IMPORTANT NOTICE

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If you have questions, please contact

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2009-2010 Course Catalog

The University Of Montana -- Full Catalog

Advising

Academic advising is a critical part of the educational process at The University of Montana. Advisors provide important information and guidance about scheduling classes, selecting a major, taking advantage of opportunities on and off campus, dealing with academic problems, and finding essential academic and social support services. An effective relationship with an advisor helps students realize the maximum educational benefits available to them, better understand themselves, and meet their particular educational needs and goals.

All undergraduate students are required to meet with their advisor at least once each semester. Students meet with an advisor throughout the semester in order to review educational progress, discuss future plans, and secure schedule approval prior to registration. Academic advisors also assist students in dropping and/or adding courses, finding appropriate academic or personal assistance programs, and ensuring that requirements for graduation are met.

Students majoring in a department or school are assigned an academic advisor in that unit. Departments use different methods to assign advisors. In some cases, the person in charge of advising for the department or program, the Advising Chair or Coordinator, does all freshman advising. In some cases, a student is assigned an advisor in the major who seems best suited to discuss particular academic interests or who represents one of the various options in the major.

Students who have yet to select a major ("Undeclared" students) are assigned to professional advisors at the Undergraduate Advising Center (www.umt.edu/uac) Appointments can be made with an advisor at the UAC throughout the semester.

In the event that a student does not know who his or her advisor is or wishes to change advisors, he or she may request advisor information or re-assignment to another advisor either from the department or through the Undergraduate Advising Center. COT students may contact their department Chair or the Associate Dean's Office.

Although faculty, professional, and peer assistants are all available to assist students, it is important for students to realize that the ultimate responsibility for meeting all graduation requirements is their own. Students improve their academic planning and success by fully using the advising services and by learning about the academic requirements of their major fields, the University policies for registration and graduation, and scholastic requirements. The UM catalog is the official source of information on these matters.

Faculty, professional and peer advisors facilitate positive academic advising experiences by: helping students to develop mentoring relationships with faculty and professional staff, by encouraging students to fulfill their obligation to plan in advance for advising sessions, by educating students to understand and accept their responsibilities in the advising process and for advising decisions, and by facilitating frank and productive dialogue about the student's academic goals.

Students with academic advising questions or concerns may contact the Office for Student Success, Lommasson Suite269, The University of Montana, Missoula, MT 59812, www.umt.edu/studentsuccess, or by phone at (406)243-5672. Students enrolled in the College of Technology may contact their academic departments, the Associate Dean's office (243-7852) or the Retention and Advising Coordinator (243-7878).

Academic Policies and Procedures

Registration

Detailed instructions regarding registration and course offerings are available via the following links -

Registration Information: http://cyberbear.umt.edu/instructions/eligibility.htm

Class Schedule: https://webprocess.umt.edu/cyberbear/bwckschd.p_disp_dyn_sched

Students must complete their registration during the scheduled registration period or be subject to payment of a late registration fee if they are allowed to register. **Registration is not completed nor is any credit awarded until all fees have been paid.**

Students in the College of Technology who do not enroll for a semester or more (excluding summer) must reapply for admission through the College of Technology. Other students who plan to attend a summer session or an academic year semester and were not in attendance during the immediately preceding 24 months, must reapply for admission through the Registration Counter in Griz Central in the Lommasson Center. Students should reapply for the autumn semester by July 1 and for the spring semester by November 1. Students who have never attended before or who are changing admission status must apply to Enrollment Services-Admissions & New Student Services or the College of Technology. See the Admissions section of this catalog.

All students currently enrolled for an academic year semester and students readmitted to the University may pre register for the subsequent semester.

Students with Disabilities

Students with disabilities may obtain assistance with the registration process and the relocation of classes through Disability Services in Lommasson Center 154 (406) 243 2243 VOICE/TDD.

Dropping and Adding Courses or Changing Sections, Grading or Credit Status

Students are expected, when selecting and registering for their courses, to make informed choices and to regard those choices as semester long commitments and obligations.

After registering and through the **first fifteen (15) instructional days of the semester**, students may use (http://cyberbear.umt.edu) to drop and add courses or change sections and credits. Fees are reassessed on the sixteenth day of the term. Added courses and credits may result in additional fees. For courses dropped by the fifteenth instructional day, no fees are charged and courses are not recorded. (For deadlines and refund policy for withdrawal from all courses, see the Withdrawal sections of this catalog.)

An instructor may specify that drop/add is not allowed on the internet. A drop/add form is used to make changes in these courses, if approved by the instructor.

After adding a course, the credit/no credit grading option or auditor status may be elected on the internet or on a form available at the Registration Counter in Griz Central in the Lommasson Center. These options are not allowed for some courses as identified in the Class Schedule. Change of grading option to audit is not allowed after the 15 instructional day.

Beginning the sixteenth (16) instructional day of the semester through the forty-fifth (45) instructional day, students use paper forms to drop, add and make changes of section, grading option, or credit. The drop/add form must be signed by the instructor of the course and the student's advisor. The signed drop/add form must be returned to the Registration Counter (or the Registrar's Office at the College of Technology) no later than the **forty-fifth** instructional day. A $10.00 processing fee is charged for each drop/add form. Added courses and credits may result in additional fees. There are no refunds or reductions of fees for courses dropped and grades of W (withdrew) are recorded.

Beginning the forty-sixth (46) instructional day of the semester through the last day of instruction before scheduled final examinations, students must petition to drop. The petition form must be signed by the instructor of the course and the student's advisor and, the dean of the student's major. A $10.00 processing fee is charged for each petition. There are no refunds or reductions of fees for courses dropped, and the instructor assigns a grade of WP (withdrew/passing) if the student's course work has been passing or a WF (withdrew/failing) if the course work has been failing. These grades do not affect grade averages but they are recorded on students' transcripts.

Documented justification is required for dropping courses by petition. Some examples of documented circumstances that may merit approval are: accident or illness, family emergency, or other circumstances beyond the student's control.

The opportunity to drop a course for the current term for such a course ends on the last day of instruction before scheduled final exams. Dropping a course taken in a previous term or altering grading option or audit status for such a course is not allowed. The only exceptions are for students who have received a grade of NF (never attended).

See the School of Law section of this catalog for the add and drop deadlines for law courses.

Class Attendance/Absence Policy

Students who are registered for a course but do not attend the first two class meetings may be required by the instructor to drop the course. This rule allows for early identification of class vacancies to permit other students to add classes. **Students not allowed to remain must complete a drop form or drop the course on the internet (http://cyberbear.umt.edu) to avoid receiving a failing grade.** Students who know they will be absent should contact the instructor in advance.

Students are expected to attend all class meetings and complete all assignments for courses in which they are enrolled. Instructors may excuse brief and occasional absences for reasons of illness, injury, family emergency, or participation in a University sponsored activity. (University sponsored activities include for example, field trips, ASUM service, music or drama performances, and intercollegiate athletics.) Instructors shall excuse absences for reasons of military service or mandatory public service.

Instructors may establish absence policies to conform to the educational goals and requirements of their courses. Such policies will ordinarily be set out in the course syllabus. Customarily, course syllabi will describe the procedures for giving timely notice of absences, explain how work missed because of an excused absence may be made up, and stipulate any penalty to be assessed for absences.

The UM Faculty Senate encourages the faculty to accommodate students incurring an excused absence by allowing them to make up missed work when this can be done in a manner consistent with the educational goals of their courses. Students expecting to incur excused absences should consult with their instructors early in the term to be sure that they understand the absence policies for each of their courses.

Withdrawal from the University

Students who withdraw from the University while a semester is in progress must complete withdrawal forms which are obtained from the Registration Counter in Griz Central in the Lommasson Center or the Registrar's Office in the College of Technology. Drop/add forms cannot be used to withdraw from school and students are not allowed to drop all their courses on the internet. International students must first contact the Foreign Student Advisor before withdrawing as visa status will be affected. Medical withdrawals are granted only for a student's significant health problems and must be documented by a healthcare provider.

See the Expenses section of this catalog for fee information relating to withdrawals.

Students receiving financial aid who withdraw will not receive aid the next term of enrollment. A Reinstatement of Financial Aid form must be completed in the Financial Aid Office to request aid for any term subsequent to a withdrawal. Students who reside in a University residence hall or in family housing must notify the Residence Life Office or the Family Housing Office of the withdrawal.

Students who purchase health insurance with registration will receive a refund and lose coverage if withdrawn during the first fifteen instructional days unless a student is granted a medical withdrawal. Withdrawal after the fifteenth day will not result in a refund but coverage will continue through the remainder of the semester.

When withdrawal forms are completed in Griz Central or the Registrar's Office in the College of Technology before the last two weeks of the semester, grades of W (withdrawal) are assigned. Beginning two weeks from the end of the term, students may not withdraw from the University except for very unusual circumstances. Such late withdrawals are to be approved by the student's academic dean before the end of the semester. However, in exceptional cases, a student's academic dean may approve retroactive withdrawal for the last semester in attendance, provided the request is approved before the end of the student's next semester of enrollment.

University Employee Registration

University employees who have applied and have been accepted for admission to the University may register with the approval of the employee's supervisor. Waivers of some fees are granted to some faculty and staff members who are at least three quarter time salaried employees on the date of registration. Additional information and the necessary forms are available in the Office of Human Resource Services in the Lommasson Center.

Grading System

The University uses two types of grading: traditional letter grades and credit/ no credit grades. At the option of the instructors some courses are offered only on the traditional letter grade basis or only on the credit/no credit basis. Other courses are open to either type of grading, at the option of the student. Courses offered on the A F basis only or CR/NCR only will be indicated in the Class Schedule. In the event a change in the published grading option for a course becomes necessary, the faculty member may make the change during the first ten class days of the semester. The students in the class and the Registrar's office must be notified of the change no later than the tenth class day. Grades preceded by an R indicate remedial courses.

Traditional Letter Grading (A-F)

Letter grades represent an assessment of the overall quality of work performed in a given course. A-Excellent; B-Good; C-satisfactory; D-Poor, F-Failure. When assigning traditional letter grades, instructors may, at their discretion, utilize the symbols + or -. Use of the + or - will be limited to A-, B+, B-, C+, C-, D+, and D-. Other symbols used are: I-Incomplete; N- -work on the course may be continued in later semesters (when work is completed, the final grade assigned applies to all semesters of the course); NF--no record of academic performance; W--withdrawal from a course or course dropped after the fifteenth instructional day; WP--course dropped after thirtieth instructional day with passing work; WF--course dropped after the thirtieth instructional day with failing work; AUD--auditor registration. (AUD is recorded for all students who register in courses as auditors, intending to listen to the courses without earning credit or being graded. The same fees are assessed as when registering for credit. Any attendance or participation expectations are established by the instructor of the course. If attendance expectations are not met, the instructor may request a notation be placed on the student's academic record indicating attendance was not satisfactory.) An R preceding the grade indicates a remedial course. Remedial courses do not count in credits earned or grade point averages.

Credit/No Credit Grading (CR, NCR)

Student Option: To encourage students to venture into courses where they might otherwise hesitate because of uncertainty regarding their aptitude or preparation, they may enroll in some courses on a credit/no credit basis. A freshman or sophomore with a grade point average of 2.00 or better may elect one undergraduate course a semester on a credit/no credit basis. Juniors and seniors may elect more than one credit/no credit course a semester.

No more than 18 CR credits may be counted toward graduation. Courses taken to satisfy General Education Requirements must be taken for traditional letter grade. Courses required for the student's major or minor must be taken for traditional letter grade, except at the discretion of the department concerned.

A CR is given for work deserving credit (A through D-) and an NCR for work of failing quality (F). CR and NCR grades do not affect grade point averages. The grades of CR and NCR are not defined in terms of their relationship to traditional grades for graduate course work.

Election of the credit/no credit option must be indicated at registration time or within the first 15 class days on CyberBear. After the fifteenth day, but prior to the end of the 30th day of instruction, an undergraduate student may change a credit/no credit enrollment to an enrollment under the A F grade system, or the reverse by means of a drop/add form.

The University cautions students that many graduate and professional schools and some employers do not recognize non traditional grades (i.e., those other than A through F) or may discriminate against students who use the credit/no credit option for many courses. Moreover, students are cautioned that some degree programs may have different requirements regarding CR/NCR credits, as stipulated in the catalog.

Faculty Option:A faculty member may elect to grade an entire class on the credit/no credit basis. This method of grading is used in courses where more precise grading is inappropriate. A faculty member may indicate that a particular course is not available under the credit/no credit option. Courses graded credit/no credit only and courses graded A-F only will be identified in the Class Schedule.

No Credit Grading in Composition (NC)

Students enrolled in WRIT 095D and WRIT 101 (formerly WTS100 and ENEX 101) and WTS 101 (COM 101) are graded by the traditional letter grades of A through F or are given NC for no credit. The NC grade is awarded when exceptional progress has occurred but the student needs to repeat the course. The NC grade does not affect grade point average.

Incomplete Grade Policy

It is assumed that students have the responsibility for completing the requirements of the courses in which they are enrolled within the time framework of the semester

Incompletes may be given when, in the opinion of the instructor, there is a reasonable probability that students can complete the course without retaking it.

The incomplete is not an option to be exercised at the discretion of students. In all cases it is given at the discretion of the instructor within the following guidelines:

1. A mark of incomplete may be assigned students when:
    1. They have been in attendance and doing passing work up to three weeks before the end of the semester, and
    2. For reasons beyond their control and which are acceptable to the instructor, they have been unable to complete the requirements of the course on time. Negligence and indifference are not acceptable reasons.
2. The instructor sets the conditions for the completion of the course work and notes these conditions on the final grade report.
3. When a student has met the conditions for making up the incomplete, the instructor will assign a grade based upon an evaluation of the total work done by the student in the course.
4. An incomplete which is not made up within one calendar year automatically will revert to the alternate grade which was assigned by the instructor at the time the incomplete was submitted.
5. **An incomplete remains on the permanent record and is accompanied by the final grade, for example, IA, IB, IC, etc.**

Computation of Cumulative Grade Average

Quality points are assigned as follows: 4 quality points for each credit of A; 3.7 quality points for each credit of A-; 3.3 quality points for each credit of B+; 3 quality points for each credit of B; 2.7 quality points for each credit of B-; 2.3 quality points for each credit of C+; 2 quality points for each credit of C; 1.7 quality points for each credit of C-; 1.3 quality points for each credit of D+; 1 quality point for each credit of D; and 0.7 quality points for each credit of D-.

The cumulative grade average is computed by dividing the total quality points earned by the total number of credits attempted, excluding courses assigned W, WF, WP, CR, NC, NCR, I, AUD, or N grades and courses numbered under 100 (grade is preceded by an R). Grades for courses transferred from other colleges and universities are not included in the calculation of the grade average for graduation.

Undergraduate Academic Performance

The cumulative grade average is computed by dividing the total quality points earned by the total number of credits attempted, excluding courses assigned W, WF, WP, CR, NC, NCR, I, AUD, or N grades and courses numbered under 100 (grade is preceded by an R). Grades for courses transferred from other colleges and universities are not included in the calculation of the grade average for graduation.

Academic Probation

Students will be placed on academic probation at the end of any semester if their cumulative grade average drops below 2.00. The effect of the academic probation is to serve notice to students that the quality of their work is below an acceptable level and that continuation of unsatisfactory work during their next semester of enrollment will result in academic suspension. Students who are placed on academic probation will find that fact noted on their final grades and their transcripts viewed on cyberbear.umt.edu. They should contact their advisors immediately to seek help.

Academic Suspension

Students will be academically suspended at the end of any semester if they were placed on academic probation during their last semester of

attendance and their cumulative grade average is still below 2.00. Exceptions are made if they earn at least 2.00 grade average for the semester without raising their cumulative grade average to the required minimum. In such cases, students remain on academic probation. The effect of academic suspension is that students may not re enroll at the University unless they have been reinstated. Academic suspensions are noted on final grades and transcripts on cyberbear.umt.edu.

Reinstatement

Students will be academically suspended at the end of a semester if they were placed on academic probation during their previous semester of attendance and their cumulative graduate point average (CGPA) is still below the 2.00 CGPA required for good academic standing.

To be reinstated, students who have been suspended for academic reasons must seek the approval of the academic dean of the school or college in which they intend to enroll. [If seeking reinstatement in the UM College of Technology, contact the Retention and Advising Coordinator.] Typically, retroactive grade changes, dropped courses or withdrawals do not reverse the academic suspension status that is recorded on the transcript, unless there was an error or grading mistake.

Academic reinstatement is not automatic. The student must provide the reasons for previous poor academic performance along with a carefully prepared plan for improvement that is completed with the help of an academic advisor. A student denied reinstatement may appeal the denial in writing to the President of the University within ten days of receiving the notice of denial. The decision to deny reinstatement normally will not be reversed unless there is evidence the decision was made arbitrarily.

If a suspended and reinstated student has not attended UM for more than two years, the student must also complete an application for readmission through the Registrar's Office. The readmission form re-activates the student's record and, along with the reinstatement form, allows the student to register for courses.

Academic Support Services

Many programs at The University of Montana-Missoula offer services to help students who are experiencing academic difficulty. Faculty academic advisors assist in academic planning and make appropriate referrals to other services as necessary. Students with declared majors are assigned a faculty advisor by the relevant department Chair. Students who are Undeclared, pre-Nursing, or a pre-major in Psychology, Communication Studies, or Business are assigned a professional advisor in the Undergraduate Advising Center located in the Lommasson Center.

Coursework is available to help students in specific areas. Developmental math and writing courses are offered by the College of Technology, including M065, M090, M095, and WRIT 095. Curriculum and Instruction 160 and AASC 101 focus on study skills, and Freshman Seminar UNC101and AASC 100 (Introduction to University Experience) provide an overview of university systems and processes. The Financial Aid Office, the Counseling Center, the Curry Health Center, the Career Planning and Placement Service, and the Clinical Psychology Center provide one-to-one counseling to help with financial issues, personal concerns, and career and major choices.

Several tutoring programs are available to all students (http://www.umt.edu/tutoring). STUDY JAM provides early evening group study tables in the UC Commons for selected courses (e.g., Chemistry, Biology, Physics, Spanish, Economics, and Statistics). The Writing Center supports students in becoming more effective writers and provides tutoring at several locations across campus (www.umt.edu/writingcenter; 406-243-2266). The Math Learning Centers provide tutoring at all levels of math coursework in two drop-in math tutoring centers. Math PiLOT oversees the ALEKS online placement testing for math and advises students who may be struggling in a math course. College of Technology students may receive tutoring in math, writing and a variety of other subjects through the Academic Support Center. The Counseling Center offers workshops on a variety of topics designed to enhance student academic performance.

For students who qualify, TRiO Student Support Services is a federally-funded program offering academic support services, including one-on-one academic advising, career search and counseling (using a national career database), mentoring for Native American students, a two-credit study skills class, and tutoring at no cost. To qualify, a student must meet one of the following criteria: first-generation (neither parent has completed a four-year college degree), financial need based on family income (usually met if receiving a Pell grant), or a documented disability. For more information, visit TRiO at Lommasson Center 154, call 406-243-5032, or log on to http://www.umt.edu/triosss/.

The Academic Support Center (ASC) on the College of Technology campus offers a variety of services to enhance students' academic success. Students can receive tutoring in math, writing and numerous other areas. Skills assessments, accommodated test services and make-up testing are also offered at the ASC. Working with the Retention and Advising Coordinator, students can develop study skills, participate in academic coaching and other student support activities, as well as accomplish reinstatement plan activities. For information about these services, contact the ASC at 243-7826 or the Retention and Advising Coordinator at 243-7878.

Plagiarism Warning

Plagiarism is the representing of another's work as one's own. It is a particularly intolerable offense in the academic community and is strictly forbidden. Students who plagiarize may fail the course and may be remanded to Academic Court for possible suspension or expulsion. (See Student Conduct Code section of this catalog.)

Students must always be very careful to acknowledge any kind of borrowing that is included in their work. This means not only borrowed wording but also ideas. Acknowledgment of whatever is not one's own original work is the proper and honest use of sources. Failure to acknowledge whatever is not one's own original work is plagiarism

General Information

Maximum Credit Load

Generally, an undergraduate student should register for no more than 21 credits during a semester, including physical education activity courses, and courses which carry no credit such as Mathematics 005.

Permission to enroll for more than the maximum credit load given above may be approved by the student's faculty advisor.

Full-Time Student Defined

An undergraduate student must register for a minimum of 12 hours credit a semester to be classified as a full time student; however, in most baccalaureate programs a student must earn at least 15 credits per semester to graduate in a four year period. One and two year programs usually require between 15 and 19 credits per semester

Classification of Undergraduate Students

The undergraduate student is classified as a freshman, sophomore, junior or senior based on the number of credits earned. The student who has earned fewer than 30 credits is a freshman. The student who has earned at least 30 credits but fewer than 60 is a sophomore, and the student who has earned at least 60 credits but fewer than 90 credits is a junior. The student who has earned 90 or more credits is classified a senior.

Dean's List (Honor Roll)

To qualify for the Dean's List, students must be undergraduates, must earn a semester grade average of 3.50 or higher, and receive grades of A or B in at least 9 credits. No grades of C+, C, C-, D+, D, D-, F, NC or NCR are allowed.

Repeating a Course

Grades of AUD, I, N, NC, NCR, NF, W, WP, or WF do not repeat other grades but an F grade does. All courses repeated remain on the permanent record but only the last grade received is used to determine credits earned. If the last grade received is an F, no credit is given for previous passing grades. Only the last grade received is used in calculating the grade point average.

If enrollment in a course is closed, a student who is repeating or auditing the course may be required by the instructor to drop the course. This rule grants enrollment preference to those students attempting to register for the course for the first time for credit. It is the responsibility of the student who is not allowed to remain in the course to formally drop the course to avoid a failing grade for that course.

The repetition of a course in the School of Law is governed by a different policy. See the School of Law section of this catalog.

University Omnibus Option for Independent Work

Under the "University omnibus option" credit is allowed for independent work in topics or problems that are proposed by the student and approved both by the instructor or instructors under whose supervision the work is to be done and by the chairperson or chairpersons of the department(s) involved. Such independent work may require as many weeks as the instructor(s) shall stipulate. The work may be on campus or off campus, as the nature of the study requires, although prior approval of all arrangements and faculty supervision must be assured.

All fees must be paid during a regular registration period in advance of beginning independent work. The student may not receive a larger number of credit hours than he or she is registered for, although a smaller number may be completed and credit obtained with the approval of the instructor or instructors. No more than 10 credit hours may be received in a single topic or problem. A maximum of 15 credit hours of independent work for a bachelor degree and 13 credit hours of independent work for an associate degree is permitted under the University omnibus option.

For each course taken under the University omnibus option, the student's transcript will show the departmental prefix, the level of the course, the number of credit hours, and the exact title of the topic. Students obtain course request numbers through the departments.

Credit By Examination

Under certain circumstances, a currently registered student may receive credit by examination for a course in which he or she has not been regularly enrolled. The student must have a minimum cumulative grade average of 2.00 and an entering freshman must present a high school scholastic record equivalent to a 2.00 grade average to be eligible to earn credit by examination in any course.

Each school or department may determine those courses, if any, for which credit may be earned by examination. The dean of the school or the chair of the department must approve any arrangements prior to testing for such credit. On the successful completion of an examination, the department notifies the Registrar's Office. There are no fees for this type of credit by examination and grading may be credit/no credit or traditional letter grade.

For information regarding other types of credit by examination, consult the College Level Examination Program in this catalog. See index.

Course Numbering System

- 001-099 Courses below college level. Credit not allowed toward a degree.
- 100-199 Primarily for freshmen.
- 200-299 Primarily for sophomores.
- 300-399 Primarily for juniors.
- 400-499 Primarily for seniors.
- 500-699 Primarily for graduate students.
- Senior (5th year) courses in Pharmacy are numbered 500 to 599.

Undergraduates in Graduate Courses

Post-baccalaureates and seniors holding a 3.0 (or greater) grade point average may, with consent of instructor, enroll in 500-level courses for undergraduate credit. Variance from these requirements cannot be petitioned.

Credit

Credit is defined in terms of semester hours. In general, 1 semester hour credit is allowed for 1 hour of lecture each week of the semester, or an average of 2 hours of laboratory each week of the semester.

Prerequisites and Corequisites

"Prereq.." indicates the course or courses to be satisfactorily completed before enrollment in the course described. "Coreq." indicates a course which must be taken concurrently with the course described.

Cross-listed and Equivalent Courses

Some courses are offered jointly by two or more departments. Thus, the notation "Same as Ling 373," included in the course description for Anthropology 373, indicates that Anthropology 373 and Linguistics 373 are the same course. A student may enroll for such a course under the department in which she or he wishes to receive credit, but credit is not allowed toward a degree for both courses.

In certain cases, a course description indicates credit is not allowed for that course and for another course offered by a different department. These courses are very similar in content, although offered separately, and credit is not allowed toward a degree for both courses.

Technical Courses

Courses in the College of Technology with a course number suffix of "T" are primarily technical in nature and apply to the certificate programs and associate of applied science programs in the College and may not apply toward the associate of arts or baccalaureate degrees. Refer to vocational technical credits in the Admissions section or Credit Maximums section. See the College of Technology section to see the courses that count toward the associate of arts and baccalaureate degrees. See index.

Cancellation of Courses

The University reserves the right to cancel any course for which fewer than five students are enrolled as of the beginning of the course.

Common Course Numbering - Montana University System

All universities, 4-year and 2-year colleges that are part of the Montana University System are now required to use the same course numbering for undergraduate courses. With common course numbering, transfer students can be reassured that they will receive credit for undergraduate courses taken at another Montana institution, as long as the admitting institution offers that same course. This transparency will make it easier for students to continue their higher education at any state-supported campus.

Effective Autumn Semester 2009, all units of the Montana University System (MUS) began to offer a portion of their classes using new subject abbreviations and new numbers that are common across all MUS units. This is an ongoing project, and subject areas and numbers will continue to be renumbered over the next 2-3 years. Information regarding Common Course Numbering here at the University of Montana is available at this URL:

http://www.umt.edu/newnumber/

Final Examinations

Final examinations for the semester are scheduled in two hour segments, one for each course. The segments should be considered as class meetings to be treated by the instructor as he or she thinks educationally appropriate. The time scheduled for final examinations is the only time period during which final examinations are to be given. If an instructor elects not to give a final examination, under no circumstances are final examinations to be given during the week preceding the scheduled final examination days.

Students may seek relief from writing more than two examinations during the same day. Students who are scheduled for more than two examinations may contact the appropriate faculty to arrange an alternate testing time during the scheduled final examination period. If satisfactory arrangements cannot be made, the student should seek the assistance of his or her dean.

Transcripts of Academic Records

Transcripts of the academic record of a student may be obtained from the Registrar&s Office in the Lommasson Center or the Registrar&s Office in the College of Technology upon the written request of the student. In compliance with federal and state laws designed to protect privacy, transcripts are not released without the student's authorizing signature.

Transcripts are usually available within two to five working days after receipt of the request. There is a charge of $3.00 for each official transcript. Payment must be received before transcripts are released. Transcripts are withheld if the student owes a debt to the University. Faxed and overnight transcripts are $15.00 to cover special handling.

A student can view his or her academic record on the internet at http://cyberbear.umt.edu.

Associate of Applied Science, Associate of Arts and Certificate of Applied Science Admission

The Associate of Applied Science and Certificate of Applied Science programs in the College of Technology are designed to lead an individual directly to employment in a specific career. In some instances, particularly in allied health, the degree is a prerequisite for taking a licensing examination. The College of Arts and Sciences offers a Bachelor of Applied Science degree for students who have completed the Associate of Applied Science degree. The Associate of Arts degree typically prepares students to transfer to other programs.

Academic Eligibility

To be eligible for admission, students must have graduated from an accredited high school or passed the GED. Students admitted to the College of Technology who wish to enroll in courses at the University of Montana-Missoula main campus must meet the admission requirements of the main campus.

How to Apply

Applications for admission are available from the College of Technology by request. Applications are also available on the University website. In addition, applications are sent to all in-state high schools

An application for admission is complete when the College of Technology receives the credentials described below.

1. Application form. Applications must be completed and signed.
2. $30 or $36 on-line application fee. This non-refundable application fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the College of Technology, UM Helena College of Technology, and Western Montana College.
3. Test scores. All students are required to take either the ACT, SAT or Compass E-Write test and submit scores to the Admissions Office. Contact the College of Technology Admissions Office for specific information regarding this requirement.
4. Proof of high school graduation/GED. An official high school transcript with graduation date or GED score report must be sent to the College of Technology.
5. Medical History Record. All students are required to submit a completed Pre-Registration Immunization Form to the Curry Health Center two weeks prior to registration. History record forms are sent to students with acceptance notifications. Some health related programs have additional requirements. Refer to the College of Technology section of this catalog.

When to Apply

Applications are considered on a first come, first-served basis. Within two weeks of receiving an application, the College of Technology will notify applicants of their status. If a program is full, applicants who fulfill admission requirements will be admitted to the next available term.

Bachelor of Applied Science Admission

Academic Eligibility

Applicants must hold an Associate of Applied Science degree from an accredited institution with a minimum cumulative grade average of 2.5.

How to Apply

Applicants should contact the Bachelor of Applied Science advisor at The University of Montana College of Technology, 243-7801. The applicant and advisor meet to discuss application procedures as well as degree plan identification and required approval.

Receipt of the following constitutes a complete application B.A.S. degree:

1. A University of Montana-Missoula application-identifying desired degree program as Bachelor of Applied Science. Applications are available from Enrollment Services-Admissions, The University of Montana-Missoula, Missoula, MT 59812 (406-243-6266); or the

College of Technology, Enrollment Services-Admissions, 909 South Avenue West, Missoula, MT 59801 (406-243-7882). Applications are also available on the university website.
2. Official college/university transcripts of all previous course work
3. $30 application fee (if the applicant is new to The University of Montana system) or $36.00 on-line application fee.
4. Pre-Registration Immunization Form (if the applicant is new or has been absent for more then 24 months from The University of Montana system)

When to Apply

Applications from students who hold an A.A.S. degree with a GPA of 2.5 are accepted on a continuing basis. Applicants in the process of completing the A.A.S. degree are encouraged to begin the application process during their final semester. Students are not, however, admitted until after the A.A.S. degree has been awarded.

Bachelor Degree Admission – Entering Freshmen

Academic Eligibility

The University continues to raise the academic standards required for full admission to Baccalaureate programs, and the process will continue in future years. For the 2009-10 academic year both in-state and out-of-state high school graduate will be offered full admissions if they meet the following requirements

1. Graduation from a state accredited high school.
2. Successful completion of the College Preparatory program (all courses are subject to Office of Public Instruction guidelines):
    - Four years of English.
    - Three years of math, including Algebra I, Geometry and Algebra II (or the sequential content equivalent of these courses). Students are encouraged to take a math course in their senior year.
    - Three years of social studies, including one year global studies (i.e., world history or world geography), one year American history and one year of additional course work (i.e., government, psychology, economics).
    - Two years of laboratory science. One year must be earth science, biology, chemistry, or physics; the other year can be one of those sciences or another approved college prep laboratory science.
    - Two years chosen from the following: foreign language (preferably two years), computer science, visual and performing arts, or vocational education units.
3. Cumulative high school grade point average (GPA), on a 0-4 scale, and composite on the enhanced ACT (or combined verbal/math on SAT) must fall in the gray region of grid #1 shown in Figure 1.
4. For Fall 2009, students must meet a minimum math score of:
    - 18 on the ACT or
    - 440 on the SAT or
    - A score of 3 or above on the AP Calculus AB or BC Subject Exams. In lieu of the above requirement, student can complete a Rigorous High School Core that includes four years of math with grades of C or higher.
5. For Fall 2009, students must meet a minimum Writing Proficiency score of:
    - 18 on the Combined English/Writing section of the Optional Writing Test or a 7 on the Writing Subscore of the ACT; or
    - 440 on the Writing Section of the SAT or a 7 on the Essay the SAT; or
    - 3.5 on the Montana University System Writing Assessment; or
    - 3 on the AP English Language or English Literature Examination; or
    - 4 on the International Baccalaureate Language A1 Exam or
    - 50 on the CLEP Subject Exam in Composition.

Information on admission requirements for home-schooled students or students who graduate from a non-accredited high school can be found at http://admissions.umt.edu/freshman.html.

Provisional Acceptance

Students who fail to meet the admissions requirements may be admitted on a provisional basis if the Admissions Committee determines that a student could be successful by taking advantage of the academic support services that are available. Students will be granted full admission, after completing twenty-four credits with a grade point average of at least 2.0 Students are expected to complete the twenty-four credits within two semesters but must complete them within three semesters. In cases where academic preparation falls well below the admission standards listed above, applicants will be directed to the College of Technology were courses can be taken to strengthen their preparation for success at The University of Montana.

Special Circumstances

The following categories of students may receive special consideration with regard to admission standards:

1. Non-traditional freshmen (those students who do not enter college for a period of at least three years from the date of high school graduation or from the date they would have graduated from high school if they have a GED).
    - Admission status of high school graduates with transcripts and ACT/SAT scores will be determined using the grid below.
    - Admission status of GED non-traditional applicants with ACT/SAT scores will be determined using the grid below. In lieu of a

GPA, the GED score rescaled from 4000 to 4.0 (maximum) will replace the GPA axis.
    - Applicants without both transcripts and ACT/SAT scores, or applicants without both GED transcript and ACT/SAT scores will be admitted provisionally.
2. GED freshmen (those students who pass the GED and enter college within three years of the date they would have graduated from high school). Admission status of GED freshman will be determined using the grid below. In lieu of a GPA, the GED score rescaled from 4000 to 4.0 (maximum) will replace GPA axis.
3. Summer only students are exempt from standards 2, 3 and 4 above.
    - All traditional freshman or GED freshman applicants must take the ACT or SAT. Some departments reserve the right to set higher admission standards for their undergraduate programs. Applicants to these programs who meet general University requirements for admission to the undergraduate degree status will be admitted to the appropriate pre-major program by Enrollment Services-Admissions. Application to the undergraduate major program is an additional, separate process administered by the department and arranged for by the student seeking acceptance. These admission requirements are subject to change.
    - Questions concerning admission requirements may be directed to Enrollment Services-Admissions, (406) 243-6266 or 1-800-462-8636.

Future trends in Admission Eligibility at UM

In future years, the academic criteria for full admission to Baccalaureate programs at The University will continue to rise. Students who fail to meet these stricter admission standards may be admitted on a provisional basis if the Admissions Committee determines that a student could be successful by taking advantage of the academic support services that are available. Other applicants will be directed to the College of Technology where courses can be taken to strengthen their preparation for success at The University.

How to Apply

Applications for admission are available from Enrollment Services-Admissions by request. In addition, applications are sent to all Montana high schools, community colleges and select out-of-state schools. Applications are also available on the University website.

An application for admission is complete when Enrollment Services-Admissions receives the credentials described below.

1. Application form. Applications must be complete and signed.
2. . $30 application fee or $36 application fee when applying online. This non refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. Applications are not processed prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and Western Montana College.
3. Test scores. Official ACT or SAT results should be sent directly from the testing company or may be posted on the high school transcript.
4. High School Student Self-Report form. This form is part of the standard application form and is the basis for the initial admission decision.
5. Final high school transcript with graduation date. Information provided on the self-report form will be verified from this transcript.
6. Medical History Record. All students are required to submit a completed Pre-Registration Immunization Form to the Curry Health Center two weeks prior to registration. It is important that the immunization record be complete, accurate and validated by a health official.

When to Apply

March 1 is the application priority processing date for autumn semester. The application priority processing date for spring is November 15. Applications postmarked or completed after the processing priority date will be processed on a space available basis. Students are encouraged to apply early as some programs may fill early. A student must be admitted to The University of Montana-Missoula prior to attending an orientation program. Orientation information is sent to accepted students prior to each semester.

Distance Education

The University of Montana provides the opportunity to apply as a Distance Education only student. Students who are interested in applying for this status would need to meet the University's general admission requirements for freshman and transfer students. This admission status is designed for students who are registering for online courses only and do not plan to take any courses on campus. When applying for this status students are not required to provide proof of immunization or complete a medical History Form. Since Distance Education only students have some of the mandatory fees waived, they are not eligible for health insurance, services provided by the Curry Health Center, athletic event discounts or the Campus Recreation facilities.

Currently enrolled students or former University of Montana students must change their status by completing a Distance Learning Change of Status Form. This form is available from the Registrar's Office or online at the following URL.
http://www2.umt.edu/registrar/forms.htm..

Former University of Montana-Missoula Students - Readmission

Students previously enrolled at The University of Montana-Missoula who have interrupted their enrollment for more than 24 months or more must submit an application for readmission. Applications for readmission may be obtained from the Registrar's Office, the registration counter at Griz Central or Enrollment Services-Admissions.

Former undergraduate degree students who do not plan to change their status and who have attended another college/university since attending The University of Montana-Missoula, even if their absence from UM has been less than two years in duration, must submit college transcripts.

Former students who are applying for readmission must comply with Immunization Requirements as listed in this catalog.

Former undergraduate students are **not** required to pay the undergraduate application fee of $30.00 unless they are changing from an undergraduate status to a graduate status or vice versa. The application fee is paid only **once** at the undergraduate level. For additional information you can contact the Registrar's Office at 406-243-2939 or visit us on the web at http://www2.umt.edu/registrar/..

GED (General Educational Development)

A person who is not a graduate from an accredited high school may be eligible for admission by earning passing scores on the GED test. Passing scores are a minimum score of 35 on each test and an average score of 45. Effective Jan 1, 2002 passing scores are a minimum score of 410 on each test and an average score of 450. GED students who have been out of high school for less than three years must also submit ACT or SAT scores. For additional information and test center locations in Montana, contact the Office of Public Instruction, Helena, MT 59601.

Graduate Nondegree Status

Graduate nondegree status allows students, who have not been formally admitted to a graduate degree program, to receive graduate credit for courses.

Up to nine semester nondegree graduate credits (or the credits earned during a single semester, whichever is greater) may be applied toward a subsequent degree program, with the approval of the student's program chair and the graduate dean. Acceptance as a graduate nondegree student does not imply future admission to a degree program

Graduate nondegree students may take courses for either graduate or undergraduate credit, as defined by the university catalog. Graduate credits will be assigned automatically unless a request for undergraduate credit is submitted to the Graduate School by the fifth week of the semester.

Applicants admitted as graduate nondegree students are NOT ELIGIBLE for financial aid. Graduate nondegree students are assessed the graduate level tuituion and fees at the master's level rate for all credits taken.

Applicants must have earned a baccalaureate degree (or higher degree) from a regionally accredited college or university prior to enrollment in the graduate nondegree status.

Applicants seeking graduate nondegree status must apply online at www.umt.edu/grad and pay a $51 non-refundable application fee. Deadline for submitting graduate nondegree applications is prior to the first day of the semester.

Graduate Nondegree Readmission

Students who previously attended The University of Montana in a graduate nondegree status and have not been enrolled for two years, 24 months or more, use the graduate nondegree readmission from to reapply for the same status.

Graduate nondegree readmission forms can be downloaded from the http://ordway.umt.edu/aa/grad/index.cfm/name/gradnondegree.Or you may contact the Graduate School at the Lommasson Center, Rm 224, Missoula, MT 59812 or by phone at 406-243-2572 or by e-mail at grad.school@umontana.edu. Former graduate nondegree students applying for readmission pay a $20 non-refundable application fee.

Graduate Degree

¬Graduate degree admission is for candidates seeking to complete a master's or doctoral program at UM. Program information and deadlines are listed at http://ordway.umt.edu/aa/grad/index.cfm/name/programs1. The academic department you are applying to conducts the initial evaluation of a complete application packet and submits your packet and a recommendation to the Graduate School for the final decision regarding admission.

Applicants seeking graduate status must apply online at the www.umt.edu/grad and pay a $51 non-refundable application fee.

Replace this content with your own. In addition, click the **Configurations** button and select an appropriate **Configuration Set** for this page other than this default one.

International Student Admission

The University of Montana-Missoula Enrollment Services-Admissions Office will issue the Immigration Form I-20 (necessary for obtaining an F 1 student visa) to international applicants who are academically eligible for the undergraduate degree status (see above) and who supply complete credentials as described below. In certain situations an international applicant may not need an I- 20; in these cases, Enrollment Services-Admissions should be contacted for individual advice regarding admission status, academic eligibility, and admission requirements. International students are encoraged to submit ACT or SAT scores if available, but ACT or SAT scores are not required for admission.

How to Apply

Receipt of the following credentials constitutes a complete international application for admission:

1. . International application form. This form can be obtained by contacting Enrollment Services-Admissions or the College of Technology. The form must be complete and signed. Applications are also available on the university website.
2. $30.00 or $36.00 on-line application fee (in US dollars). This non refundable fee is payable once at the undergraduate level when payment is followed by enrollment. In all other cases record of payment will remain on file for one year. Payment of this fee is expected prior to consideration of the application. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and Western Montana College.
3. Academic Credentials:
    1. Certified copies of non-U.S. academic credentials beginning with secondary school and continuing through the highest level of achievement.
    2. U.S. transcripts. Complete official transcripts showing all U.S. high school and college/university attendance.
4. Statement of Financial Support. The applicant must submit a certified statement from a bank or sponsor verifying that adequate financial re¬sources are available to pay for the student's estimated expenses for the first year (tuition, fees, room, board, miscellaneous expenses, student health insurance, expenses of dependents, etc.). This estimated amount is adjusted annually and is available by contacting Enrollment Services-Admissions.
5. English Language Proficiency. An official score report showing one of the following:
    - 61 IBT (173 CBT or 500 PBT) on the Test of English as a Second Language (TOEFL).
    - 5.5 on the International English Language Testing System (IELTS).
    - 69 on the Michigan English Language Assessment Battery (MELAB)
    - SAT Writing Score of 440/ACT score of 18 on the Combined English/Writing section.

    Those students who are citizens of countries where English is the native tongue need not submit proof of English language proficiency, unless English is not the student's native language. Students who have test scores below the minimum requirement may be eligible for conditional admission.

    Any questions concerning the evi¬dence of proficiency in English should be directed to Enrollment Services-Admissions. ¬ When the student arranges to take the TOEFL test, he or she should request that examination results be sent directly to Enrollment Services-Admissions or the College of Technology, The University of Montana-Missoula, Missoula, Montana 59812. (Code N. 4489 00)

    Conditional Admission

    International students who have not met the required test score and who meet all other admission requirements will be offered conditional admission. Conditionally admitted students study in an intensive program at The University of Montana-Missoula English Language Institute on campus until the TOEFL score reaches 500. After English proficiency is achieved, enrollment in regular university courses begins.

7. Medical History Record. All students are required to submit a completed Pre-Registration Immunization Form to the Curry Health Center two weeks prior to registration. It is required that the immunization record (for measles, rubella, diphtheria, tetanus and polio) be complete, accurate, and validated by a physician.. Skin testing for tuberculosis will be required upon arrival through the Curry Health Center.
8. Visa Clearance and Advisor's Recommendation Form. F 1 students transferring from another college or university in the U.S. must have this form completed by the foreign student advisor of the transfer school and returned to the UM Enrollment Services-Admissions Office or the College of Technology. A new I-20 will be issued by UM once a transfer release date is entered in SEVIS (Student & Exchange Visitor Information System) by the current school.

When to Apply

Applications are accepted on a rolling, space-available basis. Consequently, students are encouraged to apply early to secure acceptance.

Transfer Student Admission

Academic Eligibility

Any undergraduate degree transfer applicant who has attempted fewer than twelve college level credits must meet the academic eligibility requirements for freshmen mentioned above. Other undergraduate degree applicants who have attempted twelve or more college level credits must meet the academic eligibility requirements described here.

Applicants must present a 2.00 (C) cumulative grade average (on a 0-4 scale) for all college level work attempted to be eligible for admission.

How to Apply

Receipt of the following credentials in Enrollment Services-Admissions constitutes a complete application for admission:

1. Application form. The application form may be obtained by contacting Enrollment Services-Admissions, The University of Montana-Missoula, Missoula, Montana 59812 (406) 243-6266. It should be completed, signed and returned. Applications are also available on the university website.
2. $30.00 or $36 application fee when applying on-line. This non refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. An application cannot be considered prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and Western Montana College.
3. Official college/university transcripts. The student must supply a complete official transcript from each regionally accredited college or university attended, and from each college or university attended holding candidate status for regional accreditation. Applications from students who are enrolled at the transfer school while applying to UM will be considered for admission based on incomplete official transcripts showing all academic work completed and posted to date. The complete official transcript must be on file before the second registration at UM. Academic eligibility will be reviewed upon receipt of the complete transcript.
4. All students are required to submit a completed Pre-Registration Immunization Form to the Curry Health Center two weeks prior to registration. It is especially important that the immunization record be complete and accurate and validated by a health official.

When to Apply

March 1 is the application priority processing date for autumn semester. The application priority processing date for spring semester is November 15. Applications postmarked or completed after the processing priority date will be processed on a space available basis. Students are encouraged to apply early as some programs may fill early. A student must be admitted to The University of Montana-Missoula prior to attending an orientation program. Orientation information is sent to accepted students prior to each semester.

Undergraduate Nondegree Status

An applicant who wishes to pursue studies for his or her personal growth and who does not wish to work toward a formal degree at The University of Montana-Missoula may apply as an undergraduate nondegree student. (This option is not available to freshmen unless they are applying to the College of Technology.) **Each applicant should understand that acceptance to this category does not constitute acceptance into a degree granting program.** Applicants admitted as undergraduate nondegree students are not eligible for financial aid.

Academic Eligibility

Each applicant must certify on the application form that he or she has graduated from a high school that is fully accredited by its state department of education, or has passed the General Educational Development test with a standard score of 35 or above on each test and an average standard score of 45 or above on all five tests. To be considered for nondegree status, a student must have attempted 12 or more college level credits

Except in the College of Technology, a maximum of 30 semester credits earned as a nondegree student will be applied to an undergraduate degree at The University of Montana-Missoula if the applicant applies and is accepted to a degree program. Whether credits taken in the College of Technology as a nondegree student may apply to a particular degree program is dependent on the courses taken and the degree program to which the student may be admitted. This category is not open to students currently on academic suspension from The University of Montana-Missoula.

If a person is admitted as an undergraduate nondegree student and later wishes to change to a degree program, he or she will be required to file an application for readmission, furnish the required supporting credentials and meet the regular admissions standards for the intended program. Readmission applications are available from Enrollment Services-Admissions, the College of Technology, or the Registrar's Office.

How to Apply

Receipt of the following credentials in Enrollment Services-Admissions or the College of Technology constitutes a complete application for admission to the undergraduate nondegree status:

1. Application form. The application form may be obtained from the Office of Enrollment Services-Admissions, The University of Montana-Missoula, Missoula, Montana 59812 (406) 243 6266 or the College of Technology (406) 243 7882. It should be completed, signed, and returned. Applications are also available on the university website.

2. $30.00 or $36 on-line application fee. This non refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. An application cannot be considered prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and Western Montana College.
3. Medical History Record. All applicants are required to submit a completed Pre-Registration Immunization Form to the Curry Health Center two weeks prior to registration. The form must be complete, accurate and validated by a health official. Health forms are sent to students with letters of acceptance.

When to Apply

March 1 is the application priority processing date for autumn semester. The application priority processing date for spring semester is November 15. Applications postmarked or completed after these dates will be processed on a space available basis. Students are encouraged to apply early.

Areas of Study

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A

- **Accounting** - B.S., M.Acct.
- **Accounting Technology** - A.A.S.
- **Administrative Management** - A.A.S.
- **Administrative Sciences** - M.A.S.
- **Administrative Systems Management** - undergraduate minor
- **African-American Studies** - undergraduate minor
- **Algebra** - option in M.A. and Ph.D., Mathematics
- **Alternative Dispute Resolution** - Certificate
- **American Politics** - option in B.A., Political Science
- **Analysis** - option in M.A. and Ph.D., Mathematics
- **Analytical/Environmental Chemistry** - option in M.S. and Ph.D., Chemistry
- **Animal Behavior** - option in M.A. and Ph.D., Psychology
- **Anthropology** - B.A., M.A., Ph.D.; undergraduate minor
- **Applied Geoscience** - option in Ph.D., Geosciences
- **Applied Health Science** - option in B.S. in Health and Human Performance
- **Applied Linguistics** - option in M.A., Linguistics
- **Applied Mathematics** - option in B.A., M.A. and Ph.D., Mathematics
- **Applied Science** - B.A.S.
- **Aquatic** - option in B.S. in Wildlife Biology, Wildland Restoration
- **Archaeology** - option in B.A., Anthropology
- **Art** - B.A., B.F.A., M.A., M.F.A.
- **Art History/Criticism** - undergraduate minor
- **Art Studio** - undergraduate minor
- **Asian Studies** - option in B.A., Liberal Studies; undergraduate minor

- **Astronomy** - option in B.A., Physics; undergraduate minor
- **Athletic Training** - B.S.

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- **Biochemistry** - B.S., M.S.
- **Biochemistry and Biophysics** - M.S., Ph.D.
- **Biological Education** - option in B.A., Biology
- **Biology** - B.A., teacher preparation; undergraduate minor
- **Biomedical Sciences** - Ph.D.
- **Broadcast** - option in B.A. in Radio TV
- **Building Maintenance** - Certificate
- **Business Administration** - M.B.A.
- **Business Administration & Law** - dual degree program, M.B.A., J.D.
- **Business Administration & Pharmacy** - dual degree program, M.B.A., Pharm.D.
- **Business Administration & Physical Therapy** - dual degree program, M.B.A., D.P.T.
- **Business French** - undergraduate minor
- **Business and Information Technology Education** - teacher preparation

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- **Cartography and G.I.S.** - option in B.A. and M.A., Geography
- **Carpentry** - certificate; A.A.S.
- **Cellular and Molecular Biology** - option in B.A., Biology
- **Central and Southwest Asian Studies** - option in B.A., Geography
- **Chemistry** - B.A., B.S., M.S.T.C., M.S., Ph.D., undergraduate minor, teacher preparation
- **Chinese** - undergraduate minor
- **Classical Civilization** - option in B.A., Classics, undergraduate minor
- **Classical Languages (Greek & Latin)** - option in B.A., Classics
- **Classics** - B.A.
- **Climate Change Studies** - Minor
- **Clinical** - option in M.A. and Ph.D., Psychology
- **Combinatorics and Optimization** - option in B.A., Mathematics
- **Communication Studies** - B.A., M.A., undergraduate minor
- **Communication and Human Relationships** - option in B.A., Communication Studies
- **Communicative Sciences and Disorders** - B.A.
- **Community and Environmental Planning** - option in B.A. and M.A., Geography
- **Comparative Literature** - non-degree advising program
- **Composition and Music Technology** - B.M.
- **Composition/Technology** - option in M.M., Music
- **Computational Physics** - option in B.A., Physics
- **Computer Aided Design** - certificate
- **Computer Applications** - undergraduate minor
- **Computer Science** - B.S., M.S., undergraduate minor
- **Computer Science-Mathematical Sciences** - B.S.
- **Computer Support** - option in A.A.S., Accounting Technology
- **Computer System Technician** - certificate
- **Computer Technology** - A.A.S.
- **Conservation** - option in B.S. in Resource Conservation
- **Counselor Education** - M.A., Ed.S.
- **Counselor Education and Supervision** - Ed.D.
- **Creative Writing** - M.F.A.; option in B.A., English
- **Criminology** - option in B.A. and M.A., Sociology
- **Culinary Arts** - Certificate
- **Cultural and Ethnic Diversity** - option in B.A., Anthropology
- **Cultural Heritage** - option in M.A., Anthropology
- **Cultural Heritage Studies and Applied Anthropology** - option in Ph.D., Anthropology
- **Curriculum and Instruction** - M.Ed., M.A., Ed.D.
- **Curriculum Studies** - option in M.Ed. and M.A., Curriculum and Instruction
- **Customer Relations** - Certificate

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- **Dance** - B.A., B.F.A.; undergraduate minor
- **Developmental** - option in M.A. and Ph.D., Psychology
- **Diesel Technology** - A.A.S.
- **Drama** - B.A., B.F.A., M.A., M.F.A., Drama; undergraduate minor; teacher preparation

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- **Earth Science Education** - option in B.S., Geosciences, teacher preparation
- **Ecology and Organismal Biology** - option in B.A., Biology
- **Economics** - B.A., M.A., undergraduate minor, teacher preparation
- **Ecosystem Management** - M.E.M.
- **Education** - B.A.Ed.
- **Educational Leadership** - M.Ed., M.A., Ed.S., Ed.D.
- **Electronics Technology** - A.A.S.
- **Elementary Education** - option in B.A. in Education; option in M.Ed. and M.A., Curriculum and Instruction
- **Energy Technology** - A.A.S.
- **English** - B.A., M.A., undergraduate minor, teacher preparation
- **English as a Second Language** - certificate program, teacher preparation
- **English Teaching** - option in B.A. and M.A., English
- **Entertainment Management** - certificate program
- **Entrepreneurship** - certificate program
- **Entrepreneurship** - option in A.A.S, Management
- **Environmental Chemistry** - option in B.S., Chemistry
- **Environmental and Natural Resources Law** - certificate program
- **Environmental Philosophy** - option in M.A., Philosophy
- **Environmental Science and Natural Resource Journalism** - M.A.
- **Environmental Studies** - B.A., M.S., undergraduate minor
- **Exercise and Performance Psychology** - option in M.S., Health and Human Performance
- **Exercise Science** - option in B.S. in Health and Human Performance; option in M.S., Health and Human Performance

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- **Fiction** - option in M.F.A., Creative Writing
- **Field Ecology** - option in B.A., Biology
- **Film Studies** - option in B.A., English
- **Finance** - B.S.
- **Fish and Wildlife Biology** - Ph.D.
- **Food Service Management** - A.A.S.
- **Forensic Anthropology** - option in B.A. and M.A., Anthropology
- **Forensic Chemistry** - option in B.S., Chemistry
- **Forensic Studies** - Certificate
- **Forest Operations and Applied Restoration** - option in B.S. in Forestry
- **Forest Resources Management** - option in B.S. in Forestry
- **Forestry** - B.S.F., M.S., Ph.D.
- **French** - B.A., option in M.A., Modern Languages and Literatures, undergraduate minor, teacher preparation

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G

- **General** - non-degree advising program; option in B.A., Liberal Studies
- **General Studies** - A.A. (Associate of Arts)
- **General Linguistics** - option in M.A., Linguistics
- **General Psychology** - option in B.A., Psychology
- **General Science** - teacher preparation
- **Geography** - B.A., B.S., M.A., M.S., undergraduate minor, teacher preparation
- **Geosciences** - B.S., M.S., Ph.D.
- **German** - B.A., option in M.A., Modern Languages and Literatures, undergraduate minor, teacher preparation
- **Gerontology** - undergraduate minor
- **GIS (Geographic Information Systems)** - certificate program
- **Government** - teacher preparation
- **Greek** - undergraduate minor

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H

- **Health and Human Performance** - B.S.H.H.P., M.S., teacher preparation
- **Health Enhancement** - option in B.S. in Health and Human Performance
- **Health Information Coding Specialty** - option in A.A.S., Medical Information Technology
- **Health Professions** - option in B.S., Biochemistry
- **Health Promotion** - option in M.S., Health and Human Performance
- **Heavy Equipment Technology** - certificate
- **History** - B.A., M.A., Ph.D., undergraduate minor, teacher preparation
- **History Education** - option in B.A., History
- **History-Political Science** - B.A., teacher preparation
- **Honors College** - non-degree advising program
- **Human and Family Development** - undergraduate minor
- **Human Biological Sciences** - option in B.A., Biology

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I

- **Individualized Interdisciplinary Program** - Ph.D.
- **Inequality and Social Justice** - option in B.A. and M.A., Biology
- **Information Systems Management** - option in A.A.S., Computer Technology
- **Inorganic Chemistry** - option in M.S. and Ph.D., Chemistry
- **Integrated Arts and Education** - option in M.A., Fine Arts
- **Integrative Microbiology and Biochemistry** - Ph.D.
- **Intercultural Youth and Family Development** - M.A.
- **Interdisciplinary Geosciences** - B.S.
- **Interdisciplinary Studies** - M.I.S.
- **International Business** - B.S.
- **International Conservation and Development** - option in M.S., Resource Conservation
- **International Development Studies** - undergraduate minor
- **International Relations and Comparative Politics** - option in B.A., Political Science
- **International Conservation and Development** - option in M.S., Resource Conservation
- **International Field Geosciences** - B.S., joint degree with University College of Cork (Ireland)
- **Irish Studies** - minor

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J

- **Japanese** - B.A., undergraduate minor
- **Journalism** - B.A. in Journalism, M.A.

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L

- **Latin** - option in B.A., Classics, undergraduate minor, teacher preparation
- **Latin American Studies** - undergraduate minor
- **Law** - J.D.
- **Liberal Studies** - B.A.
- **Library Media Services** - option in M.Ed., Curriculum and Instruction; undergraduate minor; teacher preparation
- **Linguistics** - M.A.; option in B.A. and M.A., Anthropology; option in B.A. and M.A., English; option in B.A., French
- **Literacy Education** - M.Ed. and M.A., Curriculum and Instruction
- **Literature** - option in B.A. and M.A., English

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M

- **Management** - B.S., A.A.S.
- **Management Information Systems** - B.S. in Business Administration; teacher preparation;
- **Marketing** - B.S.
- **Math Education** - option in B.A. and M.A., Mathematics
- **Mathematics** - B.A., M.A., Ph.D., undergraduate minor, teacher preparation
- **Mathematical Sciences-Computer Science** - B.S.
- **Media Arts** - B.A., M.F.A.,; undergraduate minor
- **Medical Administrative Assisting** - option in A.A.S., Medical Information Technology

- **Medical Assisting** - A.A.S.
- **Medical Information Technology** - A.A.S.
- **Medical Reception** - Certificate
- **Medical Technology** - B.S. in Medical Technology
- **Medical Transcription** - option in A.A.S., Medical Information Technology
- **Medicinal Chemistry** - M.S., Ph.D.
- **Mental Health Counseling** - M.A., Counselor Education
- **Microbial Ecology** - option in B. S. in Microbiology and M.S., Ph.D., Biochemistry/Microbiology
- **Microbiology** - B.S. in Microbiology, M.S., undergraduate minor
- **Military Studies** - undergraduate minor
- **Modern Languages and Literatures** - M.A.
- **Mountain Studies** - undergraduate minor
- **Music** - B.A., B.M., B.M.E., M.M.; undergraduate minor, teacher preparation
- **Music Education** - option in M.M., Music
- **Musical Theatre** - option in M.M., Music

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N

- **Native American Studies** - B.A., undergraduate minor
- **Natural History** - option in B.A., Biology
- **Natural Resource Conflict Resolution** - certificate
- **Nature-Based Tourism** - option in B.S. in Recreation Management
- **Network Management** - option in A.A.S., Computer Technology
- **Neuroscience** - M.S., Ph.D.
- **Non-fiction** - option in M.F.A., Creative Writing
- **Nonprofit Administration** - undergraduate minor

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O

- **Organic Chemistry** - option is M.S. and Ph.D., Chemistry
- **Organismal Biology and Ecology** - M.S., Ph.D.
- **Organizational Communication** - option in B.A., Communication Studies

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P

- **Paralegal Studies** - A.A.S.
- **Performance** -option in M.M., Music
- **Pharmaceutical Sciences** - M.S.
- **Pharmacology** - option in B.S., Chemistry
- **Pharmacy** - Pharm.D.
- **Pharmacy Technology** - certificate
- **Philosophy** - B.A., M.A., undergraduate minor
- **Photojournalism** - option in B.A. in Journalism and M.A., Journalism
- **Physical Chemistry** - option in M.S. and Ph.D., Chemistry
- **Physical Geography** - option in B.A., Geography
- **Physical Therapy** - D.P.T.
- **Physical Therapy and MBA** - dual degree program, D.P.T., M.B.A
- **Physics** - B.A., undergraduate minor, teacher preparation
- **Poetry** - option in M.F.A., Creative Writing
- **Political Science** - B.A., M.A., undergraduate minor, teacher preparation
- **Political Science-History** - B.A., teacher preparation
- **Power Generation** - option in A.A.S., Diesel Technology
- **Practical Nursing** - A.A.S.
- **Pre-Engineering** - non-degree advising program
- **Pre-Law** - non-degree advising program
- **Pre-Medical Sciences** - non-degree advising program
- **Pre-Nursing** - non-degree advising program
- **Print** - option in B.A. in Journalism and M.A., Journalism
- **Psychology** - B.A., M.A., Ph.D., undergraduate minor, teacher preparation
- **Public Administration** - M.P.A., option in B.A., Political Science
- **Public Administration and LAW** - dual degree program, M.P.A., J.D
- **Public Health** - certificate; M.P.H.

- **Public Law** - option in B.A., Political Science
- **Pure Mathematics** - option in B.A., Mathematics

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R

- **Radio-Television** - B.A. in Radio-Television; option in M.A., Journalism
- **Radiologic Technology** - A.A.S.
- **Range Resources Management** - option in B.S. in Forestry
- **Reading** - teacher preparation
- **Recreation Management** - B.S. in Recreation Management, M.S.
- **Recreation Resources Management** - option in B.S. in Recreation Management.
- **Recreational Power Equipment** - certificate
- **Registered Nursing** - A.S.
- **Religious Studies** - B.A.
- **Research** - option in B.A., Psychology
- **Resource Conservation** - B.S. in Resource Conservation, M.S.
- **Respiratory Care** - A.A.S.
- **Rhetoric and Public Discourse** - option in B.A., Communication Studies
- **Rural and Environmental Change** - option in B.A. and M.A., Sociology
- **Russian** - B.A., undergraduate minor, teacher preparation
- **Russian Studies** - undergraduate minor

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S

- **Sales and Marketing** - certificate; option in A.A.S., Management
- **School Counseling** - option in M.A., Counselor Education
- **School Psychology** - M.A., Ed.S.; option in Ph.D., Psychology
- **Science** - teacher preparation
- **Secondary Education** - option in M.Ed., Curriculum and Instruction
- **Social Science, Comprehensive** - teacher preparation
- **Social Work** - B.A., M.S.W.
- **Sociology** - B.A., M.A., undergraduate minor, teacher preparation
- **Spanish** - B.A., option in M.A., Modern Languages and Literatures, undergraduate minor, teacher preparation
- **Special Education** - teacher preparation
- **Speech and Language Pathology** - M.A.
- **Statistics** - option in B.A., Mathematics
- **Surgical Technology** - A.A.S.

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T

- **Technical Communication** - M.S., certificate program
- **Terrestrial** - option in B.S. in Wildlife Biology, Wildland Restoration
- **TESOL/Applied Linguistics** - certificate program
- **Toxicology** - M.S., Ph.D.

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V

W

- **Welding Technology** - Certificate; A.A.S.
- **Wilderness Studies** - undergraduate minor
- **Wild Land Restoration** - B.S., undergraduate minor
- **Wildlife Biology** - B.S. in Wildlife Biology, M.S., undergraduate minor
- **Women's and Gender Studies** - option in B.A., Liberal Studies; undergraduate minor

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These videos were produced by Chisel Industries for the University of Montana. To view the videos, make sure that you have enabled javascript in your web browser. Adobe Flash Player 9 is also required. You may download it here.

General Admission Information

Achievement Tests (ACT/SAT)

The results of the American College Test (ACT) or the Scholastic Aptitude Test (SAT) must be requested directly from the testing company or may be posted on the high school transcript. They are used for admission and academic advising, for the granting of scholarships, and for admission into the Davidson Honors College. All new undergraduate degree students, both freshmen and transfers, who have attempted or earned fewer than 12 college credits must take the ACT or the SAT. Arrangements should be made to take the test in October or December of the year preceding entrance to the University. Complete information and registration forms are sent to all high school counselors well in advance of each test date. Information may also be obtained from the American College Testing Program, P.O. Box 168, Iowa City, Iowa 52240 or the College Board ATP, Box 592, Princeton, New Jersey 08540.

Students must have taken the test in order to be considered for admission. Students who have a disability which would hamper them in taking the ACT or SAT test will need to make special arrangements for accommodation.

If the high school graduation date is more than three years prior to the term in which the student intends to enroll, an ACT or SAT score is not required but is strongly encouraged.

Advanced Placement (AP) Program/College Level Examination Program (CLEP)

College credit may be granted based on achievement in college level high school courses, provided the University has received satisfactory scores from the College Level Entrance Examination Program (CLEP) or the Advanced Placement Program (AP) examinations.

It should not be assumed that credit granted by other colleges/universities would be allowed by UM. Specific questions regarding the Advanced Placement Program should be directed to Enrollment Services-Admissions.

The University policy for awarding credit on the basis of AP/CLEP is available at:

http://admissions.umt.edu/apcredit.html and http://admissions.umt.edu/clep.html.

International Baccalaureate

The University of Montana recognizes IB achievement and grants college credit provided the University has received satisfactory scores from the International Baccalaureate Program. University policy on awarding IB credit can be found at http://admissions.umt.edu/admissions/ib.html.

Foreign Language Placement

Transfer credit is not granted for high school foreign languages. Placement testing is done by the Department of Modern and Classical Languages and Literatures to determine appropriate class placement for entering students.

Immunization Requirements

Montana state law requires postsecondary students to provide proof of immunization. Students must complete the **Pre-Registration Immunization Requirements** form and return the form to the Curry Health Center prior to orientation and registration.

Registration cannot be completed without this documentation. A Pre-Registration Immunization Requirements form is sent with the admission acceptance letter. For additional information, visit www.umt.edu/curry.

High School Pilot Program

Area high school students can enroll in University classes under this program. High school students earn college credit, receive an early introduction to University opportunities and are able to develop skills and knowledge beyond the high school level. For more information, contact the Coordinator of the High School Pilot Program, Enrollment Services-Admissions, Lommasson Center 103, The University of Montana-Missoula, Missoula, MT 59812 or phone (406) 243-6266. For opportunities in the College of Technology, phone (406) 243-7828.

International Student Exchange Program (ISEP)

The University of Montana is a member of the International Student Exchange Program (ISEP), which allows University of Montana

students to spend a semester, a year, or a summer abroad at ne of ISEP's 126 member institutions in 35 foreign countries. ISEP offers reciprocal exchanges (students pay their home tuition, room and board, and create a space for an incoming international student) and ISEP-Direct programs (students pay a program fee covering tuition, room and board through the University of Montana to ISEP). Other expenses for which the student is responsible include: books and supplies, local transportation, round-trip airfare, or personal expenses.

For information on ISEP, please contact International Programs, International Center, The University of Montana-Missoula, Missoula, MT 59812 or phone (406) 243 2288.

National Student Exchange (NSE)

The University of Montana-Missoula participates in the National Student Exchange (NSE) program with 190 other state colleges and universities. This program offers students the opportunity to become better acquainted with different social and educational patterns in other areas of the United States. NSE encourages students to experience new life and learning styles, appreciate differing cultural perspectives, learn more about themselves and others and broaden their educational backgrounds through specialized courses or unique programs which may not be available on the home campus. The qualified student may travel to another state and participate in the exchange program for up to one academic year. For more information, contact the Coordinator of the National Student Exchange Program, Enrollment Services-Admissions, Lommasson Center 101, The University of Montana-Missoula, Missoula, MT 59812 or phone (406) 243-6266.

Special Admission Committee

A special admission committee reviews applications from students who do not meet the regular admission standards.

Enrollment Limitation

The University of Montana-Missoula may deny or condition admission, readmission, or continuing enrollment of any individual who, in the judgment of the University, presents an unreasonable risk to the safety and welfare of the campus and persons thereon. In making such judgment, the University may, among other things, take into account the individual's history and experience relative to (a) violence and destructive tendencies, (b) behavior on other college campuses, and (c) any rehabilitative therapy the individual may have undergone.

The University of Montana-Missoula adopts the following Admission Review Procedures:

The Assistant Vice President for Enrollment, the Dean of the Graduate School or the Chair of the Admissions Committees of the various professional schools at The University of Montana-Missoula shall be responsible for the administration of the Admissions Review procedures established to implement Board of Regents policy. When the responsible admissions officer has reason to believe an applicant may present an unreasonable risk to the safety and welfare of the campus and persons thereon, additional information regarding the applicant's background and experiences shall be requested. No applicant's admission may be barred automatically, solely by reason of a criminal conviction, if state supervision has terminated, or solely by reason of a youth court adjudication. The responsible admissions officer may request additional information in the following instances: (1) When an applicant has been convicted of a felony; (2) When an applicant has been adjudicated as a danger to others or to self; (3) When an applicant has been suspended or expelled for disciplinary reasons from other educational institutions, either before or after the applicant has been accepted at The University of Montana-Missoula; (4) When, on the basis of other facts, the Assistant Vice President for Enrollment or other responsible officer has reason to believe an applicant may present an unreasonable risk to the safety and welfare of the campus and persons thereon.

After obtaining additional information, the responsible admissions officer may admit the applicant or refer the application to the Admissions Review Committee for review and recommendation.

Evaluation of Transfer Credits

Evaluation of transfer credits is determined by Enrollment Services-Admissions at the time of admission. The evaluation is included in the acceptance packet and in the advising materials distributed during orientation. All college-level credits from regionally accredited colleges and universities will be accepted for transfer. Credits from colleges or universities that are candidates for regional accreditation will be accepted only after the student has successfully completed twenty semester credits at UM. Course work fro unaccredited schools is not accepted or evaluated unless an individual exception is requested by the student and approved by a committee composed of the Academic Vice President, Assistant Vice President for Enrollment and the Registrar.

Enrollment Services-Admissions determines whether or not courses are college-level, the appropriate grading and credit conversion and the applicability of the transfer courses to UM's general education requirements. Transfer courses graded C- or above will count toward general education and major requirements. Transfer courses with grades of D or D- transfer as elective credit. The student's major department may further evaluate the applicability of transfer courses to the student's selected program of study. College-level courses which do not have and equivalent at UM will be accepted as elective credits.

Courses earned in vocational-technical courses from regionally accredited schools are not accepted in transfer toward an A.A. or baccalaureate program with the exception of the Bachelor of Applied Science degree. Students may petition their major department for acceptance of up to 10 semester credits based on vocational-technical experiences which enhance the major program. The petition form is available from the Registrar's Office. Upon approval, the petition is an agreement between the institution and the student that the credits apply toward graduation requirements provided the student retains his or her major in the same field. Should the student elect to change majors, the same procedure must be followed with the new department. This petition process may be used by students who have taken technical courses from the College of Technology. UM technical courses are designated by a course number suffix of "T."

Elective credit may be given for military courses according to the recommendations in the American Council (ACE) Service Guide. Elective credit may also be given for training programs recommended by the ACE Guide.

The University of Montana database of courses transferable from colleges and universities is available on the web at www.umt.edu. Choose "T" from the 'A-Z Index' and click on Transfer Credit Information.

Students who wish to appeal a decision regarding acceptance of transfer credit should contact Enrollment Services-Admissions to receive information on the appeal process.

Evaluation of Transfer Credit-College of Technology

College of Technology students must submit official transcripts for evaluation. If a student feels that a course taken at another institution may substitute for a specific College of Technology course, the evaluation will be done by the associate dean and the chair of the department of the equivalent course. Courses in which a grade lower than "C" was earned, internship, clinical practice, and some laboratory courses will not be considered for transfer credit.

Western Interstate Commission for Higher Education

The Western Interstate Commission for Higher Education's Professional Student Exchange Program enables students in thirteen western states to enroll in out of state professional programs when those programs are not available in their home states. Exchange students receive preference in admission. They pay reduced levels of tuition: for most students, resident tuition in public institutions or reduced standard tuition at private schools. The home state pays a support fee to the admitting schools to help cover the cost of students' education.

The following professional programs are not available in Montana but are supported by the Montana WICHE program. They are dentistry, medicine, occupational therapy, optometry, osteopathic medicine, podiatry, public health and veterinary medicine.

The Certifying Officer for the State of Montana can be contacted for specific details about the program. WICHE Student Exchange Program, Montana University System, 2500 Broadway, Helena, MT 59620. (406)444-6570 or Fax: (406) 444-1469.

Western Undergraduate Exchange Program (WUE)

The Western Undergraduate Exchange (WUE) program at The University of Montana-Missoula is administered as a competitive academic merit based scholarship program. The scholarship is limited to students who are legal residents of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington and Wyoming.

Only first time incoming freshman and new transfer students are eligible to apply for a WUE scholarship.

The amount of the WUE scholarship will represent 150% of Montana resident tuition. Therefore, the WUE scholarship will enable recipients to pay the equivalent of 150 percent of Montana resident tuition rather than the full non-resident tuition and fees.

The WUE scholarship will automatically be renewed each semester providing recipients follow the conditions of the WUE Scholarship.

The conditions of the WUE Scholarship are:

- The scholarship is in effect for four years or until completion of a bachelor's degree (120 credits), whichever come first.
- Recipients may not change their state of legal residence. Recipients must maintain legal residence in a participating WUE state.
- Recipients must maintain a 3.0 grade point average to maintain the scholarship.
- Recipient must enroll as a full-time student (15 or more credits) for each consecutive term of enrollment.

Time as a WUE scholarship recipient cannot be used toward fulfilling Montana state residency requirements for fee purposes at any unit of the Montana University System.

To be eligible for the WUE scholarship first time incoming freshman and transfer students must apply for admission and be admitted to The University of Montana. Awarding of the WUE will occur on a rolling basis with priority given to those who apply before December 31st. Further details are available from the Enrollment Services-Admissions Office or by visiting http://admissions.umt.edu..

Student Conduct Code

The Student Conduct Code, embodying the ideals of academic honesty, integrity, human rights and responsible citizenship, governs all student conduct at The University of Montana-Missoula. Student enrollment presupposes a commitment to the principles and policies embodied in this Code.

The Student Conduct Code sets forth University jurisdiction, student rights, standards of academic and general student conduct, disciplinary sanctions for breach of the standards of student conduct and procedures to be followed in adjudicating charges of both academic and general misconduct.

The Vice President for Student Affairs is responsible for procedural administration of the Student Conduct Code for all general conduct. The Provost and Vice President for Academic Affairs is responsible for all academic conduct.

Copies of the Student Conduct Code can be obtained from the offices of the Vice President for Student Affairs, the Provost and Vice President for Academic Affairs, Residence Life, and Associated Students of The University of Montana-Missoula (ASUM). The Student Conduct Code also can be accessed from the internet at http://life.umt.edu/VPSA/name/StudentConductCode.

Servicemembers Opportunity College

The University is a member of Service members Opportunity Colleges, a consortium of over 1300 institutions pledged to be reasonable in working with service members and veterans trying to earn degrees.

General Education

Preamble

The University of Montana-Missoula's General Education Program provides a broad academic base that supports both undergraduate learning at The University of Montana-Missoula and continued learning following graduation. While the General Education Program offers students considerable flexibility in selecting courses, it has a set of common educational objectives for all students.

In accordance with the mission of The University of Montana- Missoula, these objectives are to develop competent and humane individuals who are informed, ethical, literate, and engaged citizens of local and global communities. Students should become acquainted with issues facing contemporary society, participate in the creative arts, develop an understanding of science and technology, cultivate an appreciation of the humanities, and examine the history of different American and global cultures. Upon completion of the general education requirements students should be able to articulate ideas orally and in writing, understand and critically evaluate tangible and abstract concepts, and employ mathematical and other related skills appropriate to a technologically focused society.

In summary, the General Education Program is designed to provide a high quality intellectual foundation that accommodates all UM students whether in liberal arts or professional programs. This foundation will be reinforced, expanded, and refined as students continue through their course of study. Students are encouraged to prepare for productive roles in their chosen fields by cultivating civic awareness vital to the greater community and a democratic society. The acquired skills will allow students to examine critically the human experience and achieve genuine confidence in their knowledge and abilities. For the General Education Program to accomplish its goals, students must assume primary responsibility for their growth and education.

General Education Requirements

To earn a baccalaureate degree, all students must complete successfully, in addition to any other requirements, the following General Education Requirements. (Students who have completed an approved lower-division general education program at an approved Montana institution of higher education should refer to the catalog section on General Education for Transfer Students

All courses taken to satisfy General Education Requirements must be taken for a traditional letter grade and must be C- or better.

Students are cautioned that approved courses may change from year to year. **To be used for General Education credit, a course must be listed as approved in the Class Schedule for the semester a student registers for it.**

Group I: English Writing Skills	Credits
	0-3
1. Composition course WRIT 101 or 201(ENEX 101, WTS 101, ENEX 200) or an equivalent	3
2. One designated Writing Course	0
3. Take and pass the Writing Proficiency Assessment (WPA)	1-3
4. Upper-Division Writing Requirement (as specified by major department)	
Group II: Mathematics	3
Group III: Modern and Classical Languages or Symbolic Systems	0-10 or 3-6
A two semester language sequence is the default option (test out provisions apply). Students in majors granted exceptions may substitute a symbolic systems course or courses. The list of programs granted exceptions and their alternative options are found in the listing of those majors.	
Group IV: Expressive Arts	3
Group V: Literary and Artistic Studies	3
Group VI: Historical and Cultural Studies	3
Group VII: Social Sciences	3
Group VIII: Ethics and Human Values	3
Group IX: American and European Perspectives	3
Group X: Indigenous and Global Perspectives	3
Group XI: Natural Sciences	6
One Natural Science course must include a laboratory experience.	
Total	*28-49

*Some courses satisfy more than one group (see list at the end of this section).

Group I: English Writing Skills

The ability to write effectively is fundamental to success in academic, professional, and civic endeavors. Specifically, a student should be able to:

- Use writing to learn and synthesize new concepts;
- Produce focused writing that is developed, logical, and organized;
- Compose written documents that are appropriate for a given audience, purpose, and context;
- Revise written documents based on constructive feedback;
- Develop competence in information literacy, information technology and digital literacy;
- Use discipline-specific style and citation conventions;
- Demonstrate appropriate English language usage.

Students must satisfy the following four requirements **in order:**

1. Composition course WRIT 101 or 201 (ENEX 101, WTS 101, ENEX 200) or an equivalent;
2. One approved writing course;
3. The Upper-Division Writing Proficiency Assessment (WPA), to be taken between 45-70 credits;
4. The upper-division writing requirement for the major.

Composition Course All students must complete WRIT 101 or 201 (ENEX 101, WTS 101, ENEX 200), or an equivalent composition course with a grade of C-minus or better. Students with Language and Composition AP scores of 4 or better are exempted from this requirement.

Entering students are placed into WRIT 095, WRIT 101 or WRIT 201 (WTS 100D, WTS or ENEX 101, or ENEX 200) based on their standardized test scores. Students placed into WTS 100D are provided an opportunity to challenge their placement with specific scores. Students placing into WRIT 201 (ENEX 200) may choose to take WRIT 101 (ENEX 101) instead.

One Writing Course All students, unless exempted, must pass an approved writing course (chosen from the following list of approved courses) before attempting the WPA. Students are exempted from this requirement by transferring more than 27 semester credits at the time of their initial registration at the University.

Upper-Division Writing Proficiency Assessment (WPA) All students (including transfer students) who have completed the composition course requirement, the writing course requirement (unless exempted), and at least 45 semester credits must take the WPA.
The WPA consists of a two-hour proctored examination written in response to a text released two weeks prior to the examination date. The assessment is offered six times annually. Information on the assessment and copies of the text are available at:
http://umt.edu/writingcenter/upperdivisionwritingproficiencyexam.htm

Students must pass the WPA in order to graduate. The assessment is designed to ensure that the student is prepared for the writing required in upper-division major courses. Students are advised to satisfy the writing proficiency assessment prior to completing the upper-division writing requirement in their major.

Students should note the following:

- Students must take the assessment after 45 but no later than 70 credits.
- Transfer students may take the assessment concurrently with either their writing course or the writing requirement(s) in their major.

Upper-Division Writing Requirement All students must meet the approved upper-division writing requirements specified by their majors Students should seek specific information about the upper-division writing requirements in their major in the section of the catalog where information about their chosen major is given.

Students cannot use the same writing course to meet both the approved writing course requirement and the upper-division writing requirement.

The following courses are designated as approved writing courses for 2009-2010. Students are cautioned that approved courses may change from year to year. To be used for General Education, a course must be listed as approved in the catalog and in the Class Schedule for the semester a student registers for it.

AAS 372	African American Identity
AAS 450	Prayer and Civil Rights
AASC 167H	Nature and Society
ART 203L	Introduction to Art Criticism
ART 303L	Contemporary Art and Art Criticism
ART 368	Latin American Art
ART 384	Renaissance Art

C&I 287	Business Communication
COMM 410	Communication in Personal relationships
CRT 122E	Ethics and Information Technology
DRAM 320	Theatre History
ECNS 317 (ECON 350)	Economic Development
ECNS 433 (ECON 440)	Economics of the Environment (Environmental Economics)
ENEX 200	Advanced Composition
HC 121L	Ways of Knowing
HSTR 300 (HIST 300)	The Historian's Craft
JOUR 270	Reporting
LIT 110 (ENLT 120L)	Introduction to Literature (Introduction to Critical Interpretation)
LIT 120L (ENLT 121L)	Poetry (Introduction to Poetry)
LIT 201L (ENLT 201)	Introduction to Literary Studies
LIT 210L (ENLT 224L)	American Literature I (American Literature to 1865)
LIT 211L (ENLT 225L)	American Literature II American Literature: 1865 to Present
LIT 220L (ENLT 217L)	British Literature: Medieval through Early Modern
LIT 221L (ENLT 218L)	British Literature: Enlightenment to Romantics
LIT 222L (ENLT 219L)	British Literature: Victorian to Contemporary
LS 151L/152L	Introduction to the Humanities
MCLG 251L	The Epic
MUS 325H	History of Music II
NAS 200	Native American Studies Research and Writing Methods
NAS 202X	Oral and Written Traditions of Native America
PHIL 300E	Moral Philosophy
RTV 280	Reporting for Broadcast
UNC 270	Critical Writing II
WBIO 245	Science Writing
WRIT 120L (WTS 121L)	Poetry (Introduction to Poetry)
WRIT 121 (WTS 115)	Introduction to Technical Writing (Technical Writing)
WRIT 222 (FOR 220)	Technical Approach to Writing (Technical Writing)
WRIT 240E (WTS 240E)	Ethics and Rhetoric: Writing Arguments on Contemporary Issues
WRT 110 (WTS 120L)	Introduction to Literature Introduction to Critical Interpretation

The following courses are approved as meeting the criteria for the **upper-division writing requirement.** Students should consult with their advisor regarding the requirement specified by their major.

ANTH 314	Principles of Forensic Anthropology
ANTH 402	Advanced Anthropological Statistics
ANTH 450	Archaeological Theory (2/26/09 follow-up: MacDonald)
ANTH 451	Cultural Resource Management
ANTH 455	Artifact Analysis
BIOL 304	Ornithology
BIOL 306	Mammalogy
BIOL 341	Ecology Lab
BIOL 366	Freshwater Ecology
C&I 318	Teaching Language Arts
CHMY 302	Chemical Literature and Scientific Writing

(CHEM 334)	
COMM 377	Rhetoric, Nature, Environmentalism
COMM 455	Rhetorical Criticism and Theory
COMM 480	The Rhetorical Construction of "Woman"
COMM 481	The Rhetoric of U.S. Women's Activism, 1960 - present
CS 415	Computer Ethics and Society
CS 499	Senior Thesis/Project
CSD 430 & CSD 440	Senior Capstone I and II
DAN 494	Junior/Senior Dance Seminar
DRAM 321	Theatre History II
ECNS 488-489	Research Method & Thesis Design / Senior Thesis capstone
EVST 302	Introduction to Environmental Regulation
EVST 305L	The Environmental Vision
EVST 367	Environmental Politics and Policy
EVST 487	Globalization, Justice and the Environment
GEO 499	Senior Thesis
GEO 320N	Global Water Cycle
GPHY 433(GEOG 333)	Cultural Ecology
GPHY 335	Water Policy
GPHY 499	Undergraduate Thesis
HHP 301	Instructional Strategies in Secondary Physical Education
HHP 372	Rehab of Athletic Injuries
HHP 450	Analytical and Communication Techniques
HSTR 470(HIST 437)	The Dynamics of Diplomacy
IS 448	Management Game
JOUR 331	Public Affairs Reporting
JOUR 333	Magazine Freelance Writing
JOUR 415	Feature Writing
JPNS 311	Classical Japanese Literature in English Translation
JPNS 312	Japanese Literature from Medieval to Modern Times
JPNS 431	Postwar Japanese Literature
LING 473	Language and Culture
LING 484	North American Indigenous Languages and Linguistics
LIT 300 (ENLT 301)	Literary Criticism (Applied Literary Criticism)
LIT 301 (ENLT 323)	Studies in Literary Forms
LIT 304 (ENLT 327)	U.S. Writers of Color (Literature by US Writers of Color)
LIT 314 (ENLT 335)	The American Novel
LIT 315 (ENLT 331)	Voices of the American Renaissance
LIT 316 (ENLT 373)	Topics in Postcolonial Studies
LIT 327 (ENLT 320)	Shakespeare
LIT 331 (ENLT 321)	Major Author/s (Studies in a Major Author)
LIT 335 (ENLT 336)	Women and Literature (American Women Writers)
LIT 342 (ENLT 338)	Montana Writers (Montana Literature)
LIT343 (ENLT 337)	African American Literature
LIT 353 (ENLT 353)	Milton
LIT355 (ENLT 355)	British Romanticism (British Romantic Literature)
LIT 362 (ENLT 334)	Postwar Poetry
LIT 369 (ENLT 369)	Short Fiction (Advanced Studies in the Novella and Short Fiction)
LIT 373 (ENLT 371)	Literature & the Environment
LIT 375 (ENLT 322)	Literary History (Studies in Literary History)
LIT 376 (ENLT 325)	Literature and Other Disciplines (Studies in Literature and Other Disciplines: The Bible as Literature)
LIT 494 (ENLT 401)	Seminar: Literature Capstone (Capstone Seminar in Literature)
MATH 499	Senior Thesis
MATH 406	History of Mathematics
MCLG 494	Seminar in Russian Studies
MGMT 444	Management Communications
MGMT 445	Small Business Management and Strategic Planning
MGMT 446	Strategic management
MUS 424	Music of the 20th Century to the Present
MUS 436	Topics in Music History
MUS 437	Cultural Studies in Music

NAS 494	Capstone Reading Course
PHAR 550	Drug Literature Evaluation
PHIL 480	Senior Seminar
PHYS 330	Methods of Communicating Physics
PSCI 400	Advanced Writing in Political Sciences
PSYX 400	History and Systems of Psychology
PSYX 320 (PSYC 320)	Research Methods III (Advanced Psychological Research Methods)
RECM 451	Tourism and Sustainability
RECM 482	Wilderness and Protected Area Management
RTV 360	Advanced Broadcast Reporting
RTV 361	Newscast Reporting and Producing
RTV 494	Senior Seminar
SOC I 441	Capstone: Inequality and Social Justice
SOCI 438	Seminar in Crime and Deviance
SOCI 460	Capstone in Rural & Environmental Change
SOCI 488	Religion and Political Movements
SW 310	Social Welfare Policies and Services
WBIO 408	Advanced Fisheries Science
WBIO 470	Conservation of Wildlife Populations
WBIO 497	Senior Thesis

***Note: For Academic Year 2009-2010 ONLY, students planning to graduate by satisfying general education requirements under previous catalogs may use courses from the following list for to satisfy the Writing requirement (in addition to any courses in the preceding list).**

ANTH 340H, 359

AS 340, 432

CHIN 315L, 432

COMM 410, 421, 422, 424

FOR 340

GERM 303H

HIST/ GEOG 401 (HSTA 462/GPHY 442)

LS 315L, 321H

MAR 450

MCLG 330, 432

MGMT 348

MKTG 461

NAS 329

NAS 403

PHIL 461

PSC 300

Group II Mathematics

Mathematical literacy implies an appreciation of the beauty of mathematics, an ability to apply mathematical reasoning, and an understanding of how mathematics and statistics are used in many arenas. Mathematical literacy may be attained through the study of the properties of numbers, mathematical modeling, geometry, data analysis and probability, with the overarching goal of learning mathematical reasoning and problem solving

Mathematical literacy cannot be achieved in a single course. However, for the purposes of general education, the mathematical literacy

requirement can be met by any one of the following:

1) achieving a grade of C-or better in one of the following courses which address different aspects of mathematical literacy: Math 105 (107), 104 (109), 121 (111), 122 (112), 115 (117), 151 (121), 135 (130), or a mathematics course of 3 or more credits for which one of these is a prerequisite.

2) achieving a score of 50 or better on the CLEP College Algebra Test, the CLEP College Precalculus Test, or the CLEP College Mathematics Test.

3) passing the Mathematical Literacy Examination administered by the Department of Mathematical Sciences. To qualify to take the Mathematical Literacy Examination, a student must have achieved a score of 630 or better on the SAT Math exam or a score of 28 or better on the ACT Math exam. A student may take the Mathematical Literacy Examination only once. Further details are available from the Department of Mathematical Sciences.

Students must complete the mathematical literacy requirement by the time they have earned 30 credits; if not, they must register for a mathematical sciences course every semester until they have completed the requirement. Because many other courses at the university assume some mathematical literacy, it is strongly recommended that all students complete their mathematical literacy requirement as soon as possible.

Upon completion of the mathematical literacy requirement, a student will be able to effectively apply mathematical or statistical reasoning to a variety of applied or theoretical problems.

Group III: Modern and Classical Language

Students must complete successfully the second semester of a Modern and Classical Language at the University of Montana. Courses encompass the comprehensive study of a natural language other than written or spoken contemporary English.

Upon completion of the Modern and Classical Languages sequence, students will have a basic functional knowledge of a second natural language sufficient to:

1. read and write if the language is classical, such as Latin;
2. speak and aurally comprehend, if the language does not have a written tradition, such as Salish;
3. perform all four skills (speaking, aural comprehension, reading, and writing) if the language is modern and has a written tradition, such as Japanese or French.
4. demonstrate both receptive (visual comprehension) and expressive (manual production) proficiency if the language is American Sign Language.

ARAB 101	Elementary Modern Arabic I (Elementary Standard Arabic)
ARAB 102	Elementary Modern Arabic II (Elementary Modern Standard Arabic)
CHIN 101	Elementary Chinese I
CHIN 102	Elementary Chinese II
FRCH 101 (FREN 101)	Elementary French I
FRCH 102 (FREN 102)	Elementary French II
GRMN 101 (GERM 101)	Elementary German
GRMN 102 (GERM 102)	Elementary German
GRK 101	Elementary Greek I
GRK 102	Elementary Greek II
ITLN 101 (ITAL 101)	Elementary Italian I
ITLN 102 (ITAL 102)	Elementary Italian II
JPNS 101	Elementary Japanese I
JPNS 102	Elementary Japanese II
LATN 101 (LAT 101)	Elementary Latin
LATN 102 (LAT 102)	Elementary Latin
RUSS 101	Elementary Russian I
RUSS 102	Elementary Russian II
SPNS 101	Elementary Spanish

(SPAN 101)	
SPNS 102 (SPAN 102)	Elementary Spanish
*ENIR 101	Elementary Irish One
*ENIR 102	Elementary Irish Two
* ENIR 103	Elementary Irish Three

* Three 3 credit courses of Irish are required to fulfill the general education requirement

- Students may satisfy the requirement by demonstrating equivalent skill in any of these or other languages in testing administered by the Department of Modern and Classical Languages and Literatures.

- International students from non English speaking countries may satisfy this requirement by presenting a TOEFL score of 580 or greater, or by successful completion of ESL/LING 250 or 450, or by presenting a department approved application for degree.

Group III: Exceptions to the Modern and Classical Language requirement - Symbolic Systems

The majors listed below have been granted exceptions to the Modern and Classical Language requirement. Students graduating in any one of these majors may substitute the symbolic system course or courses designated by the major.

Each of these courses presents the foundations of a symbolic system, defined as a relationship that maps real-world objects, principles and doctrines with abstractions of the real-world.

Symbolic systems facilitate communication in specialized ways but do not comprise a spoken or written language by which members of a culture typically communicate with each other.

Upon completion of a symbolic systems course or courses, students will be able to:

1. demonstrate an understanding of the symbols and the transformations of the system
2. relay and interpret information in terms of the given symbolic system.
3. apply creative thinking using the symbolic system in order to solve problems and communicate ideas;

Major	**Symbolic Systems Course(s)**
Accounting & Finance	STAT 216 (MATH 241)
Anthropology	ANTH 401 or FOR 201 or STAT 216 (MATH 241) or SOCI 202 (SOC 202) or PSYX 222(PSYC 220)
Biochemistry Biochemistry / Health Profession Option	M171 (MATH 152) M162 (MATH 150)
Chemistry	One course in Mathematical Science at 162 (150) level or above
Communication Studies	STAT 216 (MATH 241) or PSYX 222 (PSYC 220) or SOCI 202 (SOC 202) or HHP 486
Computer Science	CS 131 and CS 132
Curriculum & Instruction	M136 (MATH 131)
Division of Biological Sciences	M162 (MATH 150) or M171 (MATH 152)
Economics	STAT 216 (MATH 241) and either M162 (MATH 150) or M171 (MATH 152) or M172 (MATH 153)
Forestry	M162 (MATH 150)
Geography	STAT 216 (MATH 241)
Geoscience	M162 (MATH 150) or M171 (MATH 152)
Health and Human Performance	C&I/HHP 486 or STAT 216 (MATH 241) or PSYX 222 (PSYC 220) or SOCI 202 (SOC 202) or WBIO 210
Management Information Systems	STAT 216 (MATH 241)
Management & Marketing	STAT 216 (MATH 241)
Mathematics or combined Mathematics / Computer Science	M171 (MATH 152), or any course for which it is a prerequisite
Music- Bachelor of Music Education Bachelor of Music in Composition/Music	MUS 111, 112, 137 & 138

Technology Bachelor of Music Specialization in Instrumental Performance Bachelor of Music Specialization in Piano Performance and Pedagogy Bachelor of Music Specialization in Piano Performance	
Pharmacy	M162 (MATH 150) and [STAT 216 (MATH 241) or PSYX 222 (PSYCH 220) or SOCI 202 (SOC 202)]
Psychology	PSYX 222 (PSYC 220)
Recreation Management	STAT 216 (MATH 241) or FOR 201 or SOCI 202 (SOC 202)
Resource Conservation	STAT216 (MATH 241) or WBIO 240 or FOR 201 or SOCI 202 (SOC 202)
Sociology	SOCI 202 (SOC 202) or PSYX 222 (PSYC 220) (for double majors) or STAT 216 (MATH 241)
Wildland Restoration	[M162 (MATH 150) or M171(MATH 152)] and [FOR 201 or WBIO 240 or STAT 216 (MATH 241)]
Wildlife Biology	M162 (MATH 150) or higher and WBIO 240 or two Math courses 162 (150) and Higher

Students are advised that most courses meeting the symbolic systems exception have prerequisites, as indicated in the chart below:

Course	**Title**	**Pre-requisite(s)**
ANTH 401	Anthropological Data Analysis	College algebra or consent of instructor
CS 131	Fundamentals of Computer Science I	Computer programming experience in a language such as BASIC, Pascal, C, etc.; coreq., M 095 D (MAT 100D) or consent of instr. CS 102 highly recommended as prereq. or coreq
CS 132	Fundamentals of Computer Science II	CS 131; coreq., M151 (MATH 121) or consent of instr
C&I 486	Statistical Procedures in Education	M 115 (MATH 117) or equiv. or consent of instr
FOR 201	Forest Biometrics	M 115 (MATH 117) or M 151 (MATH 121) or equivalent
HHP 486	Statistical Procedures in Education	M 115 (MATH 117) or equiv. or consent of instr
M 136 (MATH 131)	Mathematics for K-8 Teachers II	M 135 (MATH 130)
M 162 (MATH 150)	Applied Calculus	Appropriate placement score or one of M 121, 122, or 151 (MATH 111,112 or 121)
M171 (MATH 152)	Calculus I	M 122 or 151 (MATH 112 or 121) or appropriate placement score
STAT 216 (MATH 241)	Statistics	M 115 (MATH 117) or consent of instructor
STAT 451 (MATH 444)	Statistical Methods	One year of college mathematics including M 115 (MATH 117) or equiv. course in probability or consent of instr
MUS 111	Theory I	Coreq., MUS 137
MUS 112	Theory II	MUS 111
MUS 137	Aural Perception I	Coreq., MUS 111
MUS 138	Aural Perception II	MUS 137
MUS 162	Language of Music II	MUS 161
PSYX 222 (PSYC 220)	Psychological Statistics	PSYX 100S, 120: M 115, 162, or 171 (MATH 117, 150 or 152)
SOCI 202 (SOC 202)	Social Statistics	M 115 (MATH 117) or consent of instructor

WBIO 240	Introduction to Biostatistics	Calculus and consent of instructor

Group IV: Expressive Arts (A)

Expressive Arts courses are activity-based and emphasize the value of learning by doing in an artistic context. Upon completion of an Expressive Arts course, students will be able to express themselves in the making of an original work or creative performance; understand the genres and/or forms that have shaped the medium; and critique the quality of their own work and that of others.

ART 101A	Visual Language: Drawing
ART 102A	Visual Language: 2-D Design
ART 103A	Three Dimensional Fundamentals
ART 129A	Ceramics for Non-Majors
ART 314A	Elementary School Art
ART 324A	Drawing Studio Seminar
COM 160A	Oral Communication
COM 217A	Oral Interpretation of Literature
COMM 111A	Introduction to Public Speaking
DAN 100A	Modern Dance I
DAN 104A	Ballet I
DAN 107A	Jazz Dance I
DAN 108A	Dance Forms I
DAN 200A	Modern Dance II
DAN 201A	Beginning Composition
DAN 204A	Ballet II
DAN 207A	Jazz Dance II
DRAM 103A	Introduction to Theatre Design
DRAM 106A	Theatre Production I: Running Crew
DRAM 107A	Theatre Production I: Construction Crew
DRAM 111A	Acting for Non - Majors
DRAM 112A	Acting for Non - Majors II
DRAM 216A	Production Acting I
ENCR 210A	Introduction to Creative Writing: Fiction
ENCR 211A	Introduction to Creative Writing: Poetry
ENCR 212A	Introduction to Creative Writing: Nonfiction
ENCR 312A	Creative Writing: Nonfiction
EVST 373A	Nature Works
MAR 111A	Integrated Digital Art
MAR 112A	Intro to Non-Lin Editing
MUS 100A	Performance Study
MUS 104A	Marching Band
MUS 107A	Choral Ensembles
MUS 108A	Orchestras
MUS 110A	Concert Bands
MUS 113A	Opera Theatre
MUS 114A	UM Jazz Bands
MUS 115A	Piano In Class I
MUS 116A	Piano In Class II
MUS 118A	Singing for Non-Majors
MUS 147A	Beginning Folk Guitar
MUS 150A	Chamber Ensembles
WRIT 184A (WTS 184A)	Beginning Creative Writing: Multiple Genres
WRIT 185A (WTS 185A)	Beginning Creative Writing: Fiction
WRIT 186A (WTS 186A)	Beginning Creative Writing: Poetry

Group V: Literary and Artistic Studies (L)

In these courses, students develop familiarity with significant works of artistic representation, including literature, music, visual art, and/or performing arts. Through this experience, students enhance their analytical skills and explore the historical, aesthetic, philosophical, and

cultural features of these works.

Upon completion of a Literary and Artistic Studies course, students will be able to:

1. analyze works of art with respect to structure and significance within literary and artistic traditions, including emergent movements and forms; and
2. develop coherent arguments that critique these works from a variety of approaches, such as historical, aesthetic, cultural, psychological, political, and philosophical.

ART 100L	Art Appreciation
ART 203L	Introduction to Art Criticism
DAN 234L	Dance in Cinema
DAN 335L	World Dance
DRAM 101L	Theatre Appreciation
DRAM 220L	Dramatic Literature (Script Analysis)
ENCR 110L	Montana Writers Live!
ENFM 180L	Introduction to Film
EVST 305L	Environmental Vision
HC 121 L	Ways of Knowing
LIT 110L (ENLT 120L/ WTS 120L)	Introduction to Literature (Introduction to Critical Interpretation)
LIT 120L (ENLT 121L/ WTS 121L)	Poetry (Introduction to Poetry)
LIT 210L (ENLT 224L)	American Literature I American Literature to 1865
LIT 211L ENLT 225L	American Literature II American Literature since 1865
LIT 220L (ENLT 217L)	British Literature: Medieval to Renaissance
LIT 221L (ENLT 218L)	British Literature: Enlightenment to Romanticism
LIT 222L (ENLT 219L)	British Literature: Victorian to Contemporary
LIT 270L (ENLT 227L)	Film and Literature (Film as Literature, Literature as Film)
LIT 342L (ENLT 338L)	Montana Writers (Montana Literature)
LIT 349L (ENLT 349L)	Medieval Literature
LIT 350L (ENLT 350L)	Chaucer
LIT 378L (ENLT 372L)	Gay and Lesbian Studies
GRMN 322L (GERM 222L)/ LS 282L	The German Cinema
LS 151L	Introduction to Humanities
LS152L	Introduction to Humanities
LS 327L	Gender and Sexuality in English Fiction
MAR 101L	Intro to Media Arts
MCLG 155L	Survey of Classical Literature
MCLG 160L	Classical Mythology
MCLG 251L	The Epic
MCLG 252L	Greek Drama: Politics on Stage
MCLG 313L	Classical Chinese Poetry in Translation
MCLG 314L	Traditional Chinese Literature (Traditional Chinese Literature in English Translation)
MCLG 332L	Introduction to Multicultural Literature in Germany
MUS 132L	History of Jazz
MUS 133L	History of Rock and Roll
MUS 134L	The Art of Western Music
MUS 135L	Introduction to Music Literature

RUSS 312L (RUSS 307L)/ MCLG/ LS 307L	Russian Literature II (Introduction to 19th Century Russian Literature)
RUSS 313L (RUSS 307L)/ MCLG 307/LS 307L	Russian Literature III (Introduction to 20th Century Russian Literature)

Group VI: Historical and Cultural Studies (H)

These courses present the historical or cultural contexts of ideas and institutions, and examine cultural development or differentiation in the human past. They are foundational in that they are wide-ranging in chronological, geographical, or topical focus, or in that they introduce students to methods of inquiry specific to a particular discipline.

Upon completion of a Historical and Cultural Studies course, students will be able to:

1. synthesize ideas and information with a view to understanding the causes and consequences of historical developments and events;
2. evaluate texts or artifacts within their historical and/or cultural contexts;
3. analyze human behavior, ideas, and institutions within their respective historical and/or cultural contexts.

AAS 161H	Introduction to African American Studies
AAS 342H / HISTA342H (AAS 262H)	African American History to 1865
AAS 343H/ HISTA 343H (AAS 263H)	African American History since 1865
ANTH 101H	Introduction to Anthropology
ANTH 103H	Food and Culture
ANTH 106H	The Silk Road
ANTH 251H	Foundation of Civilization
ANTH 252H	Archaeological Wonders of the World
ANTH 351H	Archaeology of North America
ANTH 354H	Mesoamerican Prehistory
ART 150H	Art of World Civilization: Ancient to Medieval Art
ART 151H	Art of World Civilization: Early Modern to Contemporary Art
COMM 250H	Introduction to Rhetorical Theory
DRAM 320H	Theatre History I
DRAM 321H	Theatre History II
DRAM 336H /ART 336H	History of Architectural Design, Pre-History to 1850
EVST167H/ AASC 167H	Nature & Society
GRMN 351H (GERM 303H)	German Culture, Beginnings to 1900 Crosslisted with LS 321H, MCLG 330H
GRMN 352H (GERM 304H)	German Culture, 1900 to the Present Crosslisted with LS 322H, MCLG 331H
HSTR 101H/ 103H (HIST 104H/107H)	Western Civilization I /Honors Western Civilization I (European Civilization to 1715)
HISTR 102H/ 104H (HIST 105H/108H)	Western Civilization II / Honors Western Civilization II (Modern Europe)
HISTA 101H/103H HIST 151/154H	American History I/ Honors American History I (The Americans: Conquest to Capitalism & Honors)
HISTA 102H/104H HIST 152H/ 155H	American History II/ Honors American History II (The Americans: 1877 to the Present)
HISTR 230H (HIST 286H)	Colonial Latin America
HISTR 231H (HIST 287H)	Modern Latin America
HISTR 377H (HIST 330H)	European International Relations

HISTR 380H (HIST 331H)	Foreign Relations of the Great Powers
HISTR 374H (HIST 334H)	War, Peace, and Society
JPNS 350H (JPNS 210H)	Japanese Culture and Civilization
LS 119H	Historical Perspective on Women
LS 161H	Introduction to Asian Humanities
MCLG 100H	Introduction to Latin American Studies
MCLG 105H, RUSS 105H, LS 105H	Introduction to Russian Culture
MCLG 211H	Chinese Culture and Civilization
MCLG 360H, ART 380H, LS 340H	Ancient Greek Civilization and culture
MUS 136H	Music of the Worlds People
MUS 324H	History of Music I
MUS 325H	History of Music II
NAS 100H	Introduction to Native American Studies
PHIL 240H	History and Philosophy of Science
RELS 210H	Introduction to the Hebrew Bible/Old Testament and the History of Ancient Israel
RELS 232H	Buddhism

Group VII: Social Sciences (S)

Social science courses describe and analyze human social organization and interaction, employing social data at a broad scale with statistical relevance, experimental data on individuals or groups, or qualitative data based on observation and discourse.

Upon completion of a Social Sciences course, students will be able to:

1. Describe the nature, structure, and historical development of human behavior, organizations, social phenomena, and/or relationships;
2. use theory in explaining these individual, group, or social phenomena; and/or
3. understand, assess, and evaluate how conclusions and generalizations are justified based on data

ANTH 102S	Race and Minorities
ANTH 220S	Comparative Social Organization
ANTH 250S	Introduction to Archaeology
BUS 103S	Principles of Business
BUS 160S / CCS 160S	Issues in Sustainability
COM 150S	Interpersonal Communication
COM 260S	Survey of Children's Communication
COMM 110S	Introduction to Interpersonal Communication
COMM 202S	Nonverbal Communication
COMM 230S	Organizational Communication
ECNS 101S (ECON 100S)	Economic Way of Thinking (Introduction to Political Economy)
ECNS 201S (ECON 111S)	Principles of Microeconomics (Introduction to Microeconomics)
ECNS 202S (ECON 112S)	Principles of Macroeconomics (Introduction to Macroeconomics)
EVST 477S	Environmental Justice Issues and Solutions
GPHY 121S (GEOG 101S)	Human Geography (Introduction to Human Geography)
GPHY 141S (GEOG 103S)	Geography of World Regions
GPHY 241S (GEOG 201S)	Montana
GPHY 323S (GEOG 315S)	Economic Geography of Rural Areas
IS 100S/ BADM 100S	Introduction to Business
LING 270S	Introduction to Linguistics

MGMT 340S	Management and Organizational Behavior
PSCI 210S (PSC 100S)	Introduction to American Government
PSCI 220S (PSC 120S)	Introduction to Comparative Government
PSYX 100S (PSY 100S/ PSYC 100S)	Introductory Psychology (Introduction to Psychology/ Introductory Psychology)
PSYX 161S (PSY 110S)	Fundamentals of Organizational Psychology (Organizational Psychology)
PSYX 230S (PSYC 240S)	Developmental Psychology (Child and Adolescent Development)
PSYX 270S (PSYC 260S)	Fundamental Psychology of Learning (Fundamentals of Learning)
PSYX 280S (PSYC 265S)	Fundamentals of Memory and Cognition (Cognition)
PSYX 340S (PSYC 330S)	Abnormal Psychology
PSYX 378S (PSYC 335S)	Introduction to Clinical Psychology (Fundamentals of Clinical Psychology)
PSYX 360S (PSYC 350S)	Social Psychology
PSYX 385S (PSYC 351S)	Psychology of Personality
RECM 110S	Introduction to Parks, Recreation & Tourism
RECM 217S	Wildland Recreation Management
RSCN 121S	Nature of Montana
RSCN 370S	Wildland Conservation Policy and Governance
SOCI 101S (SOC 110S)	Introduction to Sociology (Principles of Sociology)
SOCI 130S (SOC 130S)	Sociology of Alternative Religions
SOCI 212S (SOC 212S)	Southeast Asian Culture and Civilization
SOCI 220S (SOC 220S)	Race, Gender, and Class
SOCI 211S (SOC 230S)	Introduction to Criminology (Criminology)
SOCI 275S (SOC 275S) /WGS 275S	Gender and Society
WGS 263S	Introduction to Women's & Gender Studies

Group VIII: Ethics and Human Values (E)

Ethics and Human Values courses familiarize students with one or more traditions of ethical thought. These courses rigorously present the basic concepts and forms of reasoning that define and distinguish each tradition. The focus of these courses may be on one or more of these traditions, or on a concept such as justice or the good life as conceptualized within one or more of these traditions, or on a professional practice within a particular tradition.

Upon completion of an Ethics and Human Values course, students will be able to:

- 1. correctly apply the basic concepts and forms of reasoning from the tradition or professional practice they studied to ethical issues that arise within those traditions or practices;
- 2. analyze and critically evaluate the basic concepts and forms of reasoning from the tradition or professional practice they studied.

ANTH 385E	Indigenous Peoples and Global Development
C&I 407E	Ethics and Policy Issues
CHMY 302E (CHEM 334E)	Chemical Literature and Scientific Writing
CRT 122E	Ethics and Information Technology
FOR 489E	Ethics and Management of Public Lands
GEO 304E (GEOS 304E)	Science and Society

HC 320E	Research Portfolio Seminar
HHP 475E	Legal & Ethical Issues in the Health & Exercise Professions
HSTR 272E (HIST 226E)	Terrorism: Violence in the Modern World (Terrorism from the French Revolution to Today)
HSTR 374E (HIST 334E)	War, Peace, and Society
HSTR 384E (HIST 335E)	History of International Human Rights (International Human Rights)
HSTR 472E (HIST 460E)	Problems of Peace and Security
MED 280E	Ethics in the Health Professions
MGMT 440E	Business Ethics
NAS 301E	American Indian Religion and Philosophy
NAS 303E	Ecological Perspectives of Native Americans
PHAR 514E	CASE Studies in Pharmacy Ethics
PHIL 200E	Ethics: Great Traditions
PHIL 201E	Political Ethics
PHIL 202E	Ethics and the Environment
PHIL 223E	Business and Ethics
PHIL 300E	Moral Philosophy
PSCI 250E (PSC 150E)	Introduction to Political Theory
RELS 381E	Comparative Ethics
SCI 220E	Technology, Ethics and Society
SW 410E	Ethics and the Helping Professions
WRIT 240E (WTS 240E)	Arguments and Contemporary Issues (Rhetoric and Ethics: Writing Arguments about Contemporary Issues)

Group IX: American and European Perspectives (Y)

These courses present a critical introduction to the antecedents, principles, institutions, cultures, traditions and legacies of the United States and Europe.

Upon completion of an American and European Perspective course, students will be able to:

1. Demonstrate informed and reasoned understanding of American and/or European historical and contemporary behavior, ideas, institutions, and culture; and
2. Analyze and evaluate what is distinctive and significant about the American and/or European experience and legacy.

ANTH 102Y	Race and Minorities
ART 151Y	Art of World Civilizations II: Renaissance to Modern
ART 389Y	American Art
LIT 110Y (ENLT 120Y)	Introduction to Literature (Introduction to Critical Interpretation)
LILT 120Y (ENLT 121Y)	Poetry Introduction to Poetry
LIT 222Y (ENLT 219Y)	British Literature: Victorian to Contemporary
HSTR 101Y/ 103Y (HIST 104Y/107Y)	Western Civilization I /Honors Western Civilization I (European Civilization to 1715)
HSTR 102Y/ 104Y (HIST 105Y/108Y)	Western Civilization II / Honors Western Civilization II (Modern Europe)
HSTA 101Y/103Y HIST 151Y/154Y	American History I/ Honors American History I (The Americans: Conquest to Capitalism & Honors)
HSTA 102Y/104Y HIST 152Y/ 155Y	American History II/ Honors American History II (The Americans: 1877 to the Present)
HSTR 377Y (HIST 330Y)	European International Relations (European International Relations: Origins of the State System to 1870)
HSTR 380Y (HIST 331Y)	Foreign Relations of the Great Powers
MCLG 105Y, RUSS 105Y, LS 105Y	Introduction to Russian Culture
GRMN 351Y (GERM	German Culture to 1900

303Y)/ MCLG 330Y/ LS 321Y	German Culture, Beginnings to 1900
GRMN 352 Y (GERM 304Y)/ MCLG 331Y/ LS 322Y	German Culture, 1900 to Present
GRMN 362Y (GERM 362Y)/ MCLG 231Y/ LS 221Y	Germanic Mythology and Culture
MUS 324Y	History of Music I
MUS 325Y	History of Music II
PHIL 251Y	History of Ancient Philosophy
PHIL 252Y	History of Modern Philosophy
PSCI 210Y (PSC 100Y)	Introduction to American Government

Group X: Indigenous and Global Perspectives (X)

This perspective instills knowledge of diverse cultures in comparative and thematic frameworks. Students are encouraged to cultivate ways of thinking that foster an understanding of the complexities of indigenous cultures and global issues, past and present. Students will learn how geographically and culturally separate parts of the world are linked by various, multiple interactions.

Indigenous studies focus upon "first peoples" and their descendants who derive their cultural communal identities from their long-standing and/or historical habitation of particular places. These courses foster an appreciation for indigenous peoples, their histories and cultures, and their struggles both to maintain their ways of life and gain equal positions in world spheres of power and change.

Global studies investigate how societies and nations interact through human endeavor and /or natural processes. These courses encourage students to relate their knowledge of particular parts of the world, with their individual identities, and to larger trends and issues that affect multiple societies and environments. These include regional, national, and even transnational cultural flows, as well as a multiplicity of environmental processes and economic relationships.

Upon completion of an American and European Perspective course, students will be able to:

1. place human behavior and cultural ideas into a wider (global/indigenous) framework, and enhance their understanding of the complex interdependence of nations and societies and their physical environments;
2. demonstrate an awareness of the diverse ways humans structure their social, political, and cultural lives; and
3. analyze and compare the rights and responsibilities of citizenship in the 21st century including those of their own societies and cultures.

ANTH 101X	Introduction to Anthropology
ANTH 103X	Food and Culture
ANTH 106X	The Silk Road
ANTH 220X	Comparative Social Organization
ANTH 251X	Foundation of Civilization
ANTH 252X	Archaeological Wonders of the World
ANTH 323X	Native Peoples of Montana
ANTH 330X	Peoples and Cultures of the World
ANTH 341X	Contemporary Issues of American Indians
ANTH 351X	Archaeology of North America
ANTH 352X	Archaeology of Montana
ANTH 354X	Mesoamerican Prehistory
ANTH 357X	Archaeology of the Southwestern United States
ANTH 385X	Indigenous Peoples and Global Development
ANTH 388X	Native American Health and Healing
ART 150X	Art of World Civilization: Ancient to Medieval Art
COMM 251X	International and Development Communication
DAN 335X	World Dance
ECNS 317X (ECON 350X)	Economic Development
GPHY 243X (GEOG 207X)	Africa
GPHY 245X (GEOG 213X)	The Middle East
HSTR 230X	Colonial Latin America

(HIST 286X)	
HSTR 231X (HIST 287X)	Modern Latin America
HSTR 384X (HIST 335X)	History of International Human Rights (International Human Rights)
LING 375X	Endangered Languages
MCLG 100X	Introduction to Latin American Studies
MUS 136X	Music of the Worlds People
NAS 100X	Introduction to Native American Studies
NAS 202X	Oral and Written Traditions
NAS 210X	Native American Sports and Games
NAS 231X	Indigenous Worldview Perspectives
NAS 301X	American Indian Religion and Philosophy
NAS 303X	Ecological Perspectives of Native Americans
NAS 464X / HSTA 465	History of American Indian Affairs to 1776
NAS 465X/ HSTA 452	History of American Indian Affairs in the 19th Century
NAS 466X/ HSTA 453	History of Indian Affairs from 1890
NAS 324X	Indians of Montana
NAS 400X	Tribal Sovereignty
NAS 429X	Gender Issues in Native American Studies
NASL 201X	Indian Culture as Expressed Through Language
PSCI 230X (PSC 130X)	Introduction to International Relations
RECM /FOR 345X	Sustaining Human Society and the Natural Environment
SOCI 212X (SOC 212X)	Southeast Asian Culture and Civilization

Group XI: Natural Science

These courses present scientific conclusions about the structure and function of the natural world, and demonstrate or exemplify scientific questioning and validation of findings.

Upon completion of a Natural Science course, a student will be able to:

1. understand the general principles associated with the discipline(s) studied;
2. understand the methodology and activities scientists use to gather, validate and interpret data related to natural processes;
3. detect patterns, draw conclusions, develop conjectures and hypotheses, and test them by appropriate means and experiments;
4. understand how scientific laws and theories are verified by quantitative measurement, scientific observation, and logical/critical reasoning; and
5. understand the means by which analytic uncertainty is quantified and expressed in the natural sciences

Courses without a laboratory experience

ANTH 210N	Introduction to Physical Anthropology
ANTH 211N	Human Genetics
ANTH 286N	Survey of the Forensic Sciences
ASTR 131N	Elementary Astronomy I
ASTR 132N	Elementary Astronomy II
BIOL 106N	Elementary Medical Microbiology
BIOL 108N	Diversity of Life
BIOL 121N	Introductory Ecology
BIOL 130N	Evolution and Society
BIOL 135N	Biology of Yellowstone Hot Springs
BIOL 201N	Montana Wildlife
BMED 145N	Introduction to Cancer Biology
CHMY 121N CHEM 151N	Intro to General Chemistry (General and Inorganic Chemistry)
CHMY 123N (CHEM 152N)	Intro to Organic and Biochem (Organic and Biological Chemistry)
CSD 221N	Fundamentals of Acoustics: Applications in Speech, Hearing & Language
ERTH 303N	Weather and Climate

(GEOG 322N)/CCS 303N	
EVST 101N	Environmental Science
FOR/RSCN 271N	Wilderness Ecology
GEO 101N (GEOS 100N)	Intro to Physical Geology (General Geology)
GEO 105N (GEOS 105N)	Oceanography
GEO 107N (GEOS 103N)	Natural Hazards (Earthquakes, Volcanoes, and Natural Hazards)
GEO 108N (GEOS 108N)/ CCS 108N	Climate Change, Past and Future
GPHY 111N (GEOG 102N)	Introduction to Physical Geography
HHP 236N	Nutrition
PHAR 110N	Use and abuse of Drugs
PHYS 111N	Fundamentals of Physics I
PHYS 112N	Fundamentals of Physics II
PHYS 141N	Relativity: From Galileo to Einstein and Beyond
PHYS 211N	Fundamentals of Physics with Calculus I
PHYS 212N	Fundamentals of Physics with Calculus II
PSYX 250N (PSYC 270N)	Fundamentals of Biological Psychology
SCN 100N	Issues in Biology
SCN 175N	Integrated Physical Science
WBIO 105N	Wildlife and People

Courses <u>with</u> a laboratory experience:

ASTR 134N	Elementary Astronomy Laboratory I
ASTR 135N	Elementary Astronomy Laboratory II
ASTR 142N	The Evolving Universe: Theories and Observation
BIOL 100N	The Science of Life
BIOL 109N	Diversity of Life Laboratory
BIOL 110N	Principles of Biology
BIOL 120N	General Botany
CHMY 101N (CHEM 101N)	Chemistry for the Consumer Consumer Chemistry
CHMY 124N (CHEM 154N)	Intro to Org & Biochem Lab (Organic and Biological Chemistry Laboratory)
CHMY 141N (CHEM 161N)	College Chemistry I
CHMY 143N CHEM 162N	College Chemistry II
FOR 210N	Introductory Soils
FOR 241N	Dendrology
GEO 102N (GEOS 101N)	Intro to Physical Geology Lab (General Geology Laboratory)
GEO 106N GEOS 106N	The History of Life
PHYS 113N	Physics Laboratory I
PHYS 114N	Physics Laboratory II
PHYS 213N	Physics Laboratory I with Calculus
PHYS 214N	Physics Laboratory II with Calculus
SCI 225N	General Science: Physical and Chemical Science
SCI 226N	General Science: Earth and Life Science
SCN 201N	Human Anatomy & Physiology I
SCN 202N	Human Anatomy & Physiology II

Courses that satisfy more than one Group are listed below:

	General Education Group										

Course Number	Course Title	I	II	IIIb	IV (A)	V (L)	VI (H)	VII (S)	VIII (E)	IX (Y)	X (X)
AASC 167	Nature and Society	x					x				
ANTH 101	Introduction to Anthropology						x				x
ANTH 102	Race and Minorities							x		x	
ANTH 103	Food and Culture						x				x
ANTH 106	The Silk Road						x				x
ANTH 251	Foundation of Civilization						x				x
ANTH 252	Archaeological Wonders of the World						x				x
ANTH 351	Archaeology of North America						x				x
ANTH 354	Mesoamerican Prehistory						x				x
ANTH 385	Indigenous Peoples and Global Development								x		x
ART 151	Art of World Civilizations II: Renaissance to Modern						x			x	
ART 150	Art of World Civilization: Ancient to Medieval Art						x				x
ART 203	Introduction to Art Criticism	x				x					
CRT 122	Ethics and Information Technology	x							x		
DAN 335	World Dance					x					x
HISTA 101/103	American History I						x			x	
HISTA 102/104	American History II						x			x	
HISTR 102/ 104	Western Civilization II						x			x	
HISTR 230	Colonial Latin America						x				x
HISTR 231	Modern Latin America						x				x
HISTR 377	European International Relations: Origins of the State System to 1870						x			x	
HISTR 380	Foreign Relations of the Great Powers						x			x	
HSTR 101/ 103	Western Civilization I						x			x	
HSTR 374	War, Peace, and Society						x		x		
HSTR 384	History of International Human Rights								x		x
LIT 110	Introduction to Literature	x				x					
LIT 120	Poetry	x				x					
LIT 210	American Literature I	x				x					
LIT 211	American Literature II	x				x					
LIT 220	British Literature: Medieval through Early Modern	x				x					
LIT 221	Enlightenment to Romantics	x				x					
LIT 222	British Literature: Victorian to Contemporary	x				x					
LS 151/152	Introduction to the Humanities	x				x					
M 162	Applied Calculus		x	x							
M 171	Calculus I		x	x							
MCLG 251	The Epic	x				x					
MUS 136	Music of the Worlds People						x				x

MUS 324	History of Music I						x			x	
MUS 325	History of Music II						x			x	
NAS 100	Introduction to Native American Studies						x				x
NAS 202	Oral and Written Traditions of Native America	x									x
NAS 301	American Indian Religion and Philosophy								x		x
NAS 303	Ecological Perspectives of Native Americans								x		x
PHIL 300	Moral Philosophy	x							x		
PSCI 210	Introduction to American Government							x		x	
RUSS 105	Introduction to Russian Culture						x			x	
SOCI 212	Southeast Asian Culture and Civilization							x			x
STAT 216	Intro to Statistics		x	x							
STAT 451	Statistical Methods I		x	x							
WRIT 110	Introduction to Literature	x				x					
WRIT 120L	Poetry	x				x					
WRIT 240	Rhetoric and Ethics: Writing Arguments about Contemporary Issues	x							x		

General Education for Transfer Students.

Students transferring credits from other institutions must meet all requirements by transfer, by examination, or by completing courses at The University of Montana-Missoula.

According to Board of Regents policy, students who can demonstrate that they have completed an approved lower-division general education requirement at an approved Montana institution of higher education will be deemed to have completed general education requirements except for the upper-division writing proficiency assessment and the upper-division writing requirements in their majors.

Transfer students who believe they have completed an approved lower-division general education requirement at another Montana school should request that the registrar of the other school send a letter to the University Registrar's Office certifying that the requirement has been met.

If students transfer 20 or more approved Montana University System core course credits with their initial registration at UM-Missoula, they may choose to complete the MUS General Education rather than the UM-Missoula General Education requirement

Students governed by the 2006-2007 catalog or later catalogs must earn a traditional letter grade of C- or better in courses used to satisfy General Education (except English composition and the Mathematical Literacy course must be a C or better). Students enrolled in a post-secondary institution prior to autumn 2006 may be eligible to choose an earlier governing catalog. Refer to the Governing Catalog information in the previous section. See index.

Students who have completed a bachelor degree at the University or elsewhere will be presumed to have completed the General Education Requirement.

Admissions & New Student Services will evaluate all transfer credits for General Education credit. Students who wish to appeal that evaluation may petition the Graduation Appeals Subcommittee of the Academic Standards and Curriculum Review Committee, but such petitions must be initiated during the first semester of the student's attendance following that evaluation.

Major and Minor Requirements

Major Requirements

Declaring a Major and Changing a Major

Students indicate on the application for admission the major or majors in which they are interested. Students undecided as to a field of interest may elect to be Undeclared while making program and career decisions. Students must declare a major in a degree granting program prior to completion of 45 credits or after three semesters, whichever occurs first.

Students must complete a major in order to earn a degree or certificate.

Students may change their majors or minors by obtaining the proper approval on a change of major or minor form available from the Registration Counter in Griz Central in the Lommasson Center. Because of enrollment limitations, students must request a change to a program in the College of Technology by completing an application for admission and submitting it to the College. Students whose initial admission was to the College of Technology may change to a major outside the College by submitting an application for admission to Enrollment Services-Admissions & New Student Services in the Lommasson Center.

Credits Required for a Major

Students in a bachelor degree program must complete a minimum of 30 credits in their major. Most majors require more.

Students may elect to earn a single degree with more than one major. Students may complete a double major (two majors) or any number of majors. All requirements for the majors must be completed even though students will receive a single degree such as a Bachelor of Arts with majors in Psychology and Sociology. It is only necessary to complete the total credit requirement for a single bachelor degree.

Courses completed to satisfy the requirements of a major also may be applied toward the General Education Requirement if they appear on the list of approved courses at the time they are taken.

Students in programs in the College of Technology complete requirements as listed in the College section of this catalog. See index.

Credit Limitations in a Major

A maximum of 60 credits in the student's major may be counted toward the baccalaureate degree, except some options in Health and Human Performance and Education, majors in Computer Science, and majors in the Schools of Business Administration, Fine Arts, Journalism, Law, Pharmacy and Allied Health Sciences and the College of Forestry and Conservation are allowed more. Students with combined majors, as opposed to two majors, are allowed to apply 75 credits in the major.

Grade Requirement

Courses taken to satisfy the requirements of the major must be completed with a grade of C- or better.

A minimum grade average of 2.00 in all work attempted in the major at The University of Montana-Missoula is required for graduation.

Options

Groups of courses have been identified which lead to a specialization within one major or between two or more majors. These specializations are called options. The names of approved options will be recorded on the permanent records of those students who have satisfactorily completed the requirements as given in the catalog governing their graduation. A student desiring a particular option must satisfy the requirements of the major offering it. If one option is offered within two or more majors, the student must satisfy the requirements of only one.

Only courses listed within the supporting major count toward the 60 credit limitation in the major. Courses in other fields do not count toward the maximum of 60 credits in the major even though they may be required or elected for the options.

If one major has two or more options, a student may satisfy the requirements for more than one option so long as the maximum credit limitations are observed.

Minor Requirements

Baccalaureate students may elect to complete one or more minors in fields outside their majors. Minors may be in fields unrelated to students' majors or they may be complementary or supportive of majors. A student may not take a minor in the same field of study as his or her major.

A student will not be required to satisfy the requirements of a minor in order to graduate unless that minor is required by the student's major department or school.

Courses completed to satisfy the requirements of a minor also may be applied toward the General Education Requirement if they appear on the list of approved courses at the time they are taken.

Credits Required for a Minor

To complete a minor, students must earn at least 18 credits in an approved minor listed in this catalog and complete a baccalaureate degree.

Students possessing a baccalaureate degree from an accredited college or university may earn a minor if they have been accepted by the University as an undergraduate degree student. In addition to meeting minor requirements, students must earn from The University of Montana-Missoula a minimum of 9 credits in the minor field and 15 credits overall.

Grade Requirement

Courses taken to satisfy the requirements of the minor must be completed with a grade of C- or better.

A minimum grade average of 2.00 in all work attempted in the minor at The University of Montana-Missoula is required for graduation with the minor.

Teaching Minors

Teaching minors are separate entities from degree minors as described in this section. Teaching minors are identified and requirements listed in the School of Education section of this catalog.

Degree/Certificate Requirements for Graduation

Catalog Governing Graduation

Students may graduate fulfilling University and departmental requirements in any University of Montana-Missoula catalog under which he or she has been enrolled during the six years prior to graduation. University or departmental requirements may change, however, to comply with accreditation requirements, professional certification and licensing requirements, etc. The student may meet major and minor requirements under different catalogs than the catalog under which she or he is meeting University requirements. Pharmacy students should consult the Professional Pharmacy Curriculum section in this catalog.

Students transferring to The University of Montana-Missoula may choose to graduate fulfilling requirements under the UM catalog in effect when they were enrolled at their original institution, provided the chosen catalog is not more than six years old at the time of graduation. Eligible students who choose an earlier catalog must notify the Admissions Office at the time of admission so their transfer work can be evaluated accordingly

Applying for Certificate and Degree Candidacy

To become a candidate for a degree, the student must file formal application at the Registration Counter in Griz Central the beginning of the semester preceding the semester in which he or she expects to graduate. Deadline dates are specified in the Class Schedule. In the College of Technology, candidates for certificates and degrees must file a formal application with the Registrar's Office in the College at the beginning of the semester in which they expect to graduate

Credits Required for a Certificate of Completion

See the specific course and credit requirements for certificate programs listed in the College of Technology and Linguistics sections of this catalog. See index. In addition, students in the College of Technology must complete successfully:

1. Mathematics one course from M 105T (MAT 100T) or above.
2. Communications and Human Relations PSYX 163T (PSY 105T) or PSYX 161S (PSY 110T) and one COM course as required by the specific program. Some programs have these skills imbedded within other courses which will satisfy this requirement.

Credits Required for a Degree

Associate of Applied Science

To receive an Associate of Applied Science (A.A.S.) Degree from the College of Technology, a student must fulfill the following criteria:

1. Complete a minimum of 60 credits.
2. Possess a minimum grade average of 2.00 in all work attempted at the University of Montana-Missoula and a minimum grade of C- in all classes that count toward major, minor or general education requirements.
3. Complete the specialized degree requirements of his or her specific program.
4. Complete the following related subject area of core collegiate-level courses:
    1. **Communication:** the ability to formulate and adapt messages to a variety of audiences through written, verbal, and nonverbal processes. To ensure all graduates have developed skills in the area of communication, students must successfully demonstrate competency in one of the following writing courses: WTS 101, WTS 115, or other approved writing course. Furthermore it is recommended that all students complete one of the following communication courses, such as COM 150S, COM 160A, or other approved courses to further develop understanding of human communication processes
    2. **Computation:** the ability to complete basic algebraic manipulations and achieve mathematical literacy. To ensure all graduates have achieved computational literacy, students must demonstrate competency in MAT 100 or a higher number mathematics course.
    3. **Human Relations:** the ability to analyze social problems and structure, ethical norms of professions and society, human behavior, or human values systems. To ensure all graduates have explored dimensions in human relations, students must demonstrate competency in on of the following courses: COM 150S, COM 210E, CRT 122E, PSY 100S, PSY 110S, SUR 204E, or other approved ethical and human values or social sciences course.
    4. **Computer Literacy:** the ability to utilize a modern computing system including web applications and an office productivity suite to research, develop and produce information in a 21st century society. To ensure all graduates have achieved basic

technology literacy, students must demonstrate competency in one of the following: CRT 100, CRT 103T, or other approved applied computing course

5. **Professional Capstone:** the opportunity to apply skills acquired through a specialized field of study in a professional realm. To ensure all graduates the opportunity to apply specialized skills in a professional environment, it is recommended student complete a program-related internship, field experience, capstone project, or professional certification activity.

Associate of Arts

A total of 60 credits is required for graduation with an Associate of Arts (A.A.) degree. The minimum grade average for graduation is 2.00 in courses taken on the traditional letter grade (A F) basis. To receive an Associate of Arts degree all students must complete successfully all the general education requirements for a baccalaureate degree, except for the Upper-Division Writing Proficiency Assessment.

Bachelor Degrees

A total of 120 credits is required for graduation with a bachelor degree; except a greater number is required in teacher education programs, pharmacy, physical therapy and the Bachelor of Applied Science. See the School of Pharmacy and Allied Health Sciences section of this catalog.

Students may elect to earn two or more bachelor degrees. Those deciding to earn two or more degrees must complete all the requirements of the majors for each degree. In addition, students must earn for each degree a minimum of 30 credits beyond the number required for the first degree. The degrees may be earned concurrently or at different times.

Upper-Division Requirement

All students must complete a minimum of 39 credits in courses numbered 300 and above to meet graduation requirements for the first baccalaureate degree. Upper division credits transferred from other four year institutions will count toward the 39 credit requirement.

Residency Requirements for Degrees/Certificates

University of Montana credit is the credit earned in any course which has been approved to be listed in The University of Montana-Missoula catalog and which has been approved for offering by the department chair and dean of the school or college in which the course is taught. University of Montana-Missoula credit may be offered at any location.

Requirements for College of Technology Certificate of Completion and Associate of Applied Science Degree

A minimum of 51% of the required number of credits must be earned from The University of Montana-Missoula

Requirements for the Associate of Arts Degree

A minimum of 30 credits of the required number must be earned from The University of Montana-Missoula.

Requirements for the First Bachelor Degree

A first bachelor degree is defined as any bachelor degree earned by a student who has not previously earned a bachelor degree from The University of Montana-Missoula. Thus, the requirements below <u>also</u> apply to any student who previously earned a bachelor degree at another institution and now is seeking a bachelor degree from The University of Montana-Missoula.

a) A minimum of 30 credits of the required number must be earned from The University of Montana-Missoula. b) A minimum of 30 credits of the required number must be earned in study on The University of Montana-Missoula campus.

c) Of the last 45 credits required for the degree, at least 30 of these must be earned from The University of Montana- Missoula. Students attending elsewhere on a University approved exchange may be exempt from this requirement with the prior written approval of their major department chair or dean.

Requirements for the Second Bachelor Degree

In regard to residency requirements, a second bachelor degree is defined as any bachelor degree earned by a student who previously had earned a bachelor degree from The University of Montana-Missoula.

A minimum of 20 credits of the required 30 credits must be earned in study on The University of Montana-Missoula campus.

Credit Maximums

The amount of credit which may be counted toward the minimum credit requirements for the bachelor and associate of arts degrees is limited in certain areas:

Maximum Credit Applicable:

	For Bachelor Degree	For AA Degree
Technical courses (B.A.S. candidates may present more)	0	0
(course number suffix of T, up to 10 credits may be requested by petition) Career Skills	0	0
Study Skills Courses (AASC 101, C&I 160)	2	2
Physical education activity/skills courses	4	4
(DRAM 385, HHP 100-179, MS 203 and 315) R.O.T.C. courses	12	12
(contracted students may present 24 credits) Performance music (Mus 100A, 115A, 116A, 117A, 215, 216, 218)	6	6
(Music majors and minors may present more) Ensemble music (Mus 107A-110,A 113A-114A and 150A)	8	8
(Music majors and minors may present more) Credit/No Credit credits	18	18
Omnibus credits	15	13
Internship credits in 198, 298, 398, and 498	6	6
Correspondence credits	6	6

Credits attempted in these areas which are beyond the maximum applicable will remain on the students' permanent records but cannot be used toward graduation.

Grade Average Requirement

A minimum grade average of 2.00 in all work attempted at The University of Montana-Missoula is required for graduation.

Graduation with Honors or High Honors

Students will be awarded their certificates, associate of applied science, and bachelor degrees with honors if they receive the recommendation of their major department or school and the faculty of The University of Montana-Missoula. At the time of graduation they must have a 3.40 or higher grade average in the following four areas:

1. All work attempted at The University of Montana- Missoula.
2. The combination of all work attempted at The University of Montana-Missoula and all other work, including failing grades, transferred to this University.
3. All work attempted in the major field at The University of Montana-Missoula.
4. The combination of all work attempted in the major field at The University of Montana-Missoula and all other work in the major field, including failing grades, transferred to this University.

Students will be awarded their certificates, associate of applied science, and bachelor degrees with high honors if they have the recommendations mentioned above and, at the time of graduation, have a 3.70 or higher grade average in the four areas listed.

In the School of Law, the grade average for honors is computed on law credits only.

Accreditation

The University of Montana-Missoula is accredited by the Northwest Association of Schools and Colleges. Many of the professional schools and departments have special accreditation as well.

The following table provides detailed information on these special accreditations:

College of Arts & Sciences	Chemistry	BS, MS, PhD	American Chemical Society (ACS)
College of Arts & Sciences	Computer Science	BS	Accreditation Board for Engineering and Technology (ABET) - Computing Accreditation Commission (CAC)
College of Arts & Sciences	Psychology, Clinical	PhD	American Psychological Association
College of Arts & Sciences	School Psychology	PhD	National Association of School Psychologists
School of Business Administration	Accounting	BS, MAcct	Association to Advance Collegiate Schools of Business (AACSB-International)
School of Business Administration	Business	BS, MBA	Association to Advance Collegiate Schools of Business (AACSB-International)
College of Technology	Food Service Management	AAS	American Culinary Federation Educational Institute (ACFEI)
College of Technology	Nursing	AAS, AS	Montana State Board of Nursing
College of Technology	Paralegal Studies	AAS	American Bar Association (ABA)
College of Technology	Pharmacy Technology	Certificate	American Society of Health System Pharmacists

			(ASHSP)
College of Technology	Respiratory Therapy Technology	AAS	Committee for Accreditation of Respiratory Care (CoARC w/ CAAHEP)
College of Technology	Surgical Technology	AAS	Commission on Accreditation of Allied Health Education Programs (CAAHEP)
College of Education and Human Sciences	Athletic Training	BS	Commission on Accreditation of Allied Health Education (CAATE)
College of Education and Human Sciences	Educational Leadership and Counseling	MA, Counselor Ed; and School Counseling	Council for Accreditation of Counseling and Related Educational Programs (CACREP)
College of Education and Human Sciences	Communication Science and Disorders	MS in Speech-Language Pathology	American Speech Language Association-Council on Academic Accreditation (ASHA)
College of Education and Human Sciences	Education	BA, MEd, EdS,	National Council for Accreditation of Teacher Education (NCATE); Montana Board of Public Education
College of Education and Human Sciences	Co-Teach Preschool, Institute for Educational Research and Service	n/a	National Association for the Education of Young Children (NAEYC)
College of Visual and Performing Arts	Art & Media Arts	BA, BFA, MA, MFA	National Association of Schools of Art and Design (NASAD)
College of Visual and Performing Arts	Theater & Dance	BA, BFA, MA, MFA	National Association of Schools of Theater (NAST)
College of Visual and Performing Arts	Music	BA, BM, BME, MM	National Association of Schools of Music (NASM)
College of Forestry and Conservation	Forest Resources Management	BS	Society of American Foresters (SAF)
College of Forestry and Conservation	Recreation Management	BS	National Recreation and Park Association/American Association for Leisure and Recreation (NRPA/AALR)
School of Journalism	Journalism	BA	Accrediting Council on Education in Journalism and Mass Communications (ACEJMC)
School of Law	Law	JD	American Bar Association (ABA) American Association of Law Schools (AALS)
College of Health Professions and Biomedical Sciences	Pharmacy	PharmD	American Council of Pharmacy Education (ACPE)
College of Health Professions and Biomedical Sciences	Public Health	MPH	Council on Education for Public Health (CEPH)
College of Health Professions and Biomedical Sciences	Physical Therapy	DPT	Commission on Accreditation in Physical Therapy Education (CAPTE)
College of Health Professions and Biomedical Sciences	Social Work	BA	Council on Social Work Education (CSWE)
College of Health Professions and Biomedical Sciences	Social Work	MSW	Council on Social Work Education (CSWE)
The University of Montana	Department of Laboratory Animal Resources	n/a	Association for the Assessment and Accreditation of Laboratory Animal Care International (AAALAC)

Under construction.

Contacts, Calendar and Reserved Rights - The University of Montana - Missoula

Contacts

The University of Montana Home Page	http://www.umt.edu
Enrollment Services/Orientation	(406) 243 6266
Business Services	(406) 243 2223
College of Technology	(406) 243 7882 (In Montana, 1 800 542 6882)
Disability Services TDD	(406) 243 2243
University Villages	(406) 243 6030
Financial Aid	(406) 243 5373
Graduate School	(406) 243 2572

Registrar	(406) 243 2995
Residence Halls	(406) 243 2611
University Switchboard	(406) 243 0211

Reserved Rights

The right is reserved to change any of the rules and regulations of the University at any time including those relating to admission, instruction and graduation. The right to withdraw curricula and specific courses, alter course content, change the calendar, and to impose or increase fees similarly is reserved. All such changes are effective at such times as the proper authorities determine and may apply not only to prospective students but also to those who already are enrolled in the University.

The 2009-2010 Calendar

Listing Important Dates and Deadlines may be viewed via the following URL: http://events.umt.edu/?calendar_id=27&upcoming=upcoming&

The Montana University System

The following Strategic Plan was adopted by the Board of Regents October 19, 2001.

Mission

The Mission of the Montana University System is to serve students through the delivery of high quality, accessible postsecondary educational opportunities, while actively participating in the preservation and advancement of Montana's economy and society.

Vision

We will prepare students for success by creating an environment of ideas and excellence that nurtures intellectual, social, economic, and cultural development. We will hold academic quality to be the prime attribute of our institutions, allocating human, physical, and financial resources appropriate to our educational mission. We will encourage scientific development and technology transfer, interactive information systems, economic development and lifelong learning. We will protect academic freedom, practice collegiality, encourage diversity, foster economic prosperity, and be accountable, responsive, and accessible to the people of Montana.

Goals

The following five goals and subordinate objectives will guide the Montana University System in moving toward realization of its vision for the future of higher education in Montana.

1. **To provide a stimulating, responsive and effective environment for student learning, student living, and academic achievement.**
    1. 1. To assure adequate campus policies to protect academic freedom and promote the free exchange of ideas while requiring pre- and post-tenure evaluation of faculty performance and systematic program review that reflect the Regents' priority on student learning.
    2. To offer academic programs and services focused around approved campus missions and consistent with available resources.
    3. To foster an environment that attracts and retains high quality faculty and staff.
    4. To improve rates of student retention and degree completion across the Montana University System.
    5. To develop, maintain at/near state-of-the-art condition Montana University System facilities, technology and infrastructure and to coordinate the use of capacities and resources across all MUS institutions.
    6. To ensure student readiness for higher education and validate student competencies for graduation.
2. **To make a high quality, affordable higher education experience available to all qualified citizens who wish to further their education and training.**
    1. To identify or seek creative funding alternatives that will expand public and private resources.
    2. To make sure that every academically qualified individual has an opportunity to receive the benefits of higher education without financial or social barriers.
    3. To expedite student progress toward degree objectives in order to reduce time to degree (and related costs) and maintain affordability for the widest range of students.
3. **To deliver higher education services in a manner that is efficient, coordinated, and highly accessible.**
    1. To operate as a unified system of higher education and increase productivity through effective planning, assessment, collaboration and resource sharing.
    2. To increase student access to Montana University System programs through coordinated statewide delivery and expanded use of technology.
    3. To increase the coordination of academic resources to improve student progress toward degree.
    4. To promote diversity with special attention to Montana's Native American populations.
4. **To be responsive to market, employment, and economic development needs of the state and the nation.**
    1. To offer programs and services consistent with the changing market and employment needs of the state and nation.
    2. To encourage basic research and technology transfer to contribute to the economic development of the State of Montana.
    3. To promote the full spectrum of higher education needs and opportunities in two-year, four-year, graduate and professional education.

4. To make the Montana University System more accessible and responsive to businesses, government and other constituents.

5. **To improve the support for and understanding of the Montana University System as a leading contributor to the state's economic success and social and political well being.**
    1. To improve and expand the communication and outreach of the Montana University System to constituents, communities and policy makers.
    2. To meet constituents' expectations for accountability through responsible stewardship of resources.
    3. To expand community involvement, service and outreach initiatives at the campus level.
    4. To partner with state government, our congressional delegation, K-12 education, tribal and local governments, labor and business leaders to preserve and improve the economy of Montana.

The University of Montana

Mission

The University of Montana capitalizes on its unique strengths to create knowledge, provide an active learning environment for students, and offer programs and services responsive to the needs of Montanans. The University delivers education and training on its four campuses and through telecommunications to sites inside and outside of Montana. With public expectations on the rise, the University asks its students, faculty, and staff to do and accomplish even more than they have in the past. The dedication to education for and throughout life reflects the commitment to a service learning and community building on and off the campuses. The University enhances its programs through continuous quality review University for improvement and remains fully accountable to the citizenry through annual audits and performance evaluations.

The University of Montana - Missoula

Mission

The University of Montana-Missoula pursues academic excellence as indicated by the quality of curriculum and instruction, student performance, and faculty professional accomplishments. The University accomplishes this mission, in part, by providing unique educational experiences through the integration of the liberal arts, graduate study, and professional training with international and interdisciplinary emphases. Through its graduates, the University also seeks to educate competent and humane professionals and informed, ethical, and engaged citizens of local and global communities. Through its programs and the activities of faculty, staff, and students, The University of Montana-Missoula provides basic and applied research, technology transfer, cultural outreach, and service benefitting the local community, region, state, nation and the world.

Vision Statements

In pursuit of its mission, The University of Montana-Missoula will:

1. Educate students to become ethical persons of character and values, engaged citizens, competent professionals, and informed members of a global and technological society.
2. Increase the diversity of the students, faculty, and staff for an enriched campus culture.
3. Attain the Carnegie Commission status of Doctoral Research–Extensive University (50 or more doctorates in at least 15 fields annually) and increase funded research to $100,000,000 annually by 2011.
4. Pursue more partnerships–especially with local communities, businesses and industries, public schools, community and tribal colleges, state and local governments and universities abroad–and expand the training and technology transfer programs to promote community and economic development.
5. Develop the capability and infrastructure for use of information technology to increase the efficiency and productivity of the campus and the state; and
6. Involve and engage the faculty, staff, students, alumni, partners, and friends of the University in institutional governance.

Equal Opportunity

The University of Montana is committed to a program of equal opportunity for education, employment and participation in University activities without regard to race, color, sex, age, religious creed, political ideas, marital or family status, physical or mental disability, national origin or ancestry, or sexual orientation.

University Officers

June 2009

Board of Regents of Higher Education

- Stephen M. Barrett (chair) - Bozeman
- Robert Barnosky (student regent) - Billings
- Todd Buchanan - Billings
- Clayton Christian (vice-chair) - Missoula

- Lynn Morrison-Hamilton (vice-chair) - Havre
- Dr. Janine Pease - Billings
- Lila Taylor - Busby
- Sheila Stearns, Commissioner of Higher Education (ex-officio)
- Denise Juneau, Superintendent of Public Instruction (ex-officio)
- Brian Schweitzer, Governor (ex-officio)

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- Anne Boone - Missoula
- Bob Ream - Missoula
- Bill Woody - Missoula

Administrators

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- Royce C. Engstrom, Ph.D. - University Provost and Vice-President for Academic Affairs
- James P. Foley - Executive Vice President
- Teresa S. Branch, Ph.D. - Vice President for Student Affairs
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- Barry Good, Ph.D. - College of Technology
- Stephen Kalm, D.M.A. - College of Visual and Performing Arts
- Mehrdad Kia, Ph.D., - Associate Provost for International Affairs
- Peggy Kuhr, M.A. - School of Journalism
- James McKusick, Ph.D. - Davidson Honors College
- Edwin D. Johnson, B.S. - Registrar
- Arlene Walker-Andrews, Ph.D. - Associate Provost

These videos were produced by Chisel Industries for the University of Montana. To view the videos, make sure that you have enabled javascript in your web browser. Adobe Flash Player 9 is also required. You may download it here.

The University of Montana- Helena College of Technology

The University of Montana - Helena College of Technology offers two-year programs in business, trades, technical and health occupations designed to meet the state's business and industry needs for technologically- skilled workers. All of the curricula are industry-approved and emphasize learning in a hands-on environment. In addition, the college offers an Associate of Science degree and Associate of Arts degree designed to transfer to four-year institutions. The college, founded in 1939, is fully accredited by the Northwest Association of Schools and Colleges, approved by the Montana State Board of Nursing, certified and licensed by the Federal Aviation Administration, and certified by the National Institute for Automotive Service Excellence.

Helena's students take a full complement of courses in mathematics, communications, computer literacy, and career development. Located in Montana's beautiful capitol city, the College offers its programs in modern classrooms, shops, and labs, both near the Capitol building and at the Helena airport. For more information, call 1-800-241-4882.

Montana Tech of The University of Montana

Founded in Butte in 1889 as the Montana School of Mines, Montana Tech has a century-old reputation as one of the finest science and engineering colleges in America. Montana Tech is repeatedly recognized year after year among the top 10% of all colleges in America. While still focusing on its original programs in minerals and energy engineering, Montana Tech has expanded its offerings to include new science, engineering, computer science, technical communication, business, and innovative health care programs all designed to meet the needs of today's rapidly changing world.

Montana Tech provides outstanding educational programs to its 2,400 students in a truly personalized setting. Students are treated as individuals and enjoy their close relationships with faculty. Current Montana Tech students come from every Montana county, 38 states and

17 foreign countries. Montana Tech is a friendly campus where students get involved in a wide array of campus events and activities as well as abundant outdoor recreational opportunities. Student satisfaction surveys consistently give the College high marks for its quality of student life.

Upon graduation, Montana Tech graduates enjoy over a 94% overall placement rate with an overall salary of $52,172. Many of the College's alumni have attained senior leadership positions in the minerals, energy, and natural resource industry and business. Over 19% of Montana Tech alumni give back to the campus each and every year.

Located in the heart of the mountains of Southwest Montana, the 58-acre main campus can be seen for miles. With over $20 million in recently completed building and renovation projects, the campus blends its historical buildings with new, state-of the- art laboratory and instructional facilities. The College's two-year campus is located seven miles south of the main campus and provides occupational and technical program opportunities at the associate degree level.

Montana's geologic and hydrogeologic research arm, the Bureau of Mines and Geology, is a department of the College. Montana Tech's commitment to research has been rewarded with a 500 percent increase in funding over the past ten years. Inquiries to Montana Tech should be directed to 1-800-445-Tech or admissions@mtech.edu or see Tech's webpage at www.mtech.edu.

The University of Montana Western

The unique mission of The University of Montana Western emphasizes experiential learning that combines theory and practice through projects and field experiences. In order to better facilitate this type of learning, UMW has adopted a course scheduling system, termed Experience Once, where students take a single course at a time for about one month. Montana Western embraces as its mission the privilege and obligations to capitalize on its beautiful landscape in southwest Montana. This mission infuses the University's curriculum: in its century-long tradition for excellence in professional programs in teacher education, business and technology; in its strong program in the interdisciplinary arts and sciences; and in its two year associate degree programs responding to regional needs.

Montana Western offers the Bachelor of Science degree in: Elementary Education, Secondary Education with options in traditional subject areas, Business, Early Childhood Education, and Natural Horsemanship. In addition, Montana Western offers Bachelor of Arts (BA) and Bachelor of Applied Science (BAS) degrees. BA options include Biology, Environmental Interpretation, Environmental Science, Literature and Writing, Mathematics, Social Science, and Visual Arts. BAS students may use an Associate of Applied Science (AAS) degree as a base for the BAS degree with most of the credits from the two-year degree transferring into the BAS at Montana Western. UMW also offers Associate of Arts and Associate of Sciences degrees for those who want to obtain their general education before transferring to another campus, Associate of Applied Science degrees for those needing entry-level job skills in Business, Early Childhood Education, Education Studies, Equine Studies, Natural Horsemanship, and Tourism & Recreation; and certificate programs in Early Childhood Technology, and Information Technology & Network Administration.

Individualized education has been a campus hallmark for over 100 years. An average of 1200 students enroll at Montana Western each fall. Class sizes are kept small (average class size is 18 students). The faculty is nationally recognized for its excellence, creativity, and genuine concern for maintaining the high quality academic and personal experience that is a tradition at Montana Western.

In addition to fulfilling academic life, Montana Western offers National Association of Intercollegiate Athletics Frontier Conference sports in football, volleyball, men's and women's basketball and golf, men's and women's National Intercollegiate Rodeo Association teams, and Equestrian team competition. A varied sports program is also available for students seeking intramural activities. Montana Western's geographic location makes an ideal setting for individuals who enjoy the rugged outdoors, including proximity to Yellowstone, Grand Teton, and Glacier national parks for those interested in viewing natural wonders and wildlife. Although it has a small town atmosphere, Dillon offers all the amenities of a much larger community. Ranching, mining and tourism are the chief industries of the area. Montana Western's picturesque 34- acre campus and friendly atmosphere enhance the community and area. For more information about The University of Montana Western, call 877-683-7331.

African-American Studies

- Requirements for a Minor
- Courses
- Faculty

African-American Studies at The University of Montana connects African and African-America (including Latin America and the Caribbean) history, experiences, and perspectives with the 21st century. The goal of the African-American Studies curriculum is to develop basic knowledge of, and appreciation for, the diverse experiences of the African Diaspora, and their contributions to the nations into which they were incorporated. Through this study students will recognize that the African-American narrative connects to the core issues of nation formation, identity politics, social movements, and the liberal state. Those who take this minor will likewise be equipped to talk alongside, through, and in the midst of the racial fracture lines that mark this nation as a country where the color of one's skin is socially significant, In all these efforts, we promote scholarship that is driven first and foremost by an interest in creating knowledge and furthering our understanding of the African-American experience. The interdisciplinary curriculum of African-American Studies includes course offerings from the following academic disciplines: anthropology, economics, English, geography, history, music, political science, and sociology. Some topics of study include: African heritage and cultural continuity among African-Americans; African-American identity issues and cultural variation; the history of African-American protest and resistance, including the abolitionist, anti-lynching, and civil rights

movements; the Harlem Renaissance; the social dynamics of integration and segregation; and the various circumstances of, and prospects for, African-Americans in the 21st century.

Requirements for a Minor

The African-American studies minor is an interdisciplinary program requiring twenty-seven (27) credits drawn from a combination of disciplines-history, anthropology, English, sociology, geography, economics, and political science.

1. **African-American Core Courses**
   12 credits required from the following:
   - AAS 141H/HSTA 141H Introduction to African American Studies
   - AAS/HSTA 342H African American History to 1865
   - AAS/HSTA 343H African American History Since 1865
   - AAS 345/HSTA 345 The Black Radical Tradition
   - 6 credits required from the following electives:
   - AAS 195 Special Topics
   - AAS/HSTR 208H Discovering Africa
   - AAS/HSTA 262 Abolitionism: The First Civil Rights Movement
   - AAS 295 Special Topics
   - AAS 372 African American Identity
   - AAS/HSTA 374 African American Religious Experience
   - AAS 395 Special Topics
   - AAS/HSTA 417 Prayer and Civil Rights
   - AAS 493 Omnibus
   - AAS 495 Special Topics
2. **Electives**
   - **9 credits required from at least two of the following fields:**
   - **Geography**
   - GPHY 243S Africa
   - **History**
   - HSTR 262 (HIST 283H) Islamic Civilization: The Classical Age
   - HSTA 330 (HIST 359) Topics in 20th Century U.S. History
   - HSTA 344 (HIST 362) African American Struggle for Equality
   - HSTA 361 (HIST 361H) The American South: From Slavery to Civil Rights
   - HSTA 382 (HIST 363H) History of American Law
   - HSTR 388 (HIST 388H) Africa to 1880
   - HSTR 409 (HIST 409) History of Southern Africa
   - HSTA 418 (HIST 470) Women and Slavery
   - HSTA 419 (HIST 471) Southern Women in Black and White
   - HSTR 439 (HIST 389H) Colonial and Independent Africa since 1884
   - **Music**
   - MUS 132L History of Jazz
   - **Sociology**
   - SOCI 220S(SOC 220S) Race, Gender and Class
   - SOCI 325 (SOC 325) Social Stratification
   - SOCI 443 (SOC 322) Sociology of Poverty
   - **Political Science**
   - PSCI 326H (PSC 326H) Politics of Africa
   - **Economics**
   - ECNS 317 (ECON 350) Economic Development
   - **English**
   - LIT 343 (ENLT 337) African-American Literature
   - LIT 420 (ENLT 421) Critical Theory
   - **Anthropology**
   - ANTH 102S Race and Minorities
   - ANTH 329S Social Change in Non-Western Societies
   - ANTH 330 Peoples of Africa
3. **Exit Interview**
   All minors must meet with the AAS coordinator to discuss their experience and primary learning from the program prior to graduation
4. **Honors Designation**
   Students may elect to achieve an honors designation by writing a twenty-five-page research paper in which they develop an argument based on their class learning about a fundamental problem in the study of the African-American experience as part of a three-credit independent study.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course

may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

African-American Studies (AAS)

U 141H Introduction to African American Studies 3 cr. Offer autumn. Same as HSTA 141 (HIST 161). This course introduces students to the primary questions, themes, and approaches to African American Studies. In addition to examining key historical periods such as Reconstruction, the Harlem Renaissance, and the Civil Rights era, students will encounter Hip-Hop, African-American film, African-American religion, and contemporary identity politics. This course concludes by discussing the reasons for and new directions in African American studies, including Diasporias studies, Pan-Africanism, and post colonial studies. Overall students will gain new insight into the social, cultural, political, and intellectual, experiences of a diverse people and into the history and contemporary experience of the United States.

U 195 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 208 Discovering Africa 3 cr. Offered intermittently. Same as HSTR 208 (HIST 208H). Interdisciplinary study of the history of pre-colonial Africa, focusing on social, economic, political and cultural institutions and traditions including the wealth, diversity and complexity of ancient and classical African civilizations and cultures.

U 262 Abolitionism: The First Civil Rights Movement 3 cr. Offered spring. Same as HSTA 262 (HIST 262) Interdisciplinary, historical perspective on the early 19th century movement to abolish slavery and racial discrimination in the United States.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 342H African American History to 1865 3 cr. Offered intermittently. Same as HSTA 342H (HIST 378H). Survey of the African American experience from the African background to the end of the Civil War. Focus on Black American quest for the American Dream, and how Blacks attempted to deal with the challenges of enslavement and racism.

U 343H African American History Since 1865 3 cr. Offered intermittently. Same as HSTA 343H (HIST 379H). Study of the African American experience since the Civil War. Change and continuity in the African American experience, the fight against Jim Crow, the struggle for civil rights, and post-civil rights economic, political, social and cultural developments and challenges.

U 345 The Black Radical Tradition 3 cr. Offered autumn, odd years. Same as HSTA 345. From slave revolts through to the Move rebellion in Philadelphia, this course examines how the African-American community has engaged in radical efforts to change the status quo in the name of seeking justice**.**

U 347 African American Religious Experience 3 cr. Same as HSTA 347. An examination of the history of religious expression within the African-American community from the colonial era through the twentieth century. Central to the course is the question, "How did religion shape the experience of the African-American community?" Students will also examine the ways in which religious practice influenced social, political, and cultural changes in American history.

U 372 African American Identity 3 cr. Offered autumn. Interdisciplinary course designed to explore and illuminate the multifaceted nature and development of African American group and individual identity.

U 395 Special Topics Variable cr. (R-9) Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 396 Independent Study Variable cr. (R-9) Prereq., consent of instr.

UG 409 History of Southern Africa 3 cr. Offered intermittently. Same as HSTR 409 (HIST 409). Historical survey of developments in southern Africa from the earliest of times to the present. Focus on the evolution and growth of societies and states; economic, social and political developments; external interventions and impacts on race relations.

U 450 Prayer and Civil Rights 3 cr. An exploration of the meaning of public prayer in the Civil Rights Movement. Combines historical and religious studies inquiry to trace changes in civil rights activists' efforts to make use of religion. Challenges students to consider how meaning is formed through historical action and study the social significance of religious practice.

U 493 Omnibus Variable cr. (R-6) Prereq., consent of instr.

UG 495 Special Topics Variable cr. (R-9) Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 496 Independent Study Variable cr. (R-9) Prereq., consent of instr.

G 562 Problems in African American Religious History 3 cr. Spring, even years. Same as HSTA 562. This course explores the question, "How does one study African American history?" through the lens of African-American religious practice.

Faculty

Instructors

- **George Price, Ph.D., The University of Montana, 2006**
- **Tobin Miller Shearer, Ph.D., Northwestern University, 2008**

Emeritus Professor

- **Ulysses S. Doss, Ph.D., The Union Institute, 1974**

Department of Anthropology

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

John E. Douglas, Chair

Anthropology is the study of people, both ancient and contemporary, in their biological, archaeological, cultural, and linguistic context. Anthropology uses a holistic approach to integrate findings from the social sciences, natural sciences, and the humanities. The primary educational mission of the Department of Anthropology is teaching, research, and professional service to impart the critical importance of understanding the human condition and its relevancy to an increasingly diverse world. To accomplish this task, the Department of Anthropology provides a stimulating and challenging curriculum that will help students understand and appreciate the range of human cultures as well as the significance of biological evolution of the human condition. Through our rigorous undergraduate and graduate programs students not only achieve a broad cross-cultural education, but prepare to apply their anthropological knowledge in their chosen career paths. A minor, Bachelor of Arts, Master of Arts, and Doctor of Philosophy degrees are offered in anthropology, with options or specializations available at every level. For undergraduates, the B.A. can include an option in Archaeology, Cultural and Ethnic Diversity, Forensic Anthropology, Linguistics - or a general degree crafted to the interests of the student. Parallel missions to promote the student of human diversity and experience are advanced by the Linguistics Program and the Central and Southwest Asia Program, which are also housed in the Department. These programs also contribute to the Anthropology undergraduate major, minor and graduate programs, but, because they offer separate degree programs, these are listed individually elsewhere (see index).

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See Index.

There are no prerequisites to the undergraduate major. The major requires 36 credits in Anthropology or Linguistics, 12 of which must be the core offerings. In addition to the core courses, students are required to have a course in quantitative methods. Students must complete the core courses and the quantitative course with a letter grade of "C-" (1.70) or better.

Of the remaining 24 credits, two upper-division courses (6 credits) must be selected from Subarea I with 3 credits from the theory section and 3 credits from the methods section. Six additional credits must be selected from Subareas II, III, or IV. Students must complete the undergraduate anthropology degree requirements by choosing 12 other elective credits in anthropology or approved cognate courses.

The 36 credits must include:

Lower-Division Core Courses, 12 Credits

- ANTH 210N Introduction to Physical Anthropology, 3 cr.
- ANTH 220S Comparative Social Organization, 3 cr.
- ANTH 250S Introduction to Archaeology, 3 cr.
- LING 270S Introduction to Linguistics, 3cr.

Subarea I: Theory and Methods, 6 Credits

- **Anthropological Theory:**
- ANTH 359 Seminars in Archaeology
- ANTH 400 History of Anthropology
- ANTH 404 Anthropological Museology
- ANTH 410 Human Evolution
- ANTH 415 The Emergence of Modern Humans
- ANTH 430 Social Anthropology
- ANTH 450 Archaeological Theory
- **Anthropological Methods:**
- ANTH 314 Principles of Forensic Anthropology

- ANTH 401 Anthropological Data Analysis
- ANTH 402 Advanced Anthropological Statistics
- ANTH 412 Osteology
- ANTH 413 Forensic and Mortuary Archaeology
- ANTH 414 Human Identification
- ANTH 416 Dental Anthropology
- ANTH 431 Ethnographic Field Methods
- ANTH 451 Cultural Resource Management
- ANTH 452 Architecture of the Frontier West
- ANTH 453 Cultural Resource Research Methods
- ANTH 454 Lithic Technology
- ANTH 455 Artifact Analysis
- ANTH 456 Historic Sites Archaeology
- ANTH 466 Archaeological Survey
- ANTH 487 Anthropological Field Experience
- LING 475 Linguistic Field Methods

Subarea II, III, IV, 6 Credits from two areas

- **Subarea II: Human Adaptation and Diversity**
- ANTH 101H Introduction to Anthropology
- ANTH 102S Race and Minorities
- ANTH 201 Human Sexuality
- ANTH 211N Human Genetics
- ANTH 310 Human Variation
- ANTH 343 Culture and Population
- ANTH 388X Native American Health and Healing
- ANTH 417 Adaptation and Nutritional Anthropology
- ANTH 418 Ecology and Genetic Variation in Human Populations
- ANTH 420 Human Behavioral Ecology
- ANTH 444 Culture, Health, and Healing
- **Subarea III: World Societies and Cultures**
- ANTH 251H Foundations of Civilization
- ANTH 252H Archaeological Wonders of the World
- ANTH 323X Native Peoples of Montana
- ANTH 330X Peoples and Cultures of the World
- ANTH 351H Archaeology of North America
- ANTH 352X Archaeology of Montana
- ANTH 354H Mesoamerican Prehistory
- ANTH 357X Archaeology of the Southwest
- ANTH 457 Archaeology of the Pacific Northwest
- ANTH 458 Archaeology of Hunter-Gatherers
- **Subarea IV: Concepts and Issues**
- ANTH 286N Survey of Forensic Science
- ANTH 311 Visual Anthropology of Primates
- ANTH 326 Religious Belief Systems
- ANTH 327 Anthropology of Gender
- ANTH 328 Culture and Identity
- ANTH 329 Social Change in Non-Western Societies
- ANTH 340 Contemporary Issues of Southeast Asia
- ANTH 341X Contemporary Issues of Native Peoples
- ANTH 385E Indigenous Peoples and Global Development
- ANTH 411 Primatology
- ANTH 422 Psychological Anthropology
- LING 470 Introduction to Linguistic Analysis
- LING 473 Language and Culture
- LING 474 Historical Linguistics
- LING 476 Child Language Acquisition
- LING 477 Bilingualism
- LING 479 Pragmatics
- LING 484 North American Indigenous Languages and Linguistics
- LING 489 Morphology

Anthropology or cognate electives, 12 Credits

Upper-Division Writing Expectation

The upper-division writing expectation must be met either by taking an upper-division writing course from the approved list in the

Academic Policies and Procedures section of this catalog (see index), or by taking one of the following courses: ANTH 314, 402, 450, 451, and 455; LING 473 & 484.

Archaeology Option

For a degree in anthropology with an option in archaeology, the student must meet all the general requirements for the major and the following courses:

- Archaeology Core Courses (9 credits). One course from each of the following lists:
  - Area (3 credits): ANTH 351H, ANTH 352X, ANTH 354H, ANTH 353, ANTH 357, ANTH 451, ANTH 457, ANTH 459.
  - Theory (3 credits): ANTH 450, ANTH 456, ANTH 458.
  - Method (3 credits): Any archaeological field school, ANTH 454, ANTH 455, ANTH 466, ANTH 467.
- complete 6 credits in one of the following allied disciplines: biology, geography, or geology
- Complete 6 credits in one of the following allied disciplines: Computer Science, Environmental Studies, Forestry, History, Mathematical Sciences, or Native American Studies.

Cultural and Ethnic Diversity Option

For a degree in anthropology with an option in cultural and ethnic diversity the student must meet all the general requirements for the major and the following courses:

- ANTH 102S Race and Minorities
- ANTH 310 Human Variation
- ANTH 328 Culture and Identity
- ANTH 330X Peoples and Cultures of the World

- complete 6 credits, with advisor approval, in one of the following disciplines: anthropology, history, or sociology
- complete 6 upper-division credits, with advisor approval, in one of the following allied disciplines: African-American Studies, Asian Studies, Native American Studies or Women's Studies.

Forensic Anthropology Option

For a degree in anthropology with an option in forensic anthropology, the student must meet all the general requirements for the major and the following courses:

- ANTH 286N Survey of the Forensic Sciences
- ANTH 310 Human Variation
- ANTH 314 Principles of Forensic Anthropology
- ANTH 412 Osteology or ANTH 413 Forensic and Mortuary Archaeology
- SOCI 211S (SOC 230S) Introduction to Criminology or SOCI 221 (SOC 235) Criminal Justice System
- complete 12 credits in additional courses in subjects relevant to the forensic sciences chosen in consultation with the advisor, such as (but not limited to) archaeology, physical anthropology, biology, chemistry, criminology, drawing, geology, pharmacy, photography, public speaking, or psychology.

Linguistic Option

For a degree in anthropology with an option in linguistics, the student must meet all the general requirements for the major and complete an additional 12 credits from the following courses:

- LING 471 Phonetics and Phonology
- LING 472 Generative Syntax
- LING 474 Historical Linguistics
- LING 475 Linguistics Field Methods
- LING 473 Language and Culture
- ANTH 484 North American Indigenous Languages and Linguistics

Suggested Course of Study

Anthropology is an interconnected discipline and majors are urged to acquire a broad background especially in the natural and social sciences and the humanities. Recommended areas of study are biology, economics, English, geography, geology, history, communication studies, linguistics, Native American studies, philosophy, political science, psychology, religious studies, and sociology.

Suggested course of study for students selecting the general curriculum in Anthropology without an option:

First Year	A	S
ANTH 250S Introduction to Archaeology	-	3
ANTH elective	3	-

WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Mathematics	3	-
General Education	6	9
Elective	-	3
Total	15	15
Second Year		
ANTH 210N Introduction to Physical Anthropology	3	-
ANTH 220S Comparative Social Organization	3	-
LING 270S Introduction to Linguistics	-	3
ANTH electives	3	3
General Education	6	9
Total	15	15
Third Year		
ANTH elective	3	-
Upper-division ANTH courses	6	-
Statistics course	-	3
Upper-division electives	-	12
Electives	6	-
Total	15	15
Fourth Year		
ANTH elective	3	-
Upper-division electives	12	-
Electives	-	15
Total	15	15

Suggested course of study for students completing the archaeology option:

First Year	**A**	**B**
ANTH 250S Introduction to Archaeology	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Mathematics	3	-
ANTH elective	3	-
General Education	6	9
Elective	-	3
Total	15	15
Second Year		
ANTH 210N Introduction to Physical Anthropology	3	-
ANTH 220S Comparative Social Organization	3	-
LING 270S Introduction to Linguistics	-	3
ANTH electives	3	6
General Education	6	6
Total	15	15
Third Year		
ANTH 450 Archaeological Theory	3	-
ANTH 455 Artifact Analysis (or ANTH 466 in the fall)	-	3
Upper-Division ANTH courses	3	3
ANTH elective	3	-
Statistics course	-	3
Allied discipline courses (biology computer science, environmental studies, forestry, geography, geology, history, mathematics)	6	6
Total	15	15

Fourth Year		
ANTH 351H, or 352X, 354, 353, 357, 451, 457, 459	3	-
Electives	12	15
Total	15	15

Suggested course of study for students completing the forensic anthropology option:

First Year	A	B
ANTH 210N Introduction to Physical Anthropology	3	-
ANTH 220S Comparative Social Organization	3	-
ANTH 250S Introduction to Archaeology	-	3
LING 270 Introduction to Linguistics	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Mathematics	-	3
SOCI 101S (SOC 110S) Principles of Sociology	-	3
General Education	6	3
Total	15	15
Second Year		
ANTH 286N Survey of the Forensic Sciences	3	-
SOCI 221 (SOC 245) Criminal Justice System	-	3
ANTH 221 Human Genetics (recommended, otherwise an elective)	-	3
Forensic Science related course(s). At least one semester the chosen course should be a General Education Group XI (Natural Science) with laboratory. Recommended: CHMY 121N Introduction to General Chemistry (CHEM 151N) and CHMY 123N Introduction to Organic and Biochemistry (CHEM 152N), or BIOL 106N Principles of Living Systems	3-5	3-5
General Education	3	3
General Education writing class one semester and an elective the other	3	3
Elective	1-3	
Total	15-17	15-17
Third Year		
ANTH 401 Anthropological Data Analysis (or another statistics course)	3	-
ANTH 314 Principles of Forensic Anthropology	3	-
ANTH 310 Human Variation	-	3
Upper-division ANTH courses (Subareas III, IV)	3	3
Writing Proficiency Assessment	-	-
Forensic Science related course	3	3
Upper division elective	-	3
Elective	-	3
Total	15	15
Fourth Year		
ANTH 412 Osteology in the Autumn or ANTH 413 Forensic and Mortuary Archaeology in the Spring and an upper division ANTH elective the other semester	3	3
ANTH theory course (Subarea I Anthropological Theory) either semester and an upper division ANTH elective the other semester	3	3
ANTH 488 Forensic Science & Technology (recommended otherwise an upper division elective) either semester and an elective the other semester	3	3
Upper division elective	3	3
Electives	3	3
Total	15	15

Suggested course of study for students completing the linguistics option:

First Year	A	B
ANTH 250S Introduction to Archaeology	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Mathematics	3	-
ANTH elective	3	-

General Education	6	9
Elective	-	3
Total	15	15
Second Year		
ANTH 210N Introduction to Physical Anthropology	3	-
ANTH 220S Comparative Social Organization	3	-
LING 270S Introduction to Linguistics	-	3
ANTH electives	3	3
General Education	6	9
Total	15	15
Third Year		
LING 470 Introduction to Linguistic Analysis	3	-
Statistics course	-	3
Upper-division ANTH courses	6	-
ANTH electives	3	12
Elective	3	-
Total	15	15
Fourth Year		
LING 471 Phonetics and Phonology	3	-
LING 472 Generative Syntax	-	3
Two of: LING 473, 474, 475 or 484	3	3
Electives	6	6
Total	15	15

Certificate in Forensic Studies

The certificate in forensic studies is designed so that students may complete the requirements either as resident students at UM-Missoula or completely online through UM-Missoula's online facility.

To earn a certificate in forensic studies the student must complete a minimum of 18 credits to include:

6 credits in core forensic science courses:

- ANTH 286N Survey of the Forensic Sciences
- ANTH 488 Forensic Science and Technology

6 credits in science:

Appropriate courses include any that have been designated as University of Montana-Missoula General Education Perspective 6 (Natural Science) courses or selected courses from Anthropology (forensics, physical anthropology, archaeology method and theory); Biology, Chemistry; Computer Science; Geology; Mathematical Sciences (statistics); Physics; Psychology; Sociology 110S, criminology.

3 credits in written, oral, or pictorial communication:

Appropriate courses include selected courses in Art (drawing, photography); Curriculum & Instruction (communication, multimedia); Communications (any numbered 100 or higher); Communication Studies; Computer Science 171, 181; English 100, 101; Forestry 220; Journalism; Linguistics 173, 271; and Media Arts.

3 credits in ethics:

An appropriate course is one that has been designated as a University of Montana-Missoula General Education Perspective 5 (Ethical and Human Values) course.

Requirements for a Minor

To earn a minor in anthropology the student must complete the core courses. Afterward, the student must complete one upper-division course in Subarea I and one upper-division course from Subareas II, III, or IV.

Lower-Division Core Courses, 12 Credits

- ANTH 210N Introduction to Physical Anthropology
- ANTH 220S Comparative Social Organization

- ANTH 250S Introduction to Archaeology
- LING 270S Introduction to Linguistics

Subarea I, 3 Upper-Division Credits

Subareas II, III, or IV, 3 Upper-Division Credits

Please see the Linguistics section for all LING courses.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Anthropology (ANTH)

U 100H Introduction to Latin American Studies 3 cr. Offered autumn or spring. Same as MCLG 100H. Multidisciplinary survey and introduction to Latin America from pre- Columbian times to the present.

U 101H Introduction to Anthropology 3 cr. Offered autumn and spring. Offered intermittently in summer. A survey of anthropology which introduces the fundamental concepts, methods and perspectives of the field. The description and analysis of human culture, its growth and change. The nature and functions of social institutions.

U 102S Race and Minorities 3 cr. Offered autumn. Analysis of the development and concept of race as a social category and the processes of cultural change within and between ethnic groups.

U 103H Food and Culture 3 cr. Offered spring. Examination of the ways culture shapes the satisfaction of a biological need; food production, preparation, choices, customs, taste, taboos, beverages, spices and food distribution around the globe.

U 104 Orientation to the U.S. 2 cr. Offered spring. Examination of American cultural and societal trends from a cross-cultural perspective to help new and continuing foreign students adjust to life in the United States and to offer U.S. students an opportunity to examine their own culture from the perspective of members of other cultures.

U 106H The Silk Road 3 cr. Offered autumn and spring. Same as AS and HSTR 146 (HIST 106H). Introduction to the study of the human communities, cultures, and economies in Central and Southwest Asia along the ancient four thousand mile-long Silk Road.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship Variable cr. Offered every term. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, and 498) may count toward graduation.

U 201 Human Sexuality 3 cr. Offered autumn. Same as BIOL 265, WGS 201. Biological, behavioral, and cross-cultural aspects of human sexuality to help students place their own sexuality and that of others in a broader perspective. Includes sexual anatomy, physiology, development, reproduction, diseases, sex determination, as well as gender development and current issues.

U 210N Introduction to Physical Anthropology 3 cr. Offered autumn. An introduction to human evolutionary biology including processes of evolution, primate studies, hominid paleontology, and human variation.

U 211N Human Genetics 3 cr. Offered intermittently. Genetics-related problems that confront individuals and society. Variation and natural selection in human populations. Designed for non-biology majors.

U 214 Central Asia: People and Environments 3cr. Offered autumn. Same as AS, HSTR 241 (HIST214), LS 214. Introduction to Central Asia's history, culture and ways of thinking. Focus on the political and social organization of Central Asia and cultural changes as expressed in art and interactions with China, India and the Middle East.

U 220S Comparative Social Organization 3 cr. Offered autumn. Study of social organization of non-western societies; emphasis on variations in ecology, social structure, economic, political and religious beliefs and practices.

U 230 Explorations in American Culture 2 cr. Offered intermittently. U.S. and foreign students read fictional accounts of cultural adaptation. Some accounts written from the perspective of foreigners to give foreign students comparisons with their own acculturation process and provide a contrastive world-view for American students. Intended to give an understanding of the complexity and richness of cross-cultural ambiguity, dissonance, and convergence.

U 231X Indigenous World View Perspectives 3 cr. Offered spring. Same as NAS 231X. Examination of indigenous belief systems, with regard to world views, religious ceremonies, cultural ways and the impact that Anglo-European culture has had upon these systems. Focus

on indigenous peoples of Australia, New Zealand, and North America from Canada and the United States.

U 250S Introduction to Archaeology 3 cr. Offered spring. What archaeologists do and how they reconstruct past human cultures. Methodological and theoretical approaches to understanding and explaining past human societies.

U 251H Foundations of Civilization 3 cr. Offered spring. Focus on the worldwide evolution of human society from Stone Age hunter-gatherers to the beginnings of modern civilization. Approached through the colorful and exciting world of archaeologists and the sites they excavate.

U 252H Archaeological Wonders of the World 3 cr. Offered spring even numbered years. Major archaeological sites and discoveries and their impact on our understanding of prehistory and history.

U 283 Islamic Civilization: The Classical Age 3cr. Offered autumn. Same as HSTR 262 (HIST 283). A concise history of the Islamic world from the 6th century to the fall of the Abbasid Empire in the 13th century, focusing primarily on the teachings of Islam and the causes for the rapid expansion of the Islamic empire.

U 284 Islamic Civilization: The Modern Era 3cr. Offered spring. Same as HSTR 264 (HIST 284). History of the Islamic world and particularly the Persian, Arabic, and Turkish speaking lands between 1453 and 1952.

U 286N Survey of the Forensic Sciences 3 cr. Offered autumn and online spring. A survey of the forensic sciences and related disciplines and their use in criminal investigations, the role of forensic scientists in the investigative process and as expert witnesses.

U 293 Omnibus Variable cr. (R-10) Offered intermittently. Independent work under the University omnibus option. See index.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings relating to current problems or new developments in the discipline.

U 310 Human Variation 3 cr. Offered every spring. Prereq., ANTH 210N or consent of instr. Introduction to human biological variation, and to the methods and theories that are used to explain the distribution of variable features.

U 311 Visual Anthropology of Primates 1 cr. Offered intermittently. An exploration of primates using videos and films.

U 314 Principles of Forensic Anthropology 3 cr. Offered autumn. Prereq., ANTH 310 or consent of instr. A study of techniques for recovering skeletal material, identifying and interpreting human skeletal remains, keeping records, interacting with the law enforcement system and documenting humans' rights abuses.

UG 323X Native Peoples of Montana 3 cr. Offered spring. The history and culture of the Indian tribes in Montana.

UG 324X Indians of Montana Since the Reservation Era 3 cr. Offered intermittently. Same as NAS 324X and HSTA 354x (HIST 354H). Examination of the history of Montana Indians since the establishment of the reservations and contemporary conditions and issues among both reservation and non-reservation Indian communities in the state. Special attention given to social and economic conditions, treaty rights, tribal sovereignty, and legal issues.

UG 326 Religious Belief Systems 3 cr. Offered autumn odd-numbered years. Theories and practices concerning supernatural phenomena found among non-literate peoples throughout the world.

UG 327 Anthropology of Gender 3 cr. Offered spring even-numbered years. Prereq., ANTH 201. Same as WS 327. Comparative study of the history and significance of gender in social life.

UG 328 Culture and Identity 3 cr. Offered spring. Prereq., ANTH 220S or consent of instr. The comparative study of identity formation along and across racial, ethnic, and ethno-national lines. Emphasis on issues of ethnogenesis, cultural resistance, transformation, domination, colonialism as well as sharing to understand both the cultural commonalties and differences in identity formation.

UG 329 Social Change in Non-Western Societies 3 cr. Offered intermittently. Prereq., ANTH 220S or consent of instr. Study of the processes of change, modernization and development.

UG 330X Peoples and Cultures of the World 3 cr. (R-9) Offered autumn and spring. Study of the peoples of various geographic regions and their cultures.

UG 340 Contemporary Issues of Southeast Asia 3 cr. Offered spring. Prereq., ANTH 220S or AS 101 or AS 102. Same as AS 340. An examination of the major issues that affect the contemporary experience of the Southeast Asians.

UG 341X Contemporary Issues of American Indians 3 cr. Offered intermittently. Same as NAS 341X. An examination of the major issues that affect the contemporary experiences of American Indians.

UG 343 Culture and Population 3 cr. Offered autumn. The relationship between population processes and culture to the human condition; survey data, methodologies, theories of demographic and culture change.

U 346 Central Asia and Its Neighbors 3cr. Offered spring. Same as AS 345 and HSTR 358(HIST 345). Analysis of the human communities and cultures of Central and Southwest Asia, with particular emphasis on the importance of relationships with neighboring countries and civilizations since ancient times.

UG 351H Archaeology of North America 3 cr. Offered intermittently. The origins, backgrounds and development of Pre-Columbian American peoples and cultures.

UG 352X Archaeology of Montana 3 cr. Offered spring. The origins, distributions and development of aboriginal cultures in Montana and surrounding regions.

U 353 Paleoindian Archaeology 3 cr. Examines archaeological, linguistic, biological and skeletal data to determine from where and when Native Americans arrived in North America. Examines archaeological sites from such diverse places as Montana, Siberia, Virginia, and Chile to answer the most intriguing question in contemporary American archaeology today: how, when and from where did people first arrive in the Americas?

UG 354H Mesoamerican Prehistory 3 cr. Offered intermittently. The development of civilization and prehistoric states in the New World. Prehistoric lifeways and the effects of European contact on these cultures.

UG 357X Archaeology of the Southwestern United States 3 cr. Offered intermittently. The development of the prehistoric communities in the southwestern United States from ancient times to the dawn of history in the area.

UG 359 Seminars in Archaeology 3 cr. (R-6) Offered intermittently. In-depth research and discussion of selected areas in archaeology.

UG 385E Indigenous Peoples and Global Development 3 cr. Offered autumn odd-numbered years. Examination of the impact of global development on tribal and indigenous peoples. Topics include land issues, health, employment, and cultural change caused by global development. Exploration of how these societies are resisting or adapting to their changing world.

UG 386 Nationalism in Modern Middle East 3cr. Offered autumn. Same as HSTR 386 (HIST 386). The several intellectual traditions and philosophies some ephemeral and visionary, most eclectic and confused, and virtually all conflicting that are usually believed to underlie the varying concept of Iranian and Arab nationalism in the 20th century.

UG 387 Iran Between Two Revolutions 3 cr. Offered spring. Same as HSTR 368. The socioeconomic, political, and cultural causes which resulted in the transformation of the Iranian society from a traditional Islamic entity to a modern secular state and the factors which led to the downfall of the secular state and the establishment of an Islamic republic.

UG 388X Native American Health and Healing 3 cr. Offered spring. Same as NAS 388X. Examination of traditional and contemporary uses of medicine in Native American societies. Issues discussed will be the current health status of American Indians, the relationship between medicine and culture, and introduction to various techniques for assessing health status of American Indian populations.

U 393 Omnibus 1-9 cr. (R-9) Offered intermittently. Independent work under the University omnibus option. See index.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr. Offered intermittently. Prereq., 9 credits in anthropology; consent of faculty supervisor and cooperative education officer. Practical application of classroom learning through internship in a number of areas such as museology, cultural resource management, and forensics. A maximum of 6 credits of Internship (198, 298, 398, and 498) may count toward graduation.

UG 400 History of Anthropology 3 cr. Offered autumn odd numbered years. Prereq., ANTH 101H and 220S. The development of theory and method in cultural anthropology to the present. Various archaeological, ethnological and socio-psychological theories in the light of historical anthropology.

UG 401 Anthropological Data Analysis 3 cr. Offered autumn. Prereq., college algebra or consent of instr. An analysis of the foundations of anthropological scaling and measurement.

UG 402 Advanced Anthropological Statistics 3 cr. Offered spring. Prereq., introductory course in statistics or consent of inst. Focus on techniques used for microcomputer-based data management and multivariate analysis.

UG 403 Ethics and Anthropology 3 cr. Offered spring odd-numbered years. Prereq., ANTH 101H or 220S, or consent of instr. Ethical and anthropological modes of inquiry in relation to each other. Focus on the sociocultural subfield as well as ethical issues in physical anthropology and archaeology.

UG 404 Anthropological Museology 3 cr. Offered spring even-numbered years. Prereq., ANTH 101H. Introduction to anthropological museums, museum work and museum theory.

UG 410 Human Evolution 3 cr. Offered spring even-numbered years. Prereq., ANTH 210N. An exploration of the fossil and archaeological records of the evolution of human beings, and of current methods and theories used in interpreting these data.

UG 411 Primatology 3 cr. Offered autumn odd-numbered years. Prereq., ANTH 210N. Review of the evolution, anatomy, and behavior of monkeys, apes, and other members of the order Primates.

UG 412 Osteology 4 cr. Offered autumn. Prereq., ANTH 314 and consent of instr. A detailed examination of the human skeleton with an emphasis on identifying individual bones and their structures. Specifically extended to fragmentary skeletal elements. Direct hands-on experience required.

UG 413 Forensic and Mortuary Archaeology 3 cr. Offered spring. Prereq., ANTH 314 and consent of instr. Practical approaches to locating, documenting and recovering human skeletal remains, including surface scatters and burials. Emphasis on interpretations of evidence for recovery scene formation and mortuary behavior.

UG 414 Human Identification 3 cr. Offered spring. Prereq., ANTH 412 or consent of instr. An exploration of techniques for conservation and replication of skeletal elements, facial reconstruction, and other techniques for identification of individuals from their skeletal remains.

UG 415 The Emergence of Modern Humans 3 cr. Offered spring odd-numbered years. Prereq., ANTH 210N. An exploration of the emergence of "modern" humans and their relationships with Neanderthals. Exploration of what it means to be "a modern human" through an examination of human evolutionary history.

UG 416 Dental Anthropology 3 cr. Offered spring even-numbered years. Prereq., ANTH 210N. The use of information from teeth in investigating evolutionary trends, the relationships between human groups, subsistence change, and culture change.

UG 417 Adaptation and Nutritional Anthropology 3 cr. Offered autumn odd-numbered years. Prereq., ANTH 210N. An examination of the adaptation of human populations to the environment and food supply via evolutionary, physiological, and cultural mechanisms.

UG 418 Ecology and Genetic Variation in Human Populations 3 cr. Offered autumn even-numbered years. Prereq., ANTH 210N Human genetic variation examined from an ecological perspective. Emphasis on the role of infectious disease as a selective factor in human evolution and exploration of the implications of these associations for human genetic variation.

UG 420 Human Behavioral Ecology 3 cr. Offered intermittently. The study of the evolution of human behavior in cross-cultural perspective.

UG 422 Psychological Anthropology 3 cr. Offered autumn even-numbered years. Prereq., ANTH 220S or consent of instr. The study of socialization, personality, cognition, and mental health cross-culturally.

UG 430 Social Anthropology 3 cr. Offered autumn. Prereq., ANTH 220S. The principles and theories of social organizations and institutions.

UG 431 Ethnographic Field Methods 3 cr. Offered spring. Prereq., ANTH 220S, 401, or consent of instr. Introduction to socio-cultural anthropological methods including participant observation, interviewing and narrative techniques and analysis of qualitative data.

UG 444 Culture, Health and Healing 3 cr. Offered autumn. Cross-cultural comparisons of theories and concepts and health and illness. Examination of the impact of these concepts upon health practices and treatment of disease around the world.

UG 445 Drugs, Society and Culture 3 cr. Drug use in a cross-cultural perspective. The role of drugs in cultural expression and social interaction. Examination of the prehistory of drug use, drug use in traditional non-Western and Western societies, and drug use in the context of global sociocultural change.

UG 450 Archaeological Theory 3 cr. Offered autumn. Prereq., ANTH 250S. Historical trends and current major theories and methods in archaeology.

UG 451 Cultural Resource Management 3 cr. Offered autumn. Introduction to the laws and practice of cultural resource/heritage property management. Focus on the methods and techniques for protecting and using cultural remains to their fullest scientific and historic extent. Also emphasis on responsibility to work with long range management of properties for the greatest scientific, historic, and public benefit.

UG 452 Architecture of the Frontier West 3 cr. Offered intermittently. Introduction to the methods and techniques of recording and analyzing standing cultural resources. Includes a field project and draws from buildings listed in the National Register of Historic Places.

UG 453 Cultural Resource Research Methods 3 cr. Offered intermittently. Prereq., ANTH 450, 451, or 452. Location and use of sources of information for developing and building contexts for the consideration of cultural resource significance.

UG 454 Lithic Technology 3 cr. Offered autumn odd-numbered years. Prereq., ANTH 250S and consent of instr. Analysis of stone artifacts and debitage.

UG 455 Artifact Analysis 3 cr. Offered spring. Prereq., ANTH 250S and consent of instr. Laboratory approaches and techniques for analyzing material culture from technological, stylistic, and chronological perspectives.

UG 456 Historic Sites Archaeology 3 cr. Offered spring. Prereq., ANTH 250S and consent of instr. The location and evaluation of historic sites in the Northwest.

UG 457 Archaeology of the Pacific Northwest 3 cr. Offered autumn even-numbered years. Introduction to the study of archaeology in the Pacific Northwest region inclusive of the Northwest Coast and Columbia/Fraser-Thompson Plateau. Understanding hunter-gatherer adaptations, evolution of social complexity, and ancient history of contemporary native peoples in the region.

UG 458 Archaeology of Hunter-Gatherers 3 cr. Offered autumn even-numbered years. Introduction to the archaeological study of hunter-gatherer societies. Primary emphasis on archaeological method and theory.

UG 459 Archaeology of the Arctic and Subarctic 3 cr. Offered spring even-numbered years. Introduction to the study of Arctic and Subarctic archaeology emphasizing the Pleistocene and Holocene prehistory of North America and eastern Siberia. Understanding of methodological problems associated with archaeology in a northern context, the evolution of Inuit, Eskimo, Aleut and Athapaskan cultures, and hunter-gatherer adaptations to northern interior and coastal environments.

UG 460 Central Asia Seminar 3 cr. Offered spring. Same as AS 460 and HSTR 441 (HIST 462). Advanced analysis of the historical and contemporary issues involving the human communities, cultures, and economies in Central and Southwest Asia.

UG 461 Artistic Traditions of Central and Southwest Asia 3cr. Offered autumn and spring. Same as AS and GEOG 457 and HSTR 459 (HIST 457). Analysis of the study of human artistic creativity and scientific innovations of various cultures in Central and Southwest Asia since ancient times.

UG 462 Cities and Landscapes of Central Asia 3cr. Offered autumn. Same as AS and GEOG 405 and HSTR 442 (HIST402). Analysis of the main centers of civilization and culture, rich sites and monuments of Central Asia and Southwest Asia since ancient times.

UG 466 Archaeological Survey Variable cr. (R-12) Prereq., ANTH 250S and consent of instr. Offered autumn. A field course in Montana archaeology.

UG 467 Archaeological Field School Variable cr. (R-12) Offered summer. prereq., ANTH 250S and consent of instructor. Provides students with a well-rounded experience in archaeological field methods. Field schools will typically occur at archaeological site locations away from campus. During the archaeological field experience, students may learn methods of excavation, survey, research, and analysis to facilitate their transition to careers as professional archaeologists.

UG 482 Preceptorship in Anthropology 1-3 cr. (R-6) Offered autumn and spring. Prereq., ANTH 210N, 220S, 250S, and 270 and consent of instr. Assisting a faculty member by tutoring, grading objective exams, conducting review sessions, and carrying out other class-related responsibilities. Open to juniors, senior, and graduate students with consent of the faculty member with whom they serve. Proposals must be approved by department chair.

UG 487 Anthropological Field Experience Variable cr. (R- 12) Offered intermittently. Prereq., consent of instr. Organized field experience in anthropology.

UG 488 Forensic Science and Technology 3 cr. Offered spring and online in autumn. Prereq., ANTH 286N or consent of instr. Examination of the forensic sciences with emphases on the non-crime lab forensic sciences, new technologies, and new directions in the forensic sciences.

UG 494 Seminars in Ethnology and Linguistics 3 cr. (R-6) Offered intermittently. Prereq., consent of instr. Offered alternate years.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study Variable cr. (R-6) Offered every term. Prereq., consent of instr.

G 500 Contemporary Anthropological Thought 3 cr. Offered autumn and spring. A review of major contributions to current anthropological theory, with an emphasis on the application of theory to anthropological problems. Significant advances in general theory, symbolic anthropology, critical theory, cultural studies, and postmodernism.

G 501 Historical Anthropology 3 cr. Offered spring. The location, use, and value of written records in anthropological research.

G 502 Curatorial and Archival Management 3 cr. Offered intermittently. Theory and practice in the curation of anthropological collections and the maintenance of anthropological information and records.

G 503 Cultural Resource Interpretation 3 cr. Offered intermittently. Practice of presenting anthropological knowledge of cultural resources to the public, with an emphasis on writing.

G 510 Seminar in Human Variation and Evolution 3 cr. Offered autumn. Various topics related to genetic evidence of human biological evolution, morphological and genetic diversity of modern humans, and problems of "race".

G 511 Seminar in Physical Anthropology 3 cr. Offered intermittently. Review of major concepts, theories, and recent publications in physical anthropology. Designed to prepare graduates to evaluate new hypotheses.

G 512 Advanced Forensic Anthropology 3 cr. (R-6) Offered spring. Prereq., ANTH 314 and 412 or the equiv. and consent of instr.

Review of traditional methods and exploration of new methods of skeletal analysis, as applied to cases from the forensic collection.

G 513 Seminar in Bioarchaeology and Skeletal Biology 3 cr. Offered spring. Theoretical and methodological approaches to the analysis of human skeletal remains derived from archaeological contexts. Demography, health and disease, diet and nutrition, growth, activity patterns, and measures of biological relatedness are interpreted within a biocultural framework.

G 520 Seminar in Ethnology 3 cr. (R-6) Offered autumn and spring even-numbered years. Topic varies.

G 521 Applied Anthropology 3 cr. Offered spring even-numbered years. Study of ways in which anthropological skills may be used in non-academic fields.

G 550 Seminar in Archaeology 3 cr. Offered autumn odd-numbered years. Topic varies.

G 551 Seminar in Historical Archaeology 3 cr. Offered autumn odd-numbered years. An exploration of theories, methods, and literature in historic archaeology.

G 552 Power, Prestige, and Things 3 cr. Offered autumn even-numbered years. Investigation of power, prestige, leadership, and inequality in past social systems as interpreted through artifacts and architecture.

G 593 Professional Project Variable cr. (R-10) Offered every term.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered every term. Prereq., consent of instr.

G 597 Research Variable cr. (R-10) Offered every term.

G 598 Internship Variable cr. (R-6) Offered intermittently. Prereq., graduate standing and consent of faculty supervisor. Practical application of classroom learning through internship in a number of areas such as museology, cultural resource management and forensics. Written reports are required.

G 599 Thesis Variable cr. (R-10) Offered every term.

G 600 Issues in Cultural Heritage 3 cr. Offered autumn. A review of the range of topics that fall under the umbrella of cultural heritage and a review of theory and practice in one or more of these topics.

G 601 Research Design and Proposal Preparation 3 cr. Offered spring. Prereq., graduate standing. Seminar in the development of anthropological research designs and proposals.

G 602 Cultural Heritage Policy and Practice 3 cr. Offered spring. Prereq., graduate standing. Exploration of critical issues in cultural heritage policy emphasizing the regulatory basis for federal CRM, public anthropology, and indigenous people's issues. Hands-on training in the design and production of federal planning documents.

G 694 Seminar in Cultural Heritage Variable cr. (R-6) Offered intermittently. Topic varies.

G 697 Advanced Research Variable cr. (R-6) Offered every term. Prereq., consent of instr. Independent research projects, other than dissertation.

G 699 Dissertation Variable cr. (R-10) Offered every term. Doctoral dissertation research activities.

Faculty

Professors

- Gregory R. Campbell, Ph.D., University of Oklahoma, 1987
- John E. Douglas, Ph.D., University of Arizona, 1990 (Chair)
- S. Neyooxet Greymorning, Ph.D., University of Oklahoma, 1992
- Mehrdad Kia, Ph.D., University of Wisconsin-Madison, 1986 (Director, Central & SW Asia Program)
- Anna M. Prentiss, Ph.D., Simon Fraser University, 1993 (Vice Chair)
- Randall R. Skelton, Ph.D., University of California, Davis, 1983
- G.G. Weix, Ph.D., Cornell University, 1990

Associate Professors

- Irene Appelbaum, Ph.D., University of Chicago, 1995
- Kelly J. Dixon, Ph.D., University of Nevada-Reno, 2002

- Kimber Haddix McKay, Ph.D., University of California, Davis, 1998
- Noriko Seguchi, Ph.D., University of Michigan, 2000
- Tully J. Thibeau, Ph.D., University of Arizona, 1999 (Director, Linguistics Program)
- Gilbert Quintero, Ph.D., University of Arizona, 1997

Assistant Professors

- Leora Bar-el, Ph.D., University of British Columbia, 2005
- Ardeshir Kia, Ph.D., University of Wisconsin-Madison, 1988 (Associate Director, Central & SW Asia Program)
- Ashley H. McKeown, Ph.D., University of Tennessee, Knoxville, 2000
- Mizuki Miyashita, Ph.D., University of Arizona, 2002
- Douglas MacDonald, Ph.D., Washington State University, Pullman, 1998

Adjunct Assistant Professor

- Richard Sattler, PhD., University of Oklahoma, 1987

Lecturer

- D. Garry Kerr, M.A., University of Montana, 1994

Emeritus Professors

- Frank B. Bessac, Ph.D., University of Wisconsin, 1963
- Thomas A. Foor, Ph.D., University of California, Santa Barbara, 1982
- Anthony Mattina, Ph.D., University of Hawaii, 1973
- Charlene G. Smith, Ph.D., University of Utah, 1970
- Katherine M. Weist, Ph.D., University of California, Berkeley, 1970

Applied Science

- Special Degree Requirements
- Courses

Lynn Stocking, Advisor

The Bachelor of Applied Science program is available to students completing an Associate of Applied Science degree program at a regionally accredited institution. The College of Technology section of The University of Montana-Missoula catalog identifies Associate of Applied Science degree programs offered at The University of Montana.

Students considering a B.A.S. degree program must have completed an accredited A.A.S. degree program with a 2.50 grade point average. Because approval of a B.A.S. degree plan is required, students considering such a degree must meet with a designated B.A.S. advisor to identify a degree plan, to create a Degree Program Committee, and to identify the procedure required for degree plan approval.

Bachelor of Applied degree students must meet all the general university requirements for graduation. Fifty credits from an accredited A.A.S. program will count toward the total credits required for graduation. Student earning this degree will receive a diploma identifying the degree of Bachelor of Applied Science without designation of an area of concentration.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

General Requirements:

1. Successful completion of an approved Associate of Applied Science program.
2. Successful completion of 70 credits as identified under specific requirements of which 39 credits must be in courses numbered 300 and above.

Specific Requirements

1. Competency -General Education
    1. English Writing Skills
        1. Complete successfully WRIT 101 (ENEX 101) or be exempt by receiving an acceptable score on the writing placement exam.
        2. Complete successfully two writing courses, at least one numbered 300 or above.
        3. Complete successfully the Upper-Division Writing Proficiency Assessment.
    2. Mathematical Literacy

1. Complete successfully one mathematics course numbered greater than 100, with a grade of C or better, or demonstrate equivalent skill by competency testing.

3. Foreign Language/Symbolic Systems
    1. Complete successfully the second semester of a foreign language at The University of Montana-Missoula or demonstrate equivalent skill in a foreign language;

       OR

    2. Complete successfully one of the approved sequences in a symbolic system.

2. Perspectives - General Education

   Complete successfully 27 credits in the six identified perspectives. A minimum of two credits is required from each perspective, except perspective 6 in which six credits are required. A maximum of six credits from each perspective will count toward the general education distribution requirement:

    1. Perspective 1 - Expressive Arts
    2. Perspective 2 - Literary and Artistic Studies
    3. Perspective 3 - Historical and Cultural Studies
    4. Perspective 4 - Social Science
    5. Perspective 5 - Ethical and Human Values
    6. Perspective 6 - Natural Science

3. Supportive

   Complete successfully 30 credits in a field or fields related to or supportive of special and individual needs of the student and the student's Associate of Applied Science degree program, 21 of which must be numbered 300 and above.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Applied Science (APS)

U 396 Independent Study 1-6 cr. (R-6) Offered intermittently. Prereq., consent of instr.

Asian Studies

- Special Degree Requirements
- Courses
- Faculty

Bradley Clough, Chair

The Asian Studies Program offers opportunities for those students who wish to focus on a variety of the diverse societies within the major cultural areas of Asia (Southwest and Central Asia, South and Southeast Asia, and East Asia) through the study of geography, history, peoples, religious and other cultural traditions, and languages.

The Asian Studies Program is administered through the Liberal Studies Program. Interested students must majorin Liberakl Studies with an option in Asian Studies. In addition to select Liberal Studies courses, students will also choose from specified courses offered from many departments and programs in the College of Arts and Sciences, such as Southwest and Central Asias Studies, Anthropology, Sociology, Geography, and the Mike Mansfield Center.

Students interested in the Asian Studies option within Liberal Studies should consult and register with the chair of the Asian Studies program. the current chair is Dr. Bradley Clough (LA 158, ext. 2837, bradley.clough@mso.umt.edu). Depending on their particular interestes, students will also consult with other Asian studies faculty, in order to determine the most appropriate course of study. Students are encouraged to plan their course sequence at least one year in advance, in consultation with their assigned Asian Studies faculty advisor.

Additional Asian Studies Courses

- LS 161L Introduction to Asian Humanities
- AS 106H The Silk Road
- AS 195 Special Topics
- AS 201 East Asian Civilizations
- AS 210H Japanese Culture and Civilization
- AS 211H Chinese Culture and Civilization
- As 212S Southeast Asian Culture and Civilization
- AS 214S Central Asia: Peoples and Environment

- AS 231S The Middle East
- AS 295 Special Topics
- As 345 Central Asia and Its Neighbors
- AS 395 Special Topics
- AS 402 Cities and Landscapes of Central Asia
- AS 457 Artistic Traditions of Central and Southwest Asia
- AS 495 Problems in Asian Studies
- CHIN 101 Elementary Chinese I
- CHIN 102 Elementary Chinese II
- CHIN 193 Omnibus Variable
- CHIN 191 (CHIN 195) Special Topics
- CHIN 201 Intermediate Chinese I
- CHIN 202 Intermediate Chinese II
- CHIN 294 (CHIN 293) Omnibus Variable
- CHIN 292 (CHIN 296) Independent Study Variable
- CHIN 301 Advanced Chinese I
- CHIN 302 Advanced Chinese II
- CHIN 313 Classical Chinese Poetry in English Translation
- CHIN 314 Traditional Chinese Literature in English Translation
- CHIN 394 (CHIN 393) Omnibus Variable
- CHIN 391 (CHIN 395) Special Topics
- CHIN 392 (CHIN 396) Independent Study Variable
- CHIN 432 Twentieth Century Fiction in English Translation
- CHIN 493 Omnibus Variable
- CHIN 492 (CHIN 496) Independent Study Variable
- HSTR 345 (HIST 380H) Modern China
- HSTR 343 (HIST 381H) Modern Japan
- JPNS 101 Elementary Japanese I
- JPNS 102 Elementary Japanese II
- JPNS 193 Omnibus Variable
- JPNS 191 (JPNS 195) Special Topics Variable
- JPNS 201 Intermediate Japanese I
- JPNS 202 Intermediate Japanese II
- JPNS 293 Omnibus Variable
- JPNS 291 (JPNS 295) Special Topics
- JPNS 292 (JPNS 296) Indepnedent Study Variable
- JPNS 301 Advanced Japanese I
- JPNS 302 Advanced Japanese II
- JPNS 306 Japanese for Business and Tourism
- JPNS 311 Classical Japanese Literature in English
- JPNS 312 Japanese Literature from Medieval to Modern in English Translation
- JPNS 386 History of Japanese Language
- JPNS 390 Supervised Internship
- JPNS 391 Japanese Film
- JPNS 393 Omnibus Variable
- JPNS 391 (JPNS 395) Special Topics
- JPNS 392 (JPNS 396) Independent Study Variable
- JPNS 398 Internship Variable
- JPNS 411 Modern Japanese Writers and Thinkers
- JPNS 412 Introduction to Classical Japanese
- JPNS 415 Advanced Japanese for Professionals
- JPNS 431 Post-War Japanese Literature
- JPNS 491 (JPNS 495) Special Topics
- JPNS 492 (JPNS 496) Independent Study Variable
- JPNS 500 Directed Reading in Japanese Texts
- PSCI 329 (PSC 329H) Politics of Japan
- RELS 232 Introduction to Buddhism
- RELS 233 Traditions of Buddhist Meditation
- RELS 234 Hinduism
- RELS 236 Chinese Religions
- RELS 238 Japanese Religions
- RELS 353 Topics in South Asian Religions
- RELS 354 Topics in East Asian Religions
- RELS 366 Tibetan Civilization
- RELS 367 Approaches to the Study of Zen Buddhism
- RELS 368 Contemporary Buddhism in South and Southeast Asia
- RELS 369 Contemplative Traditions of Asia

Special Degree Requirements

Major in Liberal Studies with an option in Asian Studies

The following requirements must be met to complete this program.

1. Completion of the Liberal Studies core curriculum. (See the Liberal Studies section of this catalog.)
2. Six credits in introductory Asian Studies courses (100-level courses or Study Abroad in Asia).
3. Twelve credits in foundational Asian Studies courses (200- level courses), including Asian Studies 201.
4. At least 30 credits in upper-level courses (300-level courses and above), of which at least six credits must be in the humanities and six in the social sciences.
5. Language Requirement: Two years (or equivalent proficiency) in an Asian language appropriate to the student's academic goals and approved by the academic advisor. Students who plan to pursue graduate work are strongly advised to complete three years, including at least one study abroad in Asia experience.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Asian Studies (AS)

U 106H The Silk Road 3 cr. Offered autumn and spring. Same as ANTH 106H and HSTR 146H. Introduction to the study of the human communities, cultures, and economies in Central and Southwest Asia along the ancient four thousand mile-long Silk Road.

U 195 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201 East Asian Civilizations 3 cr. Offered autumn. Same as HSTR 240 (HIST 201H). An interdisciplinary, pluralist, and exploratory introduction to civilizations of East Asia. Primary focus on China, Japan, and Korea, the relations among them and their patterns of interaction with the outside world in pre-modern and modern periods.

U 210H Japanese Culture and Civilization 3 cr. Offered autumn. Same as JPNS 130H (JPNS 210H), LS and MCLG 210H. The historical religious, artistic, literary and social developments in Japan from earliest times to the present.

U 211 Chinese Culture and Civilization 3 cr. Offered intermittently. Same as LS and MCLG 211. A comprehensive study of Chinese culture and civilization in the manifold aspects of anthropology, sociology, economics, history, literature, religion, and philosophy.

U 212S Southeast Asian Culture and Civilization 3 cr. Offered intermittently. Same as LS and SOCI 212S (SOC 212H). Introduction to the history, geography, cultures, social organization, and contemporary events of Southeast Asia.

U 213X The Middle East 3 cr. Offered autumn odd-numbered years. Same as GPHY 245X (GEOG 213S) and LS 213X. A survey of the biophysical and cultural geography of Southwest Asia and North Africa. Emphasis on environmental change, pre-history, patterns of cultural and historical change, issues of socio-economic. religious, and political diversity, and the broader political significance of the region.

U 214 Central Asia: Peoples and Environments 3 cr. Offered autumn. Same as HSTR 241 (HIST 214S), LS 214. Introduction to Central Asia's history, culture and ways of thinking. Focus on the political and social organization of Central Asia and cultural changes as expressed in art and interactions with China, India and the Middle East.

U 295 Special Topics Variable cr. (R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 345 Central Asia and Its Neighbors 3 cr. Offered spring. Same as HSTR 347 (HIST 346). Analysis of the human communities and cultures of Central and Southwest Asia, with particular emphasis on the importance of relationships with neighboring countries and civilizations since ancient times.

U 395 Special Topics Variable cr. (R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 402 Cities and Landscapes of Central Asia 3 cr. Offered autumn. Same as HSTR 442 (HIST 402). Analysis of the main centers of civilization and culture, rich sites and monuments of Central Asia and Southwest Asia since ancient times.

UG 457 Artistic Traditions of Central and Southwest Asia 3 cr. Offered autumn and spring. Same as HSTR 459 (HIST 457). Analysis of the study of human artistic creativity and scientific innovations of various cultures in Central and Southwest Asia since ancient times.

UG 495 Problems in Asian Studies Variable cr. (R-12) Seminar designed for students with an option in Asian Studies. Regional or

temporal focus may vary, depending on the discipline and expertise of the instructor.

Faculty

Professors

- Timothy Bradstock, Ph.D., Harvard University, 1984 (Modern and Classical Languages and Literatures)
- Bradley Clough, Ph.D., Columbiz University, 1998 (Liberal Studies)
- Teresa R. Sobieszczyk, Ph.D., Cornell University, 2000 (Sociology)
- Ruth Vanita, Ph.D., Delhi University, 1992 (Liberal Studies)
- Terry Weidner, Ph.D., University of California, 1980 (Mansfield Center)
- G. G. Weix, Ph.D., Cornell University, 1990 (Anthropology)
- Philip West, Ph.D., Harvard University, 1971 (Mansfield Center)

Biochemistry

Bruce E. Bowler, Program Director

The Biochemistry Program is a joint program between the Department of Chemistry and Biochemistry and the Division of Biological Sciences. Biochemistry is an interdisciplinary science that integrates chemistry and biology to understand the basis of life at the molecular level. The program offers a B.S. in Biochemistry and M.S. and Ph.D. degrees in Biochemistry & Biophysics.

Undergraduate majors receive a solid foundation in both chemistry and biology. Biochemistry courses are usually taken in the junior year allowing majors to become involved in research with faculty and to take electives in their senior year. The major also introduces students to computer science and bioinformatics, essential tools in modern biochemistry. The B.S. in Biochemistry prepares students for both advanced degrees in biochemistry and for careers in the pharmaceutical and biotechnology industries. A Health Professions option is also offered within the B.S. in Biochemistry for students whose career goals are in fields related to biochemistry.

The graduate degrees in Biochemistry & Biophysics prepare students to be independent researchers in academic laboratories or in the biotechnology and pharmaceutical industries. Through coursework and independent research, graduate students in this program will become adept at the physical and structural methods necessary to probe important problems in the life sciences at the molecular level. In collaboration with the Center for Biomolecular Structure & Dynamics, the Biochemistry Program provides state-of-the-art facilities for research in biochemistry, biophysics and structural biology.

Prospective students desiring further information on these degrees should contact the Program Director by visiting the Biochemistry Program web site: http://www.cas.umt.edu/biomolecular/overview.htm.

High School Preparation: In addition to the general University admission requirements, it is strongly recommended that a student take four years of mathematics, four years of science, and a foreign language.

Bachelor of Science in Biochemistry

- CHMY 141N-143N; College Chemistry I & II + Lab - 10 cr.
- CHMY 221-224; Organic Chemistry I & II + Lab -10 cr.
- CHMY 225; Organic Majors Lab may be substituted for CHMY 224
- CHMY 311-421; Quantitative Analysis and Instrumental Methods - 8 cr.
- CHMY 360; Applied Physical Chemistry - 3 cr.
- CHMY 373; Phys Chem-Kntcs & Thrmdynmcs may be substituted for CHMY 360
- CHMY 401; Advanced Inorganic Chemistry - 3 cr.
- BIOC 110-111; Biochemistry of Life + Lab - 4 cr.
- BIOC 210; Introductory Biochemistry Seminar - 1 cr.
- BIOC 481-482W; Biochemistry I & II - 6 cr.
- BIOC 486W; Biochemistry Laboratory - 3 cr.
- BIOL 221; Cellular and Molecular Biology - 4 cr.
- BIOL 223; Genetics and Evolution - 4 cr.
- BIOL 464; Advanced Cellular Biology - 3 cr.
- M 171-172; Calculus I & II - 8 cr.
- PHYS 211N/213N and 212N/214N; Fundamentals of Physics with calculus I & II + Lab - 10 cr.
- CS 177; Computer Modeling for Science Majors - 3 cr.
- CS 458; Bioinformatics - 3 cr.

13 credits of electives from BIOL 301, 312, 313, 345, 347, 400, 401, 440, 460, 497[1]; BIOC 497[1]; BMED 347, 421, 422; CHMY 371, 397, 402, 403, 442, 465, 466, 485, 490,[1] 498[1]; MICB 300, 301, 302, 309, 404, 405, 410, 411, 420.

[1]No more that 3 credits combined of BIOL 497, CHMY 490, 498 or BIOC 497 may be counted toward the 13 credit elective requirement.

For Group I of the General Education requirements (English Writing Skills), all students must complete WRIT 101 (ENEX 101), a lower division writing course, an upper division writing course, and need to obtain a score of 3 or better on the WPA exam. The upper division requirement will be satisfied by BIOC 482W (1/3 of requirement) and BIOC 486W (2/3 of requirement).

Group II of the General Education requirement (Mathematics) is fulfilled by M 171-172.

The Foreign Language/Symbolic Systems requirement (Group III of the General Education Requirement) is fulfilled by M 171.

All students must complete 27 credit hours from groups IV to XI of the General Education requirement to graduate (CHMY 141N-143N) counts as the 6 credit group XI requirement). One of these courses should be an approved lower division writing course.

Credits to Graduate:

Required courses: 83

Elective courses: 13

General education:[1] 21

WRIT 101 (ENEX 101): 3

Total: 120

[1]Groups IV to X account for 21 credit hours.

Bachelor of Science in Biochemistry: Health Professions Option

- CHMY 141N-143N; College Chemistry I & II + Lab - 10 cr.
- CHMY 221-224; Organic Chemistry I & II + Lab - 10 cr.
- CHMY 225; Organic Majors Lab may be substituted for CHMY 224
- CHMY 302E; Chem. Lit and Science Writing - 3 cr.
- CHMY 311-421; Quantitative Analysis and Instrumental Methods - 8 cr.
- CHMY 360; Applied Physical Chemistry - 3 cr.
- CHMY 373; Phys Chem-Kntcs & Thrmdynmcs may be substituted for CHMY 360
- CHMY 401; Advanced Inorganic Chemistry - 3 cr.
- BIOC 110-111; Biochemistry of Life + Lab - 4 cr.
- BIOC 210; Introductory Biochemistry Seminar - 1 cr.
- BIOC 481-482W; Biochemistry I & II - 6 cr.
- BIOL 221; Cellular and Molecular Biology - 4 cr.
- BIOL 223; Genetics and Evolution - 4 cr.
- MICB 300; General Microbiology - 3 cr.
- MICB 302; Medical Microbiology may be substituted for MICB 300
- M 162; Applied Calculus - 4 cr.
- M 274; Intro to Differential Equation - 3 cr.
- PHYS 111N/113N-112N/114N; Fundamentals of Physics I&II + Lab - 10 cr.

  20 credits of electives from BIOL 301, 312, 313, 345, 347, 400, 401, 440, 460, 497[1]; BIOC 486, 497[1]; BMED 347, 421, 422; CHMY 371, 397, 402, 403, 442, 465, 466, 485, 490,[1] 498[1]; MICB 300, 301, 309, 404, 405, 410, 411, 420.

  [1]No more that 3 credits combined of BIOL 497, CHMY 490, 498 or BIOC 497 may be counted toward the 20 credit elective requirement.

  For Group I of the General Education requirements (English Writing Skills), all students must all students must complete WRIT 101 (ENEX 101), a lower division writing course, an upper division writing course, and need to obtain a score of 3 or better on the WPA exam. CHEM 334 is the formal requirement to satisfy the upper division requirement in this option. It can also be satisfied by taking the following combinations of required and elective courses: BIOC 482W and BIOC 486W; BIOC 482W, MICB 410 and MICB 411; MICB 404 or MICB 420.

  Group II of the General Education requirement (Mathematics) is fulfilled by M 162.

  The Foreign Language/Symbolic Systems requirement (Group III of the General Education Requirement) is fulfilled by M 162-274.

  All students must complete 27 credit hours from groups IV to XI of the General Education requirement to graduate (CHMY 141N-143N) counts as the 6 credit group XI requirement). One of these courses should be an approved lower division writing course.

  Credits to Graduate:

  Required courses: 76

Elective courses: 20

General education:[1] 21

WRIT 101 (ENEX 101): 3

Total: 120

[1]Groups IV to X account for 21 credit hours.

Suggested Course of Study for B.S. Degree in Biochemistry

First Year	**A**	**S**
CHMY 141N (CHEM 161N) College Chemistry I	5	-
CHMY 143N (CHEM 162N) College Chemistry II	-	5
M 171 (MATH 152) Calculus I	4	-
M 172 (MATH 153) Calculus II	-	4
WRIT 101 (ENEX 101) College Writing I	3	-
BIOC 110 Biochemistry of Life Lecture	-	3
BIOC 111 Biochemistry of Life Laboratory	-	1
CS 177 Computer Modeling for Science Majors	-	3
General Education	3	-
Total	15	16
Second Year		
CHMY 221-222 (CHEM 221-222) Organic Chemistry I and Lab	5	-
CHMY 223-224 (CHEM 223-224) Organic Chemistry II and Lab	-	5
PHYS 211N/213N Fundamentals of Physics I with Calculus and Lab	5	-
PHYS 212N/214N Fundamentals of Physics II with Calculus and Lab	-	5
BIOL 221 Cellular and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
BIOC 210 Introductory Biochemistry Seminar	-	1
Total	14	15
Third Year		
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 360 (CHEM 370) Applied Physical Chemistry (or CHMY 373 (CHEM 371)	-	3
CHMY 421 (CHEM 342) Advanced Instrument Analysis	-	4
BIOC 481 Biochemistry I	3	-
BIOC 482 Biochemistry II	-	3
BIOC 486 Biochemistry Laboratory	-	3
General Education	9	-
Total	16	13
Fourth Year		
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3	-
CS 458 Bioinformatics	3	-
BIOL 464 Advanced Cellular Biology	-	3
Advanced Electives *	6	7

General Education	3	6
Total	15	16

*Advanced Biochemistry Electives: BIOL 312, BIOL 345, BIOL/BMED 347, BIOL 400, BIOL 401, BIOL 301, BIOL 313, BIOL 440, BIOL 460, BMED/BIOL 347, BMED 421, BMED 422, CHMY 397, CHMY 442, CHMY 465, CHMY 466, CHMY 485, CHMY 372, CHMY 402, CHMY 406, MICB 300, MICB 301, MICB 302, MICB 309, MICB 410, MICB 411, MICB 404, MICB 405, MICB 420, BIOC/BIOL 497, CHMY 490, CHMY 498

Suggested Course of Study for B.S. Degree in Biochemistry: Health Professions Option

First Year	**A**	**S**
CHMY 141N (CHEM 161N) College Chemistry I	5	-
CHMY 143N (CHEM 162N) College Chemistry II	-	5
M 162 (MATH 150) Applied Calculus	4	-
M 274 (MATH 158) Intro to Differential Equation	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
BIOC 110 Biochemistry of Life Lecture	-	3
BIOC 111 Biochemistry of Life Laboratory	-	1
General Education	3	3
Total	15	15
Second Year		
CHMY 221-222 (CHEM 221-222) Organic Chemistry I and Lab	5	-
CHMY 223-224 (CHEM 223-224) Organic Chemistry II and Lab	-	5
PHYS 111N/113N Fundamentals of Physics I and Lab	5	-
PHYS 112N/114N Fundamentals of Physics II and Lab	-	5
BIOL 221 Cellular and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
BIOC 210 Introductory Biochemistry Seminar	-	1
Total	14	15
Third Year		
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 302E (CHEM 334) Chemistry Lit and Science Writing	3	-
CHMY 360 (CHEM 370) Applied Physical Chemistry (or CHMY 373 (CHEM 371)	-	3
CHMY 421 (CHEM 342) Advanced Instrument Analysis	-	4
MICB 300 General Microbiology (or MICB 302 offered autumn)	-	3
Advanced Electives*	3	5
General Education	6	-
Total	16	15
Fourth Year		
CHMY 401 (CHEM 452) Advanced		

Inorganic Chemistry	3	-
BIOC 481 Biochemistry I	3	-
BIOL 482 Biochemistry II	-	3
Advanced Electives *	3	9
General Education	6	3
Total	15	15

*Advanced Biochemistry Electives: BIOL 312, BIOL 345, BIOL/BMED 347, BIOL 400, BIOL 401, BIOL 301, BIOL 313, BIOL 440, BIOL 460, BMED/BIOL 347, BMED 421, BMED 422, CHMY 397, CHMY 442, CHMY 465, CHMY 466, CHMY 485, CHMY 372, CHMY 402, CHMY 406, MICB 300, MICB 301, MICB 302, MICB 309, MICB 410, MICB 411, MICB 404, MICB 405, MICB 420, BIOC/BIOL 497, CHMY 490, CHMY 498

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Biochemistry (BIOC)

U 110 The Biochemistry of Life 3 cr. Offered spring. Prereq. CHMY 141N (CHEM 161N) or equivalent. Coreq., CHMY 143N (CHEM 162N) and BIOC 111. An introductory course that explores bio-molecules and their roles in life processes. Provides a foundation for Cell and Molecular Biology (BIOL 221), Genetics and Evolution (BIOL 223), Biochemistry Seminar (BIOC 210), and many other advanced science courses.

U 111 The Biochemistry of Life Laboratory 1 cr. Offered spring. Prereq., CHMY 141N (CHEM 161N) or equivalent. Coreq., CHMY 143N (CHEM 162N) and BIOC 110. Introduction to the experimental techniques used to study bio-molecules and their roles in life processes. Provides a foundation for other advanced level laboratory courses in chemistry and biochemistry.

U 210 Introductory Biochemistry Seminar 1 cr. Offered spring. prereq., BIOC 110/111 or equivalent. An introduction to important advances in biochemistry through readings from the primary literature and discussion of this literature. Faculty members will also make presentations on their research.

UG 380 Fundamentals of Biochemistry 4 cr. Offered autumn. Prereq., CHMY 223 (CHEM 223). Fundamental biochemistry; chemistry and metabolism of biomolecules, energy relationships in metabolism; storage, transmission, and expression of genetic information.

UG 481 Biochemistry 3 cr. Offered autumn. Prereq., CMHY 223 (CHEM 223), CHMY 360 (CHEM 370) or CHMY 371 (CHEM 372) or equiv. Primarily for science majors. The chemistry and metabolism of biomolecules, with emphasis on the structure and function of proteins, carbohydrates, lipids and nucleic acids and the associated bioenergetics. Credit not allowed for both BIOC 380 and BIOC 481-482.

UG 482 Biochemistry 3 cr. Offered spring. Prereq., BIOC 481 or equiv. Continuation of BIOC 481. Metabolism, especially macromolecule biosyntheses, the chemistry and regulation of the transfer and expression of genetic information, protein synthesis and molecular physiology. Credit not allowed for both BIOC 380 and BIOC 481-482.

UG 486 Biochemistry Research Laboratory 3 cr. Offered spring. Prereq., BIOC 380 or 481. Applications of biochemical principles to modern molecular biology and biochemical techniques. Includes cloning a gene, making site-directed mutants; then will express, purify, and characterize the protein product.

UG 495 Special Topics 1-10 cr. (R-10) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 497 Advanced Undergraduate Research 1-10 cr. (R-10) Offered every term. Prereq., junior or senior standing and consent of instr. Independent research under the direction of a faculty member. Graded pass/not pass.

U 499 Undergraduate Thesis 3-6 cr. (R-6) Offered every term. Prereq., senior standing and consent of instr. Preparation of a thesis or manuscript based on undergraduate research for presentation and/or publication. Student must give an oral or poster presentation at the Undergraduate Research Symposium or a scientific meeting. Graded pass/not pass.

G 561 RNA Structure and Function 1 cr. (R-8) Offered every semester. Prereq., BIOC 482, BIOL 221, and consent of instr. Exploration of current scientific literature and new data that focuses on RNA biochemistry. Emphasis on literature relevant to research on RNA viruses and ribosomes and protein synthesis.

G 562 The Structural Basis of Amyloid Disease 1 cr. (R-8) CR/NCR only, offered every semester. Prereq., BIOC 481 or equivalent and

consent of instructor. Weekly exploration of current literature and new research that focuses on the biophysical aspects of amyloid diseases, including protein structure and therapeutic treatments.

G 570 Introduction to Research 2 cr. Offered autumn. Prereq., graduate standing. Required course for biochemistry and biophysics graduate students. Students are acquainted with faculty research projects. Instruction in basic research techniques, research equipment. Introduction to relevant scientific research literature. Six hours in each research laboratory of faculty in biochemistry and biophysics program.

G 580 Training Seminar 1 cr. (R-2) Offered autumn and spring. Prereq., graduate standing or consent of instr. Same as MICB 580. A one-semester offering required of all new students.

G 581 Physical Biochemistry 3 cr. Offered spring odd-numbered years. Prereq., CHMY 360 or CHMY 371 (CHEM 370) or (CHEM 372); BIOC 482. Techniques of physical chemistry used in studying biological structure and function of macromolecules. Emphasis is on spectroscopic methods, hydrodynamic methods and x-ray and other scattering and diffraction techniques.

G 582 Proteins and Enzymes 3 cr. offered alternate autumn semesters. Prereq., BIOC 482 or equivalent. An investigation into the structure/function relationship in proteins and a detailed exploration or enzyme kinetics, using examples from current literature.

G 584 Nucleic Acids Biochemistry 3 cr. Offered alternate autumn semesters. Prereq., BIOC 482 or equivalent. Emphasis on critical reading of current literature that investigates structure, chemistry, and function of nucleic acids.

G 594 Professional Seminar 1 cr. (R-4) Offered autumn and spring. Prereq., graduate standing or consent of instr. Same as MICB 594. Presentation of current research in biochemistry and molecular biology by senior graduate students, faculty, and invited outside speakers.

G 595 Special Topics 1-3 cr. (R-6) Offered intermittently. Prereq., graduate standing and consent of instr. Experimental offering of new courses by resident or visiting faculty.

G 597 Research Variable cr. (R-18) Offered intermittently.

G 599 Thesis 1-10 cr. (R-10) Offered intermittently. Prereq., master's student in biochemistry and biophysics. Laboratory research for and preparation of a master's thesis.

G 600 Advanced Cellular Biochemistry 4 cr. Offered every spring. Prereq., BIOC 380 or 482, or consent of instr. Same as BMED 600. Exploration on a molecular level the regulation of structure, function, and dynamics of eukaryotic cells. Topics include membranes, cytoskeleton, transcription, translation, signal transduction, cell motility, cell proliferation, and programmed cell death.

G 685 Advanced Biochemistry and Molecular Biology Laboratory 1-3 cr. (R-9) Offered autumn and spring. Prereq., BIOC 482 or equiv. and consent of instr. Introduction to research techniques in biochemistry and molecular biology.

G 699 Dissertation 1-10 cr. (R-20) Offered intermittently. Prereq., doctoral student in biochemistry. Laboratory research for and preparation of a doctoral dissertation.

Faculty

Professors:

- Bruce E. Bowler (Director), Chemistry & Biochemistry, Ph.D., Massachusetts Institute of Technology, 1986
- J.B.A. (Sandy) Ross, Chemistry & Biochemistry, Ph.D., University of Washington, 1976
- D. Scott Samuels, Division of Biological Sciences, Ph.D., University of Arizona, 1991
- Stephen R. Sprang, Division of Biological Sciences, Ph.D., University of Wisconsin, Madison, 1977
- Kent D. Sugden, Chemistry & Biochemistry, Ph.D, Montana State University, 1992

Associate Professors:

- J. Stephen Lodmell, Division of Biological Sciences, Ph.D., Brown University, 1996
- Michele A. McGuirl, Division of Biological Sciences, Ph.D., Montana State University, 1999

Assistant Professors:

- Klara Briknarova, Chemistry & Biochemistry, Ph.D., Carnegie Mellon University, 1999
- Valeriy Smirnov, Chemistry & Biochemistry, Ph.D., University of Nebraska, 2004

CLIMATE CHANGE STUDIES

Steven Running, Director

Climate Change Studies is an inter-disciplinary program open to all majors. The program educates students in three areas of the climate change issue: science, society, and solutions. Coursework in the minor provides a foundation that enables students to engage the scientific, societal, and political dimensions of global climate change. Further, the focus on solutions with its orientation toward applied learning will help students develop critical thinking and problem solving skills. Participating students will enhance their major field of study. They will be better prepared to enter a broad range of professions and graduate programs where they can meet the emerging challenges and opportunities arising from climate change. Climate Change Studies is a joint program between the College of Forestry and Conservation, College of Arts and Sciences, and College of Technology.

Requirements for a Minor

To earn a minor in Climate Change Studies, students must successfully complete 21.0 credits: a 3.0 credit interdisciplinary introductory course (CCS 203) and 6.0 credits in each of the three areas listed below.

Course # and Description	Credits
CCS 203 Climate Change: Science & Society	3
Six credits from the following: Climate Change Science Courses	**Credits**
CCS/GEO 108N Climate Change - Past and Future	3
CCS/ERTH 303N Weather and Climate	3
CCS/GEO 382 (UG) Global Change	3
CCS/FOR/BIO/GEO 408 Global Biogeochemical Cycles	3
CCS/GEO 448 (UG) Snow, Ice and Climate	3
Six credits from the following: Climate Change Science Courses	**Credits**
CCS/PSC 324 Sustainable Climate Policies: China and the USA	3
CCS/COMM/EVST 379 Communication, Consumption and Climate	3
CCS/RSCN 449 Climate Change Ethics and Policy	3
CCS/ECNS 445 International Environmental Economics and Climate Change	3
Six credits from the following climate change solutions courses, with at least one course taken in category A, which requires practical application	**Credits**
Climate Change Solutions Courses: Category A	
CCS/NRG 290 Energy Internship	2
CCS 398 Climate Change Internship	2-4
CCS 391 Climate Change Practicum	2-4
CCS/EVST 485 Environmental Citizenship	3
Category B	
CCS/NRG 102 Intro to Energy Systems II	3
CCS/BUS 160S Issues in Sustainability	3
CCS/NRG 191 Energy Practicum	2
CCS/CAR 235T Building Energy Conservation	3
CCS/NRG 242 Solar & Wind Systems	3

Courses

U CCS 102 Introduction to Energy Systems II, 3 cr. Offered spring. Same as NRG 102. Prereq., NRG 101 or consent of instructor. A survey of renewable energy systems and technologies. Addresses physical and technical aspects of wind, solar, geothermal, hydro, tidal, biological, and wave energy systems. Consideration is given to engineering, economic, social, environmental, and political factors that determine implementation and sustainability.

U CCS 108N Climate Change - Past and Future, 3 cr. Offered autumn. Same as GEO 108N. The geoscience perspective on the earth's climate system. Climate processes and feedbacks, climate history from early earth to the ice ages, present and future changes due to natural processes and human activities.

U CCS 160S Issues in Sustainability, 3 cr. Offered autumn and spring. Same as BUS 160S. Literature-intensive course exposes the student to a variety of essays addressing the balance of economic development with the principles of sustainability and social equity. Introduction to sustainability concepts, natural systems/cycles and environmental economics.

U CCS 191 Energy Practicum, 2 cr. Offered summer. Same as NRG 191. Prereq., consent of instructor. practicum provides students with a supervised field experience. Students will gain hands-on experience with energy specific technologies. This opportunity increases students' occupational awareness and professionalism.

U CCS 203 Climate Change: Science and Society, 3 cr. Offered autumn. Foundational course on the scientific and social dimensions of global climate change with the goal of providing students with a basic understanding of the fundamental scientific, social, political and technological issues arising from rapid climatic change.

U CCS 235 Building Energy Conservation, 3 cr. Offered spring. Same as CAR 235. Study of the analysis techniques for reduction of energy consumption and energy management, including energy accounting and energy auditing. Residential and commercial building energy efficiency opportunities are covered. Other topics include motors, pumps, green building, purchasing energy supplies, and careers in energy efficiency.

U CCS 242 Solar and Wind Systems, 3 cr. Offered autumn. Same as NRG 242. Introduction to the fundamentals of solar and wind energy for the design and installation of solar and wind systems. Includes an overview of the physics and chemistry of the resource and the technology, and will prepare students for a career in renewable energy or for installing a renewable energy system on their own home.

U CCS 298 Energy Internship, 2 cr. Offered spring. Same as NRG 298. Prereq., consent of instructor. Students complete a field experience at an energy-related site or in an energy-related industry. A series of career development seminars and activities related to the field experience are completed in parallel.

U CCS 303N Weather and Climate, 3cr. Offered autumn. Same as ERTH 303N. Prereq., GEOG 102N or consent of instructor. Origin, composition, structure, and dynamics of the atmosphere, gas and radiation laws, energy budget and balance, weather elements and North American weather systems.

U CCS 324 Sustainable Climate Policies: China and the USA, 3 cr. Offered spring. Same as PSC 324. Not open to Fr So. Explores historic, current, and future greenhouse-gas (GHG) emissions of the United States and China, reasons why both are the two largest CO_2emitters, and prevailing national and subnational government policies and nongovernmental actions that affect emissions mitigation and adaptation.

UG CCS 382 Global Change, 3 cr. Offered spring. Same as GEO 382. Prereq., consent of instructor. Lectures, readings, and discussions on geological and geochemical processes that affect global change using recent literature; carbon dioxide buildup, greenhouse effect, ozone depletion, desertification, ice ages, and other global events.

U CCS 391 Climate Change Practicum 2-4 cr. Offered autumn and spring. Prereq., consent of instructor. Provides an opportunity for students to design and implement a capstone project involving creative solutions to climate change.

U CCS 379 Communication, Consumption, and Climate 3 cr. Offered spring. Same as COMM 379 and EVST 379. Analyzes consumption as a communication practice, investigates discourses that promote consumption, and illuminates environmental impacts on consumption.

U CCS 398 Climate Change Internship 2-4 cr. Offered autumn and spring. Prereq., consent of instructor. Hands-on, "real world" experience working with local, regional, national, or international groups to address climate change. Students gain supervised, practical work experience with specific projects and organizations; create a network of professional contacts; and have an opportunity to apply ideas and approaches studied in the Climate Change Studies minor.

UG CCS 408 Global Biogeochemical Cycles 3 cr. Offered spring even numbered years. Same as FOR/BIOL/GEO 408. Exploration of how variations in the availability or utilization of critical Earth elements influences the atmosphere, the oceans, and the terrestrial biosphere including the natural and agricultural ecosystems on which we depend.

UG CCS 445 International Environmental Economics and Climate Change, 3 cr. Offered every other autumn. Same as ECON 445. Prereq., ECON 111. The economics of various policy approaches towards climate change and other international environmental issues such as trans-boundary pollution problems, international trade and the environmental, and the pollution haven hypothesis.

UG CCS 449 Climate Change Ethics and Policy 3 cr. Offered Fall. Same as EVST 449. This course focuses on the ethical dimensions of climate change policy. It covers the following major topics: (1) climate change, personal and collective responsibilities, (2) ethics, climate change and scientific uncertainty, (3) distributive justice and international climate change negotiations, (4) intergenerational justice and climate change policy.

U CCS 485 Environmental Citizenship, 3 cr. Offered spring. Same as EVST485. Open to juniors and seniors only or by permission of instructor. Develops environmental citizenship through student-initiated projects informed by principles of social marketing.

UG CCS 488 Snow, Ice and Climate, 3 cr. Offered spring. Same as GEO 488. Prereq., MATH 100. Study of basic physical processes occurring in snow and ice, and how these processes govern the interaction between frozen water and the climate system.

Faculty

Science Area

- Dr. Rebecca Bendick, Assistant Professor, Department of Geosciences

- Dr. Cory Cleveland, Assistant Professor of Soil Science
- Dr. Michael De Grandpre, Professor, Department of Chemistry
- Dr. Sarah Halvorson, Associate Professor and Departmental Chair of Geography
- Dr. Joel Harper, Associate Professor, Department of Geosciences
- Dr. Anna Klene, Associate Professor, Department of Geography
- Dr. Scott Mills, Professor of Wildlife Population Ecology
- Dr. Curtis Noonan, Associate Professor, Department of Biomedical and Pharmaceutical Sciences
- Dr. Steve Running, Regent's Professor of Ecology, Director of Numerical Terradynamics Simulation Group

Society Area

- Dr. Richard Barrett, Emeritus Professor, Department of Economics, State Legislator
- Dr. Len Broberg, Professor, Department of Environmental Studies
- Dr. James Burchfield, Interim Dean and Research Professor, College of Forestry and Conservation
- Dr. Ulrich Kamp, Associate Professor, Department of Geography
- Dr. Derek Kellenberg, Assistant Professor, Department of Economics
- Dr. Peter Koehn, Professor, Department of Political Science
- Dr. Anna Prentiss, Associate Professor, Department of Anthropology
- Dr. Christopher Preston, Associate Professor, Department of Philosophy
- Dr. Rebecca Richards, Professor, Department of Sociology
- Dr. Steve Schwarze, Associate Professor, Department of Communication Studies
- Dr. Dane Scott, Director, Center of Ethics, Associate Professor, Department of Society and Conservation
- Dr. Terry Weidner, Director, Mansfield Center

Solutions Area

- Dr. Georgia Cobbs, Associate Professor, Department of Curriculum and Instruction
- Dr. Brian Kerns, Engineer, Alternative Energy Technology Program
- Dr. Martin Horejsi, Assistant Professor, Department of Curriculum and Instruction
- Nicky Phear, Program Coordinator, Climate Change Studies and Wilderness and Civilization
- Dr. Ashley Preston, Program Director, Energy Technology Program
- Dr. Robin Saha, Assistant Professor, Department of Environmental Studies
- Lisa Swallow, Program Director, Department of Business Technology
- Nadia White, Assistant Professor, School of Journalism
- Dr. Laurie Yung, Director of Wilderness Institute; Research Assistant Professor

Central and Southwest Asian Studies

Ardi Kia, Advisor

The Central and Southwest Asian Studies Minor is available to all students. It consists of eighteen credits. Students selecting the minor are required to successfully complete HSTR 146 (HIST106)/ANTH/AS 106H and six credits in foundational Central and Southwest Asian Studies courses (200-level courses). Students must then complete nine credits of additional course work at the 300- or 400- level. No language courses are required; however, students pursuing theminor are strongly encouraged to meet he University-wide general education foreign language competency requirement by completing at least the second semester of one of the following languages (100 level or higher): Chinese, Persian, Arabic, Turkish or Russian. Participation in a study-abroad program is strongly recommended.

Requirements for a Minor

To earn a minor in Central and Southwest Asian Studies, students must successfully complete 18 credits as follows:

1. ANTH 106H or AS 106H or HSTR 146H (HIST 106) The Silk Road 3 cr.
2. 6 cr. in approved 200-level foundational Central and Southwest Asian Studies courses: ANTH/HSTR 241 (HIST 214S)/AS 214, ANTH/HSTR262 (HIST 283H)/AS 283, ANTH/HSTR 264 (HIST 284H).
3. 9 cr. in approved 300 or 400-level Central and Southwest Asian Studies courses: ANTH 346 or HSTR 347 (HIST 386H)/AS 345, ANTH/HSTR 386 (HIST 386H), ANTH/HSTR 368 (HIST 387), ANTH 462/HSTR 442 (HIST 402)/AS 402, ANTH 461/HSTR 459 (HIST457)/AS 457, ANTH/AS 460/HSTR 441 (HIST 462).

In addition, it is expected that students will study one of the following languages: Turkish, Persian, Arabic, Russian or Chinese.

A list of approved Central and Southwest Asian courses is available from advisors.

Department of Chemistry and Biochemistry

- Special Degree Requirements

- Suggested Course of Study
- Courses
- Faculty

Mark S. Cracolice, Chair

Chemistry is the central science that involves the study of atoms and molecules, their structures, their combinations, their interactions, and the energy changes accompanying chemical processes.

The Department offers the following degrees: B.S., B.A., M.S., and Ph.D.

A departmental honors program has been established for chemistry majors who attain a strong scholastic record. This program is based upon independent study and research with the direction of individual faculty members. In many cases financial support is available on a part-time research fellowship basis from research grants obtained by individual faculty members or from departmental endowment funds.

Prospective students desiring further information on any program of the Department of Chemistry and Biochemistry should contact the Chair by visiting the Department of Chemistry and Biochemistry.

High School Preparation: In addition to the general University admission requirements, it is strongly recommended that a student take four years of mathematics, four years of science, and a foreign language.

Refer to graduation requirements listed previously in the catalog. See index.

Special Degree Requirements

All chemistry and biochemistry majors must use the traditional letter grade option in registering for their required science and mathematics courses. The beginning mathematics course for a particular student depends upon a placement examination administered by the Department of Mathematical Sciences. Students are reminded of the University requirements that 39 of the 120 credits presented for graduation must be at the 300 or higher level, and that at least a 2.00 GPA must be earned in all credits attempted in the major. In addition, courses taken to satisfy the requirements of the major or minor must be completed with a grade of C- or better.

Bachelor of Science (American Chemical Society Certified)

The courses required for the B.S. degree provide a solid education in chemistry for the professional chemist and in preparation for graduate work in most areas of chemistry. These requirements meet the latest certification standards of the American Chemical Society.

Course	Credits
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	10
CHMY 221-223 (CHEM 221-222) Organic Chemistry I, II	6
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2
CHMY 225 (CHEM 264) Organic Chemistry Laboratory for Chemistry Majors (preferred) or 224 Organic Chemistry II Laboratory	2-3
CHMY 302E (CHEM 334) Chemistry Literature and Scientific Writing (satisfies the Upper-division Writing Expectation)	3
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4
CHMY 421 (CHEM 342) Advanced Instrumental Analysis	4
CHMY 373-371 (CHEM 371-372) Phys Chem-Kntcs & Thrmdynmcs & Phys Chem-Qntm Chm & Spctrscpy	8
CHMY 401-403 (CHEM 452-453) Advanced Inorganic Chemistry & Descriptive Inorganic Chem	6
BIOC 481 Biochemistry or equivalent	3
CHMY 402 (CHEM 455) Advanced Inorganic Chemistry Laboratory	2
Advanced Electives (from CHMY 391, 442, 445, 465, 491 and 3 credits maximum of 492, or 3 credit maximum of 499, or with consent of chemistry advisor, from advanced courses in chemistry, physics, geology, biochemistry, or mathematics (CHEM 395, 442, 445, 465, 495, 3 credits maximum of 497, or 3 credit maximum of 499, or with consent of chemistry advisor, from advanced courses in chemistry, physics, geology, biochemistry or mathematics)).	3
Cognate courses:	
CS 172 Computer Modeling (or similar computing experience with consent of chemistry advisor)	3
M 171-172 and 273 (MATH 152-153 and 251) Calculus I, II, III	12
M 311 (MATH 311) Ordinary Differential Equations and Systems or M 221 (MATH 221) Linear Algebra	3
PHYS 221N-222N General Physics I and II	10
Modern foreign language	10
WRIT 101 (ENEX 101)	3

At the time of graduation a recipient of this degree has the option of taking two semesters of one modern foreign language which, as a departmental requirement, may be taken credit/no credit. Students not taking this option will be required to take 2 additional advisor-

approved Chemistry & Biochemistry or related discipline electives for 3 credits each. This will bring the elective credits for this option to 9.

Bachelor of Science with a major in Chemistry, Option in Environmental Chemistry

Course	Credits
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	10
CHMY 221-223 (CHEM 221-222) Organic Chemistry and Laboratory I, II	6
CHMY 222 (CHEM 223) Organic Chemistry Laboratory I	2
CHMY 225 (CHEM 264) Organic Chemistry Laboratory for Chemistry Majors or 224 Organic Chemistry II Laboratory	2-3
CHMY 302E (CHEM 334) Chemistry Literature and Scientific Writing (satisfies the Upper-division Writing Expectation)	3
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4
CHMY 421 (CHEM 342) Advanced Instrumental Analysis	4
CHMY 360 (CHEM 370)Applied Physical Chemistry or CHMY 373 (CHEM 371) Phys Chem-Kntcs & Thrmdynmcs	3-4
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3
BIOC 481 Biochemistry	3
BIOL 110N Principles of Biology or equivalent	4
BIOL 221 Cell and Molecular Biology	4
BIOL 223 Genetics and Evolution	4
GEO 101N-102N (GEOS 100N-101N) General Geology and Laboratory	3
GEO 327 (GEOS 327) Geochemistry	3
Electives from CHMY 373, 371, 442, 445, 403, 402, 465, 466; (CHEM 371, 372, 442, 445, 453, 455, 465, 466); 3 credits maximum of 792 (CHEM 497); BIOL 340, 453, 454, 455, 497, 3 credits maximum of 497; GEO 320, 382, 431, 420 (GEOS 320, 382, 431, 480), 3 credits maximum of 497; MICB 300, 416, 3 credits maximum of 497; STAT 452 (MATH 445); Modern Foreign Language (5 credits maximum)	8
M 162 (MATH 150)Applied Calculus or 171 (MATH 152) Calculus I	4
M 274 (MATH 158) Applied Differential Equations or 172 (MATH 153), Calculus II	3-4
STAT 451, 457 (MATH 444, 447) Statistics	4
PHYS 121N-122N or 221N-222N General Physics I, II	10

Bachelor of Science with a major in Chemistry, Option in Forensic Chemistry

The Chemistry B.S. degree with the option in Forensic Chemistry forms a solid base for students interested in careers in forensic chemistry or advanced work in chemistry including graduate school.

At the time of graduation a recipient of this degree has the option of taking two semesters of one modern foreign language which, as a departmental requirement, may be taken credit/no credit. Students not taking this option will be required to take 2 additional advisor-approved Chemistry & Biochemistry or related discipline electives for 3 credits each. This will bring the elective credits for this option to 9.

Course	Credits
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	10
CHMY 221-223 (CHEM 221-222) Organic Chemistry I, II	6
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2
CHMY 225 (CHEM 264) Organic Chemistry Laboratory for Chemistry Majors of CHMY 223 (CHEM 223) Organic Chemistry II Laboratory	2-3
CHMY 302E (CHEM 334) Chemistry Literature and Scientific Writing (satisfies the Upper-division Writing Expectation)	3
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4
CHMY 421 (CHEM 342) Advanced Instrument Analysis	4
CHMY 360 (CHEM 370)Applied Physical Chemistry or CHMY 373 (CHEM 371) Phys Chem-Kntcs & Thrmdynmcs	3-4
BIOC 481-482 Biochemistry or equivalent	6
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3

CHMY 488 (CHEM 488) Forensic Research or CHEM 498 Internship	3
CHMY 489 (CHEM 489) Forensic Science Seminar	1
ANTH 286N Survey of Forensic Science	3
BIOL 110N General Biology	4
BIOL 221 Cell and Molecular Biology	4
COMM 111A Public Speaking	3
M 171-172 (MATH 152-153) Calculus I, II	8
STAT 451 (MATH 444) Statistical Methods	3
STAT 457 (MATH 447) Computer Data Analysis	1
PHYS 221N-222N Fundamentals of Physics I & II	10
SOCI 211S (SOC 230S) Criminology	3
SOCI 221 (SOC 235) Criminal Justice	3
Electives from CHMY 465, 466, 542 (CHEM 465, 466, 542); ANTH 488; BIOL 223, 440; PHAR 110. (at least 8 of these credits must be in courses numbered 300 and above	11

Bachelor of Science with a major in Chemistry, Option in Pharmacology

Course	Credits
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	10
CHMY 221-223 (CHEM 221-222) Organic Chemistry and Laboratory I, II	6
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2
CHMY 225 (CHEM 264) Organic Chemistry Laboratory for Chemistry Majors or 224 (CHEM 224)Organic Chemistry II Laboratory	2-3
CHMY 302E (CHEM 334) Chemistry Literature and Scientific Writing (satisfies the Upper-division Writing Expectation)	3
CHMY 311 (CHEM 341) Quantitative Analysis & Instrumental Methods	4
CHMY 421 (CHEM 342) Advanced Instrument Analysis	4
CHMY 360 (CHEM 370)Applied Physical Chemistry or CHMY 373 (CHEM 371) Phys Chem-Kntcs & Thrmdynmcs	3-4
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3
BIOC 481-482 Biochemistry	6
BIOL 110N Principles of Biology or equivalent	4
BIOL 221 Cell and Molecular Biology	4
MICB 302 Medical Microbiology	3
PHAR 341-342 Applied Anatomy and Physiology	8
PHAR 443-444 Pharmacology and Toxicology	8
Electives from CHMY 373, 371, 442, 445, 403, 402, 465, 466 (CHEM 371, 372, 442, 445, 453, 455, 465, 466), 3 credits maximum of 492 (CHEM 497); BIOL 3 credits maximum of 497; PHAR 421, 422, 3 credits maximum of 497	3
Cognate courses:	
M 162 (MATH 150)Applied Calculus or 171 (MATH 152) Calculus I	4
M 274 (MATH 158) Applied Differential Equations or 172 (MATH 153) Calculus II	3-4
PHYS 121N-122N or 221N-222N General Physics I, II	10

Bachelor of Arts Degree

The courses required for the B.A. degree provide a less extensive training in chemistry than do the courses required for the American Chemical Society certified B.S. degree. This is to allow the student to supplement his or her program with courses that meet his or her specific needs. Thus this degree provides the core of traditional preparation in chemistry together with latitude for combination with an interdisciplinary field or the Teacher Preparation program. It is strongly advised that students using this degree obtain faculty advice in planning their program.

Course	Credits
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	10

CHMY 221-223 (CHEM 221-222) Organic Chemistry I, II	6
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2
CHMY 225 (CHEM 264) Organic Chemistry Laboratory for Chemistry Majors or 224 (CHEM 224)Organic Chemistry II Laboratory	2-3
CHMY 302E (CHEM 334) Chemistry Literature and Scientific Writing (satisfies the Upper-division Writing Expectation)	3
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4
CHMY 421 (CHEM 342) Advanced Instrument Analysis	4
CHMY 373-371 (CHEM 371-372) Phys Chem-Kntcs & Thrmdynmcs & Phys Chem-Qntm Chm & Spctrscpy	8
* Advanced electives	15
Cognate courses:	
CS 172 Introduction to Computer Modeling (or similar computing experience with approval of Chemistry advisor)	3
M 171, 172, 273 (MATH 152, 153, 251) Calculus I, II and III	12
PHYS 221N-222N (preferred) or 121N-122N General Physics I and II	10
Modern Foreign Language	10
WRIT 101 (ENEX 101) Composition.	3

*As preparation for teaching at the secondary level, students should elect CHMY 401, 403, 485 (CHEM 452, 453, and 485), BIOC 380, STAT 216 (MATH 241), SCI 350 and teaching certification requirements including C&I 426 and SCI 350. A student should consult his or her chemistry advisor for other options.

At the time of graduation a recipient of this degree must have completed two semesters of one foreign language. The Department of Chemistry waives the foreign language requirement for a student who completes the B.A. degree in preparation for secondary teaching and who meets the requirements for teaching certification, including the student teaching requirement. These students still must meet the foreign language/symbolic systems competency requirement (likely via M 171 and 172 (MATH 152 and 153) for General Education as described in the Academic Policies and Procedures section of this catalog.

Teacher Preparation in Chemistry

Major Teaching Field of Chemistry: For an endorsement in the major teaching field of Chemistry, a student must complete the requirements for the above B.A. degree with a major in Chemistry with appropriate electives but without the foreign language requirement, and with the addition of CHMY 401, 403, and 485 (CHEM 452, 453, and 485). Students also must complete BIOC 380, STAT 216 (MATH 241), SCI 350, and C&I 426, gain admission to Teacher Education and Student Teaching and meet the requirements for certification as a secondary teacher (see the School of Education section of this catalog).

Minor Teaching Field of Chemistry: For an endorsement in the minor teaching field of Chemistry, a student must complete CHMY 101N, 141N-143N, 221-222-223, 312, 360 or 373 and 485 (CHEM 101N, 161N-162N, 221-222-223, 341, 370 or 371, and 485); BIOC 380, CS 101 or 172, M 162 (MATH 150)and STAT 216 (MATH 241), PHYS 121N-122N or PHYS 221N-222N, and SCI 350. Students also must complete C&I 426, gain admission to Teacher Education and Student Teaching and meet other requirements for certification as a secondary teacher (see the School of Education section of this catalog).

Suggested Course of Study

For B.S. Degree (American Chemical Society Certified)

First Year	**A**	**S**
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	5	5
CS 172 Computer Modeling	-	3
M 171-172 (MATH 152-153) Calculus I, II	4	4
WRIT 101 (ENEX 101) Composition	3	-
Electives and General Education	3	3
	15	15
Second Year	**A**	**S**
CHMY 221-223 (CHEM 221-222) Organic Chemistry I, II	3	3
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2	-
CHMY 225 (CHEM 264) (or 224) Organic Chemistry Laboratory	-	3
M 273 (MATH 251) Calculus III	4	-
M 311 (MATH 311) Ordinary Differential Equations and Systems or M 221 (MATH 221) Linear Algebra	-	3
PHYS 221N-222N General Physics	5	5
Electives and General Education	-	3
	14	17
Third Year	**A**	**S**

CHMY 302E (CHEM 334) Chem Literature & Scientific Writing	3	-
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 421 (CHEM 342) Advanced Instrument Analysis	-	4
CHMY 373-371 (CHEM 371-372) Phys Chem-Kntcs & Thrmdynmcs & Phys Chem-Qntm Chm & Spctrscpy	4	4
General Education (one upper-division)	6	9
	17	17

Fourth Year	**A**	**S**
CHMY 401-403 (CHEM 452-453) Advanced Inorganic Chemistry	3	3
CHMY 402 (CHEM 455) Advanced Inorganic Chemistry Laboratory	-	2
BIOC 481Biochemistry	3	-
Advanced CHEM elective	3	3
General Education	-	3
Upper-division elective	6	6
	15	17

For B.S. Degree, Option in Environmental Chemistry

First Year	**A**	**S**
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	5	5
M 162 (MATH 150)Applied Calculus or 171 (MATH 152) Calculus I	4	-
M 274 (MATH 158) Applied Differential Equations or MATH 153 Calculus II	-	3-4
BIOL 110N Principles of Biology or equivalent.	-	4
WRIT 101 (ENEX 101) Composition	3	-
Electives and General Education	4	2
	16	14-15

Second Year	**A**	**S**
CHMY 221-223 (CHEM 221-222) Organic Chemistry	3	3
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2	-
CHMY 225 or 224 (CHEM 264 or 224) Organic Chemistry Laboratory	-	3
PHYS 121N-122N or 221N-222N General Physics I and II	5	5
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
GEO 101N-102N (GEOS 100N-101N) General Geology and Laboratory	3	-
	17	15

Third Year	**A**	**S**
CHMY 302E (CHEM 334) Chem Literature & Scientific Writing	3	-
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 421 (CHEM 342) Advanced Instrument Analysis	-	4
CHMY 360 (CHEM 370)Applied Physical Chemistry or CHMY 373 (CHEM 371) Phys Chem-Kntcs & Thrmdynmcs	-	3-4
GEO 327 (GEOS 327) Geochemistry	3	-
Electives and General Education	6	9
	16	16-17

Fourth Year	**A**	**S**
BIOC 481-482 Biochemistry	3	-
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3	-
CHMY 494 (CHEM 494) Seminar/Workshop	-	1
STAT 451/457 (MATH 444/447) Statistical Methods	4	-
Electives and General Education	4	15
	17	16

For B.S. Degree, Option in Forensic Chemistry

First Year	**A**	**S**
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	5	5
M 171-172 (MATH 152-153) Calculus I, II	4	4
BIOL 110N Principles of Biology or equivalent	-	4
COMM 111A Public Speaking	3	-

WRIT 101 (ENEX 101) Composition	-	3
Electives and General Education	3	-
	15	16

Second Year	A	S
CHMY 221-223 (CHEM 221-222) Organic Chemistry	3	3
CHMY 223 (CHEM 223) and CHMY 225 or 224 (CHEM 264 or 224) Organic Chemistry I Laboratory	2	2
PHYS 221N-222N Fundamentals of Physics with Calculus I and II	5	5
BIOL 221 Cell and Molecular Biology	4	-
SOCI 211S (SOC 230S) Criminology	3	-
ANTH 286N Survey of Forensic Science	-	3
General Education	-	3
	17	16

Third Year	A	S
CHMY 302E (CHEM 334) Chem Literature & Scientific Writing	3	-
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 421 (CHEM 342)Advanced Instrument Analysis	-	4
CHMY 360 (CHEM 370)Applied Physical Chemistry	-	3
STAT 451/457 (MATH 444/447) Statistical Methods	4	-
SOCI 221 (SOC 235) Criminal Justice	-	3
Electives and General Education	6	6
	15	16

Fourth Year	A	S
BIOC 481-482 Biochemistry	3	3
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3	-
CHMY 488 (CHEM 488) Forensic Research	-	3
CHMY 489 (CHEM 489) Forensics Research Seminar	1	-
Electives and General Education	9	9
	16	15

For B.S. Degree, Option in Pharmacology

First Year	A	S
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	5	5
M 162 (MATH 150) Applied Calculus or 171 (MATH 152) Calculus I	4	-
M 274 (MATH 158) Applied Differential Equations or M 172 (MATH 153) Calculus II	-	3-4
BIOL 110N Principles of Biology or equivalent	-	4
WRIT 101 (ENEX 101) Composition	3	-
Electives and General Education	4	2
	16	14-15

Second Year	A	S
CHMY 221-223 (CHEM 221-222) Organic Chemistry	3	3
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2	-
CHMY 225 or 224 (CHEM 264 or 224) Organic Chemistry Laboratory	-	3
PHYS 121N-122N or 221N-222N General Physics I and II	5	5
BIOL 221 Cell and Molecular Biology	4	-
Electives and General Education	-	6
	17	15

Third Year	A	S
CHMY 302E (CHEM 334) Chem Literature & Scientific Writing	3	-
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 421 (CHEM 342) Advanced Instrument Analysis	-	4
CHMY 360 (CHEM 370) Applied Physical Chemistry or CHMY 373 (CHEM 371) Phys Chem-Kntcs & Thrmdynmcs	-	3-4
MICB 302E Medical Microbiology	3	-
PHAR 341-342 Applied Anatomy and Physiology	4	4
Electives and General Education	3	6
	17	17-18

Fourth Year	A	S
BIOC 481-482 Biochemistry	3	3
CHMY 401 (CHEM 452) Advanced Inorganic Chemistry	3	-
PHAR 443-444 Pharmacology and Toxicology	4	4
Electives and General Education	6	7
	16	14

For B.A. Degree

First Year	A	S
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I, II	5	5
CS 172 Introduction to Computer Modeling	-	3
WRIT 101 (ENEX 101) Composition	3	-
M 171-172 (MATH 152-153) Calculus I and II	4	4
General Education or electives	3	3
	15	15
Second Year	**A**	**S**
CHMY 221-223 (CHEM 221-222) Organic Chemistry	3	3
CHMY 222 (CHEM 223) Organic Chemistry I Laboratory	2	-
CHMY 225 (CHEM 264) (or 224) Organic Chemistry Laboratory	-	3
M 273 (MATH 251) Calculus III	4	-
PHYS 221N-222N General Physics	5	5
General Education or electives	-	6
	14	17
Third Year	**A**	**S**
CHMY 302E (CHEM 334) Chem Literature & Scientific Writing	3	-
CHMY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	-
CHMY 421 (CHEM 342) Advanced Instrument Analysis	-	4
CHMY 373-371 (CHEM 371-372) Phys Chem-Kntcs & Thrmdynmcs & Phys Chem-Qntm Chm & Spctrscpy	4	4
Advanced electives	3	3
General Education	3	6
	17	17
Fourth Year	**A**	**S**
Advanced CHEM elective	3	3
General Education or elective	3	-
Modern Foreign Language	5	5
Upper-division elective	6	6
	17	14

Requirements for a Minor To earn a minor in chemistry the student must complete CHMY 141N, 143N, 221, 222, 223, 311, 360 or373 (CHEM 161N, 162N, 221, 222, 223, 341, 370 or 371) and at least two courses from one of the following groups:

(a) CHMY 422, 371, 442, 445, 401, 403, 465 (CHEM 342, 372, 442, 445, 452, 453, 465)

(b) If the student's major does not require biochemistry, BIOC 380 or 481 and 482

For teaching minor requirements, see the Teacher Preparation in Chemistry section above.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Chemistry (CHMY)

U 101N (CHEM 101N) Chemistry for the Consumer 3 cr. Offered spring. An introduction to chemistry that emphasizes the influence of chemistry on one's everyday life. Common household products, such as soap, aspirin, toothpaste, face cream and fertilizers are prepared in the lab.

U 104 (CHEM 104) Preparation for Chemistry 3 cr. Offered autumn. An introduction to chemistry for those who believe they have an

inadequate background to enroll in CHMY 121N or 141N (CHEM 151N or 161N). Not appropriate toward chemistry requirement in any major.

U 121N (CHEM 151N) Intro to General Chemistry 3 cr. Offered autumn and spring. First semester of an introduction to general, inorganic, organic and biological chemistry.

U 122 (CHEM 153) Intro to General Chemistry Laboratory 1 cr. Offered autumn and spring. Prereq., Enrolled in the College of Technology ASRN program. Prereq. or coreq., CHMY 121N (CHEM 151N) or equivalent. A laboratory course emphasizing inorganic chemistry, quantitative relations and synthesis of inorganic and organic compounds.

U 123N (CHEM 152N) Intro Organic and Biological Chemistry 3 cr. Offered autumn and spring. Prereq., "C-" or equiv. in CHMY 121N (CHEM 151N) or consent of instr. Second semester of an introduction to general, inorganic, organic and biological chemistry.

U 124N (CHEM 154N) Intro Organic and Biological Chemistry Laboratory 2 cr. Offered autumn and spring. Prereq. or coreq., CHMY 123N (CHEM 152N). Laboratory to accompany CHMY 123N (CHEM 152N).

U 141N (CHEM 161N) College Chemistry I 5 cr. Offered autumn and spring. Prereq., high school algebra. For science majors and other students intending to take more than one year of chemistry. Properties of elements, inorganic compounds, liquid solutions, chemical equilibria and chemical kinetics. Includes laboratory.

U 143N (CHEM 162N) College Chemistry II 5 cr. Offered spring and summer. Prereq., "C-" or better in CHMY 141N (CHEM 161N) or consent of instr. A continuation of CHMY 141N. Includes Laboratory.

U 191 (CHEM 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 221 (CHEM 221) Organic Chemistry I 3 cr. Offered autumn. Prereq., CHMY 123N or 143N (CHEM 152N or 162N). The chemical and physical properties of organic compounds.

U 222 (CHEM 222) Organic Chemistry I Laboratory 2 cr. Offered autumn. Coreq., CHMY 221 (CHEM 221); prereq., one semester of 100-level laboratory. Microscale techniques are emphasized.

U 223 (CHEM 223) Organic Chemistry II 3 cr. Offered spring. Prereq., CHMY 221 (CHEM 221). Continuation of 221.

U 224 (CHEM 224) Organic Chemistry II Laboratory 2 cr. Offered spring. Prereq., CHMY 223 (CHEM 223); prereq. or coreq., CHMY 222 (CHEM 222).

U 225 (CHEM 264)Organic Chemistry Laboratory for Chemistry Majors 3 cr. Offered spring. Prereq., CHMY 223 (CHEM 223); coreq., CHMY 222 (CHEM 222). Second semester of organic chemistry laboratory for chemistry majors only. Incorporates larger-scale techniques and instrumental organic analysis.

U 291 (CHEM 295) Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 292 (CHEM 297) Independent Study cr. (R-10) Offered autumn and spring. Prereq., one semester of chemistry and consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

U 302E (CHEM 334) Chemistry Literature and Scientific Writing 3 cr. Offered autumn. Prereq., CHMY 223 (CHEM 222) and chemistry major. Presentation and discussion of current literature in chemistry. Use of library and search tools. Workshop for developing and improving skills in scientific writing and evaluation. Use of on-line data bases and the interface of these with PC-based word processing and scientific graphics programs.

U 311 (CHEM 341) Analytical Chem-Quant Analysis 4 cr. Offered autumn. Prereq., one year of college chemistry, including laboratory. Classroom and laboratory work in gravimetric, volumetric, colorimetric and electrochemical methods of analysis; theory of errors; ionic equilibria in aqueous solutions.

UG 360 (CHEM 370) Applied Physical Chemistry 3 cr. Offered spring. Prereq., CHMY 123 OR 143 AND M 162 (CHEM 152 or 162 and MATH 150). Basic thermodynamics and chemical kinetics with applications in the biological and environmental sciences. Credit not allowed for both 360 and 373 (CHEM 370 and 371).

UG 371 (CHEM 372) Physical Chemistry Qntm Chm & Spctrscpy 4 cr. Offered spring. Prereq., CHMY 373 (CHEM 371). Systematic treatment of the laws and theories relating to chemical phenomena.

UG 373 (CHEM 371) Physical Chemistry Kntcs & Thrmdynmcs 4 cr. Offered autumn. Prereq., CHMY 143 (CHEM 162), M 273 (MATH 251), PHYS 122 or 222. Systematic treatment of the laws and theories relating to chemical phenomena. Credit not allowed for both CHMY 360 and 373 (CHEM 370 and 371).

U 391 (CHEM 395) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental

offerings of new courses, or one-time offerings of current topics.

U 397 (CHEM 380) Teaching Chemistry 1 cr. Offered every term. Prereq., CHMY 141N-143N (CHEM 161N-162N) with B or better and consent of instr. Methods of peer-led team learning as applied to general chemistry instruction. Review of concepts from general chemistry. Student leaders mentor a team of general chemistry students in working toward constructing chemistry knowledge and developing problem-solving skills.

U 398 (CHEM 398) Internship Variable cr. Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 401 (CHEM 452) Advanced Inorganic Chemistry 3 cr. Offered autumn. Prereq., CHMY 223 AND 360 OR 373 (CHEM 222 and 370 or 371) or consent of instr. Theory and principles of inorganic chemistry and a systematic coverage of descriptive inorganic chemistry in the context of the periodic table.

UG 402 (CHEM 455) Advanced Inorganic Chemistry Laboratory 2 cr. Offered spring. Prereq., CHMY 224 AND 360 or 373 (CHEM 224 and 370 or 371) and consent of instr. Preparation of inorganic and coordination compounds. Isolation and characterization by ion exchange, column chromatography, IR, UV-VIS, derivatives, MP, and BP.

U 403 (CHEM 453) Descriptive Inorganic Chemistry 3 cr. Offered spring. Prereq., CHMY 221-222, 360 or 373-371, and 401 (CHEM 221-223, 370 or 371-372 and 452). A survey of the chemistry of the elements including transition metal reaction mechanisms, redox chemistry, organometallic chemistry, bioinorganic chemistry.

UG 421 (CHEM 342) Advanced Instrumental Analysis 4 cr. Offered spring. Prereq., CHMY 311 (CHEM 341). Theory and use of instrumental methods in the study of analytical and physical chemistry.

UG 442 (CHEM 442) Aquatic Chemistry 3 cr. Offered autumn odd-numbered years. Prereq., CHMY 311 (CHEM 341) or consent of instr. Application of chemical equilibria theory for understanding and modeling chemical processes in natural waters with an emphasis on spreadsheet computations. In depth examination of concepts such as pH, alkalinity, buffering, and solubility as they apply to natural waters.

UG 445 (CHEM 445) Industrial Chemistry and Its Impact on Society 3 cr. Offered every other autumn semester. Prereq., CHMY 143 or 123 (CHEM 162 or 152). A course based on local Montana chemical industries involving field trips to chemical plants, visits by company personnel and an overall evaluation of the company=s economic and environmental impact on the community.

UG 465 (CHEM 465) Organic Spectroscopy 3 cr. Offered intermittently. Prereq., CHMY 360 or 373 (CHEM 370 or 371) and one year of organic chemistry or consent of instr. Theory and interpretation of the NMR, IR, UV, and mass spectra of organic compounds with the goal of structure identification.

U 466 (CHEM 466) FT-NMR Operation for Undergraduate Research 1 cr. Offered intermittently. Prereq., CHMY 221-222 (CHEM 221-223); research project using NMR; consent of instr. Operation of the FT-NMR spectrometer and brief background of NMR spectroscopy.

U 480 (CHEM 441) Techniques of Glass Manipulation 1 cr. Offered intermittently. Fabrication and repair of laboratory glassware. Basic operations include cutting glass, bending, end seals, joining (same and different diameters), T-seals, bulbs, ring or inner seals, condensers.

UG 485 (CHEM 485) Laboratory Safety 1 cr. Offered autumn. Prereq., one year of college chemistry. Awareness of and methods of control of hazards encountered in laboratory work. Awareness of legal constraints on work with chemicals. Sources of information regarding chemical hazards.

U 488 (CHEM 488) Forensic Research 3 cr. Offered autumn, spring and summer. Prereq., consent of instr. Laboratory investigations and research on forensic chemistry topics under the direction of a faculty member.

U 489 (CHEM 489) Forensic Research Seminar 1 cr. Offered autumn. Prereq., CHMY 421 (CHEM 342) and ANTH 286N. Seminar speakers on forensic science topics in the areas of ethics, law, anthropology and criminology; tours of the Montana State Crime Laboratory.

U 490 (CHEM 497) Undergraduate Research 1-9 cr. Undergraduate Research Variable cr (R-9). Offered autumn, spring, and summer. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

UG 491 (CHEM 495) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

UG 492 Independent Study cr. (R-9) Offered autumn and spring. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

UG 494 (CHEM 494/497) 1-9 cr. (R-9) Offered autumn and spring. Prereq., consent of instr. Laboratory investigations and research in the laboratory of a faculty member.

U 498 (CHEM 498) Internship 1-6 cr. Prereq., consent of department. Extended non-classroom experience which provides practical

application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 499 (CHEM 499) Senior Thesis 3 cr. Offered autumn and spring. Prereq., CHMY 490 or consent of instr. and senior standing. Students complete and report on undergraduate research initiated as CHEM 490 or equivalent research experience. Reports are both oral and written.

G 501 (CHEM 501) Teaching University Chemistry 1 cr. Offered autumn. Preparation for teaching chemistry at the college level. A survey of teaching fundamentals and educational psychology as applied to chemistry instruction.

G 541 (CHEM 541) Environmental Chemistry 3 cr. Offered intermittently. Prereq., CHMY 360 OR 373 (CHEM 370 or 371). Chemical principles and reactions in natural systems: Fate of chemical contaminants in the environment; partitioning of contaminants between phases (air/water/soil); chemistry of atmospheric pollutants; computer modeling of equilibrium and kinetic processes; degradation and transformation of organic contaminants.

G 542 (CHEM 542) Separation Science 3 cr. Offered autumn odd-numbered years. Prereq., CHMY 421 (CHEM 342), CHMY 360 (CHEM 370) or 373 (CHEM 371). Theory, method development, and application of analytical separations; solvent extraction; solid phase extraction; various forms of chromatography; electrophoresis.

G 544 (CHEM 544) Applied Spectroscopy 3 cr. Offered intermittently. Prereq., CHMY 421 (CHEM 342) or consent of instr. The function and application of optical (ultraviolet to infrared) chemical instrumentation. Specific topics include optics, light sources, detectors and a wide variety of spectrochemical methods with an emphasis on methods not typically covered in undergraduate instrumental analysis courses.

G 553 (CHEM 553) Inorganic Chemistry and Current Literature 4 cr. Offered spring. Prereq., CHMY 401 (CHEM 452). A survey of the elements including transition metal reaction mechanisms, redox chemistry, organomatallic chemistry, bioinorganic chemistry. Oral and written presentations on primary literature.

G 561 (CHEM 561) Bioorganic Chemistry of Antibiotic and Natural Product Biosynthesis 3 cr. Offered intermittently. Prereq., one year of organic chemistry; preferred prereq. or coreq., biochemistry. Comprehensive study of the bioorganic chemistry of antibiotic and natural product production in bacteria, plants, and higher animals, focusing on polyketide, shikimate, alkaloid, terpene, and nitrogen-containing/non-alkaloid compounds. Natural product diversity, drug screening and dereplication, combinatorial biochemistry, and pathway manipulation to produce "non-natural" natural products.

G 562 (CHEM 562) Organic Structure and Mechanism 3 cr. Offered intermittently. Prereq., one year of organic chemistry. Topics may include: stereochemistry, conformational analysis, aromaticity, transition sate theory, isotope effects, solvent effects, substitution and elimination reactions, and mechanisms that involve carbocations, carbanions, radicals and carbenes as reactive intermediates.

G 563 (CHEM 563) Organic Synthesis 3 cr. Offered intermittently. Prereq., CHMY 221-223 (CHEM 221, 222). Theoretical treatise of the common methods used in organic synthesis including: oxidation, reduction, organometallics, C-C bond forming reactions, synthetic strategies and total synthesis.

G 564 (CHEM 564) Organic Reactions 3 cr. Offered intermittently. Prereq., one year of organic chemistry. Reactions such as alkylation of nucleophilic carbons, reactions of carbon nucleophiles with carbonyl groups, functional group interconversions by nucleophilic substitution reactions, electrophilic additions to carbon-carbon multiple bonds, and select oxidations/reductions.

G 566 (CHEM 566) FT-NMR Operation for Graduate Researchers 1 cr. Offered intermittently. Prereq., CHMY 221-222 (CHEM 221-223); research project using NMR; consent of instr. Operation of the FT-NMR spectrometer and brief background of NMR spectroscopy.

G 568 (CHEM 568) Organometallic Chemistry 3 cr. Offered intermittently in autumn. Prereq., CHMY 221, 223, 401, 403 (CHEM 221, 222, 452, 453). Survey of the reactivity and structure of main group and transition metal organometallic compounds with an emphasis on applications to organic synthesis and catalysis.

G 569 (CHEM 569) Medicinal Chemistry 3 cr. Offered intermittently. Prereq., CHMY 221, 223 (CHEM 221, 222); BIOC 380 or equiv. Same as BMED 621. Introduction to the historical and contemporary discoveries in medicinal chemistry.

G 573 (CHEM 573) Advanced Physical Chemistry 3 cr. Offered autumn. Prereq., CHMY 371-373 (CHEM 371-372). Fundamental principles of physical chemistry and special applications.

G 580 (CHEM 580) Advanced Graduate Student Research Seminars 1 cr. (R-10) Offered every term. Prereq., consent of instr. Formal oral and written presentations of research results and selected literature topics in a designated area.

G 581 (CHEM 581) Chemical Biology 3 cr. Offered intermittently. Prereq., consent of instr. Synthesis and structure of native and modified biomolecules such as antisense phosphothioate oligonucleotides, modified nucleosides and nucleotides designed for antiviral activity, and PNAs (protein nucleaic acids). Emphasis on the interaction of biomolecules and A "small" organic and inorganic molecules and their chemical impact on native structure and function.

G 593 (CHEM 593) Professional Project 3 cr. Offered autumn and spring. Prereq., consent of instr.

G 595 (CHEM 595) Special Topics Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 (CHEM 596) Independent Study Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

G 597 (CHEM 597) Research Variable cr. (R-open) Offered autumn and spring. Prereq., consent of instr.

G 598 (CHEM 598) Cooperative Education Experience Variable cr. (R-8) Offered autumn and spring. Prereq., consent of department. Extended non-classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 (CHEM 599) Thesis Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr.

G 630 (CHEM 630) Seminar 1 cr. (R-open) Offered autumn and spring. Prereq., graduate standing in chemistry or biochemistry, or consent of instr.

G 640 (CHEM 640) Introductory Graduate Seminar 1 cr. (R-open) Offered autumn. Prereq., graduate standing in chemistry or biochemistry or consent of instr. Seminar to acquaint new graduate students with departmental research.

G 650 (CHEM 650) Graduate Chemistry Seminar 1 cr. (R-open) Offered spring. Prereq., graduate standing.

G 697 (CHEM 697) Research Variable cr. (R-open) Offered autumn and spring. Prereq., consent of instr.

G 699 (CHEM 699) Dissertation Variable cr. (R-10) Offered autumn and spring.

Faculty

Professors

Bruce E. Bowler, Ph.D., Massachusetts Institute of Technology, 1986

Mark S. Cracolice, Ph.D., University of Oklahoma, 1994 (Chair)

Michael D. DeGrandpre, Ph.D., University of Washington, 1990

Christopher P. Palmer, Ph.D., University of Arizona, 1991

Nigel D. Priestley, Ph.D., Southhampton University, 1991

Edward Rosenberg, Ph.,D, Cornell University, 1970

J.B.A. (Sandy) Ross, Ph.D., University of Washington, 1976

Garon C. Smith, Ph.D., Colorado School of Mines, 1983

Kent Sugden, Ph.D., Montana State University, 1992

Associate Professors

- Trina J. Valencich, Ph.D., University of California, Irvine, 1974 (Adjunct)

Assistant Professors

- David Bolstad, Ph.D., The University of Montana, 2006
- Klara Briknarova, Ph.D., Carnegie Mellon University, 1999
- Xi Chu, Ph.D., University of Kansas, 2001
- Valeriy Smirnov, Ph.D., University of Nebraska, 2004

Lecturer

- Holly A. Thompson, Ph.D., Kansas State University, 1982

Research Professor

- Robert Yokelson, Ph.D., Yale University, 1991

Research Associate Professors

- William R. Laws, Ph.D., The Johns Hopkins University, 1977
- Brooke D. Martin, Ph.D., Dartmouth College, 1998

Research Assistant Professors

- Earle R. Adams, Ph.D., Montana State University, 1994
- Ted J. Christian, Ph.D., The University of Montana, 1999

Emeritus Professors

- James W. Cox, Ph.D., Montana State University, 1969
- Ralph J. Fessenden, Ph.D., University of California, 1958
- Richard J. Field, Ph.D., University of Rhode Island, 1968
- Donald E. Kiely, Ph.D., University of Connecticut, 1965
- R. Keith Osterheld, Ph.D., University of Illinois, 1950
- Geoffrey N. Richards, Ph.D., D.Sc., University of Birmingham, 1964
- Wayne P. Van Meter, Ph.D., University of Washington, 1959
- Edward E. Waali, Ph.D., University of Wyoming, 1970
- George W. Woodbury, Jr., Ph.D., University of Minnesota, 1964

Department of Communication Studies

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Betsy Wackernagel Bach, Chair

Communication studies is a growing discipline that is engaged in both social-scientific and humanistic approaches to the analysis, understanding and improvement of human communication. The discipline traces its roots to ancient Greek and Roman studies of the functions of public discourse in society, but in the twentieth century communication came to embrace the studies of interpersonal and small group interaction, human relations in organizations, media and society, and intercultural interaction. Although interdisciplinary in spirit, the discipline has a core of knowledge, theory and concepts concentrating on such things as symbols, messages, interactions, networks, and persuasive campaigns. Uniting the field is the belief that the role of communication in human experience is basic to comprehending complex situations and problems in the modern world. The discipline has roles in both the broad traditions of liberal arts education and in the development and refinement of practical skills.

The Department of Communication Studies at The University of Montana-Missoula focuses on three broad areas of study: interpersonal interaction and human relationships, organizational communication, and rhetoric and public discourse. The knowledge and skills the student may acquire in each of these areas are important to functioning effectively in one's personal life, at work, and as a citizen of the larger society in a rapidly changing world.

The program in Communication Studies helps to prepare students for such diverse professions as: public relations officer, marketing analyst, human resources or personnel manager, community mediator, political speech writer, health communication trainer, social services director, or student services coordinator. Also, undergraduate and graduate study can assist the student in pursuing advanced studies for law, the ministry, and higher education.

Admission Requirements

To be admitted to the communication studies major, a student must complete COMM 111A and two other lower-division COMM courses.

Students who intend to major in communication studies but who have not yet met the above requirements are admitted to the program as pre-communication majors. Pre-communication majors may enroll in 100- and 200-level courses only. Students must be fully admitted as communication studies majors to enroll in 300- and 400-level courses. Before a student can graduate, he or she must meet the requirements to become a communication studies major.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Core Requirements

To graduate with a degree in communication studies, the student must complete 36 total communication credits with 18 of those credits in courses numbered 300 or above. A maximum of 6 credits in COMM 360 and a maximum of 6 credits in COMM 398 may count toward a major in communication studies. In addition, the following courses are required:

- A course in statistics (does not count toward 36 credits in Communication)
- COMM 110S Introduction to Interpersonal Communication
- COMM 111A Introduction to Public Speaking
- COMM 230S Introduction to Organizational Communication
- COMM 250H Introduction to Rhetorical Theory
- COMM 460 Research Methods

To meet the Upper-division Writing Expectation for a major in Communication Studies, students must successfully complete one of the following courses: COMM 377, COMM 410, COMM 421, COMM 422, COMM 424, COMM 455, COMM 480, COMM 481 or another course approved for this purpose by the University curriculum committee.

Allied Fields

The major is advised to take courses in other academic units throughout the University that will provide an increased understanding of communication, such as anthropology, English, linguistics, management, political science, psychology, social work, and sociology. Of particular interest to students interested in helping professions and associated content areas (e.g., children, families, aging) are the human and family development minor or the minor in gerontology.

Students interested in new communication technology and its use within organizations should consider the media arts minor, while students interested in non-profit organizations should consider the minor in non-profit administration. Students in the rhetoric and public discourse may also opt for the minor in women's and gender studies or climate change. Students are encouraged to consider double majors and minors in a variety of fields that might complement their communication degree.

Organizational Communication Option

Students who elect to concentrate in organizational communication must complete:

All the core requirements listed previously.

At least 5 courses from the following: COMM 240 (Communication in Small Groups), COMM 321 (Introduction to Public Relations), COMM 322 (Public Relations Writing), COMM 412 (Communication and Conflict), COMM 421 (Communication in Nonprofit Organizations), COMM 422 (Communication and Technology in Organizations), COMM 423 (Practical Issues in Organizational Communication), COMM 424 (Risk, Crisis and Communication), and COMM 451S (Intercultural Communication).

3 courses from the following list: ANTH 220S, BADM 100, MGMT 340S; MGMT 344, 368, 440, 457 or 480; MKTG 360, 363, 412; SOCI 306, 345, 371 (SOC 306S, 320, 370S); PSCI 361, 462, 466, 467 (PSC 361, 460, 466 and 467).

Students may petition to count appropriate special topics or transfer courses upon recommendation of the student's advisor. All courses should be selected in consultation with a department faculty advisor.

Communication and Human Relationships Option

Students who elect to concentrate in communication and human relationships must complete:

All the core requirements listed previously.

At least 5 courses from the following: COMM 202S (Nonverbal Communication), 311 (Family Communication), 380 (Gender and Communication), 410 (Communication in Personal Relationships), 412 (Communication and Conflict), and 451S (Intercultural Communication).

At least 4 courses from the following list: ANTH 327, 328S; COUN 485; C&I 355; HFD 412; NAS 342; PSYX 230S, 233, 336, 345, 339, 360S, 385S, 348 (PSYC 240, 245, 336, 340, 350S, 351S, 385); SOCI 220S, 275S, 332, 330, 350 or 382 (SOC 220, 275S, 300, 330S, 340, or 350); SW 300, 420, 422, 460.

Students may petition to count appropriate special topics or transfer courses upon recommendation of the student's advisor. All courses should be selected in consultation with a faculty advisor. Students electing this option are encouraged to minor in Human and Family Development.

Rhetoric and Public Discourse Option

Students who elect to concentrate in rhetoric and public discourse must complete:

All the core requirements listed previously.

At least 4 courses from the following: COMM 241 (Persuasive Communication), 242 (Argumentation), 350 (Persuasive Speaking and Criticism), 377 (Rhetoric, Nature and Environmentalism), 379 (Consumption, Media, and the Environment), 380 (Gender and Communication), and 455 (Rhetorical Criticism and Theory), 480 (The Rhetorical Construction of "Woman"), and 481 (The Rhetoric of U.S. Women's Activism).

At least 4 courses from the following: ANTH 102; CCS 203; ECNS 433 (ECON 440) or EVST 167H, 367, 420, 427; HSTA 102H, 262, 321, 322, 344, 387, 388, or 478; HSTR 272E, 302, 384E, 364 (HIST 152H, 262, 357, 358,362, 370H, 371H 226E, 301H, 335E, 364); MAR 101L; PHIL 211, 471; PSCI 250E, 342, 343, 352, 355, 444, 471 or 474 (PSC 150E, 342, 343, 352, 355, 444, 471 or 472; SOCI 220S, 225, 325, 350, 470, 485 (SOC 220, 225, 325, 340, 470 or 485).

Students may petition to count appropriate special topics or transfer courses upon recommendation of the student's advisor. All courses should be selected in consultation with a faculty advisor.

Suggested Course of Study

First Year	A	S
COMM 110S Introduction to Interpersonal Communication	-	3
COMM 111A Introduction to Public Speaking	3	-
COMM elective	-	3
WRIT 101 (ENEX 101) Composition	3	-
M 116 (MATH 117) Probability and Linear Mathematics	3	-
General Education	6	9
	15	15
Second Year	**A**	**S**
COMM electives	-	9
COMM 230 Organizational Communication	3	-
COMM 250H Introduction to Rhetorical Theory	3	-
STAT 216 (MATH 241) or PSYC 222 (PSYC 220) or SOCI 202 (SOC 202) or HHP 486	3-4	-
General Education	6	-
Electives	2	6
	16-17	15
Third Year	**A**	**S**
COMM Writing course	3	-
COMM 460 Communication Research Methods	-	3
Upper-division COMM electives	6	-
Upper-division electives	-	12
Electives	6	-
	15	15
Fourth Year	**A**	**S**
Upper-division COMM electives	3	3
Upper-division electives	9	-
Electives	3	11
	15	14

Requirements for a Minor

To be admitted to the communication studies minor, a student must complete COMM 111A and two other lower-division COMM courses.

Students who intend to minor in communication studies but who have not yet met the above requirements are admitted as pre-communication minors. Pre-communication minors may enroll in 100- and 200-level courses only. Students must be fully admitted as communication studies minors to enroll in 300- and 400-level courses.

Once admitted to earn a minor, the student must complete a minimum of 20 credits in communication studies courses, with at least 9 credits in communication studies courses numbered 300 and above. A maximum of 6 credits in COMM 360 may count toward a minor in communication studies.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G =for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Communication Studies (COMM)

U 110S Introduction to Interpersonal Communication 3 cr. Offered yearly. An overview of the process of human communication with special emphasis on analyzing communication patterns and improving interpersonal communication skills. Credit not allowed for both COMM 110S and COM 150S.

U 111A Introduction to Public Speaking 3 cr. Offered every term. Preparation, presentation, and criticism of speeches. Emphasis on the development of public speaking techniques through constructive criticism. Credit not allowed for both COMM 111A and COM 160A.

U 173 Language Culture and Society 3 cr. Offered yearly. Same as LING 173. A survey of the elements of language (structure, meaning, and sound) including language use in its social and cultural contexts.

U 195 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 202S Nonverbal Communication 3 cr. Offered yearly. Nonverbal code systems and how they function in human communication including gestures, facial expressions, personal space, and others.

U 220 Professional Communication 3 cr. Offered intermittently. Principles and practices of effective interviewing in a variety of professional situations including screening of clients and job candidates, performance appraisal, and data-gathering. Advanced public speaking in professional contexts.

U 230S Organizational Communication 3 cr. Offered yearly. Theory and research on communication in organizations. Focus on topics such as productivity, power, culture, socialization, technology and globalization covering a wide range of organizations including corporations, government, educational institutions, non-profit agencies and media organizations.

U 240 Communication in Small Groups 3 cr. Offered autumn and spring. Theory and research related to communication patterns, cohesion, leadership, and decision-making. Experiences provided in task oriented groups and field analyses of group processes provided.

U 241 Persuasive Communication 3 cr. Offered yearly. The use of communication in attitude and behavior change as experienced in personal, organizational, and public contexts.

U 242 Argumentation 3 cr. Offered autumn and spring. Prereq., sophomore standing. Development of argumentation skills and critical judgment in decision-making and debate. Includes criticism, construction, presentation, and refutation of spoken and written arguments.

U 250H Introduction to Rhetorical Theory 3 cr. Offered yearly. Prereq., COMM 111A. An overview of rhetorical theory including an exploration of classical rhetoric, British and Continental rhetorical theory, and contemporary theories of language and persuasion.

U 251X International and Development Communication 3 cr. Offered yearly. International Communication is concerned with information exchange across national borders while Development Communication focuses on the historical, current, and prospective role of communication in social change, improving living conditions, and enhancing life prospects-mainly in developing countries.

U 260 Communication in the Workplace 3 cr. Offered intermittently. Explores communication skills needed in business and professional contexts. Focus on developing a working knowledge of theory and skills for interpersonal communication, group communication, and business writing. Concepts include communication processes, diversity in the workplace, nonverbal communication, technical communication, communication with customers, and employment communication. Course objectives are met via Blackboard, the University's online course management system.

U 295 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 311 Family Communication 3 cr. Offered yearly. Prereq., COMM 110S. An examination of communication in husband-wife, parent-child, and extended family relationships. Topics include intimacy, power, decision-making, problem solving, identity formation, and interpersonal perception.

U 321 Introduction to Public Relations 3 cr. Offered yearly. The many uses of communication in the endeavor of public relations. Communication theories and models including interpersonal communication, organizational communication, and mass communication are applied to explore the internal and external communication behaviors associated with public relations.

U 322 Public Relations Writing 3 cr. Offered yearly. Prepreq., COMM 321 recommended. Writing documents to create relationships between organizations and their public such as press releases, fact sheets, brochures, and speeches.

U 350 Persuasive Speaking and Criticism 3 cr. Offered yearly. Prereq., COMM 111A. The persuasive process through the criticism and creation of speeches and other rhetorical artifacts emphasizing the role persuasion plays in creating and shaping our culture.

U 360 Forensics/Honors 1-3 cr. (R-12) Offered every term. Prereq., COMM 111A or COMM 242 or equiv. Preparation and participation in competitive speech and debate, including British Parliamentary debate and National Individual Events Tournament (NIET) speeches. The team travels to regional competitions and hosts on-campus and intramural debates and speaking events. Up to 6 credits may apply toward a major or minor in communication studies.

U 377 Rhetoric, Nature and Environmentalism 3 cr. Offered every other year. Same as EVST 377. Survey of rhetorical texts that shape public understanding of nature and environmental issues. Analysis of a range of historical and contemporary environmental texts using theoretical concepts from the rhetorical tradition.

U 379 Communication, Consumption and Climate 3 cr. Offered every other year. Same as EVST 379 and CCS 379. Analyzes consumption as a communication practice, investigates discourses that promote consumption, and illuminates environmental impacts on consumption.

U 380 Gender and Communication 3 cr. Offered yearly. Same as WGS 380. The meaning of gender in our culture and how gender is displayed and perpetuated through our private and public verbal and nonverbal interactions.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation. Offered C/NCR only.

UG 410 Communication in Personal Relationships 3 cr. Offered yearly. Prereq., COMM 110S. An examination of the functions, types, and historical context of close personal relationships with an in-depth study of the role of communication in friendships and romantic relations.

UG 412 Communication and Conflict 3 cr. Offered autumn and spring. Conceptual and practical discussions of communication and conflict in interpersonal relationships, organizational settings and overall cultural milieu. Topics include culture, power, styles, negotiation and bargaining, mediation, dissent, dispute systems, and crisis communication.

UG 421 Communication in Nonprofit Organization 3 cr. Offered yearly. Prereq., COMM 230S. Focuses on issues in nonprofit organizational communication at macro and micro levels. Topics include: organizational identity, change processes, public relations, fund-raising, advocacy, socialization, stress and burnout, board management and professionalization.

UG 422 Communication and Technology in Organizations 3 cr. Offered every other year. Prereq., COMM 230S. This course takes a critical look at the influence of communication technologies on organizational communication. Students will examine how the world of work is changing due to new technologies and explore the social and ethical implications of technical innovation, adoption and use.

UG 423 Practical Issues in Organizational Communication 3 cr. Offered every other year. Prereq., COMM 230S. Emphasis on the theoretical and practical issues involved in communication training and consultation. Overview of theoretical models followed by the "nuts and bolts" of communication training and consultation. Students will carry out a training or consultation project (e.g., planning, execution, and evaluation) to sharpen the issues explored.

UG 424 Risk, Crisis and Communication 3cr. Offered every other year. This course explores the communicative dynamics that both prevent and cause organizational crisis. Through case studies, the class examines how people plan, communicate and make good decisions in high-risk situations, as well as how to manage crisis public relations effectively.

UG 451S Intercultural Communication 3 cr. Offered autumn and spring. Communication principles and processes in cross-cultural environments. Non-Western cultures are emphasized by contrasting them to Western communication norms.

U 455 Rhetorical Criticism and Theory 3 cr. Offered intermittently. Introduction to study of rhetorical criticism and theory. Current theoretical and methodological issues and approaches including traditional criticism, experiential criticism, dramatism, narrative criticism, feminist criticism, postmodern criticism.

UG 460 Communication Research Methods 3 cr. Offered autumn and spring. Prereq., a course in statistics. Introduction to the major types of communication research and the foundations of quantitative research methods.

UG 461 Research Seminar 1-3 cr. (R-9) Offered autumn and spring. Prereq., COMM 460 and consent of instr. Application of quantitative and qualitative research methods to specialized contexts. Emphasis on direct student involvement in research activities.

G 480 The Rhetorical Construction of "Woman" 3 cr. Offered every other year. Same as WGS 480. Topics include the early women's rights conventions, debates over marriage and divorce, social feminism, woman suffrage in Montana, and intersections between gender and race.

UG 481 The Rhetoric of U.S. Women's Activism, 1960-Present 3 cr. Offered every other year. Same as WGS 481. Explores the rhetoric surrounding contemporary women's social "activism" in the U.S. Topics include women's rights, women's liberation, consciousness raising as a rhetorical form, reproductive rights, sexuality, and intersections between gender, race, and class.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study Variable cr. (R-9) Offered every term. Prereq., consent of instr. Offered C/NCR only.

G 510 Seminar in Personal Relationships 3 cr. (R-6) Offered yearly. Prereq., consent of instr. Examines theory and research on the process and functions of communication in personal relationship contexts. Interdisciplinary reading illuminates the dynamics of

communication in the development, maintenance, and deterioration of romantic relationships, friendships, and family relationships. Discussion and assignments center around theoretical, methodological, and practical issues in research on communicative activities and events in personal relationships.

G 511 Survey of Interpersonal Communication 3 cr. Offered every other year. Prereq., graduate standing in communication studies or consent of instr. Survey of theories and research in interpersonal communication including definitions of interpersonal communication, its place in the field of communication, and methodological issues. Overall emphasis on foundational readings and recent research developments.

G 512 Seminar in Interpersonal Conflict 3 cr. (R-6) Offered intermittently. Prereq., consent of instr.

G 514 Alternative Dispute Resolution 3 cr. Offered yearly. Same as LAW 614. A study of the varieties of dispute resolution vehicles outside the court process. Focus on a 40-hour component of practical skills training for the mediation practitioner. Topics include the mediation model, interest-based negotiation and effective communication.

G 520 Seminar in Organizational Communication 3 cr. Offered every other year. (R-6) Prereq., consent of instr. Introduction to theories and research in organizational communication. Topics include culture, networks, structure, technology, identity, power, resistance, gender, and globalization. Overall emphasis on foundational readings and recent research developments.

G 540 Seminar in Instructional Communication 3 cr. Offered every other year. Prereq., consent of instr. Instruction in the theories, concepts, principles, and skills employed university level classroom communication and instruction.

G 541 Teaching the Basic Course 2 cr. (R-8) Offered autumn and spring. Prereq., consent of instr. Offered C/NCR only.

G 555 Seminar in Rhetorical Criticism and Theory 3 cr. Offered every other year. Introduction to contemporary issues in rhetorical criticism and theory. Topics include classical criticism, dramatism, close textual analysis, ideographic criticism, narrative criticism, feminist criticism, and postmodern criticism.

G 561 Qualitative Research Methods 3 cr. Offered every year. An emphasis on the philosophy and practice of qualitative inquiry, the development and use of descriptive frameworks, and gathering and testing qualitative data to develop human communication theory.

G 572 Family Law Mediation 2 cr. Offered autumn. Same as LAW 672. Interdisciplinary course on advanced mediation skills with a focus on family mediation including divorce and other types of family problems. Psychological issues for both children and parents, power balancing, gender issues and interest-based negotiation model.

G 575 Seminar in Rhetoric and Environmental Controversy 3 cr. Offered every other year. Same as EVST 575. The study of how advocates use symbols to influence meaning and action in environmental controversies. Rhetorical concepts used to examine recurring strategies and tactics in specific controversies.

G 585 Communication Across the Sciences 3 cr. Offered yearly. Focus on communication practices that facilitate interdisciplinary interactions across the sciences and result in more competent communication. Offered only to graduate student trainees enrolled in the M-EID program.

G 593 Professional Paper Variable cr. (R-6) Offered every term. Prereq., consent of instr.

G 594 Topical Seminar Variable cr. (R-6) Offered intermittently. Prereq., consent of instr.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered every term. Prereq., consent of instr.

G 599 Thesis Variable cr. (R-9) Offered every term. Prereq., consent of instr.

Faculty

Professors

- Sara E. Hayden, Ph.D., University of Minnesota, 1994
- Alan L. Sillars, Ph.D., University of Wisconsin, 1980
- Betsy Wackernagel Bach, Ph.D., University of Washington, 1985 (Chair)

Associate Professors

- Greg Larson, Ph.D., University of Colorado, 2000
- Steve Schwarze, Ph.D., The University of Iowa, 1999
- Stephen M. Yoshimura, Ph.D., Arizona State University, 2002

Assistant Professors

- Joel Iverson, Ph.D., Arizona State University, 2003
- Christina Yoshimura, Ph.D., Arizona State University, 2004

Adjunct Instructor

- Phyllis Bo-yuen Ngai, Ed.D., The University of Montana, 2004

Emeritus Professor

- William W. Wilmot, Ph.D., University of Washington, 1970

Emeritus Associate Professor

- James H. Polsin, Ph.D., University of Kansas, 1971

Comparative Literature

Robert Baker (Assistant Professor of English), Chair, Comparative Literature Committee

Comparative literature is the study of literature beyond the confines of one national literature. It is especially concerned with the similarities and differences which can be observed in literary works in different languages. It makes comparisons from various points of view, studying, for example, movements, periods, genres and themes in two or more national literatures. Certain types of comparative literature studies can be highly useful to students in such fields as psychology, philosophy, anthropology and history, as well as to majors in English and modern and classical languages and literatures.

Students interested in working toward a degree in comparative literature (not offered by this University) should bear in mind that a knowledge of at least two foreign languages is indispensable for advanced work. Courses in comparative literature topics are offered at The University of Montana-Missoula in several departments: English, Drama, Philosophy, Liberal Studies, Modern and Classical Languages and Literatures, Native American Studies, and Asian Studies. For advising see the chair.

Department of Computer Science

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Joel Henry, Chairman

The growing utility of computers in research and education, as well as the increased impact of computers on our modern society, strongly implies that knowledge of computers and their capabilities should be a part of the basic education of all students. The courses listed below are designed to provide the student with this knowledge and to prepare the student for a career in a field in which there is a growing need for trained personnel. The objective of the undergraduate curriculum in computer science is to teach theory and to develop professionally competent, broadly educated computer scientists who wish to pursue professional careers or graduate studies.

The B.S. program is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - Telephone: 410-347-7700. For more information access our homepage http://www.cs.umt.edu or email the chairman at joel.henry@umontana.edu.

High School Preparation: In addition to general University admission requirements, pre-college preparation should include as many computer science courses as possible, and four years of high school mathematics, to include algebra, trigonometry and pre-calculus. Also recommended are physics and chemistry.

Admission Requirements

Admission to computer science courses varies according to course level and other departmental standards. However, students must have completed all prerequisite courses with a grade of at least a "C-".

Lower-Division Courses

Most 100- and 200-level courses are open on a first-come, first-served basis to all students who have the prerequisites. Students taking computer science courses to satisfy a general education symbolic system sequence should normally take CS 101-131, CS 131-132, or CS 133.

Upper-Division Courses

Admission to 300-level or above courses requires successful completion of the prerequisites.

Major-Minor Status

Completed change of major forms along with college transcripts must be turned in to the department when declaring computer science as a major or minor.

Special Degree Requirements

To locate graduation requirements in addition to those of the Computer Science Department, see "graduation requirements" in the index of this catalog.

Bachelor of Science degree with a major in Computer Science

A B.S. degree in computer science requires completion of the following requirements with at least a "C-" in each course (2.00 grade point average required):

Computer Science. CS 121, CS 131-132 or CS 133, CS 241, CS 242, CS 281, CS 332, CS 344, CS 346, CS 365, CS 415, CS 441, CS 442, CS 488, and nine credits of CS electives selected from courses numbered 300 and above.

Mathematics. M 171-172, 221 or 325, 225 & Stat 341 (MATH 152-153, 221or 325, 225, and 341).

Writing/Communication. Students must take FOR 220. Students must also take COMM 111A or COMM 242.

Science. Students must take one of the sequences BIOL 108N-109N, 110N; CHMY 141N, 143N (CHEM 161N, 162N); or PHYS 211N/213N and 212N/214N.

Students also must take two additional courses selected from the following list (two numbers separated by a / means that the second number is a lab for the first and the two together only count as one course for this requirement):

- ASTR 131N/134N, ASTR 132N/135N
- BIOL 106N/107N, BIOL 108N/109N, BIOL 110N
- CHMY 141N, 143N (CHEM 161N, CHEM 162N)
- FOR 201
- GEO 101N, 102N (GEOS 100N/101N), GEO 226 (GEOS 226)
- PHYS 211N/213N, PHYS 212N/214N, PHYS 341, PHYS 444

NOTE: 100-level CS courses other than CS 121, CS 131-132, CS 133 and 200-level CS courses other than CS 241-242 and CS 281 do not count toward the degree or option requirements. However, they do count in the 60 credit limit in the major.

Upper-division Writing Expectation

Upper-division Writing Expectation for Computer Science majors is CS 415.

Social Science, Humanities, Arts and Other Disciplines
Students must take 30 credits in social science, humanities, arts or disciplines other than computer science, mathematics and science. The courses taken to meet the Writing/Communication requirement can also count towards this requirement.

Bachelor of Science degree with a combined major in Computer Science-Mathematical Sciences

The purpose for the combined program is to provide a thorough background in both allied disciplines and to inculcate a deeper understanding of their goals and methods. A student must complete 60 credits in the two disciplines: 30 of these credits in computer science courses and 30 of these credits in mathematical sciences courses. A minimum grade of "C-" and a 2.0 grade point average is required in all courses which follow:

The computer science requirements are: 121, 131-132 or 133, 241-242, 281, 332, and nine credits of CS electives selected from courses numbered 300 and above. A total of at most three of the nine credits of CS electives may be in CS 398 or 498.

The mathematical sciences requirements are: M 171 (or 181)-172 (or 182), 221, 273, 307 or (225) (MATH 152-153, 221, 251, 305 (or 225)), and twelve credits of mathematical sciences selected from the following list: M 311, 325, 326, 361, 362, 381, 412, 414, 429, 431, 432, 439, 440, 445, 472, 473, 485 and STAT 341, 421, 422, 451, 452 (MATH 311, 325, 326, 341, 351, 381, 382, 406, 412, 414, 421, 422, 431, 441, 442, 444, 445, 451, 452, 471, 475, 485).

The combined nine additional credits of computer science electives and twelve additional credits of mathematical sciences electives must include at least three 3- or 4-credit courses numbered 400 or above, with at least one chosen from each department (not including M 429,

STAT 451 and 452 (MATH 406, 444, and 445)).

Other requirements are: One of the sequences BIOL 108N-109N, 110N; or CHMY 141N, 143N (CHEM 161N, 162N); or PHYS 211N/213N and 212N/214N. In addition, WRIT 222 (FOR 220), and either COMM 111A or COMM 242.

Each student plans a program in consultation with a computer science and a mathematical sciences advisor. Students planning to attend graduate school in computer science or the mathematical sciences should consult with their respective advisors.

Suggested Curricula:

Applied Math-Scientific Programming: M 311, 412, 414 (MATH 311, 412, 414), and one course chosen from STAT 341 (MATH 341), M 381, 473, 472, 440 (MATH 351, 451, 452, 471). Three courses chosen from CS 344, 446, 477 and 486.

Combinatorics and Optimization-Artificial Intelligence: M 361, 362 (MATH 381, 382); two courses chosen from M 325, 414, 485, STAT 341 (MATH 325, 341, 414, 485); and CS 344, 455, and 457.

Statistics-Machine Learning: STAT 341, 421 (MATH 341, 441), and two courses chosen from M 325, 362, 485, STAT 422 (MATH 325, 382, 442, 485); three courses chosen from CS 365, 455, 457, 458 and 486.

Algebra-Analysis: M 381, 431 (MATH 351, 421), and two courses chosen from M 326, 432, 473, 472 (MATH 326, 422, 451, 452); CS 344, 441, and one other course.

Suggested Course of Study

First Year	**A**	**S**
CS 121 Careers in Computer Science	1	-
CS 131-132 Fundamentals of Computer Science I, II or CS 133 Accelerated Fundamentals of Computer Science (3 cr. - one semester)	3	3
COMM 111A Introduction to Public Speaking	3	-
WRIT 101 (ENEX 101) College Writing I	-	3
M 171, 172 (MATH 152-153) Calculus I, II	4	4
Electives and General Education	3	6
Total	14	16
Second Year	**A**	**S**
CS 241 Data Structures	4	-
CS 242 Programming Languages	-	4
CS 281 Computer Architecture	3	-
M 225 (MATH 225) Discrete Math I	3	-
M 221 (MATH 221) Linear Algebra	-	4
Science sequence	5	5
Electives and General Education	-	3
Total	15	16
Third Year**	**A**	**S**
CS 332 Algorithms	3	-
CS 344 Operating Systems	3	-
CS 346 Software Science	-	3
CS 365 Database Design and DBMS	-	3
CS 488 Computer Networks	-	3
WRIT 222 (FOR 220) Technical Approach to Writing	-	2
STAT 341 (MATH 341) Introduction to Probability and Statistics	3	-
Science Electives	3	3
Electives and General Education	3	-
Total	15	14
Fourth Year**	**A**	**S**
CS 415 Computers, Ethics, and Society***	3	-
CS 441 Theory and Practice I	3	-
CS 442 Theory and Practice II	-	3
CS option courses and electives	3	6
Electives and General Education	6	6
Total	15	15

**CS core courses at the 300- and 400-level may not always be offered in the sequence shown but will be offered every year.

***Students must pass the upper-division writing proficiency assessment before taking CS 415.

Requirements for a Minor

There are two minors offered by the Department of Computer Science: the traditional minor in computer science emphasizes computer programming and related skills, while the minor in computer applications emphasizes use of applications such as programming languages, word processors, spreadsheets, and data bases in the management and manipulation of electronic information.

Computer Science: To earn a minor in computer science the student must complete (with at least a "C-" in each course and a 2.00 grade average) 18 CS credits including:

1. Either CS 131-132 or CS 133.
2. Elective Courses chosen from CS 101, 177, 181, 241, 242 and one course number 300 and above. CS 101 and 177 cannot both be counted as electives, and at least 6 credits of elective must be at the 300 level or above.

Computer Applications: To earn a minor in computer applications, a student must complete (with at least a "C-" grade in each course and a 2.00 grade average) 21 CS credits including:

1. At least one and no more than three of CS 101, CS 131, CS 201, CS 207.
2. At least one and no more than three of CS 111, CAPP 171, CS 172, CS 177, and CS 181.
3. Remaining courses must be selected from CS 131-132, CS 241-242, CS 486, other CS major courses, pre-approved CS 195, CS 295, CS 395, or CS 495 special topics courses, or up to six credits of pre-approved classes outside the department.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Computer Science (CS)

Students taking CS classes with computer programming components should expect to use additional computer lab time outside of class.

- **U 101 Introduction to Programming 3 cr.** Offered every term. Elementary programming techniques using the Visual BASIC programming language. A wide range of primarily nonmathematical programs will be written by the student and run on a computer. (Two hours independent lab per week.) Credit not allowed for both CS 101 and CRT 121.
- **U 102 Introduction to Object-Oriented Programming 1 cr.** Offered every term. Classes are held for 2 hours/week in the first half of the semester. Introduction to object-oriented programming using a visual programming environment. Students create programs using drag-and-drop and these programs control animated on-screen characters and objects. Course is designed as a supplement to CS 131-132 which teaches object-oriented programming in a more traditional manner.
- **U 111 Fluency with Information Technology 3 cr.** Offered intermittently. Introduces the skills and concepts of information technology, both from practical and more theoretical points of view. During lectures and interactive computer labs, students explore a wide range of digital and information technologies, including common PC applications, networking, databases, privacy, and security.
- **U 121 Careers in Computer Science 1 cr.** Offered autumn. Exploration of various careers available in the general area of Computer Science. Includes discussion of strategies for success in the major. Computer Science faculty members also will discuss possible undergraduate research opportunities and motivation for graduate education.
- **U 131 Fundamentals of Computer Science I 3 cr.** Offered autumn and spring. Prereq., computer programming experience in a language such as BASIC, Pascal, C, etc.; coreq., M 095 (MAT 100D) or consent of instr. CS 102 highly recommended as prereq. or coreq. Fundamental computer science concepts using the high level structured programming language, Java.
- **U 132 Fundamentals of Computer Science II 3 cr.** Offered autumn, spring, and summer. Prereq., CS 131; coreq., MATH 121 or consent of instr. Continuation of CS 131. Survey of computer science topics including recursion, algorithms, basic data structures, operating systems, artificial intelligence, graphics, user interfaces, and social and ethical implications of computing.
- **U 133 Accelerated Fundamentals of Computer Science 3 cr.** Offered autumn and spring. Prereq., computer programming in a language such as BASIC, C, C++, etc.; coreq., M 151 (MATH 121) or consent of instr. A one-semester combination of CS 131 and CS 132; fundamental computer science concepts using Java, and a survey of computer science topics (software engineering, recursion, algorithms, basic data structures, operating systems, artificial systems, graphics, user interfaces, and social and ethical implications of computing).
- **U 172 Introduction to Computer Modeling 3 cr.** Offered every term. Prereq., previous computer experience and M 095 (MAT 100D) or equiv. score on math placement test, or consent of instr. Problem solving with spreadsheets and databases using the computer to analyze a set of data; presentation of results of analysis. Credit not allowed for CRT 172 and this course.
- **U 177 Computer Modeling for Science Majors 3 cr.** Offered spring. Prereq., basic computer and spreadsheet literacy; coreq., M 162 or 171 (MATH 150 or 152). An introduction to computer modeling in the sciences using spreadsheets and a programming language. Integrates principles of math, computer science and science. A student can take at most one of CS 172, CS 177, CRT 280, and CRT 281 for credit.
- **U 181 Electronic Publishing on the World Wide Web 3 cr.** Offered every term. Prereq., CS 111 or consent of instr. Introduction to browsers and the World Wide Web. Web site design and construction facilitated by the use of several multimedia programs. HTML and SGML explained in the use of web construction. Copyright issues and other WWW services are discussed.

- **U 195 Special Topics Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 196 Independent Study Variable cr.**(R-6) Offered intermittently. Prereq., consent of instr.
- **U 198 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 201 Special Programming Languages 3 cr.** (R-open) Offered intermittently. Prereq., depends on specific language offered. Computer programming using a high-level programming language which is not taught in a regular language-specific course. Can be repeated by choosing different languages.
- **U 207 Advanced Visual BASIC Programming 3 cr.** Offered intermittently. Prereq., CS 101 or consent of instr. Advanced applications programming in Visual BASIC. Topics include advanced objects and controls, web page development, and language trends.
- **U 241 Data Structures 4 cr.** Offered autumn. Prereq., CS 132; coreq., M 225 (MATH 225) or consent of instr. Abstract data types, recursion, linked lists, trees, hashing, graphs, and applications of data structures in algorithm development. Emphasis on object oriented programming techniques.
- **U 242 Programming Languages 4 cr.** Offered spring. Prereq., CS 241 and M 225 (MATH 225). Concepts and principles of programming languages with an emphasis on C, C++, and object-oriented programming. Syntax and semantics of object-oriented languages. Principles and implementation of late binding, memory allocation and de-allocation, type-checking, scope, polymorphism, inheritance.
- **U 281 Computer Architecture and Assembly Language Programming 3 cr.** Offered autumn. Prereq., CS 132 or consent of instr. Functional view of computer system components, BCPU, ALU, memory, bus, cache, I/O module. Instruction set design: formats, addressing modes. Basic circuit design. Pipelining and assembly language. Interrupt handling. Implementation of ALU and control unit. Detailed design of an RISC-like instruction set. Datapath and performance comparisons. Basic multiprocessor design.
- **U 295 Special Topics Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 296 Independent Study Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **U 298 Internship Variable cr.** (R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 332 Algorithms 3 cr.** Offered autumn. Prereq., CS 241 and M 225 (MATH 225) or consent of instr. Algorithm design, analysis, and correctness. Commonly used algorithms including searching and sorting, string search, dynamic programming, branch and bound, graph algorithms, and parallel algorithms. Introduction to NP-complete problems.
- **U 344 Operating Systems 3 cr.** Offered autumn. Prereq., CS 241, 242, CS 281, or consent of instr. Operating system design principles. Processes, threads, synchronization, deadlock, memory management, file management and file systems, protection, and security. Comparison of commonly used existing operating systems. Writing programs that make use of operating system services.
- **U 346 Software Engineering 3 cr.** Offered spring. Prereq., CS 132. Study, implementation, and assessment of software processes, techniques, methods, and CASE tools. Project management and cost estimation techniques will be examined. A group project may be required.
- **U 365 Database Design and Database Management Systems 3 cr.** Offered spring. Prereq., CS 241 or consent of instr. Fundamentals of data modeling, the relational mode, normal forms, file organization, index structures and SQL. Major project involving the design and implementation of a relational database.
- **U 394 Seminar Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Guidance in special work.
- **U 395 Special Topics Variable cr.** (R-6) Offered intermittently. Prereq., junior standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 396 Independent Study Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **U 397 Research Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **U 398 Internship Variable cr.** (R-3) Offered intermittently. Prereq., consent of department. Business or government internship. Prior approval must be obtained from faculty supervisor and the Internship Services office. Only three credits applicable to computer science major or minor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 415 Computers, Ethics, and Society 3 cr.** Offered autumn. Prereq., computer science or computer science/math major with senior standing, FOR 220, successful completion of the Upper-Division Writing Proficiency Assessment, or consent of instr. Ethical problems that face computer scientists. The codes of ethics of computing professional societies. The social implications of computers, computing, and other digital technologies.
- **U 435 Web Programming 3 cr.** Offered spring. Prereq., CS 241 or consent of instr. Programming and software development techniques for developing web-based applications. Scripting and other programming languages that are used for web-based development.
- **UG 441 Advanced Programming: Theory and Practice I 3 cr.** Offered autumn. Prereq., CS 242, 344, 346, 365 and M 225 (MATH 225), or consent of instr. Examination and implementation of modern best practices in the areas of software design, coding, testing and maintenance. Focus on design patterns and design pattern languages used to build modern software systems in a variety of areas.
- **UG 442 Advanced Programming: Theory and Practice II 3 cr.** Offered spring. Prereq., CS 441. Design and implementation of a major software project in a group setting, with required documentation, presentation, installation, and approval by the instructor.
- **UG 446 Computer Graphics 3 cr.** Offered intermittently. Prereq., CS 241 and M 221 (MATH 221) or consent of instr. Hardware and software elements of graphics systems. Basic computer graphics algorithms for transformations, clipping, windowing and polygon filing. Straight line, circle generation. Parametrical representations of curves and surfaces. Three-D viewing. Hidden line and surface removal, shading and color models.

- **UG 455 Artificial Intelligence 3 cr.** Offered intermittently. Prereq., CS 242 or consent of instr. Using the computer to solve problems that require intelligence. Representation of knowledge, search techniques, symbolic programming in LISP, expert systems.
- **U 457 Introduction to Machine Learning 3 cr.** Offered intermittently. Prereq., M 171 (MATH 152) and programming experience or consent of instr. Introduction to the framework of learning from examples, various learning algorithms such as neural networks, and generic learning principles such as inductive bias, Occam=s Razor, and data mining. Credit not allowed for both CS 457 and CS 557.
- **UG 458 Introduction to Bioinformatics 3 cr.** Offered autumn. Offered Autumn. Designed for attendance by both computer scientists and biologists. The course will explore the importance of interdisciplinary partnerships between these two fields. Students will learn to use various existing computational tools for investigating genomic and other biological data. This will include tools for performing sequence alignments and searches, building phylogenetic trees, predicting RNA secondary structure, and predicting protein tertiary structure. The underlying algorithmic approaches taken by these tools will be discussed, and in some cases, actually implemented by the class participants. The course will examine the data repositories where genomic and other biological data are stored. There will be some light programming required using PERL as the language of choice. It is assumed that the class participants have no experience programming in PERL and will learn this skill as part of the course. Credit not allowed for CS 558 and this course.
- **UG 475 Statistical, Dynamical, and Computational Modeling 3 cr.** Offered autumn odd-numbered years. Same as M 445 (MATH 475). Prereq., consent of instr. An interdisciplinary course on the integration of statistical and dynamical models with applications to biological problems. Linear and nonlinear models, estimation, systems of ordinary differential equations, numerical integration, bootstrapping, MCMC methods. Intended both for students in mathematics and natural sciences.
- **UG 476 User Interface Design 3 cr.** Offered spring. Prereq., CS 241 or consent of instr. Introduction to usability and key concepts of human behavior. Focus on the process of user-centered design, including requirements specification, prototyping, and methods of evaluation. Incorporation of regular design critiques of classmates= work, and emphasis on both oral and written communication skills. Credit not allowed for CS 576 and this course.
- **UG 477 Computer Simulation and Modeling 3 cr.** Offered spring. Prereq., M 172 (MATH 153), CS 132, or consent of instr. Matrix languages. ODE solving; Euler-Richardson, Runge-Kutta, PDE solving; finite differences, finite elements, multi-grid techniques. Discrete methods for solution, renormalization group method, critical phenomena. Emphasis on presentation of results and interactive programs. Credit not allowed for CS 577 and this course.
- **UG 486 Data Visualization 3 cr.** Offered intermittently. Prereq., M 171 (MATH 152); programming experience; and junior, senior, or graduate status; or consent of instr. Visualization fundamentals and applications using special visualization software; formulation of 3-D empirical models; translation of 3-D models into graphical displays; time sequences and pseudo-animation; interactive versus presentation techniques; special techniques for video, CD and other media.
- **UG 488 Computer Networks 3 cr.** Offered spring. Prereq., CS 241. Concepts and practice of computer networking, network protocol layers, switching, routing, flow, and congestion control. Network programming.
- **UG 494 Undergraduate Seminar Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Guidance in special work.
- **UG 495 Special Topics Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **UG496 Independent Study Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **UG 497 Research Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **U 498 Internship Variable cr.** (R-3) Offered Intermittently. Prereq., consent of department. Business or government internship. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Only three credits of CS 398 and/or CS 498 applicable to computer science major or minor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 499 Senior Thesis/Project 1-6 cr.** (R-6) Offered every term. Prereq., consent of thesis/project director and chair of the Computer Science Department. Senior thesis for computer science majors and/or Watkins scholars.
- **G 511 Analysis, Modeling, and Design 3 cr.** Offered infrequently. Prereq., CS 132 or 211 or significant programming experience; M 115 or 151 (MATH 117 or 121); CS 346 or software engineering experience; CS365 or database experience. Software requirements analysis, modeling, and specification. Human computer interface issues as they relate to usability, process support, productivity, and organizational goals.
- **G 512 Software Quality Assurance 3 cr.** Offered intermittently. Prereq., CS 132 or 221 or significant programming experience; M 115 or 151 (MATH 117 or 121); CS 346 or software engineering experience. Software quality assurance concepts and implementation Planning, execution, and assessment of quality assurance activities throughout the software project life cycle.
- **G 521 Information Technology Infrastructure 3 cr.** Offered infrequently. Prereq., CS 488 or IS 372 or consent of instr. Identification and classification of background environment, hardware, software, and service components in an enterprise IT environment; management and security concerns for each component; consideration of how the components fit together to form an enterprise information technology environment.
- **G 522 Globalization and Outsourcing 3 cr.** Offered infrequently. Prereq., CS 346 or IS 373 or consent of instr. Development of information technology on a global basis and the associated dynamics of outsourcing relating to intellectual property and national economics in a global context. Project sessions coordinated across two campuses, one at UM and one in an outsourcing environment such as a tribal college, an Indian technical college or Chinese technical college with the purpose of engaging both groups in understanding and resolving cross-cultural and technical problems.
- **G 531 Design and Analysis of Algorithms 3 cr.** Offered intermittently. Prereq., CS 332. Algorithm design, analysis, and correctness, with an emphasis on more advanced techniques than covered in CS 332. Design of algorithms by induction. Recurrences and their solutions. Parallel algorithms. Complexity theory: NP-hard and NP-complete problems. Approximation algorithms for intractable problems.
- **G 541 Software Science I: Requirements and Specifications 3 cr.** Offered intermittently. Prereq., M 225 (MATH 225); CS 241 and 242 or consent of instr. Requirements analysis, techniques for representing requirements, specification development techniques, and specification languages.
- **G 542 Software Science II: Design, Implementation and Testing 3 cr.** Offered intermittently. Prereq., CS 541. Continuation of CS 541. The design process. Major design methods such as composite/structured design, data structure driven design, structured analysis,

transfer of design to code, testing techniques, validation, verification, certification, and security.

- **G 555 Applications in Artificial Intelligence 3 cr.** (R-6) Offered intermittently. Course can be repeated for credit at the discretion of the instructor. Prereq., consent of instr. One AI application area will be investigated, such as natural language processing, expert systems, and knowledge acquisition. LISP experience is required.
- **G 557 Machine Learning 3 cr.** Offered intermittently. Prereq., M 171 (MATH 152) and programming experience or consent of instr. Fundamentals of machine learning including neural networks, decision trees, Bayesian learning, instance-based learning, and genetic algorithms; inductive bias, Occam=s razor, and learning theory; data mining; software agents. Credit not allowed for CS 457 and CS 557.
- **G 558 Introduction to Bioinformatics 3 cr.** Offered autumn. Prereq., consent of instr. Introduction and use of biological data sources available in the post *human genome project* era. Topics include basic algorithms for alignment of genome sequences and prediction of protein structures, as well as more advanced representational and algorithmic issues in protein structure, genome sequence computation, and systems biology. Discussion of state of the art bioinformatics projects that are being developed between the Department of Computer Science and the School of Pharmacy.
- **G 565 Database Systems 3 cr.** Offered intermittently. Prereq., CS 242, 344, and 365, or consent of instr. Relational database theory, data models, user interfaces and query languages, security, and concurrency.
- **G 576 Human-Computer Interactions 3 cr.** Offered spring. Prereq., CS 241 or consent of instr. Principles of good design for interactive systems and web-based applications. User-centered design methodology including requirements specification, low and high-fidelity prototyping, heuristic evaluation, cognitive walkthrough, predictive modeling, and usability testing. Advanced HCI research project. Credit not allowed for both CS 476 and 576.
- **G 577 Computer Simulation and Modeling 3 cr.** Offered spring. Prereq., M 172 (MATH 153), CS 132, or consent of instr. Matrix languages. ODE solving; Euler-Richardson, Runge-Kutta, PDE solving; finite differences, finite elements, multi-grid techniques. Discrete methods for solution, renormalization group method, critical phenomena. Emphasis on presentation of results and interactive programs. Engagement with current scientific literature. Planning and execution of small scale modeling project derived from scientific literature. Model testing and validation.
- **G 580 Parallel Processing 3 cr.** Offered intermittently. Prereq., CS 241, 242, and 344. Parallel processing architectures and programming languages.
- **G 594 Graduate Seminar Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Seminar on current research topics in computer science.
- **G 595 Special Topics Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offering of current topics.
- **G 596 Independent Study Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **G 597 Research Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **G 598 Internship Variable cr.** (R-3) Offered intermittently. Prereq., consent of department. Business or government internship. Prior approval must be obtained from faculty supervisor and the Internship Services office. Only three credits applicable to computer science major or minor.
- **G 599 Thesis/Project Variable cr.** (R-6) Offered every term. Prereq., consent of instr. Research for and preparation of the master thesis or professional paper.

Faculty

Professors

- Joel E. Henry, Ph.D., Virginia Polytechnic Institute and State University, 1993 (Chairman)

Associate Professors

- Jesse V. Johnson, Ph.D., University of Maine, Orono, 2002
- Yolanda J. Reimer, Ph.D., University of Oregon, 2002

Assistant Professors

- Min Chen, Ph.D., Florida International University, Miami, 2007
- Doug Raiford, PH.D., Wright State University, Dayton, Ohio, 2008
- Mike Rosulek, Ph.D., University of Illinois, Urbana-Champaign, 2009

Research Professor

- Alden H. Wright, Ph.D., University Wisconsin, 1969

Professors on Assignment

- Ray Ford, Ph.D., University of Pittsburgh, 1980

Lecturer

- Mike O'Conner, M.S., The University of Montana, 1996

College of Arts and Sciences

Christopher M. Comer, Dean

The largest and most broadly based academic unit of the University, the College of Arts and Sciences fulfills the central purpose for which the University was chartered in 1893:

> *"To provide the best and most efficient manner of imparting...a liberal education and thorough knowledge of the different branches of literature, science and the arts."*

A liberal education gives students the means to test ideas, beliefs and facts. It empowers them to a variety of academic disciplines that will broaden and deepen their perspectives and enable them as educated citizens to continue the learning process. It teaches them how to apply what they have learned. By studying the ways of thinking and expression that are intrinsic to the arts, humanities, and social and natural sciences, students are prepared in scientific methods, critical thinking, analysis, synthesis, and cogent expression, and are helped to develop intellectual skills, humanistic understanding and aesthetic appreciation. Such an education increases the usefulness of career planning and specialization by laying a foundation for lifelong values.

A particular strength of the College is the breadth of its disciplines and programs. This breadth makes possible a varied and flexible curriculum that advances both general programs and specialized education on the undergraduate and graduate levels. Another strength is the quality of the faculty. Its members have a distinguished record of teaching, publication, service to professional societies and national organizations, and participation in consulting, extension and outreach programs. Their commitment to undergraduate liberal education is demonstrated by the quality of the graduates the College has produced. The pre professional education received here has enabled The University of Montana graduates to compete successfully for admission to graduate schools across the nation. A third strength of the College is its commitment to students as they pursue their academic studies at the University. This is reflected in close student/faculty relationships and in the continuous attention given by the College to the effect that policies, procedures, programs, and faculty and administrative structures have on students' educational experience.

Biology

- Special Degree Requirements
- Suggested Course of Study
- Courses

The Division offers an undergraduate degree in biology that provides a solid foundation in core areas of the biological sciences and in supporting physical sciences and mathematics. Several options are provided within the biology degree. Options in cellular and molecular biology, ecology, field ecology, and organismal biology, and human biological sciences allow specialization in biological subdisciplines and are appropriate background for certain employment opportunities and for continued graduate or professional study:

Cellular and molecular biology: For students interested in the cellular and molecular aspects of biology. This option is also appropriate for students interested in medical school.

Ecology and organismal biology: For students interested in the biology of organisms (plants and animals), and populations. This option is also appropriate for students interested in veterinary school.

Human biological sciences: Provides a strong background in the biological sciences for students interested in pursuing further study in a health sciences professional program.

Natural history: Designed especially for students wishing to combine basic natural history and biological sciences with another field such as art, journalism, or creative writing. Option is not suitable for students planning a traditional career in the biological sciences.

Teacher preparation in biology, Teacher preparation in general science: Two separate options designed for students interested in a career teaching biology or broad-field science at the secondary level.

High School Preparation: In addition to general University admission requirements, chemistry, mathematics through precalculus, and a modern foreign language are recommended.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Upper-Division Writing Expectation: To meet the Upper-Division Writing Expectations for the major, biology students must take two or three partial writing courses (either three 1/3 writing courses or one 2/3 writing course plus one 1/3 writing course). Courses that are approved as 2/3 partial writing include: BIOC 486, BIOL 341, MICB 404, and MICB 411. Courses that are approved as 1/3 partial writing include: BIOC 482, BIOC 499, BIOL 304, BIOL 306, BIOL 316, BIOL 366, BIOL 403, BIOL 406, BIOL 445, BIOL 499, MICB 410, MICB 412, and MICB 499.

Option in Ecology and Organismal Biology

Forty-three credits in biology, biochemstry, and microbiology including BIOL 108N-109N, 110N, 221, 223, 340-341; one organismal course chosen from BIOL 301, 403, 435, 444-445; one course with a focus on a group of organisms chosen from BIOL 304, 306, 308, 316, 350, 400-401, 410, 418, MICB 300-301; one ecology course chosen from BIOL 366, 430, 442, 446, 447,448, MICB 422, WBIO 470; one evolutionary biology course chosen from 405, 406, 480, 482, 484. Other recommended courses include BIOC 380 or 481-482, MICB 423.

Also required: M 162 (MATH 150) or M 171 (MATH 152); one semester of statistics STAT 216 (MATH 241) or a full year of statistics STAT 451-457;452-458 (MATH 444-447, 445-448); one year of chemistry CHMY 121N, 123N-124N (CHEM 151N, 152N-154N) or two years of chemistry CHMY 141N, 143N, 221-222, 223-224) (CHEM 161N, 162N, 221-223, 222-224); PHYS 111N/113N, 112N/114N.

Option in Field Ecology

Forty-three credits in biology and microbiology including BIOL 108N-109N, 110, 221, 223, 342 or 340/341. Major courses chosen from the Aquatic Emphasis, BIOL 451, 453, 454, 452, 492; or the Terrestrial Emphasis, BIOL 451, 458, 459, 452, 492. Choose an additional 8 credits of upper division BIOL or MICB, with at least one being from each category from BIOL 304, 306, 308, 316, 350, 400/401, 410, 418, MICB 300/301; or Evolutionary Biology, BIOL 405, 406, 480, 482 or 484. One of these classes must be an Upper Division Writing course. Other required courses are M 162, STAT 216 (MATH 150, MATH 241) or STAT 451/457 and STAT 452/458 (MATH 444/447 and MATH 445/448); CHMY 121N & 123N/124N (CHEM 151N and 152N/154N) or CHMY 141N, 143N 221-222 and 223-224 (CHEM 161N, 162N, 221/222 and 223/224); and PHYS 111N/113N, 112N/114N.

Students in Track A will also spend two summers at the Flathead Lake Biological Station

Option in Cellular and Molecular Biology

Forty-four to forty-nine credits in biochemistry, biology and microbiology including BIOC 481-482; BIOL 108N-109N, 110N, 221, 223, 301, 340, and 464; MICB 300-301; one course chosen from MICB 410 or 420; one course chosen from BIOL 435, 440, 444-445, MICB 404, or 450; and two lab courses chosen from BIOC 486, MICB 405, 411, 451, or 497.

M 162 (MATH 150); CHMY 141N-143N, 221-222-223-224 (CHEM 161N-162N, 221-222-223-224); one course chosen from CHMY 311, 360, 373 (CHEM 341, 370, 371); PHYS 111N/113N, 112N/114N or PHYS 211N/213N, 212N/214N are also required.

Option in Human Biological Sciences

Forty-two to forty-three credits in biology, biochemistry, and microbiology including BIOL 108N-109N, 110N, 221, 223, 301, 312, 313, 340-341, 460 or 464. MICB 300-301 (or MICB 302) and the remaining credits at the 300 or 400 level, including one writing course.

One year of chemistry CHMY 121N, 123N-124N (CHEM 151N, 152N-154N) or two years of chemistry CHMY 141N, 143N, 221-222-223-224 (CHEM 161N, 162N, 221-223-222-224); M 162 (MATH 150), STAT 216 (MATH 241); PHYS 111N/113N, 112N/114N or PHYS 211N/213N, 212N/214N; PSYX 110S, 230S or 340S (PSYC 100S, 240S or 330S) also are required.

Recommended Courses: Some graduate schools in the health professions also may require course work in these areas: BIOL 400, General Parasitology; BIOC 380 or 481, 482, Biochemistry; COMM 111A, Introduction to Public Speaking; HHP 236N, Nutrition; HHP 377-378, Physiology of Exercise and Laboratory; SOCI 101S (SOC 110S) Principles of Sociology.

Option in Natural History

Forty-two to forty-four credits in biology including BIOL 108N-109N, 110N, 221, 223, 316, 340-341, 350, 410; one course chosen from 304, 306, or 356; one course chosen from 405 or 406.

CHMY 121N, 123N-124N (CHEM 151N-152N, 154N) and GEO 101N-102N (GEOS 100N-101N) are required. Students also must complete at least 20 credits in cognate areas of anthropology, chemistry (excluding CHMY 121N, 123N-124N (CHEM 151N-152N, 154N)), geography, geology (excluding GEO 101N-102N (GEOS 100N-101N)), forestry, mathematics, physics/astronomy, and wildlife biology. No more than 10 credits from any one of these areas can be applied toward the 20-credit requirement. Students interested in combining this option with another subject area may, with the advisor's permission, substitute 20 credits in English-writing, journalism, photography, art, foreign language, business management, or other appropriate field.

Teacher Preparation in Biology

Option in Biological Education Major Teaching Field of Biology: This option is designed for students seeking an endorsement in the major teaching field of biology.

A student must complete thirty-four credits in biology and microbiology including BIOL108N-109N, 110N, 221, 223, 340-341, 444 & 445; MICB 300-301 and one course chosen from BIOL 301 or 435.

M 162 or M 171 (MATH 150 or 152) and STAT 216 (MATH 241) are required; CHMY 121N-123N, 124N, 485 (CHEM 151N-152N, 154N, 485); PHYS 111N/113N; C&I 426; and one course chosen from GEO109N or GEO 301 also are required.

For endorsement to teach biology, a student also must gain admission to Teacher Education and Student Teaching and meet all the requirements for certification as a secondary teacher (see the School of Education section of this catalog).

Biology qualifies for a single-field endorsement. However, there is a limited demand in most Montana high schools for teachers with a single endorsement in biology, and students are advised to complete the requirements for a second teaching endorsement (major or minor).

Minor Teaching Field of Biology: For an endorsement in the minor teaching field of biology, a student must complete BIOL 108N-109N, 110N, 221, 223; MICB 300-301; C&I 426; GEO 109N or GEO 301; M 162 or 171 (MATH 150 or 152),STAT 216 (MATH 241); and CHMY 121N-123N, 485 (CHEM 151N-152N, 485). A student also must gain admission to Teacher Education and Student Teaching and must meet the requirements for certification as a secondary teacher (see the School of Education section of this catalog).

Teacher Preparation in General Science

Extended Major Teaching Field of General Science: A student is awarded a B.A. with a major in biology with an ecology option by completing the following 60 credits in astronomy, biology, chemistry, geology, mathematics and physics: ASTR 131N, 134N; BIOL 108N-109N, 110N, 221, 223, 340-341; CHMY 123N , 141N-143N, 485 (CHEM 152N, 161N-162N, 485); GEO 101N-102N, 301 (GEOS 100N-101N, 301); M 162 or 171 (MATH 150 or 152), STAT 216 (MATH 241 and PHYS 111N/113N, 112N/114N. C&I 426 also is required

Highly recommended are BIOL 435, MICB 300-301, and CHMY 101N (CHEM 101N).

For an endorsement in the extended major teaching field of General Science, a student must gain admission to Teacher Education and Student Teaching, complete C&I 426 and meet the requirement for certification as a secondary teacher (see the School of Education section of this catalog.)

Suggested Course of Study

Biological Education Option

First Year		
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3	-
CHMY 123N (CHEM 152N) Organic and Biochemistry	-	3
CHMY 124N (CHEM 154N) Intro to Organic and Biochemistry Laboratory	-	2
WRIT 101 (ENEX 101) College Writing I	3	-
M 162 (MATH 150) Applied Calculus	4	-
PSYX 100S (PSYC 100S) Introduction to Psychology	-	4
General Education	-	3
	15	16
Second Year		
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
CHMY 485 (CHEM 485) Laboratory Safety	1	-
STAT 216 (MATH 241) Introduction to Statistics	4	-
MICB 300-301 General Microbiology & Laboratory	-	5
Lower-division writing course	-	3
General Education/Native American Studies Course	6	3
	15	15
Third Year		
BIOL 340-341 Ecology and Laboratory	-	5
PHYS 111N/113N General Physics I	5	-
BIOL 444/445 Plant Physiology and Lab	-	4
C&I 200 Exploring Teaching	1	-
C&I 303 Educational Psychology and Measurement	3	-
C&I 306 Instructional Media and Computer Applications	3	-
C&I 410 Exceptionality and Classroom Management	3	-
HHP 233 Health Issues of Children and Adolescents	-	3
Elective	-	2
	15	14
Fourth Year		
C&I 301 or 302 Field Experience	1	-
C&I 407E Ethics and Policy Issues	3	-
C&I 426 Teaching Science in the Middle and Secondary School	3	-

C&I 427 Literary Strategies in Content Areas	3	-
C&I 482 Student Teaching: Secondary	-	14
C&I 494 Professional Portfolio	-	1
BIOL 435 Comparative Animal Physiology	3	-
GEO 109N Environmental Geoscience (or GEO 301 Environmental Geology)	2	-
	15	15

Cellular and Molecular Biology Option

First Year		
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 141N-143N (CHEM 161N-162N) Introduction to General Chemistry	5	5
WRIT 101 (ENEX 101) College Writing I	-	3
M 162 (MATH 150) Applied Calculus	4	-
General Education	-	3
Elective	1	-
	15	15
Second Year		
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics & Evolution	-	4
CHMY 221-222, 223-224 (CHEM 221-222, 223-224) Organic Chemistry and Laboratory	5	5
MICB 300-301 General Microbiology and Laboratory	-	5
Lower-division writing course	3	-
General Education	3	-
Elective	-	1
	15	15
Third Year		
BIOC 481-482 Biochemistry	3	3
MICB 404 Microbial Genetics (or BIOL 345, 440, 444, 495; MICB 450)	-	3
MICB 405 Molecular Genetics Laboratory (or 405, 411, 451, 497, or BIOC 486)	-	1
PHYS 111N/113N, 112N/114N General Physics	5	5
General Education	3	3
Electives	4	-
	15	15
Fourth Year		
BIOL 340 Ecology	-	3
BIOL 301 Developmental Biology	-	3
BIOL 464 Adv. Cell Biology	-	3
CHMY 311 (CHEM 341) Analytic Chemistry-Quantitative Analysis	4	-
MICB 410-411 Immunology and Laboratory	5	-
Upper-division elective	3	3
General Education	3	3
	15	15

Ecology and Organismal Biology Option with One Year of Chemistry

First Year		
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3	-
CHMY 123N (CHEM 152N) Introduction to Organic and Biochemistry	-	3
CHMY 124N (CHEM 154N) Introduction to Organic and Biochemistry Laboratory	-	2
WRIT 101 (ENEX 101) College Writing I	3	-
M 162 (MATH 150) Applied Calculus	4	-
General Education Requirement	-	3
Electives	-	3

	15	15
Second Year		
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
PHYS 111N/113N-112N/114N General Physics I, II	5	5
Lower-division writing course	3	-
Elective	3	
General Education	3	6
	15	15
Third Year		
STAT 451/457 (MATH 444/447) Statistical Methods I and Comp. Lab	4	-
STAT 452/458 (MATH 445/448) Statistical Methods II and Comp. Lab	-	4
BIOL 340-341 Ecology and Laboratory	5	-
BIOL 306 Mammalogy (or BIOL 304, 308, 316, 350, 400/401, 410 and MICB 300/301)	4	-
BIOL 406 Behavior and Evolution (or BIOL 405, 480, 482, 484)	-	4
BIOL 446 Wildlife Physiological Ecology (or BIOL 366, 430, 442, 447, 448, MICB 422, or WBIO 470	-	3
General Education Requirement	-	3
Electives	3	-
	16	14
Fourth Year		
BIOL 316 Plant Form and Function (or UD BIOL elective)	-	5
BIOL 403 Vertebrate Design and Evolution (or BIOL 301, 435, 444/445)	5	-
Upper-division elective	5	-
General Education Requirement	3	3
Electives	1	8
	14	16

Ecology and Organismal Biology Option with Two Years of Chemistry

First Year	**A**	**S**
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 141N (CHEM 161N) College Chemistry	5	-
CHMY 143N (CHEM 162N) College Chemistry Laboratory	-	5
WRIT 101 (ENEX 101) College Writing I	-	3
M 162 (MATH 150) Applied Calculus	4	-
STAT 216 (MATH 241) Statistics	-	4
	14	16
Second Year	**A**	**S**
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics & Evolution	-	4
CHMY 221-222-223-224 (CHEM 221-222-223-224) Organic Chemistry and Laboratory	5	5
Writing course	3	-
General Education	3	6
	15	15
Third Year	**A**	**S**
BIOC 481-482 Biochemistry I and II	3	-
BIOL 301 Developmental Biology(or BIOL 345, 403, 444/445)	-	3
BIOL 340-341 Ecology and Laboratory	5	-
PHYS 111N/113N, 112N/114N General Physics I, II	5	5
General Education	-	3
Elective	2	-
Upper-division electives	-	4
	15	15
Fourth Year	**A**	**S**
BIOL 405 Animal Behavior (or BIOL 406, 480,482, 484)	-	5

BIOL 448 Terrestrial Plant Ecology (or BIOL 366, 430, 446, 447, 495, MICB 422, WBIO 470)	4	-
MICB 300/301 General Microbiology & Lab (or BIOL 304, 306, 308, 316, 350, 400/401, 410, 418)	-	5
General Education Requirement	6	-
Upper-division elective	4	5
Elective	1	1
	15	15

Ecology Option for Teacher Preparation in General Science

First Year		
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 141N-143N (CHEM 161N-162N) College Chemistry	5	5
WRIT 101 (ENEX 101) College Writing I	-	3
M 162 (MATH 150) Applied Calculus	4	-
PSYX 100S (PSYC 100S) Introduction to Psychology	-	4
	14	16
Second Year		
ASTR 131N, 134N Elementary Astronomy and Laboratory	4	-
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
CHMY 123N (CHEM 152N) Introduction to Organic and Biochemistry	-	3
GEO 101N-102N (GEOL 100N-101N) Introduction to Physical Geology	-	3
STAT 216 (MATH 241) Statistics	4	-
General Education/Native American Studies course	-	3
Lower-division writing course	3	-
Elective	-	1
	15	14
Third Year		
CHMY 485 (CHEM 485) Laboratory Safety	1	-
C&I 200 Exploring Teaching	-	1
C&I 303 Educational Psychology and Measurement	-	3
C&I 306 Instructional Media and Computer Applications	-	3
C&I 410 Exceptionality and Classroom Management	-	3
GEO 301 (GEOS 301) Environmental Geology	3	-
PHYS 111N/113N-112N/114N General Physics I, II	5	5
General Education	6	-
	15	15
Fourth Year		
BIOL 340-341 Ecology and Laboratory	5	-
C&I 301 or 302 Field Experience	1	-
C&I 407E Ethics and Policy Issues	3	-
C&I 426 Teaching Science in the Middle and Secondary School	3	-
C&I 427 Literary Strategies in Content Areas	3	-
HHP 233 Health Issues of Children and Adolescents	-	3
Upper-division biology writing course	-	4
General Education	-	3
Electives	-	5
	15	15
Fifth Year	**A**	
C&I 482 Student Teaching: Secondary	14	
C&I 494 Professional Portfolio	1	

Field Ecology Option (Track A, two summers)

First Year	**A**	**S**
BIOL 108N Diversity of Life	3	-

BIOL 109N Diversity of Life Lab	2	-
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3	-
M 162 (MATH 150) Applied Calculus	3	-
WRIT 101 (ENEX 101) College Writing I	3	-
Elective	1	1
BIOL 110N Principles of Biology	-	4
CHMY 123N (CHEM 152N) Introduction to Organic and Biochemistry	-	3
CHMY 124N (CHEM 154N) Introduction to Organic and Biochemistry Lab	-	2
General Education Requirement	-	3
Lower Division Writing Requirement	-	3
	16	16

Second Year

BIOL 221 Cell and Molecular Biology	4	-
STAT 451/457 (MATH 444/447) Statistical Methods/Computer Analysis	4	-
General Education Requirement	3	-
Electives	5	-
BIOL 223 Genetics and Evolution	-	4
STAT 452/458 (MATH 445/448) Statistical Methods/Computer Analysis	-	4
General Education Requirement	-	6
Elective	-	2
	16	16

Third Year

Summer (at Biological Station)

BIOL 342 Field Ecology and Lab	5	
Upper Division Electives	5	10
BIOL 484 Planet Evolution	3	
PHYS 111N (PHYS 121N) Fundamentals of Physics I	5	-
General Education Requirement	6	-
Electives	2	-
BIOL 316 Plant Form & Function	-	5
PHYS 112N (PHYS 122N) Fundamentals of Physics II	-	5
Electives	-	7
	16	17

Summer (at Biological Station)

BIOL 451 Landscape Ecology of Mntn Ecosystems	3
BIOL 458 Ecology of Forests & Grasslands	3
BIOL 459 Alpine Ecology	3
BIOL 452 Conservation Biology & Ecology	3
BIOL 492 Seminars in Ecology & Resource Management	1
	13

Field Ecology Option (Track B one summer)

First Year	**A**	**S**
BIOL 108N Diversity of Life	3	-
BIOL 109N Diversity of Life Lab	2	-
CHMY 141N (CHEM 161N) College Chemistry I	5	-
M 162 (MATH 150) Applied Calculus	4	-
Elective	1	-
BIOL 110N Principles of Biology	-	4
CHMY 143N (CHEM 162N) College Chemistry II	-	5
WRIT 101 (ENEX 101) College Writing I	-	3
General Education Requirement	-	3
	15	15

Second Year

BIOL 221 Cell and Molecular Biology	4	-

CHMY 221/222 (CHEM 221/222) Organic Chemistry I & Lab	5	-
STAT 216 (MATH 241) Introduction to Statistics	4	-
Lower Division Writing Requirement	3	-
BIOL 223 Genetics and Evolution	-	4
CHMY 222/224 (CHEM 222/224) Organic Chemistry II & Lab	-	5
General Education	-	6
	16	15
Third Year		
BIOL 340/341 Ecology and Lab	5	-
PHYS 111N/113N Fundamentals of Physics I	5	
Electives	2	-
PHYS 112N/114N (PHYS 122N) Fundamentals of Physics II	-	5
General Education Requirements	-	6
Electives	-	1
	12	12
Summer Semester at Flathead Lake Biological Station		
BIOL 451 Landscape Ecology	3	
BIOL 453 Lake Ecology	3	
BIOL 454 Stream Ecology	3	
BIOL 452 Conservation Ecology	3	
BIOL 492 Seminar in Ecology & Res. Management	1	
	13	
Fourth Year		
BIOL 308 Biology and Management of Fishes	4	-
Upper Division electives	8	-
BIOL 406 Behavior and Evolution	-	4
Upper-division elective	-	5
General Education	-	3
	12	12

Human Biological Sciences Option with Two Years of Chemistry

First Year		
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 141N-143N (CHEM 161N-162N) College Chemistry	5	5
WRIT 101 (ENEX 101) College Writing I	-	3
M 162 (MATH 150) Applied Calculus	4	-
PSYX 100S (PSYC 100S) Introduction to Psychology	-	4
	14	16
Second Year		
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
CHMY 221-222-223-224 (CHEM 221-222-223-224) Organic Chemistry and Laboratory	5	5
MICB 300-301 General Microbiology and Laboratory	-	5
Lower-division writing course	3	-
STAT 216 (MATH 241) Introduction to Statistics	4	-
	16	14
Third Year		
BIOL 312, 313 Anatomy and Physiology I and II	4	4
BIOL 301 Developmental Biology	-	3
PHYS 111N/113N-112N/114N General Physics I, II	5	5
PSYX 340S (PSYC 330S) Abnormal Psychology or PSYX 230S (PSYC 240S) (if PSYC 230S OR PSYC 240S, must have 3 more upper-division credits)	-	3
Upper-division elective	3	-
General Education	3	-

	15	15
Fourth Year		
BIOL 340-341 Ecology and Laboratory	-	5
BIOL 464 Adv. Cell Biology	-	3
MICB 410 Immunology or other upper-division biology or microbiology elective that meets the biology Writing requirement	3	-
General Education	6	3
Elective	-	4
Upper-division elective	6	-
	15	15

Natural History Option

First Year		
BIOL 108N -109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3	-
CHMY 123N (CHEM 152N) Introduction to Organic and Biochemistry	-	3
CHMY 124N (CHEM 154N) Introduction to Organic and Biochemistry Laboratory	-	2
WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Mathematics	3	-
General Education	-	6
Elective	1	-
	15	15
Second Year		
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics & Evolution	-	4
BIOL 350 Rocky Mountain Flora	-	3
GEO 101N-102N (GEOL 100N-101N) Introduction to Physical Geology and Laboratory	3	-
Lower-division writing course	3	-
General Education	-	3
Modern/Classic Language	5	5
	15	15
Third Year		
BIOL 340 Ecology	3	-
BIOL 341 Ecology Laboratory	2	-
BIOL 316 Plant Form and Function	-	5
Cognate course	3	4
Upper-division cognate course	-	7
General Education	6	-
	14	16
Fourth Year		
BIOL 306 Mammalogy or 304, 356	4	-
BIOL 406 Behavior and Evolution or 405	-	4
BIOL 410 Insect Biology	-	4
Cognate course	3	-
Upper-division electives	3	4
General Education	3	-
Electives	2	3
	15	15

Requirements for a Minor

To earn a minor in biology, the student must complete a minimum of 25 credits in biology including BIOL 108N-109N, 110N, 221 and 223 and 8 credits in Biology at the 300-400 level. All courses must be taken for a traditional letter grade.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course

may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Biology (BIOL)

U 100N The Science of Life 3 cr. Offered every term. Contemporary exploration of the organization and complexity of living organisms and the systems in which they live. The central question of biology--relationship between form and function, acquisition and use of energy, and continuity between generations will be addressed through lectures and laboratory investigations. Credit not allowed toward a major in biology. Credit not allowed for both BIOL 100N and 110N.

U 106N Elementary Medical Microbiology 3 cr. Offered spring. Infectious diseases, including concepts of virulence, resistance, prevention and control of microbial diseases in the individual and in the community. If laboratory experience is desired, the student may enroll concurrently in BIOL 107. Credit not allowed toward a major in microbiology.

U 107 Elementary Microbiology Laboratory 1 cr. Offered spring. Prereq. or coreq., BIOL 106N. Same as MICB 107. Observation of live microorganisms, their characteristics and activities. Experience with microbiological techniques. Credit not allowed toward a major in microbiology.

U 108N Diversity of Life 3 cr. Offered autumn and summer. Survey of the diversity, evolution and ecology of life including prokaryotes, viruses, protista, fungi, plants and animals.

U 109N Diversity of Life Laboratory 2 cr. Offered autumn and summer. Coreq., BIOL 108N. The diversity of life including prokaryotes, viruses, protista, fungi, plants and animals including structure and evolutionary relationships.

U 110N Principles of Biology 4 cr. Offered spring and summer. Unifying principles of biological structure-function relationships at different levels of organization and complexity. Consideration of reproduction, genetics, development, evolution, ecosystems, as well as the inter-relationships of the human species to the rest of life. Lab experiences illustrate biological principles underlying growth, reproduction, development, genetics and physiology. Credit not allowed for both BIOL 100N and 110N.

U 112 Introduction to Human Form and Function I 3cr. Offered autumn. Explores the fundamentals of structure and function at basic cellular and tissue levels, in addition to the anatomy and physiology of the integumentary, musculoskeletal, and nervous systems.

U 113 Introduction to Human Form and Function II 3 cr. Offered spring. Explores the fundamental structures and functions of the endocrine, cardiovascular, respiratory, digestive, urinary and reproductive systems.

U 120N General Botany 3 cr. Offered spring. Prereq., consent of instr. Introduction to the plant kingdom including anatomy, physiology and ecology.

U 121N Introductory Ecology 3 cr. Offered autumn. An introduction to ecological principles, stressing the structure and function of natural communities and examining human's role in these ecosystems.

U 130N Evolution and Society 3 cr. Offered spring. A focus on relationships between evolutionary biology and important social issues, including the evolution of drug-resistant diseases, the construction and use of genetically-modified organism, human evolutionary biology, and experimental laboratory evolution.

U 135N Biology of Yellowstone Hot Springs. 3 cr. Offered autumn. A field and laboratory based exploration of the microbial diversity of the thermal features of our first national park. Topics to be discussed include how these communities are shaped by the physical and chemical conditions of the environment and how microorganisms can thrive at life's extremes. Includes a field trip to Yellowstone National Park.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship Variable cr. Offered intermittently. Prereq., consent of Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 201N Montana Wildlife 3 cr. Offered autumn. Prereq., one course in biology. Interpreting biological patterns associated with selected Montana wildlife species, including mammals, birds, reptiles and amphibians.

U 221 Cell and Molecular Biology 4 cr. Offered autumn. Prereq., BIOL 110N or equiv. and one year of college chemistry. Description and analysis of biological structures and processes at the cellular and subcellular levels including molecular genetics, energy, metabolism and cell differentiation.

U 223 Genetics and Evolution 4 cr. Offered spring. Prereq., BIOL 221. Principles and mechanisms of inheritance and evolution. Population genetics, fossil record, macroevolution, speciation, extinction, systematics, molecular evolution.

U 240 Introduction to Biostatistics (Honors) 3 cr. Offered autumn even-numbered years. Prereq., calculus and consent of instr. Same as WBIO 240. Introduction to statistical ecology: distributions, hypothesis testing, and fitting models to data with emphasis on problems in

ecological sampling.

U 265 Human Sexuality 3 cr. Offered autumn. Same as ANTH 201. Biological, behavioral, cross-cultural aspects of human sexuality to help students place their own sexuality and that of others in a broader perspective. Includes sexual anatomy, physiology, development, reproduction, diseases, determination, as well as gender development and current issues.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 298 Internship Variable cr. Offered intermittently. Prereq., consent of Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 301 Developmental Biology 3 cr. Offered spring. Prereq., BIOL 221; BIOL 223 recommended. An analysis of the origin and development of form and patterns in organisms, stressing the processes of growth and differentiation in plants and animals. Graded traditional letter grade only.

UG 304 Ornithology 4 cr. Offered spring. Prereq., BIOL 108N, 109N and 223. The classification, structure, evolution, behavior and ecology of birds.

UG 306 Mammalogy 4 cr. Offered autumn. Prereq., BIOL 108N, 109N and 223. The evolution, systematics, anatomy, physiology and ecology of mammals.

UG 308 Biology and Management of Fishes 4 cr. Offered autumn. Prereq., BIOL 108N, 109N, 223 and one year of college mathematics. Diversity, adaptations and ecology of fishes. Analysis and management of fish populations and communities.

U 312 Anatomy and Physiology I 4 cr. Offered autumn. Prereq. or coreq., CHMY 121N (CHEM 151N) or CHMY 141N (CHEM 161N); BIOL 110N or BIOL 112 or BIOL 113. Introduction to basic cellular structure and function. The fundamental facts and concepts of the anatomy and physiology of the integumentary, musculoskeletal, nervous and endocrine systems.

U 313 Anatomy and Physiology II 4 cr. Offered spring. Prereq., BIOL 312. The fundamental facts and concepts of the anatomy and physiology of the endocrine, circulatory, respiratory, digestive, urinary and reproductive systems.

UG 315 Peer Advising 1 cr. (R-6) Offered every term. Prereq., consent of instr. Supervised training and internship for peer advisors who will gain knowledge and ability to communicate degree requirements and relate the various degree offerings to professional and career goals. No more than two credits are allowed toward upper-division major requirements.

U 316 Plant Form and Function 5 cr. Offered spring. Prereq., BIOL 108N-109N, 221. Prereq. or coreq., BIOL 223. Anatomy, morphology, ecology and physiology of photosynthetic organisms.

U 339 Listening to Ecology 2 cr. Offered autumn. Preparatory readings and attendance at seminars on a wide variety of ecological and wildlife management topics followed by critiques.

UG 340 Ecology 3 cr. Offered autumn and spring. Prereq., BIOL 223 and one year of college mathematics including STAT 216 (MATH 241) or equiv. Analysis of the distribution and abundance of plants and animals. Includes individual, population and community-level processes (e.g., population growth and regulation, competition, predation, succession, nutrient cycling, energy flow and community organization).

UG 341 Ecology Laboratory 2 cr. Offered autumn and spring. Coreq., BIOL 340. Methods of describing and testing alternative explanations for patterns in nature. The use of scientific methodology in ecology.

U 342 Field Ecology 5 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 223 and one year of college math, including statistics. The principles and practices of the study of animals and plants in their natural environments, including human influences, with focus on the Crown of the Continent area of the Rock Mountains and taught entirely outdoors.

U 343 Ecological Methods and Analysis 5 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or BIOL 340/341. The methods and tools for conducting observational and experimental research in field ecology with emphasis on experimental design, hypothesis testing, data gathering and analysis and presentation of scientific research in ecology.

U 347 Introduction to Neuroscience 3 cr. Offered autumn. Prereq., introductory chemistry and biology. Same as BMED 347. The molecular and cellular physiology of the human nervous system. Topics range from the basis of electrical and chemical signaling in neurons to the organization of the nervous system and its functions in generating behavior.

U 350 Rocky Mountain Flora 3 cr. Offered spring. Prereq., one college-level course in BIOL or consent of instr. Elements of the evolution, geography and natural affinities of flowering plants. Identification using a manual of native plants of Montana.

UG 356 Ecology of Birds 4 cr. Prereq., BIOL 223 or equiv. Offered summers only at Flathead Lake Biological Station. The identification, natural history, and behavior of western Montana birds.

UG 366 Freshwater Ecology 5 cr. Offered autumn. Prereq., BIOL 108N, 109N and one year of college chemistry. Physical and chemical dynamics of lakes and streams. Diversity, distribution and dynamics of freshwater organisms.

U 395 Special Topics Variable cr. (R-10) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 397 Research 1-10 cr. (R-10) Offered every term. Prereq., consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

U 398 Internship 1-6 cr. Offered intermittently. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 400 General Parasitology 2 cr. Offered autumn. Prereq., BIOL 223. Same as MICB 400. Parasitism as a biological phenomenon, origin of parasitism, adaptations and life cycles, parasite morphology, fine structure, physiology, parasites and their environment.

UG 401 General Parasitology Laboratory 2 cr. Offered autumn. Coreq., BIOL 400. Same as MICB 401. Taxonomy, morphology and identification of parasitic protozoa, helminths and arthropods.

UG 403 Vertebrate Design and Evolution 5 cr. Offered autumn. Prereq., BIOL 108N, 109N and 223 and PHYS 111N113N or 211N/213N. Evolutionary patterns of animal morphology and the importance of body size on life history patterns. Phylogenetic study of major extant and extinct vertebrate groups. Laboratory includes systematic study of organ systems and workshops in experimental functional morphology.

UG 405 Animal Behavior 3 cr. Offered spring alternate years. Prereq., BIOL 223, senior standing or consent of instr. The description and evolutionary interpretation of animal behavior under natural conditions. Laboratory involves observation and recording of animal behavior.

UG 406 Behavior and Evolution 4 cr. Offered spring. Prereq., BIOL 223. Diversity of animal behavior in an evolutionary context including inheritance of behavior, diets, avoidance responses, mating systems and sexual selection, parental care, and evolution of animal groups and societies. Discussion sections examine both landmark and recent literature.

UG 407 Global Biogeochemical Cycles 3 cr. Offered spring odd numbered years. Same as FOR 408, GEO/CCS 407. Exploration of how variations in the availability or utilization of critical Earth elements influences the atmosphere, the oceans, and the terrestrial biosphere including the natural and agricultural ecosystems on which we depend.

UG 408 Advanced Fisheries Science 2 cr. Offered spring. Prereq., BIOL 308. Quantitative analysis and interpretation of fish population and community data for use in management. Selection, application and evaluation of management techniques.

UG 410 Insect Biology 4 cr. Offered spring. Prereq., BIOL 108N, 109N and 223. The classification, morphology, anatomy, development, life-history, behavior and ecology of insects. Labs include identification of major insect groups, internal and external anatomy and student collections.

UG 415 Field Methods in Fisheries Biology and Management 1-4 cr. Offered autumn. Prereq., BIOL 308; Consent of instr. Same as WBIO 441. Field instruction by practicing biologists in techniques for evaluating and managing aquatic habitats and fish populations.

UG 418 Fungal Biology 3 cr. Offered autumn even-numbered years. Prereq., BIOL 108N-109N and 221-223 or MICB 300 or consent of instr. Same as MICB 418. Reviews the definition, evolution, genetics, physiology, and ecology of fungi (including organisms in the Chromista), provides overview of all fungal phyla (Chytridiomycota, Zygomycota, Ascomycota, Basidiomycota, Hyphochytriomycota, Labyrinthulomycota, Oomycota), and highlights the importance of fungi to human affairs (food production, fungal pathogens).

UG 430 Plant Biogeography 3 cr. Prereq., consent of instr. Offered alternate years. Description of the distribution of plants and animals at global, continental and regional scales. Analysis of ecological and historical factors influencing distribution and association.

UG 435 Comparative Animal Physiology 3 cr. Offered autumn. Prereq., BIOL 221 or equivalent. Animal physiology with emphasis on diversity of functional processes, with strong links to broader ecological and evolutionary contexts.

UG 440 Biological Electron Microscopy 2 cr. Offered spring. Prereq., senior standing or consent of instr. Theory of electron microscopy, recent developments in transmission and scanning electron microscopy. Limited experience with the instruments.

UG 442 Ecology of Infectious Diseases 3 cr. Offered autumn (even-numbered years). Prereq., BIOL 223, 340. Introduction to the field of disease ecology, focusing on diversity of parasites, parasite population biology and causes and consequences of host-parasite interactions.

UG 444 Plant Physiology 3 cr. Offered spring. Prereq., BIOL 108N-109N, 120N or 316. The chemical and physical basis of water relations, photosynthesis, mineral nutrition, respiration, vegetative and reproductive growth of plants.

UG 445 Plant Physiology Lab 1 cr. Offered spring. Prereq or coreq., BIOL 444. Laboratory exercises designed to familiarize students with concepts and techniques in plant physiology.

UG 446 Wildlife Physiological Ecology 3 cr. Offered spring. Same as WBIO 446. Prereq., BIOL 221, 223 and 340. How physiological and biochemical processes in animals influence behavior and ecology. Application of physiological approaches to wildlife conservation such as assessment of animal health, nutritional condition, and physiological performance.

UG 447 Terrestrial Ecosystem Ecology 3 cr. Offered autumn odd-numbered years. Prereq., BIOL 110N and any ecology-themed course or consent of instr. Same as MICB 447. Introduction to systems thinking and the ecosystem concept, review of water and energy balance, carbon cycling and production processes, nutrient cycling, trophic dynamics, and species effects on ecosystem functioning.

UG 448 Terrestrial Plant Ecology 4 cr. Offered autumn. Prereq., an introductory college course in ecology. The interrelationships between plants and plant communities and their natural environment.

UG 449 Plant-Animal Interactions 4 cr. Offered summers only at Flathead Lake Biological Station. Prereq., a college course in ecology. Concepts and techniques for understanding the interdependent relationships between plants and animals. Emphasis given to ecological and behavioral studies.

UG 451 Landscape Ecology 3 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341. Biophysical processes that determine landscape and ecosystem structure and function using remote sensing tools, geographic information systems and dynamic models to demonstrate landscape change.

UG 452 Conservation Ecology 3 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341. Concepts and approaches for sustaining biodiversity and other natural goods and services provided by terrestrial and aquatic systems.

UG 453 Lake Ecology 3 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341, CHMY 121N (CHEM 151N) and CHMY 123N (CHEM 152N). The physical, chemical and biological characteristics of lake ecosystems with an emphasis on nutrient cycling, food web interactions and water quality.

UG 454 Stream Ecology 3 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341, CHMY 121N (CHEM 151N). The biota and biogeochemical processes of running waters with unifying principles and contemporary research approaches.

UG 458 Ecology of Forests and Grasslands 3 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341. Patterns and processes of the forests and grasslands of the northern Rocky Mountains in the context of principles of population community and ecosystem ecology.

UG 459 Alpine Ecology 3 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341. Distribution, abundance and life cycles of plants and animals and their unique ecophysiological adaptations to life in the rigorous environments of the high mountains above the timberline, with emphasis on the Crown of the Continent area.

UG 460 Medical Physiology 3 cr. Offered spring. Prereq., C (2.00) or better in BIOL 312, 313, one year college chemistry or consent of instr. An advanced course in human physiology for students preparing for careers in health care.

UG 464 Advanced Cellular Biology 3 cr. Offered spring. Prereq., BIOL 221 and BIOL 223; BIOC 380 strongly recommended. Cell structure and function, cell cycle, cellular signaling, molecular basis of cancer, regulated cell death, membrane transport, organelle dynamics, cytoskeleton, cell adhesion, and the molecular basis of learning and memory.

U 471 Teaching Anatomy and Physiology I 3 or 4 cr. Offered autumn. Prereq., "A" or "B" in BIOL 312 and 313 or equiv. and consent of instr. This select group of students performs cadaver prosections; assists in preparation and grading of demonstrations and laboratory teaching materials; and provides laboratory anatomy and physiology instruction to undergraduate students enrolled in BIOL 312. Students enrolling for the 4 credit option will also provide occasional comparable assistance for BIOL 112.

U 472 Teaching Anatomy and Physiology II 3 or 4 cr. Offered spring. Prereq., "A" or "B" in BIOL 312 and 313 or equiv. and consent of instr. This select group of students performs cadaver prosections; assists in the preparation and grading of demonstrations and laboratory teaching materials; and provides laboratory anatomy and physiology instruction to undergraduate students enrolled in BIOL 313. Students enrolling for the 4 credit option will also provide occasional comparable assistance for BIOL 113.

UG 480 Conservation Genetics 3 cr. Offered autumn. Prereq., BIOL 223. Genetic basis for solving biological problems in conservation including the genetics of small populations, the application of molecular genetic techniques to conservation biology and case studies of the application of genetics to conservation problems.

UG 482 Evolution and Development 3 cr. Offered spring, alternate years. Prereq., BIOL 108N and 223. Lecture, reading and discussion of questions at the intersection of developmental and evolutionary biology. Questions include but are not restricted to: how novel traits arise; how diversity in animal form is generated; and how phenotypic plasticity (environment-sensitive expression of traits) is produced.

UG 484 Plant Evolution 3 cr. Offered fall, alternate years. Prereq., BIOL 223. Lecture, reading and discussion on the evolutionary processes that shape major patterns of plant diversity. Topics include but are not restricted to: local adaptation, floral and mating system evolution, polyploidy, genome evolution, and speciation.

UG 486 Field Techniques in Mammalogy 2 cr. Offered autumn. Prereq., BIOL 306 or equiv. and consent of instr. A "hands-on" approach to lab and field techniques employed for the study of mammals. Includes mark/recapture live trapping methods, remote cameras,

and tracking plates of non-invasive censussing.

UG 492 Seminars in Ecology and Resource Management 1 cr. Offered summers only at Flathead Lake Biological Station. Prereq., BIOL 342 or 340/341 or taken concurrently with BIOL 342. Seminar course that meets weekly for 2 hours in the evening. Includes seminar speaker and discussion.

U 493 Omnibus 1-10 cr. Offered intermittently. Prereq., consent of instr. Independent work under the University omnibus option. See index.

UG 494 Seminar in Biology 1 cr. (R-3) Offered intermittently. Prereq., consent of instr.

UG 495 Special Topics Variable cr. (R-10) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 497 Advanced Undergraduate Research 1-10 cr. (R-10) Offered every term. Prereq., junior or senior standing and consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.

U 498 Internship 1-6 cr. Offered intermittently. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 499 Undergraduate Thesis 3-6 cr. (R-6) Offered every term. Prereq., senior standing and consent of instr. Preparation of a thesis or manuscript based on undergraduate research for presentation and/or publication. Student must give oral or poster presentation at the Biological Sciences Undergraduate Research Symposium or a scientific meeting. Graded credit/no credit

G 501 Graduate Issues and Policies 1 cr. Prereq., graduate standing in biological sciences. Discussion of issues of importance to new graduate students, including the philosophy of graduate education, the mentor-student relationship, the role of the teaching assistant, handling ethical quandaries, library resources and bibliographic searches, animal use policies and issues, proposal writing and the publication process. Review of ongoing research by faculty in the organismal biology and ecology program.

G 510 Avian Ecology 3 cr. (R-6) Offered intermittently. Prereq., graduate standing in EVST, BIOL, WBIO; upper-division course in ecology; or consent of instr. Review of recent developments in avian ecology with special emphasis on scientific methodology.

G 513 Community Ecology 3 cr. Offered alternate years. Prereq., BIOL 340 or equiv., consent of instr. Current concepts of species interactions, succession, food webs, temporal and spatial patterns and quantitative characterization of community structure.

G 517 Advanced Plant Ecology 3 cr. Prereq., upper-division course in ecology or consent of instr. Offered alternate years. Review and discussion of recent advances in plant ecology.

G 518 Plant-Consumer Interactions 3 cr. Offered alternate years. Prereq. BIOL 340 or equiv. Ecology and evolution of plant-consumer interactions. Review of classic and contemporary literature on plant-consumer interactions.

G 519 Fire Ecology 3 cr. Offered autumn even-numbered years. Prereq., graduate standing or consent of instr. Review of fundamental principles and recent advances in fire ecology with the primary focus on biological effects.

G 522 Readings in Morphology, Physiology and Ecology 1 cr. (R-8) Prereq., graduate standing and consent of instr. Review and discussion of current literature in the fields of morphology, physiology, and ecology.

G 524 Physiological Plant Ecology 3 cr. Offered alternate years. Prereq., BIOL 340 and 444. The physiological basis of plant adaptation and response to the environment.

G 526 Current Trends in Plant Ecology 2 cr. (R-16) Prereq., graduate standing. Current concepts, theory, and experiments in plant ecology.

G 530 Advanced Topics in Physiology 1-4 cr. (R-8) Prereq., consent of instr. Offered alternate years. Topics vary but emphasize aspects of comparative or environmental physiology of animals and/or plants.

G 541 Electron Microscopy Laboratory Variable cr. (R-6) Prereq. or coreq., BIOL 440 or equiv. Practical laboratory experience in the preparation of various biological materials, hands-on operation of the transmission electron microscope.

G 551 Environmental Field Study 1-3 cr. (R-3) Prereq. or coreq., BIOL 550 or EVST 540 or 560. Same as EVST 551. Designing, executing, and interpreting environmental studies. Project oriented.

G 561 Population Genetics Seminar 1-2 cr. (R-12) Prereq., consent of instr. or graduate standing. Current topics in population genetics, evolutionary biology, molecular evolution and related topics.

G 575 Frontiers in Conservation Research 2 cr. (R-6) Same as WBIO 575. Exploration of current topics in conservation biology.

G 594 Seminar in Biology 1 cr. (R-6) Prereq., graduate standing or consent of instr. A review and discussion of current research in biology. Topics vary.

G 595 Special Topics 1-8 cr. (R-8) Prereq., graduate standing and consent of instr. Experimental offering of new courses by resident or visiting faculty.

G 596 Independent Study 1-8 cr. (R-8) Prereq., consent of instr. Credit for independent research project unrelated to thesis or dissertation.

G 597 Research 1-8 cr. (R-12) Prereq., consent of instr. Library work involved with preparation of a thesis or dissertation proposal.

G 598 Internship 1-8 cr. (R-8) Prereq., consent of the Division, graduate standing. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 Thesis 1-10 cr. (R-10) Prereq., masters student in biology. Field and laboratory research on, and writing of, a student's master's thesis.

G 699 Dissertation 1-10 cr. (R-20) Prereq., doctoral student in biology. Credit for field and laboratory research on, and writing of, a student's doctoral dissertation.

Biological Station

Jack A. Stanford (Bierman Professor of Ecology), Director

The University of Montana-Missoula operates its Flathead Lake Biological Station as a year-round research facility and academic center in ecological sciences. The Station is located on 80 acres at Yellow Bay on Flathead Lake, some 85 miles north of Missoula near Kalispell and Glacier National Park. Up to 110 students can room in cabins and the G. W. Prescott dorm/apartment facility; board is provided by the station's commissary. Several large academic and office structures complement the state-of-the-art Freshwater Research Laboratory at this field campus.

During the annual 8-week summer session, formal courses are offered which emphasize field investigations of the rich flora and fauna of the diverse aquatic and terrestrial habitats found at or near the Station. Faculty from UM and other universities throughout the United States and Canada teach the field-oriented courses of the summer program. The formal courses each carry three to five semester credits for either advanced undergraduate or graduate academic programs.

A Bachelor of Science in Biology with Field Ecology Option is available through the Division of Biological Sciences which requires summer courses offered at the Flathead Lake Biological Station. This Field Ecology Option requires students to take advantage of at least one summer of courses at the Biological station, while allowing additional summers of coursework to apply to degree requirements as well. The required coursework includes Landscape Ecology, Conservation Ecology and either the Aquatic Emphasis (Stream ecology, Lake Ecology) or the terrestrial Emphasis (Ecology of Forests and Grasslands, Alpine Ecology). Students may complete BIOL 340/341 Ecology and Lab on the UM campus or take BIOL 342 Field Ecology at the Biological Station. Students who plan their academic years and summer programs carefully and who enroll for two or three summer sessions at the Biological Station may be able to complete degree requirements in three years.

Biological Station courses can also substitute for major program requirements in the Division of Biological Sciences and Wildlife Biology. Credits are transferable to most universities in the United States and Canada. Students must have completed introductory courses in biology, ecology and chemistry before enrolling in courses of the program.

Biological Station courses are offered for two or four-weeks during the eight-week session.

- 342 Field Ecology
- 343 Ecological Methods & Analysis
- 451 Landscape Ecology
- 452 Conservation Ecology
- 453 Lake Ecology
- 454 Stream Ecology
- 458 Ecology of Forests and Grasslands
- 459 Alpine Ecology
- 492 Seminar in Ecology and Resource Management
- 497 Undergraduate Research Experience
- 499 Undergraduate (Senior) Thesis in Field Ecology
- 596 Research in Ecology

In addition to these summer courses, the Biological Station offers opportunities for graduate studies in aquatic biology and ecology. After formal admission to a graduate degree-granting program, research programs leading to M.S. or Ph.D. degrees can be designed by the student, academic departments at the University and the faculty of the Station. Research assistantships are often available for students working on advanced degrees at FLBS. Numerous scholarships are also available annually for students enrolled at UM/FLBS.

Enrollment Procedures

Students interested in participating in the annual summer academic program must apply by mid-May. Application forms are available from the Biological Station website (www.umt.edu/flbs) or may be obtained in the Division of Biological Sciences office at UM.

Students interested in pursuing graduate work at FLBS should apply in writing to Graduate Admissions, Division of Biological Sciences, The University of Montana-Missoula, 32 Campus Drive #4824, Missoula, MT 59812-4824, or contact the Director.

For detailed information about academic and research opportunities at the Flathead Lake Biological Station, please visit the station web page (www.umt.edu/flbs) or contact:

Flathead Lake Biological Station
The University of Montana
32125 Bio Station Lane
Polson, MT 59860-6815
Phone: (406) 982-3301
Fax: (406) 982-3201
E-Mail: flbs@flbs.umt.edu
Web Page: www.umt.edu/flbs/

Division of Biological Sciences

Charles H. Janson, Associate Dean for the Biological Sciences

The Division of Biological Sciences offers undergraduate and graduate programs representing the full range of the biological sciences. The Division offers bachelor degrees in biology (with a broad array of formal options including botanical sciences, cellular and molecular biology, ecology, field ecology, human biological sciences, natural history, zoological sciences, biological education and general sciences education), medical technology, microbiology including microbial ecology, and wildlife biology (a cooperative program administered by the College of Forestry and Conservation). The Division also advises students in pre-medical and other pre-health sciences, and offers a series of courses during the summer at the University's Flathead Lake Biological Station (see separate listing in this section). The Division is one of the leading research units in the University. Research programs in the Division provide abundant opportunities for students to enhance their educational experience by participating in research. Several sources of funding are available to support undergraduate student research, and the Division participates in the University undergraduate research symposium each spring.

Graduate degrees offered by the Division of Biological Sciences include Master of Science degrees in biochemistry, microbiology, and organismal biology and ecology. Doctor of Philosophy degrees in integrative biochemistry and microbiology, organismal biology and ecology, and biomolecular structure and dynamics are offered. The Division participates in the graduate (M.S. and Ph.D.) program in wildlife biology, administered by the College of Forestry and Conservation. Information on graduate study and program requirements is available from the Graduate School or the Division of Biological Sciences.

The Division of Biological Sciences is committed to providing coursework and experiences for non-science majors. The world faces many problems and opportunities that include significant biological components. Courses for non-science majors have the goal of fostering understanding of the process of science and enhancing biological knowledge as it relates to environmental, medical, social, and other issues. A number of introductory courses are open both to majors and non-majors. In addition, the Division offers courses designed specifically for non-majors: elementary medical microbiology, introductory ecology, Montana wildlife, and others.

Degree requirements and courses are described below (see the College of Forestry and Conservation for information about wildlife biology).

Faculty

Professors

- Fred W. Allendorf, Ph.D., University of Washington, 1975
- Joel Berger, Ph.D., University of Colorado, Boulder, 1978 (John J. Craighead Endowed Chair)
- Carol A. Brewer, Ph.D., University of Wyoming, 1993
- Ragan M. Callaway, Ph.D. University of California at Santa Barbara, 1990
- Kenneth P. Dial, Ph.D., Northern Arizona University, 1984
- Douglas Emlen, Ph.D., Princeton University, 1994
- Kerry R. Foresman, Ph. D., University of Idaho, 1977
- James E. Gannon, Ph.D., University of Houston, 1981
- Willard O. Granath, Ph.D., Wake Forest University, 1982
- Erick P. Greene, Ph.D., Princeton University, 1989
- F. Richard Hauer, Ph.D., North Texas State University, 1980
- Walter E. Hill, Ph.D., University of Wisconsin, 1967
- William E. Holben, Ph.D., University of New York, Buffalo, 1985
- Richard L. Hutto, Ph.D., University of California at Los Angeles, 1977
- Charles H. Janson, Ph.D., University of Washington, 1985

- Ralph C. Judd, Ph.D., The University of Montana, 1979
- Michael F. Minnick, Ph.D., Washington State University, 1987
- Jack H. Nunberg, Ph.D., Stanford University, 1979 (Director for the Montana Biotechnology Center)
- Anna Sala, Ph.D., University of Barcelona, 1992
- D. Scott Samuels, Ph.D., University of Arizona, 1991
- Stephen Sprang, Ph.D., University of Wisconsin, Madison, 1977 (Director, Center for Biomolecular Structure and Dynamics)
- Jack A. Stanford, Ph.D., University of Utah, 1975 (Bierman Professor; Director of the Biological Station)

Associate Professors

- Mark L. Grimes, Ph.D., University of Oregon, 1986
- Jesse C. Hay, Ph.D., University of Wisconsin, Madison, 1994
- J. Stephen Lodmell, Ph.D., Brown University, 1996
- John L. Maron, Ph.D., University of California-Davis, 1996
- Michele A. McGuirl, Ph.D., Montana State University, 1999
- Scott Miller, Ph.D., University of Oregon, 1999
- Frank Rosenzweig, Ph.D., University of Pennsylvania, 1991
- Bret W. Tobalske, Ph.D., The University of Montana, 1994 (Director of the Field Station at Fort Missoula)

Assistant Professors

- Creagh W. Breuner, Ph.D., University of Washington, 1998
- Sarah J. Certel, Ph.D., The University of Iowa, 1999
- Vanessa O. Ezenwa, Ph.D., Princeton University, 2002
- Lila Fishman, Ph.D., Princeton University, 1998
- Jeffrey Good, Ph.D., University of Arizona, 2007
- Winsor H. Lowe, Ph.D., Dartmouth College, 2002
- John P. McCutcheon, Ph.D., Washington University, 2006
- Brent J. Ryckman, Ph.D., The University of Iowa, 2003
- Scott A. Wetzel, Ph.D., Oregon Health and Science University, 2001
- H. Arthur Woods, Ph.D., University of Washington, 1998

Lecturers

- Heather Davis, M.S., The University of Montana, 2005
- Kevin J. Murray, Ph.D., University of Nevada-Reno, 1994

Research Faculty

- Jim Battisti, Ph.D., The University of Montana, 1998
- Jerry J. Bromenshenk, Ph.D., Montana State University, 1973
- Dan Drecktrah, Ph.D.,Cornell University, 1999
- Bonnie Ellis, Ph.D., The University of Montana, 2006
- Ric Hauer, Ph.D., University of North Texas, 1980
- John Kimball, Ph.D., Oregon State University, 1995
- Evgueny Kroll, Ph.D., Hopkins School of Medicine, USA
- Penny Kukuk, Ph.D., University of Kansas, 1980
- Jean-Marc Lanchy, Ph.D., University; Louis Pasteur, Stransbourg, France
- Gordon Luikart, Ph.D., The University of Montana, 1997
- Megan McPhee, Ph.D., University of New Mexico, 2003
- Dan Mummey, Ph.D., University of Wyoming, 2003
- Philip Ramsey, Ph.D., The University of Montana, 2006

Associated Faculty

- Thomas E. Martin, Ph.D., University of Illinois, 1982
- L. Scott Mills, Ph.D., University of California, Santa, Cruz, 1993

Medical Technology

Michael Minnick (Professor of Microbiology), Advisor

Medical Technology or clinical laboratory sciences, is a combined study of chemistry, physiology and microbiology. A medical technologist performs chemical, microscopic, and microbiological procedures used in the diagnosis, study and treatment of disease, under the supervision of a qualified physician or lab director. Medical technologists are in high demand in hospital labs, clinical labs, research institutions and government health departments. Although certification is required for clinical practice, individuals with a B.S. degree in Medical Technology are qualified microbiologists and can obtain positions in research many labs as technicians. The degree is also an

excellent foundation for students planning to attend professional schools in the health sciences or graduate school in the molecular biosciences.

Four years are required to earn a B. S. degree in Medical Technology. The curriculum is devoted to development of a sound foundation in chemistry, biology, and microbiology and clinical methods. The student is encouraged to obtain an understanding of social science and cultural subjects.

To be certified by the Board of Registry, a student, after satisfying the minimum course requirements, serves a clinical internship of at least 12 consecutive months in an approved school of medical technology endorsed by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) or American Society of Clinical Pathology (ASCP) of the American Medical Association. After completing a clinical internship and passing the Registry exam, the student receives a diploma from the Board of Registry with the professional designation of Medical Technologist M.T. ASCP).

The University of Montana has two coursework options for the medical technology degree:

Option A is a 4+1 curriculum in which the student completes the B.S. degree and subsequently does a one-year clinical internship if desired. Students who choose the 4+1 curriculum do a clinical internship by applying in the fall of their senior year. Details and application forms can be obtained online at the following: http://www.umt.edu/Medtech/. Internship applications are typically due in October for enrollment the following May.

Option B is a 3+1 curriculum designed to fast-track students who definitely want to become a medical technologists. The first three years are completed at UM. The fourth year is applied and incorporates both classroom learning and a clinical internship at one of our affiliates (University of North Dakota or at the Montana Medical Laboratory Science Training Program) in cooperation with several clinical sites located in Montana and the Midwest. Internship information is available online at http://www.umt.edu/medtech/. The B.S. degree and certification are granted after successful completion of the fourth year.

High School Preparation: In addition to the general University requirements for admission, it is recommended that high school preparation include algebra, geometry, trigonometry, chemistry, and a foreign language.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

In addition to the General Education requirements, the following courses are required for either option leading to a Bachelor of Science in Medical Technology: Thirty or more credits (300-level or above) in biology, biochemistry and microbiology including MICB 300-301, 309, 410, 412-413, 420, BIOC 380; BIOL 221, 223, 312, 400-401; CHMY 141N,143N (CHEM 161N-162N), 221-223 and M 162 or 171 (MATH 150) and STAT 216 (MATH 241). The 4+1 option also requires CHMY 222-224, 311 (CHEM 222-224,341); MICB 309, 406-407,433; and PHYS 111N/113N, 112N/114N . The 3+1 option also requires 37 credits of MICB 490 (Clinical Laboratory Internship).

Upper-Division Writing Expectation: To meet the Upper-Division Writing Expectation for the major, medical technology 4+1 students take MICB 410 and MICB 411; 3+1 students take MICB 410, 412, and one class chosen from: BIOC 482, MICB 411, or MICB 499.

Suggested Course of Study

Option A (4+1)

First Year	A	S
CHMY 141N,143N (CHEM 161N-162N) College Chemistry and Laboratory	5	5
+M 162 (MATH 150) Applied Calculus	4	-
+WRIT 101 (ENEX 101) College Writing I	3	-
General Education	3	9
Electives	-	1
	15	15

+Depends on placement test.

Second Year	A	S
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
CHMY (CHEM) 221-222, 223-224 Organic Chemistry and Laboratory	5	5
MICB 300-301 General Microbiology and Laboratory	-	5
Lower-Division Writing Course	3	-
General Education	3	-
Elective	-	1
	15	15

Third Year	A	S
BIOL 312 Anatomy and Physiology I	4	-
BIOC 380 Biochemistry	4	-
MICB 410-411 Immunology and Laboratory	5	-
MICB 412-413 Medical Bacteriology and Laboratory	-	5
Elective	3	2
General Education	-	3
STAT 216 Intro to Statistics		4
	16	14

Fourth Year	A	S
CHMY 311 (CHEM 341) Quantitative Analysis and Instrumental Methods	4	-
BIOL 400/401 Parasitology and Lab (add 4 credits to fall)	3	
MICB 309 Hematology	3	-
MICB 406 Clinical Diagnosis	-	2
MICB 407 Clinical Diagnosis Laboratory	-	1
MICB 420 Virology	-	3
PHYS 111N-112N (121N-122N) or 221N-222N General Physics	5	5
Elective	-	4
	16	14

Option B (3+1)

First Year	A	S
CHMY 141N,143N (CHEM 161N-162N)College Chemistry and Laboratory	5	5
+WRIT 101 (ENEX 101) College Writing I	3	-
+ M 162 (MATH 150) Applied Calculus	4	-
General Education	3	9
Electives	1	1
	16	15

+Depends on placement test.

Second Year	A	S
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics and Evolution	-	4
BIOL 312 Anatomy and Physiology	4	-
CHMY (CHEM) 221, 222 Organic Chemistry and Laboratory	5	-
MICB 300-301 General Microbiology and Laboratory	-	5
Lower-division writing course	-	3
General Education	-	3
Elective	3	-
	16	15

Third Year	A	S
BIOC 380 Biochemistry	4	-
BIOL 400/401 Parasitology	4	-
MICB 309 Hematology (3 credits in Fall)	3	-
MICB 410-411 Immunology and Laboratory	5	-
MICB 412-413 Medical Bacteriology and Laboratory	-	5
MICB 420 Virology	-	3
General Education	-	3
STAT 216 Introduction to Statistics	-	4
	16	15

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R.

Clinical Laboratory Science (CLS)

- **U 460 Clinical Immunohematology I 1 cr.** Offered summer. Prereq., consent of medical technology advisor. Practical application of modern transfusion techniques, component therapy, and quality assurance.
- **U 461 Clinical Chemistry Theory 2 cr.** Offered summer. Prereq., consent of medical technology advisor. Overview of clinical chemistry theory, principles, procedures, and correlations. Topics include instrumentation, carbohydrates, proteins, lipids, enzymes, liver function, blood gases, electrolytes, renal function, endocrinology, therapeutic drug monitoring and toxicity.
- **U 462 Clinical Laboratory I 1 cr.** Offered summer. Prereq., consent of medical technology advisor. Theory and practice of phlebotomy in the clinical setting, specimen processing, review of state and federal regulations, safety and biohazard compliance, interpersonal relationship skills.
- **U 463 Clinical Hemostasis 2 cr.** Offered summer. Prereq., consent of medical technology advisor. Physiological mechanisms of normal human hemostasis as well as hereditary and acquired bleeding and thrombotic defects are discussed. Laboratory techniques for obtaining blood, screening procedures, specific assays and procedures to monitor anticoagulant therapy.
- **U 464 Clinical Microscopy and Urinalysis 2 cr.** Offered summer. Prereq., consent of medical technology advisor. Theory, techniques and practice of routine urinalysis.
- **U 465 Clinical Body Fluids 1 cr.** Offered summer. Prereq., consent of medical technology advisor. Body fluid physiology, pathology, laboratory measurement and case study analysis. Focus on laboratory technologies, principles of operation of various laboratory instruments and quality management in the clinical setting.
- **U 467 Clinical Immunohematology Theory 1 cr.** Offered summer. Prereq., consent of medical technology advisor. Theory of modern transfusion techniques, component therapy, and quality assurance.
- **U 468 Clinical Microbiology Theory and Laboratory 2 cr.** Offered summer. Prereq., consent of medical technology advisor. Study of groups of medically important bacteria correlated to laboratory practice in identification. Includes antibiotic susceptibility testing, quality control, and methods of identification; rapid, automated and traditional methods.
- **U 470 Clinical Immunohematology II 2 cr.** Offered autumn. Prereq., consent of medical technology advisor. Techniques and modern transfusion practices at the clinical affiliate. Review of the basic and advanced information in blood banking with correlation between laboratory testing and patient care.
- **U 471 Clinical Chemistry I 3 cr.** Offered autumn. Prereq., consent of medical technology advisor. Applied theory and practice in clinical chemistry at the clinical affiliate. Review of the basic and advanced information in clinical chemistry with correlation between laboratory testing and patient care.
- **U 472 Clinical Hematology I 2 cr.** Offered autumn. Prereq., consent of medical technology advisor. Morphologic evaluation of blood smears, interpretive correlation of hematology finds and the pathophysiology of disorders of the hematopoietic system.
- **U 473 Clinical Laboratory II 1 cr.** Offered autumn. Prereq., consent of medical technology advisor. Focus on performing phlebotomy techniques, hemostasis procedures and laboratory safety. Communication skills, attitude and work performance will be evaluated.
- **U 474 Clinical Microbiology I 2 cr.** Offered autumn. Prereq., consent of medical technology advisor. Techniques and practices in clinical microbiology at the clinical affiliate. Psychomotor skills, performance and understanding of the procedure methodologies, along with the relationship of test results to the patient disease/care.
- **U 475 Clinical Laboratory III 1 cr.** Offered autumn. Prereq., consent of medical technology advisor. Observation, practice or research in specialized areas or settings at the clinical affiliate.
- **U 476 Clinical Immunology 1 cr.** Offered autumn. Prereq., consent of medical technology advisor. Applied theory and practice in clinical immunology and serology at the clinicalaffiliate.
- **U 477 Medical Mycology 1 cr.** Offered autumn. Prereq., consent of medical technology advisor. Comparative morphology, physiology and pathogenicity of medically important fungi. Laboratory methods for identification emphasize interpretation and evaluation of results including the recognition of contaminating organisms.
- **U 480 Financial and Quality Management of the Clinical Laboratory 3 cr.** Offered spring. Prereq., consent of medical technology advisor. A capstone course designed to provide senior CLS students with the skills to manage a clinical laboratory. Brings together previous content with a focus on laboratory profitability, quality management and quality improvement.
- **U 481 Clinical Chemistry II 2 cr.** Offered spring. Prereq., consent of medical technology advisor.
- **U 482 Clinical Immunohematology III 2 cr.** Offered spring. Prereq., consent of medical technology advisor. Techniques and modern transfusion practices at the clinical affiliate. Psychomotor skills, performance and understanding of the procedure methodologies, along with the relationship of test results to the patient disease/care.
- **U 483 Clinical Hematology II 3 cr.** Offered spring. Prereq., consent of medical technology advisor. Techniques and practices in clinical hematology at the clinical affiliate. Psychomotor skills, performance and understanding of the procedure methodologies, along with the relationship of test results to the patient disease/care.
- **U 485 Clinical Microbiology II 2 cr.** Offered spring. Prereq., consent of medical technology advisor. Techniques and practices in clinical microbiology at the clinical affiliate. Psychomotor skills, performance and understanding of the procedure methodologies, along with the relationship of test results to the patient disease/care.

Microbiology

- Special Degree Requirements
- Suggested Course of Study
- Courses

Microbiology is the study of microorganisms, including the bacteria, yeasts, molds, viruses, protozoa and other microscopic parasites. Two options are available. The microbiology degree emphasizes microbial structure, function, and interactions and relationships with humans. The microbial ecology option emphasizes microbial structure, function, and interactions and relationships with the environment and other organisms including plants and animals.

A B.S. in Microbiology is offered as a general degree or with an option in microbial ecology. Initial work provides the student with a working knowledge of the basic principles of the physical and biological sciences and mathematics. The remaining study is devoted to a more intense and broadened training in microbiology and allied fields, and may include independent study which offers the student an opportunity to prepare for graduate work.

Special Degree Requirements

Refer to the graduation requirements listed previously in the catalog. See index.

In accordance with American Society for Microbiology recommendations, the following courses must be completed in addition to the General Education requirements for the Bachelor of Science in Microbiology: Thirty-two upper-division credits (300-level or above) in biology, biochemistry and microbiology including BIOL 340; BIOC 380 or 481-482; MICB 300-301, 404-405, 422, 450-451; and at least 7-9 credits chosen from the following courses (with lab if available):

MICB 309, 400-401, 406-407, 410-411, 412-413, 418, 420, 423, 497. BIOL 108N-109N, 110N, 221, 223; M 162 (MATH 150) STAT 216 (MATH 241); CHMY 141N-143N, 221-222, 223-224, 311 (CHEM 161N-162N, 221-223, 222-224, 341); PHYS 111N-113N, 112N-114N also are required.

Microbial Ecology Option: In addition to the General Education requirements and the Upper-Division Writing Expectation described below, the following must be completed for the Bachelor of Science in Microbiology with an option in microbial ecology: Thirty-two or more credits (300-level or above) in biology, biochemistry, microbiology including BIOL 340; BIOC 380 or 481-482; MICB 300-301, 404-405, 422, 450-451, and at least 7-9 credits chosen from the following courses (with lab if available): MICB 400-401, 410-411, 418, 420, 423, 497; BIOL 341, 366, 413, 440, 444/445, 453, 454,.

BIOL 108N/109N, 110N, 221, 223; M 162 or 171, STAT 216 (MATH 150 or 152, 241); CHMY 141N-143N, 221-222, 223-224 or CHMY 121N, 123N, 124N, (CHEM 161N-162N, 221-223, 222-224 or CHEM 151N, 152N,154N); PHYS 111N-113N also are required. In addition, choose at least 6 credits from: CHMY 311 (CHEM 341); CS 131; FOR 210N; GEO 301, 382, 420 (GEOS 301, 382, 480); M 172, 273 (MATH 153, 251) and STAT 451, 452, 457, 458 (MATH 444, 445, 447, 448); PHYS 112N/114N.

Upper-Division Writing Expectation: To meet the Upper-Division Writing Expectations for the major, Microbiology students must take MICB 404 (required), plus one more course chosen from: BIOL 482, BIOC 486, BIOL 366, BIOL 445, MICB 410, MICB 411, MICB 412 or MICB 499.

Suggested Course of Study

Microbiology

First Year	A	S
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 141N-143N (CHEM 161N-162N) College Chemistry and Laboratory	5	5
+M 162 (MATH 150) Applied Calculus	4	-
+WRIT 101 (ENEX 101) College Writing I	-	3
STAT 216 (MATH 241) Introduction to Statistics	-	4
Total	14	16

+Depends on placement exam.

Second Year	A	S
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics & Evolution	-	4
CHMY 221-222, 223-224 (CHEM 221-222, 223-224) Organic Chemistry and Laboratory	5	5
MICB 300-301 General Microbiology and Laboratory	-	5
Lower-Division Writing Course	3	-
General Education	3	-
Elective	-	1
Total	15	15

Third Year	A	S
BIOC 481-482 (or 380 and two upper-division BIOL or MICB*)	3	3
MICB 410-411 Immunology and Laboratory*	5	-
MICB 422 Microbial Diversity and Ecology	-	3
PHYS 111N-113N, 112N-114N General Physics	5	5
Upper-division General Education	-	3
Electives	2	1

Total	15	15
Fourth Year	**A**	**S**
BIOL 340 Ecology	-	3
CHMY 311 (CHEM 341) Quantitative Analysis and Instrumental Methods	4	-
MICB 404-405 Microbial Genetics and Laboratory	-	4
MICB 420 Virology*	-	3
MICB 450-451 Microbial Physiology and Laboratory	4	-
General Education	6	6
Total	14	16

*Choose 7-9 credits from MICB 309, 400-401, 406-407, 410-411, 412-413, 418, 420, 423, 497.

Microbiology with Microbial Ecology Option

First Year	**A**	**S**
BIOL 108N-109N Diversity of Life and Laboratory	5	-
BIOL 110N Principles of Biology	-	4
CHMY 141N-143N (CHEM 161N-162N) College Chemistry and Laboratory	5	5
+M 162 (MATH 150) Applied Calculus	4	-
+WRIT 101 (ENEX 101) College Writing I	-	3
STAT 216 (MATH 241) Introduction to Statistics	-	4
Total	14	16

+Depends on placement exam.

Second Year	**A**	**S**
BIOL 221 Cell and Molecular Biology	4	-
BIOL 223 Genetics & Evolution	-	4
CHMY 221-222, 223-224 (CHEM 221-222, 223-224) Organic Chemistry and Laboratory	5	5
MICB 300-301 General Microbiology and Laboratory	-	5
Lower-Division Writing Course	3	-
General Education	3	-
Elective	-	1
Total	15	15
Third Year	**A**	**S**
BIOC 481-482 (or 380 and two upper-division BIOL or MICB*)	3	3
BIOL 340 Ecology	3	-
FOR 210N Introductory Soils+	-	3
MICB 400-401 General Parasitology and Laboratory	4	-
MICB 422 Microbial Diversity and Ecology	-	3
General Education	3	3
Upper-division elective	-	4
Electives	1	-
Total	14	16
Fourth Year	**A**	**S**
GEO 382 Global Change	-	3
MICB 404-405 Molecular Genetics and Laboratory	-	4
MICB 423 Applied and Environmental Microbiology*	-	3
MICB 450-451 Microbial Physiology and Laboratory	4	-
PHYS 111N/113N, 112N/114N General Physics I	5	-
General Education	3	6
Elective	2	-
Total	14	16

*Choose 7 credits from BIOL 341, 366, 440, 444; MICB 400-401, 410-411, 418, 420, 423, 497.

+Choose 6 credits from CHMY 311 (CHEM 341); CS 131; FOR 210N; GEO 301, 382, 420 (GEOS 301; 382 or 480); M 172, 273 (MATH 153, 251) Stat 451, 452, 457, 458 (MATH 444-447, 445-448); PHYS 112N/114N.

Requirements for a Minor

To earn a minor in microbiology, the student must complete MICB 300-301, 404-405, 422, and 450-451, as well as at least three additional credits at the 300 or 400-level in Microbiology.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Microbiology (MICB)

- **U 107 Elementary Microbiology Laboratory 1 cr.** Offered spring. Same as BIOL 107. Observation of live microorganisms, their characteristics and activities. Experience with microbiological techniques. Credit not allowed toward a major in microbiology.
- **U 300 General Microbiology 3 cr.** Offered autumn and spring. Prereq., CHMY 141N, 143N (CHEM 161N, 162N); Prereq. or coreq., CHMY 221 (CHEM 221), BIOL 221. Microbial structure and function, growth and reproduction, physiology, ecology, genetics, environmental factors, control of microorganisms and sterility, antimicrobial agents, microbial diversity.
- **U 301 General Microbiology Laboratory 2 cr.** Offered autumn and spring. Prereq. or coreq., MICB 300. Basic microbiology procedures and techniques.
- **UG 302 Medical Microbiology 3 cr.** Offered autumn. Microbial structure and functions, pathogenic microorganisms, virology, immunology. Credit not allowed toward a major in microbiology.
- **U 309 Hematology 3 cr.** Offered autumn. Prereq., junior level or consent of instr., MICB 300. Study of blood and diseases of the circulatory system. Blood banking and serology.
- **UG 400 General Parasitology 2 cr.** Offered autumn. Prereq., BIOL 223. Same as BIOL 400. Parasitism as a biological phenomenon, origin of parasitism, adaptations and life cycles, parasite morphology, fine structure, physiology, parasites and their environment.
- **UG 401 General Parasitology Laboratory 2 cr.** Offered autumn. Coreq., MICB 400. Same as BIOL 401. Taxonomy, morphology and identification of parasitic protozoa, helminths and arthropods.
- **UG 404 Microbial Genetics 3 cr.** Offered spring. Prereq., MICB 300 and 301. The molecular genetics of prokaryotic organisms including: structure and replication of the prokaryotic chromosome; gene expression; mutagenesis and DNA repair; plasmids and other tools of genetic engineering; transmission of genetic material and recombination in prokaryotes; regulation of gene expression in prokaryotes; recombinant DNA and biotechnology.
- **UG 405 Experimental Microbial Genetics Laboratory 1 cr.** Offered spring. Prereq. or coreq., MICB 404. Experiments in microbial genetics: Analysis of genes and genomes.
- **UG 406 Clinical Diagnosis 2 cr.** Offered spring. Prereq., MICB 412-413. Principles of blood chemistry, urinalysis, hematology and other clinical parameters of disease and health.
- **UG 407 Clinical Diagnosis Laboratory 1 cr.** Offered spring. Prereq., MICB 406, 412-413. Clinical diagnostic methods.
- **U 408 Seminar 1 cr.** (R-3) Offered autumn and spring. Prereq., senior standing in natural sciences. Recent topics in microbiology and related subjects.
- **UG 410 Immunology 3 cr.** Offered autumn. Prereq., MICB 300-301. Modern concepts and methods in immunology.
- **UG 411 Immunology Laboratory 2 cr.** Offered autumn. Coreq., MICB 410. Modern techniques for analysis of immune responses.
- **UG 412 Medical Bacteriology and Mycology 3 cr.** Offered spring. Prereq., MICB 300, 301. A study of the pathogenic bacteria and fungi and the diseases they produce.
- **UG 413 Medical Bacteriology and Mycology Laboratory 2 cr.** Offered spring. Prereq. or coreq., MICB 412. Laboratory study of pathogenic bacteria and fungi.
- **UG 418 Fungal Biology 3 cr.** Offered autumn even-numbered years. Prereq., BIOL 108N-109N and 221-223 or MICB 300 or consent of instr. Same as BIOL 418. Reviews the definition, evolution, genetics, physiology, and ecology of fungi (including organisms in the Chromista), provides overview of all fungal phyla (Chytridiomycota, Zygomycota, Ascomycota, Basidiomycota, Hyphochytriomycota, Labyrinthulomycota, Oomycota), and highlights the importance of fungi to human affairs (food production, fungal pathogens).
- **UG 420 Virology 3 cr.** Offered spring. Prereq., MICB 410. The general nature of viruses, with emphasis on the molecular biology of animal and human viruses.
- **UG 422 Microbial Diversity and Ecology 3 cr.** Offered spring. Prereq., BIOL 221-223, MICB 300-301 or consent of instr. A broad overview of the physiological, phylogenetic and genomic diversity and ecology of microorganisms within a framework of general ecological principles. Focuses on microbial interactions with their environment at the level of the individual, population and community, including intimate associations with plants and animals. Surveys current methods for studying microbial ecology and diversity in the environment.
- **UG 423 Applied and Environmental Microbiology 3 cr.** Offered spring odd-numbered years. Prereq., MICB 300 or consent of instr. Study of microorganisms and their relation to environment including foods, water and wastewater treatment, bioremediation and industrial processes. Includes field trips and specialized laboratory exercises.
- **UG 447 Terrestrial Ecosystem Ecology 3 cr.** Offered autumn odd-numbered years. Prereq., BIOL 110N and any ecology-themed course or consent of instr. Same as BIOL 447. Introduction to systems thinking and the ecosystem concept, review of water and energy balance, carbon cycling and production processes, nutrient cycling, trophic dynamics, and species effects on ecosystem functioning.
- **UG 450 Microbial Physiology 3 cr.** Offered autumn. Prereq., MICB 300-301. Microbial structure and function, physiological diversity, microbial metabolism, role of microbial activity in the environment.
- **UG 451 Microbial Physiology Laboratory 1 cr.** Offered autumn. Coreq., MICB 450. Experimental approaches to analysis of microbial structure, composition and metabolism.
- **UG 490 Medical Technology Internship 1-16 cr.** Offered every term. Prereq., consent of instr.
- **UG 495 Special Topics 1-10 cr.** (R-10) Offered intermittently. Experimental offerings of new courses, experimental offerings of

visiting professors, or one-time offerings of current topics.

- **U 497 Advanced Undergraduate Research 1-10 cr.** (R-10) Offered every term. Prereq., MICB 300, junior or senior standing and consent of instr. Independent research under the direction of a faculty member. Graded credit/no credit.
- **U 498 Internship 1-6 cr.** Offered intermittently. Prereq., consent of the Division. Extended classroom experience that provides practical application of learning during placement off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 499 Undergraduate Thesis 3-6 cr.** (R-6) Offered every term. Prereq., senior standing and consent of instr. Preparation of a thesis or manuscript based on undergraduate research for presentation and/or publication. Student must give an oral or poster presentation at the Biological Sciences Undergraduate Research Symposium or a scientific meeting. Graded credit/no credit.
- **G 502 Advanced Immunology 3 cr.** Offered autumn even-numbered years. Advanced topics and immunological techniques used in modern immunology.
- **G 509 Advanced Virology 3 cr.** Offered spring add-numbered years. Prereq., MICB 420-421. Students are presented with research papers that have been pivotal to the understanding of important molecular or genetic concepts in virology.
- **G 520 Medical Parasitology 2 cr.** Offered spring. Prereq., BIOL 400 or equiv. Offered alternate years. Epidemiology, pathology, immunology, diagnosis and treatment of protozoan and helminth parasites of humans. Stresses current advances in parasitology.
- **G 530 Grant Writing 2 cr.** Offered spring. Prereq., graduate standing. Same as BIOC 530. Required course for biochemistry and microbiology graduate students. Students become acquainted with the grant writing process by writing grants that have received University approval for submission based on student research projects.
- **G 540 Molecular Pathogenesis 3 cr.** Offered fall. Prereq., graduate standing. Current concepts in pathogenesis at the molecular and cellular levels. Focus is on microbial (virla, bacterial) and genetic factors leading to disease and the host's involvement in the process.
- **G 545 Advanced Topics in Microbial Ecology 1 cr.** Offered every term. Prereq., graduate standing or consent of instr. Discussion of selected themes of the ecology of microorganisms with a focus on the recent primary literature.
- **G 546 Experimental Microbial Ecology 1 cr.** Offered every term. Prereq., graduate standing or consent of instr. Focus on experimental design, methods, and presentation of experimental results in the area of microbial ecology.
- **G 570 Introduction to Research 1 cr.** (R-2) Offered autumn and spring. Prereq., graduate standing. Required course for biochemistry and microbiology graduate students. Instruction in basic research techniques, research equipment and reading in the relevant scientific literature. Students conduct research projects under faculty mentors of their choosing.
- **G 580 Training Seminar 1 cr.** (R-2) Offered autumn and spring. Prereq., graduate standing or consent of instr. Same as BIOC 580. A one semester offering required of all new students.
- **G 594 Professional Seminar 1 cr.** (R-4) Offered autumn and spring. Prereq., graduate standing or consent of instr. Same as BIOC 594. Presentation of current research in biochemistry and molecular biology by senior graduate students, faculty, and invited outside speakers.
- **G 595 Special Topics 1-3 cr.** (R-6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **G 597 Research Variable cr.** (R-18) Offered intermittently. Prereq., graduate standing, one semester residence.
- **G 599 Thesis 1-10 cr**. (R-10) Offered intermittently. Prereq., master's student in microbiology. Laboratory research for and preparation of a master's thesis.
- **G 699 Dissertation 1-10 cr.** (R-20) Offered intermittently. Prereq., doctoral student in microbiology. Laboratory research for and preparation of a doctoral dissertation.

Pre-Medical Sciences

Diana I. Laurie (Professor of Biomedical and Pharmaceutical Sciences), Director

Health care continues to be one of the most rapidly expanding areas of our society. Careers in the health professions have expanded, both in numbers and in the variety of opportunities. The rewards of a career in health care include excellent salaries, stability of employment, geographic mobility, and the opportunity to help other people. The pre-medical sciences program is an advising program that helps students become well-informed, well-prepared applicants to programs in allopathic medicine, chiropractic medicine, dentistry, naturopathic medicine, optometry, osteopathic medicine, physician assistant, podiatry and veterinary medicine.

The Pre-Medical Sciences Program does not lead to a bachelor's degree. The Pre-Medical coursework will help students to gain admission to a professional school or program while completing a degree in a field of study. Students may select any major as a field of study, but specific pre-professional courses must be completed. When selecting a major, remember that a science major is not required for admissions into professional schools. It is more important to perform well in your chosen major. Professional schools are most concerned with the overall quality, scope and difficulty of undergraduate work rather than the major.

Pre-professional courses are designed to provide a strong foundation in the sciences, highly developed communicative skills and a solid background in the social sciences and humanities. Curriculum guides outlining minimal course requirements established by professional schools are available from the Pre-medical Sciences office. The Pre-Medical Sciences Program also offers students the opportunity to interact with several pre-med advisors in addition to their advisor for their major.

The minimal requirements for professional school should be completed by the end of the third year of study or prior to taking the admission test required by professional schools. Since specific subject requirements vary among institutions, students should discuss their academic plans with their Pre-medical Sciences advisor. Individuals with weak math and science preparation should consider a five year undergraduate program beginning with remedial courses in math, English, and reading skills.

Admission to a professional school is very competitive. Students must maintain a B-plus grade-point average in college if they expect to be admitted. All required courses must be taken for letter grades. In addition, the applicant must score well on the appropriate professional

admissions test. These tests are designed to measure basic academic ability in the natural sciences, reading ability and problem solving skills. These examinations are usually taken during the junior year.

Besides academic accomplishments and admission exam scores, acceptance by a professional school is also dependent upon letters of recommendation and personal interviews conducted by the professional school. It is important that students consult with a Pre-medical Sciences advisor and with an academic advisor in their major each year to make sure that they can satisfy the necessary requirements for graduation within the time available. The Pre-Medical Sciences Director will also discuss procedures, advise and assist the student during the process of applying to a professional school.

High School Preparation: High school students contemplating a career in the health professions should have three to four years of mathematics, courses in chemistry and physics and considerable background in literature and social science.

Department of Economics

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Kay Unger, Chairperson

The department considers its teaching goals to be three-fold: (1) To present to students the basic theoretical tools of economic analysis, relevant facts and institutional material, which will assist them as civic leaders. (2) To introduce students majoring in economics to the various special fields of study within economics. This training, along with extensive work in the other liberal arts and sciences, is intended to instill breadth of intellectual interest, critical habits of thought, a problem-solving attitude and facility of expression. (3) To help meet, through graduate work, the increasing demands for competent professional economists in industry, commerce, government and education.

Courses cover general economic theory, environmental economics, monetary theory, international economics, public finance, labor economics, economic development, comparative economic systems, econometrics, and industrial organization.

Students major in economics leading to a Bachelor of Arts degree. Graduate work leads to a Master of Arts degree in economics (see Graduate School catalog).

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Thirty-six credits in economics must be earned. Within the 36 credits the student must include ECNS 201S, 202S, 301, 302, 403, 488, 494, 499 (ECON 111S, 112S, 311, 313, 460, 488, 487, 489); and fourteen elective economics credits numbered 300 or above. Three credits of ECNS 101S (ECON 100S) may be counted toward the additional fourteen credits of upper-division economics courses if taken before attaining junior status. A maximum of four credits of ECNS 486 and none of the ECNS 398 credits may count toward the 36-credit requirement. The following courses may be counted as part of the 36 economics credits required for the undergraduate degree: GPHY 323S, PSCI 365 (GEOG 315, PSC 365), FOR 320, FOR 520.

The student should take ECNS 301 and 302 (ECON 311 and 313) before the senior year.

Non-economics courses required for the undergraduate degree are: M 115 (MATH 117) and M 162 (MATH 150) or M 171 and 172 (MATH 152 and 153) ; STAT 216 (MATH 241) or equivalent. The student must pass WRIT 101 (ENEX 101) with a grade of "C" or above. M 115 (MATH 117) and M 162 (MATH 150) should be taken before ECNS 301. Students planning graduate study in economics should take M 171-172 (MATH 152-153) and consider M 221 (MATH 221), M 307 (MATH 305) and ECNS 511, 513 and 560 (ECON 511, 513, and 560).

The Upper-division Writing Expectation must be met by successfully completing the Senior Economics Thesis, ECNS 494-499 (ECON 487-489).

Teacher Preparation in Economics

Students who want to be licensed to teach economics at the high-school level must complete the BA degree requirements in economics. They also must complete a teaching minor in a second field of their choice and the professional licensure program in the School of Education. Students may also earn a teaching minor in economics. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of these licensure programs.

Suggested Course of Study

First Year	A	S
ECNS 201S, 202S (ECON 111S, 112S) Principles of Micro- and Macroeconomics	3	3

WRIT 101 (ENEX 101) Composition	3	-
M 115 (MATH 117) Probability and Linear Math	3	-
M 162 (MATH 150) Applied Calculus	-	4
Electives and General Education	6	8
	15	15
Second Year	**A**	**S**
ECNS 301 (ECON 311) Intermediate Microeconomics with Calculus	3	-
ECNS 302 (ECON 313) Intermediate Macroeconomics	-	3
STAT 216 (MATH 241) Introduction to Statistics	4	-
Upper-division economics elective	-	3
Electives and General Education	8	9
	15	15
Third Year	**A**	**S**
ECNS 403 (ECON 460) Introduction to Econometrics	4	-
Upper-division economics electives	3	3
Electives & General Education	8	12
	15	15
Fourth Year	**A**	**S**
ECNS 488 Research Methods & Thesis Design	2	
ECNS 494 (ECON 487) Senior Seminar	-	2
ECNS 499 (ECON 489) Senior Thesis	-	2
Upper-division economics elective	3	3
Electives & General Education	10	8
	15	15

Requirements for a Minor

To earn a minor in economics the student must complete ECNS 201S, 202S, 301, 302 (ECON 111S, 112S, 311, 313), and six additional credits of economics classes numbered 300 or above, only three of which may be in ECNS 486 (ECON 486).

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Economics (ECNS)

U 101S (ECON 100S) Economic Way of Thinking 3 cr. Offered autumn and spring. A critical examination of the market mechanism as a social decision-making device to guide the use of a nation's resources. The limitations of these processes in light of current economic problems such as the rise of the large corporation, monopoly, environmental degradation, economic discrimination and the increasing role of the government.

U 191 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201S (ECON 111S) Principles of Microeconomics 3 cr. Offered every term. The nature of a market economy, economic decisions of the household and firm, competition and monopoly, value and price determination, distribution of income and applied microeconomic topics.

U 202S (ECON 112S) Principles of Macroeconomics 3 cr. Offered every term. Prereq., ECNS 201S (ECON 111S). The determination of the level of national economic activity, inflation, economic instability, the role of money and financial institutions, and selected topics in public economic policy.

UG 301 (ECON 311) Intermediate Microeconomics with Calculus 3 cr. Offered spring and autumn. Prereq., ECNS 201S (ECON 111S) and M 162 (MATH 150) or equiv. Analysis of consumer behavior, production, factor pricing, externalities and public goods.

UG 302 (ECON 313) Intermediate Macroeconomics 3 cr. Offered autumn and spring. Prereq., ECNS 202S (ECON 112S) and M 162 (MATH 150). Analysis of national income determination, unemployment, and inflation with emphasis on the role of fiscal and monetary policy.

UG 310 (ECON 320) Health Economics 3 cr. Offered intermittently. Prereq., economics course. Survey of market forces that govern the production and consumption of medical care in the U.S. market; uncertainty, asymmetric information, and concentrations of market power

resulting in inefficient outcomes. Topics include cost escalations, role of medical insurance, and problems of an aging population.

UG 312 (ECON 323) Labor Economics 3 cr. Offered intermittently. Prereq., ECNS 201S, 202S (ECON 111S, 112S). Economic analysis of labor markets. Theories of wage determination, discrimination and poverty with implications for manpower policy.

UG 313 (ECON 317) Money and Banking 3 cr. Offered intermittently. Prereq., ECNS 201S, 202S (ECON 111S, 112S). Definition and role of money; banks and other financial institutions as suppliers of money; the federal reserve system as a regulator of money; monetary theories, history, and policy.

UG 315 (ECON 315) History of Economic Thought 3 cr. Offered intermittently. Prereq., ECNS 201S, 202S (ECON 111S, 112S). A survey of economic ideas from antiquity through the present.

UG 317X (ECON 350) Economic Development 3 cr. Offered intermittently. Prereq., ECNS 201S, 202S (ECON 111S, 112S). Study of the processes of economic growth and development in the less developed world.

UG 320 (ECON 304) Public Finance 3 cr. Offered autumn. Prereq., ECNS 201S, 202S (ECON 111S, 112S). Rationale for governmental expenditure; public goods; public choice. Analysis of expenditure policy. Intergovernmental relations.

UG 374 (ECON 374) Comparative Economic Systems 3 cr. Offered intermittently. Prereq., ECNS 201S (ECON 111S). Comparative analysis of alternative ideal types of economic organization stressing the assumptions and values used in their critique and defense. Capitalism, Socialism, Communism, Fascism.

U 391 (ECON 395) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 392 (ECON 396 Independent Study Variable cr. (R-9) Offered intermittently. Prereq., six credits in economics and consent of instr.

U 393 (ECON 393) Omnibus Variable cr. (R-9) Offered intermittently. Independent work under the University omnibus option. See index.

UG 398 (ECON 398) Internship Variable cr. (R-6) Offered intermittently. Extended classroom experience that provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. The department will determine the number of credits to be earned for the experience based upon the activities outlined in the learning agreement. Prior approval must be obtained from the faculty supervisor and the Internship Services office. The department has determined that credit for this course cannot count in the 36 credit minimum requirement for the major. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 403 (ECON 460) Introduction to Econometrics 4 cr. Offered autumn. Prereq., an introductory statistics course. Quantitative methods in economics with emphasis on regression analysis.

UG 405 (ECON 405) Game Theory 3 cr. Offered every other autumn. Prereq., ECNS 201S, 202S (ECON 111S, 112S). An introduction to the tools of game theory and how they are applied. In many real-world economic situations, outcomes are jointly determined where one agent's choices will affect another's welfare, and vice versa. Game theory provides a method of analyzing these economic situations where decisions are interrelated, and each agent recognizes this fact and thus makes decisions strategically.

UG 406 (ECON 376) Industrial Organization 3 cr. Offered intermittently. Prereq., ECNS 201S (ECON 111S). The theoretical basis for public policy solutions to market power. Emphasis on case studies in matters of antitrust, regulation of public utilities, and public ownership of business enterprises.

UG 431 (ECON 431) International Trade 3 cr. Offered intermittently. Prereq., ECNS 301 (ECON 311) or consent of instr. International trade: theory, policy, institutions, and issues. Analysis of comparative advantage and trade restrictions, negotiations, and agreements.

UG 433 (ECON 440) Economics of the Environment 3 cr. Offered intermittently. Prereq., ECNS 201S, 202S (ECON 111S, 112S). Same as EVST 440. Outlines a theoretical framework for the analysis of environmental problems, including concepts of market failure and externalities, materials balance and property rights. The policy implications of this analytical model are explored for a range of topics including pollution and the preservation of natural environments and species.

UG 445 (ECON 445) International Environmental Economics and Climate Change 3 cr. Offered autumn every other year. Same as CCS 445. Prereq., ECNS 201S (ECON 111S). An introduction to the economics of various policy approaches towards climate change and other international environmental issues such as trans-boundary pollution problems, international trade and the environment and pollution haven hypothesis.

UG 450 (ECON 450) Advanced Topics in Economic Development 3 cr. Offered intermittently. Prereq., ECNS 201S, ECNS 317X (ECON 111S, ECON 350), or permission of instructor. Advanced treatment of the processes of economic growth and development in the less developed world.

UG 486 (ECON 486) Economic Research Seminar Variable cr. (R-15) Offered autumn and spring. Prereq., consent of instr.

U 488 (ECON 488) Research Methods and Thesis Design 2 cr. Offered autumn. Prereq., senior standing, economics major. Development of senior thesis proposal; presentation of research topics and methods by economics faculty and seminar participants.

UG 491 (ECON 495) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 492 (ECON 497) Independent Study Variable cr. (R-15) Offered intermittently. Prereq., 12 credits in economics and consent of instr.

UG 494 (ECON 487) Senior Seminar in Economics 2 cr. Offered spring. Prereq., ECNS 301, 302 (ECON 311, 313); six additional credits at the upper-division level; senior standing in economics. Capstone course for economics majors . Advanced topics in economic methodology, theory and/or public affairs.

U 499 (ECON 489) Senior Thesis 2 cr. Offered spring. Prereq., senior standing, economics major. Completion of senior thesis; presentation of results by seminar participants.

G 501 (ECON 501) Graduate Research Variable cr. (R-6) Offered autumn and spring.

G 511 (ECON 511) Microeconomic Theory 3 cr. Offered autumn. Prereq., ECNS 301 (ECON 311). Advanced theoretical treatment of consumer and producer behavior.

G 513 (ECON 513) Macroeconomic Theory 3 cr. Offered spring. Prereq., ECNS 302 (ECON 313). Advanced theoretical treatment of national income determination, unemployment and inflation.

G 560 (ECON 560) Advanced Econometrics 4 cr. Offered spring. Prereq., ECNS 403 (ECON 460). Advanced quantitative methods in econometrics. Coverage of probit-logit regression models, simultaneous equation system, and other specialized techniques.

G 569 (ECON 569) Empirical Research Design Variable cr. (R-6) Offered every term. Role and scope of empirical research. Planning and conduct of a research project.

G 595 (ECON 595) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 (ECON 596) Independent Study Variable cr. (R-9) Offered intermittently.

G 598 (ECON 598) Internship Variable cr. (R-9)Offered intermittently. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 (ECON 599) Thesis Variable cr. (R-9) Offered every term.

Faculty

Professors

- Douglas Dalenberg, Ph.D., University of Oregon, 1987
- Kay Unger, Chairperson, Ph.D., Johns Hopkins University, 1974

Associate Professor

- Jeffrey T. Bookwalter, Ph.D., University of Utah, 1999
- Michael H. Kupilik, Ph.D., University of Colorado, 1976

Assistant Professors

- Amanda Dawsey, Ph.D., University of Maryland at College Park, 2001
- Derek K. Kellenberg, Ph.D., University of Colorado, 2004
- Helen Naughton, Ph.D., University of Oregon, 2007
- Ranjan Shrestha, Ph.D., Ohio State University, 2007

Research Professors

- John W. Duffield, Research Professor, Ph.D., Yale University, 1974
- Richard D. Erb, Ph.D., Stanford University, 1967

Emeritus Professors

- Richard N. Barrett, Ph.D., University of Wisconsin, Madison, 1972
- Ronald A. Dulaney, Ph.D., Columbia University, 1973
- Dennis J. O'Donnell, Ph.D., Pennsylvania State University, 1974
- John G. Photiades, Ph.D., University of Illinois, 1972
- Thomas M. Power, Ph.D., Princeton, 1971
- John H. Wicks, Ph.D., University of Illinois, 1962

Department of English

- Special Degree Requirements
- Sample Course of Study
- Courses
- Faculty

Jill Bergman, Chair

The Department of English is among the oldest and most prestigious units at the University. As one of the campus's original departments, it offered some of the university's inaugural courses: literature classes taught by UM's first president, Oscar J. Craig. In 1919, Rhodes Scholar H.G. Merriam inaugurated one of the first creative writing programs in the country. Now, more than a century old, this department–which has employed writers and scholars such as Richard Hugo, Leslie Fiedler, William Kittredge and Patricia Goedicke–offers a B.A. with options in multiple disciplines and three graduate degrees in creative writing (M.F.A.), literature (M.A.), and teaching (M.A.T.).

On the undergraduate level, the department offers five options for English majors: 1) Literature; 2) Creative Writing; 3) English Teaching; 4) Film studies; and 5) Linguistics. In addition, students may pursue a general minor in English or minors in Film Studies, English Teaching and Irish Studies. Students can also study expository writing, linguistics and Teaching English as a Second Language.

Under the Literature option, students ground their study in the reading and examination of works through a series of historically based surveys as well as other core courses, covering the techniques of literary analysis, the application of literary theory, and finally the development of a research project in a senior seminar. Students also choose from electives that engage specific genres, authors, and periods, as well as different disciplines (e.g. Literature and the Environment) and literatures of diversity (e.g. Native American Literature). M.A. students select graduate seminars in American, British, and comparative literatures as well as other disciplines, their course work culminating in a research thesis. The literature emphasis imparts an understanding of not only the aesthetic richness of canonical and emerging literatures but also the historical and cultural forces that have contributed to their making. The classes are of a size that makes discussion very much a part of a student's experience.

The Creative Writing program is predicated on the model of the workshop, and focuses on three areas of study: poetry, fiction, and nonfiction. Undergraduates who select the creative writing option fulfill some of the same requirements as those in literature, while also participating in a series of small workshops at both the lower and upper division, gaining the techniques needed to craft poetry and/or prose that work towards artistic excellence. Graduate students pursuing an M.F.A. degree complete a series of writing workshops and seminars designed to develop their creative work and expand their understanding of literary technique. The Creative Writing program invites visiting writers to fill its Hugo and Kittredge fellowships, and also sponsors the graduate literary magazine *CutBank*, now in its fourth decade of publishing works, of poetry, fiction and art. Additionally, undergraduate students have the opportunity to contribute and edit their own literary magazine, *The Oval*.

The English Teaching program provides content knowledge, pedagogy, and professional experiences required for teaching literacy in a democratic society. Based on current research and best practices, the English Teaching program integrates the study of language, literature, and media, creating learning communities and supporting teachers as critical thinkers, creative problem solvers, and reflective practitioners. Students who successfully complete this option and the requirements from the School of Education receive a secondary teaching license (grades 5-12) in English. At the graduate level, the English Teaching program offers advanced theory and pedagogy courses for experienced teachers. The English Teaching Program is also the home of the Montana Writing Project, which is dedicated to improving the teaching and learning of writing at all grade levels.

In Film Studies, students receive a thorough introduction to the many facets of moving image culture, including a background in film history, theory, and aesthetics. In this interdisciplinary program, students are exposed to a broad array of national and international films, as well as filmic translations of well-known works of literature. Students analyze film from a variety of theoretical perspectives and become critical viewers of what is now one of the most predominant forms of cultural representation.

In conjunction with the Linguistics Program, English also offers an option in English Linguistics. Students select one of two tracks: 1) General Linguistics, which provides a background in both literature and linguistics, or 2) Teaching English as a Second Language, which prepares students for the particular concerns of second-language acquisition while also providing a foundation in the study of literature.

The Department of English also offers an interdisciplinary minor in Irish Studies which provides students with access to instruction in the fields of Irish language, history, literature, and culture. This academic and artistic approach to Irish culture involves an interdisciplinary and inter-collegiate collaboration that brings together leading scholars in the humanities and the creative arts.

Through the administration of one of the core competency requirements of the University's General Education curriculum, the Expository Writing or Composition program serves the entire student body by ensuring that all students learn to write with clarity of thought and

precision of language. Writing is understood as a skill, one that is improved by instructing students in the concerns of audience, organization, development, voice, diction, and grammar. Good writing also is related to cogent thinking , and the Expository Writing program–through both its general education requirement and its advanced courses–seeks to integrate critical thinking within the production of skilled writing.

Admission Requirements

To be admitted to any option of the English major, a student must satisfy the following requirements:

1. Completion of 24 credits overall with a minimum cumulative GPA of 2.5 or a GPA of 2.5 in the previous two terms.
2. Completion of at least nine credits in English, excluding WRIT (composition) courses, with a minimum GPA of 2.5 and no grade lower than a C (2.00) in those courses.

Students who intend to major in English, but who have not yet met the above requirements are admitted to the program as pre-English majors. Pre-English majors will be assigned to the English department Academic Advisor. Before a student can graduate with a major in English, she/he must meet the requirements to become an English major and declare a specific option within the program.

Special Degree Requirements

For University graduation requirements, please consult Academic Policy and Procedures: Degree/Certification Requirement for Graduation in this catalog.

For the Bachelor of Arts degree every major in English will complete the following requirements unless otherwise noted within the option:

1. At least 42 credits in English. Only courses under English, cross-listed with English, or labeled, in some cases, Linguistics will count toward the 42-60 credit major requirement. WRIT 101 (WTS 101, ENEX 101) do not count toward the major or minor.

   Majors in English may not take any course required for the English major on a credit/no credit basis.

2. Transfer students must complete a minimum of 9 credits of advisor-approved upper-division English courses at The University of Montana to receive a B.A. with a major in English. To complete the Creative Writing option, the transfer student must take at least one workshop from The University of Montana.

Major Options

English majors must take all of the courses required in one of the following options within the English major:

- **Literature:** 1) LIT 201 (ENLT 201); 2) either LIT 220L or LIT 221L (ENLT 217 or ENLT 218); 3) two of the following courses: LIT 222L, 210L, 211L, (ENLT 219, 224, 225; 4) LIT 300 (ENLT 301); 5) LIT 327 (ENLT 320); 6) LIT 494 (ENLT 401); 7) seven electives: four of which must cover each of the following four areas: a) Medieval through Early-Modern British literature, b) Enlightenment through Romantic British literature of pre-1665 American literature, c) Theory, d) Diversity (categories a and b may be fulfilled at the 200-level if additional substitutions are made at the 300 level so the 42 credit minimum is met; 8) two years of the same, spoken modern or classical language.
- **Creative Writing:** 1) ENCR 210A, 211A, or 212A; 2) one of the following courses: LIT 110L, 120L, 201 (ENLT 120, 121, 201); 3) three of the following courses: LIT 220L, 221L, 222L, 210L, 211L (ENLT 217, 218, 219, 224, 225); 4) LIT 300 (ENLT 301); 5) LIT 327 (ENLT 320); 6) three additional 300 or 400 level LIT (ENLT), ENFM or ENIR courses; 7) three upper-division creative writing workshops; 8) two years of the same spoken modern or classical language. Entry into 300-400 level Creative Writing workshops are by consent of instructor only. Creative Writing majors must submit samples of their work to the instructors of individual classes by the approved deadline in order to be considered for the next semester's workshops. Submission guidelines are posted in the English Department in LA 133.
- **English Teaching:** For an endorsement in the extended major field of English: 1) either LIT 220L or 221 (ENLT 217 or 218); 2) two of the following courses: LIT 222L, 210L, 211L (ENLT 219, 224, 225); 3) one course chosen from LIT 120L, 201 (ENLT 121, 201) or ENCR 211A; 4) LIT 300 (ENLT 301); 5) LIT 327 (ENLT 320); 6) two additional 300-level LIT courses, one of which concentrates in American literature, the other of which has a diversity focus; 7) the following English Teaching courses: ENLI 465; ENT 439, 440, 441, 442; 8) two elective courses from ENLI, ENCR, ENFM, WRIT (above 100 level, or ENIR (above 200 level); 9) secondary school teaching certification courses (see the School of Education). This program requires a minimum of 48 credits within the English option and 128 total credits. Students in the major English Teaching option must gain admission to Teacher Education program, apply and be accepted to student teach and meet the requirements for licensure as a secondary teacher (see School of Education for more details).
- **Film Studies:** 1) ENFM/LS 180; 2) LIT 270L (ENLT 227L) ENFM 330; 3) LIT 300 (ENLT 301); 4) ENFM 320; 5) nine courses from the following: MAR 101L, MCLG 222L/LS 361, MCLG 338/LS 338, MCLG 358/LS 358, SPNS 359 (SPAN 359), ENFM 325/LS356, ENFM/LS 381, PHIL 340, PHIL 444, NAS/ENFM 344, ENFM 381, or ENT 442; 6) ENFM 427; 7) two years of the same spoken modern or classical language. 8) Nine courses (27 credits) from the following electives: MAR 101L, MCLG 222L/LS 361/ENFM 222, ENFM 338/MCLG 338/LS 338/FREN 338, ENFM 358/MCLG 358/LS 358, SPNS 359 (SPAN 359), LIT 376/LS 356, ENFM/LS 381, ENFM 443/MAR 443, ENFM 444, PHIL 340, PHIL 444, NAS/ENFM 344, ENT 442, ENFM 195, ENFM 295, ENFM 395, ENFM 495, ENFM 396, ENFM 496
- **English Linguistics:** Students choose one of two curricula. General Linguistics: 1) LIT 220L (ENLT 217); 2) two courses from LIT 221L, 222L, 210L, 211L (ENLT 218, 219, 224, 225); 3) LIT 327 (ENLT 320); 4) either LIT 349 L or 350 L (ENLT 349 or 350); 5)

ENLI 465; 6) LING 470, 471, 472, 473, 474, and 476; 7) LING 489; 8) either LING 477 or 478; 9) either LING 475 or 478; and 10) two years of a foreign language. Teaching ESL: 1) LIT 220L (ENLT 217); 2) two courses from LIT 221L, 222L, 210L, 211L (ENLT 218, 219, 224, 225); 3) ENT 440, 442; 5) ENLI 465; 6) LING 466, 470, 471, 472; 7) one course from LING 473, 475, 476; 8) either LING 477 or 478; 9) LING 480, 481, 491; 10) one upper-division LING elective; and 11) two years of the same, spoken modern and classical language.

- **Teaching English as a Second Language:** 1) LIT 220L (ENLT 217); 2) two courses from LIT 221L, 222L, 210L, 211L (ENLT 218,219,224,225); 3) ENT 440, 442; 4) ENT 440, 442; 5) ENLI 465; 6) LING 466,470,471,472; 7) one course from LING 473,475,476; 8) either LING 477 or 478; 9) LING 480, 481, 491; 10) one upper division LING elective; and 11) two years of the same, spoken language. These options require a minimum of 45 credits within English/ Linguistics.

Minor requirements

General Minor in English

A minor in English requires at least nine courses (27 credits) in English excluding WRIT 101 (ENEX 101), which must include 1) four courses chosen from LIT 110L, 120L, 201, 220L, 221L, 222L, 210L, 211L (ENLT 120, 121, 201, 217, 218, 219, 224, 225); 2) LIT 300 (ENLT 301); 3) LIT 327 (ENLT 320). 4) Additional credits must be LIT (ENLT) /ENFM/ENCR/ENLI or ENIR courses numbered 300 or higher.

Minor Teaching Field of English

For an endorsement in the minor teaching field of English, a student must complete 1) either LIT 220L or 221L (ENLT 217 or 218); 2) two of the following courses: LIT 222L, 210L, or 211L (ENLT 219, ENLT 224, or ENLT 225); 3) One course chosen from LIT 120L (ENLT 121), ENCR 211, or LIT 201 (ENLT 201); 4) LIT 300 (ENLT 301); 5) LIT 327 (ENLT 320); 6) two additional 300 or 400 level LIT courses, one of which concentrates in American literature, one with a diversity focus; 7) the following English Teaching courses: ENLI 465; ENT 439; ENT 440; ENT 441; ENT 442; and 8) secondary school teaching licensure courses. Students in the minor English Teaching option must gain admission to Teacher Education program, apply and be accepted to student teach, and meet the requirements for licensure as a secondary teacher. (See the School of Education section of this catalog).

Minor in Irish Studies

For a minor in the field of Irish Studies, a student must complete at least six courses (18 credits), including four required core courses, and two elective courses. A student must complete 1) ENIR/IRSH 101; 2) ENIR/IRSH 102; 3) HSTR250/ENIR 249 (HIST249); and 4) ENIR 322, Irish and/or Northern Irish Literature (in English) or LIT 391/ENIR 395 (ENLT/ENIR 395) Special Topics in Irish Literature and Culture. A student wishing to begin the Irish Studies Minor must contact the Director of Irish Studies and complete the requisite paperwork.

Minor in Film Studies

A minor in film studies requires at least 27 credits including 12 credits worth of requirements and at least 15 credits worth of electives. Requirements: 1) ENFM/LS 180-Introduction to Film; 2) ENFM/LS 227-Film as Literature, Literature as Film; 3) ENFM 330-History of Film; 4) ENFM 427- Film Theory. For electives, students must choose at least five of the following courses. Two of these courses must be 300 level or above and two courses must focus on nations or cultures other than our own. Selections include the following: MAR 101, ENFM 222/MCLG 222, ENFM 320, ENFM 338/MCLG 338/FREN 338/LS338, ENFM 358/MCLG 358/LS 358, SPAN 359, LIT 376/LS 356, ENFM/LS 381, ENFM 443/MAR 443, ENFM 444, PHIL 340, PHIL 444, NAS 344, ENLT 380, ENT 442, ENFM 195, ENFM 295, ENFM 395, ENFM 495, ENFM 396, ENFM 496.

All students must meet the Upper Division Writing Requirement and pass the Writing Proficiency Assessment in keeping with the Academic Policy and Procedures in this catalog.

Sample Course of Study

Literature

First Year	A	S
WRIT 101 (ENEX 101)Composition	3	(3)
LIT 201 (ENLT 201L) Intro to Literary Studies	3	-
LIT 220L or 221L (ENLST 217L, 218L) Brit Lit: Medieval to Renaissance, Brit Lit: Enlightenment to Romantic	-	3
Modern or Classical language	5	5
Electives or General Education	4	7
	15	15
Second Year	**A**	**S**
LIT 222L, 210L, 211L (ENLT, 219:, 224:, 225L) Brit Lit Victorian to Contemp, American Lit I or American Lit II	3	-
LIT 222L, 210L, 211L (ENLT 219L, 224L, 225L) Brit Lit Victorian to Contemp, American Lit I or American Lit II	-	3
LIT 300 (ENLT 301) Literary Criticism	3	-

Modern or Classical language	4	4
Electives or General Education	6	7
	16	14
Third Year	**A**	**S**
LIT 327 (ENLT 320) Shakespeare	3	-
English Electives and General Education	12	15
	15	15
Fourth Year	**A**	**S**
LIT 494 (ENLT 401) Capstone Seminar	3	-
English Electives and General Education	12	15
	15	15

Creative Writing Option

First Year	**A**	**S**
WRIT 101 (ENEX 101) Composition	3	(3)
ENCR 210A, 211A or 212A Introduction to Creative Writing	(3)	3
LIT 200-Level British Literature course: LIT 220L, 221L, 222L (ENLT 217, 218, 219)	-	3
Modern and Classical language	5	5
Electives or General Education	4	4
	15	15
Second Year	**A**	**S**
LIT 200-level British or American Literature courses: LIT 220L, 221L, 222L, 210L, or 211L (ENLT 217, 218, 219, 224, or 225)	3	3
LIT 300 (ENLT 301) Literary Criticism	-	3
ENCR/ LIT/ENFM/ENIR elective	3	-
Foreign language	4	4
Electives or General Education	5	5
	15	15
Third Year	**A**	**S**
ENCR 310 or 311 or 312A Creative Writing	3	(3)
LIT 327 (ENLT 320) Shakespeare	3	-
LIT/ENFM/ENIR 300-level course	3	3
Electives and General Education	9	9
	15	15
Fourth Year	**A**	**S**
ENCR 310, 311, or 312A	3	-
ENCR 410, 411, or 412	-	3
LIT/ENFM/ENIR 300-level course	3	-
Electives and General Education	9	12
	15	15

English Teaching Option

First Year	**A**	**S**
WRIT 101 (ENEX 101) Composition	3	-
One of LIT 120L, 201 (ENLT 121L, 201) or ENCR 211A	3	-
LIT 220L or 221L (ENLT 217L or 218L) British Literature	-	3
LIT 210L or 211L (ENLT 224L or 225) American Literature	-	3
General Education and licensure requirements	9	9
	15	15
Second Year	**A**	**S**
LIT 222L, 210L, 211L (ENLT 219L, 224L, 225L) American Literature	3	-
LIT 300 (ENLT 301) Applied Literary Criticism	3	
LIT 327 (ENLT 320) Shakespeare	-	3
English elective	-	3
General Education and licensure requirements	9	9
	15	15

Third Year	A	S
One 300 or 400-level LIT course concentrating in American literature	3	-
One 300 or 400-level LIT course with diversity focus	3	-
ENT 439 Studies in Young Adult Literature	3	-
ENLI 465 Structure and History of English for Teachers	-	3
ENT 440 Teaching Writing	-	3
English elective	-	3
General Education and licensure requirements	9	8
	18	17
Fourth Year	**A**	**S**
ENT 441 Teaching Reading and Literature	3	-
ENT 442 Teaching Oral Language & Media Literacy	3	-
General Education and licensure requirements	12	-
Certification requirement of C&I 489 Student Teaching	-	14
Certification requirement of C&I 494 Professional Portfolio	-	1
	18	15

Film Option

First Year	A	S
WRIT 101 (ENEX 101) Composition	3	(3)
ENFM/LS 180 Introduction to Film	3	-
LIT 270L/ENFM 227L/LS 227L (ENLT 227L) Film as Literature, Literature as Film	-	3
Modern and classical Language	5	5
Electives/General Education	4	4
	15	15
Second Year	**A**	**S**
LIT270L/ENFM 227L/LS 227L (ENLT 227L) Film as Literature, Literature as Film	3	-
ENFM 327 National Cinema Course	3	3
Foreign Language	4	4
Electives/General Education	5	5
	15	15
Third Year	**A**	**S**
ENFM 381 Studies in Film	3	-
LIT 300 (ENLT 301) Applied Literary Criticism	3	-
LIT/ENFM 327 (ENLT 320) Shakespeare	3	3
Electives/General Education	6	9
LIT 376 (ENLT 325) Studies in Literature and Film	-	3
	15	15
Fourth Year	**A**	**S**
ENFM 427 Film Theory	3	-
Selections from Approved Film Offerings	6	6
ENT 442 Teaching Oral Language and Media Literacy	-	3
Electives/General Education	3	9
	15	15

Linguistics Option (General Linguistics)

First Year	A	S
WRIT 101 (ENEX 101) Composition	3	(3)
LIT 220 (ENLT 217L) British Literature	3	-
LIT 221L, 222L, 210L, 211L (ENLT 218L, 219L, 224L or 225L) (British or American Literature)	-	3
Modern and classical language	5	5
General Education	4	7
	15	15

Second Year	A	S
LIT 221L, 222L, 210L, 211L (ENLT 218L, 219L, 224L or 225L) (British or American Literature)	3	-
LIT 327 (ENLT 320) Shakespeare	-	3
LING 470 Introduction to Linguistic Analysis	-	3
Modern and classical language	4	4
General Education	8	5
	15	15

Third Year	A	S
ENLI 465 Structure and History of English for Teachers	-	3
LIT 349L (ENLT 349L) Studies in Medieval Literature or ENLT 350L Chaucer	3	-
LING 472 Syntax-Semantics	3	-
LING 474 Language, History, Variety, and Change	3	-
Electives and General Education	6	9
	15	12

Fourth Year	A	S
LING 473S Language and Culture or 475 Linguistic Field Methods	3	-
LING 475 Linguistic Field Methods or LING 484 North American Indian Linguistics	-	3
LING 476 Child Language Acquisition	-	3
LING 477 Bilingualism or 478 Second Language Acquisition	3	-
LING 489 Languages of the World	-	3
Electives	9	6
	15	15

Linguistics Option (Teaching ESL)

First Year	A	S
WRIT 101 (ENEX 101) Composition	3	(3)
LIT 221L, 222L, 210L, 211L (ENLT 218L, 219L, 224L or 225L) (British or American Literature)	-	3
Foreign language	5	5
General Education	7	7
	15	15

Second Year	A	S
LIT 220L (ENLT 217L) British Literature	3	-
LIT 221L, 222L, 210L, 211L (ENLT 218L, 219L, 224L or 225L) (British or American Literature)	-	3
LING 470 Introduction to Linguistic Analysis	-	3
Foreign language	4	4
General Education	8	5
	15	15

Third Year	A	S
ENLI 465 Structure and History of English for Teachers	-	3
LING 471 Phonology and Morphology	-	3
LING 472 Generative Syntax and Semantics	3	-
LING 477 Bilingualism or 478 Second Language Acquisition	3	-
LING 480 Teaching ESL	-	3
Linguistics elective	3	-
Electives and General Education	6	6
	15	15

Fourth Year	A	S
ENT 440 Teaching Writing	3	-
ENT 442 Teaching Oral Language and Media Literacy	-	3
LING 466 Pedagogical Grammar	3	-
LING 473 Language and Culture or 475 Linguistic Field Methods or 476 Child Language Acquisition	3	-
LING 481 ESL Professional	-	3
LING 491 ESL Practicum	-	1
Electives	6	8
	15	15

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

English As A Second Language (EASL)

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Expository Writing (WRIT)

U 101 (ENEX 101) College Writing I 3 cr. Offered every term. Prereq., WRIT 095 (ENEX 100)or proof of passing score on writing diagnostic examination, referral by WRIT 095 (ENEX 100) instructor-SAT writing score at or above 440, MUSWA at or above 3.5, SAT/ACT essay score at or above 7, or ACT Combined English/Writing score at or above 18. Expository prose and research paper; emphasis on structure, argument, development of ideas, clarity, style, and diction. Students expected to write without major faults in grammar or usage. Credit not allowed for both WRIT 101 (ENEX 101) and COM 101. Grading A-F, or NC (no credit).

U 191 (ENEX 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 (ENEX 198) Internship Variable cr. Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 201 (ENEX 200) College Writing II 3 cr. Offered autumn, spring, and summer semesters. Prereq., placement of C or better in WRIT 101 (ENEX 101). MUSWA at or above 5.5, SAT/ACT essay at or above 11, a SAT writing section score at or above 700 or a Combined English/Writing portion of the ACT at or above 32. Designed for first year students with advanced writing ability and students who seek a lower-division writing course. Offers opportunities for instruction in rhetorical reading and writing, particularly the study and practice of written argumentation in different academic and civic contests.

U 391 (ENEX 395) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 (ENEX 398) Internship Variable cr. Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 491 (ENEX 495) Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 492 (ENEX 496) Independent Study 1-3 cr. (R-9) Offered every term. Prereq., consent of instr. and chair, and junior or senior standing. Special projects in expository writing. Only one 496 may be taken per semester.

G 540 (ENEX 540) Teaching College Level Composition 3 cr. Offered autumn. Restricted to graduate students teaching expository writing at The University of Montana. Theory and pedagogy of teaching college composition are emphasized.

G 595 (ENEX 595)Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 (ENEX 596) Graduate Independent Study 1-3 cr. (R-9) Offered every term. Prereq., consent of instr. and chair. Special projects in expository writing. Only one 596 may be taken per semester.

Creative Writing (ENCR)

U 110L Montana Writers Live! 3 cr. (R-6) Offered autumn. Open to all majors. An introduction to Montana's practicing creative writers and their work through reading, live performances and discussion. Regional poets and prose writers will read from their work and lead class discussion. Students prepare questions developed from readings and criticism.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 210A Introduction to Creative Writing: Fiction 3 cr. Offered every term. An introductory writing workshop focused on the reading, discussion, and revision of students' short fiction. Students will also be introduced to models of fiction techniques. No prior experience in writing short fiction required.

U 211A Introduction to Creative Writing: Poetry 3 cr. Offered every term. An introductory writing workshop focused on the reading,

discussion, and revision of students' poems. Students also will be introduced to models of poetic techniques. No prior experience in writing poetry required.

U 212A Beginning Creative Writing: Nonfiction 3 cr. Offered every semester. Study of the art of nonfiction through reading and responding to contemporary nonfiction and the wiring of original nonfiction works. Focus is on creative expression, writing technique and nonfiction forms. Students begin with writing exercises and brief essays, advancing to longer forms as the semester progresses.

U 310 Creative Writing: Fiction 3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. An intermediate fiction writing workshop. Students will be expected to finish 3 or 4 substantial stories for the course. Although some outside material will be considered, the primary emphasis will be analysis and discussion of student work. Students are expected to have done promising work in ENCR 210A.

U 311 Creative Writing: Poetry 3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. An intermediate workshop involving critical analysis of students' work-in-progress as well as reading and discussion of poems in an anthology. Numerous directed writing assignments, experiments, exercises focused on technical considerations like diction, rhythm, rhyme, and imagery.

U 312A Introduction to Creative Nonfiction 3 cr. Offered autumn. Prereq., consent of instr. Study of various forms of nonfiction with emphasis on memoir, personal essay, lyrical essay, travel and nature writing and interactive journalism.

U 390 Supervised Internship 1-3 cr. (R-9) Offered intermittently. Prereq., consent of faculty supervisor and department chair.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr. Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements on and off campus. Prior approval must be obtained from the faculty supervisor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 410 Advanced Creative Writing: Fiction Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr. An advanced writing workshop in which student manuscripts are read and criticized. Rewriting of work already begun (in ENCR 310 classes) will be encouraged.

UG 411 Advanced Creative Writing: Poetry Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr. An advanced writing workshop involving critical analysis of students' work-in-progress, as well as reading and discussion of poems by established poets. Discussions will focus on structure and stylistic refinement, with emphasis on revision. Different techniques, schools and poetic voices will be encouraged. Frequent individual conferences.

UG 412 Creative Non-Fiction 3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. A creative writing workshop focused primarily on personal essay. Attention given to writing and publishing professional magazine essays. Students complete two substantial essays.

UG 495 Special Topics 1-6 cr. (R-6) Offered Intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-3 cr. (R-9) Offered every term. Prereq., consent of instr. and chair, and junior or senior standing. Special projects in creative writing. Only one 496 may be taken per semester.

G 510 Fiction Workshop Variable cr. (R-15) Offered autumn and spring. Prereq., consent of instr.

G 511 Poetry Workshop Variable cr. (R-15) Offered autumn and spring. Prereq., consent of instr.

G 512 Non-Fiction Workshop Variable cr. (R-15) Offered autumn and spring. Prereq., consent of instr. A creative writing workshop focused primarily on personal essay. Attention given to writing and publishing professional magazine essays. Students complete two substantial essays.

G 514 Techniques of Modern Fiction Variable cr. (R-6) Offered intermittently. Prereq., consent of instr. Intensive reading of contemporary prose writers.

G 515 Traditional Prosody 3 cr. Offered intermittently. Prereq., consent of instr. Intensive practice and readings in prosodic and other poetic techniques.

G 516 Topics in Creative Writing 3 cr. (R-9) Offered intermittently. Visiting writers explore readings in their genres of specialty. Each writer chooses the focus, reading list, and assignments for the course.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Graduate Independent Study 1-9 cr. (R-9) Offered every term. Prereq., consent of instr. and chair. Special projects in creative writing. Only one 596 permitted per semester.

G 599 Thesis Creative Writing Variable cr. (R-12) Offered every term.

Film (ENFM)

U 180L Introduction to Film 3 cr. Offered every term. Same as LS 180. The history and development of the film medium. Emphasis on critical analysis of selected classic or significant films.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 222L German Cinema 3 cr. Offered intermittently. Same as MCLG 222L and LS 282L. The development of the German film from its beginnings in 1895 down through the contemporary New German Cinema. Topics include Expressionism, New Objectivity, the Nazi film, the German contribution to Hollywood, the post-war film in East and West Germany, and film in unified Germany. Credit not allowed for LS 282L or MCLG 222L and 322L GRMN (GERM 361L).

U 227L Film as Literature, Literature as Film 3 cr. (R-6) Offered autumn and/or spring. Same as LIT 270L (ENLT 227) and LS 227L. Studies of the relationship between film and literature. Topics vary.

U 295 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 320 Shakespeare and Film 3 cr. Offered once a year. Same as LIT 327. Prereq., LIT 300 (ENLT 301) or consent of instr. A survey of selected Shakespeare plays emphasizing close reading of the texts and consideration of their dramatic possibilities in relation to film.

U 330 History of Film 3 cr. Offered every year. Prereq., ENFM 180, 227. Survey of film history.

U 338 The French Cinema 3 cr. Offered intermittently. Same as MCLG and LS 338. An historical, aesthetic, and critical survey of the French cinema, from its beginnings in 1895 through the contemporary cinema (Muet, classical, Realism, Nouvelle Vogue, etc.) With an introduction to contemporary film criticism. Students taking the course for French credits are required to do research, reading, and writing in the French language.

U 344 Native Americans and Film 3 cr. Offered once each year. Same as NAS 344. Surveys the image of Native Americans in American film with an emphasis on "revisionist," or "breakthrough" films. Ultimate focus will be on films featuring Native American writers, directors and actors.

U 358 Latin American Civilization through Literature and Film 3 cr. Offered in autumn odd-numbered years. Same as MCLG 358. The development of the traditional society of Latin American civilization through the interaction of European, Indian and African elements. Credit allowed only for one of the cross-listed courses: LS/MCLG 358 or SPNS 359 (SPAN 359).

UG 381 Studies in the Film 3 cr. Offered autumn and spring. Prereq., ENFM/LS 180 or consent of instr. Same as LS and MCLG 381. Studies in genres, directors, movements, problems, etc.

U 395 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics

UG 427 Film Theory 3 cr. Offered yearly. This course examines key approaches to film theory and criticism, and the theoretical roots of each. Classic and contemporary films will be assessed in the light of the theories covered.

UG 443 Documentary: Theory and Practice 3 cr. Offered yearly. Same as MAR 443. Designed to bring together Film Studies students (theorists) and Media Arts students (filmmakers) so they may draw from their respective fields to collaborate on the production of documentaries. After exposure to both documentary history and criticism, students will be required to work with a team of producers in learning the basic skills involved in documentary production.

UG 444 Film Directors 3 cr. (R-9) Offered every year. Prereq. ENFM 180. Intensive study of the life and work of one major film director.

UG 495 Special Topics 1-6 cr. (R-6) (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics

U 496 Independent Study 1-3 cr. (R-9) Offered every term. Pereq., consent of instr. and chair, and junior or senior standing. Special Projects in film. Only one 496 may be taken per semester.

Linguistics (ENLI)

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 270S Introduction to Linguistics 3 cr. Offered every term. Same as LING 270S. Introduction to the field of modern linguistics and to

the nature of language. Emphasis on the ways different cultures develop symbol systems for representing meaning.

U 295 Special Topics Variable cr. (R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 395 Special Topics Variable cr. (R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 465 Structure and History of English for Teachers 3 cr. Offered intermittently. Same as LING 465. The development of the English language from a historical perspective contrasted with the phonological and grammatical structure of English from a modern linguistic point of view, specifically designed for teachers.

UG 470 Introduction to Linguistic Analysis 3 cr. Offered every term. Same as LING 470. An introduction to the field of modern linguistics and to the nature of language. Emphasis on linguistic analysis.

UG 480 Teaching English as a Foreign Language 3 cr. Offered spring. Prereq., ENLI 270S or equiv. and LING 466 or 471 or 472. Same as LING 480. The application of principles of modern linguistics to the problems of teaching English as a foreign language.

UG 491 ESL Practicum 1-3 cr. Offered every term. Same as LING 491. Students with a teaching major take the course for 3 credits; others take it for 1 credit and do one third of the work.

UG 495 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

English Teaching (ENT)

English teaching courses do not count toward majors under the Literature, English Linguistics, and Creative Writing options.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr. Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 439 Studies in Young Adult Literature 3 cr. Offered autumn. Reading of representative texts covering the history, genres, authors, and themes of literature for students in middle school and high school.

UG 440 Teaching Writing 3 cr. Offered autumn and spring. Prereq., C&I 303, senior standing and consent of instr. Emphasis on teaching writing in grades 5-12. Research about development and maturity of writers, overview of schools of writing/history of writing instruction, strategies for teaching writing as a process, elements of writing craft, criteria for assessing and responding to writing, peer-coaching methods, writing/reading workshops, the role of grammar in improving writing, writing/reading connections, assignment characteristics, and grading practices. Required of students pursuing secondary English major and minor teaching certificates.

UG 441 Teaching Reading and Literature 3 cr. Offered autumn and spring. Prereq., ENT 439, admission to teacher education and consent of instr. Emphasis on various approaches to teaching reading and literature in grades 5-12. Research about the development and maturity of readers, strategies for teaching reading comprehension and vocabulary, strategies for diagnosing reading abilities and criteria for reading assessment, reading workshops/literature circles. Emphasis on various approaches to teaching literature: generic, thematic, chronological and interdisciplinary. Includes techniques for developing evaluative, interpretive, perceptive, and personal responses to prose, poetry, film and other media. Focus on the design of lesson plans and curriculum using traditional, young adult, and multicultural literature in grades 5-12. Required of students pursuing secondary English major and minor teaching certificates.

UG 442 Teaching Oral Language and Media Literacy 3 cr. Offered autumn and spring. Prereq., ENLI 465, admission to Teacher Education, and consent of instr. Emphasis on preparation, implementation, and evaluation of teaching strategies and materials in grades 5-12. Includes learning objectives, teaching styles, unit plans, print and non-print media, and creative drama. Explores student-centered curriculum, with emphasis on developmental abilities in reading, speaking, listening and viewing. Special emphasis on language and language development. Teaching majors and minors in areas other than English should enroll in ENT 440.

UG 495 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-3 cr. (R-9) Offered every term. Prereq., consent of instr. and chair, and junior or senior standing. Special projects in English teaching. Only one 496 may be taken per semester.

G 542 Theories and Pedagogies of Rhetoric and Composition 3 cr. Offered intermittently. Exploration of contemporary theories and

practical strategies for teaching rhetoric and composition grades 5-16.

G 543 Advanced Teaching Strategies for Young Adult Literature 3 cr. Offered intermittently. Prereq., teaching experience or senior standing (3.0 GPA and petition) with consent of instr. Selecting, reading, teaching, and evaluating young adult literature. Design of thematic units with emphasis on students' responses to literature. Presentation of multicultural literature, gender equity, censorship, and media issues.

G 544 Creative Drama in English Class 3 cr. Offered intermittently. Prereq., teaching experience, or senior standing (3.0 GPA and petition) with consent of instr. Designing, teaching and evaluating creative drama in the English language arts classroom. Emphasis on using creative drama as a learning skill to teach literature and language.

G 545 Theories and Pedagogies of Literacy 3 cr. Offered intermittently. Exploration of contemporary theories and practical strategies for teaching literacy grades 5-16.

G 546 Theories of Literary Criticism for Teachers 3 cr. Offered intermittently. Prereq., teaching experience or senior standing (3.0 GPA and petition) with consent of instr. Emphasis on a variety of theories which focus on reader responses. Application of theories to prose and poetry genres.

G 547 Advanced Teaching Strategies for Writing and Reading 3 cr. Offered intermittently. Prereq., teaching experience, or senior standing (3.0 GPA and petition) with consent of instr. Current research and best practices in teaching writing and reading in all content areas. Emphasis on writing and reading processes, workshops, conferences and portfolios. National and state standards, curriculum, and assessments in writing and reading are addressed.

G 548 Portfolios and Assessment in English Language Arts 3 cr. Offered intermittently. Prereq., teaching experience, or senior standing (3.0 GPA and petition) with consent of instr. Selecting, designing, and evaluating informal and formal assessments in English Language Arts. Exploration of portfolios as assessment strategies that align curriculum and instruction. Focus on content and performance standards, evaluation criteria and rubrics, and role of reflection in teaching and learning.

G 550 Montana Writing Project 9 cr. Offered summer. Prereq., special application and consent of director. Intensive, four-week program designed to increase the effectiveness of the teaching and learning of writing in all levels of education in Montana. For graduate students, K-12 teachers in all content disciplines and university level educators.

G 551 Writing the Professional Paper 3 cr. Offered intermittently. Guidelines and mentoring for individual research projects that culminate in writing the professional paper for completion of the M.A. in English Teaching.

G 552 Montana Writing Project Leadership Training 7 cr. Offered intermittently Prereq., ENT 440, special application, and consent of director. Intensive leadership training for Montana Writing Project teacher-consultants in responding to peer writing, organizing professional development institutes, honing strategies for curriculum development and institute design to provide professional development statewide that increases the effectiveness of teaching and learning of writing in all levels of education, pre-20.

G 553 Niitsitapi Ways of Knowing and Teaching: An Institute for Writing, Reading, Inquiry and Reflection 7cr. Offered summer at Blackfeet Community College. Focus is on writing across the curriculum in the context of participants' teaching assignments alongside the essential component of Niitsitapi (Blackfeet) culture and ways of knowing. Participants develop a theoretical articulation of what it means to write in their disciplinary area(s) of endorsement and with predominantly Blackfeet students. Participants design and critique writing curriculum and instruction in their disciplines with attention to theory and research on writing in the content areas and Blackfeet ways of knowing.

G 593 Professional Paper (Teacher) Variable cr. (R-4) Offered intermittently. Pedagogical paper for the Master of Arts (Teacher Option). Credit not allowed toward any other degree.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., teaching experience or senior standing (3.0 GPA and petition) with consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Graduate Independent Study 1-9 cr. (R-9) Offered every term. Prereq., consent of instr. and chair. Special projects in English teaching. Only one 596 permitted per semester.

G 598 Internship Variable cr. (R-9) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

Literature (LIT)

U 110L (ENLT 120L) Introduction to Literature 3 cr. Offered every term. Study of how readers make meaning of texts and how texts influence readers. Emphasis on interpreting literary texts: close reading, critical analysis and effective writing.

U 120L (ENLT 121L) Poetry 3 cr. Offered every term. An introduction to the techniques of reading and writing about poetry with emphasis on the lyric and other shorter forms.

U 191 (ENLT 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201 (ENLT 201L) Introduction to Literary Studies 3 cr. Offered every term. Introduction to the field of literary studies, to the literature option for English majors, and to the conventions of literary analysis. Reading, writing, and research skills will be stressed, along with interpretative approaches to major genres within the field.

U 210L (ENLT 224L) American Literature I 3 cr. Offered every term. Representative texts from the pre-colonial period through the Civil War.

U 211L (ENLT 225L)American Literature II 3 cr. Offered every term. Representative texts from the Civil War to the present.

U 220L (ENLT 217L) British Literature: Medieval to Renaissance 3 cr. Offered every term. Representative texts from the Anglo-Saxon period through the Renaissance.

U 221L (ENLT 218L) British Literature: Enlightenment to Romantic 3 cr. Offered every term. Survey of British literature from the seventeenth through the eighteenth century.

U 222L (ENLT 219L) British Literature: Victorian to Contemporary 3 cr. Offered every term. Survey of British literature from the early nineteenth century to the present.

U 270L (ENLT 227L) Film and Literature 3 cr. (R-6) Offered intermittently. Same as ENFM 227L and LS 227L. Studies of the relationship between film and literature. Topics vary.

U 300 (ENLT 301)Literary Criticism 3 cr. Offered every term. Prereq. or coreq., 12 credits of lower-division English courses. Study of various literary theories and their application to literary texts.

UG 301 (ENLT 323) Studies in Literary Forms 3 cr. (R-9) Offered intermittently. Prereq., LIT 300 (ENLT 301) or consent of instr. Same as LS 323. Reading of various authors from different literary periods and cultures working in the same mode of composition (courses offered under this rubric may include Literature of Place, Modern Drama, 19th Century Fiction, 20th Century Fiction, Lyric Poetry, Science Fiction, Autobiography; less frequently, Travel Literature, Popular Fiction, Epic, Tragedy, Satire, Romance, Comedy).

U 304 (ENLT 327) U. S. Writers of Color 3cr. Offered intermittently. Prereq., LIT 300 (ENLT 301) or consent of instr. Selected readings from African American, Asian American, Chicano/a, Latino/a, and Native American literatures.

UG 305 (ENLT 329) Native American Literature 3 cr. Offered autumn. Prereq., three credits of lower-division LIT courses and NAS 100H or 202. Same as NAS 329. Selected readings from Native American literature with special emphasis on the literature of writers from the Rocky Mountain west.

U 314 (ENLT 335) The American Novel 3 cr. Offered autumn or spring. Prereq., LIT 210L or 211L (ENLT 224L or 225L) and prereq. or coreq., LIT 300 (ENLT 301). Examination of a limited number of American novels in their historical, cultural, and literary contexts. Exploration of literary movements such as realism, naturalism, modernism, and postmodernism. Discussion of critical theories and application to the texts.

U 315 (ENLT 331) Voices of the American Renaissance 3 cr. Offered alternate years. Prereq., LIT 210L or 211L (ENLT 224L or 225L) and LIT 300 (ENLT 301) or consent of instr. Perspectives on antebellum Native American, African American, and gender issues. Study of the poetry of Walt Whitman and Emily Dickinson in light of these three perspectives.

U 316 (ENLT 373) Topics in Postcolonial Literatures 3 cr. Offered alternate years. Prereq., LIT 210L or 211L (ENLT 224L or 225L) and LIT 300 (ENLT 301).

UG 327 (ENLT 320) Shakespeare 3 cr. Same as ENFM 320. Offered autumn and spring. Prereq., LIT 300 (ENLT 301) or consent of instr. A survey of selected Shakespeare plays emphasizing close reading of the texts and consideration of their dramatic possibilities.

U 328 (ENLT 328L) Gender and Sexuality in English Fiction 3 cr. Offered yearly. Same as LIT 327 and WGS 327. Major 19th or 20th century novels and short stories written in English in different parts of the world and how these texts explore changing concepts of gender and sexuality.

UG 331 (ENLT 321) Major Author 3 cr. (R-9) Offered autumn and spring. Prereq., LIT 300 (ENLT 301) or consent of instr. Intensive study of the life and works of one author writing in English (courses offered under this rubric may include Chaucer, Milton, Faulkner, Joyce, Twain; less frequently, Conrad, Hemingway, Blake, Woolf, D.H. Lawrence, Welty).

U 335 (ENLT 336) American Women Writers 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Same as WS 336. Consideration of political and aesthetic purposes in women's fiction through a progression of 19th century literary forms: a cautionary seduction novel, sentimental and domestic novels, realism, naturalism, and utopianism.

U 336 (ENLT 326) Doctors' Stories 3 cr. Offered intermittently. Selected works by physician writers, exploring literary approaches to themes of illness and healing. Authors include Anton Chekhov, William Carlos Williams, Richard Selzer, Dannie Abse and others.

U 342L (ENLT 338L) Montana Writers 3 cr. Offered intermittently. Prereq., LIT 210L or 211L (ENLT 224L or 225L) . Examination of poems, stories, and novels by or about Montanans and the treatment and representation of race, place, class, gender, sexuality, and identity in Montana. Exploration of the myths and realities of Montana and the American West.

U 343 (ENLT 337) African-American Literature 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Selected works by African-American authors. Course may define a narrowed focus such as poetry, women writers, etc.

U 349L (ENLT 349L) Medieval Literature 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Exploration of literature from the medieval period (400-1500), focusing on the major cultural and intellectual influences on the emergence of vernacular writing. Topics will vary, but will regularly include Anglo-Saxon literature and Middle English literature (excluding Chaucer).

U 350L (ENLT 350L) Chaucer 3 cr. Offered alternate years. Critical reading of Chaucer's masterpiece, the Canterbury Tales, with attention to Chaucerian irony, the author's place in literary history, and issues in Chaucer studies.

U 351 (ENLT 351) Donne and His Followers 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Close study of John Donne and other early 17th century religious poets within the context of Renaissance intellectual history.

U 353 (ENLT 353) Milton 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Selected study of poetry and prose of Milton.

U 355 (ENLT 355) British Romanticism 3 cr. Offered alternate years. Prereq. or coreq., LIT 300 (ENLT 301). Introduction to the major texts, themes, and authors of British literature from 1790-1815, focusing on poets such as Blake, Barbauld, Wordsworth, Coleridge, and P.B. Shelley but attending also to prose writers from Austen to Mary Shelley.

U 357 (ENLT 357) Victorian Literature and Culture 3 cr. Offered alternate years. Survey of British Victorian literature from a cultural perspective, focusing on the connections between literary texts and their social-historical contexts.

U 358 (ENLT 358) British Modernism 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Study of British literature from about 1885 to about 1950.

U 362 (ENLT 334) Postwar Poetry 3 cr. Offered intermittently. Prereq., LIT 300 (ENLT 301) or consent of instr. Study of postwar American (and, less frequently, British and Irish) poetry. A broad survey of six or more poets including George Oppen, Gwendolyn Brooks, Elizabeth Bishop, Robert Creeley, James Merrill, Adrienne Rich, John Ashbery, and Geoffrey Hill, among others, or a more detailed study of two or three major poets.

U 363 (ENLT 333) Modern Poetry 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Survey of modern poetry in English beginning with Emily Dickinson and Walt Whitman and moving toward the present, centering on modernist poets.

U 369 (ENLT 369) Short Fiction 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instructor. Study of selected short stories and novellas from mid-19th century to the present.

U 370 (ENLT 370) Science Fiction 3 cr. Offered intermittently. Prereq., LIT 300 (ENLT 301) or consent of instr. Study of the science fiction genre from its pulp magazine beginnings in the 1920s to the present.

U 373 (ENLT 371) Literature and the Environment 3 cr. Offered autumn. Prereq., LIT 210L or 211L (ENLT 224L or 225L) and LIT 300 (ENLT 301) or consent of instr. Study of major texts and issues in American nature writing.

UG 375 (ENLT 322) Literary History 3 cr. (R-9) Offered autumn and spring. Prereq., LIT 300 (ENLT 301) or consent of instr. Study of influences on and innovations in the works of various authors within a particular literary historical period in England or America (e.g. British Renaissance, 18th century, Victorian, British Modern, American Puritanism, American Realism and Naturalism; 17th century).

UG 376 (ENLT 325) Literature and Other Disciplines 3 cr. (R-9) Offered autumn and spring. Prereq., nine credits in LIT or LS or consent of instr. Same as LS 356. Selected works of literature studied in conjunction with works of art, music, religion, philosophy, or another discipline (e.g. Film and Literature, Modernism, Literature and Science, Bible as Literature, Song).

U 378L (ENLT 372) Gay and Lesbian Studies 3 cr. Offered alternate years. Prereq., LIT 300 (ENLT 301) or consent of instr. Same as WS 372. Review of the history of the gay and lesbian movement as a basis for understanding the political, social, and sexual issues that influenced homoerotic cultural representation in plays, films, poetry, and novels.

U 391 (ENLT 395) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 (ENLT 398) Internship Variable cr. Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 420 (ENLT 421) Critical Theory 3 cr. (R-9) Offered autumn or spring. Prereq., LIT 300 (ENLT 301) and six credits in literature courses numbered 300 or higher or consent of instr. Same as LS 461. Study and application of one or more theoretical approaches to

interpreting texts (e.g., aesthetic poststructural, new historicist, classical, Renaissance, Romantic, narrative, psychoanalytic, formalist, neo-Marxist, feminist, gender, cultural studies and reader-response theory).

UG 421 (ENLT 420) History of Criticism and Theory 3 cr. Offered autumn or spring. Prereq., LIT 300 (ENLT 301) and six credits in literature courses numbered 300 or higher or consent of instr. Same as LS 460. Survey of the historical development of critical theories which shaped ways of reading and writing from Plato and Aristotle to the present.

UG 429 (ENLT 429L)Studies in Native American Autobiography 3 cr. Offered intermittently. Same as NAS 410. Prereq., LIT 300 (ENLT 301) or LIT 305 (ENLT 329)/NAS 329, or consent of instr. Study of texts that present a first-person story of an American Indian individual's life within historical and cultural contexts, with discussion of theories of autobiography.

UG 430 (ENLT 430) Studies in Comparative Literature 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Same as LS 455 and MCLG 440. The study of important literary ideas, genres, trends and movements. Credit not allowed for the same topic in more than one course numbered 430, LS 455, MCLG 440, or MCLG 494.

UG 491 (ENLT 495) Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 492 (ENLT 496) Independent Study 1-3 cr. (R-9) Offered every term. Prereq., consent of instr. and chair, and junior or senior standing. Special projects in literature. Only one 496 may be taken per semester. Consent must be obtained prior to enrollment.

U 494 (ENLT 401) Capstone Seminar in Literature 3 cr. Offered autumn and spring.. Prereq., LIT 300 (ENLT 301) and nine credits in literature courses numbered higher than 300. Required for completing the English literature option, this seminar will allow students to conduct advanced studies in literary figures and topics chosen by faculty to engage a broad range of interests. A long research paper is required.

U 499 (ENLT 499) Honors Thesis Variable cr. (R-9) Offered intermittently. Prereq., consent of chair.

G 500 (ENLT 500) Introduction to Graduate Studies 3 cr. Offered autumn. Instruction in advanced literary and cultural theory, library and research skills, and academic genres.

G 520 (ENLT 520) Seminar in British Literature 3 cr. (R-9) Offered every autumn and spring. Prereq., consent of instructor. Topics will vary.

G 521 (ENLT 521) Seminar in American Literature 3 cr. (R-9) Offered autumn and spring. Prereq., consent of instr. Topics will vary.

G 522 (ENLT 522) Seminar in Comparative Literature 3 cr. (R-9) Same as MCLG 522. Offered autumn and spring. Prereq., consent of instructor. Topics will vary.

G 524 (ENLT 524) Nature, Language and Politics 3 cr. Offered intermittently. Same as PHIL 506. Investigation of environmental, social and political thought from the perspective of contemporary language theory.

G 595 (ENLT 595) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 (ENLT 596) Graduate Independent Study Variable cr. (R-9) Offered every term. Prereq., consent of instr. and chair. Special projects in literature. Only one 596 permitted per semester. Consent must be obtained prior to enrollment.

G 598 (ENLT 598) Internship Variable cr. (R-9) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 (ENLT 599) Thesis Variable cr. (R-6) Offered every term.

Irish Studies (ENIR)

U101 Elementary Irish 1 3 cr. Offered autumn or spring. Same as IRSH 101. This course represents an introduction to modern Irish in both its spoken and written forms: basic principles of grammar and sentence structure are covered. Emphasis is placed on the application of these principles in every-day situations. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103.

U102 Elementary Irish II 3 cr. Offered autumn or spring. Same as IRSH 102. The primary objective of this course is to build on the foundations laid in Beginning Irish I. Students will expand their vocabulary with a special focus on verbs; they will also engage new themes that demand a corresponding increase in their store of nouns, adjectives, idioms and expressions. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103

U103 Elementary Irish III 3 cr. Offered autumn or spring. Same as IRSH 103. The primary objective of this course is to build on the foundations laid in Beginning Irish I. Students will expand their vocabulary with a special focus on verbs; they will also engage new themes

that demand a corresponding increase in their store of nouns, adjectives, idioms and expressions. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103

U 249 The Irish and Irish-Americans 3 cr. Offered autumn odd-numbered years. Same as HSTR 250 (HIST 249). Ireland, the Irish people, and the Irish diaspora, from first settlement to contemporary troubles.

UG 321 Studies in a Major Author: Joyce 3 cr. (R-9) Offered autumn and spring. Same as LIT 331 (ENLT 321) when the topic is Joyce. Prereq., LIT 300 (ENLT 301) or consent of instr. Intensive study of the life and works of James Joyce.

UG 322 Studies in Literary History: Irish/Northern Irish Literature 3 cr. (R-9) Offered autumn and spring. Prereq., LIT 300 (ENLT 301) or consent of instr. Study of influences on and innovations in the works of various authors within a particular literary historical period in England or America (every two years, British Renaissance, Age of Johnson, Romantic, Victorian, British Modern, American Puritanism to Transcendentalism, American Realism and Naturalism, American Romanticism; less frequently, Medieval, 17th century).

UG 325 Studies in Literature and Other Disciplines: Poetry and Partition 3 cr. (R-9) Offered autumn and spring. Prereq., nine credits in LIT or LS or consent of instr. Same as LIT 376 (ENLT 325) and LS 356. Selected works of Irish literature studied in conjunction with works of art, music, religion, philosophy, or another discipline.

U 345 Literature in the Irish Language 3cr. Offered autumn or spring. This course acknowledges Irish as the oldest documented vernacular in Europe and its literature as a voice that is over 1500 years old. Examines the response of Gaelic Ireland to invasion, conquest, and colonization as articulated by its literature.

U 360 Irish/Northern Irish Literature 3 cr. Offered autumn or spring. Examines (in English) selection of fiction, poetry, drama, film, and music from the Irish and/or Northern Irish literary traditions. Students will seek to understand how artists respond to the burdens of history, identity, and political conflict, and how they articulate the possibilities afforded by Ireland's changing position in the world.

U 380 Topics in Irish Studies 3 cr. Offered alternate years. A rotating variety of special topics in Irish Studies, including Irish and Irish-American cinema, major Irish/N. Irish authors, Irish cultural studies, and transatlantic and comparative studies.

U 395 Special Topics in Irish Studies 3 cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics;

UG 430 Studies in Comparative Literature: Multicultural British Literature 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Same as LIT 430 (ENLT 430), LS 455 and MCLG 440. The study of important literary ideas, genres, trends and movements. Credit not allowed for the same topic in more than one course numbered 430, LS 455, MCLG 440, or MCLG 494.

Faculty

Professors

- Heather Bruce, Ph.D., University of Utah, 1997
- Kevin Canty, M.F.A., University of Arizona, 1993
- Casey Charles, Ph.D., State University of New York, Buffalo, 1992
- Beverly Ann Chin, Ph.D., University of Oregon, 1973
- Debra Magpie Earling, M.F.A., Cornell University, 1991
- John Glendening, Ph.D., Indiana University, 1992
- Brady Harrison, Ph.D., University of Illinois, 1994
- Christopher J. Knight, Ph.D., New York University, 1982
- Deirdre McNamer, M.F.A., The University of Montana, 1987
- David L Moore, Ph.D., University of Washington, 1994
- Greg Pape, M.F.A., University of Arizona, 1974
- Jocelyn Siler, M.F.A., The University of Montana, 1977

Associate Professors

- Robert Baker, Ph.D., Cornell University, 1997
- Jill Bergman, Ph.D., University of Illinois, 1999 (Chair)
- Judy Blunt, M.F.A., The University of Montana, 1994
- Nancy Cook, Ph.D., State University of New York, Buffalo, 1991
- John Hunt, Ph.D., Stanford University, 1984 (Associate Chair)
- Kathleen M. Kane, Ph.D., University of Texas, 1997
- Ashby Kinch, Ph.D., University of Michigan, 2000
- Joanna Klink, Ph.D., The John Hopkins University, 2000
- Kathleen J. Ryan, Ph.D., University of North Carolina, Greensboro, 2001
- Prageeta Sharma, M.F.A., Brown University, 1995
- Karen Volkman, M.F.A., Syracuse University, 1992

Assistant Professors

- Brian Blanchfield, M.F.A., Warren Wilson College Program for Writers, 1999 (visiting)
- Rob Browning, Ph.D., Indiana University, 2004 (visiting)
- Louise Economides, Ph.D., Indiana University, 2003
- Lynn Itagaki, Ph.D., University of California at Los Angeles, 2004
- Eric Reimer, Ph.D., University of Oregon, 2002

Lecturers

- Sean O'Brien, Ph.D., University of Colorado, 1989
- Traolach O'Riordain, Ph.D., National University of Ireland, Co. Cork, Ireland
- Robert Pack, M.S., Columbia University, 1953 (Distinguished Senior Lecturer)
- Robert Stubblefield, M.F.A., University of Montana, 1994

Emeritus Professors

- Richard R. Adler, Ph.D., University of Illinois, 1971
- William Bevis, Ph.D., University of California, Berkeley, 1969
- Jesse Bier, Ph.D., Princeton University, 1956
- Bruce Bigley, Ph.D., Yale University, 1972
- Gerry Brenner, Ph.D., University of Washington, 1965
- Walter L. Brown, Ph.D., University of California
- Merrel D. Clubb, Jr., Ph.D., University of Michigan, 1953
- Earl Ganz, Ph.D., University of Utah, 1977
- Patricia Goedicke, M.A., Ohio University, 1965
- Robert B. Hausmann, Ph.D., University of Wisconsin, 1972
- William Kittredge, M.F.A., University of Iowa, 1969
- Michael W. McClintock, Ph.D., Cornell University, 1970
- Lois Welch, Ph.D., Occidental College, 1966

Emeritus Associate Professors

- Robert B. Johnstone, Ph.D., University of Washington, 1970
- Dexter Roberts, Ph.D. Stanford University, 1966
- Veronica J. Stewart, Ph.D., State University of New York, Stony Brook, 1990

Environmental Studies

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Len Broberg, Director

The Environmental Studies Program (EVST) seeks to provide students with the literacy, skills and commitment needed to foster a healthy natural environment and to create a more sustainable, equitable, and peaceful world. To these ends, the EVST program educates and challenges students to become knowledgeable, motivated, and engaged in environmental affairs. We want our students to acquire the skills and awareness that will enable them to promote positive social change and to improve the environment and communities of Montana and thereby the lives of all Montanans. Our program is organized upon the following principles:

- -Environmental studies require an interdisciplinary approach that integrates the natural sciences, social sciences, and humanities.
- -Creating solutions to environmental problems requires enterprise and performance as well as reflection; therefore, an effective environmental education generates thinkers who can do as well as doers who can think.
- -It is important to provide both classroom and experiential learning opportunities in the arts and responsibilities of democratic citizenship, including communication, collaboration, and committed civic participation.
- -Students should be co-creators of their educational experience.

High School Preparation: Students in high school who are planning to major in environmental studies should take their schools' college preparatory curriculum. Courses in biology, chemistry, math through pre-calculus, and writing are recommended.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog (see index). For the Bachelor of Arts degree, every major in environmental studies will complete the following requirements:
Environmental Studies: EVST 101N, 167H, 201, 225, 360, 398, one of the following two courses, 302 or 367 and one of the following two courses 305L or 420 and at least 12 credits selected from 300 and/or 400 level courses offered by EVST.
Required courses outside Environmental Studies: BIOL 100N or 110N or 108N; CHMY 121N (CHEM 151N); STAT 216 (MATH 241),

and one, 3 credit NAS course from among the following: 100H, 231, 301E, 303E, 324, 329, 341, 342 or 410 or NASL 201X, 202L (NAS201H, 202).
The Upper-division Writing Expectation must be met by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Focus Areas of Study

Students are encouraged to select a minor or double major from another campus discipline or to focus in one of the following areas of study:
Sustainable Business: Students focus on creating and maintaining enterprises that meet social needs sustainably. In addition to satisfying the general requirements for a degree in environmental studies, students should take EVST 210, Sustainable Business Practices or BUS 160S, Issues in Sustainability; EVST 485, Environmental Citizenship or 487, Globalization, Justice and Environment; COMM 379, Communication, Consumption, and Climate; ACTG 201, 202 (ACCT 201, 202) Principals of Financial Accounting and Principals of Managerial Accounting; MIS 257 Business Law; MGMT 457 Entrepreneurship for Non-Business Majors. Students should also intern with a local sustainable business or the Sustainable Business Council. Students interested in this focus area are encouraged to double major in Business Management and in addition to the core Business courses take some of these courses: MGMT 348, Entrepreneurship; MGMT 430, Business Negotiations; MGMT 445, Small Business Management and Strategic Planning; MGMT 446, Strategic Management; MGMT 458, Advanced Entrepreneurship Seminar.

Environmental Writing and Literature: In addition to satisfying the general requirements for a degree in environmental studies, students desiring to focus in this area must complete EVST 305L, The Environmental Vision and EVST 373, Nature Works; at least one 3 credit course at the 200-level or above in either ENCR or LIT or JOUR; at least either one, 3 credit internship (*Camas* magazine, the Environmental Writing Institute, *Wild Mercy* reading series, or some other environmental publication; or one independent study credit (EVST 496, arranged with instructor) in either original nature writing or in nature literature study.

Pre-Law: In addition to satisfying the general requirements for a degree in environmental studies, students desiring to focus in environmental law must consult with the pre-law faculty advisor within environmental studies to design a suitable pre-law program. The pre-law study area is a flexible program designed to prepare students for law school and allow students to strengthen their background within their area of interest.

Sustainable Food and Farming: In addition to satisfying the general requirements for a degree in environmental studies, students desiring to focus in this area must complete: 6 supervised internship credits in the Program in Ecological Agriculture and Society (PEAS, EVST 390); EVST 430, Culture and Agriculture; and EVST 450, Food, Agriculture and Environment. In addition, students must complete 9 credits of advisor-approved courses or internships. These could include such courses as: FOR 210N, Introductory Soils, 362 Range Livestock Production, 424 Community Forestry Conservation; HHP 236N Nutrition; BMED 324 Medicinal Plants; ANTH 103 Food and Culture.

Water Resources: In addition to satisfying the general requirements for a degree in environmental studies, students desiring an emphasis in water resources must complete 20 credits of advisor-approved courses or internships. These could include such courses as BIOL 308, Biology & Management of Fishes; 366, Freshwater Ecology; 408, Advanced Fisheries Science; 415, Field Methods in Fisheries Biology and Management; 453 & 454, Lake & Stream Ecology at the Flathead Lake Biological Station; CHMY 442 (CHEM 442), Aquatic Chemistry; FOR 210, Soil Science; 385 & 386 Watershed Hydrology & Lab; 415, Environmental Soil Science; 455 Riparian Ecology Management; 485, Watershed Management; GEO (GEOS) 260, River Systems, 301 Environmental Geology; 320 Global Water; 327, Geochemistry; 460, Process Geomorphology; 420 Hydrogeology; GPHY (GEOG) 335 Water Policy. Note: Some of these courses require prerequisites not in the environmental studies core requirements. Students can also work with the UM Watershed health Clinic.

Sustainability Studies: With this focus area, students will increase their understanding of our earth's limited capacity to support all forms of life and to provide for the needs of human society. Students will learn how to reduce our demands on the earth through increased resource efficiency and choosing simpler but more joyful lifestyles. Students have the opportunity to identify and develop more sustainable means of providing food, shelter, mobility and other necessities. The focus puts students into the community to learn and to innovate. Students pursuing this focus area must complete 20 credits of advisor-approved courses or internships. These could include courses such as: EVST 204, Sustainable Technology Applications; 210, Sustainable Business Practices; 390, PEAS Internship, Sustainable Agriculture Education Practicum; COMM 379, Communication Consumption and Climate; and the energy related courses offered by the College of Technology such as NRG 101-102, Energy System I & II; 213, Power Systems Technology; 191, Energy Practicum; 242, Solar and Wind Systems; or 241, Alternative Fuels.

Environmental Justice: With this focus area students will develop the capacity for thoughtful active participation in the quest for environmental and social justice. Students gain in-depth understandings of a wide range of environmental injustices and the role of race, class, and gender in shaping quality of life, enjoyment of environmental amenities and access to natural resources both domestically and internationally. Students learn about the ways that business, government, financial institutions, and the labor and environmental movements can work toward a more just and sustainable society. In addition to satisfying the general requirements for a degree in environmental studies, students desiring to focus in this area must complete 21 credits including the following: EVST 477S Environmental Justice Issues and Solutions/Service Learning, 487 Globalization, Justice, and the Environment; 398 Internship (3 credits) and 12 credits of advisor-approved electives (contact the EVST office for a list of recommended courses).

Suggested Course of Study

First Year	A	S
BIOL 100N The Science of Life	3	-
WRIT 101 (ENEX 101) Composition	(3)	(3)
EVST 101N Environmental Science	3	-
EVST 167H Nature and Society	-	3
M 115 (MATH 117) Probability and Linear Mathematics	-	3
UNC 180 Environmental Studies Freshman Interest Group Seminar	1	-
Elective and General Education	6-9	7-10
Total	16	16
Second Year	**A**	**S**
CHMY 121N (CHEM 151N) General and Inorganic Chemistry	3	-
EVST 201 Environmental Information Resources	-	3
EVST 225 Community and Environment	3	-
STAT 216 (MATH 241) Statistics	4	-
Electives and General Education	6	12
Total	16	15
Third Year	**A**	**S**
EVST 302 Introduction to Environmental Regulation	-	3
EVST 360 Applied Ecology	3	-
EVST 367 Environmental Politics and Policies	3	-
EVST 420 U.S. Environmental Movement	3	-
EVST upper-division courses	3	3
Electives and General Education	3	9
Total	15	15
Fourth Year	**A**	**S**
EVST upper-division course	3	-
EVST 398 Cooperative Education	3	-
Electives and General Education	8	14
Total	14	14

Requirements for a Minor

To earn a minor the student must complete 25 credits. The following courses must be completed: EVST 101N, 167H, 225 and one of these ecology courses: BIOL 121N, EVST 360, FOR 330, or BIOL 340. The remaining credits can be from any other upper-division EVST courses.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G= for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Environmental Studies (EVST)

U 101N Environmental Science/Service Learning 3 cr. Offered autumn. Provides students with opportunities to use class knowledge to make a difference; helps students build all of the following: scientific literacy; skills in critical thinking, research and self-instruction; provides an understanding of the scientific basis of environmental issues, policies and laws; encourages habits of sustainable living, scientifically-informed, active participation in social decisions, and service to their community and to the earth.

U 167H Nature and Society 3 cr. Offered spring. The relationship between ideas about nature and the development of political and social ideas, institutions, and practices, primarily in western (Euro-American) society. Complements ethics offerings in philosophy aimed at environmental studies majors.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201 Environmental Information Resources 3 cr. Offered spring. Students learn how to find, evaluate and use existing information to increase understanding of environmental issues and resolve controversies. Students will: research a subject, using a variety of sources (referred literature, government sources, internet sources, interviews); evaluate sources critically; write a literature review and give an oral presentation on their topic. Focus is on critical thinking and dealing with the information explosion.

U 204 Sustainable Technology Applications 2 cr. (R-4) Offered intermittently autumn or spring. Prereq., EVST 167H. Review of the concept of sustainability in the context of the current American economic system and the extant applications of sustainability principles to private enterprise.

U 210 Sustainable Business Practices/Service Learning 3 cr. Offered Spring. Same as MGMT 210. Examination of the social and environmental responsibilities of business within a free-market system. Explores alternative models for organizational and economic development and focuses on sustainability-driven innovation as a strategic option for organizations.

U 225 Community and Environment 3 cr. Offered autumn. Same as SOCI 225 (SOC 225). Exploration of the ways that communities address their environmental concerns. Introduction of relevant social science concepts.

U 282 Field Skills for Conservation Work 3 cr. Coreq. EVST/RSCN 382, EVST/RSCN 383. Offered autumn by Northwest Connections. Via backcountry travel and hands-on field application, proficiency gained in wilderness first aid; natural history field journal techniques; navigation using map, compass, and GPS; collecting and recording scientific field data in remote settings; minimum impact camping and travel; backcountry preparedness; and basic woodsman skills.

U 294 Seminar 1-6 cr. (R-6) Offered intermittently.

U 295 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 302 Introduction to Environmental Regulation 3 cr. Offered spring. Introduction to the history, law and theory of environmental regulation in the United States using public and private land regulation mechanisms as case studies. Basic principles of constitutional and administrative law relevant to environmental regulation, substantive public and private land use law and the history of environmental problems and their regulation.

U 305L The Environmental Vision 3 cr. Offered autumn. Provides background, overview, interpretations, and understanding of key concepts, themes, approaches, and forms in American nature and environmental nonfiction as well as that literature's response to and influence on environmental events, figures, and movements.

U 311 Field Studies in Human/Ecological Communities and Public Land Issues 2-3 cr. (R-12) Offered every term. Via extended backcountry travel, experiential examination of cultural history and public lands management, and how those affect ecosystem integrity. Investigation of personal roles in and relationships with human and ecological communities. Offered by the Wild Rockies Field Institute.

UG 360 Applied Ecology 3 cr. Offered autumn. Prereq., BIOL 100N, CHMY 121N (CHEM 151N), EVST 201, STAT 216 (MATH 241). Understanding the principles and concepts of ecology and how they inform real life decisions about human interactions with the environment. Emphasizes the science of sustainability and the conservation of watersheds and biodiversity.

UG 367 Environmental Politics and Policies 3 cr. Offered autumn. Foundation in public lands history, bedrock environmental laws, policy processes and institutions. Research and analysis of current environmental and natural resource policy issues. Focus is domestic illustrated by case studies.

UG 371 Wilderness Issues Lecture Series 1 cr. (R-3) Offered spring. Same as RECM 371. Explores current issues in wilderness preservation, management and research.

U 373A Nature Works 3 cr. Offered spring. Prereq., consent of instr. Writing workshop for the creation, critique, and revision of essays about the environment to include natural history, personal narrative, science interpretation, advocacy/editorial, place-based essay, and others. Examination of concepts, forms, and approaches to writing about environmental concerns, awareness and sensitivity. Reading and responding to published work, primarily from the perspective of technique and approach.

U 377 Rhetoric, Nature and Environmentalism 3 cr. Offered intermittently. Same as COMM 377. Survey of rhetorical texts that shape public understanding of nature and environmental issues. Analysis of a range of historical and contemporary environmental texts using theoretical concepts from the rhetorical tradition.

U 379 Collaboration in Natural Resources Decisions 3 cr. Offered intermittently. Same as FOR 379. CCS 379. Political and social processes affecting natural resource decisions. Examination of cases of multi-party collaboration in forestry, range, and watershed management issues.

U 382 Biogeography of Northwest Montana 3 cr. Coreq., EVST/RSCN 383, EVST/RSCN 282. Offered each autumn by Northwest Connections. Examines drivers of biodiversity in northwestern Montana. Starting with basic natural history of native flora and fauna, students learn to identify various biotic communities and their distribution. Emphasizes how geology, topography, fire ecology, climate change, and human settlement influence biogeography.

U 383 Conservation & Community Research Project 3 cr. Coreq., EVST/RSCN 382, EVST/RSCN 282. Offered each autumn by Northwest Connections. Students pursue a project of their own design relating to conservation and rural issues.

U 390 Supervised Internship PEAS 2 cr. (R-8) Offered every term. Summer intensive, 6 cr. Students learn small scale sustainable vegetable farming in a hands-on work environment at the PEAS farm (15 minute bike ride from campus). Lectures, readings and reflection

inform the work. Summer students also visit local farms on once-a-week field trips. PEAS is repeatable, as the curriculum changes across the season, and students can attend any semester, though the 6 credit summer intensive course is the heart of the program.

U 395 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr. Offered autumn and spring. Prereq., six credits in EVST and consent of instr. Practical application of classroom learning through internship with governments, organizations or industry. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 410 Environmental Justice in Latin America 3cr. Offered summer. Two week travel seminar to one or more Latin American countries to examine Latin American perspectives on environmental justice and efforts toward sustainable development within the context of the global economy and U. S. foreign policy. Required one-credit seminar offered spring semester to provide background readings.

UG 420 The U.S. Environmental Movement 3 cr. Offered autumn. Study of the environmental movement as a social movement. Examination of different approaches to environmental protection and restoration in view of the movement's historical roots and contemporary debates.

UG 427 Ethics and the Environment 3 cr. Offered autumn. Prereq., PHIL 202 or 300. Same as PHIL 427. Critical exploration of selected philosophical and literary texts pertinent to the ethics of human relationships with the natural environment.

U 430 Culture and Agriculture 2 cr. Offered spring, from start of semester to mid-April. Surveys treatment of farmers and farming in the humanities. Course covers specific agricultural crops and their effect on social and environmental history, artistic commentary on agricultural life and farmer philosophy. Themes range from the tea and opium wars, to Wendell Berry's poetry to David Orr's philosophy.

UG 432 The Human Role in Environmental Change. 3 cr. Offered autumn even-numbered years. Prereq., upper-division standing or graduate standing. Same as GPHY 432 (GEOG 432). A systematic examination of the ways in which the major physical systems and ecosystems of the earth have been modified by human activity, and approaches to the rehabilitation of these systems.

UG 440 Environmental Economics 3 cr. Offered autumn. Prereq., ECNS 201S, 202S (ECON 111S, 112S) or consent of instr. Same as ECNS 433 (ECON 440). Outlines a theoretical framework for the analysis of environmental problems, including concepts of market failure and externalities, materials balance and property rights. The policy implications of this analytical model are explored for a range of topics including pollution and the preservation of natural environments and species.

UG 449 Climate Change Ethics and Policy 3 cr. Offered spring. Same as RSCN 449 and CSS 449. Course focuses on the ethical dimensions of climate change policy. Covers following majors topics: (1) climate change, personal and collective responsibilities, (2) ethics, climate change and scientific certainty, (3) distributive justice and international climate change negotiations, (4) intergenerational justice and climate policy.

UG 450 Food, Agriculture, and Environment 3 cr. Offered spring. Exploration of the premise that agricultural sustainability requires practices, policies, and social arrangements that balance concerns of environmental soundness, economic viability, and social justice among all sectors of society.

UG 460 Introduction to Alternative Energy 1 cr. Offered autumn, odd-numbered years. Survey of alternative technologies currently available to address energy problems and their environmental and economic impacts.

UG 465 Restoration Ecology 3 cr. Offered intermittently. Prereq., senior standing and a course in ecology. Same as FOR 465. Philosophy and practice of restoring damaged ecosystems. Restoration planning including improvement of degraded soils, site preparation for revegetation, and case studies.

UG 470 Appropriate Technology 1 cr. (R-2) Offered autumn even-numbered years/spring odd-numbered years. Problem assessment, project design, fund-raising and implementation of technical resource issues at the PEAS farm to gain practical skills in small scale community development projects, creative problem solving, and working in groups.

UG 477S Environmental Justice Issues and Solutions/Service Learning 3 cr. Offered autumn. Examination of social inequality in the distribution of environmental risks and in access to natural resources and environmental amenities.

U 484 Senior Capstone Project 3 cr. Offered intermittently. Prereq., senior standing in EVST. For seniors who want to design and perform a significant capstone project involving research and/or service. Students have responsibility for designing their projects which are subject to faculty approval. A final report and public presentation are required. Honors credit available.

U 485 Environmental Citizenship/Service Learning 3 cr. Offered spring. Prereq., open to juniors and seniors only or by consent of instructor. Same as CCS 485. Develops environmental citizenship through student-initiated projects informed by principles of social marketing.

U 487 Globalization, Justice, and the Environment 3 cr. Offered spring. Study of current trends in economic globalization and its effects on efforts to work for social justice and environmental sustainability, particularly in the Global South. Examination of different models and theories of globalization, analysis of ethical issues raised, and assessment of alternatives proposed.

UG 494 Seminar Variable cr. (R-6) Prereq., EVST 101N or consent of instr. A seminar on a current environmental topic.

UG 495 Special Topics Variable cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-6 cr. (R-6) Offered autumn and spring.

G 501 Scientific Approaches to Environmental Problems 3 cr. Offered autumn. Prereq., graduate standing in EVST or consent of instr. The strength and limitations of the scientific approach to investigating and solving selected environmental problems with an emphasis on the natural sciences.

G 502 Environmental Law for Non-Lawyers 3 cr. Offered spring. Prereq., graduate standing. Review of major substantive environmental laws with an emphasis on areas of citizen involvement in the legal process.

G 504 Topics in Environmental Philosophy 3 cr. (R-9) Offered autumn and spring. Same as PHIL 504. Critical study/discussion of current (as well as benchmark) texts and issues in environmental ethics, environmental politics, and the philosophy of ecology, Interdisciplinary; open to concerned students from all disciplines.

G 505 The Literature of Nature Writing 3 cr. Offered spring. Study of nature, environmental, and place-based writing, from classical times to the present, with emphasis on the American tradition and its relationship to twenty-first century environmental concerns, challenges, and opportunities, and to the current practice of nature writing and natural history.

G 513 Natural Resource Dispute Resolution 3 cr. Offered spring. Same as LAW 613 and FOR 513. Provides a conceptual framework for understanding the history of ideas that have shaped the policies, institutions, and strategies used to resolve natural resource and other public policy conflicts in the American West. Focus on natural resource and environmental dispute resolution.

G 520 Environmental Organizing 3 cr. Offered spring. Developing understanding of and skills in community and environmental organizing. Emphasis on theory and practice of civic engagement and social change with a focus on developing and running campaigns and working in a group. Team projects.

G 521 Foundations in Environmental Education 3 cr. Offered autumn. Prereq., graduate standing in environmental studies. Same as C&I 521. Problem-solving approaches to environmental education; problem identification, research and design and implementation of an educational approach to selected environmental issues.

G 525 Teaching Environmental Science 1-3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Same as C&I 525. Identification and examination of potential solutions to environmental problems and their impact on society. Major emphasis on teaching methods as they apply to environmental science.

G 531 Citizen Participation in Environmental Decision Making 3 cr. Offered spring. Review of the modes and methods of citizen participation in governmental and corporate decision making. Review of the National and Montana Environmental Policy Act; administrative rule making and appeals, strategic planning, lobbying and corporate governance. Students complete a project with an outside group.

G 537 Building Effective Environmental Organizations 3 cr. Offered spring. Prereq., graduate standing. Focus on the tasks and skills necessary to building and managing effective environmental organizations, particularly non-profit. Budgeting, fund-raising, grant-writing, attracting and utilizing volunteers, working with the media. Strategic approaches and how they are shaped by issue, context, and structure.

G 540 Watershed Conservation Ecology 3 cr. Offered autumn. Prereq., college ecology course or consent of instr. Integrates watershed science, policy, planning, action and organizing. The science component explores watershed connections, evaluating change and assessing watershed condition. The policy component explains the scientific basis of national, state and local laws, programs and agencies that affect watersheds. The planning and action component discusses developing watershed conservation plans and selecting actions likely to address problems without creating other problems. The organizing component covers how to help watershed communities make choices, resolve conflicts, build commitment and find funding. Students work individually or in teams to assist Montana groups in developing watershed CPR plans, initiating monitoring projects, and/or conducting education projects.

G 542 Transboundary Environmental Issues 3 cr. Offered intermittently in autumn. Prereq., graduate standing in environmental studies program. Review of the political systems and administrative systems of each country relevant to natural resource policy decision-making and ecological systems. Review pertinent literature, interact with stakeholders, and produce group reports.

G 548 Supervision and Teaching in Environmental Education 3 cr. Offered intermittently. Prereq., EVST 521 or C&I 521. Design, selection and evaluation of materials for the teaching of environmental education.

G 550 Pollution Ecology 3 cr. Offered spring even-numbered years. Prereq., college ecology course or consent of instr. Same as BIOL 550. Examines sources, fate, and effects of pollutants on organisms and ecosystems; methods of measuring and predicting pollutant fate and effects, assessing and reducing risks, estimating ecosystem assimilation capacity; setting standards and restoring ecosystems damaged by pollution. Briefly examines some relevant laws and policies at the federal, state and local level.

G 551 Environmental Field Study 1-3 cr. (R-3) Offered intermittently. Prereq. or coreq., EVST 540 or 550 or 560. Same as BIOL 551.

Designing, executing and interpreting environmental field studies. Oriented to studies of aquatic systems and watersheds. Students will assist with a class project and may also pursue their own projects. Projects focus on the Clark Fork, Bitterroot and Blackfoot River basins.

G 555 Research Methods for Social Change 3 cr. Offered spring. Introduction to qualitative methods of research design, data collection, and analysis. Emphasis on research that facilitates and documents social change processes. Hands-on research experience through fieldwork projects. Includes instruction on writing social science and on research ethics.

G 560 Environmental Impact Analysis 3 cr. Offered spring odd-numbered years. Prereq., graduate standing in EVST or consent of instr. Covers legal and scientific aspects of the Environmental Impact Analysis (EIA) including: What is required by international, national and state law and regulations? How does one organize an effective interdisciplinary team research effort and public participation program? What scientific tools are used in EIA? How could EIA process be improved.

G 561 Land Use Planning Law 3 cr. Offered autumn. Same as GPHY 561 (GEOG 561) and LAW 687. Basic overview of the law of land use planning including background in the traditional governmental regulatory, proprietary, and fiscal land use tools. Examination of modern techniques for land use planning; consideration of constitutional limits of authority of state and local governments. Focus on skills in interpreting, drafting and applying state legislation and local ordinances.

G 562 Land Use Planning Clinic 2 cr. Offered every term. Prereq. or coreq., EVST 561. Same as GPHY 562 (GEOG 562). Students assist local communities in long-range planning efforts and development of growth management plans as required by Montana law; ordinance drafting, development proposals, and land use issues.

G 563 Introduction to Environmental Law 3 cr. Offered autumn. Prereq., graduate standing in EVST. Same as LAW 650. Philosophy and values underlying environmental regulation, basic introduction to administrative law, in-depth study of air and water pollution and the environmental policy acts.

G 564 Environmental Law II 3 cr. Offered autumn. Prereq., graduate standing in EVST. Same as LAW 649. In-depth study of the laws addressing toxic substances and solid and hazardous waste, and the Endangered Species Act. Exploration of interaction between land use regulation and environmental law.

G 565 Public Land and Resources Law 3 cr. Offered spring. Prereq., graduate standing in EVST and consent of instr. Same as LAW 654. Historical development of United States public land law, state-federal relations, and the roles of Congress, the executive and the courts; the law applying to specific public land resources: water, minerals, timber, range, and preservation.

G 566 Advanced Public Land Law 2 cr. Offered spring. Prereq., graduate standing in EVST and consent of instr. Same as LAW 619. Collaborative work on practical problems arising in public land and resources law and individual research and writing projects.

G 567 Water Law 3 cr. Offered spring. Same as LAW 663. Interstate water problems; federal/state powers; federal/Indian water rights/Montana water law.

G 573 Environmental Writing 3 cr. Offered autumn. Prereq., graduate standing. Writing workshop designed to improve skills in writing on environmental topics for general audiences. Approaches include personal narrative, natural history, science interpretation, advocacy/argument, place-based essays. Includes analysis of published work from the perspective of technique and craft.

G 575 Seminar in Rhetoric and Environmental Controversy 3 cr. Offered intermittently. Same as COMM 575. The study of how advocates use symbols to influence meaning and action in environmental controversies. Rhetorical concepts used to examine recurring strategies and tactics in specific controversies.

G 579 Advanced Natural Resources Conflict Resolution 3 cr. (R-4) Offered autumn. Same as FOR 579 and LAW 679. Prereq., EVST 513 or consent of instr. Current topics in theory and practice. Development and discussion of research topics. Topics vary.

G 590 Supervised Internship PEAS Variable cr. (R-8) Spring and autumn, 2 cr.; Summer intensive, 3 cr. Students learn small scale sustainable vegetable farming in a hands-on work environment at the PEAS farm (15 minute bike ride from campus). Lectures, readings and reflection inform the work. Summer students also visit local farms on a once-a week filed trips. PEAS is repeatable, as the curriculum changes across the season, and students can attend any semester, though the 3 credit (grad level) summer intensive course is the heart of the program.

G 593 Professional Paper Variable cr. (R-6) Offered autumn and spring. Prereq., graduate standing in EVST.

G 594 Graduate Seminar 3 cr. (R-15) Offered autumn and spring. Prereq., graduate standing in EVST or consent of instr. In-depth analysis of a current environmental topic. Different topics offered each semester.

G 595 Special Topics Variable cr. (R-9) Offered autumn and spring. Prereq., graduate standing in EVST or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-12) Offered autumn and spring. Prereq., graduate standing in EVST. Work on selected problems by individual students under direct faculty supervision.

G 597 Research Variable cr. (R-12) Offered autumn and spring. Prereq., graduate standing in EVST. Directed individual graduate

research and study appropriate to background and objectives of the student.

G 598 Internship Variable cr. (R-8) Offered autumn and spring. Prereq., graduate standing in EVST. Practical application of classroom learning during placements off campus.

G 599 Thesis Variable cr. (R-6) Offered autumn and spring. Prereq., graduate standing in EVST.

Faculty

Professors

- Leonard Broberg, Ph.D., University of Oregon, 1995 (Director)
- Vicki Watson, Ph.D., University of Wisconsin, 1981

Associate Professors

- Fletcher Brown, Ph.D., Miami University, 1994
- Phil Condon, M.F.A., M.S., The University of Montana, 1989, 2000
- Neva Hassanein, Ph.D., University of Wisconsin, 1997
- Robin Saha, Ph.D., University of Michigan, 2002
- Daniel Spencer, Ph.D., Mater of Divinity, Union Theological Seminary, New York, 1994, 1983

Emeritus Professor

- Thomas M. Roy, M.A., University of Chicago, 1966

Department of Geography

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Sarah J. Halvorson, Chair

Geography provides a broad-ranging perspective on humans as inhabitants and transformers of the face of the earth. The search for this understanding involves thorough study of the physical earth, its habitation by humans, and the resulting diversity of regions and places. Geographers study the physical earth by examining the interlocking systems of the natural environment, including climate, landforms, soils, and biota. Humans are studied by examining those diverse historical, cultural, social, economic, and political structures and processes which affect the location and spatial organization of population groups and their activities. Regions and places, whether described as nations, cities, ecological units, or landscapes, are studied by integrating and interpreting their physical and human relationships in an effort to better understand them and the problems that they face.

Geographers are often found working in business, industry, government, and education. Those in planning might be called upon to determine the most satisfactory location for a new school or an airport, or undertake the environmental or socioeconomic studies required for community and regional planning. Others enter fields such as environmental law, diplomacy, intelligence, and teaching. Graduates trained in cartography and

Geographical Information Systems find professional opportunities in map-making and spatial analysis. No academic discipline offers a greater range of employment opportunities.

The Department of Geography maintains particular strengths in each of the following major branches within the discipline: 1) physical geography (geomorphology, palaeo-environments, climate and global change); 2) human–environment interaction (environmental rehabilitation, water policy, and environmental hazards); 3) geography and society (geography of towns and settlements, economic geography, and migration and population change); 4) regional geography (with particular strengths in the geography of North America, Africa, Asia, and Europe); 5) geographical techniques (remote sensing, cartography and GIS, transport planning and GIS-T, field methods, quantitative and qualitative method).

The Department of Geography offers the Bachelor of Arts, Bachelor of Science, Master of Arts and Master of Sciences degrees in geography. For a B.A. in geography, options in physical geography, community and environmental planning; and cartography and GIS are available. Also offered are a minor in geography and a teaching major and minor in geography. The bachelor degree program provides a broad liberal education; it qualifies graduates for a variety of professional jobs; and it prepares students who excel for graduate studies in geography, planning, cartography, or related fields. Graduate programs prepare candidates for a somewhat greater range of employment, including teaching in community and junior colleges, and for doctoral studies in geography and allied disciplines. In addition to a general degree in geography without option, students may pursue an option within the Master of Sciences program--community and environmental planning, or cartography and GIS. See the graduate catalog for more information concerning the M.A. and M.S. programs.

A certificate in GIS Sciences and Technologies, jointly offered by the Department of Geography, (College of Arts and Sciences), and the Department of Forest Management (College of Forestry and Conservation) is also available. This GIS certificate is a complement to an existing major or to a bachelor's degree already obtained. For details, please see the College of Arts and Sciences and the College of Forestry and Conservation sections of the catalog.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

General Education Requirements for Geography Majors

Geography majors must meet the mathematical literacy requirement by taking M 115 (MATH 117). Students obtaining a geography degree without an option, may meet the university-wide symbolic system requirement either by taking one year of foreign language instruction (100-level or higher) or by taking M 115 (MATH 117) and STAT 216 (MATH 241). Students obtaining a degree in geography with an option must meet the university-wide symbolic system requirement by taking M 115 (MATH 117) and STAT 216 (MATH 241). The upper-division writing expectation must be met by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog (see index), or by writing a senior thesis in geography.

Requirements for a Major in Geography

A major in geography requires a minimum of 36 (maximum of 60) credits. All geography majors take a 26-credit core consisting of the following courses: GPHY 121S (GEOG 101S), GPHY 111N (GEOG 102N), GPHY 112 (GEOG 105), GPHY 385 (GEOG 385), GPHY 381 (GEOG 387) and GPHY 382 (GEOG 389), GPHY 141S (GEOG 103S) or other regional course, three 300- or 400-level courses, one each from the systematic emphases of physical geography, human-environment interaction, and geography and society.
Students who pursue a geography degree without option (general geography) elect a minimum of 10 (maximum of 34) additional credits in geography. Students who pursue an option in physical geography, in community and environmental planning,, or in cartography and GIS also must meet the course requirements of the option (see below).

General Geography

The general geography degree (without option) is very flexible. In addition to meeting the core requirements for all geography majors, students may take a wide range of electives in geography (minimum 10, maximum 34 elective credits). Electives may be chosen from the fields of regional geography, geographic methods and techniques, or systematic geography (physical geography, human-environment interaction or geography and society).

Physical Geography Option

In addition to satisfying the general requirements for a degree in geography, a student pursuing the option in physical geography must complete a minimum of 24 additional credits as follows: six additional credits of upper-division coursework in physical geography, geology, hydrology, and/or ecology, and three credits of undergraduate thesis devoted to a theme in physical geography. Coursework and thesis topic should be determined in consultation with the student's advisor. In addition, a student must complete a course in applied calculus (M 162 (MATH 150) or equivalent) or an upper-division course in statistics (STAT 451 (MATH 444) or equivalent), and two two-course sequences in science (such as CHMY121N-123N (CHEM 151N-152N)), PHYS 121N-122N, BIOL 120N, 121N, or their equivalents).

Community and Environmental Planning Option

In addition to satisfying the general requirements for a degree in geography, the student desiring to achieve an option in community and environmental planning must complete a minimum of 13 additional credits as follows: GPHY 465 (GEOG 465), at least one of the following two courses: GPHY 468 (GEOG 468) or GPHY 486 (GEOG 486) (with corequisite laboratories GPHY 460 (GEOG 469) or GPHY 489 (GEOG 489)), plus four of the following five courses: GPHY 323S (GEOG 315S), GPHY 335 (GEOG 335), GPHY 421 (GEOG 412S), GPHY 432 (GEOG 432), GPHY 435 (GEOG 435). (These courses can be used to satisfy the 300- or 400-level core requirement in geography and society, and human-environment interaction.) An internship is strongly recommended.

Cartography and GIS Option

In addition to satisfying the general requirements for a degree in geography, the student desiring to pursue an option in cartography and GIS must complete a minimum of 18-20 additional credits as follows: CS 101, GPHY 487 (GEOG 487) and 489, GEOG 488 and 489, plus two courses from the following four; GPHY 468 (GEOG 468) and 469,GPHY 486 and 489(GEOG 486 and 489), GPHY 482 (GEOG 484), GPHY 485 and 489 (GEOG 485 and 489).

Certificate in GIS Sciences and Technologies

The Certificate in GIS Sciences and Technologies is a complement to an existing major at The University of Montana or as a complement to a bachelor's degree obtained at another university. The purpose of the Certificate is to ensure the knowledge, understanding, and training necessary to acquire, process, analyze, and properly display geographical data.

Special Requirements for the Certificate

To earn a Certificate in GIS Sciences and Technologies, students must either complete or have completed an undergraduate degree and complete a minimum of twenty semester credit hours of course work including 11 to 13 required credits and 7 to 9 elective credits as described below. Students must achieve at least an overall grade point average of 3.0 for courses within the program in order to earn a certificate. The certificate will be awarded upon the successful completion of all of the requirements of the certificate and the undergraduate degree.

General Requirements:

To earn the Certificate in GIS Sciences and Technologies, students must complete 11 to 13 required credits and 7 to 9 elective credits totaling a minimum of 20 credits as described below.

Required Courses(11-13 cr.):

- FOR 250 Geographic Information Systems Practicum - 2 cr.
- FOR 350 Geographic Information Systems and Applications - 3 cr.

or

- GPHY 381/382 Principles of Digital Cartography (3 cr.) & Lab (1 cr.)
- FOR 351 Photogrammetry and Remote Sensing - 3cr

or

- GPHY Remote Sensing & Raster GIS (3 cr.) & Lab (1 cr.)
- GPHY 488/489 Thematic Cartography and GIS (3 cr.) and Lab (1 cr.)

Advanced Elective Courses (7-9 cr.): (Although elective courses are organized by topical specialty, no specialization is necessary). Additional and experimental courses are offered intermittently; please see faculty or website for current semester offerings. Faculty may submit course syllabi to the GIS Certificate Committee for possible inclusion in the Certificate.

Raster GIS, Remote Sensing, and Image Analysis

- GPHY 587/589 Digital Image Analysis & Modeling (3 cr.) and Lab (1 cr.)
- FOR 551 Digital Image Processing - 3 cr.

Vector GIS and Networks

- GPHY 486/489 Transport, Planning, and GIS 3 (3 cr.) and Lab (1 cr.)
- GPHY 588/589 Vector GIS (3 cr.) and Lab (1 cr.)
- GPHY 580 Seminar in GIS and Cartography

Data Management and Collection

- GPHY 468/469 Community and Regional Analysis (3 cr.) and Lab (1 cr.)
- FOR 505 Sampling Methods

GIS Applications

- GPHY 385 Field Techniques - 3 cr.
- GPHY 491 Digital Mapping & Design - 3 cr.
- GPHY 564 Planning Design - 3 cr.
- FOR 503 GIS: Methods and Applications I - 3 cr.
- FOR 504 GIS: Methods and Applications II - 3 cr.

Teacher Preparation in Geography

Students who want to be licensed to teach geography at the middle and high school level must complete the BA degree requirements in geography (general geography, no option required). They also must complete a teaching minor in a second field of their choice and the professional licensure program in the School of Education. Students may also earn a teaching minor in geography. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of the licensure program.

Additional Information

Advisor

Every geography major will be assigned a geography faculty member to act as advisor. The advisor offers assistance in designing a program and in monitoring progress. In addition to guiding students toward meeting degree requirements, advisors also can direct students toward special opportunities, such as study abroad and field experiences, as well as scholarship and internship opportunities. All course

substitutions must be approved by the advisor. The advisor also reviews and initials a student's application for graduation before the application is signed by the chairman.

International and Field Experience for Geographers

Students obtaining a degree in geography are strongly encouraged to explore study-abroad options and field experiences. Geography credits obtained through approved studies abroad will be applied toward the geography degree. With approval of the student's advisor, additional credits obtained through studies abroad and field experiences may count toward geography electives.

Suggested Course of Study

Geography major: General Geography without option:

First Year	A	S
GPHY 121S (GEOG 101S) Introduction to Human Geography	3	–
GPHY 111N (GEOG 102N) Introduction to Physical Geography	–	3
GPHY 112 (GEOG 105) Geography Laboratory	–	1
M 095 (MATH 100) Intermediate Algebra	3	–
M 115 (MATH 117) Probability and Linear Math	–	3
WRIT 101 (ENEX 101) College Writing I	3	–
Electives and General Education	6	8
Total	15	15
Second Year	**A**	**S**
GPHY 141S (GEOG 103S) Geography of World Regions or other regional geography course	3	–
STAT 216 (MATH 241) or 100–level foreign language	0–5	3–5
Electives and General Education	V	V
Total	15	15
Third Year	**A**	**S**
GPHY 385 (GEOG 385) Field Techniques	3	–
GPHY 381 (GEOG 387) and 389 Principles of Digital Cartography and Laboratory	4	–
Upper division courses in Geography & Society, Physical Geography and Human–Environment Interaction	3–6	3–6
*Upper–division writing course	–	3
Electives including study abroad/internship	2–5	6–9
Total	15	15
Fourth Year	**A**	**S**
Electives including study abroad/internship/ senior thesis	15	15
Total	15	15

Geography with option in Physical Geography

First Year	A	S
WRIT 101 (ENEX 101) College Writing I	3	–
GPHY 121S (GEOG 101S) Introduction to Human Geography	3	–
GPHY 111N (GEOG 102N) Introduction to Physical Geography	–	3
GPHY 112 (GEOG 105) Geography Laboratory	–	1
M 115 (MATH 117) Probability and Linear Math	3	–
M 151 (MATH 121) Precalculus	–	3
General Education and electives	6	8
	15	15
Second Year	**A**	**S**
GPHY 141S (GEOG 103S) Geography of World Regions or other regional geography course	–	3
M 162 (MATH 150) Applied Calculus	4	–
STAT 216 (MATH 241) Statistics	–	3
Two 100–level science sequences	6	6
General Education and electives	5	3
	15	15
Third Year	**A**	**S**
GPHY 385 (GEOG 385) Field Techniques	3	–

GPHY 381 and 382 (GEOG 387 and 389) Principles of Digital Cartography and Laboratory	4	–
Upper–division courses in Geography & Society and Human–Environment Interaction	3	3
Upper–division courses in Physical Geography	3	3
Electives including study abroad/internship	2	9
	15	15
Fourth Year	**A**	**S**
GPHY 487 (GEOG 487) and 489 Raster GIS and Laboratory	4	–
Upper–division course in Physical Geography	3	–
Electives including study abroad/internship	8	15
	15	15

Geography with option in Community and Environmental Planning:

First Year: Same as General Geography

Second Year	**A**	**S**
GPHY 141S (GEOG 103S) Geography of World Regions, or other regional geography course	3	–
STAT 216 (MATH 241) Statistics	–	3
General Education and electives	12	12
	15	15

Third Year: Same as General Geography

Fourth Year	**A**	**S**
GPHY 465 (GEOG 465) Planning Principles and Processes	3	–
GPHY 468 and 469 (GEOG 468 and 469) Community & Regional Analysis and Laboratory or GPHY 486 and 489 (GEOG 486 and 489) Transport, Planning, and GIS and Laboratory	4	–
Upper–division courses in Geography & Society, and Human–Environment Interaction	3	3
Electives including study abroad, internship/senior thesis	5	12
	15	15

Geography with option in Cartography and GIS:

First Year: Same as General Geography

Second Year	**A**	**S**
GPHY 141S (GEOG 103S) Geography of World Regions, or other regional geography course	3	–
STAT 216 (MATH 241) Statistics	3	–
CS 101 Introduction to Programming	–	3
General Education and electives	9	12
	15	15

Third Year: Same as General Geography

Fourth Year	**A**	**S**
GPHY 487 and 489 (GEOG 487 and 489) Remote Sensing and Raster GIS & Image Analysis and Laboratory	3	–
GPHY 488 and 489 (GEOG 488 and 489) Thematic Cartography and GIS Laboratory	–	4
GPHY 468 and 469 (GEOG 468 and 469) Community & Regional Analysis and Laboratory or 484 Spatial Analysis in GIS	4	–
GPHY 486 (GEOG 486) Transport, Planning and GIS and Laboratory or GPHY 485 and 489 (GEOG 485 and 489) Internet GIS and Laboratory	–	4
Electives including study abroad/internship/ senior thesis	8	7
	15	15

Requirements for the Certificate in GIS Sciences and Technologies

To earn a certificate in GIS Sciences and Technologies, students must either complete or have completed an undergraduate degree and complete a minimum of 20 semester credit hours of course work, including 11 to 13 required credits and 7 to 9 elective credits as described below. Students must achieve at least an overall grade point average of 3.0 for courses within the program in order to earn a certificate. The certificate will be awarded upon the successful completion of all of the requirements of the certificate and the undergraduate degree. It is recommended that students complete the University's symbolic systems requirements before beginning this program, as these courses promote basic qualitative reasoning (M 115 (MATH 117), STAT 216 (MATH 241), FOR 201, SOCI 202 (SOC 202). CS 101, Introduction to Programming, is also strongly recommended.

Required Courses (11–13 cr.):

- FOR 303 Introduction to Geographic Information Systems, or
- GPHY 381 (GEOG 387) Principles of Digital Cartography and GEOG 389 Digital Cartography Lab
- FOR 351 Photogrammetry and Remote Sensing or GPHY 487 (GEOG 487) Remote Sensing and Raster GIS and GPHY 489 (GEOG 489) Cartography/GIS Lab
- GPHY 488 (GEOG 488) Thematic Cartography and GIS and GPHY 489 (GEOG 489)
- Cartography/GIS Lab

Elective Courses (7–9 cr.):

- Raster GIS, Remote Sensing, and Image Analysis
- GPHY 587 (GEOG 587) Digital Image Analysis and Modeling and GPHY 589 (GEOG 589) Cartography/GIS Lab FOR 551 Digital Image Processing
- Vector GIS and Networks
- GPHY 486 (GEOG 486) Transport Planning and GIS and GPHY 489 (GEOG 489) Cartography/GIS Lab
- GPHY 580 (GEOG 580) Seminar in GIS and Cartography
- GPHY 588 (GEOG 588) VECTOR GIS and GPHY 589 (GEOG 589) Cartography/GIS Lab
- Data Management and Collection
- GPHY 468 (GEOG 468) Community and Regional Analysis and GPHY 489 (GEOG 489) Cartography/GIS Lab
- FOR 505 Sampling Methods
- GIS Applications
- GPHY 385 (GEOG 385) Field Techniques
- GPHY 491 (GEOG 495) GIS in Geology
- GPHY 491 (GEOG 495) Planning Decision Support Systems
- GPHY 564 (GEOG 564) Planning Design
- FOR 503 GIS: methods and Applications I
- FOR 504 GIS: Methods and Applications II
- (Although elective courses are organized by topical specialty, no specialization is necessary)

Minor in Mountain Studies

Mountain studies is an interdisciplinary field of study focusing on the physical and human dimensions of mountain environments. Coursework in the minor emphasizes physical geography and mountain-society interactions, including a critical analysis of the processes of change and influence shaping local and regional mountain environments today. The minor in mountain studies takes advantage of existing faculty expertise and an array of courses to provide students with a science-based curriculum and global perspective. Students pursuing the minor in mountain studies will develop knowledge and skills appropriate for graduate study and for working with government and non-government agencies and groups.

Requirements

In addition to completing the requirements for a major in any discipline, students electing the minor in mountain studies must complete a minimum of 18 additional credits as follows:

1. Nine credits must be core courses:

- GPHY 144 (GEOG 138) Montana's Mountains (3 cr.)
- GPHY 214 (GEOG 222) Global Mountain Environments (3 cr.)
- GPHY 338 (GEOG 338) Mountains and Society (3 cr.)

2. Six credits must be selected from the following list of upper-division advanced mountain studies courses:

- BIOL 350 Rocky Mountain Flora (3 cr.)
- BIOL 451 Landscape Ecology of Mountain Ecosystems (3 cr.)
- BIOL 450 Alpine Ecology (3 cr.)
- FOR 495 Montana Wilderness Field Studies in Winter (3 cr.)
- GPHY 344 (GEOG 310) Crown of the Continent (3 cr.)
- GPHY 442 (GEOG 401) Regionalism and the Rocky Mountain West (3 cr.)
- GPHY 438 (GEOG 438) Mountains Field Study (3 cr.)
- GEO 425 (GEOS 425) Geology of the Pacific Northwest (3 cr.)
- GPHY 488 (GEOG 488) (Snow, Ice and Climate (3 cr.)

3. Three credits must be chosen from the following list of electives, or alternatively, from the advanced mountain studies course listing above.

- BIOL 201 Montana Wildlife (3 cr.)
- FOR 330 Forest Ecology (3 cr.)
- FOR 385 Watershed Hydrology (3 cr.)
- GPHY 291 (GEOG 295) Mountain Cultures & Economies (3 cr.)
- GPHY 317 (GEOG 324) Geomorphology (3 cr.)

- GPHY 411 (GEOG 426N) Biogeography (3 cr.)
- GEO 107N (GEOS 103) Volcanoes, Earthquakes, and Other Natural Hazards (3 cr.)
- GEO 231 (GEOS 230) Field Methods and Maps (3 cr.)
- GEO 391 (GEOS 395) Appropriate Topics (3 cr.)
- GEO 433 (GEOS 430) Global Tectonics (3 cr.)
- RECM 482 Wilderness and Protected Area Management (3 cr.)

Requirements for a Minor in Geography

To earn a minor in Geography, the student must complete a minimum of 19-20 credits including: GPHY 121S and 111N(GEOG 101S and 102N; GPHY 141S (GEOG 103S) or other regional course; GPHY 112 (GEOG 105), GPHY 385 (GEOG 385) or GPHY 381 and 382 (GEOG 387 and 389); two upper-division systematic courses from the fields of geography and society, physical geography, and human-environment interaction.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates that the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Geography (GPHY)

U 111N (GEOG 102N) Introduction to Physical Geography 3 cr. Offered autumn and spring. Prereq., M 095D (MATH 100) or above, or appropriate score on mathematics placement examination. Introduction to the earth's major natural environmental systems, their spatial distribution and interrelationships, including weather and climate, vegetation and ecosystems, soils, landforms, and earth-surface processes.

U 121S (GEOG 101S) Introduction to Human Geography 3 cr. Offered autumn and spring. Introduction to Human Geography focuses upon the linkages between geography and society including analysis of regions, ethnic groups, urban landscapes, migration and population change, geopolitics, economics, and cultural differences.\

U 122 (GEOG 105) Geography Laboratory 1 cr. Offered autumn and spring. Prereq. or coreq., a 100-level GPHY course. Introduction to concepts and techniques needed to understand and analyze the information contained in various types of maps, graphs, aerial photos, imagery, and other graphics and geographic data sets. This is prerequisite to GPHY 385 and 381 (GEOG 385 and 387).

U 141S (GEOG 103S) Geography of World Regions 3 cr. Offered autumn and spring. An overall view of how the lands and peoples of the world are organized into coherent geographical regions, how landscapes differ from region to region, and how the people differ in terms of their traits, beliefs, ways of life, and economic livelihood.

U 191 (GEOG 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 291 (GEOG 295) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 378 Preceptorship in Geography 1-3 cr. (R-6) Offered autumn and spring. Prereq., two of the following three: GPHY 121S (GEOG 101S), GPHY 111N (GEOG 102N), GPHY 141S (GEOG 103S); plus GPHY 112 (GEOG 105), and consent of instr. Assisting a faculty member by tutoring, conducting review sessions, helping students with research projects, and carrying out other class-related responsibilities. Open to juniors and seniors who apply to instructor for consent.

U 391 (GEOG 395) Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 491 (GEOG 495) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 492 (GEOG 498) Internship Variable cr. Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements within governmental agencies or the business community. A maximum of 6 credits of Internship (192, 292, 392, 492) may count toward graduation.

UG 496 Independent Study Variable cr. (R-9) Offered every term. Prereq., consent of instr. Independent study in any subfield of geography.

U 499 Undergraduate Thesis 3 cr. (R-6) Offered autumn and spring. Prereq., senior standing or consent of instr. Independent research project in any geographical topic supervised by a faculty member, and leading to completion of the baccalaureate degree.

Earth Systems (ERTH)

UG 303N (GEOG 322N) Weather and Climate 3 cr. Offered autumn odd-numbered years. Prereq., GPHY 111N (GEOG 102N) or

consent of instr. Origin, composition, structure, and dynamics of the atmosphere, gas and radiation laws, energy budget and balance, weather elements and North American weather systems.

Physical Geography

U 214 (GEOG 222) Mountain Environments 3 cr. The study of mountain environments and their physical processes around the globe: Andes, Appalachians, East African Mountains, European Alps, Hindu Kush-Himalaya-Karakoram, Pamir, Rocky Mountains, Southern Alps of New Zealand, Tien Shan, and others. Topics include mountain building, alpine glaciers, mountain geomorphology and climatology, mountain watersheds, mountain biogeography, and mountain hazards such as earthquakes and mass movements.

UG 317 (GEOG 324) Geomorphology 3 cr. Offered intermittently. Prereq., GPHY 111N (GEOG 102N) or equiv. Important landforms and landscapes, their biophysical processes, and their formative elements.

UG 411 (GEOG 426N) Biogeography 3 cr. Offered intermittently. Prereq., GPHY 111N (GEOG 102N) or equiv. Changing patterns of plant and animal distributions in space and time. Combination of historical and ecological approaches to biological species and communities. Study of external causes of plant and animal distributions, especially climatic change and human impacts.

UG 413 (GEOG 423) Soil Geomorphology 3 cr. Offered intermittently. Prereq., GPHY 111N (GEOG 102N) or FOR 210N or consent of instr. Morphology and classification of soils and their relationships to landforms and geomorphic processes.

UG 438 Mountains Field Study 3 cr. Prereq., junior or senior standing or graduate student. Examination of aspects of the study of mountain geography through a two-week field course based in a mountainous country and/or region. Possible areas of focus include, but are not limited to, the Northern Rocky Mountains, the Alps, the Himalaya, and the Andes.

G 525 Advanced Physical Geography 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Advanced topics in climate and global change, paleo-environments and biogeography, landform analysis, soils, and other selected topics. Topic titles will appear in the Class Schedule.

G 538 Mountain Studies Seminar 3 cr. Offered intermittently. Prereq., consent of instr. In-depth treatment of the physical and cultural geography of mountainous regions, including attention to the theory and methodology of mountain geography.

Human–Environment Interaction

U 335 Water Policy 3 cr. Offered autumn. Prereq., upper-division standing. Exploration of water resources issues facing the public, resource managers, and water users in the western United States today. Examines concepts, terms, and regulatory environment which provide the foundation for modern water management and policy.

UG 336 Exploration and Discovery 3 cr. Offered autumn intermittently. Emphasis on the evidence of language, genetics, material culture, and transoceanic plant and animal exchanges in assessing mobility and population distributions in prehistory; factors that motivate exploration; the history of navigation; the impacts of exploration upon science, society, economics, and government.

U 338 Mountains and Society 3 cr. Offered autumn. Physical and cultural aspects of the mountains of North and South America, Europe, Africa, and Asia. Emphasis on combining the physical landscape with an overview of the indigenous people who inhabit the worlds' heights.

UG 432 The Human Role in Environmental Change 3 cr. Offered autumn even-numbered years. Prereq., upper-division or graduate standing . Same as EVST 432. A systematic examination of the ways in which the major physical systems and ecosystems of the earth have been modified by human activity, and approaches to the rehabilitation of these systems.

UG 433 Cultural Ecology 3 cr. Offered spring. Examines issues related to culture and the natural environment. Topics include cultural origins and diversity, geography of religion, geolinguistics, plant and animal domestication, livelihood systems, folk and popular culture, ethnic geography, political patterns, demography, industries, urban genesis, and the transformation of environmental systems.

UG 434 Food and Famine 3 cr. Offered autumn intermittently. Exploration of the production, distribution, and consumption of food; the causes and consequences of hunger; and measures that might be taken to relieve hunger.

UG 435 Environmental Hazards and Planning 3 cr. Offered spring. Prereq., upper-division or graduate standing. Surveys the characteristics and impacts of selected natural and technological hazards. Emphasizes risk and vulnerability assessment procedures, mitigating measures to reduce damage, and strategies for planning community response.

Geography and Society

U 323S (GEOG 315S) Economic Geography of Rural Areas 3 cr. Offered spring odd-numbered years. Study of the location of economic activities, including agriculture, industry, and services. Focus on the changing nature of rural areas.

UG 421 (GEOG 412S) Towns and Rural Settlement 3 cr. Offered spring even-numbered years. Prereq., upper-division or graduate standing. The spatial, functional, and locational attributes of regional centers and towns within the context of patterns of rural settlement.

UG 423 (GEOG 415) Migration and Population Change 3 cr. Offered autumn odd-numbered years. Prereq., senior standing or graduate standing or consent of instr. Focus on internal migration and population change in the U.S., in particular in the Mountain West. Review of migration theories and empirical research; development of practical skills for conducting empirical research related to migration and population change.

UG 443 (GEOG 417) Cultural and Global Competence–Key Components for Success in Global Economy and Society 3 cr. Offered autumn. Prereq., upper-division or graduate standing. Designed to increase awareness of student's own culture and increase cross-cultural sensitivity. Understanding the perspectives of other cultures and resolving possible conflicts. Examination of the role of perception, belief systems, social structures, and culture practices.

G 515 Advanced Human Geography 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Advanced topics in cultural and historical geography, gender issues, migration and population change, economic geography, urban and settlement geography, and other selected topics. Topic titles will appear in the Class Schedule.

Regional Geography

U 144 (GEOG 138) Montana's Mountains 3 cr. Prereq., freshman or sophomore standing or consent of instructor. A field-based course offered during winter session in the winter splendor of the North Fork of the Flathead River and Glacier National Park. Topics addressed include physical geography, geology, winter ecology, national park management, environmental history, and the changing economy of the region.

U 241S (GEOG 201S) Montana 3 cr. Offered autumn. The physical, cultural, economic, political, and historical geography of the state including Montana's mountains and the prairies.

U 243X (GEOG 207S) Africa 3 cr. Offered autumn even numbered years. A survey of the biophysical and cultural geography of Sub-Saharan Africa. Emphasis is on the region's cultural-historical development and current ecological, demographic, and economic patterns.

U 245X (GEOG 213S) The Middle East 3 cr. Offered autumn odd-numbered years. Same as AS and LS 213. A survey of the biophysical and cultural geography of Southwest Asia and North Africa. Emphasis on environmental change; prehistory; patterns of cultural and historical change; issues of socio-economic, religious, and political diversity; and the broader political significance of the region.

U 342 (GEOG 301) North America 3 cr. Offered intermittently. Physiographic regions of North America; highlights of historical geography blended with physical and cultural aspects of the continent. Lesser known places are explored.

U 344 (GEOG 310) Crown of the Continent 3 cr. The study of the geographical setting of the Crown of the Continent of North America, including the richness of physical geography, history, culture, and models of conservation. Examines ongoing research initiatives, impacts of climate change, regional transformations, and the relationship between people and this mountainous environment.

UG 347 (GEOG 308) Regional Geography (Multiple Regions) 3 cr. (R-9) Offered intermittently. Selected regions will be listed as appropriate in each Class Schedule.

U 348 (GEOG 307) Field Studies in Geography 3 cr. (R-12) Offered autumn and spring. Through extended backcountry travel, experiential examination of regional landforms, climate, hydrology, soils, and patterns of vegetation and wildlife. Local landscapes, natural-resource endowment, and societies with particular emphasis on human-environmental interaction. Geographical skills and techniques, including map reading and navigational skills. Offered by the Wild Rockies Field Institute as part of a semester-long, 12-credit field experience with corequisite courses in allied fields.

UG 442 (GEOG 401) Regionalism and the Rocky Mountain West 3 cr. Offered spring. Same as HSTA 462 (HIST 401). Investigation of regionalism as a concept and its future in the Rocky Mountain West. Regionalism as a geographical, economic, political, and cultural entity.

UG 444 (GEOG 410) High Asia 3 cr. Offered intermittently. A study of the geography and mountain-society interactions in High Asia. The course includes attention to the theory and methodology of mountain geography, with attention to physical and human systems and their interaction.

UG 445 (GEOG 408) Advanced Regional Geography 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. In-depth treatment of a geographic region, a particular regional problem, or the methodology of regional geography. Topics vary.

Geographical Thought, Methods, Planning and GIS

U 381 (GEOG 387) Principles of Digital Cartography 3 cr. Offered autumn. Prereq., GPHY 112 (GEOG 105) or consent of instr.; coreq., GEOG 389. Concepts, principles, and methods of cartography as applied to computerized mapping and geographical information systems. Topics include history of cartography, basic geodesy, map projections, coordinate systems, map compilation, generalization, and design.

U 382 (GEOG 389) Digital Cartography Laboratory 1 cr. Offered autumn. Prereq., GPHY 112 (GEOG 105); coreq., GPHY 381 (GEOG 387). Laboratory to accompany GPHY 381 (GEOG 387).

UG 385 Field Techniques 3 cr. Offered autumn. Prereq., M 115 (MATH 117), GPHY 111N (GEOG 102N), and GPHY 112 (GEOG 105) or consent of instr. Field techniques used by geographers and planners in making field observations and in collecting data. One hour of lecture and four hours of field/laboratory-based work.

UG 465 Planning Principles and Processes 3 cr. Offered autumn. Prereq., upper-division or graduate standing. Surveys planning principles, practices and issues in urban and rural environments. Attention is devoted to Montana, state planning programs in the United States., and federal programs and policies that influence land-use planning. Emphasizes skills and techniques used in plan development and implementation.

UG 466 Environmental Planning 3 cr. Offered spring. Introduction to practice of environmental planning which includes elements of physical planning, planning design at the landscape scale, and conservation planning. Includes field visits and project-based work.

UG 467 Planning Decision Support Systems 3 cr. Offered spring even numbered years. Introduction to use of computer software tools for modeling and analyzing land use.

UG 468 Community and Regional Analysis 3 cr. Offered autumn. Prereq., M 115 (MATH 117) (or higher) or consent of instr. Coreq., GPHY 460 (GEOG 469).Socio-demographic analysis of communities and regions: population, employment, and spatial interaction. Hands-on course designed for future planners, GIS analysts, and others interested in socio-demographic change.

UG 469 Planning and Analysis Laboratory 1 cr. Offered autumn. Coreq., GPHY 468 (GEOG 468). Laboratory to accompany GPHY 468 (GEOG 468).

UG 486 (GEOG 483) Transport, Planning, and GIS 3 cr. Offered spring. Prereq., M 115 (MATH 117) or higher or consent of instr. Coreq., GPHY 489 (GEOG 489). A project-oriented course focusing on patterns and trends in urban passenger transportation, principles of transport planning, and modeling in GIS-T.

UG 482 (GEOG 484) Spatial Analysis and GIS 3 cr. Offered intermittently**.** Prereq., GPHY 381 (GEOG 387) and 389 and STAT 216 (MATH 241) (or higher) or consent of instr. Quantitative analysis of spatial data, including techniques for pattern analysis, classification, and interpolation within a GIS environment.

UG 485 Internet GIS 3 cr. Offered intermittently. Prereq., GPHY 381 (GEOG 387); coreq., GPHY 489 (GEOG 489). Principles and techniques for distributing GIS and mapping applications through the Internet.

UG 487 Remote Sensing and Raster GIS 3 cr. Offered autumn. Prereq., GPHY 381 (GEOG 387) and 389 and STAT 216 (MATH 241) (or higher) or consent of instr. Coreq., GPHY 489 (GEOG 489). Basic principles of remote sensing and analyzing images within a raster GIS. Review current data sources.

UG 488 Thematic Cartography and GIS 3 cr. Offered spring. Prereq., GPHY 381 (GEOG 387) or consent of instr.; coreq., GPHY 489 (GEOG 489). Communicating and analyzing topical information with maps. Choropleth maps, dot maps, proportional figure maps, isarithmic maps, and others. Includes computer mapping and GIS exercises.

UG 489 Cartography/GIS Laboratory 1 cr. (R-4) Offered autumn and spring. Coreq., GPHY 486 (GEOG 486), 485, 487 or 488. Lab to accompany cartography and GIS courses.

UG 497 (GEOG 471) Workshop in Teaching Geography 2-3 cr. Offered summer. Prereq., upper-division or graduate standing. Modern concepts and techniques in geography, with emphasis on their use in teaching geography in Montana schools. Students are required to prepare and present a teaching unit project.

G 500 Geography Graduate Colloquium 1 cr. (R-3) Offered autumn. Presentation of faculty and student research interests. Guest lecturers. Graded pass/not pass only. Enrollment required every autumn graduate students are in residence.

G 504 Introduction to Geographical Research 1 cr. Offered autumn. To be taken during first semester of graduate studies. Understanding of diverse research approaches in geography and development of a thesis topic. To be continued in spring in GEOG 505.

G 505 Research Design 2 cr. Offered spring. Prereq., graduate standing and GEOG 504. Preparation of a thesis proposal: research design, data collection, analysis, interpretation, and presentation. Recommended to be taken during the second semester of graduate studies.

G 520 Seminar in Geographical Thought 3 cr. Offered autumn. Geographical ideas, concepts, approaches, and techniques from ancient to modern times. Recommended to be taken during first semester of graduate studies.

G 550 Seminar in Geography 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Seminar topics in geography and society, human-environmental interaction, physical geography, regional geography, or geographical techniques.

G 560 Seminar in Planning 3 cr. Offered spring odd-numbered years. A critical analysis of land planning history, theory, approaches, and practice. Emphasis is on the United States and England.

G 561 Land Use Planning Law 3 cr. Offered autumn. Same as EVST 561 and LAW 687. Basic overview of the law of land-use planning including, background in the traditional governmental regulatory, proprietary, and fiscal land use tools. Examination of modern techniques

for land-use planning; consideration of constitutional limits of the authority of state and local governments. Focus on skills in interpreting, drafting, and applying state legislation and local ordinances.

G 562 Land Use Planning Clinic 1-6 cr. (R-6) Offered every term. Prereq. or coreq., GEOG 561. Same as EVST 562. Students assist local communities in long-range planning efforts and development of growth management plans as required by Montana law; ordinance drafting, development proposals, and land use issues.

G 564 Planning Design 3 cr. Offered spring even-numbered years. Prereq., graduate standing or qualified seniors. Analysis of land-use problems and design.

G 578 Preceptorship in Geography 1-3 cr. (R-6) Offered autumn and spring. Prereq., graduate standing, suitable coursework, and consent of instr. Assisting a faculty member by tutoring, helping students with research projects, and carrying out other class-related activities.

G 580 Seminar in GIS and Cartography 3 cr. (R-9) Offered spring. Prereq., consent of instr. Seminar topics in cartography and GIS. Applications to advanced studies in human and physical geography.

G 587 Digital Image Analysis and Modeling 3 cr. Offered spring. Prereq., GPHY 487 (GEOG 487) or FOR 351 or consent of instr.; coreq., GPHY 589 (GEOG 589). Advanced topics in image analysis (e.g., hyperspectral images and pattern-recognition-based classification) and foundations of simple raster-based models.

G 588 Vector GIS 3 cr. Offered autumn. Prereq., consent of instr.; coreq., GPHY 589 (GEOG 589). Applications of GIS in human geography. Mapping and map analysis methods employing census data, TIGER Files, city and county data bases, county surveyors maps, and others. Theory, concepts, and practices of GIS focusing on the vector data model.

G 589 Cartography/GIS Laboratory 1 cr. (R-4) Offered autumn and spring. Laboratory to accompany GPHY 587 or 588.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered every term. Prereq., consent of instr. Independent research in geography or planning.

G 598 Internship Variable cr. (R-9) Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus.

G 599 Thesis Variable cr. (R-6) Offered every term. Prereq., consent of advisor.

Faculty

Professors

- **Jeffrey A. Gritzner, Ph.D., The University of Chicago, 1986**
- **Christiane von Reichert, Ph.D., University of Idaho, 1992**
- **Paul B. Wilson, Ph.D., University of Nebraska, 1972**

Associate Professor

- **Sarah J. Halvorson, Ph.D., University of Colorado-Boulder, 2000**
- **Ulrich Kamp, Doktor der Naturwissenschaften, Technical University of Berlin, 1999**
- **David D. Shively, Ph.D., Oregon State University, 1999**

Assistant Professor

- **Anna Klene, Ph.D.., University of Delaware, 2005**

Lecturers and Adjuncts

- **Udo Fluck, Ph.D., The University of Montana, 2003 (Director, Multicultural Learning Solutions)**
- **Richard Graetz, D.H.L. (Hon), The University of Montana, 2004**
- **Thomas Sullivan, M.A., The University of Montana, 1995**

Emeritus Professors

- **John M. Crowley, Ph.D., University of Minnesota, 1964**
- **Evan Denney, Ph.D., University of Washington, 1970**
- **John J. Donahue, Jr., Ph.D., Syracuse University, 1971**
- **Chris Field, Ph.D., University of California, Los Angeles, 1966**

- **Darshan S. Kang, Ph.D., University of Nebraska, 1975**

Department of Geosciences

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

William Woessner, Chairman

The Science of Earth directly involves the study of natural geological procedures processes and the interactions of these processes with the environment. The major in Geosciences prepares students to assist society in understanding and addressing complex science-based challenges such as climate change and the utilization of finite energy, mineral, and water resources. Geoscientists are involved in deciphering both ancient and modern records that record Earth history.

Geoscientists advance our understanding of earthquakes, landslides, severe storms, and volcanic eruptions; explore the history of life; investigate changing glacial landscapes and watersheds; evaluate the inner-workings of our planet; and search for natural resources including oil, gas, water, and minerals. Our classrooms include field and laboratory settings in which inquiry-based learning helps students develop skills in creative thinking and problem solving. Geoscientists completing our program are employed by private industry; federal, state, and local governmental agencies; environmental consulting firms; non-profit organizations; and by secondary schools needing earth science teachers. Our graduates have a wide range of educational employment opportunities. They are sought after to work in other natural science fields and as graduate students. Jobs in geosciences are available at the B.S., M.S. and Ph.D. levels. The M.S. degree is highly prized by employers and is considered the working professional degree. The Ph.D. degree is required for positions at universities and with companies specializing in research.

The Department of Geosciences offers five B.S. degree options, an M.S. degree, and a Ph.D. degree. The B.S. degrees include Interdisciplinary Geosciences, Geosciences, Earth Science Education, and two transatlantic institutionally shared degrees: International Field Geosciences Joint B.S. Degree with the University College of Cork (Ireland), and an International Field Geosciences Dual B.S. Degree with Potsdam University (Germany). All degree programs in the department require a student to develop a strong background in geosciences and a sound foundation in other sciences.

High School Preparation: In addition to the general requirements for University admission, recommended high school preparation includes a solid background in mathematics and science.

Special Degree Requirements

See index.

Science courses designed for education majors may not be counted toward Geosciences Department science requirements. Geosciences courses and allied science courses must be taken for a traditional grade.

The Upper-division Writing Expectation must be met by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog or by completing GEO 499 (GEOS 499). See index.

The Geosciences Department offers four options for students wishing to major in geosciences. The first option is a highly flexible program designed for those who wish to double major in another science or who simply wish to acquire a broad education of their own design. It features a minimum number of specifically required courses in geosciences and other sciences. The remaining three options are designed for students who desire a more defined path through our curriculum or who are seeking certification to teach. Some paths in each of the options may require prerequisites that are not specifically listed or required.

Interdisciplinary Geosciences B.S.

This flexible option requires the following courses in Geosciences: GEO 101N (GEOS 100N), GEO 102N (GEOS 101N), GEO 211 (GEOS 200), GEO 226 (GEOS 226), and GEO 231 (GEOS 230). In addition, thirteen credits of Geoscience coursework must be taken, relevant to student interests, at the 200, 300, or 400 levels. A minimum of 27 credits from the Geosciences curriculum is required to earn this degree. In addition to 27 credits in Geosciences, at least 27 credits from recognized cognate science classes are required to earn this degree. Required classes include CHMY 121N (Chemistry 151N) or CHMY 141N (Chemistry 161N); M 151 (Math 121) or a more advanced math class; and three credits in Computer Science (modeling or programming), or GIS or Statistics.
Additional cognate science courses must be completed from the list below such that the sum of all cognate science classes is a minimum of 27 credits. Student curricular planning should include awareness of prerequisites as listed in this catalog.

CHMY above 121N (CHEM 151N); MATH above M 151 (MATH 121); CS 131 or above; PHYS 111N or above; BIOL 100N or above; FOR 210N Introductory Soils, FOR 360 Range Management; FOR 380S Environmental Conservation

At the discretion of the academic advisor, other sciences courses such as some courses in physical geography may also be acceptable.

Geosciences B.S.

This option is designed for students who seek post-graduate employment as a professional geoscientist and has two major suggested courses of study; Earth History, Evolution and Earth Resources, and Water, Climate, and Environment. The following Geosciences courses are required to earn this degree: GEO 101N (GEOS 100N), GEO 102N (GEOS 101N), GEO 211 (GEOS 200), GEO 226 (GEOS 226), and GEO 231 (GEOS 230).

Earth History, Evolution, and Earth Resources

- GEO 305 (GEOS 306) Igneous and Metamorphic Petrology..... 4
- GEO 310 (GEOS 310) Invertebrate Paleontology..... 3
- GEO 311 (GEOS 311) Paleobiology..... 3
- GEO 327 (GEOS 327) Geochemistry..... 4
- GEO 315 (GEOS 330) Structural Geology..... 3
- GEO 429 (GEOS 429) Field Geology..... 6
- GEO 433 (GEOS 430) Global Tectonics..... 3
- GEO 442 (GEOS 432) Architecture of Sedimentary Deposits..... 4
- GEO 443 (GEOS 433) Sedimentary Petrology..... 4
- GEO 437 (GEOS 437) Seismology and Magnetics..... 4
- GEO 438 (GEOS 438) Gravity and Magnetics..... 4
- GEO 460 (GEOS 460) Process Geomorphology..... 4

Water, Climate, and Environment

- GEO 320 (GEOS 320) Global Water..... 4
- GEO 327 (GEOS 327) Geochemistry..... 4
- GEO 315 (GEOS 382) Structural Geology..... 3
- GEO 382 (GEOS 302) Global Change..... 3
- GEO 391 (GEOS 395) Special Topics..... 3
- GEO 442 (GEOS 432) Architecture of Sedimentary Deposits..... 4
- GEO 443 (GEO 433) Sedimentary Petrology..... 4
- GEO 437 (GEOS 437) Seismology and Magnetics..... 4
- GEO 438 (GEOS 438) Gravity and Magnetics..... 4
- GEO 460 (GEOS 460) Process Geomorphology..... 4
- GEO 420 (GEOS 480) Hydrogeology..... 4

At least 32 credits of Geoscience courses must be completed, of which 18-24 are upper-division (300-400 level) credits.
In addition to completing the coursework in Geosciences, students must also complete a minimum of 30 credits in cognate sciences classes. Required are the following: PHYS 111N/113N-112N/114N or PHYS 211N/213N-212N/214N; CHMY 121N/122N/123N/124N (CHEM 151N/152N/154N) or CHMY 141N/143N (CHEM 161N/162N); M 162/274 (MATH 150/158) or M 171/172 (MATH 152/153); three credits in Computer Science (modeling or programming), or GIS, or Statistics.

Additional cognate science courses must be completed such that the sum is a minimum of 30 credits. These may include additional courses in Chemistry, Computer Science, Math, and Physics above the listed minimum levels specified above. Biology 100N or above is also appropriate, but substitutions or other science courses must be approved by the student's advisor.

International Field Geosciences Joint B.S. Degree with University College of Cork (Ireland)

This option is designed specifically for students who seek to combine a rigorous education in the Geosciences with a year long international geosciences experience and an emphasis on field-based learning. It requires attending classes and living overseas. Student demonstrating a high level of performance at the University will be eligible for partial financial support as funds are available. Although most of the course work completed during the year abroad will take place at University College Cork in Ireland, additional course work is required at Potsdam University in Germany. For students who satisfy all degree requirements, a B.S. degree in International Field Geosciences will be jointly awarded by The University of Montana and the University College Cork.

The following UM Geoscience courses are required to earn this degree: GEO 101N (GEOS 100N); GEO 102N (GEOS 101N); GEO 108N (GEOS 108N); GEO 211 (GEOS 200); GEO 226 (GEOS 226); GEO 231 (GEOS 230); GEO 315 (GEOS 330); GEO 442 OR 443 (GEOS 432 or 433); and GEO 429 (GEOS 429). Also required are a minimum of 12 credits in upper division UM Geoscience courses selected from among the following: GEO 305,310, 311, 320, 327, 420, 433, 442, 443, 460,491 (GEOS 306, 310, 311, 320, 327, 430, 432, 433, 460, 480, 495) plus GRMN 101/102.

In addition to Geoscience coursework completed at UM, students must complete one formal field course run by the Institute for Geosciences at Potsdam University to sites in Europe (arranged in consultation with advisor) plus one formal field course module run by University College Cork, selected from GL 2016 (pre-Easter Field Course-Scotland), GL3019 (Easter Field Course-Greece), GL4008 (Easter Field Course-Canary Islands). In addition, while in residence at Cork, students must complete any nine of the following courses in consultation with their UM advisor:

- GL2011 Sedimentologic Processes and Petrology

- GL2012 Igneous and Metamorphic Petrology
- GL2015 Invertebrate Paleontology and Evolution
- GL2018 Plate Tectonics and Global Geophysics
- GL3010 Igneous Petrogenesis and Geochemistry
- GL3012 Advanced Structural Geology
- GL3013 Sedimentary Environments
- GL3014 Stratigraphy and Geologic Maps
- GL3017 Environmental Geology
- GL3024 Terrestrial Ecosystems Through Time
- GL4001 Micropaleontology and Palynology
- GL4003 Petroleum Geology and Basin Analysis
- GL4003 Applied Geophysics and Computer Applications
- GL4004 Advanced Igneous Petrology
- GL4005 Hydrogeology
- Metamorphism & Geochronology

Students seeking this degree must also complete one additional formal upper-level Geosciences course at Potsdam University during their year abroad. Recommended are courses that focus on computer-based visualization of geoscience data, using GIS or other visualization platforms. Along with the formal Geoscience course work completed at UM and abroad, students earning this degree must complete a minimum of 27 credits in cognate sciences classes, including the following: PHYS 111N/113N-112N/114N or PHYS 211N/213N-212N/214N; CHMY 121N/122N (CHEM 151N/153N) and CHMY 123N/124N (CHEM 152N/154N) or CHMY 141N/143N (CHEM 161N/162N); M 162/274 OR M 171/172 (MATH 150/158 or MATH 152/153); three credits in Computer Science (modeling or programming), or GIS or Statistics. Also required is one year of college German, GRMN 101/102 (GERM 101/102) and completion of general education requirements relevant to German and Irish culture and history.

International Field Geosciences Dual Degree with Potsdam University (Germany)
This option is designed specifically for students who seek to combine a rigorous education in the Geosciences with a year long international geosciences experience and an emphasis on field-based learning. It requires attending classes and living overseas. Students demonstrating a high level of performance at the University will be eligible for partial financial support as funds are available. Although most of the course work completed during the year abroad will take place at University Potsdam in Germany, additional course work is required at the University College Cork in Ireland. For students who satisfy all degree requirements, a B.S. degree in Geosciences will be awarded by The University of Montana and a second B.S. degree in International Field Geosciences will be awarded by Potsdam University.
The following UM Geoscience courses are required to earn this degree: GEO 101N (GEOS 100N); GEO 102N (GEOS 101N); GEO 108N (GEOS 108N); GEO 211 (GEOS 200); GEO 226 (GEOS 226); GEO 231 (GEOS 230); GEO 326 (GEOS 302); and GEO 429 (GEOS 429). Also required are a minimum of 15 credits in upper division UM Geoscience courses selected from among the following: GEO 305, 310, 311, 320, 327, 315, 433, 442, 443, 437, 438, 460, 420, 491 (GEOS 306, 310, 311, 320, 327, 330, 430, 432, 433, 437, 438, 460, 480, 495).

In addition to Geoscience coursework completed at UM, the following overseas field-based Geoscience courses are required: BP15 (Field course C–France, run by Potsdam) or <u>both</u> BW01 (Field course-Norway, run by Potsdam) <u>and</u> BW02 (Field course-Alps, run by Potsdam); plus one of the following courses offered by University College Cork; GL 2016 (pre-Easter Field Course-Scotland), GL3019 (Easter Field Course-Greece), GL4008 (Easter Field Course-Canary Islands). Students seeking this degree must also complete any four of the following courses offered by Potsdam University:

- BW04 Regional Geology (6)
- BW05 Paleoclimate and Quaternary Geology (6)
- BW06 Analysis of Geologic Maps(6)
- BW07 Analytic Geochemistry (6)
- BW16 Natural Hazards (6)
- BW15 Tectonophysics and Rheology (6)
- BW11 Seismology (6)
- BW12 Seismics (6)
- BW13 Geoelectrics (6)
- BWP05 Sedimentary Systems and Stratigraphy (6)
- BWP06 Geomorphology (6)
- BWP16 Tectonics and Geodynamics (6)

Along with the formal Geoscience course work, students earning this degree must complete a minimum of 27 credits in cognate sciences classes, including the following: PHYS 111N/113N-112N/114N or PHYS 211N/213N-212N/214N; CHMY 121N/123N (CHEM 151N/152N) or CHMY 141N/143N (CHEM 161N/162N); M 162/274 (MATH 150/158) or M 171/172 (MATH 152/153); three credits in Computer Science (modeling or programming), or GIS or Statistics. While overseas, the students must complete tow of the following cognate science courses at Potsdam University:

- BWP07 Basics in GIS
- BWP08 Basics in Remote Sensing
- BWP09 Numerical Methods
- BWP10 Basic Data Analysis

Also required is one year of college German GRMN 101/102 (GERM 101/102) and completion of general education requirements relevant to German and Irish culture and history.

Option in Earth Science Education
Major Teaching Field of Earth Science: A student must complete GEO 101N, 102N, 105N, 231, 226, 301, 310, 315 (GEOS 100N, 101N, 105N, 230, 226, 301, 310, 330), 3 additional credits from any geosciences course numbered 100 or above and 12 credits from any geosciences courses numbered 300 or above. Also required are GPHY 303N, ASTR 131N-132N, M 151, STAT 341 (MATH 121, 341), CS 101, CHMY 485 (CHEM 485), and C&I 426. One of BIOL 121N-122N or CHMY 121N/123N (CHEM 151N-152N) or PHYS 111N/113N or 112N/114N must be completed.
For endorsement to teach earth science, a student also must gain admission to Teacher Education and Student Teaching and meet the requirements for certification as a secondary teacher (see the School of Education section of this catalog). The demand in most Montana high school for teaching in this field may be limited, and students must complete the requirements for the required second teaching endorsement (major or minor).

Suggested Course of Study

For questions concerning your special interests or preparation, see a geology advisor.

Interdisciplinary Geosciences B.S.

First Year	A	S
CHMY 121N/122N (CHEM 151N/153N) or CHMY 141N (CHEM 161N)	4(5)	–
CHMY 123N/124N or CHMY 143	–	5
WRIT 101 (ENEX 101) College Writing I	3	–
GEO 101N/102N (GEOS 100N) Intro to Physical Geology	4	–
GEO 108N (GEOS 108N) Climate Change	–	3
CS 172 Intro to Computer Modeling	–	3
General Education	5(4)	4
	16	15
Second Year	**A**	**S**
M 151 (MATH 121) Precalculus	4	–
M 171 (MATH 152) Calculus	–	4
FOR 210N Introductory Soils	4	–
GEO 211 (GEOS 200) Earth History and Evolution	4	–
GEO 226 (GEOS 226) Earth Materials	–	4
GEO 231 (GEOS 230) Geosciences Field Methods	–	4
Electives and General Education	3	3
	15	15
Third Year	**A**	**S**
PHYS 111N/113N-211N/213N	5	–
Additional cognate science*	–	5
GEO any 300 and above	6	6
Electives and General Education	4	4
	15	15
Fourth Year	**A**	**S**
GEO any 300 and above	6	6
Additional cognate science*	3	3
Electives and General Education	6	6
	15	15

*Suggested, a total of 30 additional science credits are required. See special degree requirements.

Geosciences B.S.

First Year	A	S
CHMY 121N/122N (CHEM 151N/153N) or CHMY 141N (CHEM 161N)	4(5)	–
CHMY 123N/124N (CHEM 152N/154N) or CHMY 143N (CHEM 162N)	–	5
WRIT 101 (ENEX 101) College Writing I	3	–

GEO 101N (GEOS 100N) 102N Intro to Physical Geology	4	–
GEO 108N (GEOS 108N) Climate Change	–	3
CS 172 Intro to Computer Modeling	–	3
M 151 (MATH 121) Precalculus (if needed)	–	4(0)
General Education	2(1)	3(7)
	13	18
Second Year	**A**	**S**
M 171 (MATH 152) Calculus	4	–
M 172 (MATH 153) Calculus II	–	4
GEO 211 (GEOS 200) Earth History and Evolution	4	–
GEO 226 (GEOS 226) Rocks, Minerals, and Resources	4	–
GEO 231 (GEOS 230) Geosciences Field Methods	–	4
Electives and General Education	3	7
	15	15
Third Year	**A**	**S**
PHYS 111N/113N (211N/213N)	5	–
PHYS 112N/114N-212N/214N	–	5
GEO at 300 level or above	6	6
Electives and General Education	4	4
	15	15
Fourth Year	**A**	**S**
GEO at 300 level or above	6	6
Additional cognate science*	3	3
Electives and General Education	6	6
	15	15

*Suggested, a total of 30 additional science credits are required. See special degree requirements.

International Field Geosciences Joint B.S. Degree with University College Cork (Ireland)

First Year	**A**	**S**
CHMY 121N/122N (CHEM 151N/153) (or CHMY 141N)	4	–
CHMY 123N/124N (CHEM 152N/154N) (or CHMY 143N)	–	5
WRIT 101 (ENEX 101) College Writing I	3	–
GEO 101N (GEOS 100N)–102N Intro to Physical Geology and Lab	4	–
GEO 108N (GEOS 108N) Climate Change	–	3
GEO 211 (GEOS 200) Earth History and Evolution	–	3
M 151 (MATH 121) Precalculus (if needed)	–	4(0)
General Education	5	0(4)
	16	15
Second Year	**A**	**S**
M 171 (MATH 152) Calculus (or M 162)	4	–
M 172 (MATH 153) Calculus II (or M 274)	–	4
GEO 226 (GEOS 226) Rocks, Minerals and Resources	4	–
GEO 231 (GEOS 230) Geosciences Field Methods	4	–
GEO 315 (GEOS 330) Structural Geology	–	3
GEO 442 (GEOS 432) Architecture of Sedimentary Deposits or GEO 443 (GEOS 433) Sedimentary Petrology	–	4
GRMN 101 (GERM 101) Elementary German I	5	–
GRMN 102 (GERM 102) Elementary German II	–	5
	17	16
Summer (in Potsdam)		
Field Course (Potsdam)	3	
Visualization Course (Potsdam)	3	
GEO 429 Field Course (UM)	6	
Third Year (in Cork)	**A**	**S**
Formal GL field courses	–	5
Formal GL classroom courses	10.5	2.5

General Education	2.5	2.5
	13	10

Summer

GEO 429 (GEOS 429) Field Geology	6

Fourth Year	**A**	**S**
PHYS 111N/113N (211N/213N)	5	–
PHYS 112N/114N (212N/214N)	–	5
GEO at 300 level or above	6	6
Electives and General Education	4	4
	15	15

International Field Geosciences Dual Degree with Potsdam University (Germany)

First Year	**A**	**S**
CHMY 121N/122N (CHEM 151N/153N)	4	–
CHMY 123N/124N (CHEM 152N/154N)	–	5
WRIT 101 (ENEX 101) College Writing I	3	–
GEO 101N (GEOS 100N)–102N Intro to Physical Geology and Lab	4	–
GEO 108N (GEOS 108N) Climate Change	–	3
GEO 211 (GEOS 200) Earth History and Evolution	–	3
M 151 (MATH 121) Precalculus (if needed)	–	4(0)
General Education	5	0(4)
	16	15

Second Year	**A**	**S**
M 171 (MATH 152) Calculus (or M 162) (or MATH 150)	4	–
M 172 (MATH 153) Calculus II (or M 274) (or MATH 158)	–	4
GEO 226 (GEOS 226) /Rocks, Minerals and Resources	4	–
GEO 231 (GEOS 230) Geosciences Field Methods	4	–
GEO 326 (GEOS 302) Sedimentary Geology Field Trip	–	2
GRMN 101 (GERM 101) Elementary German I	5	–
GRMN 102 (GERM 102) Elementary German II	–	5
Electives and General Education	–	4
	17	15

Summer (in Potsdam)

BP15 (or BW01 and BW02)	6

Third Year (in Potsdam)	**A**	**S**
Formal BP or BWP class work	6	6
BWP cognate science classes	3	3
Electives and General Education	3	3
	12	12

Winter (in Cork)

Formal GL field courses	–	2.5

Fourth Year

PHYS 111N/113N (211N/213N) (221N)	5	–
PHYS 112N/114N (212N/214N) (222N)	–	5
GEO at 300 level or above	6	6
Electives and General Education	4	4
	15	15

Earth Science Education Option

First Year	**A**	**S**
CS 172 Introduction to Computer Modeling or equivalent	–	3
WRIT 101 (ENEX 101) College Writing I	3	–
GEO 101N (GEOS 100N)–102N Intro to Physical Geology and Laboratory	4	–

GEO 105 (GEOS 105) Oceanography	–	2
GEO 231 (GEOS 230) Geosciences Field Methods	–	3
M 151 (MATH 121) Precalculus	4	–
PSYX 100S (PSYC 100S) Introduction to Psychology	4	–
*Electives and General Education	3	6
	18	14

Second Year	**A**	**S**
ASTR 131N–132N Elementary Astronomy I, II	3	3
CHMY 121N (CHEM 151N) General and Inorganic Chemistry	3	–
GEO 226 (GEOS 226) Rocks, Minerals and Resources	–	4
GEO 301 (GEOS 301) Environmental Geology	3	–
GEO any 100	–	3
*Electives and General Education	6	6
	15	16

Need to formally gain admission to the Teacher Education Program. See requirement in the School of Education, Department of Curriculum and Instruction. Deadlines: March 1 and October 1.

Third Year	**A**	**S**
CHMY 485 (CHEM 485) Laboratory Safety	–	1
C&I 200 Exploring Teaching Through Field Experience	2	–
C&I 303 Educational Psychology & Measurements	–	4
C&I Other	3	6
ERTH 303N (GEOG 322N) Meteorology	3	–
GEO 310 (GEOS 310) Invertebrate Paleontology	3	–
GEO 315 (GEOS 330) Structural Geology	3	–
GEO any 300 or above	3	6
	17	17

Fourth Year	**A**	**S**
C&I 426 Teaching Science in Middle and Secondary Schools	3	–
C&I Other	–	6
GEO any 300 or above	3	–
*Electives and General Education	9	12
	15	18

*C&I recommends a minor teaching field. A fifth year may be required to obtain a minor field endorsement.

Requirements for a Minor

To earn a minor in Geosciences the student must complete GEO 101N (GEOS 100N), 102N, 226, 231 plus at least 12 credits in other geoscience courses numbered 300 or above. All courses must be taken for a traditional letter grade.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Geosciences (GEO)

U 101N (GEOS 100N) Intro to Physical Geology 3 cr. Offered autumn and spring. General geology including the work of wind, flowing water, glacial ice, gravity, earthquakes, volcanoes and plate tectonics in shaping the earth.

U 102N (GEOS 101N) Intro to Physical Geology Laboratory 1 cr. Offered autumn and spring. Prereq. or coreq., any geoscience courses below GEO 130. A series of laboratory and field experiences designed around basic geologic processes and materials. Familiarization with common minerals, rocks, land forms, and structures. Intended to provide laboratory experience with any geoscience course below GEO 130.

U 105N Oceanography 3 cr. Offered alternate spring semesters. Origin of sea–water and ocean basins; currents, tides, and coastal processes; use and misuse of the oceans by humans.

U 106N History of Life 3 cr. Offered autumn. The evolution of plants, invertebrates and vertebrate animals, highlighting major events in the evolution of life on Earth. Includes laboratory experience with fossils.

U 107N (GEOS 103N) Natural Hazards 3 cr. Offered spring. Examination of volcanism, earthquakes, landslides, floods, coastal erosion, hurricanes, and asteroid impacts. Emphasis on processes, recognition and consequences of catastrophic events, and how to minimize their societal impacts.

U 108N Climate Change 3 cr. Offered autumn. The geoscience perspective on the earth's climate system. Climate processes and feedbacks, climate history from early earth to the ice ages, present and future changes due to natural processes and human activities.

U 191 (GEOS 195) Special Topics Variable cr. (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.

U 207 Geological Hazards and Disasters 2 cr. Offered spring. Prereq., minimum grade of C in any 100-level geoscience course except 106. Study of major geological catastrophes, their causes and effects. Probability, frequency and recurrence intervals, magnitudes, the role of overlapping/ unrelated events. Examples of floods, hurricanes, landslides, submarine landslides, tsunamis, earthquakes, volcanic eruptions, asteroid impacts.

U 211 (GEOS 200) Earth History and Evolution 3 cr. Offered spring. Prereq., any 100–level GEO course. Traces the history of the earth since its inception 4.5 billion years ago. Presents scientific theories for the origin of the earth and the nature of important earth shaping events of the past, including the development of the oceans, atmosphere and climate..

U 226 Rocks, Minerals and Resources 4 cr. Offered autumn and spring. Prereq., any geoscience 100–level lecture course, GEO 102N (GEOS 101N), CHMY 121N or 141N (CHEM151N or CHEM 161N). Study of minerals and rocks utilizing an Earth Systems approach; mineral identification and paragenesis; survey of the distribution of minerals from the interior to the surfaces of planets and the processes that led to their formation.

U 231 (GEOS 230) Geosciences Field Methods 3 cr. Offered autumn and spring. Prereq., GEO 101N-102N (GEOS 100N–101N). Field methods and interpretations. This course introduces students to a variety of field methodologies routinely used in the collection and interpretation of geoscientific field data.

U 260 River Systems 3 cr. Offered spring alternate years. Hydrologic and geomorphic basis of environmental management problems concerning river systems. Analysis of the processes of flooding, sedimentation, and morphological change in channels, flood plains, deltas, and alluvial fans. Effects of climate, land use and engineering.

U 291 (GEOS 295) Special Topics Variable cr. (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.

U 301 Environmental Geology 3 cr. Offered autumn. Prereq., GEO 101N-102N, (GEOS 100N–101N, 130); M 115 or 151(MATH 117 or 121); CS 172 or equiv. experience with spread sheets and word processors. Human effects on geologic processes and the effect of geologic processes on humans. Group and independent research projects on local and regional environmental geology problems are used to teach scientific problem solving. Topics include population growth, management of surface and groundwater quantity and quality, resource use, global environmental change.

UG 326 (GEOS 302) Sedimentary Geology Field Trip 2 cr. Offered spring. Prereq., GEO 101N (GEOS 100N). Examination of modern and ancient sedimentary depositional systems in the field through a 9–day spring break field trip. Possible areas of focus include the Permian Reef Complex of West Texas, the California convergent margin, Oregon coastal processes, geology of the Basin and Range, Death Valley Region, Colorado Plateau, and Oklahoma Aulacogen.

U 304E Science and Society 3 cr. Offered autumn. Role of scientific knowledge in human societies from the pre–Classical to the present. Discussion of tools for integrating science into ethical, political, and social decisions, including analyses of modern case studies from physical sciences.

U 305 (GEOS 306) Igneous and Metamorphic Petrology 4 cr. Offered spring. Prereq., GEO 226 (GEOS 226), CHMY 143N (CHEM 162N). Igneous rock associations, igneous processes and origins; metamorphic minerals and phase relationships, metamorphic zones, facies, and conditions; metamorphic environments, metallic minerals and mineral deposits.

UG 310 Invertebrate Paleontology 3 cr. Offered autumn. Prereq., GEO 101N (GEOS 100N) or equiv. Principles of paleontology including morphology, classification and evolution of major groups of fossils and their application to paleoecology and biostratigraphy.

UG 311 Paleobiology 3 cr. Offered spring. Prereq., GEO 310 (GEOS 310) or equiv. Application of geologic and biologic principles to problems in paleontology.

UG 313 Curation Techniques 2 cr. Offered spring. Prereq., basic course in natural sciences. Instruction in basic techniques of managing natural history collections. Focus on practical applications.

U 315 (GEOS 330) Structural Geology 3 cr. Offered autumn. Prereq., GEO 226 (GEOS 226). Structures of deformed rocks; mechanical principles; graphical interpretation of structural problems, tectonic principles.

UG 317 (GEOS 309) Planetary Science 3 cr. Offered autumn even-numbered years. Prereq., PHYS 111N/113N or 211N/213N and M 162, 171 (MATH 150 or 152). Same as ASTR 351. Physical and geological characteristics of planets, satellites, asteroids, comets, and

meteoroids with an emphasis on comparative planetology.

U 320 Global Water 4 cr. Offered spring. Prereq., one semester of college chemistry, WRIT 101 (ENEX 101) or equiv. Study of the chemistry of water as it moves through the hydrological cycles; discussion of how water chemistry evolves through atmospheric water, precipitation, ground water, and surface water.

U 327 Geochemistry 4 cr. Offered autumn even–numbered years. Prereq., one year of college chemistry and one semester of geology. One semester of mineralogy recommended. Chemical principles applied to geologic processes. Origin and chemical composition of atmosphere and hydrosphere. Methods of radiometric dating and isotope applications.

UG 382 Global Change 3 cr. Offered intermittently. Prereq., consent of instr. Lectures, readings, and discussions on geological and geochemical processes that affect global change using recent literature; carbon dioxide buildup, greenhouse effect, ozone depletion, desertification, ice ages, and other global events.

U 391 (GEOS 395) Special Topics Variable cr. (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.

U 392 (GEOS 396) Independent Study Variable cr. (R–6) Offered every term. Specific topics of particular interest to individual students.

U 398 Internship Variable cr. Offered every term. Prereq., 12 credits in geosciences. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. No more than 3 credits of GEO 398 (GEOS 398) may be applied to the geosciences minor. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 407 Global Biogeochemical Cycles 3 cr. Offered spring odd numbered years. Same as FOR 408, BIOL/CCS 407. Exploration of how variations in the availability or utilization of critical Earth elements influences the atmosphere, the oceans, and the terrestrial biosphere including the natural and agricultural ecosystems on which we depend.

UG 420 (GEOS 480) Hydrogeology 4 cr. Offered autumn. Prereq., GEO 101N (GEOS 100N)-102N; PHYS 111N/113N or 211N/213N; M 162 OR 171 (MATH 150 or 152) strongly recommended. Occurrence, movement, quality, and methods of quantification of groundwater. Geological framework and physics of groundwater flow. Supply, contamination, and management problems.

U 425 Geology of the Pacific Northwest 3 cr. Offered intermittently. Prereq., GEO 101N (GEOS 100N). Narrative discussion of the evolutions of the Pacific Northwest from Archean time to present.

UG 426 (GEOS 402) Sedimentary Geology Field Trip 2 cr. Examination of sedimentary depositional systems through a nine–day spring break field trip off campus.

U 429 Field Geology 6 cr. Offered summer. Prereq., GEO 315 (GEOS 330) and consent of instr. Geologic mapping on aerial photos and topographic base maps. Field interpretation in a variety of rock types and structures. Taught every summer near Dillon, Montana. Extra fees. Pre–registration in early spring.

UG 433 (GEOS 430) Global Tectonics 3 cr. Offered spring. Prereq., GEO 315 (GEOS 330), M 162 (MATH 150), and 2.25 or better overall GPA in geosciences courses. Examination of large scale structural features of earth's surface and their relation to tectonic processes as well as active tectonic phenomena including seismicity, volcanism, and crustal deformation.

UG 436 Subsurface Imaging in Archaeology 3 cr. Offered Spring. Prereq., successful completion of UM general education requirements for math and natural science. Applied and theoretical aspects of radar, magnetics, gravity, and electrical methods related to the detection of buried archaeological features. The focus is on the development of experimental design, data acquisition, processing, and interpretation. Course content is also applicable to shallow environmental sources and problems.

UG 437 Seismology and Magnetics 4 cr. Offered autumn. Prereq. or coreq., M 172 (MATH 153), GEO 101N-102N (GEOS 100N-101N), PHYS 111N/113N. Theory and global aspects of seismology and magnetics as well as their practical application to environmental problems.

UG 438 Gravity and Magnetics 4 cr. Offered Spring. Prereq. or coreq., M 172 (MATH 153), GEO 101N (GEOS 100N)-102N, PHYS 111N/113N. GPS, gravity, and electromagnetic methods with acquisition, processing, and interpretation of locally-collected data. Applications include environmental and crustal scale imaging, tectonic processes, and whole-earth models.

UG 442 (GEOS 432) Architecture of Sedimentary Deposits 4 cr. Offered spring. Study of the architectural elements and composition of sedimentary deposits in the context of their tectonic environments and their influence on petroleum and hydrogeologic systems.

UG 443 (GEOS 433) Sedimentary Petrology 4 cr. Offered spring. Prereq., graduate standing or GEO 442 (GEOS 432). Field, hand specimen and thin section petrology of siliciclastic and carbonate rocks, emphasis on tectonic and diagenetic interpretation of siliciclastic rock and environments of deposition and diagenesis of carbonate rocks.

UG 460 Process Geomorphology 4 cr. Offered autumn, alternate years. Coreq., one year college calculus and physics. Quantitative examination of landforms, runoff generation, weathering, mechanics of soil erosion by water and wind, mass wasting, glacial and periglacial

processes and hillslope evolution.

UG 469 (GEOS 465) Computer Modeling in the Physical Sciences with Matlab 3 cr. Offered spring alternate years. Coreq., one year college calculus and physics. Introduction to Matlab and writing and using computer models to address typical problems faced by physical scientists. Topics include heat diffusion, carbon storage, and landscape evolution. No previous computer experience required.

UG 488 Snow, Ice and Climate 3 cr. Offered spring. Prereq., M 121 (MATH 100). Study of basic physical processes occurring n snow and ice, and how these processes govern the interaction between frozen water and the climate system. The first half of the course focuses in snow, with special attention to snow formation in the atmosphere, snow metamorphism, water flow through snow, and basic avalanche mechanics. The second half of the course focuses on ice and includes glacier and ice sheet flow dynamics, glacier hydrology, and ice age theory. Graduate students will be required to complete additional problem sets requiring higher level math; perform additional reading assignments; perform at a higher level on assignments and exams where students are asked to outline and describe various physical processes; submit a well researched and reference research proposal that is able to synthesize previous research and provide a sophisticated research plan.

UG 491 (GEOS 495) Special Topics 1-8 cr. (R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

UG 492 (GEOS 496) Independent Study Variable cr. (R-6) Offered every term. Specific topics of particular interest to individual students.

U 493 Omnibus Variable cr. (R–10) Offered intermittently. Independent work under the University omnibus option. See index.

UG 494 Senior Geology Seminar 1–10 cr.(R–10) Offered intermittently. Prereq., upper–division standing in geosciences or consent of instr. Independent study of various topics under the direction of a faculty member.

U 499 Senior Thesis/Capstone 3–10 cr.(R–10) Offered every term. Prereq., 18 credits in geosciences. Independent research project in any geosciences topic supervised by faculty member, and leading to completion of baccalaureate degree.

G 502 Thesis/Dissertation Proposal 1 cr. Offered spring. Work with advisors to choose a research project and write a proposal.

G 508 Fundamentals of Academic Research 3 cr. Offered fall. Prereq., graduate standing. An introduction to research methods and tools in the academic setting intended for first semester graduate students in geosciences. Topics include proposal writing, presenting research results in oral and written formats, using computer tools for research in the geosciences, and ongoing research of department faculty.

G 522 Metamorphic Terrain Analysis 3 cr. Offered autumn. Introduction to techniques used to analyze burial and uplift histories of metamorphic terrains. Topics include: geochronology, including closure temperature theory and the use of geochronologic systems as thermochronometers; geothermometry and geobarometry; quantitative thermodynamic modeling of P–T paths; heat flow and the thermal structure of orogenic belts.

G 528 Sedimentary Basin Analysis 4 cr. Offered autumn. Influence of allocyclic processes (tectonism, climate, eustacy, etc.,) in shaping the evolution of sedimentary basins. Emphasis on integration and synthesis of tools of sedimentary basins analysis, including the study of depositional systems, provenance, paleocurrents, subsidence, sequence stratigraphy, and well logs.

G 531 Environmental Geochemistry of Metal Contamination 4 cr. Offered autumn. Prereq., GEO 570, 579 (GEOS 570, 579); CHMY 442 (CHEM 442); FOR 511 or consent of instr. Integration of major processes and cycles transporting, fixing, and transforming inorganic contaminants in aquatic systems, soils, sediments and subsurface environments. Concentration on research to solve complex environmental problems.

G 548 Topics in the Cryosphere 3 cr.(R–6 M.S., R–12 Ph.D.) Offered spring. Prereq., graduate standing or consent of instructor. Readings, discussions, lectures, and field experiments on various topics related to snow, ice, and climate processes. Recent topics: meltwater infiltration in snow, glacier hydrology, climate cycles, ice, and sea level rise.

G 560 Fluvial Geomorphology 4 cr. Offered intermittently. Prereq., one year college calculus and physics. Application of fluid mechanics to sediment transport and development of river morphology. Form and process in river meanders, the pool–riffle sequence, aggradation, grade, and baselevel.

G 570 Advanced Geochemistry 4 cr. Offered autumn even–numbered years. Prereq., one year college chemistry. Chemistry of aqueous systems including aqueous kinetics, aqueous thermodynamics, acid/base chemistry, carbonate systematics, oxidation/deduction reactions, mineral solubility, and complexation. Includes an introduction to the use of geochemical models. Concepts applied to natural systems.

G 572 Advanced Hydrogeology 3 cr. Offered spring. Prereq., GEO 420 (GEOS 480) or consent of instr. Advanced concepts used in groundwater investigations, including flow systems analysis, hydrogeologic monitoring and sampling, resource evaluation, exploration, development and monitoring, and contaminant transport. Special problem areas in groundwater exploration and management.

G 573 Applied Groundwater Modeling 3 cr. Offered autumn. Prereq., GEO 420 (GEOS 480) and consent of instr. Development of numerical modeling techniques, finite difference and finite element modeling of groundwater flow systems. Application of standard 2D and

3D models to field problems.

G 575 Clays and Clay Petrology 3 cr. Offered spring. Prereq., consent of instr. Clay mineralogy including fundamental particle theory; x–ray identification methods. Origins of clays; petrology of shales through low–grade metamorphism.

G 579 Geochemistry of Hot Springs 3 cr. Offered autumn, even–numbered years. Prereq., one year of college of chemistry of consent of instr. Chemistry and geology of hydrothermal systems including solute/gas geothermometry, acid/base reactions, oxidation/reduction reactions, mineral equilibrium, and microbial ecology as applied to terrestrial and submarine hydrothermal systems. Includes an introduction to the use of geochemical models.

G 580 Topics in Mineralogy and Petrology Variable cr. (R–6 for M.S., R–12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: tectonics and petrology; alkaline igneous rocks.

G 582 Topics in Structure and Geophysics Variable cr. (R–6 for M.S., R–12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: structural analysis, Precambrian crustal evolution, field trips on Rocky Mountain structure.

G 583 Topics in Stratigraphy, Sedimentation and Paleontology Variable cr. (R–6 for M.S., R–12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: evolution of life; Proterozoic stratigraphy; reefs through time.

G 585 Topics in Hydrogeology and Low–Temperature Geochemistry Variable cr. (R–6 for M.S., R–12 for Ph.D.) Prereq., consent of instr. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: field methods, well design, contaminant transport, geochemical modeling.

G 587 Topics in Geomorphology Seminar Variable cr. (R–6 for M.S., R–12 for Ph.D.) Offered spring. Prereq., consent of instr. Reading and discussion of relevant papers. Offerings on request of graduate students by arrangement with appropriate faculty. Recent topics: landscape evolution; weathering processes; tectonic geomorphology.

G 590 Supervised Internship 1–12 cr. Offered intermittently.

G 595 Special Topics Variable cr.(R–8) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.

G 597 Advanced Problems Variable cr.(R–10) Offered intermittently. Prereq., consent of instr. Investigations of geological problems exclusive of thesis or dissertation research.

G 599 Thesis Research Variable cr.(R–6) Offered every term. Prereq., thesis proposal approval. Directed research to serve as thesis for the master degree. Credit assigned upon submittal of final copy of approved and bound thesis.

G 699 Dissertation Research Variable cr.(R–12) Offered every term. Prereq., dissertation proposal approval. Directed research to serve as dissertation for the Ph.D. degree. Credit assigned upon submittal of final copy of approved and bound dissertation.

Faculty

Professors

- Marc S. Hendrix, Ph.D., Stanford University, 1992
- Nancy W. Hinman, Ph.D., University of California (San Diego), 1987
- Johnnie N. Moore, Ph.D., University of California (Los Angeles), 1976
- James W. Sears, Pd.D., Queen's University, 1979
- Steven D. Sheriff, Ph.D., University of Wyoming, l981 (Chair)
- George D. Stanley, Ph.D., University of Kansas, 1977
- William W. Woessner, Ph.D., University of Wisconsin (Madison), 1978

Associate Professor

- Joel T. Harper, Ph.D., University of Wyoming, 1997

Assistant Professors

- Julia A. Baldwin, Ph.D., Massachusetts Institute of Technology, 2003
- Rebecca O. Bendick, Ph.D., University of Colorado, Boulder, 2000
- Marco P. Maneta, Ph.D., University of Extremadura (Spain), 2006
- Andrew C. Wilcox, Ph.D., Colorado State University, 2005

Emeritus Professors

- David Alt, Ph.D., University of Texas, 1961
- Donald W. Hyndman, Ph.D., University of California (Berkeley), 1964
- Ian M. Lange, Ph.D., University of Washington, 1968
- Raymond C. Murray, Ph.D., University of Wisconsin, 1955
- Graham R. Thompson, Ph.D., Case Western Reserve, 1971
- John P. Wehrenberg, Ph.D., University of Illinois, 1956
- Robert M. Weidman, Ph.D., University of California (Berkeley), 1959
- Donald Winston, Ph.D., University of Texas, 1963

Department of History

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Richard Drake, Chair

For the student in search of a broad education rather than in training for a particular occupation, the History Department offers an exciting program of instruction. It is designed to provide a knowledge and understanding of the background and ramifications of present local, national, and world affairs. The program emphasizes understanding rather than the memorization of names and dates. Students are taught how to read critically, analyze thoughtfully, conduct research carefully, and write intelligently.

Toward this end, the department offers a wide variety of courses ranging in time, location, and subject. For those students interested in local history there are courses on Montana, the West and unique aspects of the frontier. Other classes stress the nature of early American society, the American Revolution, family and gender in America, the Civil War, and diplomacy in the Cold War. Still others emphasize European social, cultural, and intellectual history, European exploration, the French Revolution, Islamic civilization, Asian history, Russian history, and African history. Topical courses concentrate upon the European peasantry, documentary analysis, diplomacy, war and peace, terrorism, and environmental history.

The History Department helps to prepare men and women for many different kinds of occupations. Graduates are employed in federal, state or local government positions ranging from domestic to foreign service, from senators to research analysts. Many teach history in Montana or in other states while others pursue their educations at advanced graduate schools earning master or doctoral degrees. Several have been awarded Rhodes or Marshall Scholarships.

Lawyers, journalists and businessmen also are trained by the department; many combine history with political science, journalism, or business. History provides not only a basis for the pursuit of their chosen profession but also furnishes knowledge and perspective for intelligent leadership of citizens in community affairs.

The department offers the Bachelor of Arts, Master of Arts, and the Doctor of Philosophy degrees.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Requirements for a History Major

Students selecting a major in history must complete the following requirements:

I. Courses and credits

A. A minimum of 40 credits in history, maximum of 60. Of the 40-credit total, 9 credits must be in European history, 9 in American history, and 9 in world history (Asian, Islamic, African, or Latin American). History majors must complete at least 21 upper-division credits.

B. All history majors must take at least 2 or the following 8 courses: HSTR 101H, 102H, 103H, 104H, (HIST 104, 105, 107, 108), HSTA 101H, 102H, 103H, 104H (HIST 151-154).

C. History majors must complete HSTR 300 (HIST 300), The Historian's Craft or a 400-level approved history writing course.

II. Languages

The Department requires competency in English and a proficiency in one foreign language. These requirements include:

A. WRIT 101 (ENEX 101) or its equivalent.

B. Foreign language requirements may be satisfied by completing anyone of the following options:

1. The 101-102 active skills sequence in any foreign language.

2. Any single course at or above the 102 or 112 level in any foreign language.

3. An equivalency test for (3) offered by the Department of Modern and Classical Languages and Literatures.

The Department of History does not allow credit for foreign languages taken in high school but students with high school backgrounds in a foreign language may wish to pursue options (2) or (3) above.

III. Upper-Division Writing Expectation

The Upper-Division Writing Expectation must be met by successfully completing an upper-division history writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Requirements for a History Minor

To earn a minor in history, the student must complete the following: (1) a minimum of 20 credits in history of which 6 credits must be in American history, 6 must be in European history, and 6 in world history (Asian, Islamic, or Latin American); (2) two of the following 8 courses: HSTR 101H, 102H,103H, 104H (HIST 104, 105, 107, 108), HSTA 101H, 102H, 103H, 104H, (HIST 151-154); (3) of the 20 credits at least 9 must be upper-division credits; and (4) WRIT 101 (ENEX 101) or its equivalent.

Teacher Preparation in History

Students who want to be licensed to teach history at the middle and high school level must complete the BA degree requirements in history. They also must complete a teaching minor in a second field of their choice and the professional licensure program in the School of Education. Students may also earn a teaching minor in history. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of these licensure programs.

Teacher Preparation in History and Government

Students who want to be licensed to teach history, government, and one additional social science at the middle and high school level must complete the BA degree requirements for the combined academic major in history and political science. In completing this combined degree, students simultaneously satisfy the Comprehensive Social Science teaching major and the professional licensure program in the School of Education. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of this licensure program.

Suggested Course of Study for History Majors

First Year	A	S
HSTR 101H, 102H (HIST 104-105) Western Civilization I & II or HSTA 101H, 102H American History I & II (HIST 151-152)	4	4
WRIT 101 (ENEX 101) Composition	3	-
Foreign language	5	5
Electives and General Education	3	6
	15	15
Second Year	**A**	**S**
HSTR 240 (HIST 201) East Asia, HSTR 208 (HIST 208) Africa, HSTA 255 (HIST 269) Montana, HSTR 262, 264 Islamic, or HSTR 230H, 231H Latin America	6	6
Electives and General Education	9	9
	15	15
Third Year	**A**	**S**
HSTR 300 The Historian's Craft or a 400-level approved history writing course.	(3)	(3)
HSTA OR HSTR upper division history courses	3-6	3-6
Electives and General Education	9	9
	15	15
Fourth Year	**A**	**S**
HSTA OR HSTR upper division history courses	6	3
Electives, General Education, Broadfield Social Sciences and C&I courses (if applicable)	9	12
	15	15

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course

may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

United States History (HSTA)

- **U 101H (HIST 151H) American History I 4 cr.** Offered autumn. A comprehensive introductory history of Colonial, Revolutionary and 19th century America, to 1877. Lecture-discussion. Credit not allowed for both 101H and 103H.
- **U 102H (HIST 152H) American History II 4 cr.** Offered spring. A comprehensive introductory history of the U.S. since 1877. Lecture-discussion. Credit not allowed for both 102H and 104H.
- **U 103H (HIST 154H) Honors American History I 4 cr.** Offered autumn. Enrollment by consent of instructor. A comprehensive introductory history of Colonial, Revolutionary, and 19th century America, to 1877. Lecture-honors discussion. Credit not allowed for both 103H and 101H.
- **U 104H (HIST 155H) Honors American History II 4 cr.** Offered spring. Enrollment by consent of instructor. A comprehensive introductory history of the U. S. since 1877. Lecture-honors discussion. Credit not allowed for both 104H and 102H.
- **U 161 (HIST 161) 3cr.** Same as AAS 141. This course introduces students to the primary questions, themes, and approaches to African American Studies. In addition to examining key historical periods such as Reconstruction, the Harlem Renaissance, and the Civil Rights era, students will encounter Hip-Hop, African-American film, African-American religion, and contemporary identity politics. This course concludes by discussing the reasons for and new directions in African American studies, including diasporic studies, Pan-Africanism, and post colonial studies.
- **U 191 (HIST 195) Special Topics Variable cr.** (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 198 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 225 (HISTA 352) The American Revolution, 1763-1801 3 cr.** Offered spring. Dissent within the revolutionary movement; the different revolutionary traditions.
- **U 255 (HIST 269) Montana 3 cr.** Offered autumn. An introductory and interpretive history from Lewis and Clark to 2000.
- **U 262 (HIST 262) Abolitionism 3 cr.** Same as AAS 262. Offered spring. Interdisciplinary, historical perspective on early 19th century movement to abolish slavery and racial discrimination in the United States.
- **U 291 (HIST 295) Special Topics Variable cr.** (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **Although the department has no official prerequisites for 300-level courses, they generally rest on a modicum of survey knowledge or ability.**
- **UG 311 (HIST 351) Early America 3 cr.** Offered even-numbered years. Emphasis changes from year to year. Can touch upon the political economy of Puritanism, through gender and family to the preconditions for the American Revolution.
- **UG 315 (HIST 353) The Early American Republic, 1787-1848 3 cr.** Offered spring odd-numbered years. Democracy, nationalism and sectionalism, the War of 1812, the second party system, social order and disorder, the capitalist revolution.
- **UG 316 (HIST 355) American Civil War Era 3 cr.** Offered autumn odd-numbered years. Civil War and Reconstruction; the triumph of the industrialist and capitalist ethic.
- **UG 320 (HIST 356)The Birth of Modern America, 1877-1919 3 cr.** Offered autumn odd-numbered years. The history of the U.S. from 1877 to 1920 is largely the story of Americans responding to profound social, cultural and economic change. In an effort to bring order to their changing world, Americans created new institutions, retooled their ideologies, and improved the nation's infrastructure. The order they created is, in modified form, still with us today. Students will explore the myriad changes that transformed the United States during this period and study the social, political, and cultural struggles that shaped the emergence of Modern America.
- **UG 321 (HIST 357) America in Crisis, 1920 to 1952 3 cr.** Offered autumn. This era in U.S. history was marked by a series of crises: the contested transition to modernity during the 1920s, the Great Depression, and World War II and its aftermath. This course will explore how Americans responded to these crises, why they responded to them the way they did, and how their responses altered the society in which they lived.
- **UG 322 (HIST 358) America in Our Time: The United States, 1952 to the Present 3 cr.** Offered spring. The Cold War and its consequences, the civil rights revolution, affluence and anxiety, counter-culture, political radicalism, feminism, the Nixon years, Watergate and after.
- **U 330 (HIST 359)Topics in 20th Century U.S. History 3 cr.** (R-9) Offered intermittently. Selected topics in 20th century American history.
- **UG 333 (HIST 368) American Military History 3 cr.** (R-6) Offered spring. The French and Indian Wars to Vietnam and beyond; chronological and topical accounts.
- **U 342H (HIST 378H) African American History to 1865 3 cr.** Offered intermittently. Same as AAS 378. Survey of the African American experience from the African background to the end of the Civil War. Focus on Black American quest for the American Dream, and how Blacks attempted to deal with the challenges of enslavement and racism.
- **U 343H (HIST 379H) African American History Since 1865 3 cr.** Offered intermittently. Same as AAS 379H. Study of the African American experience since the Civil War. Change and continuity in the African American experience, the fight against Jim Crow, the struggle for civil rights, and post-civil rights economic, political, social and cultural developments and challenges.
- **UG 344 (HIST 362) Afro-American Struggle for Equality 3 cr.** Offered intermittently. A survey of the various efforts by African Americans to achieve racial equality in the United States from the late 19th century through the 1960s.
- **U 345 (HIST 373) The Black Radical Tradition 3 cr.** Autumn, odd years. From slave revolts through to the Move rebellion in Philadelphia, this course examines how the African-American community has engaged in radical efforts to change the status quo in the name of seeking justice. Same as AAS 373.
- **U 347 African American Religious Experience 3cr.** Spring, odd years. Same as AAS 374 and RELS 374. The African American

religious experience encompasses Islam, Christianity, Santeria, voodoo, and many others. In this course, students will examine the history of religious expression within the African-American community from the colonial era through the twentieth century. Central to the course question, "How did religion shape the experience of the African-American community?" Students will also examine the ways in which religious practice influenced social, political, and cultural changes in American history.

- **UG 354X Indians of Montana Since the Reservation Era 3 cr.** Offered autumn odd-numbered years. Same as ANTH 324X and NAS 324X. Examination of the history of Montana Indians since the establishment of the reservations, contemporary conditions, and issues among both reservation and non-reservation Indian communities in the state. Special attention given to social and economic conditions, treaty rights, tribal sovereignty, and legal issues.
- **UG 358 (HIST 369) Images of the American West 3 cr.** Offered even-numbered years. The roles that artists, artistic works and illustrations, and symbolic images have played in the history of the American West.
- **UG 361 The American South: From Slavery to Civil Rights 3 cr.** Offered autumn odd-numbered years. Social history of the American South with particular attention to race, class, and gender.
- **U 375 U. S. Immigration and Ethnicity 3 cr.** Discussion-BASED course on immigration, assimilation, and social diversity in U.S. history. Students will study the waves of immigration that have peopled America from colonial times to the present, the shifting intellectual and policy responses to immigration, the social histories of different immigrant and ethnic/racial groups, and contemporary debates about multiculturalism.
- **UG 379 (HIST 377) American Constitutional History Since 1864 3 cr**. Offered intermittently. The development of the American Constitution from the Civil War to the present.
- **UG 380H (HIST 376) Problems in American Constitutional History 3 cr.** Offered intermittently. An examination of major issues in the American constitutional past. Topics include the creation of the U.S. Constitution and the problem of "original intent," courts and judicial review, slavery and anti-slavery, the bill of rights, industrial capitalism and the welfare state, and majority rule and minority rights in American democracy.
- **UG 382 (HIST 363H) History of American Law 3 cr.** Offered intermittently. Issues in the social history of law from the colonial period to the present.
- **U 385 (HIST 367H) Families and Children in America 3 cr.** Offered intermittently. Historical overview of families and children in the United States from the colonial era to the present. Topics include changing patterns of family life, the evolution of attitudes toward children and youth, the relationship between the American family and the nation-state, and debates over "family values" from the nation's founding to the present.
- **UG 387 (HIST 370H) Women in America: to the Civil War 3 cr.** Offered autumn. Same as WS 370H. Interpretive overview of women's experiences in America before the Civil War. Exploration of new definitions of womanhood and "women's sphere" emerging from women's varied experiences in the American colonies and the American Revolution; how immigrant, poor, slave, and western women transgressed the boundaries of their sphere; and how women--from both inside and outside their assigned sphere--reshaped their roles in American society.
- **UG 388 (HIST 371H) Women in America: from the Civil War to the Present 3 cr.** Offered spring. Same as LS and WS 371H, Interpretive overview of women's experiences in America after the Civil War. Exploration of such topics as women's associations, the battle for suffrage, organized feminism and its opponents, the industrialization of housework, women in the workforce, reproductive rights, and welfare. Particular attention to women's experiences shaped by class and race as well as by gender.
- **U 391 (HIST 395) Special Topics Variable cr.** (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **Although the department has no official prerequisites for 400-level courses, they may require appropriate prior study. Interested students should inquire of the History Department before registering.**
- **U 417 (HIST 450) Prayer and Civil Rights 3 cr.** Autumn, even years. Same as AAS 450 and RELS 450. This course explores the meaning of public prayer in the Civil Rights Movement. Built around the question, "Does religion help or hinder the pursuit of social change?" this class combines historical and religious studies inquiry to trace changes in civil rights activists' efforts to make use of religion. By focusing on a particular religious practice - in this case prayer - in a specific, but limited period of time, this course challenges students to consider how meaning is formed through historical action and study the social significance of religious practice. This formed through historical action and study the social significance of religious practice. This course complicates prevailing ideas about the normalcy of African-American religious practitioners' prayer, invites students to examine their assumptions about the nature of prayer, and traces how religion spilled out of sanctuaries into the streets during the civil rights era.
- **UG 418 (HIST 470) Women and Slavery 3 cr.** Same as WGS 418. Offered autumn odd-numbered years. Prereq., upper-division standing. Study of the connection between women's status and slavery in antebellum America, looking at slave women, slaveholding women, and antislavery women.
- **UG 419 (HIST 471)Southern Women in Black and White 3 cr.** Same as WGS 419. Offered spring, even-numbered years. Examination of the connections between race, class, and gender in the South. Conflict and cooperation among black and white women in politics, reform, and work.
- **UG 452X (HIST 465H) History of Indian Affairs TO 1865 3 cr.** Offered autumn. Same as NAS 465X. A study of tribal encounters and adjustments to the American nations in the nineteenth century.
- **UG 453X (HIST 466H) History of Indian Affairs from 1865 3 cr.** Offered spring. Same as NAS 466X. A study of tribal encounters and adjustments to the American nation from 1890.
- **UG 455 (HIST 467) Indian, Bison and Horse 3 cr.** Offered autumn odd-numbered years. Historical interaction between Native American societies, horses and bison in North America. A writing intensive course.
- **UG 462 (HIST 401) Regionalism and the Rocky Mountain West 3 cr.** Offered spring odd-numbered years. Same as GEOG 401. Investigation of regionalism as a concept and its future in the Rocky Mountain West. Regionalism as a geographical, economic, political and cultural entity. An intensive writing class.
- **UG 465X History of Indian Affairs to 1776 3 cr.** Offered autumn. Same as NAS 465X. A study of tribal encounters and adjustments to the American nations in the nineteenth century.
- **G 550 Early America 3 cr.** Intensive reading.
- **G 551 The Early American Republic: Constitution to Civil War 3 cr.** Intensive reading.
- **G 552 Industrial America, 1863-1932 3 cr.** Intensive reading.

- **G 553 Modern America 3 cr.** Intensive reading.
- **G 560 The American State 3 cr.** Intensive reading in the history of American government.
- **G 564 U.S. Environmental History 3 cr.** Intensive reading.
- **G 566 The American West 3 cr.** Intensive reading.
- **G 567 Native Americans 3 cr.** Intensive reading.
- **G 570 U.S. Women's History 3 cr.** Intensive readings in U.S. women's history.
- **G 594 Seminar Variable cr.** (R-12) Prereq., 27 credits in history. Directed research.
- **G 595 Special Topics Variable cr.** (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R-12)
- **G 597 Research in History Variable cr.** (R-9)
- **G 598 Internship Variable cr.** (R-8) Prereq., consent of department and Internship Services office. Practical application of classroom learning in off-campus placements.
- **G 599 Professional Paper Variable cr.** (R-6)
- **G 699 Thesis/Dissertation Variable cr.** (R-6)

World History (HSTR)

- **U 101H (HIST 104H) Western Civilization I 4 cr.** Offered autumn. A comprehensive, introductory history of western civilization from classical antiquity to 1715. Lecture-discussion. Credit not allowed for both 101H and 103H.
- **U 102H (HIST 105H) Western Civilization II 4 cr.** Offered spring. A comprehensive, introductory history of western civilization from 1715 to the present. Lecture-discussion. Credit not allowed for both 102H and 104H.
- **U 103H (HIST 107H) Honors Western Civilization I 4 cr.** Offered autumn. Limited enrollment by consent of instr. only. A comprehensive, introductory history of western civilization from classical antiquity to 1715. Lecture-honors discussion. Credit not allowed for both 103H and 101H.
- **U 104H (HIST 108H) Honors Western Civilization II 4 cr.** Offered spring. Limited enrollment by consent of instr. only. A comprehensive introductory history of western civilization from 1715 to the present. Lecture-honors discussion. Credit not allowed for both 104H and 102H.
- **U 146H (HIST 106) The Silk Road 3 cr.** Offered autumn and spring. Same as AS and ANTH 106H. Introduction to the study of the human communities, cultures, and economies in Central and Southwest Asia along the ancient four thousand mile-long Silk Road.
- **U 191 (HIST 195) Special Topics Variable cr.** (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 198 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 208 Discovering Africa 3 cr.** Offered intermittently. Same as AAS 208. Interdisciplinary study of the history of pre-colonial Africa, focusing on social, economic, political and cultural institutions and traditions including the wealth, diversity and complexity of ancient and classical African civilizations and cultures.
- **U 230H (HIST 286H) Colonial Latin America 3 cr.** Offered autumn. Latin America from the conquest to wars for independence. Focus on social relations, imperial and local politics, hegemony, resistance, and change.
- **U 231H (HIST 287H) Modern Latin America 3 cr.** Offered spring. Latin American history from wars of independence to the present. Focus on social relations, development models, politics, and popular movements.
- **U 240 (HIST 201H) East Asian Civilizations 3 cr.** Offered autumn. Same as AS 201. An interdisciplinary, pluralist, and exploratory introduction to civilizations of East Asia. Primary focus on China, Japan, and Korea, the relations among them and their patterns of interaction with the outside world in pre-modern and modern periods.
- **U 241 (HIST 214S) Central Asia: Peoples and Environments 3 cr.** Offered autumn. Same as AS, ANTH, LS 214S. Introduction to Central Asia's history, culture and ways of thinking. Focus on the political and social organization of Central Asia and cultural changes as expressed in art and interactions with China, India and the Middle East.
- **U 242 (HIST 240H) History and Philosophy of Science 3 cr.** Offered intermittently. Same as PHIL 240. The epistemological and metaphysical developments of natural philosophy or science. The origins of science in ancient Greece and its subsequent development during the scientific revolution. Developments in biology, especially Darwinism and genetics, as well as developments in physics.
- **U 250 (HIST 249) The Irish and Irish-Americans 3 cr.** Offered autumn odd-numbered years. Ireland, the Irish people, and the Irish Diaspora, from first settlement to contemporary troubles.
- **U 262 (HIST 283H) Islamic Civilization: The Classical Age 3 cr.** Offered autumn. Same as ANTH 283. A concise history of the Islamic world from the 6th century to the fall of the Abbasid Empire in the 13th century, focusing primarily on the teachings of Islam and the causes for the rapid expansion of the Islamic empire.
- **U 264 (HIST 284H) Islamic Civilization: The Modern Era 3 cr.** Offered spring. Same as ANTH 284. History of the Islamic world and particularly the Persian, Arabic, and Turkish speaking lands between 1453 and 1952.
- **U 272E (HIST 226E) Terrorism: Political Violence in the Modern World 3 cr.** Offered autumn. Prereq., lower-division course in Perspective 5 or consent of instr. The rise and spread of terrorism in the modern world, from the French Revolution to the present.
- **U 291 (HIST 295) Special Topics Variable cr.** (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **Although the department has no official prerequisites for 300-level courses, they generally rest on a modicum of survey knowledge or ability.**
- **UG 300 The Historians' Craft 3 cr.** Offered autumn and spring. The location and use of historical sources; footnotes, bibliography, and style; previous historical interpretations; an explicit writing component.

- **UG 301 Classical Greece 3 cr.** Offered intermittently. Same as MCLG 301. Greek history from the earliest times through the Macedonian ascendancy, based on the writings of the Greek historians.
- **UG 302 Classical Greece II: Individual, Family, and Civic Life in Ancient Greece 3 cr.** Offered intermittently. Same as MCLG 302. Various aspects of personal, social, and political life of classical times in Greece. Primary readings in various ancient authors supplemented by some audio-visual or other informational presentations.
- **UG 304 (HIST 303H) Classical Rome 3 cr.** Offered intermittently. Same as MCLG 303. Roman history from the time of the Kings through the early Empire. Based on the writings of the Roman historians.
- **UG 306 The Medieval World: The Barbarian West, 400-1200 3 cr.** Offered autumn. The collapse of Roman authority, the establishment of the Germanic kingdoms, Christianity and the Roman church.
- **UG 307 The Medieval World: The High Middle Ages, 1150-1450 3 cr.** Offered spring. The Christian world in the West to the decline of the papacy, a hundred years of war, the Black Death.
- **UG 312 The Age of Absolutism, 1648-1789 3 cr.** Offered intermittently. The political, economic, intellectual, and social development of Europe 1648-1789.
- **UG 315 (HIST 310H) The Reformation 3 cr.** Offered intermittently. The Reformation and its impact on European society, politics, economic theory and religious thought from 1500 to 1600; the Counter-Reformation.
- **UG 317 (HIST 311H) Europe in Renaissance and Reform, 1348-1648 3 cr.** Offered intermittently. The political, economic, intellectual and social development of Europe from 1348 to 1648.
- **UG 320 (HIST 338H) European Social and Intellectual History: 1450-1789 3 cr.** Offered autumn. The influence of the Renaissance, Baroque and Classical Ages, and the Enlightenment on early modern history.
- **UG 323 (HIST 339H) European Social and Intellectual History: The 19th Century 3 cr.** Offered autumn. Romanticism, Realism, and the Avant-Garde against the historical background of the Industrial Revolution and urbanization.
- **UG 325 (HIST 340H) European Social and Intellectual History: The 20th Century 3 cr.** Offered spring. The triumph of the Avant-Garde and the decline of traditional culture: 1914-1945.
- **UG 326 (HIST 319H) Contemporary Europe 3 cr.** Offered autumn odd-numbered years. European politics, culture, and society since 1945.
- **U 334 (HIST 385) Latin America: Reform and Revolution 3cr.** Offered spring. Different ideologies and projects in Latin America aimed at gradual or radical transformation of political systems and/or socio-economic relations. Case studies range from the Haitian Revolution to the Bolivarian vision of Hugo Chavez.
- **UG 343 (HIST 381H) Modern Japan 3 cr.** Offered spring. Japanese culture, politics, and economics since 1800: the Tokugawa period, the Meiji Restoration, militarization and the Great Pacific War, the American occupation, Japan as a model of modernization.
- **UG 345 (HIST 380H) Modern China 3 cr.** Offered autumn. China since 180, emphasizing internal weaknesses of the Manchu dynasty, confrontation with the west, and the emergence of Nationalist and Communist regimes.
- **U 346 Central Asia and Its Neighbors 3 cr.** Offered spring. Same as AS 345 and ANTH 346. Analysis of the human communities and cultures of Central and Southwest Asia, with particular emphasis on the importance of relationships with neighboring countries and civilizations since ancient times.
- **UG 348 (HIST 341) Britain from Reformation to Revolution, 1485-1688 3 cr.** Offered autumn. Social, political, religious, and intellectual history of the British peoples during the tumultuous period of reformation, exploration, constitutional crisis, and civil war.
- **UG 349 (HIST 342) Britain from Revolution to Reform, 1688-1832 3 cr.** Offered spring. The social, political, cultural, and intellectual consequences of British expansion, financial and industrial revolutions, and revolutionary movements.
- **UG 350 (HIST 343) Modern Britain 3 cr.** Offered autumn odd-numbered years. Social, political, intellectual and cultural history of the United Kingdom from an age of industry, empire, and political reform to one of economic decline and international retreat.
- **UG 352 (HIST 314) France in Revolution, 1789-1848 3 cr.** Offered autumn. Political, economic, and social upheaval and development.
- **UG 353 (HIST 315) Modern France, 1848-Present 3 cr.** Offered intermittently. The political, economic and social development.
- **UG 354 (HIST 324) Italy: 1300-1800 3 cr.** Offered autumn odd-numbered years. The emergence of the Italian states with an emphasis on cultural achievements in the late Medieval, Renaissance, Baroque, and Neoclassical periods.
- **UG 355 (HIST 325) Italy: 1800-Present 3 cr.** Offered spring even-numbered years. The emergence of a united Italy, the triumph of fascism and contemporary Italian society.
- **UG 357 (HIST 344) Russia to 1881 3 cr.** Offered autumn. Emphasis on the autocratic political tradition, Westernization, and territorial expansion.
- **UG 358 (HIST 345) Russia Since 1881: War, Revolution and Reform 3 cr.** Offered spring. Emphasis on modernization and the revolutionary movement; the Bolshevik Revolution and Stalinist era; the decline of Soviet system.
- **UG 361 (HIST 321) Germany: Augsburg to Bismarck, 1555-1866 3 cr.** Offered intermittently. Political, economic and social development of the states of the Holy Roman Empire from 1555-1866.
- **UG 363 (HIST 348) Eastern Europe 3 cr.** Offered spring. Main currents in the history of Eastern Europe from earliest times to the present. Focus on the lands of Poland, Bohemia, Hungary, and the Balkan region.
- **UG 364 (HIST 364) Environmental History 3cr.** Offered spring odd-numbered years. Prereq., lower-division course in Perspective 5 or consent of instr. A history of the human-nature interaction in the United States.
- **UG 367 (HIST 365) 19th Century American West 3 cr.** Offered autumn. Euro-American movement and conflict in the nineteenth century trans-Mississippi west.
- **UG 368 (HIST 387) Iran Between Two Revolutions 3 cr.** Offered spring. Same as ANTH 387. The socioeconomic, political, and cultural causes which resulted in the transformation of the Iranian society from a traditional Islamic entity to a modern secular state and the factors which led to the downfall of the secular state and the establishment of an Islamic republic.
- **UG 369 (HIST 366) 20th Century American West 3 cr.** Offered spring. The contemporary trans-Mississippi West.
- **UG 374H/E (HIST 334E) War, Peace, and Society 3 cr.** Offered intermittently. A thematic and interdisciplinary approach to warfare and peace, sociopolitical structures and military organization, power among states, technological change, the role of the individual in organized violence, and moral views of war and peace.
- **UG 377H (HIST 330H) European International Relations: Origins of the State System to 1870 3 cr.** Offered intermittently. The nature, evolution, and functions of the European diplomatic system from the Ancient World to 1870.

- **UG 378 (HIST 332H) The Global Diplomacy of the Cold War 3 cr.** Offered intermittently. Deals with the emergence of the Cold War, confrontations like the Cuban Missile Crisis, wars like those in Korea and Vietnam, strategies of deterrence, the rise of Gorbachev, the collapse of the Iron Curtain and the Cold War itself, and the long term implications of the Cold War on contemporary international relations.
- **UG 380H (HIST 331H) Foreign Relations of the Great Powers, 1870-Present 3 cr.** Offered intermittently. Begins with a discussion of the classical system of diplomacy and then moves into the causes and results of the First World War, the rise of Hitler and the Second World War, America's emergence as a superpower, the Cold War, the influence of Asia, the implications of the 9/11 attack and terrorism, and the continuing search for peace and stability in a world of conflict.
- **UG 382 (HIST 350) Historical Backgrounds to Current Crises 3 cr.** (R-6) Offered intermittently. Social, intellectual, political, and constitutional backgrounds of unresolved crises in Europe, Asia, Middle East, and America.
- **UG 384E (HIST 335E) Human Rights 3 cr.** Offered intermittently. A treatment of the powerful global influence of visions of human rights upon the historical and contemporary world in which movements such as abolitionism, women's rights, humanitarian law, racial equality, decolonization and democratization, and the impact of the Universal Declaration of Human Rights.
- **UG 386 Nationalism in Modern Middle East 3 cr.** Offered autumn. Same as ANTH 386. The several intellectual traditions and philosophies some ephemeral and visionary, most eclectic and confused, and virtually all conflicting that are usually believed to underlie the varying concept of Iranian and Arab nationalism in the 20th century.
- **U 388 Africa to 1880 3 cr.** Offered intermittently. Same as AAS 388. History of Africa from the earliest of times. Evolution of African societies and states, social, economic, political, and cultural developments; the dynamics, nature and consequences of Africa's interaction with Europe up to 1880.
- **U 389 Africa Since 1880 3 cr.** Offered intermittently. Same as AAS 389. Historical development in Africa since the imposition of colonial rule. Analysis of colonialism and emergence of nationalism.
- **U 391 (HIST 395) Special Topics Variable cr.** (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 393 Omnibus Variable cr.** (R-9) Offered intermittently. University omnibus option for independent work. See index.
- **UG 394 Seminar Variable cr.** (R-6) Offered intermittently.
- **U 396 Independent Study Variable cr.** (R-12) Offered intermittently.
- **U 398 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **Although the department has no official prerequisites for 400-level courses, they may require appropriate prior study. Interested students should inquire of the History Department before registering.**
- **UG 401 (HIST 400) Historiography: History and Historians 3 cr.** Offered intermittently. The history and philosophy of history.
- **UG 409 History of Southern Africa 3 cr.** Offered intermittently. Same as AAS 409. Historical survey of developments in southern Africa from the earliest of times to the present. Focus on the evolution and growth of societies and states; economic, social and political developments; external interventions and impacts on race relations.
- **UG 410 Personalities in History 3 cr.** (R-6) Offered intermittently. Influential individuals in European, American, and Asian history.
- **UG 435 (HIST 485) Latin America: Memories of Politics and Politics of Memory 3cr.** Offered spring alternate years. Individual and collective memories of social and political conflict, activism, and repression in Latin America. Battles over memory (and its relation to truth) in forums ranging from academic panels to human rights tribunals. Relations between memory, politics and history in select case studies.
- **UG 436 (HIST 486) Latin America: Workers and Labor History 3 cr.** offered spring alternate years. Structures, experiences, and agency of working people in Latin America, with emphasis on the modern period. Influence or race, ethnicity, gender, religion, and generation on working class identity and movements. Labor organizations and politics in historic context.
- **UG 441 (HIST 462) Central Asia Seminar 3 cr.** Offered spring. Same as AS and 460. Advanced analysis of the historical and contemporary issues involving the human communities, cultures, and economies in Central and Southwest Asia.
- **UG 442 (HIST 402) Cities and Landscapes of Central Asia 3 cr.** Offered autumn. Same as AS 402 and ANTH 462. Analysis of the main centers of civilization and culture, rich sites and monuments of Central Asia and Southwest Asia since ancient times.
- **U 448 Tradition & Reform in China 3cr.**
- **U 449 Revolution & Reform in China 3cr.**
- **UG 455 An Introduction to Public History 3 cr.** Offered spring. Review of selected areas in which public historians work. Examination of how the public historian's role may differ from the academic historian. Focus on specific approaches, issues, and problems in a variety of areas of public history.
- **UG 457 (HIST 445) The World of Anna Karenina 3 cr.** Offered fall. Tolstoy's classic novel as a point of entry into a multifaceted exploration of imperial Russian culture and society. Topics include family life, social relations, modernization, politics, religion and spirituality, gender and sexuality.
- **UG 458 (HIST 446) The Russian Revolution, 1900-1930 3 cr.** Offered spring. The causes, course, character, and consequences of the Bolshevik Revolution.
- **UG 459 (HIST 457) Artistic Traditions of Central and Southwest Asia 3 cr.** Offered autumn and spring. Same as AS 457 and ANTH 461. Analysis of the study of human artistic creativity and scientific innovations of various cultures in Central and Southwest Asia since ancient times.
- **UG 470 (HIST 437) Dynamics of Diplomacy 3 cr.** Offered intermittently. An interdisciplinary, global, and thematic approach to major issues in foreign affairs brought about by world wars, diplomatic expansion, the collapse of cultural homogeneity, technological developments, and the rise of public opinion.
- **UG 472E (HIST 460E) Problems of Peace and National Security 3 cr.** Offered intermittently. Prereq., lower-division course in Perspective 5 or consent of instr. Contemporary and historical problems of civilian policy and military strategy, power and technology, intelligence operations in democratic societies, human rights and security issues, conscription, and ethics in statecraft.
- **UG 481 Tradition and Reform in China 3 cr.** Taught annually. Prereq., junior standing or consent of instructor. A history of key

reform movements from the mid-19th century (when China was rocked by rebellion and the entry of the West) to the Maoist period.
- **UG 482 Revolution and Reform in China 3 cr.** Offered fall. A history of the rise and fall of the Maoist regime and the complicated impact of the epochal post Mao reform movement.
- **U 493 Omnibus Variable cr.** (R-9) Offered intermittently. University omnibus option for independent work. See index.
- **UG 494 Seminar Variable cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **UG 495 Special Topics Variable cr.** (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **UG 496 Independent Study Variable cr.** (R-12) Offered intermittently. Prereq., consent of instr.
- **G 500 Teaching Discussion Sections in History 1 cr.** (R-4) Supervised teaching and reading keyed to survey courses in American history and western civilization.
- **G 511 Early Modern Europe 3 cr.** Offered alternate years. Intensive reading in 16th, 17th, and 18th century European history.
- **G 512 Age of Absolutism and Revolution, 1648-1789 3 cr.** Offered autumn even numbered years. Intensive reading in 17th and 18th century European history.
- **G 514 Modern France 3 cr.** Offered alternate years. Intensive reading, from the French Revolution to the present.
- **G 516 Modern Europe 3 cr.** Offered alternate years. Intensive reading in 19th and 20th century European history.
- **G 531 International Relations 3 cr.** Offered alternate years. Intensive reading in the history of international relations and diplomacy during the late 19th and 20th centuries.
- **G 540 European Cultural and Intellectual History 3 cr.** Intensive reading.
- **G 541 Early Modern Britain 3 cr.** Offered intermittently. Intensive reading in British history from 1500 to 1800.
- **G 544 Modern Russia 3 cr.** Offered alternate years. Intensive reading in 19th and 20th century Russia.
- **G 585 Latin America 3 cr.** Offered alternate years. Intensive reading.
- **G 586 Modern Islamic Politics 3 cr.** Offered alternate years. Intensive reading.
- **G 594 Seminar Variable cr.** (R-12) Prereq., 27 credits in history. Directed research.
- **G 595 Special Topics Variable cr.** (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R-12)
- **G 597 Research in History Variable cr.** (R-9)
- **G 598 Internship Variable cr.** (R-8) Prereq., consent of department and Internship Services office. Practical application of classroom learning in off-campus placements.
- **G 599 Professional Paper Variable cr.** (R-6)
- **G 699 Thesis/Dissertation Variable cr.** (R-6)

Faculty

Professors

- George M. Dennison, Ph.D., University of Washington, 1968 (President)
- Richard R. Drake, Ph.D., University of California, Los Angeles, 1976 (Chair)
- John A. Eglin, Ph.D., Yale University, 1996
- William E. Farr, Ph.D., University of Washington, 1971
- Dan Flores, Ph.D., Texas A & M University, 1978 (A.B. Hammond Professor of Western History)
- Linda S. Frey, Ph.D., Ohio State University, 1971
- Anya Jabour, Ph.D., Rice University, 1995
- Paul Gordon Lauren, Ph.D., Stanford University, 1973 (Regents Professor)
- Michael S. Mayer, Ph.D., Princeton University, 1984

Associate Professor

- Jeff Wiltse, Ph.D., Brandeis University, 2002

Assistant Professors

- Robert H. Greene, Ph.D., University of Michigan, 2004
- Jody Pavilack, Ph.D., Duke University, 2003
- Tobin Miller Shearer, Ph.D., Northwestern University, 2008
- Kyle G. Volk, Ph.D., University of Chicago, 2008

Emeritus Professor

- David M. Emmons, Ph.D., University of Colorado, 1969
- Harry W. Fritz, Ph.D., Washington University at St. Louis, 1971
- Kenneth A. Lockridge, Ph.D., Princeton University, 1965
- Frederick W. Skinner, Ph.D., Princeton University, 1973

Human and Family Development

- Requirements for a Minor

- Courses

Paul Silverman (Professor of Psychology), Chair, Human and Family Development

Minor

The Human and Family Development minor is an interdisciplinary minor concerned with the study of life-span human development and family relations, and the impact of biological, environmental and socio-cultural factors on both. The HFD minor encompasses a broad range of areas: Early Intervention, Gerontology, Early Childhood, Normal Development, Family Development, and Exceptional Development. The minor is designed to supplement the knowledge base of students by providing a human and family development specialty orientation to their fields of major interest. Students with career goals that include communications, psychology, education, social work, sociology, anthropology, pre-medical sciences, nursing, and physical therapy will benefit from the specialty orientation in human and family development. Students with other career goals also will find the program rewarding; a business major interested in family service administration or consumer economics; a radio-television major interested in children's programming; a forestry major interested in recreational management appropriate for a particular population.
Human and family development encompasses a broad range of topics, all of which share the view that human growth is a valid subject of scientific study. Knowledge of the processes and contents of psychological, social and biological growth of the individual separately and within the family context will benefit the quality of life of both the student/investigator and the public. The purpose of this program is to equip students with a general knowledge of issues relevant to normal and atypical patterns of human and family development and to provide them with some practical skills and insights which will enhance their abilities in a variety of professions which deal with developmental and family issues. The minor has general, early intervention, and gerontology tracks.
The interdisciplinary curriculum reflects four specific goals: (1) to provide students with an extensive knowledge base of theory and research concerning lifespan development and the role of the family in development; (2) to train students to be critical consumers of research and evaluation results in the human and family development areas; (3) to provide students with practical experience in at least one applied service discipline in the human development areas; and (4) to provide students with the opportunity to take topical courses in normal and atypical development of the individual and family.
All students seeking a minor must formally enroll in the minor and select a faculty advisor from the Human and Family Development Committee.

Requirements for a Minor

To earn a minor the student must complete 24 credits, with 11 at the 300 level or above. All students are required to take a 12-credit core curriculum and, with the help of a faculty advisor, to develop a written statement of goals and interests along with a planned curriculum that includes 12 additional credits of electives consistent with the stated goals and interests. At least 6 credits of electives must be outside of the student's major.

Core Curriculum:

- PSYX 230S or 233 (PSYC 240S or 245) (3 cr.)
- HFD 494 Seminar in Human Development (at least 1 cr.)
- HFD 498 Internship (Variable cr.; 2 required)

One of the following:

- HFD 412 Family Development (3 cr.)
- COMM 411 Family Communication (3 cr.)
- SOCI 332 (SOC 300) Sociology of The Family (3 cr.)

Plus one of the following research courses:

- PSYX 120 or 320 (PSYC 120 or 320) Research Methods (3 cr.)
- SOCI 318 (SOC 201) Social Science Methods (4 cr.)
- COMM 460 Communication Research Methods (3 cr.)
- SW 400 Social Work Research (3 cr.)
- C&I 520 Educational Research (3 cr.)

Electives:

The following list of electives is categorized to assist the student wishing to focus on one of these areas. Students may plan curricula which do not correspond to these categories, but should choose among courses from this list. Occasionally "special topics" courses are offered. Students may use these as electives with the consent of their advisors.

Early Intervention

- HFD 411 Infant and Toddler Development and Variability
- HFD 412 Family Development/Families of Young Children with Disabilities
- HFD 413 Assessment and Program Planning
- HFD 414 Community Service Delivery

- HFD 415 Implementation and Program Evaluation
- HFD 416 Data-Based Decision Making
- HFD 498 Internship

Early Childhood

- C&I 330 Early Childhood Education/Curriculum
- C&I 355 Child in the Family
- C&I 357 Introduction to Special Education Law and Policy
- C&I 367 Preschool Practicum
- C&I 410 Exceptionality and Classroom Management
- C&I 420 Curriculum in Early Childhood Special Education
- C&I 421 Issues in Early Childhood Special Education
- C&I 494 Practicum in Special Education Preschool
- C&I 495 Special Topics in Special Education
- HFD 498 Internship (must complete all course work prior to taking course)
- HFD 413 Assessment & Program Planning
- PHAR 110N Use and Abuse of Drugs
- PSYX 297 (PSYC 397) Research Experience
- PSYX 378 (PSYC 335) Fundamentals of Clinical Psychology

School-Age

- C&I 303 Educational Psychology/Measurements
- C&I 357 Introduction to Exceptionality
- C&I 410 Exceptionality/Classroom Management
- PHAR 110N Use and Abuse of Drugs
- PSYX 378 (PSYC 335) Fundamentals of Clinical Psychology
- PSYX 345 (PSYC 336S) Child and Adolescent Psychological Disorders
- PSYX 376 (PSYC 337) Principles of Cognitive Behavior Modification
- PSYX 339 (PSYC 340) Current Topics in Developmental Psychology
- SOCI 332 (SOC 300) Sociology of the Family
- SOCI 330 (SOC 330) Juvenile Delinquency
- SW 300 Human Behavior and Social Environment
- SW 420S Child Abuse and Neglect

Adolescence

- C&I 303 Educational Psychology/Measurements
- C&I 357 Introduction to Exceptionality
- C&I 410 Exceptionality/Classroom Management
- PHAR 110N Use and Abuse of Drugs
- PSYX 378 (PSYC 335) Fundamentals of Clinical Psychology
- PSYX 345 (PSYC 336) Child and Adolescent Psychology
- PSYX 376 (PSYC 337) Principles of Cognitive Behavior Modification
- PSYX 339 (PSYC 340) Current Topics in Developmental Psychology
- SOCI 332 (SOC 330) Sociology of the Family
- SOCI 330 (SOC 330) Juvenile Delinquency
- SW 300 Human Behavior and Social Environment
- SW 450 Children and Youth at Risk

Gerontology

- HS 325 Clinical Issues in Geriatrics
- HS 327 Montana Gerontology Society Annual Conference
- HS 495 Special Topics: Health Aspects of Aging
- PSYX 233 (PSYC 245) Adult Development and Aging
- SOCI 491 (SOC 495) Sociology of Aging
- SW 455S Social Gerontology

Family Development

- COMM 410 Communication in Personal Relationships
- COMM 411 Family Communication
- C&I 355 Child in the Family
- C&I 452E Ethics and Consumer Economics
- PSYX 348 (PSYC 385) Family Violence
- SOCI 332 (SOC 300) Sociology of the Family
- SW 422 Services to Changing Families

- SW 432/PSYX 441 (PSYC423)/SOCI 433 (SOC 432) Addiction Studies
- SW 450 Domestic Violence

Human and Family Development Committee

- Dan Doyle, Ph.D., University of Washington, 1984 (Professor, Sociology)
- Christine Fiore, Ph.D., University of Rode Island, 1990 (Professor, Psychology)
- Ann Garfinkle, Ph.D., University of Washington, 1995 (Associate Professor, Education)
- Shannon Guilfoyle, M.Ed., The University of Montana, 2002 (COTEACH Preschool Coordinator, Education)
- Susan Harper-Whalen, Ed.M., Harvard University, 1984 (Research Faculty, Education)
- Lynne S. Koester, Ph.D., University of Wisconsin, Madison, 1976 (Professor, Psychology)
- Ted Maloney, M.A. (Adjunct Assistant Professor, Rural Institute: Center for Excellence in Disability Education, Research and Service)
- Susie Morrison, Ed.S., The University of Montana, 1995 (Assistant Research Professor, Psychology)
- Lucy Hart Paulson, M.S., University of Illinois, 1980 (Research Assistant Professor, Education)
- Audrey Peterson, M.S., Pennsylvania State University, 1970 (Professor, Education)
- Alan Sillars, Ph.D., University of Wisconsin, 1980 (Professor, Communication Studies)
- Paul Silverman, Ph.D., University of Georgia, 1977 (Professor, Psychology)
- John Spores, Ph.D., University of Michigan, 1976 (Professor, Social Work)
- Meg Traci, Ph.D., The University of Montana, 2000 (Project Director, Rural Institute: Center for Excellence in Disability Education, Research and Service)
- Richard van den Pol, Ph.D., Western Michigan University, 1981 (Professor, Education)
- Kimberly A. Wallace, Ph.D., University of Notre Dame, 1999 (Associate Professor, Psychology)
- Celia Winkler, Ph.D., University of Oregon, 1996 (Professor, Sociology)

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree

Human and Family Development (HFD)

- **U 298 Internship Variable cr.** (R-4) Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 398 Internship Variable cr.** (R-4) Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **UG 411 Infant and Toddler Development and Variability 3 cr.** Offered autumn even-numbered years. Foundation of knowledge and practical experiences in infant and toddler development and its variability. Development of the child within the family and social context.
- **UG 412 Family Development 3 cr.** Offered autumn even-numbered years. Foundation of knowledge and practical experiences in family development from an ecological, family systems perspective. Focus on families who have children with disabilities.
- **UG 413 Assessment and Program Planning 4 cr.** Offered spring odd-numbered years. Prereq., consent of instr. Foundation of knowledge and practical experiences in child assessments and family information gathering. Primary focus on birth through two years of age.
- **UG 414 Community Service Delivery I 2 cr.** Offered spring odd-numbered years. Foundation of knowledge and practical experiences in early intervention service models and their theoretical orientation, roles of other agencies and professional disciplines, teaming models and techniques, support coordination models and techniques, community collaboration, and current early intervention trends and models.
- **UG 415 Program Development, Implementation, Evaluation and Modification 4 cr.** Offered autumn odd-numbered years. Prereq., consent of instr. Foundation of knowledge and practical experiences in program planning, implementation and evaluation. Focus on birth through two years of age.
- **UG 416 Data-Based Decision Making 2 cr.** Offered autumn odd-numbered years. Prereq., consent of instr. Foundation of knowledge and applied experience in making intervention and programmatic decisions based on data. Primary topical areas covered are (1) foundations of applied behavioral analysis; (2) technical competencies in applied behavioral analysis; (3) facilitating acquisition of skills; and (4) skill generalization for individuals across the life-span.
- **UG 490 Practicum in Human Development Variable cr.** (R-6) Offered intermittently. Prereq., 12 credits in HFD. Supervised fieldwork in settings relevant to developmental topics, including school classrooms; child/family welfare agencies; various institutions and programs for children, juveniles, or the aged.
- **UG 494 Seminar in Human Development 1 cr.** (R-3) Offered autumn. Discussion of selected problems in human development. Emphasis on integrating theory and practice.
- **UG 495 Special Topics Variable cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.
- **UG 498 Internship Variable cr.** (R-4) Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

International Development Studies

- Requirements for a Minor
- Faculty

Peter Koehn (Professor of Political Science), Advisor

International Development Studies is an interdisciplinary field of study focusing on the interconnected processes of social, political, economic, cultural, and environmental change taking place in poor countries and poorer regions of wealthy countries. Coursework in the minor emphasizes a global perspective on the process of change and development, critical analysis of the role of internal and external influences on the development process, and applications to local (including Montana) situations and challenges. The IDS minor takes advantage of existing faculty expertise and courses to offer an interdisciplinary experience for those students interested in either international or domestic development work. Students minoring in IDS will develop knowledge and skills appropriate for graduate study and for working in non-governmental organizations, international and bilateral government development organizations, the U.S. Peace Corps and other national/international equivalents, and /or community–development groups.

Requirements for a Minor

To earn a minor in International Development Studies the student must successfully complete a minimum of 21 credits (at least 7 upper–division). Of the 21 credits, 12 must be core courses and 9 must be content courses chosen from the following lists. Specialized independent study and internship credits can be counted for content credit when approved by the advisor.

Core Courses:

- ANTH 329 Social Change in Non–Western Societies
- COMM 251X International and Development Communication
- ECNS 317X (ECON 350) Economic Development
- ECNS 450 Advanced Economic Development
- EVST 487 Globalization, Justice and the Environment
- FOR 170 International Environmental Change
- FOR 475 Sociology of Environment and Development
- FOR 424 Community Forestry and Conservation
- GPHY 141S (103) Geography of World Regions
- PSCI 463 (PSC 463S) Development Administration
- RECM 451 Tourism and Sustainability
- SOCI 270 (SOC 270) Introduction to Rural and Environmental Change
- SOCI 371 (SOC 370S) Social Change and Global Development
- SW 323 Women and Social Action in the Americas
- SW 465 Social Work in a Global Context

Content Courses:

- ANTH 330 Peoples and Cultures of Africa
- ANTH 343 Culture and Population
- ANTH 385E Indigenous Peoples and Global Development
- BUS 160 Issues in Sustainability
- COMM 420 Communication and Nonprofit Organizations
- COMM 451 Intercultural Communication
- ECNS 101S (ECON 100S) Introduction to Political Economy
- EVST 410 Environmental Justice and Sustainable Development
- GPHY 121S (GEOG 101S) Introduction to Human Geography
- GPHY 243X (GEOG 207S) Africa
- GPHY 245X (GEOG 213S) The Middle East
- GPHY 433 (GEOG 333S) Culture and Environment
- GPHY 432 (GEOG 432)/EVST 432 Human Role in Environmental Change
- GPHY 410 High Asia
- HSTR 241 (GEOG 214S) Central Asian Culture and Civilization
- EVST 440 Environmental Economics
- HSTR 231X (HIST 287H) Latin America, 1800–1990s
- HSTR 355 History o fIntercultural Human Rights
- PSCI 220S (PSC 120S) Introduction to Comparative Government
- PSCI 230 (PSC 130E) International Relations
- PSCI 325 (PSC 325) Politics of Latin America
- PSCI 326 (PSC 326H) Politics of Africa
- PSCI 327 (PSC 327) Politics of Mexico
- PSCI 343 (PSC 343) Politics of Social Movements
- PSCI 432 (PSC 430) Inter–American Relations

- PSCI 431 (PSC 431) Politics of Global Migration
- SOCI 212S (SOC 212S) Southeast Asian Culture and Civilization
- SOCI 443 (SOC 322) Sociology of Poverty
- SOCI 346 (SOC 346) Rural Sociology
- SOCI 355 Population Problems
- SW 324 Gender and the Politics of Welfare

With permission of a core faculty member, up to 6 credits of field experience in international development can be counted toward the content requirements.

Faculty

- Jill Belsky, Ph.D., Cornell University, 1991 (Professor, Society and Conservation)
- Jeff Bookwalter, Ph.D., University of Utah, 2000 (Assistant Professor, Economics)
- Keith Bosek, Ph.D., University of Georgia-Athens, 2006 (Assistant Professor, Society and Conservation)
- Janet Finn, Ph.D., University of Michigan, 1995 (Associate Professor, Social Work)
- Paul Haber, Ph.D., Columbia University, 1992 (Professor, Political Science)
- Sarah Halvorson, Ph.D., University of Colorado, Boulder, 2000 (Professor, Geography)
- Peter Koehn, Ph.D., University of Colorado, Boulder, 1973 (Professor, Political Science)
- Kimber Haddix McKay, Ph.D., University of California, Davis, 1998 (Associate Professor, Anthropology)
- Phyllis B. Ngai, Ed.D., The University of Montana, 2004 (Adjunct Assistant Professor, Communication Studies)
- Ranjan Shrestha, Ph.D., Ohio State U:niversity, 2006 (Assistant Professor, Economics)
- Steve Siebert, Ph.D., Cornell University, 1990 (Professor, Forest Management)
- Teresa Sobieszczyk, Ph.D., Cornell University, 2000 (Assistant Professor, Sociology)
- Daniel Spencer, Ph.D., Union Theological Seminary, 1994 (Assistant Professor, Environmental Studies)

Latin American Studies

- Requirements for a Minor
- Faculty

Maria Jose Bustos Fernandez (Professor of Modern and Classical Languages and Literatures) Director/Advisor

The Latin American Studies program at The University of Montana–Missoula provides students an opportunity to study and research the history, culture, lands, art, geography and institutions of Spanish and Portuguese speaking nations of American through an interdisciplinary perspective. The growing importance of the United States economic, political and cultural relations with the Latin American region makes knowledge of Latin America and its people an essential part of a liberal arts education.

The Latin American Studies program is administered by the Latin American Studies steering committee. The interdisciplinary faculty who teach and direct research in the program, drawn mainly from the College of Arts and Sciences, are internationally known for their research and experience abroad. The program encourages and promotes travel and exchange with institutions of higher education in Latin America. Several study abroad options in Latin America are available both for a short period of time or for longer stays (one semester or two semester programs). Inquire at the Departments of Modern and Classical Languages and Literatures, Political Sciences and Art for details on these programs as well as at the Office of International Programs.

The Latin American studies program offers a Minor in Latin American Studies in conjunction with a major in another discipline. Students admitted to the program must register with the academic advisor of the Latin American Studies program who will review their course of study and advise on planning their course sequence. Students are encouraged to plan this option early in their studies to be able to participate in a study abroad program, if possible.
Students minoring in Latin American Studies will be prepared for graduate study or for employment in fields such as government, non–governmental organizations, business, industry, health and education.

Requirements for a Minor

To earn a minor in Latin American studies a student must:

1. Complete a minimum of 18 semester credits in approved Latin American studies courses (all courses listed below in addition to special offerings) in at least three different disciplines. One of these courses must be MCLG 100H, Introduction to Latin American Studies.
2. Complete SPNS 101 through 201 (SPAN 101 through 201), or equivalent.

Note: Participation in a study abroad program is highly recommended.

Latin American Studies Core Curriculum:

- MCLG 100H Introduction to Latin American Studies 3 cr.
- MCLG/LS 358 Latin American Civilization through Literature and Film 3 cr. or SPAN 359 Spanish American Civilization through

Literature and Film 3 cr.
- SPNS 331 (SPAN 312L) Introduction to Latin American Literature 3 cr.
- SPNS 432 (SPAN 450L) Latin American Literature 3 cr. (R–6)
- SPNS 494 (SPAN 494) Seminar Variable cr. (R–12) (when topic is related to Latin American literature such as Latin American drama, poetry, novel, short story, Argentinian literature, 19th Century Latin American Literature)
- HSTR 230H (HIST 286H) Colonial Latin America 3 cr.
- HSTR 231X (HIST 287H) Modern Latin America 3 cr.
- HSTR 334 (HIST 385) Latin America: Reform and Revolution 3 cr.
- HSTR 435 (HIST 485) Latin America: Memories of Politics and Politics of Memory 3 cr.
- HSTR 436 (HIST 486) Latin America: Workers and Labor History 3 cr.
- PSCI 325 (PSC 325) Politics of Latin America 3 cr.
- PSCI 327 (PSC 327) Politics of Mexico 3 cr.
- PSCI 432 (PSC 430) Inter–American Relations 3 cr.
- PSCI 463 (PSC 463S) Development Administration (when offered during summer session in Mexico)
- ART/NAS 367 Art of the Ancient Americas 3 cr.
- ART/NAS 368 Latin American Art 3 cr.
- ART 451 Seminar in Art History and Criticism 3 cr. (when topic refers to Latin America)
- SW 323 Women and Social Action in the Americas 3 cr.
- ANTH 354 Mesoamerican Prehistory 3 cr.
- EVST 410 Environmental Justice in Latin America (credits variable)

Faculty

Professors

- David Aronofsky, J.D., University of Texas, 1982 (Law)
- Maria José Bustos Fernandez, Ph.D., University of Colorado, Boulder, 1990 (Modern and Classical Languages and Literatures)
- Hipolito Rafael Chacón, Ph.D., University of Chicago, 1995 (Art)
- John E. Douglas, Ph.D., University of Arizona, 1990 (Anthropology)
- Janet Finn, Ph.D., University of Michigan, 1995 (Social Work)
- Paul Haber, Ph.D., Columbia University, 1992 (Political Science)
- Clary Loisel, Ph.D., University of Florida, 1996 (Modern and Classical Languages and Literatures)
- Stan Rose, Ph.D., University of Wisconsin, 1969 (Modern and Classical Languages and Literatures)

Associate Professors

- Eduardo Chirinos, Ph.D., Rutgers University, 1997 (Modern and Classical Languages and Literatures)
- Jannine Montauban, Ph.D., Rutgers University, 2000 (Modern and Classical Languages and Literatures)
- Daniel Spencer, Ph.D., Union Theological Seminary, 1994 (Environmental Studies)

Assistant Professors

- Jody Pavilack, Ph.D., Duke University, 2003 (History)

Liberal Studies Program

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Stewart Justman, Director

The Liberal Studies curriculum is designed for the student who seeks a liberal education with emphasis on the humanities. It is not intended for the student who is undecided about a major. While allowing ample room for electives, the coursework for the LS major focuses on the literary and religious works, cultural records, and ideas that enrich our common inheritance. The aim of the program is to foster critical understanding and appreciation of our inheritance and world through the study and discussion of these texts and traditions. Emphasis in all cases is on critical thinking, close reading of primary sources, analytical writing, and historical understanding. Students who graduate from the program will be prepared to enter various fields in the private and public sectors, pursue further professional training, and be better prepared to meet the demands of citizenship. More information about the program is available at the Liberal Studies Program office in LA 101, (406) 243–2171, or online at www.cas.umt.edu/liberal.

Majors in Liberal Studies may not take any course work presented for LS credit on a pass/not pass basis. Upper–level students transferring into this program should have at least a C average in all credits attempted.

Degree Requirements

Following are the requirements for the Bachelor of Arts degree with a major in Liberal Studies.

Major Requirements

Core Curriculum (courses numbered under 300)

- WRIT 101 (ENEX 101) Composition (coreq. or prereq. to LS 151L–152L 3
- Foreign language (2 years of one language)..... 18
- Liberal Studies 151L, 152L Introduction to Humanities... 8
- American Literature..... 3
- American History..... 3–4
- European literature (including British)..... 3
- European history (including British)..... 3–4
- Native American studies or African–American studies.... 3
  (including cross–listed and cognate courses in anthropology, geography, and sociology)
- Asian studies..... 3
  (including cross–listed courses in anthropology, geography, and sociology)
- Philosophy or political science..... 3
- Religious studies 3

Upper–Division Curriculum (courses numbered 300 and above)

The upper–division writing expectation must be met by successfully completing an upper–division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

The student elects upper–division courses in either the General, Asian Studies, Religious Studies or Women and Gender Studies options.

General Option

- History..... 3
- Art history or music history..... 3
- Philosophy 3
- Women's and Gender Studies or Native American Studies or African–American Studies..... 3
- Liberal Studies (from among LS 326, 327, 368, 428)..... 6
- Religious Studies (from among RELS 310,320,335,351,352)..... 6
- Senior Liberal Studies capstone seminar..... 3

Asian Studies Option (Professor Bradley Clough, advisor):

Students who choose the Asian Studies option must register with the Asian studies faculty advisor who will supervise their program. The following requirements must be met to complete the Asian studies option within the liberal studies major.

1. Completion of the Liberal Studies core curriculum. (See above.)
2. Six credits in introductory Asian Studies courses (100–level courses or study abroad in Asia).
3. Twelve credits in foundational Asian Studies courses (200–level courses), including Asian Studies 201H.
4. At least 30 credits in upper–level courses (300–level courses and above), of which at least six credits must be in the humanities and six in the social sciences.
5. Language Requirement: Two years (or equivalent proficiency) in an Asian language appropriate to the student's academic goals and approved by the academic advisor. Students who plan to pursue graduate work are strongly advised to complete three years, including at least one study abroad in Asia experience.

Religious Studies Option (Professor Paul Dietrich, advisor):

The academic study of religion is coextensive with the broad field of humane learning in which questions pertaining to the meaning of human existence are most prominent. The study of religions in the University is therefore taken up in close conjunction with the humanities, arts, letters and several sciences. Please refer to the Religious Studies section of the catalog for course requirements.

Women's Studies Option (Professor Elizabeth Hubble and Professor Bryan Cochran, Co–Directors):

Students who choose the Women's Studies option must register with the Women's Studies advisor, who will supervise their program. The following requirements must be met to complete the women's studies option within the liberal studies major.

1. Completion of liberal studies core curriculum.
2. Completion of LS 119H.
3. At least 21 credits of course work in relevant, advisor approved courses numbered above 299. At least 12 of these credits must be designated as "focus" courses, and 9 more may be "content" courses. Each semester a list of these courses is published at pre–registration by the Women's Studies office, LA 138A, (406) 243–2584.

Suggested Course of Study

The course of study for Liberal Studies majors varies greatly depending on student interest and course availability. The core curriculum typically takes more than two years to complete, while the upper–division requirements typically take less than two years. Following is one possible course of study for the first two years:

First Year	A	S
WRIT 101 (ENEX 101) Composition	3	–
LIT 220L (ENLT 222L) British Literature Medieval through Renaissance or LIT 221L (223L) British Literature Enlightenment to Romantics	(3)	(3)
Foreign language 101 and 102 Elementary	5	5
HSTR 101H or 102H (HIST 104H or 105H) Western Civilization I or II	(4)	(4)
LS 151L 152L Introduction to Humanities	4	4
Lower–division Native American Studies course	–	3
	15–16	15–16

Second Year	A	S
Foreign language 201 and 202 Intermediate	4	4
LIT 210L (ENLT 224L) American Literature I or LIT 211L (ENLT 225L) American Literature II	(3)	(3)
HSTA 101H (HIST 151H) American History I or HSTA 102H (HIST 152H) American History II	(4)	(4)
PHIL 200E Ethics or lower–division Political Science course	3	–
Lower–division course in Asian Studies	3	–
Lower–division course in Religious Studies	–	3
General Education	3	3
	16–17	16–17

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Liberal Studies (LS)

- **U105 H Introduction to Russian Culture**
- **U 119H Philosophical Perspectives on Women in the Western Hemisphere 3 cr.** Offered intermittently. Same as PHIL and WS 119H. Introduction to the discipline and scope of Western philosophy focusing on women as the subject rather than men. A chronological study following the ideological development in the West of social attitudes and scientific theses.
- **U 151L Introduction to the Humanities 4 cr.** Offered autumn. Prereq., eligibility for WRIT 101 (ENEX 101) based on writing placement examination. General survey of the field of Humanities in Western civilization with reference to non–Western analogs, contrasting the Greco–Roman with the Jewish and Christian traditions.
- **U 152L Introduction to the Humanities 4 cr.** Offered spring. Prereq., eligibility for WRIT 101 (ENEX 101) based on writing placement examination. General survey of the field of Humanities in Western civilization, with reference to non–Western analogs, since antiquity.
- **U 160L Classical Mythology 3 cr.** Offered every spring; offered intermittently in summer. Same as MCLG 160L. Deities and myths of the Greeks and Romans, with emphasis on those of most importance to Western literature and art.
- **U161H Introduction to Asian Humanities 3 cr.** Offered autumn. Coreq., LS 151L or consent of instr. Selective survey of classical South and East Asian perspectives on the humanities as introduced in LS 151L. Hinduism, Confucianism, Taoism and Buddhism are the primary traditions considered.
- **U 170 Myth Seminar: Honors 1 cr.** Offered every spring, offered intermittently in summer. Same as MCLG 170. Coreq., MCLG/LS 160L. Research, writing, and discussion about the mythologies of the Greeks and Romans in a small group setting.
- **U 180L Introduction to Film 3 cr.** Offered every term. Same as ENFM 180L. The history and development of the film medium. Emphasis on critical analysis of selected classic or significant films.
- **U 195 Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 210H Japanese Culture and Civilization 3 cr.** Offered intermittently. Same as AS, MCLG 210H and JPNS 150H. The historical, religious, artistic, literary and social developments in Japan from earliest times to the present.
- **U 211H Chinese Culture and Civilization 3 cr.** Offered intermittently. Same as AS and CHIN 211H. A comprehensive study of Chinese culture and civilization in the manifold aspects of anthropology, sociology, economics, history, literature, religion, and philosophy.
- **U 212S Southeast Asian Culture and Civilization 3 cr.** Offered intermittently. Same as AS and SOCI 212S (SOC 212H). Introduction to the history, geography, cultures, social organization, and contemporary events of Southeast Asia.
- **U 213X The Middle East 3 cr.** Offered autumn odd–numbered years. Same as AS and GPHY 245X (GEOG 213S). A survey of the biophysical and cultural geography of Southwest Asia and North Africa. Emphasis on environmental change, pre–history,

patterns of cultural and historical change, issues of socio–economic, religious, and political diversity, and the broader political significance of the region.

- **U 214 Central Asia: Peoples and Environments 3 cr.** Offered autumn. Same as AS 214, HSTR 241. Introduction to Central Asia's history, culture and ways of thinking. Focus on the political and social organization of Central Asia and cultural changes as expressed in art and interactions with China, India and the Middle East.
- **U 221Y Germanic Mythology and Culture 3 cr.** Offered intermittently. Same as MCLG 231Y. Offered alternate years. Germanic culture and mythology from 200 B.C. to 1200 A.D. Topics include the Germanic pantheon, Germanic religious practices, Germanic migrations and major literary masterpieces. Credit not allowed for LS 221Y, MCLG 231Y and GRMN 362Y (GERM 362H).
- **U 227L Film as Literature, Literature as Film 3 cr.** (R–6) Offered intermittently. Same as LIT 270L (ENTL 227L). Studies of the relationship between film and literature. Topics vary.
- **U 251L The Epic 3 cr.** (R–6) Offered odd–numbered years. Same as MCLG 251L. Reading, study, and discussion of epic poems. Selections will vary from Western and non–Western traditions.
- **U 252L Tragedy 3 cr.** (R–6) Offered even–numbered years. Same as MCLG 252L. Study of the literary, artistic and philosophical dimensions of tragedy. Selections will vary.
- **U 282L The German Cinema 3 cr.** Offered intermittently. Same as MCLG 222L. Development of the German film from its beginnings in 1895 through the contemporary New German Cinema. Topics include Expressionism, New Objectivity, the Nazi film, the German contribution to Hollywood, and the post–war film in East and West Germany. Credit not allowed for LS 282L, MCLG 222L and GRMN 322L (GERM 361L).
- **U 293 Omnibus Variable cr.** (R–6) Offered intermittently. Prereq., consent of instr. Independent work under the University omnibus option. See index.
- **U 294 Seminar Variable cr.** (R–6) Offered intermittently.
- **U 295 Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 296 Independent Study Variable cr.** (R–9) Offered intermittently.
- **U 301 Earth's Mind: Ecology and Native Peoples 3 cr.** Offered intermittently. Non–western attitudes toward nature, based on the work of anthropologists, philosophers, novelists, poets, and on native oral traditions.
- **UG 305L Introduction to Russian Literature I 3 cr.** Offered autumn alternate years. Same as MCLG and RUSS 312L A survey of Russian poetry and prose from their beginnings (medieval period) to mid–nineteenth century. Included are the works of Karamzin, Pushkin, and Lermontov.
- **UG 306L Introduction to Russian Literature II 3 cr.** Offered spring. Same as MCLG and RUSS 313L. A survey of Russian poetry and prose from the mid–nineteenth century through the Symbolist period of the early 20th century. Included are the works of Gogol, Turgenev, Dostoevsky, Tolstoy, and the Symbolists.
- **U 309 Reading the City: Rome 3 cr.** Offered autumn. Same as MCLG 309. Prereq., previous acceptance in subsequent intersession Italy program. Overview of the history of Rome from its beginnings until modern times, with lectures on various periods and artists across the spectrum of Italian art history. Orientation to the city of Rome, practicalities of life and study in the city.
- **U 311 Chinese Folktales 3 cr.** Offered intermittently. Same as MCLG 380. The study of the aspirations, desires, loves, fears, moral and aesthetic values of the Chinese people as expressed in their folk literature.
- **U 313L Classical Chinese Poetry in English Translation 3 cr.** Offered intermittently in spring. Same as AS, CHIN, and MCLG 313L. The works of major Chinese poets to 1300 A.D.
- **U 314L Traditional Chinese Literature in English Translation 3 cr.** Offered intermittently in spring. Same as AS, CHIN, and MCLG 314L. Highlights of Chinese literature to 1800; includes philosophy, poetry, prose, and fiction.
- **U 315 Major Hispanic Authors and Their Times 3 cr.** Offered autumn. Same as MCLG 315. The intensive study of the life, times, and works of a major Hispanic author.
- **U 320 Women in Antiquity 3 cr.** Offered intermittently. Same as MCLG and WS 320. Examination of varied sources from ancient Greece, the Hellenistic world, and republican and imperial Rome to clarify the place of women in various communities. Women's contribution to community and the mechanisms by which communities attempted to socialize female populations.
- **U 321H German Culture to 1900 3 cr.** Offered spring. Same as MCLG 330H. Overview of major events and currents in German culture to 1900 with an emphasis on the arts, literature, and intellectual movements. Credit not allowed for LS 321H and GRMN 351H (GERM 303).
- **U 322H German Culture Since 1900 3 cr.** Offered spring. Same as MCLG 331H. Overview of major events and currents in the German culture from 1900 to the present with an emphasis on the arts, literature, and intellectual movements. Credit not allowed for LS 322H and GRMN 352H (GERM 304).
- **UG 323 Studies in Literary Forms 3 cr.** (R–9) Offered autumn and spring. Prereq., LIT 300 (ENLT 301) or consent of instr. Same as LIT 375 (ENLT 323). Reading of various authors from different literary periods and cultures working in the same mode of composition (every two years, Literature of Place, Modern Drama, 19th Century Fiction, 20th Century Fiction, Lyric Poetry, Science Fiction, Autobiography; less frequently, Travel Literature, Popular Fiction, Epic, Tragedy, Satire, Romance, Comedy).
- **U 325 The Roots of Western Ethics 3 cr.** Offered intermittently. Prereq., lower–division course in Perspective 5 or consent of instr. Same as MCLG 365. Studies of the origins of Western ethical thinking in the original writings of Greek writers and their application to current situations.
- **UG 326 Stories East and West 3 cr.** Offered yearly. A course tracing the influence of Arabic fiction on its western counterpart.
- **U 327L Gender and Sexuality in English Fiction 3 cr.** Offered alternate years. Same as WGS 379L & LIT 379L (ENLT 375L). Major 20th century novels and short stories written in English in different parts of the world and how these texts explore changing concepts of gender and sexuality.
- **UG 338 The French Cinema 3 cr.** (R–6) Offered intermittently. Same as MCLG and FREN 338. An historical, aesthetic, and critical survey of the French cinema, from its beginnings in 1895 through the contemporary cinema (Muet, classical, Realism, Nouvelle Vogue, etc.) With an introduction to contemporary film criticism. Students taking the course for French credits are required to do research, reading, and writing in the French language.
- **UG 340H Ancient Greek Civilization and Culture 3 cr.** Offered intermittently. Prereq., ART 150H or 151H or consent of instr. Same as MCLG 360H and ART 380H. Slide lecture course. Ancient Greek works of art and architecture, related to and explained by

contemporary ideas and values of Greek society.

- **UG 341 Roman and Early Christian Art in Context 3 cr.** Offered intermittently. Prereq., ART 150H or 151H or consent of instr. Same as ART 381 and MCLG 361. A survey of the various media used in Roman art; the social political, and economic contexts in which the media were developed; and the transition (technical, iconographic, and contextual) to the art of the Early Christian period.
- **U 351 Exploring the Humanities in Depth 3 cr.** (R–9) Offered autumn and spring. Intensive study of a specific historical period in Western humanities through its seminal literature, with an emphasis on the intellectual and ethical paradigms which form an essential component of the foundations of the Western tradition.
- **UG 356 Studies in Literature and Other Disciplines 3 cr.** (R–9) Offered autumn and spring. Prereq., nine credits in LIT or LS or consent of instr. Same as LIT 376 (ENLT 325). Selected works of literature studied in conjunction with works of art, music, religion, philosophy, or another discipline (every two years, Psychology and Literature, Film and Literature, The Poetry of Meditation; less frequently, British Art and Literature, Modernism, Literature and Science, Bible as Literature, Song).
- **U 358 Latin American Civilization through Literature and Film 3 cr.** Offered autumn odd–numbered years. The development of the traditional society of Latin American civilization through the interaction of European, Indian and African elements. Credit not allowed for both LS/MCLG 358 and SPNS 357 (SPAN 359).
- **U 362 Ancient Greek and Roman Philosophy 3 cr.** Offered intermittently. Same as MCLG 362 and PHIL 362. Examination of the thought of the philosophers of Greece and Rome as expressed in original works read in English translation. Ancient philosophy studied within its historical, linguistic and cultural setting.
- **U 365 South Asian Traditions: Hinduism 3 cr.** Offered spring even–numbered years. Same as AS and RELS 365. Critical exploration of selected aspects of Hindu thought, narrative and practice, both in contemporary and historical perspective. Focus primarily on India, but with consideration of Hinduism's transformation and impact beyond South Asia.
- **UG 368 Shakespeare: Comedy and Tragedy 3 cr.** Offered yearly. An investigation of the differences, but also affinities, between the two fundamental Shakespearean genres.
- **UG 371 Women in America: from the Civil War to the Present 3 cr.** Offered intermittently. Same as HSTA 388 (HIST 371H) and WGS 371H. Interpretive overview of women's experiences in America after the Civil War. Exploration of such topics as women's associations, the battle for suffrage, organized feminism and its opponents, the industrialization of housework, women in the workforce, reproductive rights, and welfare. Particular attention to women's experiences shaped by class and race as well as by gender.
- **UG 381 Studies in the Film 3 cr.** Offered autumn and spring. Same as ENFM 381L. Prereq., LS 180L or consent of instr. Same as MCLG 381. Studies in genres, directors, movements, problems, etc.
- **U 391 Agriculture in the Humanities and Fine Arts 1 cr.** Offered autumn. Same as EVST and PHIL 391. Lecture series that accompanies cooperative education credit for students in P.E.A.S. (Program in Ecological Agriculture and Society).
- **U 395 Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 396 Independent Study Variable cr.** (R–12) Offered intermittently.
- **U 397 Research Variable cr.** (R–6) Offered intermittently.
- **U 398 Internship Variable cr.** Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **UG 428 Renaissance Debate on Women 3 cr.** Offered yearly. A reading of texts from the fourteenth to the seventeenth centuries in several different genres (prose pamphlets, lectures, lyrics, drama, extracts from epics), to examine the arguments presented by women and men that crucially shaped the debate on women and gender and influenced modern attitudes toward women in the western hemisphere.
- **UG 432 Twentieth Century Chinese Fiction in English Translation 3 cr.** Offered intermittently in spring. Same as CHIN, and MCLG 432. A survey of the principal works of Chinese fiction circa 1910–1990
- **UG 455 Studies in Comparative Literature 3 cr.** (R–9) Offered intermittently. Same as LIT 430 (ENLT 430) and MCLG 440. Study of important literary ideas, genres, trends and movements. Credit not allowed for more than one course on the same topic numbered LIT 430 (ENLT 430), MCLG 440, 494 or LS 455.
- **UG 460 History of Criticism and Theory 3 cr.** Offered autumn or spring. Prereq., LIT 300 (ENLT 301) and six credits in literature courses numbered 300 or higher. Same as LIT 420 (ENLT 420). A survey of the historical development of critical theories which shaped ways of reading and writing from Plato and Aristotle to the present.
- **UG 461 Topics in Critical Theory 3 cr.** (R–6) Offered autumn or spring. Prereq., LIT 300 (ENLT 301) and six credits in literature courses numbered 300 or higher. Same as LIT 420 (ENLT 421). Study and application of one or more theoretical approaches to interpreting texts (e.g., aesthetic poststructural, new historicist, classical, renaissance, romantic, narrative, psychoanalytic, formalist, neo–Marxist, feminist, gender, cultural studies and reader–response theory.)
- **U 493 Omnibus Variable cr.** (R–6) Offered intermittently. Prereq., consent of instr. Independent work under University omnibus option. See index.
- **UG 494 Seminar in Humanities: Genres and Periods 3 cr.** (R–9) Offered intermittently. Concentrated studies in specific genres and periods.
- **UG 495 Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 496 Independent Study Variable cr.** (R–9) Offered intermittently.
- **U 497 Research Variable cr.** (R–6) Offered intermittently.
- **U 498 Internship Variable cr.** Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

Faculty

Professors

- Paul A. Dietrich, Ph.D., University of Chicago, 1984
- Stewart Justman, Ph.D., Columbia University, 1976
- Ruth Vanita, Ph.D., Delhi University, 1992

Assistant Professor

- Bradley Clough, Ph.D., Columbia University, 1998
- Nathaniel Levtow, Ph.D., Brown University, 2006

Linguistics

- Courses
- Faculty

Tully J. Thibeau, Director

Mission

Objectives. The objectives of the Linguistics Program are to train students in the scientific analysis of languages. Students are prepared for further graduate study in the field: to study other languages; to apply their understanding of language to other fields; and to teach English and other languages to non–native students of those languages.

Indigenous and Endangered Languages. The research focus of the program includes indigenous languages of North America. Montana is the aboriginal home of speakers of languages that belong to four distinct language families: 1. Kutenai (isolate); 2. Flathead (Salish); 3 Cree, Blackfoot, Northern Cheyenne, and Gros Ventre (Algonquian); 4. Assiniboine, Sioux and Crow (Siouan). Of the approximately six thousand languages currently spoken in the world, only about five percent are projected to survive into the 22nd century. The Linguistics Program is committed to preserving and promoting the linguistic diversity of the region and the state.

Interdisciplinarity. The Linguistics Program is situated within the Department of Anthropology. In offering its curriculum the Linguistics Program collaborates with Native American Studies, English, Modern and Classical Languages and Literatures, Communication Studies, Philosophy, and the McNair Program.

Degree Offered.

- **Graduate Program:** The Program offers an M.A. in Linguistics. Students admitted to the Program pursue two tracks: general or applied. The program also supports students pursuing an MA degree with a Linguistics specialization through the Department of Anthropology.
- **Undergraduate Program:** There is no linguistics major or minor. However, students may pursue a Linguistics Option while earning a BA degree through the following departments: Anthropology, English, and Modern and Classical Languages and Literature. For specific course requirements, students should refer to the relevant department's section in this catalog.
- **Certificate of Accomplishment in English as a Second Language.** The University offers a sequence of courses (24 credits) that will lead to a Certificate of Accomplishment in English as a Second Language. The certificate will be issued by the University upon the recommendation of the Linguistics Program and the Faculty Senate.
  In order to earn this certificate, a student must hold (or simultaneously earn) a baccalaureate or higher degree and complete the following courses: LING 470; LING 471; LING 472; LING 477 or 478; two upper–division electives (6 credits) from among LING 466, 473, 475, 476, and 489; LING 480; and LING 491. Courses required for the Certificate may not be taken on a pass–not pass basis.
- **English as a Second Language/Academic English.**Outside of its curriculum, the Linguistics Program directs several EASL courses for international students whose TOEFL scores range between 500 and 580.
  EASL courses enhance learning second language English as the language of classroom instruction at an English–speaking university or college. These courses facilitate the transition from learning academic English to actually using English in academic settings. Course content concentrates on academic uses of language skills : reading, writing, speaking and listening, with a limited degree of periodic intensive activities involving grammar and/or pronunciation.
  Trained, supervised graduate assistant teachers who are pursuing advanced degrees in linguistics instruct academically–oriented EASL courses. Each EASL course lasts one semester and grants international students three credit hours that count toward graduation. The needs of individuals who must raise their English proficiency to gain admission to a university or college are addressed by the English Language Institute.
- **Teacher Preparation in English as a Second Language. Minor Teaching Field:** For an endorsement in the minor teaching field of English as a Second Language, a student must complete LING 470, 471, 472, 477 or 478, 480 and 491; at least two courses from the following: LING 466, 473, 475, 476, and 489. Students also must gain admission to Teacher Education and Student Teaching and meet the requirements for certification as a secondary teacher (see School of Education section of this catalog.) Courses in the teaching minor may not be taken on a pass–not pass basis.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

English as a Second Language (EASL)

- **U 250 Intermediate English for Academic Purposes: I 3 cr.** (R–6) Offered autumn and spring. Extensive training in reading, writing, and speaking grammatical English. This course is required of all foreign students with TOEFL scores between 500 and 525. Grading A, B, C, D, or F.
- **U 251 Intermediate English for Academic Purposes: II 3 cr.** (R–6) Offered autumn and spring. Prereq., 500 to 525 on the TOEFL or consent of instr. English grammar, reading, writing, and conversation skills for students who are not native speaker of English; designed for students who have scored between 500 and 525 on the TOEFL. Grading A, B, C, D, or F.
- **U 450 Advanced English for Academic Purposes: I 3 cr.** Offered autumn and spring. Prereq., TOEFL score of 526 or greater and consent of instr. Extensive training in reading, writing, and speaking grammatical English. Grading A, B, C, D, or F.
- **U 451 Advanced English for Academic Purposes: II 3 cr.** Offered autumn and spring. Prereq., 526 to 580 on the TOEFL or consent of instr. English grammar, reading, writing, and conversation skills for students who are not native speakers of English; designed for students who have scored between 525 an 580 on the TOEFL. Grading A, B, C, D, or F.

Linguistics (LING)

- **U 173 Introduction to Language 3 cr.** Offered every term. Same as COMM 173. A survey of the elements of language (structure, meaning, and sound) including language use in its social and cultural context.
- **U 195 Special Topics Variable cr.** (R–6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 198 Internship Variable cr.** Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 270S Introduction to Linguistics 3 cr.** Offered every term. Same as ENLI 270S. An introduction to the field of modern linguistics and to the nature of language. Emphasis on the ways different cultures develop symbol systems for representing meaning.
- **U 375X Endangered Languages 3 cr.** Survey of endangered languages and the communities in which those endangered languages are spoken. topics to be addressed include linguistic diversity, language endangement, language shift and loss, language maintenance efforts, and prospects for the future of these languages.
- **U 395 Special Topics Variable cr.** (R–9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 398 Internship Variable cr.** Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **UG 403 Applied German Linguistics 3 cr.** Offered autumn. Same as GRMN 400 (GERM 403). Contrastive analysis of German phonology, morphology, and syntax.
- **UG 405 Applied Spanish Linguistics 3 cr.** Offered autumn. Prereq., SPNS 305 (SPAN 302) and LING 270 or consent of instr. Same as SPNS 400 (SPAN 405). Topics and issues from various linguistic approaches, selected for their applicability to the teaching of Spanish.
- **UG 465 Structure and History of English for Teachers 3 cr.** Offered autumn and spring. Same as ENLI 465. The development of the English language from a historical perspective contrasted with the phonological and grammatical structure of English from a modern linguistic point of view; specifically designed for teachers.
- **UG 466 Pedagogical Grammar 3 cr.** Offered autumn. Prereq., LING 470. Discussion of English grammar from a non–native speaker perspective focusing on items and structures that are difficult for non–native speakers.
- **UG 470 Introduction to Linguistic Analysis 3 cr.** Offered autumn and spring. Same as ENLI 470. An introduction to the field of modern linguistics and to the nature of language. Emphasis on linguistic analysis.
- **UG 471 Phonetics and Phonology 3 cr.** Offered autumn. Prereq., LING 470. A study of phonetic and phonological systems from as many as 20 languages, most of them non–Indo–European; training in how to do linguistic analysis as well as linguistic theory.
- **UG 472 Generative Syntax 3 cr.** Offered autumn. Prereq., LING 470. A study of the human language sentence–formation system, the means for expressing semantic information as propositional content. Emphasis on the abstraction of utterances in the form of mathematical objects.
- **UG 473S Language and Culture 3 cr.** Offered autumn even–numbered years. Prereq., LING 470. Technical study of the relationships between grammatical categories and world view.
- **UG 474 Historical Linguistics 3 cr.** Offered every year. Prereq., LING 470. An introduction to the study of language change over time. Topics include: methods for studying language change (the comparative method and internal reconstruction); types of language change (sound change, borrowing, analogical change, lexical, syntactic, and semantic change); and explanations for language change.The principles of historical reconstruction and comparative method in the analysis of linguistic variation and change.
- **UG 475 Linguistic Field Methods 3 cr.** Offered spring odd-numbered years. prereq., LING 470. Writing up linguistic data; developing techniques for eliciting linguistic data by working with a native speaker of a less commonly taught language.**UG 476 Child Language Acquisition 3 cr.** Offered spring even–numbered years. Prereq., LING 470. The development of speech and language: phonologic, prosodic, semantic, pragmatic, and morphosyntactic systems.
- **UG 477 Bilingualism 3 cr.** Offered autumn odd–numbered years. Prereq., LING 270S or equiv. Societal and individual

bilingualism: topics include language policy, maintenance, interference, code switching and mixture, and bilingual education.

- **UG 478 Second Language Development 3 cr.** Offered spring. Prereq., LING 471 and 472 or consent of instructor. Like studies in Second Language (L2) Acquisition, this course considers Interlanguage (i.e., a language system that develops non–natively) and includes analysis of L2 data taken from naturalistic and experimental setting.
- **UG 479 Pragmatics 3 cr.** Offered spring odd–numbered years. Prereq., LING 270 or equiv. Relations between language and its interpreters focusing on presupposition, speech acts, discourse analysis, and the application of pragmatics to second and foreign language acquisition.
- **UG 480 Teaching English as a Foreign Language 3 cr.** Offered spring. Prereq., LING 270 or equiv. Same as ENLI 480. The application of principles of modern linguistics to the problems of teaching English as a foreign language.
- **UG 481 The ESL Professional 3 cr.** Offered spring. Prereq. or coreq., LING 491; prereq., LING 480 or consent of instr. Professional development techniques for the independent language teacher: language test construction, self–critique of teaching strategies, materials development, curriculum evaluation and design, and electronic and print media resources for the language teaching professional.
- **UG 482 Topics in the Philosophy of Language 3 cr.** (R–6) Offered Intermittently. Prereq., upper–division standing. Same as PHIL 471. Discussion of one or more of the following topics: theories of meaning, theories of reference, pragmatics, the origin of language, psycholinguistics, and foundations of linguistic theory.
- **UG 484 North American Indigenous Languages and Linguistics Linguistics 3 cr.** Offered intermittently. prereq. LING 470. Description and analysis of some grammatical features of Indigenous languages of North America.
- **UG 489 Morphology 3 cr.** Offered spring. Prereq., LING 470. A survey of the morphological features of several unrelated languages to provide the student with a broad overview of how languages compare and contrast.
- **UG 491 ESL Practicum 1– 3 cr.** Prereq., or coreq., LING 480. Offered every term. Same as ENLI 491. Students with a teaching major take the course for 3 credits; others take it for 1 credit and do one third of the work.
- **UG 495 Special Topics Variable cr.** (R–6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **UG 496 Independent Study Variable cr.** (R–9) Offered every term. Prereq., consent of instr. Special projects in linguistic analysis.
- **U 498 Internship Variable cr.** Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **G 570 Seminar in Linguistics 3 cr.** (R–12) Offered autumn and spring. Prereq., LING 470. Same as ANTH 570. Advanced topics in linguistic analysis.
- **G 575 Preceptorship 1 cr. (R–4)** Offered autumn and spring. Prereq., consent of instr. Materials development, assessment and evaluation of learners' needs and interests in teaching English as an academic second Language to international students attending universities with English instruction.
- **G 595 Special Topics Variable cr.** (R–9) Offered every term. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **G 596 S Independent Study 1–3 cr. (**R–6) Offered every term.
- **G 598 Internship Variable cr.** (R–6) Offered autumn and spring.
- **G 599 Professional Paper Variable cr.** (R–6) Offered every term.
- **G 699 Thesis Variable cr. (R–6)** Offered every term.

Faculty

- Irene Appelbaum, Ph.D., University of Chicago, 1995, Associate Professor (Linguistics)
- Leora Bar–el, Ph.D., :University of British Columbia, 2005, Assistant Professor (Linguistics)
- Gary Bevington, Ph.D., University of Massachusetts at Amherst, 1970, Adjunct Professor (Linguistics)
- Anthony Mattina, Ph.D., University of Hawaii, 1973, Professor, (Linguistics)
- Donna Mendelson, Ph.D., State University of new York at Binghamton, 1997, Adjunct Professor
- Miyashita Mizuki, Ph.D., University of Arizona, 2002, Assistant Professor (Linguistics)
- Naomi Shin, Ph.D., City University of New York, 2006, Assistant Professor (Modern and Classical Languages and Literatures)
- Tully J. Thibeau, Ph.D., University of Arizona, 1999, Assistant Professor (Director

Department of Mathematical Sciences

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Leonid Kalachev, Chair

Mathematics is studied both as a tool and for its own sake. Its usefulness in the sciences--physical, biological, social, behavioral, and environmental--and in decision–making processes is so established as to make it an indispensable part of many curricula.

Mathematics is chosen as a major area of study by individuals who find it challenging, fascinating, and beautiful. It is also appreciated by many who seek primarily to use mathematics as a tool.

A career in mathematics, except for teaching at the secondary level, generally requires a graduate degree as preparation. Careers include teaching, research, and the application of mathematics to diverse problems in institutions of higher learning, business, industry, and government.

The Bachelor of Arts, Master of Arts, and Doctor of Philosophy degrees are offered as well as a Bachelor of Science in Mathematical Sciences–Computer Science.

High School Preparation: For study of mathematics at the University, it is recommended that high school preparation include the equivalent of three years of algebra, plane geometry, trigonometry, and analytic geometry.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Mathematics Requirements for B.A. Degree with a Major in Mathematical Sciences

To obtain a B.A. degree with a major in Mathematical Sciences, the required courses are M 171 or 181, 172 or 182, 221(MATH 152, 153, 221), 273 (MATH 251) (except for students in the Mathematics Education option), M 300 (MATH 300) (except for students in the Mathematics Education option), M 307 (MATH 305) and six additional courses from the following list (at least three of the six must be numbered 400 or above): M 301, 311, 325, 326, 361, 362, 381, 412, 414, 429, 431, 432, 439, 440, 472, 473, 485 and STAT 341, 421 ,422. All mathematical sciences courses counted toward the major must be passed with a grade of C– or better and a 2.00 grade point average is required for these courses. In addition, if a special option is desired, the minimum requirements listed below for that option must be met. Additional courses should be chosen in consultation with a mathematics advisor.

Requirements for the Special Options

Pure Mathematics Option

Four courses chosen from M 381, 431, 432, 472, 473 (MATH 351, 421, 422, 451, 452).

Mathematics Education Option

M 301, 326, 429, 431, 439, (MATH 301, 326, 406, 421, 431) STAT 341 (MATH 341); either M 273 (MATH 251) or one additional course chosen from the above list for the six-course requirement; and the completion of certification requirements for teaching in secondary schools to include C&I 430.

Statistics Option

STAT 341, 421, 422 (MATH 341, 441, 442). (Additional mathematics and statistics courses chosen with advisor.)

Combinatorics and Optimization Option

M 361, 362, 485 (MATH 381, 382, 485); and one course chosen from STAT 341 (MATH 341) M 414, 440 (MATH 414, 471), or CS 332.

Applied Mathematics Option

M 311, 412, 414 (MATH 311, 412, 414) and one of M 472 or 440 (MATH 452 or 471). (M 381 and M 485 (MATH 351 and 485) are recommended.)

Major Requirements in Courses Outside Mathematics

1. Except for students in the Mathematics Education option and for students presenting a second major within the University, students must either complete two-semester language sequence as specified under "Group III: Modern and Classical Languages" in the General Education section of the Catalog, or take two courses chosen from CS 101, 131, 132, 201, 207.
2. All mathematics majors, except those selecting the mathematics education option, must complete 18 credits in at most three sciences selected from astronomy, biology, chemistry, computer science, economics, forestry, geology, management, microbiology, and physics. Students selecting the mathematics education option must complete 12 credits in at most two sciences selected from astronomy, biology, chemistry, computer science, geology, microbiology and physics. An alternative to the science requirement is for the student to present a minor or second major within the University, or for the student with a mathematics education option to complete an additional teaching minor or major.
3. The upper–division writing requirement for Mathematical Sciences majors consists of: M 429 (Math 406), or any other approved General Education upper–division Writing course, OR a senior thesis M 499 (MATH 499).

Requirements for a B.S. Degree with a Combined Major in Mathematical Sciences–Computer Science

The purpose for the combined program is to provide a thorough background in both allied disciplines and to inculcate a deeper understanding of their goals and methods. A student must complete 60 credits in the two disciplines: 30 of these credits in mathematical

sciences courses and 30 of these credits in computer science courses. A minimum grade of "C–" and a 2.0 grade point average is required in all courses which follow.

The mathematical sciences requirements are: M 171 (or 181)-172 (or 182), 221, 273, 307 or (225) (MATH 152–153, 221, 251, 305 (or 225)), and twelve credits of mathematical sciences selected from the following list: M 311, 325, 326, 361, 362, 381, 412, 414, 429, 431, 432, 439, 440, 445, 472, 473, 485 and STAT 341, 421, 422, 451, 452 (MATH 311, 325, 326, 341, 351, 381, 382, 406, 412, 414, 421, 422, 431, 441, 442, 444, 445, 451, 452, 471, 475, 485).

The computer science requirements are: CS 121, 131–132 or 133, 241–242, 281, 332 and nine credits of CS electives selected from courses numbered 300 and above. A total of at most three of the nine credits of CS electives may be in CS 398 or 498.
The combined nine additional credits of computer science electives and twelve additional credits of mathematical sciences electives must include at least three 3– or 4–credit courses numbered 400 or above, with at least one chosen from each department (not including M 429 (MATH 406) and STAT 451, 452 (MATH 444 and 445)).

Other requirements are: One of the sequences BIOL 108N, 109N, 110N; CHMY 141N, 143N (CHEM 161N, 162N); or PHYS 211N-214N (221N–222N). In addition, WRIT 222 (FOR 220), and either COMM 111A or COMM 242.

Each student plans a program in consultation with a computer science and a mathematical sciences advisor. Students planning to attend graduate school in computer science or the mathematical sciences should consult with their respective advisors.

The upper–division writing requirement is one of the following: CS 415E, M 429 (MATH 406), any other approved General Education upper–division writing course, or a senior thesis (CS 499 or M 499 (MATH 499)).

Suggested Curricula:
Applied Math–Scientific Programming: M 311, 412, 414 (MATH 311, 412, 414), and one course chosen from STAT 341 (MATH 341), M 381, 473, 472, 440 (MATH 351, 451, 452, 471). Three courses chosen from CS 344, 446, 477, 486.
Combinatorics and Optimization–Artificial Intelligence: M 261, 362 (MATH 381, 382), and two courses chosen from M 325, 414, 485 (MATH 325, 414, 485) STAT 341 (MATH 341); and CS 344, 455, and 457.
Statistics–Machine Learning: STAT 341, 421 (MATH 341, 441), and two courses chosen from M 325, 362, 485 (MATH 325, 382, 485) STAT 422 (MATH 442). Three courses chosen from CS 365, 455, 457, 458, and 486
Algebra–Analysis: M 381, 431 (MATH 351, 421), and two courses chosen from M 326, 432, 473, 472 (MATH 326, 422, 451, 452); CS 344, 441, and one other course.

Suggested Course of Study

First Year	A	S
M 171-172 (MATH 152-153) Calculus I, II	4	4
WRIT 101 (ENEX 101) Composition and other General Education Courses (including two sciences courses)	12	12
	16	16
Second Year	**A**	**S**
M 221 (MATH 221) Intro to Linear Algebra	4	–
M 273 (MATH 251) Multivariable Calculus	4	–
M 307 (MATH 305) Introduction to Abstract Mathematics	–	3
General Education courses, additional science courses and electives	9	13
	17	16

Requirements for a Minor

To earn a minor in mathematics the student must earn 23 credits in M, MATH, or STAT courses listed in a UM-Missoula Catalog (or in transfer courses equivalent to such courses), M courses must be numbered 115 or higher, and MATH courses must be numbered 111 or higher. Courses must include: (a) one of M 162 or 172 or 182 (MATH 150 or 153), and (b) at least three 3– or 4– credit courses at the 300 level or above. M 172 or 182 (MATH 153) (Calculus II) is recommended since it is a prerequisite for many upper–division mathematics courses. All courses counted toward the minor must be passed with a grade of C– or better and a 2.00 grade point average is required for these courses. A handout with detailed advice for math minors, including suggested curricula, is available on the math department's home page.

Mathematics Education Minor: For a teaching minor endorsement in the field of mathematics, a student must complete M 171-172, 221, 301, 307, 326, 439 (MATH 152-153, 221, 301, 305, 326, 431), and STAT 341, (MATH 341). Students also must complete C&I 430, gain admission to Teacher Education and Student Teaching and meet the requirements for certification as a secondary teacher (see the School of Education section of this catalog). All courses counted toward the minor must be passed with a letter grade of C– or better and a 2.00 grade average is required.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Mathematical Sciences (M)

Unless the student has prior written approval of the Mathematical Sciences Department, credit is not allowed for any mathematics course that is a prerequisite for a mathematics course for which credit has already been earned. Students receiving transfer or Advanced Placement credit for STAT 216 (MATH 241) may take M 115 (MATH 117) for credit.
See the College of Technology section for Introductory Algebra, M 090 (MAT 005), and Intermediate Algebra, M 095 (MAT 100).

- **U 104 (MATH 109) Numbers as News 3 cr.** Offered spring. Prereq., M 090 (MAT 005) with a grade of B- or better, or M 095 (MAT 100), or appropriate placement score. An exploration of mathematics and statistics as used in the popular media. For students in the School of Journalism only.
- **U 105 (MATH 107) Contemporary Mathematics 3 cr.** Offered every term. Prereq., M 090 (MAT 005) with a grade of B–or better, or M 095 (MAT 100), or appropriate placement score. An introduction to mathematical ideas and their impact on society. Intended for students wishing to satisfy the general education mathematics requirement.
- **U 115 (MATH 117; MAT 117) Probability and Linear Mathematics 3 cr.** Offered every term. Prereq., M 090 (MAT 005) with a grade of B- or better, or M 095 (MAT 100), or appropriate placement score. Systems of linear equations and matrix algebra. Introduction to probability with emphasis on models and probabilistic reasoning. Examples of applications of the material in many fields.
- **U 121 (MATH 111) College Algebra 3 cr.** Offered autumn and spring. Prereq., M 095 (MAT 100) or appropriate placement score. Intended to strengthen algebra skills. The study of functions and their inverses; polynomial, rational, exponential, and logarithmic functions. Credit not allowed for both M 121 (MATH 111, MAT 118), M 151 (MATH 121, MAT 120).
- **U 122 (MATH 112) College Trigonometry 3 cr.** Offered autumn and spring. Prereq., M 121 (MATH 111) or appropriate placement score. Preparation for calculus based on college algebra. Review of functions and their inverses, exponential and logarithmic functions. Trigonometric functions and identities, polar coordinates and an optional topic such as conic sections or parametric functions. Credit not allowed for both M 122 (MATH 112, MAT 119) and M 151 (MATH 121, MAT 120).
- **U 135 (MATH 130) Mathematics for K-8 Teachers I 5 cr.** Offered autumn and spring. Prereq., M 095 (MAT 100) or appropriate placement score. Open only to elementary education majors. Topics include problem-solving, sets and logic, functions, whole numbers, integers, rational numbers, real numbers, number theory, probability and statistics.
- **U 136 (MATH 131) Mathematics for K-8 Teachers II 4 cr.** Offered autumn and spring. Prereq., 130. Topics include introductory geometry, geometric constructions, congruence, similarity, measurement, coordinate geometry and an introduction to computer geometry.
- **U 151 (MATH 121) Precalculus 4 cr.** Offered autumn and spring. Prereq., appropriate placement score. A one semester preparation for calculus (as an alternative to M 121-122 (MATH 111–112). Functions of one real variable are introduced in general and then applied to the usual elementary functions, namely polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, and miscellaneous others. Inverse functions, polar coordinates and trigonometric identities are included. Credit not allowed for both M 151 (MATH 121, MAT 120) and M 121 or 122 (MATH 111 or 112, MAT 118 or 119).
- **U 162 (MATH 150) Applied Calculus 4 cr.** Offered autumn and spring. Prereq., appropriate placement score or one of M 121, 122 or 151 (MATH 111, 112 or 121). Introductory course surveying the principal ideas of differential and integral calculus with emphasis on applications and computer software. Mathematical modeling in discrete and continuous settings. Intended primarily for students who do not plan to take higher calculus.
- **U 171 (MATH 152) Calculus I 4 cr.** Offered autumn and spring. Prereq., M 122 or 151 (MATH 112 or 121) or appropriate placement score. Differential calculus, including limits, continuous functions, Intermediate Value Theorem, tangents, linear approximation, inverse functions, implicit differentiation, extreme values and the Mean Value Theorem. Integral Calculus including antiderivatives, definite integrals, and the Fundamental Theorem of Calculus.
- **U 172 (MATH 153) Calculus II 4 cr.** Offered autumn and spring. Prereq., M 171 (MATH 152). Techniques of Integration. Area computations. Improper integrals. Infinite series and various convergence tests. Power series. Taylor's Formula. Polar coordinates. Parametric curves.
- **U 181 Honors Calculus I 4 cr.** Offered autumn. Prereq., consent of instr. Coreq., Honors Calculus Seminar, a section of M 294 (MATH 294. Honors version of M 171 (MATH 152).
- **U 182 Honors Calculus II 4 cr.** Offered spring. Prereq., M 181 or consent of instr. Coreq., Honors Calculus Seminar, a section of M 294 (MATH 294). Honors version of M 171 (MATH 153).
- **U 191 (MATH 95) Special Topics Variable cr.** (R–6) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 221 Introduction to Linear Algebra 4 cr.** Offered autumn and spring. Prereq., M 172 (MATH 153). Vectors in the plane and space, systems of linear equations and Gauss–Jordan elimination, matrices, determinants, eigenvalues and eigenvectors, vector spaces, linear transformations. Calculators and/or computers used where appropriate.
- **U 225 Introduction to Discrete Mathematics 3 cr.** Offered autumn. Prereq., M 162 or 171 (MATH 150 or 152) or consent of instr. Mathematical concepts used in computer science with an emphasis on mathematical reasoning and proof techniques. Elementary logic, sets, functions and relations, combinatorics, mathematical induction, recursion and algorithms. Mathematics majors should take M 307 instead of M 225 (MATH 305 instead of 225).
- **U 231 Topics in Geometry 3 cr.** Offered intermittently. Prereq., M 136 (MATH 131) or consent of instr. Geometry topics for teaching grades 6–12 mathematics. Intended primarily for students in elementary education who plan to teach middle school mathematics.
- **U 273 (MATH 251) Multivariable Calculus 4 cr.** Offered autumn and spring. Prereq., M 172 (MATH 153). Calculus of functions of several variables; differentiation and elementary integration. Vectors in the plane and space.
- **U 274 (MATH 158) Introduction to Differential Equations 3 cr.** Offered spring. Prereq., M 162 (MATH 150) or M 171 (MATH

152) and knowledge of basic trigonometry. Solution of ordinary differential equations and systems with emphasis on applications, numerical methods and computer software.

- **U 291 (MATH 295) Special Topics Variable cr.** (R-9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 292 (MATH 296) Independent Study Variable cr.** (R-9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study on material not offered in a regular course.
- **U 294 Seminar Variable cr.** (R–9) Offered autumn and spring. Prereq., consent of instr. Guidance in special work for advanced students.
- **U 300 Undergraduate Mathematics Seminar 1 cr.** (R–6) Offered every semester. Prereq., M 171 (MATH 152). Discussion seminar focused on topics and issues of interest to students in the mathematical sciences.
- **UG 301 Mathematics Technology for Teachers 3 cr.** Offered autumn. Prereq., M 221 (MATH 221). Discrete and continuous mathematical models from a variety of disciplines using appropriate technology.
- **U 307 (MATH 305) Introduction to Abstract Mathematics 3 cr.** Offered autumn and spring. Prereq., M 172 (MATH 153). Designed to prepare students for upper–division proof–based mathematics courses. Topics include proof techniques, logic, sets, relations, functions and axiomatic methods. Students planning to take both M 221 and M 307 (MATH 221 and 305) are encouraged to take M 221 (MATH 221) first.
- **UG 311 Ordinary Differential Equations and Systems 3 cr.** Offered autumn. Prereq., M 273 (MATH 251). Ordinary differential equations. Systems of linear differential equations from a matrix viewpoint. Series solutions. Existence and uniqueness for initial value problems. Numerical methods. Stability and selected topics. M 317 (MATH 317) computer lab recommended.
- **UG 317 Ordinary Differential Equations Computer Lab 1 cr.** Offered autumn. Coreq., M 311 (MATH 311) or consent of instr. Intended primarily for student in M 311 (MATH 311).
- **UG 325 Discrete Mathematics 3 cr.** Offered spring. Prereq., M 171 and 225 or 307 (MATH 152 and 225 or 305). Continuation of 225 and topics from graph theory, Boolean algebras, automata theory, coding theory, computability and formal languages.
- **UG 326 Number Theory 3 cr.** Offered spring. Prereq., M 225 or 307 (MATH 225 or 305). Congruences, Diophantine equations, properties of primes, quadratic residues, continued fractions, algebraic numbers.
- **UG 361 (MATH 381) Discrete Optimization 3 cr.** Offered spring. Prereq., M 162 or 172 (MATH 150 or 153) (221 or 225 recommended). Intended for non–mathematics majors as well as mathematics majors. Introduction to discrete optimization and modeling techniques with applications. Topics from combinatorics and graph theory, including enumeration, graph algorithms, matching problems and networks.
- **UG 362 (MATH 382) Linear Optimization 3 cr.** Offered autumn. Prereq., M 162 or 172 (MATH 150 or 153) (221 recommended). Coreq., M 363 (MATH 388) recommended. Intended for non–mathematics majors as well as majors. Introduction to linear programming and modeling techniques with applications. Topics include the simplex method, duality, sensitivity analysis and network models.
- **UG 363 (MATH 388) Linear Optimization Laboratory 1 cr.** Offered autumn. Coreq., M 362 (MATH 382). Introduction to linear optimization software.
- **UG 381 (MATH 351) Advanced Calculus I 4 cr.** Offered autumn even-numbered years. Prereq., M 273, 307 (MATH 251, 305). Rigorous development of the theory of functions of several variables. Differentiability, Taylor's theorem, inverse and implicit function theorems, multiple integration, differential forms and Stokes' theorem.
- **U 390 Supervised Internship 1–9 cr.** (R–9) Prereq., consent of dept.
- **U 391 (MATH 395) Special Topics Variable cr.** (R-9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 392(MATH 396) Independent Study Variable cr.** (R-9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study n material not offered in a regular course.
- **U 394 Seminar Variable cr.** (R–9) Offered autumn and spring. Prereq., consent of instr. Guidance in special work for advanced students.
- **U 398 Internship Variable cr.** Offered autumn and spring. Prereq., consent of instructor. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **UG 412 Partial Differential Equations 3 cr.** Offered spring. Prereq., M 311 (MATH 311). Fourier series, Sturm–Liouville and boundary value problems. Partial differential equations: Cauchy problems and the method of characteristics, separation of variables and Laplace transform methods. Numerical methods and selected topics. M 418 (MATH 418) computer lab recommended.
- **UG 414 Deterministic Models 3 cr.** Offered autumn. Prereq., M 274 or 311 (MATH 158 or 311) or consent of instr. Linear and nonlinear difference and differential equations: stability, phase–plane analysis, oscillatory behavior, limit cycles, and chaos. Eigenvalues and eigenfunctions. Emphasis on models in biology.
- **UG 418 Partial Differential Equations Computer Lab 1 cr.** Offered spring. Coreq., M 412 (MATH 412) or consent of instr. Intended primarily for students in M 412 (MATH 412).
- **UG 429 (MATH 406) History of Mathematics 3 cr.** Offered spring. Prereq., M307 (MATH 305). Historical study of the development of mathematics from the Egyptian and Babylonian eras to the 20th century.
- **UG 431 (MATH 421) Abstract Algebra I 4 cr.** Offered autumn. Prereq., M 221 and 307 (MATH 221 and 305) or consent of instr. An introduction to modern ideas of algebra through the study of groups, rings, and fields.
- **UG 432 (MATH 422) Abstract Algebra II 4 cr.** Offered spring. Prereq., M 431 (MATH 421). Continues the investigation of groups, rings, and fields begun in M 431 (MATH 421). Further topics include vector spaces and field extensions.
- **UG 439 (MATH 431) Euclidean and Non–Euclidean Geometry 3 cr.** Offered autumn. Prereq., M 307 (MATH 305); M 231 (MATH 231) recommended. Euclidean geometry from a rigorous, axiomatic viewpoint and Non–Euclidean geometries chosen from Lobachevskian, projective, finite and Riemannian.
- **UG 440 (MATH 471) Numerical Analysis 4 cr.** Offered intermittently. Prereq., M 307, 311 (MATH 305, 311), one computer language. Error analysis; approximation and interpolation, numerical solution of linear and non-linear equations, numerical integration of ordinary and partial differential equations.

- **UG 445 (MATH 475) Statistical, Dynamical, and Computational Modeling 4 cr.** Offered autumn odd-numbered years. Prereq., consent of instr. An interdisciplinary course on the integration of statistical and dynamical models with applications to biological problems. Linear and nonlinear models, estimation, systems of ordinary differential equations, numerical integration, bootstrapping, MCMC methods. Intended both for students in mathematics and the natural sciences.
- **UG 472 (MATH 452) Introduction to Complex Analysis 4 cr.** Offered spring. Prereq., M 273 (MATH 251), M 307 (MATH 305). Analytic functions, complex integration, singularities and application to contour integration, harmonic functions, spaces of analytic functions.
- **UG 473 (MATH 451) Introduction to Real Analysis 4 cr.** Offered autumn odd-numbered years. Prereq., M 273 (MATH 251), M 307 (MATH 305). Theory of metric spaces and point set topology, Riemann-Stieltjes integral, sequences and series of functions. Stone-Weierstrass theorem, theorem of Arzela-Ascoli, introduction to Lebesgue integration.
- **UG 485 Graph Theory 3 cr.** Offered autumn. Prereq., M 325 or M 307 and M 361 (MATH 325, or MATH 305 and 381), or consent of instr. Theory and applications of graphs. Topics chosen from trees, matchings, connectivity, coloring, planarity, Ramsey theory, random graphs, combinatorial designs and matroid theory.
- **U 494 Seminar Variable cr.** (R–9) Offered autumn and spring. Prereq., consent of instr. Guidance in special work for advanced students.
- **UG 491 (MATH 495) Special Topics Variable cr.** (R–9) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 492 (MATH 496) Independent Study Variable cr.** (R–9) Offered autumn and spring. Prereq., consent of instr. Guidance of an individual student in doing independent study on material not offered in a regular course
- **U 498 Internship Variable cr.** Offered autumn and spring. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 499 Senior Thesis Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr. Senior thesis for mathematics majors and/or Watkins Scholars.
- **G 500 Current Mathematical Curricula 3 cr.** Offered intermittently. Prereq., undergraduate major or minor in mathematics. Analysis of contemporary materials for secondary school mathematics: the goals, the mathematical content, alternative methodologies, and curriculum evaluation.
- **G 501 Technology in Mathematics for Teachers 3 cr.** Offered intermittently. Prereq., undergraduate mathematics major or minor. Technology usage—when it is appropriate and when it is not. Experience is provided with scientific calculators, graphing utilities, computers, and identification of exemplary software.
- **G 504 Topics in Math Education Variable cr.** (R–12) Offered intermittently. Prereq., teacher certification. Topics of current interest which may include calculus, number theory, probability and statistics, geometry, or algebra, at a level suitable for teachers.
- **G 510 Problem Solving for Teachers 3 cr.** Offered intermittently in summer. Prereq., undergraduate major or minor in mathematics. Strategies for problem solving, problem posing in a variety of situations, modeling and applications. Problems are selected from various areas of mathematics.
- **G 511 Advanced Mathematical Methods I 3 cr.** Offered autumn odd–numbered years. Prereq., M 311, 412, 414 (MATH 311, 412 or 414). Methods in applied mathematics related to the qualitative and quantitative solution of nonlinear and differential integral equations, dynamical systems, and perturbation methods. Applications of these methods to other sciences.
- **G 512 Advanced Mathematical Methods II 3 cr.** Offered spring even–numbered years. Prereq., M 511 (MATH 511). Continuation of M 511 (MATH 511).
- **G 514 Topics in Applied Mathematics Variable cr.** (R–12) Offered autumn even–numbered years. Prereq., consent of instr. or M 511-512 (Math 511–512). Topics of current interest in applied mathematics, mathematical modeling, dynamic modeling, and optimal management in stochastic or deterministic environments.
- **G 520 Algebra for Teachers 3 cr.** Offered intermittently in summer. Prereq., M 431 (MATH 421) or equiv. Topics include algebraic number fields, linear algebra topics, and applications appropriate for secondary teachers.
- **G 521 Advanced Algebra I 3 cr.** Offered alternate years. Prereq., M 432 (MATH 422) or consent of instr. Topics covered include group theory, field theory and Galois theory.
- **G 522 Advanced Algebra II 3 cr.** Offered alternate years. Prereq., M 521 (MATH 521) or consent of instr. Continuation of 521; rings, modules, commutative algebra, and further topics.
- **G 524 Topics in Algebra I 3 cr.** (R-6) Offered alternate years. Prereq., M 432 (MATH 422) or consent of instr. Topics have included algebraic geometry, commutative ring theory and advanced linear algebra.
- **G 525 Topics in Algebra II 3 cr.** (R-6) Offered alternate years. prereq., M 524 (MATH 524) or consent of instr. Continuation of M 524 (MATH 524).
- **G 526 Discrete Mathematics for Teachers 3 cr.** Offered intermittently in summer. Prereq., M 307 (MATH 305) or consent of instr. Elements and operations of finite structures, combinatorics, recursion, graph theory, matrix representations, and finite state transition models.
- **G 530 Geometries for Teachers 3 cr.** Offered intermittently in summer. Prereq., M 439 (MATH 431) or equiv. Comparison of synthetic, analytic, vector, and transformational approaches to geometry. Includes classification of geometries, geometric representations, axiomatics, and the applications of modern geometries.
- **G 531 Topology 3 cr.** Offered autumn even–numbered years. Prereq., M 473 (MATH 451) or consent of instr. Set theory, topological spaces, metrizability, continuous mappings and selected topics.
- **G 532 Algebraic Topology 3 cr.** Offered spring alternate years. Prereq., M 431 (MATH 421) and M 531 (MATH 531) or consent of instr. Introduction to algebraic topology through one or more topics chosen from the fundamental group and higher homotopy groups, singular homology, and simplicial homology.
- **G 550 Analysis for Teachers 3 cr.** Offered intermittently in summer. Prereq., M 273 (MATH 251) or equiv. Notions of limits, continuity, differentiation, and integration in Rn.
- **G 551 Real Analysis 3 cr.** Offered spring even–numbered years. Prereq., M 473 or 472 (MATH 451 or 452) or consent of instr. Measure theory, abstract integration theory, theory of Lp–spaces.

- **G 555 Functional Analysis 3 cr.** Offered spring odd–numbered years. Prereq., M 473 or M 472 (MATH 451 or 452) or consent of instr. Normed linear spaces, linear functionals, separation theorems, topological linear spaces, weak topologies, dualities.
- **G 564 Topics in Analysis 3 cr.** (R–12) Offered autumn odd–numbered years. Prereq., consent of instr. Research projects or topics in analysis. May include but not restricted to Banach algebras, Fourier analysis, Harmonic analysis, Hilbert space theory, integral equations, or operator theory.
- **G 581 Combinatorics 3 cr.** Offered autumn odd–numbered years. Prereq., consent of instr. Theory and applications of discrete mathematics. Topics chosen from enumeration, combinatorial analysis, and graph theory.
- **G 582 Optimization 3 cr.** Offered autumn even–numbered years. Prereq., consent of instr. Theory and applications of optimization. Topics chosen from linear, non–linear, and discrete optimization, including duality theory, convexity and networks.
- **G 584 Topics in Combinatorics and Optimization 3 cr.** (R–12) Offered spring odd–numbered years. Prereq., consent of instr. Topics chosen from the areas of combinatorics and optimization. May include classical problems, current trends, research interests or other topics chosen by the instructor.
- **G 593 Professional Project Variable cr.** (R–6) Offered autumn and spring. Prereq., consent of advisor.
- **G 595 Special Topics Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 597 Research Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 598 Internship Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.
- **G 599 Thesis Variable cr.** (R–6) Offered autumn and spring. Prereq., consent of instr.
- **G 600 Mathematics Colloquium 1 cr.** (R–3) Offered autumn and spring. Prereq., consent of advisor.
- **G 602 Teaching College Mathematics 3 cr.** Prereq., second year standing in graduate school. Topics include publishing, grant writing, writing in mathematics classes, media use in mathematics, evaluation and assessment of curricular materials and programs, instructional methods in university mathematics courses, and other selected topics.
- **G 605 Learning Theories in Mathematics 3 cr.** Prereq., graduate status. How children learn mathematical content and processes. Models of mental development, concept formation, problem solving, reasoning, and creative thinking.
- **G 606 Current Topics in the History of Mathematics 3 cr.** Examination of mathematical history topics from the latter part of the 20th century. Discussions may focus on the impact of Hilbert's Problems. Research on current mathematics.
- **G 610 Graduate Seminar in Applied Mathematics Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 620 Graduate Seminar in Algebra Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 630 Graduate Seminar in Geometry/Topology Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 650 Graduate Seminar in Analysis Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 670 Graduate Seminar in Numerical Analysis Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 680 Graduate Seminar in Combinatorics and Optimization Variable cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 690 Supervised Internship Variable cr.** (R–6) Offered autumn and spring. Prereq., consent of department. Supervised Teaching Internship.
- **G 691 Research Methods in Mathematics Education 3 cr.** Prereq., consent of instr. Resources for learning of reported research, **critical** reviews of research, quantitative and qualitative processes.
- **G 694 Seminar** Variable **cr.** (R–12) Offered autumn and spring. Prereq., consent of instr.
- **G 699 Dissertation** Variable cr. (R–9) Offered autumn and spring.

Statistics (STAT)

- **U 216 (MATH 241) Introduction to Statistics 4 cr.** Offered autumn and spring. Prereq., M 115 (MATH 117)or consent of instr. Introduction to major ideas of statistical inference. Emphasis is on statistical reasoning and uses of statistics.
- **UG 341 (MATH 341) Introduction to Probability and Statistics 3 cr.** Offered autumn and spring. Prereq., M 162 or 172 (MATH 150 or 153). Probability, probability models and simulation, random variables, density functions, special distributions, and a brief survey of estimation and hypothesis testing. Computer use integrated throughout.
- **UG 421 (MATH 441) Probability Theory 3 cr.** Offered autumn. Prereq., M 273 (MATH 251) and STAT 341 (MATH 341) or consent of instr. An introduction to probability, random variables and their probability distributions, estimation and hypothesis testing. This course is the foundation on which more advanced statistics courses build.
- **UG 422 (MATH 442) Mathematical Statistics 3 cr.** Offered spring. Prereq., STAT 421 (MATH 441). Continuation of 421.
- **UG 451 (MATH 444) Statistical Methods I 3 cr.** Offered autumn. Prereq., one year of college mathematics including M 115 (MATH 117)or equiv. course in probability or consent of instr. May not be counted toward a major in mathematics. Intended primarily for non-mathematics majors who will be analyzing data. Graphical and numerical summaries of data, elementary sampling, designing experiments, probability as a model for random phenomena and as a tool for making statistical inferences, random variables, basic ideas of inference and hypothesis testing.
- **UG 452 (MATH 445) Statistical Methods II 3 cr.** Offered spring. Prereq., STAT 451 (MATH 444). Continuation of STAT 451 (MATH 444). May not be counted toward a major in mathematics. Multiple regression, experimental design, analysis of variance, other statistical models.
- **UG 457 (MATH 447) Computer Data Analysis I 1 cr.** Offered autumn. Coreq., STAT 451 (MATH 444) or consent of instr. An introduction to software for doing statistical analyses. Intended primarily for students in STAT 451 (MATH 444).
- **UG 458 (MATH 448) Computer Data Analysis II 1 cr.** Offered spring. Coreq., STAT 452 (MATH 445) or consent of instr. Continuation of STAT 457 (Math 447). Intended primarily for students in STAT 452 (MATH 445).
- **G 540 (MATH 540) Probability and Statistics for Teachers 3 cr.** Offered intermittently in summer. Prereq., STAT 341 (MATH 341) or equiv. A survey of modern topics in probability and statistics. Emphasis will be on applications of statistics in real situations.

- **G 541 (MATH 541) Advanced Mathematical Statistics 3 cr.** Offered intermittently. Prereq., STAT 422 (MATH 442). Advanced theory of estimation and hypothesis testing including large sample theory.
- **G 542 (MATH 542) Applied Linear Models 3 cr.** Offered autumn even-numbered years. Prereq., STAT 422 (MATH 442) or consent of instr. Numerical and graphical data summaries, simple linear and multiple regression and analysis of variance, including estimation, hypothesis testing, residual analysis, diagnostics, and model-building strategies. Use of the computer and real data sets integrated throughout.
- **G 543 (MATH 543) Applied Multivariate Statistical Analysis 4 cr.** Offered spring even-numbered years. Prereq., STAT 452 or 422 (MATH 445 or MATH 442), or consent of instr. Introduction to multivariate statistical methods and applications. Includes appropriate linear algebra, random vectors, multivariate normal distribution, multivariate ANOVA, principal components, clustering, discriminant analysis, and related topics. Use of the computer and real data sets integrated throughout. Intended for students in mathematics and in other fields.
- **G 544 (MATH 544) Topics in Probability and Statistics 3 cr.** (R-12) Offered intermittently. Prereq., STAT 422 (MATH 442) and consent of instr. May include theory of nonparametric statistics, generalized linear models, stochastic processes or other topics chosen by the instructor.
- **G 545 (MATH 545) Theory of Linear Models 3 cr.** Offered autumn odd-numbered years. Prereq., STAT 422 (MATH 442). Multivariate normal distribution, distribution of quadratic forms, estimation and hypothesis testing in the full rank and less than full rank general linear models.
- **G 547 (MATH 547) Applied Nonparametric Statistics 3 cr.** Offered autumn odd-numbered years. Prereq., STAT 421 or 452 (MATH 441 or 445) or consent of instr. Statistical estimation and inference based on ranks and elementary counting methods. Applications to a variety of situations including one- and two-sample, correlation, regression, analysis of variance, and goodness-of-fit problems. Use of the computer and real data sets integrated throughout. Intended for students in mathematics and in other fields.
- **G 549 (MATH 549) Applied Sampling 3 cr.** Offered autumn even-numbered years. Theory and application of methods for selecting samples from populations in order to efficiently estimate parameters of interest. Includes simple random, systematic, cluster, stratified, multistage, line transect, distance and adaptive sampling. Use of the computer and real data sets integrated throughout. Intended for students in mathematics and in other fields.
- **G 640 (MATH 640) Graduate Seminar in Probability and Statistics Variable cr.** (R-12) Offered autumn and spring. Prereq., consent of instr.

Faculty

Professors

- Richard W. Billstein, Ed.D., The University of Montana, 1972
- Jonathan Graham, Ph.D., North Carolina State University, 1995
- James J. Hirstein, Ed.D., University of Georgia, 1976
- Leonid Kalachev, Ph.D., Moscow State University, 1987 (Chair)
- P. Mark Kayll, Ph.D., Rutgers University, 1994
- Jennifer McNulty, Ph.D., University of North Carolina at Chapel Hill, 1993
- D. George McRae, Ph.D., University of Washington, 1967
- David A. Patterson, Ph.D., University of Iowa, 1984
- Bharath Sriraman, Ph.D., Northern Illinois University, 2002
- Emily Stone, Ph.D., Cornell University, 1989
- Karel M. Stroethoff, Ph.D., Michigan State University, 1987
- Thomas Tonev, Ph.D., Moscow State University, 1973
- Nikolaus Vonessen, Ph.D., Massachusetts Institute of Technology, 1988

Associate Professors

- John Bardsley, Ph.D., Montana State University, 2002
- Solomon Harrar, Ph.D., Bowling Green State University, 2004
- Greg St. George, Ph.D., The University of Montana, 1989
- Brian Steele, Ph.D., The University of Montana, 1995

Assistant Professors

- Eric Chesebro, Ph.D., University of Texas at Austin, 2006
- Jennifer Halfpap, Ph.D., University of Wisconsin, 2005
- Ke Wu Norman, Ph.D., University of Minnesota, 2008
- Kelly McKinnie, Ph.D., University of Texas at Austin, 2006

Lecturers

- Lauren Fern, M.S., Northern Illinois University, 1994
- Regina Souza, Ph.D., Massachusetts Institute of Technology, 1990

Emeritus Professors

- William R. Ballard, Ph.D., University of Chicago, 1957

- Charles A. Bryan, Ph.D., University of Arizona, 1963
- William R. Derrick, Ph.D., Indiana University, 1966
- Rudy A. Gideon, Ph.D., University of Wisconsin, 1970
- Stanley I. Grossman, Ph.D., Brown University, 1969
- Gloria C. Hewitt, Ph.D., University of Washington, 1962
- Don O. Loftsgaarden, Ph.D., Montana State University, 1964
- Johnny W. Lott, Ph.D., Georgia State University, 1973
- Robert W. McKelvey, Ph.D., University of Wisconsin 1954
- William M. Myers, Jr., Ph.D., Ohio State University, 1952
- Howard E. Reinhardt, Ph.D., University of Michigan, 1959
- George F. Votruba, Ph.D., University of Michigan, 1964
- I. Keith Yale, Ph.D., University of California, Berkeley, 1966

Department of Military Science

- Requirements for a Minor
- Courses
- Faculty

Reserve Officers Training Corps, Michael L. Hedegaard, Chair

Army ROTC (Reserve Officers' Training Corps) offers college students the opportunity to serve as commissioned officers in the U.S. Army, the Army National Guard, or the U.S. Army Reserve upon graduation. ROTC enhances a student's education by providing unique leadership and management training, along with practical leadership experience. Students develop many of the qualities basic to success while earning a college degree and an officer's commission at the same time.

Four–Year Program. The four–year Army ROTC program consists of two parts, the Basic Course and the Advanced Course.

Basic Course. The basic course is normally taken during the first two years of college and may be taken without incurring any miltiary obligation. This course covers such subjects as management principles, national defense, military history, and leadership development. Basic course classes include adventure training such as rappelling, squad tactics and small arms marksmanship. Additional opportunities are also available to conduct small unit training exercises at Lubrecht Forest. In addition, a variety of outside social and professional enrichment activities are available. All necessary ROTC textbooks, uniforms, and other essential materials for the basic course are furnished to students at no cost. After they have completed the basic course, students who have demonstrated the potential to become officers and who have met the physical and scholastic standards are eligible to enroll in the Advanced Course. Compression of the Basic Course into two semesters may be arranged for those students who did not take military science courses during their Freshman year.

Army ROTC Scholarship. Students receiving Army ROTC scholarships and enrolling in Basic Course classes must sign an oath of loyalty to the U.S. Constitution, as directed by the Congress of the United States, and will be required to complete enrollment forms specified by the Department of the Army.

Advanced Course. The Advanced Course is usually taken during the final two years of college. Instruction includes organization and management, tactics, ethics, critical thinking, creative problem solving and further leadership development. Uniforms and equipment in the Advanced Course are furnished to students at no cost. During the summer between their junior and senior years of college, Advanced Course cadets attend the Leader Development and Assessment Course (LDAC), a fully paid four–week leadership practicum. LDAC gives cadets the chance to apply what they have learned in the classroom and introduces them to Army life while also receiving academic credit. Completion of the Advanced Course requires two years of study. Each cadet in the Advanced Course receives a subsistence allowance of up to $4,500 for each year of attendance.

Two–Year Program. The two–year program is applies to incoming juniors and community college graduates, students at four–year colleges who did not take ROTC during their first two years of school, and students entering a two–year postgraduate course of study. To enter the two–year program, students must attend a fully paid four–week Leadership Training Course (LTC), normally held during the summer between their sophomore and junior years of college. At LTC, students learn to challenge themselves physically and mentally, and to build their confidence and leadership skills. After successfully completing LTC, students who meet all the necessary enrollment requirements may participate in the Advanced Course.

Scholarships and Financial Assistance. Army ROTC scholarships are offered for four, three and two years and are awarded on a competitive basis. Each scholarship pays 100% of student's tuition and fees, $1200 a year for textbooks and supplies, and a monthly stipend totaling up to $4,500 per year while the scholarship is in effect. Four-year scholarships are awarded to students who will be entering college as freshmen. Two and three–year scholarships are awarded to students already enrolled in college and to Army enlisted personnel on active duty. Additionally, students who attend the LTC of the two–year program may compete for two–year scholarships while at the course. Additional room and board offset ared available to deserving students. Students who receive scholarships are required to attain undergraduate degrees in the fields in which their scholarships were awarded.

Veterans. Veterans may apply their military experience as credit toward the ROTC Basic Course. If eligible, a veteran may a veteran may enroll directly into the Advanced Course.

Simultaneous Membership Program. This program allows students to be members of the Army National Guard or the Army Reserve and to enroll in Army ROTC at the same time. Students participating in the Simultaneous Membership Program receive up to $4,500 per year in tuition assistance, $4,500 per year in monthly stipends and an additional $20,000 per year in other benefits. There are also scholarships available for students participating in the Simultaneous Membership Program that are interested in staying in the Army National Guard or the Army Reserve upon graduation that pay up to $7,500 per year for living expenses and $1,200 per year for textbooks, supplies and other equipment. These scholarships are in addition to the current benefits students receive as part of the Simultaneous Membership Program.

Requirements for a Minor

To earn a minor in Military Studies a student must successfully complete 21 credits in two areas: 12 credits in Military Leadership Studies to include MSL 101S, 301, 302 and 402E; and 9 credits in History and Political Science (at least 3 credits from each discipline and at least 6 credits upper–division) selected from HSTR 272E, 302, 304, 374E (HIST 226E, 301H, 303H, 334E) HSTA 316, 333 (HIST 355, 368) ; PSCI 230X, 335, 336, 391 (PSC 130E, 335, 336, 395) (International Security).

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Military Science Leadership (MSL)

A total of 24 credits are allowed toward the bachelor degree for contracted students. A total of 12 credits are allowed toward the bachelor degree for non–contracted students.

- **U 101 American Defense Establishment 3 cr.** Offered autumn and spring. The Constitutional role of the military, military tradition, current defense posture, service roles and missions. An introduction to issues and competencies that are central to a commissioned officer's responsibilities. Establishes framework for understanding officership, leadership and army values.
- **U 102 Introduction to Leadership 3 cr.** Offered autumn and spring. Establishes foundation of basic leadership fundamentals such as problem–solving, communications, goal setting and improving listening techniques. Introduction to the principles of military leadership and organizational values through discussion, observation and practice exercises.
- **U 131 Aviation: Introduction and Ground School 3 cr.** Offered spring. Prereq., basic high school math competency. Introductory course covering the ground school material required for an FAA Private Pilot Certificate. Topics include fundamentals of flight, flight operations, aviation weather, performance and navigation, and integration of pilot knowledge and skills.
- **U 195 Special Topics Variable cr.** (R–6) Offered autumn. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 201 Team Leadership 3 cr.** Offered autumn. Demonstration and practice of individual military leadership skills with emphasis on communication and observation through experiential learning exercises. Establishes framework for understanding of "life skills" such as physical fitness and time management. Examination and practical application of tasks training and military style briefings.
- **U 202 Foundations of Tactical Leadership 3 cr.** Offered spring. Building successful teams through influencing actions and effective communication in setting and achieving goals. Use of creativity in the problem solving process. Introduction of individual and team aspects of military tactics in small unit operations. Practical exercises in techniques for training others as an aspect of continued leadership development.
- **U 203 Ranger Challenge 2 cr.** (R–4) Offered autumn. Practical hands–on training in one rope bridge, land navigation, military weapons assembly/disassembly and physical conditioning. A team selected from this class will represent the University in competition against four other colleges and universities within the Big Sky Task Force. Students may include up to, but not more than, four credits earned in the HHP 100–179 and DRAM 385 activity courses and MSL 203 and 315 in the total number of credits required for graduation. Students must be physically qualified and enrolled in an additional MSL academic class.
- **U 204 Leadership Practicum 1–4 cr.** (R–4) Offered autumn and spring. Prereq., consent of instr. Intensive supervised study in applied leadership and management development in an organizational setting.
- **U 295 Special Topics Variable cr.** (R–6) Offered spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 301 Tactical Leadership 3 cr.** Offered autumn. Prereq., consent of instr. Coreq., MSL 303. Developing personal leadership principles through the learning and application of various small unit leadership procedures. Fundamentals of leadership development, land navigation, troop leading, small units tactics, rappelling, rifle marksmanship and physical fitness. Study of the organization and operation of the U.S. Army as a profession. Students are required to attend one weekend field exercise during the semester.
- **U 302 Leadership in Changing Environments 3 cr.** Offered spring. Prereq., consent of instr. Coreq., MSL 303. Continuation of the study and application of small unit leadership tasks. Advanced leadership skills taught including medical evacuation procedures, radio procedures, and increased involvement in planning and executing military operations in preparation for attendance at the Leader Development and Assessment Course at Fort Lewis, Washington. Students participate in rifle marksmanship instruction including qualification with the M16A2 rifle, rappelling, and attend one weekend exercise with students from regional universities in the area and the Montana Army National Guard.
- **U 303 Leadership Laboratory 1 cr.** (R–4) Offered autumn and spring. Prereq., consent of instr. Coreq., MSL 301, 302, 401, or 402E. Practical application of skills learned in the classroom.
- **U 315 Drill and Conditioning 1 cr.** (R–4) Offered autumn and spring. The study and application of military drill and ceremony: formation, ceremonies, and marching; the study of the fundamentals of the military physical conditioning program, and the practical application of skills learned. Physical education activity course; a maximum of four credits of activity courses may be counted toward graduation.
- **U 395 Special Topics Variable cr.** (R–9) Offered autumn and spring. Experimental offerings of visiting professors, experimental

offerings of new courses, or one–time offerings of current topics.

- **U 401 Developmental Leadership 3 cr.** Offered autumn. Prereq., consent of instr.; coreq., MSL 303. The application of leadership principles and techniques involved in leading young men and women in today's Army. Students explore training management. methods of effective staff collaboration and development counseling techniques. Develops student proficiency in planning and executing complex operations, functioning as a member of a staff and mentoring subordinates. Restricted to contracted Military Science students.
- **U 402E Officership and Ethics 3 cr.** Offered spring. Prereq., consent of instr.; coreq., MSL 303. Study includes case study of military law and practical exercises on establishing an ethical command climate. Examines the role communications, values and ethics play in effective leadership. Students complete a semester long Senior Leadership Project that requires them to plan, organize, collaborate, analyze and demonstrate their leadership skills. Restricted to contracted Military Science students.
- **U 404 Advanced Leadership Practicum Variable cr.** (R–4) Offered every term. Prereq., consent of instr. Required study and internship in military tactics, leadership and organizational behavior. Supervised by active duty military officers.

Faculty

Professor

- Joseph J. Yakawich, M.A., Webster University, 2006 (Chair)

Assistant Professors

- Jason A. Grider, B.S., History, Weber State University, 1997
- Natalie L. Jewett, B.S., Biological Sciences, Austin Peay University, 1998
- Dustin J. Kay, B.A., Recreation, University of Northern Iowa, 2003
- Tracy A. Mitchell, B.A., Carroll College, 2000
- Patrick D. Van Hecke, US Army First Sergeant Course, 2007
- Charles M. Robinson, US Army Maneuver Non-Commissioned Officer Course, 2004

Department of Modern and Classical Languages Literatures

- Major Degree Requirements
- Minor Degree Requirements
- Courses
- Faculty

Linda W. Gillison, Chair

Instruction is offered in the following languages and literatures: Arabic, Chinese, French, German, Classical Greek, Italian, Japanese, Latin, Persian (Farsi), Turkish, Russian and Spanish, as well as in linguistics, foreign literatures in English translation, film, and the study of foreign cultures. Undergraduate courses have been planned to meet the needs of students who began studying a language in high school as well as those who undertake such study for the first time at the University.
The courses are intended to serve several purposes: (1) Contribute to the general education of students by giving them an opportunity to gain insight into patterns of living and thinking which are different from their own: (2) Enable students to gain proficiency in the language; (3) Prepare candidates for careers in research and college teaching by providing a solid basis for graduate studies in the various languages; (4) Prepare future teachers of foreign languages; (5) Give language training requisite to careers in government, foreign commerce and library work; (6) Enable students to read foreign publications and to meet graduate foreign language requirements in their field.
A 28 position multi–media computer laboratory and a 40 position language laboratory with facilities for video/audio individual and group interaction, computerized language programs, and satellite TV are used to supplement regular class work, and are available to give the individual student opportunity to develop active use of the language.
The Department of Modern and Classical Languages and Literatures offers undergraduate majors in Classics (Greek and Latin), French, German, Japanese, Russian, and Spanish. Within Classics, it is possible to elect options in Classical Languages (Latin and Creek), Classical Civilization, and Latin. There is an undergraduate minor in Chinese. The Master of Arts degree in Modern Languages and Literatures is offered with options in French, German, and Spanish. A master's degree with a concentration in Classics or Linguistics may be obtained by means of the Master of Interdisciplinary Studies program.

High School Preparation: Credit is automatically granted for Advanced Placement scores of 3, 4, or 5. At each UM Orientation, the department offers a computerized placement/assessment examination in French, Spanish and German. Students also can arrange individually to take the CLEP exam, administered by Testing Services in French, German or Spanish.
These exams are not required, but serve one or more of three purposes:

1. **Exemption from the General Education Competency Requirement in Foreign Language:** if the student achieves a score that indicates a competence equivalent to the completion of French, German, or Spanish 102 (second semester). (See the General Education Requirements section of this catalog.)
2. **Placement for further study in the language:** the score achieved on this test is an accurate indicator of the course level at which language study should be resumed at the University (e.g. 102, 201, 202).
3. **Credit by examination:** A student with extensive language study may score high enough on the placement exam to qualify for University credits if she or he places into 202 or 301. By taking the course into which she or he placed (202 or 301) and receiving a B

(3.00) or better, the student may then receive four by–pass credits (Pass grade only) for the preceding course (201or 202).

Students who elect not to take this exam may:

1. Satisfy the General Education Competency Requirement in Foreign Language by successfully completing a University foreign language 102 (second semester) course.
2. Estimate their placement level for further study by the approximate equating of one year of high school study to one semester of university study. Students should consult with the department in making this estimate.

Foreign Study Programs. The Department of Modern and Classical Languages and Literatures offers programs of accredited study in Austria, China, Germany, Italy, Spain, Mexico, and Russia. Each program is supervised by a University of Montana department faculty member, and is open to any student who meets the respective foreign language prerequisites. Details concerning individual programs are available from the Department of Modern and Classical Languages and Literatures. The department also sponsors student exchanges with universities in France as well as work/study internships abroad for students in Japanese.

Major Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Total credits required for a major in a modern or classical language vary with the student's high school preparation or language credit transferred from another college or university. Requirements for academic majors are set forth below under the various languages. Requirements for teaching majors and minors also are listed under the School of Education.
Courses submitted in fulfillment of major or minor requirements must be taken for a traditional letter grade.
Students are required to maintain a minimum overall GPA of 2.5 in all upper–division courses within their major language presented in fulfillment of requirements for the language major.
All majors must register in the department and be assigned a departmental major advisor. A student is not considered a major in the Department of Modern and Classical Languages and Literatures until he or she has registered with the department.

Classics

Classical Languages Option:

1. 1a. Emphasis in Latin: twelve credits in Latin beyond Latin 102, plus six credits in Greek beyond Greek 102.
   1b. Emphasis in Greek: twelve credits in Greek beyond Greek 102, plus six credits in Latin beyond Latin 102.
2. MCLG 155L, MCLG 160L and either MCLG 251L or MCLG 252L.
3. Twelve credits from MCLG 301, 302, 303, 320, 360H, 361, 362, or PHIL 251.
4. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division courses presented in fulfillment of requirement for the Classics/Classical Languages major.
5. The upper–division Writing Expectation will be fulfilled by completion of MCLG 301, 302, 362 or 365.

Classical Civilization Option:

1. LATN 201 (LAT 211) or equivalent or GRK 201 (GRK 211) or equivalent or LATN 101–102 and GRK 101–102 or equivalent.
2. MCLG155L, MCLG 160L, and MCLG 251L or 252L.
3. Twelve credits from MCLG 301, 302, 303, 320, 360H, 361, 362, or PHIL 251. Students are encouraged to spread these credits among courses focusing on classical history, philosophy, art and literature.
4. Nine additional credits from recommended or specially approved courses. Recommended courses are MCLG 365; LATN 202 (LAT 212), 300; GRK 212, 300; PHIL 461, 463; RELS 311, 312.
5. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division courses presented in fulfillment of requirements for the Classics/Classical Civilization major.
6. The upper–division Writing Expectation must be met by successfully completing MCLG 301, 302, 303, 320, 362, or 365 with the consent of instructor.

Latin Option:

1. Fifteen credits in Latin beyond Latin 202, Greek 101–102 may account for 4 credits.
2. Latin 402, Advanced Prose Composition.
3. MCLG 155L, MCLG 160H and either MCLG 251L or 252L.
4. MCLG 303 and 361.
5. Nine additional credits from recommended or specially approved courses. Recommended courses are MCLG 301, 302, 320, 360H, or 362; PHIL 251, 461, 463; RELS 311, 312. Students are encouraged to spread these credits among courses focusing on classical history, philosophy, art and literature.
6. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division courses presented in fulfillment of requirements for the Classics/Latin major.
7. The upper–division Writing Expectation must be met by successfully completing MCLG 301, 302, 303, 320, 362, or 365 with the consent of the instructor..

French

1. French 101 to 202 or equivalent.
2. At least 30 credits of upper division courses in French, including 301, 311, 312, 313, 421 (formerly 408), 350 (formerly 302), one 3–credit 400–level literature course and one 3–credit 400–level culture course or a second 3–credit 400–level literature course. Of these specifically required courses, at least 6 credits must be completed in courses with UM French faculty.
3. A second modern or classical language is encouraged as a sequence of complementary electives to a major in French, but is not a requirement.
4. One semester of French history HSTR 352 or 353 (HIST 314 or 315) is encouraged as a complementary elective to a major in French, but is not a requirement.
5. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division French courses presented in fulfillment of requirements for the French major.
6. The Upper–division Writing Expectation must be met by successfully completing an upper–division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Linguistics Option:

For a complete listing of Linguistics offerings see Linguistics.

1. FRCH 101 to 202 (FREN 101 to 202) or equivalent.
2. FRCH 401 (FREN 401) or approved equivalent.
3. Eighteen credits of Linguistics, including: LING 270 or 470, 471, 473.
4. Strongly recommended for the French major are: nine upper–division credits in literature and/or culture, and at least one course in the history of Europe.

German

1. German 101 to 202 or equivalent.
2. At least 30 credits of upper division work in German, including 301, 302, 311, 312 or 318, 400 and at least two 3 credit courses in literature at the 400 level and at least two of the following culture courses: 351H, 352H, 350, 322L and 362Y.
3. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division GERM courses presented in fulfillment of requirements for the German major.
4. The Upper–division Writing Expectation must be met by successfully completing an upper–division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Japanese

1. Japanese 101 to 202 or equivalent.
2. At least 26 credits of upper division work in Japanese language courses and electives, including 301, 302, 411 (repeatable once), 412 or 415, and at least 12 credits from JPNS 306, 311, 312, 386, 390 (up to 3 credits only), 393 (up to 3 credits only), 412, 431, and 491. Japanese 391 also may be counted as an elective when the course is a Japanese literature, Japanese pedagogy/linguistics, or cultural course not part of basic Japanese language instruction.
3. Japanese 150H and at least two Asian studies or history courses on Japan or East Asia at any level not in the Modern and Classical Languages and Literatures Department: for example, HSTR 240, 343 (HIST 201H, 381H); AS 101, 201.
4. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division JPNS courses presented in fulfillment of requirements for the Japanese major.
5. The Upper–Division Writing Expectation must be met by successfully completing an upper–division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Russian

1. Russian 101 to 202 or equivalent.
2. RUSS/MCLG 105HY: Intro to Russian Culture
3. At least 27 credits of upper–division work in Russian, 15 of which must be in the target language and must include 301 and 302. The remainder of upper-division credits must include one of the following: 308, 312L and 313L (306L and 307L).
4. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division courses presented in fulfillment of requirements for the Russian major.
5. The Upper–division Writing Expectation must be met by successfully completing RUSS 494: Seminar in Russian Studies.

Spanish

1. Spanish 101 through 202 or equivalent.
2. At least 30 credits of upper–division courses in Spanish, including 301, 326 (311L), 331 (312L) and three 3–credit literature or linguistics courses at the 400 level (not SPAN 408).
3. All Spanish majors must complete MCLG 315L, Major Hispanic Authors, in addition to the 30 hours in upper–division Spanish courses.
4. The sequential order of the following required courses must be followed: SPNS 326 (SPAN 311) and SPNS 331 (SPAN 312L) before any 400–level literature course; 301 before 408.
5. Students are required to maintain a minimum overall GPA of 2.5 in all upper–division courses presented in fulfillment of requirements for the Spanish major.

6. The Upper–division Writing Expectation must be met by successfully completing an upper–division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.
7. Spanish majors interested in Spanish–American literatures and cultures are encouraged to take MCLG 100H, 3 cr., Introduction to Latin American Studies, a requirement for students wishing to obtain the Latin American Studies minor. Students majoring in Spanish are also encouraged to check listings in anthropology, art, history, political science, sociology and other disciplines for additional courses that will fulfill the Latin American Studies minor. Students wishing to improve their facility in Spanish and earn credit toward their Spanish major or minor may wish to consider the Spanish section's study abroad programs offered each spring semester in Mexico or Spain. (Contact the Department of Modern and Classical Languages and Literatures for further information on either the Latin American Studies minor or study abroad programs.)

Minor Degree Requirements

Minors are offered in Chinese, French, Business French, German, Japanese, Russian, Spanish, Classical Civilization, Latin, and Greek.

Total credits required for a minor vary by languages. These credits also vary with a student's high school preparation or language credits transferred from another college or university. For example, a student in a modern language with experience equivalent to 101–102 and 201–202 need only complete the upper division requirements and any additional lower division courses. Students with no experience in a modern language, however, must first complete 101–102 and 201–202 before taking upper division courses. Following is a list of requirements for each language.

In French 101, 102, 201, 202 and 15 upper–division credits. Courses must include 301, 302 (350), and two of the following: 330, 311, 312, 313, 338 (306, 311L, 312L, 313L, 338) and one 400 level course.

In Chinese, 101–102, 201–202, and nine credits in upper–division Chinese literature courses. With prior approval, three of these credits may be in China–focused courses offered by other departments.

In German, 101, 102, 201, 202 and 15 upper–division credits. Courses must include 301, 302, 311, and 312, and one of the following culture courses: 351H, 352H, 350, 322L, or 362Y (303H, 304H, 355, 361L or 362H). Students must maintain a minimum overall GPA of 2.5 in these courses. Native or near–native speakers of German must substitute two 400–level courses for 301 and 302.

In Japanese, 101–102, 201–202 and 150H (JPNS 210H), as well as 9 credits in Japanese literature or other courses from among the following: JPNS 306, 311, 312, 386, 390 (up to 3 credits only), 393 (up to 3 credits only), 412, 431, and 491 (495). Students may substitute either Japanese 191 (195) (3 credits) or Japanese 291 (295) (3 credits) for one of the above. Also permitted in substitution would be one course from outside the department, if it has a substantial Japan–related element: Asian studies, Japanese history, etc.

In Russian, 101, 102, 201, 202, and 12 upper division credits.

In Spanish, 101 through 202 or equivalent and 18 upper–division credits. Courses must include 301, 326 or 331 (311L or 312L), and a 400–level literature or linguistics course.

To earn a minor in Classical Civilization the student must complete either Latin 101, 102 or Greek 101, 102; LS 151L, MCLG 160L, and PHIL 251; three (3) credits from MCLG 301, 302, 303; and nine additional credits from: MCLG 155L, 251L, 252L, 301, 302, 303, 360H, 361, 362, 365; LATN 201, 202, 311 (LAT 211, 212, 300); GRK 201, 202,(211, 212) 300.

To earn a minor in Latin the student must complete LATN 101, 102, 201-202 (LAT 101, 102, 211–212) and 9 credits in courses numbered 300 and above.

To earn a minor in Greek the student must complete GRK 101, 102, 201-202 (211–212) and 9 credits in Greek numbered 300 and above.

Teacher Preparation in Modern and Classical Languages

General Requirements for an Endorsement in the Extended Major, Major, and Minor Teaching Fields: Students must gain admission to Teacher Education and Student Teaching (see the School of Education section of this catalog). A departmental recommendation on the student's proficiency is required for student teaching. An overall minimum grade point average of 3.0 is required for upper division work. Students must meet the requirements for certification as a teacher (see the School of Education section of this catalog.)

Extended Major Teaching Field of French: For an endorsement in the extended major teaching field of French, a student must complete the requirements for the B.A. with a major in French including FRCH 401 (FREN 401) and MCLG 410. Study in a French language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required. French qualifies for a single field endorsement. However, there is a limited demand in the majority of Montana high schools for teachers with a single endorsement in French. Students should complete the requirements for a second teaching endorsement (major or minor) in another field in more demand in high schools.

Minor Teaching Field of French: For an endorsement in the minor teaching field of French, a student must complete FRCH 101, 102, 201, 202, 301, 350, 400 (FREN 101,102, 201, 202, 301, 302, 401) and MCLG 410. Study in a French–language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required.

Extended Major Teaching Field of German: For an endorsement in the extended major teaching field of German, a student must complete the requirements for the B.A. with a major in German plus LING 270S and MCLG 410. Study in a German language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required. German qualifies for a single field endorsement. However, there is a limited demand in the majority of Montana high schools for teachers with a single endorsement in German. Students are encouraged to complete the requirements for a second teaching endorsement (major or minor) in another field in more demand in high schools.

Minor Teaching Field of German: For an endorsement in the minor teaching field of German, a student must complete GRMN 101, 102, 201, 202, 301, 302 (GERM 101,102, 201, 202, 301, 302); one of the following German culture courses: 351H, 352H, 350, 322L or 362Y (303, 304H, 355, 361L or 362H); GRMN 400 (GERM 403), LING 270S, and MCLG 410. Study in a German–language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required.

Major Teaching Field of Latin: For an endorsement in the major teaching field of Latin, a student must complete the requirements for the B.A. with a major in Classics, Latin option, and in addition, MCLG 410.

Minor Teaching Field of Latin: For an endorsement in the minor teaching field of Latin, a student must complete LATN 101, 102, 201, 202 (LAT 101, 102, 211, 212, 6 credits of LATN 311, 402, (LAT 300, 402) and MCLG 410.

Major Teaching Field of Russian: For an endorsement in the major teaching field of Russian, a student must complete the requirements for the B.A. with a major in Russian including RUSS 301, 350 (302) and MCLG 410.

Minor Teaching Field of Russian: For an endorsement in the minor teaching field of Russian, a student must complete RUSS 101, 102, 201 202, 301, 350 (302), 312 (306L), and MCLG 410.

Extended Major Teaching Field of Spanish: For an endorsement in the extended major teaching field of Spanish, a student must complete the requirements for the B.A. with a major in Spanish including SPNS 301, 305, 400, 408 (SPAN 301, 302, 405, 408) and MCLG 410. Study in a Spanish language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required. Spanish qualifies for a single field endorsement. However, there is a limited demand in the majority of Montana high schools for teachers with a single endorsement in Spanish. Students are encouraged to complete the requirements for a second teaching endorsement (major or minor) in another field in more demand in high schools.

Minor Teaching Field of Spanish: For an endorsement in the minor teaching field of Spanish, a student must complete SPNS 101 through 202 or equivalent, 301, 305, 326 or 331, 400 (SPAN 101 through 202, 301–302, 311L or 312, 405) and MCLG 410. Study in a Spanish–language country, provided either through the University's Study Abroad Program or an experience considered to be equivalent, also is required.

Suggested Course of Study

The following is a sample first year program to aid students in planning their first year before they arrive on campus and have the opportunity to work out a full four year course plan with their academic advisor. Each student intending to major or minor in a foreign language must consult with an advisor before registering. For any further information contact the Secretary, Department of Modern and Classical Languages and Literatures. For freshmen without previous training in the major language (French, German, Russian, Spanish):

First Year	A	S
Specific Recommendations:		
Major language 101–102 Elementary	5	5
LS 151L–152L Introduction to the Humanities	4	4
HSTR 101H-102H (HIST 104H–105H) Western Civilization I, II	4	4
WRIT 101 (ENEX 101) Composition	3	–
Suggested electives:		
LIT 110L-120L (ENLT 120L–121L) Intro to Lit/Poetry	(3)	(3)
MCLG 160L Classical Mythology	(3)	(3)
General Education courses in Perspectives 1, 4, or 5	0–3	3–6
	16	16

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

General (MCLG)

These courses are given in English for the general student body and do not require knowledge of a foreign Language. They do not count as language credit toward a B.A. degree in any given foreign language. For clarity, they are arranged below according to the section in which they are offered.

Classical Civilization (MCLG)

- **U 155L Survey of Greek and Roman Literature 3 cr.** Offered every autumn. An introduction to the literature of classical Greece and Rome. Readings in English translations of ancient works by Homer, Sophocles, Herodotus, Plato, Cicero, Vergil, Livy, and Ovid (and/or similar authors).
- **U 160L Classical Mythology 3 cr.** Offered every spring; offered intermittently in summer. Same as LS 160L. Deities and myths of the Greeks and Romans, with emphasis on those of most importance to Western literature and art.
- **U 170 Myth Seminar: Honors 1 cr.** Offered every spring. Same as LS 170. Coreq., MCLG/LS 160L. Research, writing, and discussion about the mythologies of the Greeks and Romans in a small group setting.
- **U 251L The Epic 3 cr.** (R–6) Offered intermittently. Same as LS 251L. Reading, study and discussion of epic poems. Selections will vary from Western and non–Western traditions.
- **U 252L Greek Drama: Politics on Stage 3 cr.** (R–6) (R 6) Same as LS 252L. Offered intermittently. A study of the literary, artistic and political dimensions of Greek Tragedy and Comedy. Selections will vary.
- **UG 301 Classical Greece 3 cr.** Offered intermittently. Same as HIST 301H. Greek history from the earliest times through the Macedonian ascendancy, based on the writings of Greek historians.
- **UG 302 Classical Greece II: Ancient Greek Social History 3 cr.** Offered intermittently. Same as HIST 302. Various aspects of personal, social, and political life of classical times in Greece. Primary readings in various ancient authors supplemented by audio–visual or other informational presentations.
- **UG 303 Classical Rome 3 cr.** Offered intermittently. Same as HIST 303H. Roman history from the time of the Kings through the early Empire, based on the writings of the Roman historians.
- **U 309 Reading the City: Rome 3 cr.** Offered autumn. Same as LS 309. Prereq., previous acceptance in subsequent intersession Italy program. Overview of the history of Rome from its beginnings until modern times, with lectures on various periods and artists across the spectrum of Italian art history. Orientation to the city of Rome, practicalities of life and study in the city.
- **U 319 UM Students in Rome 1 cr.** Offered intermittently. Prereq., MCLG 309. Approximately three–week experience in Rome. Study of the classical, medieval, and modern city. Presentation of research on site.
- **U 320 Women in Antiquity 3 cr.** Offered intermittently. Same as LS and WS 320. Examination of varied sources from Ancient Greece, the Hellenistic World, and republican and imperial Rome to clarify the place of women in communities. Women's contribution to community and the mechanisms by which communities attempted to socialize female populations.
- **UG 360H Ancient Greek Civilization and Culture 3 cr.** Offered intermittently. Prereq., ART 150H or 151H or consent of instr. Same as ART 380H and LS 340H. Slide–lecture course. Ancient Greek works of art and architecture, related to and explained by contemporary ideas and values of Greek society.
- **UG 361 Roman and Early Christian Art in Context 3 cr.** Offered intermittently. Prereq., ART 150H or 151H or consent of instr. Same as ART 381H and LS 341H. A survey of the various media used in Roman art; the social political, and economic contexts in which the media were developed; and the transition (technical, iconographic, and contextual) to the art of the Early Christian period.
- **U 362 Ancient Greek and Roman Philosophy 3 cr.** Offered intermittently. Same as LS 362 and PHIL 362. Examination of the thought of the philosophers of Greece and Rome as expressed in original works read in English translation. Ancient philosophy studied within its historical, linguistic and cultural setting.
- **U 365 The Roots of Western Ethics 3 cr.** Offered intermittently. Prereq., lower–division course in Perspective 5 or consent of instr. Same as LS 325. Studies of the origins of Western ethical thinking in the original writings of Greek and Roman writers and their application to current situations.

Chinese Literature/Culture (MCLG)

- **U 313L Classical Chinese Poetry in English Translation 3 cr.** Offered intermittently. Same as AS, CHIN, and LS 313L. The works of major Chinese poets to 1300 A.D.
- **U 314L Traditional Chinese Literature in English Translation 3 cr.** Offered intermittently. Same as AS, CHIN, and LS 314L. Highlights of Chinese literature to 1800; includes philosophy, poetry, prose, and fiction.
- **U 380 Chinese Folktales 3 cr.** Same as LS 311. Offered intermittently. The study of the aspirations, desires, loves, moral and aesthetic values of the Chinese people as expressed in their folk literature.
- **UG 432 Twentieth Century Chinese Fiction in English Translation 3 cr.** Offered intermittently. Same as AS, CHIN, and LS 432L. A survey of the principal works of Chinese fiction circa 1910–2000.

French Culture (MCLG)

- **U 338 The French Cinema 3 cr.**(R–6) Offered intermittently. Same as FRCH and LS 338. An historical, aesthetic, and critical survey of the French cinema, from its beginnings in 1895 through the contemporary cinema (Muet, classical, Realism, Nouvelle Vogue, etc.) with an introduction to contemporary film criticism. Students taking the course for French credits are required to do research, reading, and writing in the French language.

German Literature/Culture (MCLG)

- **U 222L The German Cinema 3 cr.** Offered intermittently. Same as LS 282L. The development of the German film from its beginnings in the late 19th century to the present. Topics include Expressionism, New Objectivity, the Nazi film, the German contribution to Hollywood, and the post–war film in East and West Germany. Credit not allowed for LS 282L, MCLG 222L and GRMN 322L (GERM 361L).
- **U 231Y Germanic Mythology and Culture 3 cr.** Offered intermittently. Same as LS 221Y and GRMN 362Y. Germanic culture and mythology from 200 B.C. to 1200 A.D. Topics include the Germanic pantheon, Germanic religious practices, Germanic migrations, and major literary masterpieces. Credit not allowed for LS 221Y, MCLG 231Y and GRMN 362Y (GERM 362H).

- **U 330H German Culture to 1900 3 cr.** Offered spring alternate years. Same as LS 321H and GRMN 351H. Overview of major events and currents in German culture to 1900 with emphasis on the arts, literature, and intellectual movements. Credit not allowed for both MCLG 330H and GRMN 351H (GERM 303).
- **U 331H German Culture from 1900 to Present 3 cr.** Offered spring alternate years. Same as LS 322H and GRMN 352H. Overview of major events and currents in German culture from 1900 to the present with emphasis on the arts, literature, and intellectual movements. Credit not allowed for MCLG 331H and GRMN 352H (GERM 352).
- **U 332L Introduction to Multicultural Literature in Germany 3 cr.** Introduction to multicultural literature created during recent decades in Germany. Study topics include immigration, citizenship, multilingualism, identity; significant literary and cultural movements and selected writers in contemporary Germany.

Japanese Literature/Culture (MCLG)

- **U 150H Japanese Culture and Civilization 3 cr.** Offered intermittently. Same as AS, JPNS and LS 150H. The historical religious, artistic, literary and social developments in Japan from earliest times to the present.
- **UG 311 Classical Japanese Literature in English Translation 3 cr.** Offered autumn. Same as JPNS 311. Introduction to the classical literature of the Japanese court, ca. 7th to 14th century. Kojiki, Man'yoshu, Kokinshu, Genji Monogatari, and other major classics of the period.
- **UG 312 Japanese Literature from Medieval to Modern Times in English Translation 3 cr.** Offered spring. Same as JPNS 312. Introduction to the literature of Japan from the 15th to the 20th century.
- **UG 431 Post–War Japanese Literature 3 cr.** Offered spring odd–numbered years. Same as JPNS 431. Introduction to issues, literature, and criticism of Japanese literature from the postwar (1945) through the contemporary period, using texts in English translation.

Russian Literature/Culture (MCLG)

- **U 105HY Introduction to Russian Culture 3 cr.** Offered autumn. Same as RUSS 105HY and LS 105HY. A chronological survey of Russian culture from its beginnings to the contemporary period.
- **U 306L Introduction to Russian Literature I 3 cr.** Offered alternate years. Same as LS 306L and RUSS 312 (RUSS 306L). A survey of 19th-century Russian literature in translation. May include the works of Dostoevsky, Tolstoy, and Chekhov. No knowledge of Russian is necessary.
- **U 307L Introduction to Russian Literature II 3 cr.** Offered alternate years. Same as RUSS 313L (RUSS 307L) and LS 307L. Survey of Russian literature in translation of the 20th century and into the 21st. No knowledge of Russian is necessary.
- **U 308 Russian Cinema and Culture 3 cr.** Offered alternate years. Same as LS 308, ENFM 308 and RUSS 308. Topically arranged introduction to the cinema of Russia and the former Soviet Union, with particular emphasis on contemporary Russian cinema. All films screened with English subtitles. No knowledge of Russian is necessary.
- **U 494 Seminar in Russian Studies 3 cr.** Offered Spring. Same as RUSS 494. The topic of the seminar alternates between 1.) The Russian Novel and 2.) Women and Gender in Russian Culture. May be taken for honors credit through the Davidson Honors College. No knowledge of Russian is necessary, but Russian majors will be required to do selected readings in the original Russian. Fulfills the Upper-Division Writing Expectation for Russian majors.

Spanish Literature/Culture (MCLG)

- **U 100H Introduction to Latin American Studies 3 cr.**Offered autumn or spring. Same as ANTH 100H. Multi–disciplinary survey and introduction to Latin America from pre–Columbian times to the present.
- **U 315 Major Hispanic Authors and Their Times 3 cr.** Offered autumn. Same as LS 315. The intensive study of the life times, and works of a major Hispanic author.
- **U 345 Introduction to Spanish Section Study Abroad Program 3 cr.** Offered autumn semester. Introduction to spring semester study abroad program in Spain or Latin America.
- **U 358 Latin American Civilization through Literature and Film 3 cr.** Offered autumn and spring odd–numbered years. The development of the traditional society of Latin American civilization through the interaction of European, Indian and African elements. Credit not allowed for both LS/MCLG 358 and 359.

Other (for any language section) (MCLG)

- **U 193 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 195 Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one–time offerings of current topics.
- **U 198 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 293 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 295 Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 296 Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **UG 381 Studies in the Film 3 cr.**Offered autumn and spring. Prereq., LS 180 or consent of instr. Same as ENLT and LS 381. Studies in genres, directors, movements, problems, etc.
- **U 393 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.

- **U 395 Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offering of visiting professors, experimental offerings of new courses or one–time offerings of current topics.
- **U 396 Independent Study 1–9 cr.** (R–9) Offered autumn and spring.
- **U 398 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **UG 410 Methods of Teaching Foreign Languages 3 cr.** Offered spring. Prereq., Ling 270S; one of FRCH 400 (FREN 401), GERM 400, LAT 300, RUSS 350 (RUSS 302), or SPNS 400 (SPAN 405). Coreq. C&I 301 or 302. Fundamental concepts, objectives and techniques in the teaching of foreign languages.
- **UG 440 Studies in Comparative Literature 3 cr.**(R–9) Offered intermittently. Prereq., consent of instr. Same as ENLT 430 and LS 455. The study of important literary ideas, genres, trends and movements. Credit not allowed for the same topic in more than one course numbered 440, 494, ENLT 430 or LS 455.
- **U 493 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **UG 494 Seminar in Foreign Literatures 1–3 cr.**(R–9) Offered intermittently. Prereq., consent of instr. Specialized topics in various foreign literatures. Topics announced in class schedules. Credit not allowed for the same topic in more than one course numbered 440, 494 or LS 455.
- **UG 495 Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one–time offerings of current topics.
- **U 496 Independent Study Variable cr.** (R–6) Offered autumn and spring..
- **G 501 Research Methods 3 cr.** Offered intermittently. Prereq., graduate standing in an M.A. program. Study of technical terms and overview of literary theory. Intensive analysis of research tools, materials and methods in literature, linguistics and pedagogy. Guided work in writing components of a research paper or thesis. Required of both thesis and non–thesis candidates for an advanced degree in Modern Languages and Literatures with an option in French, German, Spanish, or Interdisciplinary Studies which includes Classics.
- **G 522 Seminar in Comparative Literature 3 cr.** (R–9) Offered intermittently. Prereq., graduate standing. Same as ENLT 522. Topics will vary.
- **G 594 Graduate Seminar Variable cr.** (R–6) Offered intermittently.
- **G 596 Independent Study Variable cr.** (R–6) Offered intermittently.
- **G 598 Internship Variable cr.**(R–9) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

Linguistics (MCLX)

- **U 395 Special Topics Variable cr.** (R 6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.
- **UG 495 Special Topics Variable cr.** (R 6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

Arabic (ARAB)

- **U 101 Elementary Modern Standard Arabic 5 cr.** Offered autumn. Active skills in elementary modern standard Arabic: listening, speaking, reading, and writing, plus basic cultural study.
- **U 102 Elementary Modern Standard Arabic 5 cr.** Offered spring. Continuation of ARAB 101. Active skills in elementary modern standard Arabic: listening, speaking, reading, and writing, plus basic cultural study.
- **U 191 (ARAB 195) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 201 Intermediate Modern Standard Arabic I 5 cr.** Offered autumn. Prereq., ARAB 102 or equiv. Expansion of active skills: Listening, speaking, reading, writing, plus further cultural analysis.
- **U 202 Intermediate Modern Standard Arabic II 5 cr.** Offered spring. Prereq., ARAB 201 or equiv. Continuation of ARAB 201.
- **U 291 (ARAB 295) Special Topics Variable cr.** (R–8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 292 (ARAB 296) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 301 Advanced Modern Standard Arabic I 3 cr.**Offered autumn. Prereq., ARAB 202 or equiv. Improves and builds upon oral and written expression in modern standard Arabic and accelerates the use of vocabulary and the Arabic root system.
- **U 302 Advanced Modern Standard Arabic II 3 cr.** Offered spring. Prereq., ARAB 301 or equiv. Continuation of ARAB 301.
- **U 391 (ARAB 395) Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 392 (ARAB 396) Independent Study Variable cr.** (R–6) Offered autumn and spring.

Chinese (CHIN)

- **U 101 Elementary Chinese I 5 cr.** Offered autumn. Emphasis on speaking, reading and writing elementary Mandarin.
- **U 102 Elementary Chinese II 5 cr.** Prereq., CHIN 101. Offered spring. Continuation of 101.
- **U 191 (CHIN 195) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 193 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.

- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 Intermediate Chinese I 5 cr.** Offered autumn. Prereq., CHIN 102 or equiv. Emphasis on oral communication, with continuing development in all major skill areas: listening, speaking, reading and writing.
- **U 202 Intermediate Chinese II 5 cr.** Offered spring. Prereq., CHIN 201 or equiv. Continuation of 201.
- **U 211H Chinese Culture and Civilization 3 cr.** Offered intermittently. Same as AS and LS 211H. An introduction to the historical, intellectual, political, literary and social developments of China from early times to the present.
- **U 292 (CHIN 296) Independent Study Variable cr.** (R-6) Offered autumn and spring.
- **U 294 (CHIN 293) Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 301 Advanced Chinese I 3 cr.** Offered autumn. Prereq., CHIN 202 or consent of instr. Advanced Chinese, with emphasis on literary style, advanced grammar, and oral expression.
- **U 302 Advanced Chinese II 3 cr.** Offered spring. Prereq., CHIN 301 or consent of instr. Advanced Chinese, with emphasis on literary style, advanced grammar, and oral expression.
- **U 313L Classical Chinese Poetry in English Translation 3 cr.** Offered intermittently. Same as AS, MCLG, and LS 313L. The works of major Chinese poets to 1300 A.D.
- **U 314L Traditional Chinese Literature in English Translation 3 cr.** Offered intermittently. Same as AS, MCLG, and LS 314L. Highlights of Chinese literature to 1800; includes philosophy, poetry, prose, and fiction.
- **U 391 (CHIN 395) Special Topics Variable cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 392 (CHIN 396) Independent Study Variable cr.** (R-6) Offered autumn and spring.
- **U 394 (CHIN 393) Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 395 Special Topics 1–12 cr.** (R–12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 432 Twentieth Century Chinese Fiction in English Translation 3 cr.** Offered intermittently. Same as AS, MCLG, and LS 432L. A survey of the principal works of Chinese fiction circa 1910–2000
- **UG 492 (CHIN 496) Independent Study Variable cr.** (R-9) Offered intermittently.
- **U 493 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.

French (FRCH)

- **U 101 Elementary French I 5 cr.** Offered autumn. Active skills: listening, speaking, reading and writing plus basic cultural analysis.
- **U 102 Elementary French II 5 cr.**Prereq., FRCH 101 (FREN 101). Offered spring. Continuation of 101.
- **U 191 (FREN 195) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 193 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 Intermediate French I 4 cr.**Offered autumn. Prereq., FRCH 102 (FREN 102) or equiv. Expansion of active skills: listening, speaking, reading, writing plus further cultural analysis.
- **U 202 Intermediate French II 4 cr.** Offered spring. Continuation of 201.
- **U 292 (FREN 296) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 293 (FREN 295)Omnibus 1-6 cr.** (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 294 (FREN 293) Seminar/Workshop Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 301 Oral and Written expression 3 cr.**(R–6) Offered autumn. Prereq., FRCH 202 (FREN 202). Development of oral and written skills in French.
- **U 311 Survey of French Literature 3 cr.**Offered autumn. Prereq., FRCH 202 (FREN 202) or equiv. French literature of the Middle Ages, Renaissance and 17th century.
- **U 312 French Literature of the 18th and 19th Centuries 3 cr.**Offered spring. Prereq., FRCH 301 (FREN 301) or consent of instr. French literature of the 18th and 19th centuries.
- **U 313 French Literature 20th Century 3 cr.** Offered autumn. Prereq., FRCH 202 (FREN 202) or equiv. French and Francophone literature of the 20th century.
- **U 330 (FREN 306) French for Business and Translation 3 cr.**Offered intermittently. Prereq., FRCH 202 (FREN 202) or equiv. Development of skills for the mastery of vocabulary and style specific to French for business. General overview of the economy of France. Practical exercises in techniques of translation.
- **UG 338 The French Cinema 3 cr.**(R–6) Offered intermittently. Same as MCLG and LS 338. An historical, aesthetic, and critical survey of the French cinema, from its beginnings in 1895 through the contemporary cinema (Muet, classical, Realism, Nouvelle Vogue, etc.) With an introduction to contemporary film criticism. Students taking the course for French credits are required to do research, reading, and writing in the French language.
- **U 350 (FREN 302) French Civilization and Culture 3 cr.**(R-6) Offered spring. Prereq., FRCH 301 (FREN 301) or consent of instr. Chronological/topical study of French culture.
- **U 355 Special Topics in French Language, Literature, and Culture 1–3 cr.** (R–9) Offered intermittently. To be taken in conjunction with the French Study Abroad Program.
- **U 391 (FREN 395) Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 392 (FREN 396) Independent Study 1–3 cr.** (R–3) Offered autumn and spring.

- **U 393 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 400 (FREN 401) French: Applied Linguistics 3 cr.**Offered intermittently. Prereq., FRCH 301 (FREN 301) and LING 270 or consent of instr. Contrastive phonology (including phonetics), morphology and syntax.
- **UG 420 Studies in French Prose 3 cr.**Offered intermittently. Prereq., FRCH 311 and 312 (FREN 311L and 312L). Evolution of textuality from the Renaissance to the 20th century: the novel.
- **UG 421 (FREN 408) French: Adv Composition and Conversation 3 cr.**(R-6) Offered spring. Prereq., FRCH 301)FREN 301) and FRCH 311 and 312 (FREN 311L and 312L) or consent of instr. Intensive practice in writing and speaking French; close examination of different levels of usage and style.
- **UG 430 Studies in French Drama 3 cr.**Offered intermittently. Prereq., FRCH 311 and 312 (FREN 311L and 312L). Evolution of theatre from the Renaissance to the 20th century or performance of a French play in French.
- **UG 440 Studies in French Poetry 3 cr.** Offered intermittently. Prereq., FRCH 311 and 312 (FREN 311L and 312L). Evolution of textuality from the Renaissance to the 20th century: poetry and essays.
- **UG 491 (FREN 495) Special Topics Variable cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 493 Omnibus Variable cr. (**R–9) Offered intermittently. Independent work under the University omnibus option. See index.
- **UG 494 Seminar/Workshop Variable cr.** (R–12) Offered autumn and spring. Prereq., FRCH 202 (FREN 202), FRCH 311 and 312 (FREN 311L and 312L). Studies in major authors, periods or genres or linguistic and/or pedagogical areas.
- **U 500 Directed Readings Variable cr. (R-3)**
- **G 540 Advanced Topics in the Teaching of French Variable cr.** (R–4) Offered autumn. Prereq., graduate standing. Study of problems encountered by the French teacher: lesson planning, testing, use of supplementary materials, contribution of linguistics to the foreign language classroom. Methods and techniques of teaching culture.
- **UG 492 (FREN 496) Independent Study Variable cr. (R-9)** Offered autumn and spring.
- **G 594 Graduate Seminar 3 cr.** (R–6) Offered autumn and spring. Prereq., graduate standing.
- **G 595 Special Topics Variable cr. (**R–6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R–6) Offered intermittently. Prereq., graduate standing.
- **G 599 Professional Paper 1–3 cr.** (R–6) Offered intermittently. Prereq., graduate standing.
- **G 699 Thesis Variable cr.** (R–9) Offered intermittently. Prereq., graduate standing.

German (GRMN)

- **U 101 Elementary German I 5 cr.** Offered autumn. Emphasis on oral communication, with development in all major skill areas: listening, speaking, reading, and writing.
- **U 102 Elementary German II 5 cr.** Offered spring. Prereq., GRMN 101 (GERM 101). Emphasis on oral communication, with continuing development in all major skill areas: listening, speaking, reading, and writing.
- **U 191 (GERM 195) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 193 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 Intermediate German I 4 cr.** Offered autumn. Prereq., GRMN 102 (GERM 102) or equiv. Continuation of active skills approach to German listening, speaking, reading, and writing.
- **U 202 Intermediate German II 4 cr.** Offered spring. Prereq., GRMN 201 (GERM 201) or equiv. Continuation of 201.
- **U 293 Omnibus Variable cr. (R-10)**
- **U 292 (GERM 296) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 301 German: Oral and Written Expression I 3 cr.** Offered autumn. Prereq., GRMN 202 (GERM 202) or equiv. Native or near–native speakers of German may not apply credit for this course toward a German major or minor.
- **U 302 German: Oral and Written Expression II 3 cr.** Offered spring. Prereq., GRMN 301 (GERM 301) or equiv. Native or near–native speakers of German may not apply credit for this course toward a German major or minor.
- **U 305 Practicum in German Language 4 cr.** Offered spring. Prereq., consent of instr. Offered as part of the Study Abroad program in Germany and Austria. Concentration on grammar topics and advanced language usage.
- **U 311 Introduction to German Literature: Prose 3 cr.** Offered autumn. Prereq., GRMN 202 (GERM 202) or equiv.
- **U 312 Introduction to German Literature: Drama and Poetry 3 cr.** Offered spring. Prereq., GRMN 202 (GERM 202).
- **U 318 (GERM 313L) Introduction to German and Austrian Theater 3 cr.** Offered spring. Prereq., consent of instr. Offered as part of the Study Abroad program in Germany and Austria. Introduction to the basics of German–speaking theater. Students read, discuss, and analyze plays before seeing them performed on stage.
- **U 321 (GERM 360) Advanced Conversation in German 3 cr.** Offered intermittently. Offered in the study program in Germany and Austria. Development of conversational skills.
- **U 322L (GERM 361L) Advanced German Cinema 3 cr.** Offered intermittently. The development of the German film from its beginnings in the late 19th century to the present. Topics include Expressionism, New Objectivity, the Nazi film, the German contribution to Hollywood, the post–war film in East and West Germany, and film in unified Germany. Credit not allowed for LS 282L or MCLG 222L and GRMN 322L (GERM 361L).
- **U 350 (GERM 355) Introduction to German and Austrian Culture. 3 cr.** Offered spring. Prereq., consent of instr. Offered as part of the Study Abroad program in Germany and Austria. Introduction to cultural topics, current events, and historical topics of Germany and Austria. Course content supplemented with on-site visits.
- **U 351H (GERM 303H) German Culture to 1900 3 cr.** Offered intermittently in spring. Overview of major events and currents in German culture to 1900 with emphasis on the arts, literature, and intellectual movements. Lectures in English. Credit not allowed for both MCLG 330H and GRMN 351H (GERM 303H).

- **U 352H (GERM 304H) German Culture from 1900 to the Present 3 cr.** Offered intermittently in spring. Overview of major events and currents in culture of German-speaking world from 1900 to the present with emphasis on the arts, literature, and intellectual movements. Lectures in English. Credit not allowed for both MCLG 331H and GRMN 352H (GERM 304H).
- **U 362Y (GERM 362H) Germanic Mythology and Culture 3 cr.** Offered intermittently. Germanic culture and mythology from 200 B.C. to 1200 A.D. Topics include the Germanic pantheon, Germanic religious practices, Germanic migrations and major literary masterpieces. Credit not allowed for LS 221Y, MCLG 231Y and GERM 362Y.
- **U 393 Omnibus Variable cr.** (R–10) Offered intermittently. Prereq., consent of instr. Independent work under the university omnibus option. See index.
- **U 391 (GERM 395) Special Topics Variable cr.** (R–9) Offered intermittently. Prereq., GRMN 202 (GERM 202) or equiv. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 392 (GERM 396) Independent Study 1–9 cr.** (R–9) Offered intermittently. Prereq., consent of instr.
- **U 398 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 400 (GERM 403) Applied Linguistics 3 cr.** Offered autumn odd–numbered years. Same as LING 403. Specific problems in contrastive analysis of German phonology, morphology and syntax.
- **UG 431 German Literature from 1760 to 1832 3 cr.** Offered autumn. Prereq., GRMN 311 and 312 (GERM 311L and 312L) or consent of instr. Readings, study, and discussion of writers, texts, and contexts in German literature from 1760 to 1832, including Enlightenment, Storm and Stress, Romanticism, and Classicism.
- **UG 441 19th Century German Literature 3 cr.** Offered autumn. Prereq., GRMN 311 and 312 (GERM 311L and 312L) or consent of instr. Readings, study, and discussion of writers, texts, and contexts in German literature from 1832 to 1900.
- **UG 451 20th Century German Literature to 1945 3 cr.** Offered spring. Prereq., GRMN 311 and 312 (GERM 311L and 312L) or consent of instr.
- **UG 452 20th Century German Literature Since 1945 3 cr.** Offered spring. Prereq., GRMN 311 and 312 (GERM 311L and 312L) or consent of instr.
- **UG 453 German Literature Since Unification 3 cr.** Offered intermittently. Prereq., GRMN 311 and 312 (GERM 311L and 312L) or consent of instructor. An introduction to current literature in Germany that has been produced since the fall of the Berlin wall and the process of unification in 1989/90.
- **U 491 (GERM 495) Special Topics 1–9 cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 492 (GERM 496) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 493 Omnibus Variable cr.** (R-10) Offered intermittently. Prereq., consent of instr. Independent work under the University omnibus option. See index.
- **UG 494 Seminar in German Studies Variable cr.** (R-12) Offered autumn. Prereq., GRMN 311 and 312 (GERM 311L and 312L) . Advanced studies in major topics in German literature and culture.
- **G 500 Directed Readings 1–3 cr.** (R–6) Offered intermittently. Prereq., undergraduate major in German.
- **G 540 Advanced Topics in the Teaching of German 3 cr.** Offered autumn. Prereq., graduate standing. Study of problems encountered by teachers of German: lesson planning, testing, use of supplementary materials, methods of teaching culture. Includes application of linguistics.
- **G 594 Graduate Seminar 3 cr.** (R–6) Offered intermittently. Prereq., graduate standing.
- **G 595 Special Topics Variable cr.** (R–6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R–6) Offered intermittently. Prereq., graduate standing. Out–of–class independent work of a research nature which involves intensive use of the University or other libraries; also, research carried on in another country under the direction of a University professor.
- **G 599 Professional Paper 1–3** (R–6) Offered intermittently. Prereq., graduate standing.
- **G 699 Thesis Variable cr.** (R–9) Offered intermittently. Prereq., graduate standing.

Greek (GRK)

- **U 101 Elementary Greek I 5 cr.** Offered autumn. Introduction to Classical Greek, designed to enable the student to read Greek authors in the original Greek as rapidly as possible. Based upon selected texts from Tragedians, Plato, Xenophon, Menander, New Testament, and other major authors.
- **U 102 Elementary Greek II 5 cr.** Offered spring. Prereq., GRK 101. Continuation of 101. Greek grammar, vocabulary, readings of ancient Greek writings with the aid of a lexicon.
- **U 191 (195)Special Topics Variable cr.** (R-6)
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 (211) Intermediate Greek I 3 cr.** Offered autumn. Prereq., GRK 102 or equiv. Attic prose and poetry Plato, Thucydides, Euripides.
- **U 202 (212) Intermediate Greek II 3 cr.** Offered spring. Prereq., GRK 201 (211) or equiv. Readings from Homer's Iliad and/or Odyssey.
- **U 292 (296) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **UG 300 Major Greek Writers 3 cr.** (R–12) Offered autumn and spring. Prereq., GRK 202 (212) or equiv. Homer, lyric poets, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, Xenophon, Plato, Aristotle, Hellenistic philosophers, New Testament, etc. Selection to fit students' interests and programs.
- **U 391 (395) Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental

offerings of new courses, or one–time offerings of current topics.
- **U 392 (396) Independent Study 1–9 cr.** (R–9) Offered intermittently. Prereq., consent of instr.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 492 (496) Independent Study 1–9 cr.** (R–9) Offered intermittently. Prereq., consent of instr.

Irish (IRSH)

- **U 101 Elementary Irish/Gaelic I 3 cr.** Offered autumn or spring. Same as ENIR 101. This course represents an introduction to modern Irish in both its spoken and written forms: basic principles of grammar and sentence structure are covered. Emphasis is placed on the application of these principles in every–day situations. This course is housed in the English Department. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103.
- **U 102 Elementary Irish II 3 cr.** Offered autumn or spring. Same as ENIR 102. The primary objective of this course is to build on the foundations laid in Elementary Irish I. Students will expand their vocabulary with a special focus on verbs; they will also engage new themes that demand a corresponding increase in their store of nouns, adjectives, idioms and expressions. This course is housed in the English Department. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103.
- **U 103 Elementary Irish III 3 cr.** Offered autumn or spring. Same as IRSH 103. The primary objective of this course is to build on the foundations laid in Beginning Irish I. Students will expand their vocabulary with a special focus on verbs; they will also engage new themes that demand a corresponding increase in their store of nouns, adjectives, idioms and expressions. The GenEd Foreign Language requirement can be fulfilled by successful completion of 101, 102 and 103.

Italian (ITAL)

- **U 101 Elementary Italian I 5 cr.** Offered autumn. An introduction to Italian language and culture, with emphasis on the skills of reading, writing, comprehension, and speaking.
- **U 102 Elementary Italian II 5 cr.** Offered spring. Prereq., ITAL 101. Continuation of ITAL 101.
- **U 201 Intermediate Italian I 4 cr.** Offered autumn. Prereq., ITAL 102 or equiv. Expansion of active skills" listening, speaking, reading, writing, plus further cultural analysis.
- **U 202 Intermediate Italian II 4cr.** Offered spring. Prereq., ITAL 201 or equiv. Continuation of ITAL 201.
- **U 391 (395) Special Topics 3cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.

Japanese (JPNS)

- **U 101 Elementary Japanese I 5 cr.** Offered autumn. Understanding of grammar and basic sentence structures are taught as a foundation for oral comprehension. The students will learn Hiragana and Katakana, two syllabic writing systems, and approximately 400 Kanji ideographs.
- **U 102 Elementary Japanese II 5 cr.** Offered spring. Prereq., JPNS 101. Continuation of 101.
- **U 150H (210H) Japanese Culture and Civilization 3 cr.** Offered intermittently. Same as AS, MCLG and LS 210H. The historical, religious, artistic, literary and social developments in Japan from earliest times to the present.
- **U 191 (195) Special Topics Variable cr. (**R–6) Offered spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 193 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 Intermediate Japanese I 5 cr.** Offered autumn. Prereq., JPNS 102 or equiv. Reading and writing kanji; building oral/aural fluency.
- **U 202 Intermediate Japanese II 5 cr.** Offered spring. Prereq., JPNS 201 or equiv. Continuation of JPNS 201.
- **U 291 (295) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 292 (296) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 293 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 301 Advanced Japanese 4 cr.** Offered autumn. Prereq., JPNS 202 or equiv. Development of greater reading and speaking proficiency. Vocabulary enhancement and kanji (Chinese characters) are emphasized.
- **U 302 Advanced Japanese 4 cr.** Offered spring. Prereq., JPNS 301 or equiv. Continuation of 301.
- **UG 306 Japanese for Business and Tourism 3 cr.** Prereq., JPNS 202 or equiv. Offered autumn. Vocabulary and idiom of oral and written communication in business and tourism. Professional, ethical practices and special etiquette.
- **UG 311L Classical Japanese Literature in English Translation. 3 cr.** Offered autumn. Same as MCLG 311. Introduction to the classical literature of the Japanese court, ca. 7th to 14th century. Kojiki, Man'yoshu, Kokinshu, Genji Monogatari, and other major classics of the period.
- **UG 312L Japanese Literature Medieval to Modern Times 3 cr.** Offered spring. Same as MCLG 312. Introduction to the literature of Japan from the 15th to the 20th century.
- **UG 386 History of the Japanese Language 3 cr.** Offered intermittently. Prereq., JPNS 202. Overview of Japanese language history from earliest times to the modern day. Topics include the development of writing systems, changes in phonology, and issues concerning orthography and lexicon.
- **U 390 Supervised Internship 1–12 cr.** Offered intermittently. Paid work experience in Japan, combined with language/culture course work by correspondence directed by UM department staff.
- **U 391 (395) Special Topics Variable cr.** (R–12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 392 (396) Independent Study Variable cr.** (R–6) Offered autumn and spring.

- **U 393 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 398 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 411 Modern Japanese Writers and Thinkers 3 cr.** (R–6) Offered autumn or spring. Prereq., JPNS 302. Introduction to the important writers, thinkers, and poets of the 20th century. Readings include a wide range of topics in the humanities, including philosophy, history, sociology, and the arts.
- **UG 412 Introduction to Classical Japanese 3 cr.** Offered spring. Prereq., JPNS 302. Introduction to the language of the Japanese court, ca. 7th to 14th century. Essential features of grammar, sentence structure, vocabulary, and orthography.
- **UG 415 Advanced Japanese for Professionals 3 cr.** Offered spring even–numbered years. Prereq., JPNS 302. A high–level professional language course covering all coordinated reading, writing, and speaking skills. Intended for majors hoping to enter the Japanese job market and prepare for professional testing in Japan.
- **UG 431L Post–War Japanese Literature 3 cr.** Offered spring odd–numbered years. Same as MCLG 431L. Introduction to issues, literature, and criticism of Japanese literature from the postwar (1945) through the contemporary period, using texts in English translation.
- **UG 491 (495) Special Topics 1–9 cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 492 (496) Independent Study Variable cr. (**R–6) Offered autumn and spring.
- **G 500 Readings in Japanese Text 1–3 cr.** (R–3) Offered intermittently. Prereq., undergraduate major in Japanese or equiv. Guided readings in a selected research field.

Latin (LATN)

- **U 101 Elementary Latin I 5 cr.** Offered autumn. The first course of a two semester sequence designed to impart to the student a solid foundation in the Latin language. Successful completion of the sequence will enable the student to read Latin authors.
- **U 102 Elementary Latin II 5 cr.** Offered spring. Prereq., LATN 101 (LAT 101). Continuation of 101. Latin grammar, vocabulary, readings.
- **U 191 (Lat 195) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 (LAT 211) Intermediate Latin I 4 cr.** Offered autumn. Prereq., LATN 102 (LAT 102) or equiv. Selections of Latin prose from the classical period, with complementary exercises in elementary composition.
- **U 202 (LAT 212) Intermediate Latin II 3 cr.** Offered spring. Prereq., LATN 201 (LAT 211) or equiv. Latin epic poetry: Vergil's Aeneid.
- **U 292 (LAT 296) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **UG 311 (LAT 300) Major Latin Authors 3 cr.** (R–18) Offered autumn and spring. Prereq., LATN 202 (LAT 212) or equiv. Plautus, Terence, Lucretius, Livy, Cicero, Vergil, Horace, Ovid, Tacitus, Juvenal, Pliny, Martial, etc.; also, Early Church fathers, Medieval and Renaissance Latin. Selection to suit students' needs and interests.
- **U 391 (LAT 395) Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 392 (LAT 396) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 393 Omnibus Variable cr.** (R-9) Offered intermittently. Independent work under the University omnibus option. See index.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 402 Advanced Prose Composition 3 cr.** Offered intermittently. Prereq., LATN 202 (LAT 212) or equiv. Latin prose composition, based on the best classical models.
- **UG 492 (LAT 496) Independent Study 1–12 cr.** (R–12) Offered intermittently.
- **G 596 Independent Study 1–6 cr.** (R–6) Offered intermittently.

Russian (RUSS)

- **U 101 Elementary Russian I 5cr.** Offered autumn.
- **U 102 Elementary Russian II 5 cr.** Offered spring. Prereq., RUSS 101 or equiv. Continuation of 101.
- **U 105HY Introduction to Russian Culture 3 cr.** Offered autumn. Same as MCLG 105HY and LS 105HY. A chronological survey of Russian culture from its beginnings to the contemporary period.
- **U 191 (195) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 192 (196) Independent Study 1–6 cr.** (R–6) Offered intermittently.
- **U 193 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 Intermediate Russian I 4 cr.** Offered autumn. Prereq., RUSS 102 or equiv.
- **U 202 Intermediate Russian II 4 cr.** Offered spring. Prereq., RUSS 201. Continuation of 201.
- **U 292 (296) Independent Study Variable cr.** (R-6) Offered autumn and spring.
- **U 293 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 301 Oral and Written Expression I 3 cr.** Offered autumn. Prereq., RUSS 202 or consent of instr. Emphasis on active use of Russian. Intensive practice in conversation and writing.
- **U 302 Oral and Written Expression II 3 cr.** Prereq., RUSS 301 or consent of instr. A continued emphasis on active use of Russian.

Intensive practice in conversation and writing.

- **U 308 Russian Cinema and Culture 3 cr.** Offered alternate years. Same as LS 308, ENFM 308 and MCLG 308. Topically arranged introduction to the cinema of Russia and the former Soviet Union, with particular emphasis on contemporary Russian cinema. No knowledge of Russian is necessary.
- **U 312L Introduction to Russian Literature I 3 cr.** Alternate years. Same as MCLG and LS 306L. A survey of 19th-century Russian literature in translation. May include the works of Dostoevsky, Tolstoy, and Chekhov. No knowledge of Russian is necessary.
- **U 313L Introduction to Russian Literature II 3 cr.** Offered alternate years. Same as MCLG and LS 307L. A survey of Russian literature of the 20th century and into the 21st. No knowledge of Russian in necessary.
- **U 391 (395) Special Topics Variable cr.** (R–9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 392 (396) Independent Study Variable cr.** (R–6) Offered autumn and spring.
- **U 393 Omnibus Variable cr.** Offered intermittently. University omnibus option for independent work. See index.
- **U 398 Internship Variable cr.** Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 399 Upper-Division Elective Variable cr.**
- **U 411 19th-Century Russian Authors 3 cr.** Offered intermittently. Prereq., RUSS 202. A study of various authors; may include Pushkin, Dostoevsky, Tolstoy, etc.
- **U 412 20th-Century Russian Authors 3 cr.** Offered intermittently. Prereq., RUSS 202. A study of various authors; may include Bulgakov, Nabokov, Solzhenitsyn,etc.
- **U 424 Russian Short Story 3 cr.** Offered intermittently. Prereq., RUSS 202. A chronological study of the Russian short story, 19th and 20th centuries.
- **U 440 Russian Poetry 3 cr.** Offered intermittently in autumn. Prereq., RUSS 202 or consent of instr. The evolution of Russian poetry from the end of the 18th century to the early 20th century.
- **U 491 (495) Special Topics Variable cr.** (R–6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **U 492 (496) Independent Study Variable cr. (**R–6) Offered autumn and spring.
- **U 493 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 494 Seminar in Russian Studies 3 cr.** Offered Spring. The topic of the seminar alternates between 1.) The Russian Novel and 2.) Women and Gender in Russian Culture. May be taken for honors credit through the Davidson Honors College. No knowledge of Russian is necessary, but Russian majors will be required to do selected readings in the original Russian.

Spanish (SPNS)

- **U 101 Elementary Spanish I 5 cr.** Offered autumn. Emphasis on oral communication, with development in all major skill areas: listening, speaking, reading and writing.
- **U 102 Elementary Spanish II 5cr.** Offered spring. Prereq., SPNS 101 (SPAN 101). Continuation of 101.
- **U 191 (SPAN 195) Special Topics Variable cr.** (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 193 Omnibus Variable cr. (R-10)**
- **U 199 Lower-Division Elective Variable Cr.**
- **U 201 Intermediate Spanish I 4 cr.** Offered autumn. Prereq., SPNS 102 (SPAN 102). Continued practice in the oral skills with added emphasis on grammar and reading proficiency.
- **U 202 Intermediate Spanish II 4 cr.** Offered spring. Prereq., SPNS 201 (SPAN 201). Continuation of 201.
- **U 292 (SPAN 296) Independent Study Variable cr.** (R-6) Offered autumn and spring.
- **U 293 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **U 301 Spanish: Oral and Written Expression 3 cr.** Offered autumn and spring. Prereq., SPNS 202 (SPAN 202) or equiv. Development of oral and written skills with an emphasis on Hispanic cultural context.
- **U 305 (SPAN 302) Spanish Phonetics 3 cr.** Offered once each academic year. Prereq., SPNS 202 (SPAN 202) or consent of instr. A practical and theoretical exploration of the Spanish sound system.
- **U 306 Commercial Spanish 3 cr.** (R–6) Offered intermittently. Prereq., SPNS 301 (SPAN 301). The use of business concepts and terminology in Spanish. Conducted entirely in Spanish. Investigation of cultural attitudes, resources of the Hispanic world, ways in which Hispanics conduct business, practice in business letter writing.
- **U 308 Intensive Spanish Abroad 1–9 cr.** (R–9) Offered spring. Prereq., SPNS 202 (SPAN 202) or equiv. Intensive Spanish language course to coincide with intensive language course given at an institute or college during the Spanish Study Abroad Program. Credits vary according to the hours and intensity of the foreign language course and are determined by the director of the program.
- **U 321 (SPAN 328) Advanced Conversations 3 cr.** Offered intermittently. Prereq., SPNS 202 (SPAN 202). Intensive practice in oral Spanish through individual presentations, vocabulary and grammar work, and film discussion and analysis.
- **U 326 (SPAN 311L) Contemporary Spanish Literature 3 cr.** Offered autumn and spring. Prereq., SPNS 202 (SPAN 202) or equiv. The study of contemporary works by peninsular authors, including an introduction to literary genres.
- **U 331 (SPAN 312L) Contemporary Latin America Lit 3 cr.** Offered autumn and spring. Prereq., SPNS 202 (SPAN 202) or equiv. The study of representative works by Latin-American authors with emphasis on the 20th century. Includes an introduction to literary genres.
- **U 355 Topics in Hispanic Literature and Culture Variable cr.** (R–9) Offered intermittently in spring. Prereq., SPNS 326 (SPAN 311L) or SPNS 331 (SPAN 312L) or consent of instr.

- **U 359 Spanish–American Civilization Literature and Film 3 cr.** Offered spring. Prereq., at least one upper–division class in Spanish and SPNS 301 (SPAN 301). Same as MCLG and LS 358. The development of the traditional society of Spanish American civilization through the interaction of European, Indian, and African elements. Credit not allowed for both LS/MCLG 358 and SPAN 359.
- **U 391 (SPAN 395) Special Topics Variable cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 392 (SPAN 396) Independent Study Variable cr. (**R–6) Offered autumn and spring.
- **U 393 Omnibus Variable cr.** (R-10) Offered intermittently. University omnibus option for independent work. See index.
- **U 399 Upper-Division Elective Variable cr.**
- **UG 400 (SPAN 405) Spanish: Applied Linguistics 3 cr.** Offered autumn. Prereq., SPNS 305 (SPAN 302) and LING 270 or 470. Topics in linguistics applied to the Spanish Language with an emphasis on morphology, syntax and semantics.
- **UG 408 Spanish: Adv Composition and Conversation 3 cr.** Offered spring. Prereq., SPNS 301 (SPAN 301) or consent of instr. Intensive practice in writing on different levels of usage and style, combined with guided oral practice.
- **UG 432 (SPAN 450L) Latin American Literature 3 cr.** (R–6) Offered regularly. Prereq. SPNS 326 or 331 (SPAN 311L or 312L) or consent of instr. Emphasis on major works of the 20th century.
- **UG 465 (SPAN 420) Spanish Literature: Renaissance and Golden Age 3 cr.** (R-6) Offered autumn even-numbered years. Prereq., SPNS 326 or 331 (SPAN 311L or 312L) or consent of instr.
- **UG 466 (SPAN 430) Spanish Literature: Modern and Contemporary 3 cr.** (R-6) Offered spring even-numbered years. Prereq., SPNS 326 or 331 (SPAN 311L or 312L) or consent of instr.
- **UG 491 (SPAN 495) Special Topics 1-9 cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 492 (SPAN 496) Independent Study 1-6 cr.** (R-6) Offered autumn and spring.
- **U 493 Omnibus Variable cr.** (R–10) Offered intermittently. University omnibus option for independent work. See index.
- **UG 494 Seminar Variable cr.** (R–12) Offered regularly. Prereq., SPNS 326 or 331 (SPAN 311L or 312L). Studies in major authors, periods, or genres.
- **G 500 Directed Readings 1–3 cr. (**R–6) Offered intermittently. Prereq., undergraduate major in Spanish.
- **G 594 Graduate Seminar 3 cr.** (R–6) Offered intermittently. Prereq., graduate standing.
- **G 595 Special Topics Variable cr.** (R–6) Offered intermittently. Prereq., graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one–time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R–6) Offered intermittently. Prereq., graduate standing. Out–of–class independent work of a research nature which involves intensive use of University or other libraries; also research work carried on in another country under the direction of a University professor.
- **G 599 Professional Paper 1–3 cr.** (R–6) Offered intermittently. Prereq., graduate standing.
- **G 699 Thesis Variable cr.** (R–9) Offered intermittently. Prereq., graduate standing.

Faculty

Professors

- **Elizabeth Graff Ametsbichler, Ph.D., University of Maryland at College Park, 1992**
- **Christopher Anderson, Ph.D., University of Iowa, 1990**
- **Hayden Ausland, Ph.D., University of California, Berkeley, 1987**
- **Timothy Bradstock, Ph.D., Harvard University, 1984**
- **Maria Jose Bustos Fernandez, Ph.D., University of Colorado, 1990**
- **M. Ione Crummy Ph.D., Stanford University, 1992**
- **Linda Rutland Gillison, Ph.D., University of Minnesota, 1975 (Chair)**
- **Clary Loisel, Ph.D., University of Florida, 1996**
- **Judith N. Rabinovitch, Ph.D., Harvard University, 1981**
- **Stanley L. Rose, Ph.D., University of Wisconsin, 1969**
- **James M. Scott, Ph.D., University of Washington, 1986**
- **Michel Valtentin, Ph.D., University of Minnesota, 1980**

Associate Professors

- **Hiltrudis Arens, Ph.D., University of Maryland, 1997**
- **Eduardo Chirinos, Ph.D., Rutgers University, 1997**
- **Jannine Montauban, Ph.D., Rutgers University, 2000**
- **Ona Renner–Fahey, Ph.D., Ohio State University, 2003**
- **Matthew S. Semanoff, Ph.D., University of Wisconsin, 2002**
- **Yuka Tachibana, Ph.D., Tohoku University, 1999**

Assistant Professors

- **Benedicte Boisseron, Ph.D. University of Michigan, 2006**
- **Joshua Davis, Ph.D., University of Virginia, 2007**
- **Charles Exley, Ph.D., Yale University, 2005**
- **Mladen Kozul, Ph.D., Universite de Paris X–Nanterre, 1996**
- **Marton Marko, Ph.D., Washington University, 2005**

- **Naomi Shin, Ph.D., City University of New York, 2006**

Senior Lecturer

- **Zhen Cao, Ed.D., The University of Montana, 1997**

Lecturer

- **Samir Bitar, M.A., University of Montana, 1997**
- **Kelly Noe, M.A., Miami University, 2004**

Adjunct Instructors

- **Khalded Huthaily, Ed.D., University of Montana, 2008**
- **Evelina Badery, M.A., Universita di Torino, 1981**
- **Linda Bailey, M.A., University of Montana, 2001**
- **Manolita Connor, M.A., University of Montana, 1992**
- **Alicia Gignoux, M.A., The University of Montana, 1994**
- **Melissa MacKenzie, M.S., Eastern Michigan University,1989**
- **Yuri Naito, M.A., University of Toronto, 2007**
- **Martina Baum-Acker, M.A., University of Innsbruck, 1983**

Emeritus Professors

- **Robert W. Acker, Ph.D., University of Texas at Austin, 1974**
- **Anthony F. Beltramo, Ph.D., Stanford University, 1972**
- **Raymond L. Corro, Ph.D. University of Utah, 1971**
- **Maureen Cheney Curnow, Ph.D., Vanderbilt University, 1975**
- **Gerald A. Fetz, Ph.D., University of Oregon, 1972**
- **James A. Flightner, Ph.D., State University of New York at Buffalo, 1971**
- **John G. Hay, Ph.D., University of Minnesota, 1973**
- **Horst Jarka, Ph.D., University of Vienna, 1955**
- **Gertrud Lackschewitz, Ph.D., Goettingen University, 1954**
- **David K. Loughran, Ph.D., Johns Hopkins University, 1969**
- **Dennis R. McCormick, Ph.D., University of Texas at Austin, 1972**
- **Sigyn Minier, Ph.D., University of Connecticut, 1977**
- **Ward H. Powell, Ph.D., University of Colorado, 1956**
- **Ludmila Prednewa, Ph.D., University of Pennsylvania, 1982**
- **O. W. Rolfe, Ph.D., Stanford University, 1967**
- **John B. Wang, Ph.D., University of Maryland, 1967**

Emeritus Associate Professor

- **Robert R. Brock, M.A., University of Washington, 1961**

Department of Native American Studies

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Wade Davies, Chair '09 and Dave Beck, Chair '10

Native American Studies is an academic discipline committed to examining the contemporary and past experiences and life ways of the first Americans from their perspective. The curriculum is designed to provide a study of American Indians from a holistic and humanistic viewpoint by focusing upon their cultures, history, and contemporary life. Courses are designed for both Native American and non Native American students so they can better understand human similarities and differences, thereby leading to the development of better communications and cross-cultural relationships.

The Native American Studies major supports the objectives of a liberal arts education. It is interdisciplinary, offering courses from literature to history, and provides a perspective that critically analyzes and evaluates the strengths and limitations of each contributing discipline.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

For the Bachelor of Arts degree with a major in Native American Studies, students must complete a minimum of 39 credits, 30 credits in Native American studies plus nine elective credits which can be met within the department or out-of-department. The required NAS courses are: 100H, 200, 201X, 202X, 301E, 303E, 341 or 400X, 494, and two of the following: 464X, 465X and 466X.
Beyond these 30 credits in NAS, students have the option to take an additional 17 credits from NAS as electives for a maximum of 47 credits in NAS courses. These electives include NAS 195, 210X, 231X, 295, 300, 324X, 329, 341, 342, 344, 388, 394, 395, 400X, 403, 410, 496, 499,and one of the following: 464X, 465X, and 466X.
The credits may also be chosen from the following out-of-department courses: ANTH 102S, 323X, 330X; HSTR 367, 369 and HSTA 455 (formerly HIST 365, 366, and 467).

The Upper-division Writing Expectation must be met by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.
As part of the major's liberal arts and interdisciplinary focus, all students completing the major must complete a minor in another field. The department recommends cognate areas of study for the minor including anthropology, history, sociology, and political science. Students also are encouraged to pursue a double major. The department recommends a compatible major in one of the following disciplines: anthropology, English, modern or classical languages and literatures, history, linguistics, political science, sociology, or social work. Students who pursue a second major are not required to complete a minor in addition to the second major.

Suggested Course of Study

First Year	A	S
WRIT 101 (ENEX 101) College Writing	3	-
M 105 Contemporary Mathematics	3	-
NAS 100H Introduction to Native American Studies	3	-
NAS 201X Indian Culture as Expressed Through Language	3	-
General Education	3	9
Electives	-	6
Total	15	15
Second Year	**A**	**S**
NAS 200 Native American Studies Research and Writing Methods	3	-
NAS 202X Oral and Written Traditions of the Native American	3	-
General Education	6	9
Electives	3	6
Total	15	15
Third Year	**A**	**S**
NAS 301E American Indian Religion and Philosophy	3	-
NAS 303E Ecological Perspectives in Native American Traditions	-	3
NAS 341 Contemporary Issues of American Indians or 400X Tribal Sovereignty	3	-
NAS 465 History of Indian Affairs in the 19th Century (Spring) or NAS 464 History of Indian Affairs to 1776 (Autumn)	-	3
Electives	9	9
Total	15	15
Fourth Year	**A**	**S**
NAS 465X History of Indian Affairs in the 19th Century (Spring) or 466H History of Indian Affairs from 1890 (Autumn)	3	-
NAS 494 Readings in Native American Studies	-	3
Electives	12	12
Total	15	15

Requirements for a Minor

To earn a minor in Native American studies the student must complete a minimum of 21 credits of the following requirements:

1. Complete NAS 100H, 202X, 301E and 303E.
2. Complete at least 9 credits of electives from the following approved cognate courses: ANTH 102S, 323, 330; HSTR 367, 369 (HIST 365, 366), HSTA 455; NAS 195, 200, 210X, 201X, 231X, 295, 300, 324X, 329, 341, 342, 344, 388, 394, 395, 400X, 410, 465, 466, 496 and 499.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Native American Studies (NAS)

- **U 100H Introduction to Native American Studies 3 cr.** Offered Autumn and Spring. Survey course to acquaint the student with Native American Studies by a general overview of Indian history, culture, philosophy and religious beliefs.
- **U 191 Special Topics Variable cr.** (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 198 Internship Variable cr.** (R-9) Offered by special arrangement. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **U 200 Native American Studies Research and Writing Methods 3 cr.** Offered Autumn. Prereq., NAS major or minor. Introduction to the Research materials pertaining to the study of American Indian peoples and cultures. Emphasis on current research trends and writing.
- **U 201L Indian Culture as Expressed through Language 3 cr.** Offered Autumn. Introduction to the language of American Indian peoples. Understanding, through the language, the history, traditions, and modern life of Indian peoples.
- **U 202X Oral and Written Traditions of Native America 3 cr.** Offered Autumn and Spring. Analysis of the oral traditions of Native Americans including a study of the literary works of early leading American Indian writers.
- **U 210X Native American Sports and Games 3 cr.** Offered Autumn or Spring. Explores Native American sports and games, both traditional and modern. Through classroom learning and actual play, students gain an understanding of how play and competition have been vital to Native communities.
- **U 231X Indigenous World View Perspectives 3 cr.** Offered Spring even-numbered years. Same as ANTH 231X. Examination of indigenous belief systems, with regard to world views, religious ceremonies, cultural ways and the impact that Anglo-European culture has had upon these systems. Focus on indigenous peoples of Australia, New Zealand, and North America from Canada and the United States.
- **U 291 Special Topics Variable cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **UG 300 American Indian Education 3 cr.** Offered intermittently. A study of modern Indian education to the present; examination of Johnson O'Malley funding for Indian education; and a look at the unique needs of the Indian child.
- **UG 301E American Indian Religion and Philosophy 3 cr.** Offered Autumn and Spring. Same as RELS 301E. A study of selected ethical systems; origins, world views; religious beliefs and the way they have been affected by western civilization.
- **UG 303E Ecological Perspectives in Native American Traditions 3 cr.** Offered Autumn and Spring. An examination of Native American environmental ethics and tribal and historical and contemporary use of physical environmental resources.
- **UG 324X Indians of Montana Since the Reservation Era 3 cr.** Offered Autumn odd-numbered years. Same as ANTH 324X and HSTA 354 (HIST 354H). Examination of the history of Montana Indians since the establishment of the reservations, contemporary conditions, and issues among both reservation and non-reservation Indian communities in the state. Special attention given to social and economic conditions, treaty rights, tribal sovereignty, and legal issues.
- **UG 329 Native American Literature 3 cr.** Offered Autumn. Prereq., three credits of lower-division LIT courses and NAS 100H or 202X. Same as LIT 305 (ENLT 329). Selected readings from Native American Literature with special emphasis on the literature of writers from the Rocky Mountain West.
- **UG 341 Contemporary Issues of American Indians 3 cr.** Offered Autumn. Same as ANTH 341. An examination of the major issues that affect the contemporary experiences of American Indians.
- **UG 342 Gender Studies in Native American Studies 3 cr.** Offered intermittently. Same as WS 342. Focus on American Indian gender relations and their cultural continuity and historical evolution. National in scope with concentration on certain tribes. Group analysis of contemporary gender issues relevant to Native American peoples.
- **U 344 Native Americans and Film 3cr.** Offered Autumn or Spring. Same as ENFM 344. Surveys the image of Native Americans in American film with an emphasis on "revisionist," or "breakthrough" films. Ultimate focus will be on films featuring Native American writers, directors and actors.
- **UG 367 Art of the Ancient Americas 3 cr.** Offered intermittently. Prereq., consent of instr. Same as ART 367. Development of major ceremonial and urban centers throughout the Americas before the coming of Europeans. Analysis of how the visual arts articulate ancient world views or cosmologies in relation to nature. Focus on various strategies of reading the structure and meaning encoded in the layout of cities, stone sculpture, wall murals, ceramics, precious metals, and textiles.
- **UG 368 Latin American Art 3 cr.** Offered intermittently. Prereq., consent of instr. Same as ART 368. Offered alternate years. Exploration of themes in the development of Latin American art from the colonial period to the present, including Renaissance ideals in the "New World", syncretism of European, African, and indigenous roots, the Black Legend, and the advent of such movements as Academism, Modernism, Social Realism, Magic Realism, and Post-Modernism.
- **UG 388 Native American Health and Healing 3 cr.** Offered alternate years. Same as ANTH 388. Examination of traditional and contemporary uses of medicine in Native American societies. Issues discussed will be the current health status of American Indians, the relationship between medicine and culture, and introduction to various techniques for assessing health status of American Indian populations.
- **U 394 Seminar Variable cr.** (R-6) Offered intermittently. Variable topics addressing Indian law, policy and culture by visiting scholars.
- **U 391 Special Topics Variable cr.** (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **U 398 Internship Variable cr.** (R-6) Offered by special arrangement. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.
- **UG 400X Tribal Sovereignty 3 cr.** Offered Spring. Same as PSCI 475 (PSC 475). An examination of the evolution of tribal governments from a historical and political perspective. Particular attention is devoted to the issues of tribal sovereignty and tribal-state conflicts.
- **UG 403 Contemporary Tribal Resource Issues 3 cr.** Offered intermittently. Same as RSCN 403. Acquaints students with

contemporary tribal resource management and environmental policies.

- **UG 410 Studies in Native American Autobiography 3 cr.** Offered intermittently. Same as LIT 429 (ENLT 429L). Prereq., LIT 300 or LIT 305/NAS 329 (ENLT 301 or ENLT/NAS 329), or consent of instr. Study of texts that present a first-person story of an American Indian individual's life within historical and cultural contexts, with discussion of theories of autobiography.
- **UG 464X History of Indian Affairs to 1776 3cr.** Offered Autumn. Same as HSTA 465X (HIST 464H). A study of American Indian relations with Europeans and the United States from first contact to 1776.
- **UG 465X History of Indian Affairs in the 19th Century 3 cr.** Offered Spring. Same as HSTA 452X (HIST 465H). A study of tribal encounters and adjustments to the American nations in the nineteenth century.
- **UG 466X History of Indian Affairs from 1890 3 cr.** Offered Autumn. Same as HSTA 453X (HIST 466H). A study of tribal encounters and adjustments to the American nation from 1890.
- **U 494 Reading Seminar in Native American Studies 3 cr.** (R-6) Offered Spring. Prereq., NAS major or minor, 18 credits in NAS, and junior standing or higher. Senior reading capstone course for the review of past and current literature on and by American Indians.
- **UG 492 Special Topics Variable cr.** (R-9) Offered by special arrangement. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.
- **U 496 Independent Study Variable cr.** (R-6) Prereq., upper-division standing and consent of instr. Selected topics on American Indians under the direct supervision of a faculty member.
- **U 499 Senior Thesis in Native American Studies 3-9 cr.** (R-9) Offered by special arrangement. Prereq., NAS major or minor, 18 credits in NAS, junior standing, and consent of instr. Independent research project in Native American Studies, supervised by a faculty member, and leading to completion of baccalaureate degree.
- **G 560 Methods and Sources in Native American Studies 3 cr.** Offered intermittently. Prereq., consent of instr. Field observations, interviews, special collections, federal records, and library materials in Native American studies research and writing.
- **G 594 Seminar in Native American Studies 1- 3 cr.** (R-6) Offered intermittently. Prereq., consent of instr.
- **G 595 Special Topics Variable cr.** (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.
- **G 596 Independent Study Variable cr.** (R-6) Offered intermittently. Prereq., graduate standing and consent of instr. Study of selected topics or problems on American Indians under the direct supervision of a faculty member.
- **G 598 Internship Variable cr.** (R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

Faculty

Professor

- Richmond L. Clow, Ph.D., University of New Mexico, 1977
- David R. M. Beck, Ph.D., University of Illinois at Chicago, 1994 (Chair '10)
- S. Neyooxet Greymorning, Ph.D., University of Oklahoma, 1992
- Kathryn W. Shanley, Ph.D., University of Michigan, 1987

Associate Professors

- Wade M. Davies, Ph.D., Arizona State University, 1998 (Chair '09)

Assistant Professor

- Angelica Lawson, Ph.D., University of Arizona, 2006

Adjunct Professors

- George Price, Ph.D., The University of Montana, 2006

Non-profit Administration

Jonathan R. Tompkins, (Professor of Political Science), Advisor

The interdisciplinary minor in nonprofit administration concentrates on nonprofit board and committee development, fund raising principles and practices, nonprofit financial management, human resource development, nonprofit management and program planning, grant writing, and nonprofit marketing. It is designed to complement students' major areas of study and prepare them to enter careers in the nonprofit sector. Interested students must meet with the program director at the Office for Civic Engagement prior to declaring the minor.

Students pursuing the nonprofit administration minor will have the option to obtain certification from the national American Humanics organization if they complete additional requirements that include participation in the campus-based student association, extra-curricular training sessions and events, and attendance at a national American Humanics Management Institute. The director of the Office for Civic Engagement serves as the director for the national certification program. Students should contact that office for information regarding certification.

Requirements for a Minor

Students must complete successfully 21 credits in the following courses:

1. PSCI 466 (PSC 466) Nonprofit Administration and Public Service, 3 cr.
2. PSCI 467 (PSC 467) Advanced Nonprofit Administration, 3 cr.
3. PSCI 498 (PSC 498) Nonprofit Internship, 3 cr.
4. Twelve credits from at least four of the following six areas:
    a. Communication Skills
        - COMM 110S, Introduction to Interpersonal Communication
        - COMM 240 Communication in Small Groups
        - COMM 421 Comm in Nonprofit Organizations
        - COMM 422 Comm & Technology
        - COMM 423 Practical Issues in Organizational Communication
        - COMM 424 Risk, Crisis, and Communication
        - COMM 451 Intercultural Communication
        - MGMT 420 Leadership and Motivation (for business majors only, MGMT 340 prereq.)
    b. Youth and Adult Development
        - PSYX 230S (PSYC 240S) Child and Adolescent Development
        - PSYX 233 (PSYC 245) Adult Development and Aging
        - SOCI 330 (SOC 330S) Juvenile Delinquency
        - SOCI 335 (SOC 335) Juvenile Justice System
    c. Human Resources Development and Supervision
        - PSCI 462 (PSC 460) Human Resource Management
        - RECM 380 Recreation Administration and Leadership
        - COMM 230S Intro to organizational Communication
    d. Nonprofit Program Planning
        - RECM 230 Programming in Recreation
        - RECM 485 Recreation Planning (for RECM majors only)
        - MKTG 411 Services/Relationship Marketing (for business majors only, MKTG 360 prereq.)
    e. Nonprofit Marketing
        - MKTG 363 Marketing Communications (for business majors only, MKTG 360 prereq.)
        - MKTG 412 Nonprofit Marketing (for business majors only, MKTG 360 prereq.)
    f. Nonprofit Accounting/Financial Management
        - ACTG 201 (ACCT 201) Financial Accounting (M 115 (MATH 117) prereq.)

Department of Philosophy

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Deborah Slicer, Chair

Philosophy is the search for an understanding of how the world as a whole hangs together and of how we are to assume our place in the world. Philosophy pursues its goal first of all historically. It is the trustee of the heritage of great philosophical texts, and it engages those texts in conversation with contemporary problems. Second, philosophy turns to the contemporary world directly and tries to illuminate and advance its concerns with ethics and art, with science and technology, with ecology and feminism, with law and medicine. Bachelor of Arts and Master of Arts degrees are offered. More information is available online: www.cas.umt.edu/phil/.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

The following requirements must be completed for the Bachelor of Arts degree with a major in philosophy: a minimum of 33 credits including PHIL 210, 215, 251Y and 252Y; at least 21 credits in courses numbered 300 and above, including PHIL 300E, 480 and one course from each of the following groups: History (PHIL 452, 453, 461, 463); Value Theory (PHIL 325, 340, 421, 422, 427, 429, 441, 444, 477); Continental (PHIL 465, 467); Logic and Analytic Philosophy (PHIL 410, 411, 469, 471). A PHIL 395 or 495 Special Topics course may be used to count as a course from any of the above four groups as its topic makes appropriate (consult the Department advisor). Majors are expected to complete lower-division requirements before beginning upper-division work. No credit toward the major will be awarded for any course (including required language courses) in which the student receives a grade less than a C-.

The Upper-division Writing Expectation must be met by successfully completing PHIL 300E and 480. All philosophy majors must complete at least three semesters of a foreign language (though four semesters are recommended) or certify equivalent competency. Recommended languages for philosophy are Greek, Latin, French, and German.

Suggested Course of Study

First Year	A	S
PHIL 100 Introduction to Philosophy	3	-
PHIL 210 Introduction to Logic	-	3
WRIT 101 (ENEX 101) Composition	3	-
Foreign language	5	5
HSTR 101H, 102H (HIST 104H, 105H) European Civilization	4	4
College mathematics course	-	3
Total	15	15
Second Year	**A**	**S**
PHIL 215 Philosophical Reasoning	3	-
PHIL 251Y History of Ancient Philosophy	3	-
PHIL 252Y History of Modern Philosophy	-	3
PHIL 300E Moral Philosophy	-	3
Foreign language	4	-
LS 151L and 152L Introduction to the Humanities.	4	4
Electives and General Education	-	6
Total	14	16

Students should not neglect mathematics and the physical and biological sciences in choosing elective courses. Philosophy majors are encouraged to pursue a minor in another discipline.

Requirements for a Minor

To earn a minor in philosophy the student must complete: PHIL 210, 215, 251Y, 252Y, 300E, and an additional course numbered above 300.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Philosophy (PHIL)

U 100 Introduction to Philosophy 3 cr. (R-12) Offered intermittently. An introduction to philosophy through examination of the thought of selected great philosophers or of traditional positions on classical philosophical problems.

U 105 Topical Introduction to Philosophy 3 cr. Offered intermittently. An introduction to philosophy through examination of selected themes. Themes will vary; existentialism, technology and the good life, philosophy of religion, philosophy of film, and science and society are examples.

U 119 Philosophical Perspectives on Women in the Western Hemisphere 3 cr. Offered intermittently. Same as LS and WS 119H. Introduction to the discipline and scope of Western philosophy focusing on women as the subject rather than men. A chronological study following the ideological development in the West of social attitudes and scientific theses.

U 190 Supervised Internship 1-6 cr. (R-6) Offered intermittently. Prereq., consent of faculty supervisor and department chair.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship 1-6 cr. (R-6) Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 200E Ethics: The Great Traditions 3 cr. Offered every term. An examination of the Western vision of morality through the careful study of selected writings from Aristotle, Kant and Mill. Additional works in ethics may supplement primary readings.

U 201E Political Ethics 3 cr. Offered yearly. An examination of the issues of political ethics through the careful study of selected writings from the three great Western political traditions: classical natural law theory, modern individualism, and contemporary distributive justice.

U 202E Ethics: The Great Traditions and Environment 3 cr. Offered intermittently. An introductory-level ethics course with a special interest in the natural environment. The course will (a) introduce students to the three classical traditions in ethics - virtue, Kantianism, and

utilitarianism, (b) ground these theories in questions about the moral status of non-humans and our moral duties to non-humans, (c) include an applied section of the course that will cover animal welfare, biotechnology, and other current topics.

U 210 Introduction to Logic: Deduction 3 cr. Offered autumn and spring. Understanding general principles of reasoning and the habits of clear and correct thinking. Emphasis on the analysis of the logical structure of claims in natural language and the skills of elementary deductive inference.

U 211 Introduction to Logic: Applied Logic 3 cr. Offered spring. Prereq., PHIL 210 or equivalent, or consent of instr. Elementary principles of reasoning from evidence. Emphasis on effective evaluation of information and argument in public discourse.

U 215 Philosophical Reasoning 3 cr. Offered autumn. Prereq., philosophy major or minor, or consent of instr. Focus on basic skills essential to success in philosophy; careful reading, critical analysis, and well-structured writing. Emphasis on repeated practice in recognizing, reading, analyzing, and writing philosophical arguments. Intended primarily for philosophy majors and minors.

U 223E Business and Ethics 3 cr. Offered intermittently. An analysis of ethical conflicts that may arise in business.

U 240H History and Philosophy of Science 3cr. Offered intermittently. Same as HSTR 242H (HIST 240H). The epistemological and metaphysical developments of natural philosophy or science. The origins of science in ancient Greece, and its subsequent developments during the scientific revolution. Developments in biology, especially Darwinism and genetics, and developments in physics.

U 251Y History of Ancient Philosophy 3 cr. Offered autumn. Introduction to the central works of Plato and Aristotle, with an overview of Presocratic and Hellenistic philosophy.

U 252Y History of Modern Philosophy 3 cr. Offered spring. A survey of the history of philosophy from Descartes to Kant, which includes other continental rationalists and the British Empiricists.

U 290 Supervised Internship Variable cr. (R-9) Offered intermittently. Prereq., consent of faculty supervisor and department chair.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296 Independent Study 1-6 cr. (R-6) Offered intermittently.

U 298 Internship Variable cr. (R-9) Offered intermittently. Prereq., consent of faculty supervisor and the Internship Services office.. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 300E Moral Philosophy 3 cr. Offered spring. Prereq., PHIL 215. Development of the fundamental principles grounding moral reasoning in the Western tradition. A more thorough treatment of the material offered in PHIL 200E intended for philosophy majors or prepared students who are interested in a rigorous introduction to the foundations of ethics.

U 325 Morality and the Law 3 cr. Offered intermittently. Prereq., lower-division course in Group VIII (E) or consent of instr. Analysis of moral reasoning in Anglo-American law, emphasizing certain ethical and legal concepts and the role of the Supreme Court.

UG 340 Aesthetics 3 cr. Offered intermittently. Prereq., upper-division standing. This course examines the nature of aesthetic experience, the standards of art criticism, and the kinds of knowledge communicated by art. Readings from philosophers, artists, and art critics.

U 362 Ancient Greek and Roman Philosophy 3 cr. Offered intermittently. Same as MCLG 362 and LS 362. Examination of the thought of the philosophers of Greece and Rome as expressed in original works read in English translation. Ancient philosophy studied within its historical, linguistic and cultural setting.

U 390 Supervised Internship 1-12 cr. (R-12) Offered intermittently. Prereq., consent of faculty supervisor and department chair.

U 393 Omnibus Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Independent work under the University omnibus option. See index.

U 394 Seminar Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

U 396 Independent Study Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

U 397 Research Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

U 398 Internship 1-6 cr. (R-6) Offered intermittently. Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of

Internship (198, 298, 398, 498) may count toward graduation.

UG 410 Formal Logic: Scope and Limits 3 cr. Offered intermittently. Prereq., PHIL 210 or equiv. A systematic study of first-order logic, including development of standard metatheory and the significance of modern formal methods.

UG 411 Philosophy of Science 3 cr. Offered intermittently. Prereq., upper-division standing. A consideration of philosophical issues relating to the nature of modern physical science: method, explanation, theory, progress, space/time, causality, relation of science to philosophy.

UG 421 Medical Ethics 3 cr. Offered intermittently. Prereq., upper-division standing and lower-division course in Group VIII (E), or consent of instr. An examination of ethical problems raised by the practice of medicine and by recent developments in medically-related biological sciences.

UG 422 Contemporary Moral and Political Theory 3 cr. Offered intermittently. Prereq., upper-division standing and PHIL 200E or 201E, or consent of instr. Recent theories in ethics and their implications; recent work in political theory, emphasizing contemporary liberalism and its critics.

UG 427 Ethics and the Environment 3 cr. Offered spring. Prereq., PHIL 202E or PHIL300E. Same as EVST 427. Critical exploration of selected philosophical and literary texts pertinent to the ethics of human relationships with the natural environment.

UG 429 Feminist Philosophy 3 cr. Offered intermittently. Prereq., lower-division course in Group VIII (E) or consent of instr.; PHIL 200 strongly recommended. Same as WGS 429. Study of what distinguishes feminist from traditional approaches to selected areas of philosophy, including ethics, epistemology, political theory, philosophy of science and environment.

UG 430 Topics in the Philosophy of Religion 3 cr. Offered intermittently. An examination of one or more of the classic problems of Western philosophy of religion, such as the traditional arguments for and against the existence of God, the relationship of faith and reason, the status of religious experience, the problem of evil, and the problem of reconciling divine omniscience with human freedom.

U**G 441 Philosophy in Literature 3 cr.** Offered intermittently. Prereq., upper-division standing or consent of instr. Philosophical thought in selected works of literature.

UG 443 Ethics and Public Affairs 3 cr. Offered intermittently. Prereq., lower-division course in Group VIII (E) or consent of instr. Examination of morally relevant issues in government, journalism, education and other social institutions. Issues considered may include deception, confidentiality, conflict of interest, privacy, paternalism responsibilities in conflict with other institutions, and responsibilities across national boundaries, among others.

UG 444 Topics in the Philosophy of the Arts 3 cr. (R-9) Offered intermittently. Prereq., upper-division standing. Examination of philosophical problems related to the particular arts and discussion of the nature of the arts. Topics considered may include music, visual arts, literature, and film.

UG 452 Early Modern Philosophy 3 cr. (R-6) Offered autumn even-numbered years. Prereq., PHIL 252Y or consent of instr. Intensive reading of one or more of the major philosophers from the early modern period (Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume).

UG 453 Kant 3 cr. Offered spring even numbered years. Prereq., PHIL 252Y or PHIL 452 or consent of instr. Reading and interpretation of selected works.

UG 461 Plato 3 cr. Offered every other spring. Prereq., PHIL 251Y. General introduction to the philosophy of Plato emphasizing dialogues of the Early and Middle periods.

UG 463 Aristotle 3 cr. Offered every other spring. Prereq., PHIL 251Y. General introduction to Aristotle. Early biological writings, Categories, De Interpretatione, Nicomachean Ethics, selections from Physics, De Anima and Metaphysics.

UG 465 19th Century Continental Philosophy 3 cr. (R-6) Offered intermittently. Prereq., PHIL 252Y or consent of instr. Intensive study of the work of one or more 19th century continental philosophers (Hegel, Schopenhauer, Kierkegaard, Marx, Nietzsche, etc.).

UG 467 20th Century Continental Philosophy 3 cr. (R-9) Offered intermittently. Prereq., upper-division standing. Intensive study of the work of one philosopher (Heidegger, Husserl, Sartre, Merleau-Ponty, Ricoeur, Derrida, etc.) or several texts representing a major movement in 20th century continental thought (Phenomenology, Existentialism, Hermeneutics, Post-structuralism, etc.).

UG 469 20th Century Analytic Philosophy 3 cr. (R-9) Offered intermittently. Prereq., upper division standing and PHIL 210, or consent of instr. Intensive study of the work of one or more philosophers (Frege, Russell, Wittgenstein, etc.) or historical introduction to the major issues and figures of 20th century philosophy in the analytic tradition (with readings from Frege, Russell, Wittgenstein, Quine and others).

UG 471 Contemporary Issues in Analytic Philosophy 3 cr. (R-6) Offered intermittently. Prereq., upper-division standing and PHIL 210, or consent of instr. Examination of contemporary issues in analytic philosophy focusing on one or more of the following topics: philosophy of language, epistemology, metaphysics, philosophy of mind.

UG 477 Philosophy of Society and Culture 3 cr. Offered intermittently. Prereq., upper-division standing. A philosophical examination of

cultural forces shaping modern society, forces such as science, technology, or domesticity.

UG 480 Senior Seminar 3 cr. (R-9) Offered spring. Prereq., senior standing. Research in problems in philosophy.

U 490 Supervised Internship Variable cr. (R-12) Offered intermittently. Prereq., consent of faculty supervisor and department chair.

U 493 Omnibus Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Independent work under the University omnibus option. See index.

UG 494 Seminar Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

U 497 Research Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

U 498 Internship 1-6 cr. (R-6) Offered intermittently. Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 501 Topics in Epistemology, Philosophy of Technology and Philosophy of Science 3 cr. (R-6) Offered every year.

G 502 Topics in Value Theory 3 cr. (R-6) Offered every year.

G 503 Topics in the History of Philosophy 3 cr. (R-6) Offered every year.

G 504 Topics in Environmental Philosophy 3 cr. (R-9) Offered autumn and spring. Same as EVST 504. Critical study/discussion of current (as well as benchmark) texts and issues in environmental ethics, environmental politics, and the philosophy of ecology. Interdisciplinary; open to concerned students from all disciplines.

G 505 Topics in Contemporary Philosophy 3 cr. (R-6) Offered intermittently.

G 506 Nature, Language and Politics 3 cr. Offered intermittently. Same as LIT 524 (ENLT 524). Investigation of environmental, social and political thought from the perspective of contemporary language theory.

G 510 Philosophy Forum Colloquium 1 cr. (R-3) Offered intermittently. Prereq., graduate standing. Discussion and further exploration of issues presented at the weekly Philosophy Forum.

G 520 Seminar in Foundations of Ethics 4 cr. Offered summer. Major traditions in Western moral philosophy along with feminist and non-Western critiques.

G 521 Theory and Skills for Teaching Ethics 3 cr. Offered every summer. Exploration and critical reflection of concepts and significant issues in the teaching of practical ethics in classroom and corporate settings.

G 523 Practicum in Teaching Ethics 4 cr. Prereq., M.A. teaching ethics emphasis candidates. Field experience in a postsecondary classroom or off campus learning environment. Field work includes lesson planning, teaching, and evaluation.

G 530 Research Ethics Online 1 cr. Offered every term. Online asynchronous instruction in ethical issues in research; interpersonal, institutional, and professional responsibility; research with animals and human participants. Interactive case studies in biomedical, behavioral, and social sciences.

G 581 Thesis Proposal Preparation Variable cr. (R-2) Offered intermittently.

G 590 Supervised Internship 1-12 cr. (R-12) Offered intermittently. Prereq., consent of faculty supervisor and department chair.

G 593 Professional Paper Variable cr. (R-9) Offered intermittently. For students in the M.A. in Teaching Ethics and AGS options.

G 594 Seminar Variable cr. (R-9) Offered intermittently.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

G 597 Research Variable cr. (R-9) Offered intermittently. Directed individual research and study appropriate to the background and

objectives of the student.

G 598 Internship 1-12 cr. (R-12) Offered intermittently. Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus.

G 599 Thesis Variable cr. (R-9) Offered intermittently. Prereq., approval of a thesis proposal by the student's thesis committee.

Faculty

Professors

- Albert Borgmann, Ph.D., University of Munich, 1963
- Deborah Slicer, Ph.D., University of Virginia, 1989 (Chair)

Associate Professors

- David Sherman, Ph.D., University of Texas, Austin, 1999
- Christopher Preston, Ph.D., University of Oregon, 1999

Assistant Professors

- Bridget Clarke, Ph.D., University of Pittsburgh, 2003
- Armond Duwell, Ph.D., University of Pittsburgh, 2004
- Soazig Le Bihan, Ph.D., joint program at University of Nancy and University of Bielefeld, 2008
- Paul Muench, Ph.D., University of Pittsburgh, 2006
- Matthew Strohl, Ph.D., Princeton University, 2008

Lecturer

- Mark Hanson, Ph.D., University of Virginia, 1993

Adjunct Assistant Professor

- Sean O'Brien, Ph.D., University of Colorado, 1989

Emeritus Professors

- Thomas Birch, Ph.D., University of Texas, 1969
- Thomas P. Huff, Ph.D., Rice University, 1968
- Ray Lanfear, Ph.D., Rice University, 1968
- Fred McGlynn, M.A., Northwestern University, 1965
- Burke A. Townsend, Ph.D., University of Hawaii, 1976
- Richard E. Walton, M.A., Claremont Graduate School, 1970

Department of Physics and Astronomy

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Andrew S. Ware, Chair

Physics is considered to be the most fundamental of all the disciplines in the natural sciences. In physics we try to describe and understand a myriad of physical phenomena ranging from subatomic to cosmological scales by quantifying the relationships among different physical quantities. Not only does physics have its own merit as a challenging but exciting scientific endeavor, it provides the basis for understanding underlying processes in astronomy, biology, chemistry, geology, computer science, engineering, and even in behavioral sciences. Applications of physics are virtually unlimited: computers, communications, energy production, medical technology, and space flight, to name just a few. The Department of Physics and Astronomy offers a range of physics courses from introductory to advanced undergraduate level in both experimental and theoretical physics with computational methods in mind. In addition, we offer introductory to advanced astronomy and astrophysics courses in which astronomical applications of physics are emphasized. These courses deal with the Universe, from the solar system to clusters of galaxies, both theoretically and observationally. The Department of Physics and Astronomy offers the Bachelor of Arts degree with a major in physics. Graduates with this degree are prepared for further study in physics or related fields at the masters or Ph.D. level, as well as a wide variety of technical positions in industry. In addition, the department offers two other degree paths which combine a solid background in the study of physics with in-depth study in other fields. These options allow for specialization in related fields and provide appropriate background for certain employment opportunities and for continued graduate or professional study:

Astronomy: The astronomy option provides a thorough study of astronomy and astrophysics as well as a solid background in physics and mathematics. Graduates from this program have gone on to graduate programs in astronomy and astrophysics while others have found career opportunities at national astronomical observatories.

Computational Physics: The computational physics option provides a thorough study of computer science and computational physics as well as a solid background in physics and mathematics. Graduates from this program have gone on to graduate programs in physics and computer science while others have found career opportunities in technical fields.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

All majors must meet the Upper-division Writing Expectation by successfully completing PHYS 330 or another upper division writing course from the approved list.

Bachelor of Arts with a major in Physics

Forty-three credits in physics must be earned for the Bachelor of Arts degree with a major in physics. Required courses in physics are: 211N-212N-213N-214N or 111N-113N-112N-114N (211N-212N-213N-214N strongly recommended), 301, 311, 321, 325, 341, 375, 414 (415 strongly recommended), 444, 461, and 480. Mathematics 171, 172, 273, 311 also must be taken.

Physics majors must satisfy successfully the general education requirements including the following requirement in Foreign Language/Symbolic Systems: Completion of a semester of a foreign language or demonstration of equivalent skill in a foreign language in testing administered by the Counseling Center and Department of Modern and Classical Languages and Literatures, and completion of at least one computer science language course: PHYS 331 (strongly recommended), or CS 101, 131, or 201. Recommended courses in other departments include Mathematics 317, 412, 418.

Bachelor of Arts with a major in Physics: Astronomy Option

During their first two years, students in the astronomy option should take ASTR 131N, 132N, 134N, 135N, PHYS 211N- 212N-213N-214N, or 111N-113N-112N-114N (2 normally during the sophomore year), and M 171, 172, 273 (MATH 152, 153, and 251), (M 151 (MATH 121), if necessary). Forty-seven credits in astronomy and physics courses are required for the B.A. degree in physics with astronomy option. Required courses in physics are: 211N-212N or 213N-214N, 301, 311, 480 plus at least four courses from the following: 325, 341, 375, 414, 415, and 461. Required astronomy courses are: 131N, 132N, 134N, 135N, 353, 363, and 364 (351 and 362 recommended). At least one lab course must be taken from ASTR 362, PHYS 321, or PHYS 444. Mathematics 171, 172, 273, and 311 also must be taken. The Foreign Language/Symbolic Systems requirements must be met as set forth above under Bachelor of Arts with a major in Physics (one semester of a foreign language and one computer language course chosen from PHYS 331, CS 101, 131, or 201).

Bachelor of Arts with a major in Physics: Computational Physics Option:

The purpose of the computational physics option is to provide a thorough background in both physics and computer science and to inculcate a deeper understanding of their goals and methods. A student earns the computational physics option by completing at least 50 credits in the two disciplines, 30 of these credits in physics courses and 20 of these in computer science courses. The following courses are required: Physics 211N-212N-213N-214N, or 111N-113N-112N-114N, 301, 311, 331, 341, 375, 414, and 480 (PHYS 321, 444, and 415 are highly recommended); Computer Science 131-132, 241, 332, and seven credits of CS electives selected from courses numbered 200 and above (CS 242, 281, 415E, 471, and 477 recommended); Mathematics 171, 172, 273, 311 and 325 (M 307, 448 and STAT 341 recommended). Foreign language requirements must be met as set forth above under Bachelor of Arts with a major in Physics.

Teacher Preparation in Physics

Major Teaching Field of Physics: For an endorsement in the major teaching field of Physics, a student must complete the following course requirements: 35 credits in Physics including Physics 111N-113N-112N-114N or 211N-212N and 213N-214N, 301, 325, 330, 341, 375, 414, 461, and 480. Also required are Astronomy 131N-132N; Mathematics 171, 172, 273, 311, STAT 216 or 341 (MATH 241 or 341) and ; Computer Science 101 or 131 or 201; Curriculum & Instruction 426; Chemistry 121N and 485; Biology 108N or 110N or 120N or 121N; Geology 101N-102N; and EVST 101 or Science 350 or Geology 301. Students also must gain admission to Teacher Education and Student Teaching and meet the requirements for certification as a secondary teacher (see the School of Education section of this catalog).

Minor Teaching Field of Physics: For an endorsement in the minor teaching field of Physics, a student must complete Physics 111N-113N-112N-114N or 211N-212N-213N-214N, 325, 330, 341 and 375. Also required are Astronomy 131N or 132N; Biology 108N or 110N or 120N or 121N; Chemistry 121N, 485; Mathematics 171, 172, 273, 311, STAT 216 or 341 (MATH 241 or 341); and Computer Science 101, 131, or 201. Students also must gain admission to Teacher Education and Student Teaching and meet the requirements for certification as a secondary teacher (see the School of Education section of this catalog).

Suggested Course of Study

Bachelor of Arts with a Major in Physics

For physics majors with four years of college preparatory mathematics or exemption from MATH 121 by examination:

First Year	A	S
CS 101 or 131 Fundamentals of Computer Science	-	3
*WRIT 101 (ENEX 101) College Writing I	3	-
M 171-172 (MATH 152-153) Calculus I, II	4	4
PHYS 211N, 212N, 213N, 214N Fundamentals of Physics	5	5
Electives and General Education	3	3
Total	15	15

*Semester of enrollment depends on beginning letter of student's last name.

Second Year	A	S
M 273 (MATH 251) Multivariable Calculus	4	-
PHYS 301 Mathematical Methods for Physical Scientists	-	3
PHYS 311 Oscillations and Waves	2	-
PHYS 325 Optics	-	3
PHYS 341 Fundamentals of Modern Physics	3	
Foreign Language*	5	
Electives and General Education	1	9
Total	15	15

*Can be waived with two years of foreign language in high school.

Third Year	A	S
M 311, 412 Ordinary Differential Equations/Systems, Partial Differential Equations	3	3
PHYS 321 Electronics for Scientists	3	-
PHYS 330 Communicating Physics	-	3
PHYS 375 Classical Mechanics	-	3
PHYS 414-415 Electromagnetism	3	3
PHYS 446 Thermodynamics and Statistical Mechanics *	(3)	-
Electives and General Education	(3)	3

* PHYS 446 is offered every other year and may be taken in the third or fourth year.

Total	15	15

Fourth Year	A	S
PHYS 444 Advanced Physics Laboratory	-	3
PHYS 446 Thermodynamics and Statistical Mechanics*	(3)	-
PHYS 461 Quantum Mechanics I	3	-
PHYS 463 Selected Topics or 462 Quantum Mechanics II	-	3
PHYS 480 Senior Seminar	1	-
Electives and General Education	8	9

* PHYS 446 is offered every other year and may be taken in the third or fourth year.

Total	15	15

For physics majors with fewer than four years of college preparatory mathematics (students who begin MATH 152 in the second semester use this suggested course of study for physics courses):

First Year	A	S
ASTR 131N-132N Elementary Astronomy	3	3
CS 101 or 131Fundamentals of Computer Science	-	3
*WRIT 101 (ENEX 101) College Writing I	3	-
M 151 (MATH 121) Precalculus	4	-
M 171 (MATH 152) Calculus I	-	4
Foreign language+ or General Education	5	5
Total	15	15

* Semester of enrollment depends on beginning letter of students last name.

+Can be waived with two years of foreign language in high school.

Second Year	A	S
M 172 (MATH 153) Calculus II	4	-

M 273 (MATH 251) Calculus III	-	4
PHYS 211N, 212N, 213N, 214N Fundamentals of Physics	5	5
Electives or General Education	6	6
Total	15	15
Third Year	**A**	**S**
M 311, 412 Ordinary Differential Equations/Systems, Partial Differential Equations	3	3
PHYS 311 Oscillations and Waves	2	-
PHYS 321 Electronics for Scientists	3	-
PHYS 325 Optics	-	3
PHYS 330 Communicating Physics	-	3
PHYS 341-Fundamentals of Modern Physics	3	-
PHYS 375 Classical Mechanics	-	3
PHYS 446 PHYS 446 Thermodynamics and Statistical Mechanics*	(3)	-
PHYS 301 Mathematical Methods for Physical Scientists	-	3
Electives and General Education	3	-
* PHYS 446 is offered every other year and may be taken in the third or fourth year.		
Total	15	15
Fourth Year	**A**	**S**
PHYS 414-415 Electromagnetism	3	3
PHYS 444 Advanced Physics Laboratory	-	3
PHYS 446 Thermodynamics and Statistical Mechanics *	(3)	-
PHYS 461-462 Quantum Mechanics I	3	-
PHYS 480 Senior Seminar	1	-
Electives and General Education	5	-
Total	15	16
* PHYS 446 is offered every other year and may be taken in the third or fourth year.		

Bachelor of Arts with a Major in Physics and an Option in Astronomy

First Year	**A**	**S**
ASTR 131N-132N Elementary Astronomy	3	3
ASTR 134N-135N Elementary Astronomy Laboratory	1	1
CS 101or 131 Introduction to Programming	-	3
WRIT 101 (ENEX 101) Composition*	3	-
M 151 (MATH 121) Precalculus	4	-
M 171 (MATH 152) Calculus I	-	4
Foreign language+ or General Education	5	5
Total	16	16
* WRIT 101 is required unless exempted by testing. Semester of enrollment depends on beginning letter of student's last name.		
+Can be waived with two years of foreign language in high school.		
Second Year	**A**	**S**
M 172, 273 (MATH 153, 251) Calculus II, Multivariable Calculus	4	4
PHYS 211N, 212N, 213N, 214N Fundamentals of Physics with Calculus*	5	5
General Education	6	6
Total	15	15
*Student who are ready for calculus in their first year could take PHYS 211N, 212N, 213N, 214N Fundamentals of Physics with Calculusin their first year instead of a foreign language.		
Third Year	**A**	**S**
ASTR 351 Planetary Science or ASTR 362 Observational Astronomy*	2-3	-
ASTR 353 Galactic Astrophysics and Cosmology*	-	3
M 311 (MATH 311) Ordinary Differential Equations/ Systems	3	-
PHYS 301 Mathematical Methods for Physical Scientists	-	3
PHYS 325 Optics	-	3
PHYS 311 Oscillations and Waves	2	-
PHYS 330 Communicating Physics	-	3
PHYS 341 Fundamentals of Modern Physics	3	-

General Education or electives	3-4	3
Total	15	15

Fourth Year	A	S
ASTR 363-364 Stellar Astronomy and Astrophysics*	3	3
PHYS 375 Classical Mechanics or PHYS 461 Quantum Mechanics I or PHYS 414-415 Electromagnetism I, II	3	3
PHYS 480 Senior Seminar	1	-
General Education or electives	8	9
	15	15

*Upper-division astronomy courses can be taken in a different order, as they are offered only in alternate years.

Bachelor of Arts with a Major in Physics with an Option in Computational Physics

First Year	A	S
CS 131-132 Fundamentals of Computer Science	3	3
WRIT 101 (ENEX 101) College Writing I*	3	-
M 171, 172 (MATH 152-153) Calculus I, II	4	4
PHYS 211N, 212N, 213N, 214N Fundamentals of Physics with Calculus	5	5
General Education	-	3
Total	15	15

* Semester of enrollment depends on beginning letter of student's last name.

Second Year	A	S
CS 241 Data Structure	4	-
M 225 (MATH 225) Introduction to Discrete Math	3	-
M 273 (MATH 251) Multivariable Calculus	-	4
PHYS 301 Mathematical Methods for Physical Scientists	-	3
PHYS 311 Oscillations and Waves	2	-
PHYS 331 Introduction to Computational Physics #	(3)	-
PHYS 341 Fundamentals of Modern Physics	3	-
Foreign language+ or General Education	-	5
General Education or electives	-	0-3
Total	15	15

PHYS 331 is offered every other year and may be taken in the third or fourth year.

+Can be waived with two years of foreign language in high school.

Third Year	A	S
CS 242 Programming Languages	-	4
CS 281 Computer Architecture and Assembly Language Programming	3	-
M 311 (MATH 311) Ordinary Differential Equations/Systems	3	-
M 325 (MATH 325) Discrete Math II	-	3
PHYS 321 Electronics for Scientists*	3	-
PHYS 331 Introduction to Computational Physics #	(3)	-
PHYS 375 Classical Mechanics	-	3
General Education or electives	3-6	6
Total	15	16

PHYS 331 is offered every other year and may be taken in the third or fourth year.

Fourth Year	A	S
CS 332 Algorithms	3	-
CS 415E Computers, Ethics, and Society*	-	3
PHYS 414-415 Electromagnetism*	3	3
PHYS 480 Senior Seminar	1	-
General Education or electives	8	9
Total	15	15

* CS and PHYS courses marked with * are recommended. Other courses in physics and computer science can be substituted for them.

Requirements for a Minor in Astronomy

To earn a minor in astronomy the student must complete PHYS 111N-113N-112N-114N or 211N-212N-213N-214N; ASTR 131N- 132N (ASTR 134N-135N strongly recommended); and eight credits from ASTR 351, 353, 362, or 363-364. (Mathematics prerequisites for the

astronomy minor are M171, 172, and 273 (MATH 152, 153, and 251)).

Requirements for a Minor in Physics

To earn a minor in physics the student must complete PHYS 111N-113N-112N-114N or 211N-212N-213N-214N; 301, 311, and 375; and six credits from PHYS 325, 341, 414, 415, 446, 461 or 462. (Mathematics prerequisites for the physics minor are M 171, 172, 273, and 311 (MATH 152, 153, 251, and 311)).

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Astronomy (ASTR)

U 131N Elementary Astronomy I 3 cr. Offered autumn. Prereq., high school algebra and geometry. An introduction to historical and solar system astronomy.

U 132N Elementary Astronomy II 3 cr. Offered spring. Prereq., high school algebra and geometry. An introduction to stars, stellar evolution, galaxies, and the universe.

U 134N Elementary Astronomy Laboratory I 1 cr. Offered autumn. Prereq. or coreq., ASTR 131N Laboratory exercises in observational and solar system astronomy.

U 135N Elementary Astronomy Laboratory II 1 cr. Offered spring. Prereq. or coreq., ASTR 132N. Laboratory exercises in stellar and galactic astronomy.

U 142 The Evolving Universe: Theories and Observations in Modern Astronomy 4 cr. Offered spring. Prereq., M 151 (MATH 121) or equiv. Overview of recent developments in planetary system formation, stars, galaxies, and cosmology. Some astronomical observing required outside of normal class hours.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

U 198 Internship Variable cr. (R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 351 Planetary Science 3 cr. Offered autumn even-numbered years. Prereq., PHYS 211N-213N or 111N-113N and M 162 or 171 (MATH 150 or 152). Same as GEO 317 (GEOS 309). Physical and geological characteristics of planets, satellites, asteroids, comets, and meteoroids, with an emphasis on comparative planetology.

UG 353 Galactic Astrophysics and Cosmology 3 cr. Offered spring odd-numbered years. Prereq., ASTR 132N, PHYS 212N-214N, M 273 (MATH 251). The nature of the Milky Way galaxy and other galaxies, galactic evolution, the large scale structure of the universe, active galaxies and quasars, and cosmology, including the early universe.

UG 362 Observational Astronomy 2 cr. Offered autumn even-numbered years. Prereq., ASTR 132N, PHYS 212N-214N. Telescopes and instrumentation for the determination of the positions, brightness, colors and other properties of stars; particular attention to photoelectric photometry. Includes observational and computational problems.

UG 363 Stellar Astronomy and Astrophysics I 3 cr. Offered autumn odd-numbered years. Prereq., ASTR 132N, M 273 (MATH 251), and PHYS 212N-214N; PHYS 341 recommended. Detailed application of physical laws to determine the nature of the stars; analysis of stellar spectra and atmospheres; solar astrophysics; structure of stars and their evolution.

UG 364 Stellar Astronomy and Astrophysics II 3 cr. Offered spring even-numbered years. Prereq., ASTR 363. Continuation of ASTR 363.

U 395 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr. (R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

Physics (PHYS)

U 111N Fundamentals of Physics I 4 cr. Offered autumn and spring. prereq., M 122 or 151 (MATH 112 or 121) or equivalent, and

prereq. or coreq. PHYS 113N. Mechanics, sound, and heat. For non-physical science majors. This course satisfies the lecture portion of medical school requirements in general physics. Credit not allowed for both PHYS 111N-112N and 211N-212N.

U 112N Fundamentals of Physics II 4 cr. Offered autumn and spring. prereq. PHYS 111N and prereq. or coreq., PHYS 114N. Electricity, magnetism, light, and modern physics. For non-physical science majors. This course satisfies the lecture portion of medical school requirements in general physics. Credit not allowed for both PHYS 111N-112N and 211N-212N.

U 113N Fundamentals of Physics Laboratory I 1 cr. Offered autumn and spring. Prereq. or coreq., PHYS 111. mechanics, sound, and heat. For non-physical science majors. This course satisfies the laboratory portion of medical school requirements in general physics. Credit not allowed for both PHYS 113N-114N and 213N-214N.

U 114N Fundamentals of Physics Laboratory II 1 cr. Offered autumn and spring. Prereq., PHYS 113N, prereq, or coreq., PHYS 112N. Electricity, magnetism, light and modern physics. For non-physical science majors. This course satisfies the laboratory portion of medical school requirements in general physics. Credit not allowed for both PHYS 113N-114N and 213N-214N.

U 141N Relativity: From Galileo to Einstein and Beyond 3 cr. Offered spring. Prereq., working knowledge of high school physics and high school calculus, or consent of instr. Modern theoretical study of space, time, the principle of relativity, and its implications. Analysis of apparent paradoxes, and applications to particle physics.

U 175 Introduction to Engineering 3 cr. Offered autumn. Prereq. or coreq., M 151 (MATH 121) or equivalent. An introduction to engineering calculations, problem solving, and design. Students are taught to solve and present engineering problems on computers using spreadsheet and graphic software (AutoCAD). In addition, there will be discussions on engineering failures and engineering ethics. NOTE: This course may NOT be counted toward the Physics major.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship Variable cr. (R-6) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 211N Fundamentals of Physics with Calculus I 4 cr. Offered autumn. Prereq. or coreq., PHYS 213N and M 171 (MATH 152) or equiv. This course satisfies the lecture portion of medical and technical school requirements in general physics. Mechanics, fluids, waves and sound. Credit not allowed for both PHYS 211N-212N and 111N-113N-112N-114N.

U 212N Fundamentals of Physics with Calculus II 4 cr. Offered spring. Prereq., PHYS 211N, PHYS 214N, and prereq. or coreq., M 172 (MATH 153) or equivalent. This course satisfies the lecture portion of medical and technical school requirements in general physics. Heat, electricity, magnetism, and light. Credit not allowed for both PHYS 211N-212N and 111N-113N-112N-114N.

U 213N Physics Laboratory I with Calculus 1 cr. Offered autumn. Coreq., PHYS 211N. This course satisfies the laboratory portion of medical and technical school requirements in general physics. Mechanics, fluids, waves, and sound. Credit not allowed for both PHYS 213N-214N and 111N-113N-112N-114N.

U 214N Physics Laboratory II with Calculus 1 cr. Offered spring. Prereq., PHYS 211N, coreq., PHYS 212N. This course satisfies the laboratory portion of medical and technical school requirements in general physics. Heat, electricity, magnetism, and light. Credit not allowed for both PHYS 213N- 214N and 111N-113N-112N-114N.

U 251 Laboratory Arts 1 cr. (R-2) Offered intermittently. Prereq., PHYS 212N-214N and upper-division standing in physics. Elements of glass blowing, machine shop practice and electronic construction techniques.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 301 Mathematical Methods for Physical Scientists 3 cr. Offered spring. Prereq., M 273 (MATH 251); coreq., PHYS 212N-214N. Selected topics from applied linear algebra, ordinary and partial differential equations, vector analysis, complex variables, and Fourier series. Applications to classical mechanics, electromagnetism, and quantum mechanics.

U 311 Oscillations and Waves 2 cr. Offered fall. Prereq., PHYS 212N-214N or 112N-114N; Prereq. or coreq. M 273 (MATH 251). Detailed study of oscillations and waves at the intermediate level, to develop physical intuition and mathematical skills needed for analyzing a wide range of periodic phenomena encountered in physics.

U 321 Electronics for Scientists 3 cr. Offered autumn. Prereq., PHYS 212N-214N or PHYS 113N-114N. Laboratory exercises in the techniques of analog and digital electronics, including circuit design, construction, and measurement. Recommended for student who perform laboratory work in any experimental science.

U 325 Optics 3 cr. Offered spring. Prereq., PHYS 311. Intermediate level study of light and optics, including geometrical optics, wave optics, optical instruments, coherence, polarization, and special topics.

UG 330 Methods of Communicating Physics 3 cr. Offered spring even-numbered years. Prereq., PHYS 212N-214N or PHYS 112N-114N. Oral and written communication skills in physics, to include teaching high school and college physics, presenting seminars, and writing technical and non-technical physics articles.

U 331 Introduction to Computational Physics 3 cr. Offered autumn even-numbered years. Prereq., PHYS 212N-214N; coreq., any upper-division PHYS course (301 or higher). Solution of advanced problems in physics using computational methods. Students will learn a variety of numerical methods, including FORTRAN programming techniques.

UG 341 Fundamentals of Modern Physics 3 cr. Offered autumn. Prereq., one year of college physics; coreq., M 273 (MATH 251). Includes historical background for development of modern physics and an introduction to quantum mechanics, atomic and nuclear physics. Credit not allowed for graduate degree in physics.

U 375 Classical Mechanics 3 cr. Offered spring. Prereq., PHYS 301, M 311. Topics in classical mechanics at the intermediate level, emphasizing Lagrangian and Hamiltonian dynamics.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Honors Physics Variable cr. (R-6) Offered intermittently. Prereq., consent of instr. Independent research in topics of current interest in physics.

UG 414 Electromagnetism I 3 cr. Offered autumn. Prereq, PHYS 301. Electricity and magnetism at the intermediate level.

UG 415 Electromagnetism II 3 cr. Offered spring. Prereq., PHYS 414. Continuation of PHYS 414. Electricity and magnetism at the intermediate level.

U 444 Advanced Physics Laboratory 3 cr. Offered spring. Prereq., PHYS 341 or equiv., PHYS 325 or equiv.; PHYS 321 suggested but not required. Advanced experiments in classical and modern physics, including optics, spectroscopy, laser science, atomic, nuclear, and particle physics, Data analysis techniques for experimental scientists. Recommended for students entering graduate school in any experimental science.

UG 446 Thermodynamics and Statistical Mechanics 3 cr. Offered autumn odd-numbered years. Prereq., PHYS 341; coreq., M 311. Topics in thermodynamics and statistical mechanics.

UG 461 Quantum Mechanics I 3 cr. Offered autumn. Prereq., PHYS 311, PHYS 341; prereq. or coreq., M 311. Introduction to quantum mechanics. Topics include Schroedinger equation, piecewise constant potential, harmonic oscillator, hydrogen atom, angular momentum theory, electron spin.

UG 462 Quantum Mechanics II 3 cr. Offered spring. Prereq., PHYS 461 or consent of instr. Advanced topics in quantum mechanics including linear vector spaces and Dirac notation, quantum dynamics, time-dependent perturbation theory, and scattering theory.

UG 463 Selected Topics in Modern Physics 3 cr. (R-6) Offered intermittently. Prereq., PHYS 461 or consent of instr. Studies of a topic in advanced modern physics including nuclear physics, solid state physics, and quantum optics. The topic chosen will vary according to instructor.

UG 480 Senior Seminar 1 cr. Offered autumn. Prereq., junior or senior standing in physics. Each student will present a seminar on research performed prior to or during their senior year.

U 493 Omnibus Variable cr. (R-9) Offered intermittently. University omnibus option for independent work. See index.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 597 Research 1-6 cr. (R-9) Offered intermittently. Prereq., consent of instr. Research in selected physics topics.

G 598 Internship Variable cr. (R-9) Offered intermittently. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 Thesis Variable cr. (R-9) Offered intermittently. Thesis preparation and execution.

Faculty

Professors

- James P. Jacobs, Ph.D., University of Washington, 1991
- Eijiro Uchimoto, Ph.D., University of Wisconsin, 1988
- Andrew S. Ware, Ph.D., University of California, San Diego, 1992 (Chair)

Associate Professor

- Daniel B. Reisenfeld, Ph.D., Harvard University, 1998

Assistant Professors

- Nate McCrady, Ph.D., University of California - Berkeley, 2005
- Michael L. Schneider, Ph.D., University of Wisconsin, 2003

Research Assistant Professor/Adjunct Assistant Professor

- Maureen A. McGraw, Ph.D., University of California, Berkeley, 1996

Adjunct Associate Professors

- David E. Andrews, Ph.D., Cornell University 1972
- Bradford L. Halfpap, Ph.D., Arizona State University, 1987

Adjunct Assistant Professor

- Jack Dostal, Ph.D., Montana State University, 2008
- John Williams, Ph.D., University of Washington, 2002

Lecturer/Research Assistant Professor

- Diane S. Friend, M.S., The University of Montana, 2000

Adjunct Lecturer

- Julie Schneider, M.S., The University of Colorado, 2007

Emeritus Professors

- Richard J. Hayden, Ph.D., University of Chicago, 1948
- Mark J. Jakobson, Ph.D., University of California, Berkeley, 1951
- Randolph H. Jeppesen, Ph.D., New Mexico State University, 1980

Department of Political Science

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

James J. Lopach, Chair

From the time of Plato and Aristotle, the study of politics has been concerned with how human communities use power to shape the lives of individuals. Students of politics observe the world's political institutions, from local governments to international organizations. They are interested in the quality of political leadership, the values which underlie public affairs, the political and legal processes used to make governmental decisions, and the wisdom of policies. Politics is the continuing dialogue about the best way for communities to govern themselves.

The department offers a varied undergraduate curriculum covering domestic, foreign, and international politics. By meeting requirements outlined below, a student may earn a bachelor degree in political science or in political science- history; a minor in political science; or a bachelor degree in political science with an option in American politics, international relations and comparative politics, public administration, or public law. A Master of Arts degree in political science and a Master of Public Administration degree are also offered.

The scope of the faculty's interest and research is wide. They bring special insights gained through study and residence in Canada, England, Western Europe, the former Soviet Union, Africa, India, the Far East and Latin America, as well as in Montana and Washington, D.C. All members of the department teach introductory and advanced courses.

Courses offered in the department are designed to: (1) assist students to secure a broad liberal education and to equip them with the foundations for American citizenship; (2) provide undergraduate preparation for those students who propose to continue study at the

graduate level with the ultimate goal of college teaching and research; (3) offer a broad program of training for those students who plan careers in government or politics; 4) assist in preparing students for careers in teaching at both the elementary and secondary levels; (5) provide a sound background for those students who intend to enroll in law and other professional schools.

The major fields of political science are (1) American government and politics with national, state and local government, politics, and public law as sub-fields; (2) public administration; (3) political theory; (4) comparative government; (5) international relations, organization and law. Majors are eligible for membership in Pi Sigma Alpha, the national political science honorary and are active in student political activities. The Department of Political Science secures a number of legislative and administrative internships in state and local government each year. Internships and other learning opportunities in Washington, D.C., are also available.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

All majors must meet the Upper-division Writing Expectation by successfully completing PSCI 400.

Political Science Major: Students majoring in political science must take a minimum of 36 credits of political science, including 210S (PSC 100S), 220S (PSC 120S), 230X (PSC 130E), 250E(PSC 150E); and one 300-400 level course in four of the five major fields listed above. Twenty-one of the 36 credits must be in upper-division courses. No more than 7 credits of independent study (PSCI 492 (PSC 496)) and internship (PSCI 498 (PSC 498)) combined may count toward the 36 required credits. In addition, no more than 15 total credits in special topics courses (e.g., PSCI 320 (PSC 381), 391 (PSC 395)) may count toward the 36 required credits.

Political Science Major with an Option in American Politics: A student may earn a major in political science with an option in American politics by completing 39 credits in political science, including: 210S (PSC 100S), 220S (PSC 120S), 230X (PSC 130E), 250E (PSC 150E); one 300- 400 level course in four of the five major fields of political science listed previously; and five of the following courses: 341, 342, 343, 352, 344 (PSC 364), 346 (PSC 366), 370, 340 (PSC 383), 347 (PSC 387), 468, 440 (PSC 483). Courses used to complete the upper-division requirement of this option also fulfill the 300-400 level requirement in the respective major fields of political science.

Political Science Major with an Option in International Relations and Comparative Politics: A student may earn a major in political science with an option in international relations and comparative politics by completing 39 credits in political science, including: 210S (PSC 100S), 220S (PSC 120S), 230X (PSC 130E), 250E (PSC 150E); one 300- 400 level course in four of the five major fields of political science listed previously; and three courses from each of the following groups: a) 322 (PSC 321H), 325, 326, 327, 328, 329, 320 (PSC 381), 421 (PSC 420), 420 (PSC 481); and b) 335, 336, 337, 330 (PSC 382), 431, 433, 463, 432 (PSC 430) 430 (PSC 482). Strongly recommended are: a) minimum of two years of foreign language study; b) internship/study-abroad program. Courses used to complete the upper-division requirement of this option also fulfill the 300-400 level requirement in the respective major fields of political science.

Political Science Major with an Option in Public Administration: A student may earn a major in political science with an option in public administration by completing a minimum of 39 credits in political science, including: 210S (PSC 100S), 220 (PSC 120S), 230X (PSC 130E), 250E (PSC 150E); one 300-400 level course in four of the five major fields of political science listed previously; 361, and three of the following courses: 344 (PSC 364), 360 (PSC 385), 462 (PSC 460), 461, 463, 466, 467, 468, 460 (PSC 485). A legislative or administrative internship is strongly recommended. Courses used to complete the upper division requirement of this option also fulfill the 300-400 level requirement in the respective major fields of political science.

Political Science Major with an Option in Public Law: A student may earn a major in political science with an option in public law by completing a minimum of 39 credits in political science, including 210S (PSC 100S), 220 (PSC 120S), 230X (130E), 250E (PSC 150E); one 300-400 level course in four of the five major fields of political science listed previously; 370, and four of the following courses: 352, 421 (PSC 420), 433, 462 (PSC 460), 461, 471, 474 (PSC 472). Courses used to complete the upper-division requirement of this option also fulfill the 300-400 level requirement in the respective major fields of political science.

Teacher Preparation in Government

Students who want to be licensed to teach civics and government at the middle and high school level must complete the BA degree requirements in political science (no option required). They also must complete a teaching minor in a second field of their choice and the professional licensure program in the School of Education. Students may also earn a teaching minor in government. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of these licensure requirements.

Teacher Preparation in Government and History

Students who want to be licensed to teach government, history, and one additional social science at the middle and high school level must complete the BA degree requirements for the combined academic major in political science and history. In completing this combined degree, students simultaneously satisfy the Comprehensive Social Science teaching major and the professional licensure program in the School of Education. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of this licensure program.

Suggested Course of Study

Political Science Major:

First Year	A	S
PSCI 210S (PSC 100S) Introduction to American Government	3	-
PSCI 220S (PSC 120S) Introduction to Comparative Government	-	3
Seven General Education courses	12	9
One elective	-	3
	15	15
Second Year	**A**	**S**
PSCI 230X (PSC 130E) Introduction to International Relations	3	-
PSCI 250E (PSC 150E) Introduction to Political Theory	-	3
Seven General Education courses	12	9
One elective	-	3
	15	15
Third Year	**A**	**S**
Four PSCI 300-400-level courses	6	6
Six electives	9	9
	15	15
Fourth Year	**A**	**S**
Four PSCI 300-400-level courses	6	6
Six electives	9	9
	15	15

Political Science with American Politics Option:

First /Second Year: same for all options

Third Year	A	S
Three 300-400-level American Politics courses	6	3
Two other 300-400-level PSCI courses	3	3
Five electives	6	9
	15	15
Fourth Year	**A**	**S**
Two 300-400-level American Politics courses	3	3
Two other 300-400-level PSCI courses	3	3
Six electives	9	9
	15	15

Political Science with International Relations and Comparative Politics Option:

First/Second Year: same for all options

Recommend beginning foreign language study as part of General Education courses.

Third Year	A	S
Three 300-400-level International and Comparative courses	6	3
Two other 300-400-level PSCI courses	3	3
Five electives	6	9
	15	15
Fourth Year	**A**	**S**
Three 300-400-level International and Comparative courses	6	3
One other 300-400-level PSCI course	3	-
Six electives	6	12
	15	15

Political Science with Public Administration Option:

First/Second Year: same for all options

Third Year	A	S
PSCI 361 Public Administration	3	-
One 300-400-level public administration course	-	3
Two other 300-400-level PSCI courses	3	3

Six electives	9	9
	15	15

Fourth Year	A	S
One 300-400-level public administration course	3	-
PSCI 462 (PSC 460) Human Resource Management	-	3
Three other 300-400-level PSCI courses	6	3
Five electives	6	9
	15	15

Political Science with Public Law Option:

First/Second Year: same for all options

Third Year	A	S
PSCI 370 Courts and Judicial Politics	-	3
Two 300-400-level Public Law courses	3	3
Two other 300-400-level PSCI courses	3	3
Five electives	9	6
	15	15

Fourth Year	A	S
Two 300-400-level Public Law courses	3	3
Two other 300-400-level PSCI courses	3	3
Six electives	9	9
	15	15

Requirements for a Minor

To earn a minor in political science the student must complete a minimum of 21 credits of political science, including 210S (PSC 100S), 220S (PSC 120S), 230X (PSC 130E), 250E (PSC 150E); and three additional 300-400-level courses in three of the five major fields of political science listed previously. Nine of the 21 credits must be in 300-400-level courses.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Political Science (PSCI)

U 191 (PSC 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 192 (PSC 196) Independent Study 1-6 cr. (R-6) Offered intermittently.

U 199 Lower-Division Elective Variable cr.

U 210S (PSC 100S) Introduction to American Government 3 cr. Offered every term. Not open to senior level political science majors except with consent of instructor. Constitutional principles, structures, and the political processes of the national government.

U 220S (PSC 120S) Introduction to Comparative Government 3 cr. Offered every term. Not open to senior level political science majors except with consent of instr. Introduction to the basic political concepts, themes, values and dilemmas as they apply to the world's diverse societies and cultures.

U 230X (PSC 130E) Introduction to International Relations 3 cr. Offered every term. Not open to senior level political science majors except with consent of instr. Review of the evolution of the nation-state system and survey of contemporary international actors, issues and forces for stability and change.

U 250E (PSC 150E) Introduction to Political Theory 3 cr. Offered spring. Analysis of the various attempts (from Plato to Marx) to explain, instruct, and justify the distribution of political power in society. Emphasis is placed upon those theories whose primary concern is to define the nature of the "good" society.

U 300 Writing in Political Science 1 cr. (R-3) Offered every term. Coreq., any upper-division political science course. Designed for students seeking an approved writing course or desiring additional experience in writing.

U 320 (PSC 381)) Special Topics: Comparative Politics Variable cr. (R- 6) Offered intermittently. Experimental or one-time offerings in

the subfield of comparative politics.

U 322 (PSC 321H) Politics of Europe 3 cr. Offered autumn. Prereq., PSCI 210 (PSC 100S) and junior standing or consent of instr. Comparative analysis of parliamentary forms of government and politics with emphasis on Great Britain, France and Germany.

U 324 Sustainable Climate Policies: China and USA 3 cr. Offered every other year. Prereq., CCS 203 or consent of instructor. Explores historic, current, and future greenhouse-gas emissions of the United States and China, reasons why both are the two largest C02 emitters, and prevailing national and subnational government policies and nongovernmental actions that affect emissions mitigation and adaptation.

UG 325 Politics of Latin America 3 cr. Offered autumn. Latin American politics from both historical and contemporary perspectives.

UG 326 Politics of Africa 3 cr. Offered autumn. Prereq., junior standing or consent of instr. Development of the political systems of sub-Saharan Africa. Analysis of the interaction between African and Western social, political, and economic forces. Consideration of African political thought.

UG 327 Politics of Mexico 3 cr. Offered spring. Prereq., junior standing or consent of instr. A review of contemporary politics of Mexico from the Revolution to the present.

UG 328 Politics of China 3 cr. Prereq., junior standing or consent of instr. Institutions and political development in China.

UG 329 Politics of Japan 3 cr. Offered autumn. Prereq., junior standing or consent of instr. Institutions and political development in Japan.

U 330 (PSC 382) Special Topics: International Relations Variable cr. (R-6) Offered intermittently. Experimental or one-time offerings in the subfield of international relations.

U 334 (PSC 333) International Security 3 cr. Offered autumn. Prereq., junior standing or consent of instr. Theories about the causes, conduct, and consequences of war. The historical record of war from World War I to the present. Contemporary security issues, including terrorism, proliferation, disarmament, and the rise and fall of great powers

UG 335 American Foreign Policy 3 cr. Prereq., PSCI 230X (PSC 130E) and junior standing or consent of instr. American diplomatic, economic and defense policies since World War II and their significance in international politics.

UG 336 The Causes of War 3 cr. Prereq., junior standing or consent of instr. A colloquium to clarify the definitional and philosophical problems besetting the search for the causes (and the prevention) of war.

U 337 Model United Nations 3 cr. Offered autumn. Prereq., junior standing or consent of instr. History and structure of the UN. Contemporary global problems, and the UN's role in addressing them. Class has both active learning and service learning dimensions. Students plan, organize and run the annual Montana Model UN high school conference.

U 340 (PSC 383) Special Topics: American Government Variable cr. (R-6) Offered intermittently. Experimental or one-time offerings in the subfield of American government.

UG 341 Political Parties and Elections 3 cr. Offered spring even-numbered years. Prereq., PSCI 210S (PSC 100S). Political party organization, nominations, campaigns and elections in the United States.

UG 342 Media and Public Opinion 3 cr. Offered intermittently. Prereq., PSCI 210S (PSC 100S). Study of the role played by mass media in shaping public opinion, policy agendas, and governmental institutions.

UG 343 Politics of Social Movements 3 cr. Offered intermittently. Prereq., junior standing or consent of instr. The role of social movements in shaping the politics of power, reflected in public policy, electoral politics, relations of class, race, and gender, and people's understanding of the world and their place in it.

UG 344 (PSC 364) State and Local Government 3 cr. Offered intermittently. Prereq., PSCI 210S (PSC 100S) and junior standing. Analysis of American state and local government with emphasis on governmental organization, intergovernmental relations, local government powers, and self-government charters. Special attention to Montana.

UG 346 (PSC 366) The American Presidency 3 cr. Offered autumn. Prereq., PSCI 210S (PSC 100S). The constitutional foundation and evolution of the executive branch, the structure of the office and executive functions and powers.

UG 347 (PSC 387) US Congress 3 cr. Offered spring. Prereq., PSCI 210S (PSC 100S). Structure, processes, and politics of U.S. Congress and state legislatures. During legislative years, special emphasis will be devoted to the Montana Legislature.

U 350 (PSC 384)) Special Topics: Political Theory Variable cr. (R-6) Offered intermittently. Experimental or one-time offerings in the subfield of political theory.

UG 352 American Political Thought 3 cr. Offered spring. Prereq., PSCI 250X (PSC 150E) or consent of instr. The study of representative political thinkers is used to illustrate the theme of American democracy as a multifaceted experiment with self-government.

UG 354 Contemporary Issues in Political Theory 3 cr. (R-6) Offered intermittently in autumn. Prereq., PSCI 250X (PSC 150E) or consent of instr. Topics variable. Research and assessment of current political and social issues through the study of a representative text and related literature.

UG 355 Theories of Civil Violence 3 cr. Offered autumn. Prereq., junior standing or consent of instr. Survey of the theoretical literature on civil violence, its causes and consequences. Analysis of violence as a political technique and of counter measures designed to prevent or control it.

U 360 (PSC 385) Special Topics: Public Administration or Policy Variable cr. (R-6) Offered intermittently. Experimental or onetime offerings in the subfield of public administration or policy.

U 361 Public Administration 3 cr. Offered autumn. Prereq., PSCI 210S (PSC 100S). Legal and institutional setting of the administrative system; dynamics of organization and processes of public management.

U 370 Courts and Judicial Politics 3 cr. Offered spring. Prereq., PSCI 210S (PSC 100S) and junior standing. Introduction to American courts with emphasis on judicial policy making.

U 391 (PSC 395) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 400 Advanced Writing in Political Science 1 cr. (R-3) Offered every term. Coreq., any upper-division political science course. Designed for political science students to satisfy their upper-division writing expectation for the major or for students desiring additional experience in writing.

UG 401 Issues in Nonprofit Administration: Human Resources 2 cr. On-line course offered every year. Addresses human resource needs specific to nonprofits, including payroll, employment law, and other legal issues.

UG 402 Issues in Nonprofit Administration: Volunteer Management 2 cr. On-line course offered every year. Addresses the process of recruiting and retaining volunteers at a nonprofit organization, including case studies and hand-on projects.

UG 403 Issues in Nonprofit Administration: Program Planning 2 cr. On-line course offered every year. Explores program planning for nonprofits from top-to-bottom, including needs assessment and evaluation.

UG 404 Issues in Nonprofit Administration: Ethics and Legal Issues 2 cr. On-line course offered every year. Explores specific ethical dimensions and the necessity of accountability in nonprofit work.

UG 405 Issues in Nonprofit Administration: Advocacy and Public Policy 2 cr. On-line course offered every year. Explores and reviews the role of nonprofit organizations in advocacy.

UG 420 (PSC 481) Special Topics: Comparative Politics Variable cr. (R-9) Offered intermittently. Experimental or one-time offerings in the subfield of comparative politics.

UG 421 (PSC 420) Comparative Legal Systems 3 cr. Prereq., junior standing. Emphasis on non-western approaches to law, specifically Islamic law and the legal systems of East Asia. Focus on constitutional law, judicial process, civil liberties, and law enforcement and corrections.

UG 422 Revolution and Reform in China 3 cr. Offered fall. A history of the rise and fall of the Maoist regime and the complicated impact of the epochal post Mao reform movement.

UG 430 (PSC 482) Special Topics: International Relations Variable cr. (R-9) Offered intermittently. Experimental or one-time offerings in the subfield of international relations.

UG 431 Politics of Global Migration 3 cr. Prereq., junior standing or consent of instr. Exploration of the elective and forced migration of peoples within countries and across national boundaries. Geographical coverage includes Asia, North and Central America, Africa, and Europe. Attention to policy and gender issues surrounding economic and political migration.

UG 432 (PSC 430) Inter-American Relations 3 cr. Offered intermittently. Prereq., PSCI 325 or consent of instr. Examination of problems, issues and concepts in the international relations of nations of the western hemisphere.

UG 433 International Law and Organizations 3 cr. Offered spring. Prereq., junior standing or consent of instr. Introduction to classical principles and contemporary issues of the law of nations and the organizations created to facilitate international cooperation

UG 440 (PSC 483) Special Topics: American Government Variable cr. (R-9) Offered intermittently. Experimental or one-time offerings in the subfield of American government.

UG 444 American Political Participation 3 cr. Offered intermittently. Prereq., PSCI 210S (PSC 100S). Examination of the individual and institutional factors affecting voter turnout, the influences on voter decision making, and non-electoral forms of participation in the United States.

UG 450 (PSC 484) Special Topics: Political Theory Variable cr. (R-9) Offered intermittently. Experimental or one-time offerings in the subfield of political theory.

UG 451 Ancient and Medieval Political Philosophy 3 cr. Offered autumn. Prereq., PSCI 250E (PSC 150E) or consent of instr. The classical western tradition, beginning with the ancient Greeks, spanning the Christian era, and ending with the high Renaissance period. Examination of the political ideas/values of these different times, exploring broad questions concerning human nature, the origins of the state, and the meaning of "legitimate" authority.

UG 452 (PSC 450) Utopianism and Its Critics 3 cr. Offered intermittently. Examination of classic and contemporary utopias, from Plato's *Republic* to Barbara Goodwin's *Justice by Lottery* as well as their critics.

UG 453 Modern Political Theory 3 cr. Offered autumn. Prereq., PSCI 250E (PSC 150E) or consent of instr. Analysis of Hobbes, Locke, Rousseau, Burke, James and John Stuart Mill, Marx and Lenin with regard to their "modern" views of the purpose(s) of political inquiry, the nature of citizenship and popular sovereignty. Particular attention to contemporary implications of ideas.

UG 460 (PSC 485) Special Topics: Public Administration or Policy Variable cr. (R-9) Offered intermittently. Experimental or onetime offerings in the subfield of public administration or policy.

UG 461 Administrative Law 3 cr. Offered autumn. Prereq., PSCI 210S (PSC 100S) and junior standing. The legal foundations of public administration with emphasis on legislative delegation, administrative rulemaking and adjudication, judicial review, and public participation.

UG 462 (PSC 460) Human Resource Management 3 cr. Offered spring. Study of the essential elements of human resource management, including analysis and evaluation of work, and the selection, management, and evaluation of public employees.

UG 463 Development Administration 3 cr. Offered autumn. Prereq., junior standing or consent of instr. Study of the functions and processes of public administration in the Third World. Focus on alleviating poverty and underdevelopment. Includes project design and development planning activities.

UG 466 Nonprofit Administration and Public Service 3 cr. Offered autumn. Investigation of the aspects involved in nonprofit management and public service and the complexity of the role of nonprofit organizations in society.

UG 467 Advanced Nonprofit Administration 3 cr. Offered spring. Prereq., PSCI 466. In-depth exploration of the special issues related to nonprofit management including fund raising, budgeting, and program planning.

UG 468 Public Policy Cycle 3 cr. Offered intermittently. Follows specific policy problem through each stage of the public policy cycle, including how policy is formulated in the legislative branch, implemented by the executive branch and reviewed by the judicial branch.

UG 471 American Constitutional Law 3 cr. Offered autumn. Prereq., junior standing or consent of instr. Survey of U.S. Supreme Court's interpretation of the U.S. Constitution's provisions on separation of powers, federalism, civil rights, and civil liberties.

UG 474 (PSC 472)) Civil Rights Seminar 3 cr. Offered spring. Prereq., PSCI 471 or consent of instr. Intensive analysis, discussion, and writing about key U.S. Supreme Court constitutional cases on expression, religion, privacy, criminal justice, and discrimination.

UG 475 Tribal Sovereignty 3 cr. Offered alternate years. An examination of the evolution of tribal governments from a historical and political perspective. Particular attention is devoted to the issues of tribal sovereignty and tribal state conflicts.

UG 491 (PSC 495) Special Topics in Political Science 1-3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of new courses, or one-time offerings of current topics.

UG 492 (PSC 496) Independent Study in Political Science 1-3 cr. (R-6) Offered every term. Prereq., nine credits in political science courses numbered at the 300- or 400-level and consent of instr. Research in fields appropriate to the needs and objectives of the individual student.

U 493 Omnibus Variable cr. (R-15) Offered every term. Prereq., consent of instr. Independent work under the University omnibus option. See index.

U 498 Internship 1-6 cr. Offered every term. Prereq., sophomore standing and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. Offered credit/no credit only. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 501 Public Administration 3 cr. Offered autumn. Advanced analysis of processes of public management; examination of public administrators' involvement in policy making.

G 503 Policy Analysis 3 cr. Offered spring. The role of public administrators in the policymaking process with emphasis on methods of policy analysis and program evaluation.

G 504 Organization Theory 3 cr. Offered spring. Concepts and theories relevant to the administration of complex organizations, including administrative structure, behavior, process and functions.

G 505 Budgeting and Finance 3 cr. Offered spring. Seminar focusing on principles of public finance and analysis of budgeting as a primary tool of public sector management.

G 520 Comparative Government 3 cr. Offered autumn. Prereq., consent of instr. Concentrated reading and examination of selected subject areas in the field of comparative government.

G 521 Globalization 3 cr. Offered spring. Prereq., senior or graduate standing or consent of instr. Critical examination of the politics of capitalism and democracy in Latin America from a variety of perspectives. Reading and discussion of key texts. Students present research that engages theoretical themes in contexts relative to their graduate work.

G 522 Human Resource Management 3 cr. Offered autumn. Study of the essential elements of human resource management, including analysis and evaluation of work, and the selection, management, and evaluation of public employees.

G 523 Administrative Law 3 cr. Offered autumn. The legal foundations of public administration with emphasis on legislative delegation, administrative rulemaking and adjudication, judicial review, and public participation.

G 524 Management Skills 3 cr. Offered spring. Focus on developing the skills required of managers in nonprofit and government organizations, such as competency in self-assessment, oral and written presentations, managing stress, communicating supportively, motivating, managing conflict, empowering and delegating, succeeding in multicultural contexts, and participating in interviews.

G 525 Strategic Planning and Leadership 3 cr. Focus on the means by which public and nonprofit agencies can carry out their missions effectively.

G 526 Issues in State Government 3 cr. Examination of the evolution and development of state governments since the founding period by focusing on the basic political institutions and a broad range of public policy issues that affect governing in the states.

G 527 Performance Measurement 3 cr. Offered intermittently. Focus on the process by which organizations routinely and systematically gather data to assess progress in achieving their goals.

G 530 International Relations 3 cr. Offered autumn. Prereq., consent of instr. Concentrated reading and examination of selected subject areas in the field of international relations.

G 540 American Government 3 cr. Offered spring. Prereq., consent of instr. Concentrated reading and examination of selected subject areas in the field of American government.

G 550 Political Theory 3 cr. Offered spring. Prereq., consent of instr. Concentrated reading and examination of selected subject areas in the field of political theory.

G 580 MA Research Design 1 cr. Selection of topic and development of research design for MA thesis.

G 586 MA Research Project 1-4 cr. (R-6) Offered every term. Prereq., consent of instructor. Offered as Credit/No Credit only.

G 594 Seminar Variable cr. (R-9) Offered intermittently. Topic varies.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6) Offered every term. Prereq., consent of instr.

G 598 Internship Variable cr. (R-6) Offered every term. Prereq., consent of instr. Offered credit/no credit only.

G 599 Thesis Variable cr. (R-6) Offered every term.

Faculty

Professors

- Jeffrey D. Greene, Ph.D., University of South Carolina, 1992
- Paul L. Haber, Ph.D., Columbia University, 1992
- Louis D. Hayes, Ph.D., University of Arizona, 1966
- Peter Koehn, Ph.D., University of Colorado, 1973
- James J. Lopach, Ph.D., University of Notre Dame, 1973 (Chair)
- Jonathan R. Tompkins, Ph.D., University of Washington, 1981 (Associate Dean)

Associate Professors

- Karen Adams, Ph.D., University of California, Berkeley, 2000
- Ramona Grey, Ph.D., University of California, Riverside, 1991

Assistant Professors

- Christopher P. Muste, Ph.D., University of California, Berkeley, 2001
- Robert P. Saldin, Ph.D., University of Virginia, 2008

Emeritus Professor

- Forest L. Grieves, Ph.D., University of Arizona, 1967

Pre-Engineering

Eijiro Uchimoto (Professor, Dept . of Physics and Astronomy), Advisor

Andrew Ware (Professor, Dept. of Physics and Astronomy) Advisor

The pre-engineering curriculum is for students planning to transfer to and accredited engineering program. Since engineering curricula differ for the different divisions of engineering, the general curriculum listed below serves only as a guide. A student planning to transfer into a particular type of engineering should look for the appropriate program guide on the Pre-engineering web site and consult with his or her advisor.

First Year	A	S
COMM 111A Intro to Public Speaking	-	3
ECNS 201S or 202S (ECON 111S or 112S) Principles of Micro/Macroeconomics	3	-
WRIT 101 (ENEX 101) Composition	3	-
M 171, 172 (MATH 152-153) Calculus I, II	4	4
PHYS 211N-212N-213N-214N Fundamentals of Physics	5	5
PHYS 175 Intro to Engineering	-	3
	17	17
Second Year	**A**	**S**
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I & II	5	5
M 273 (MATH 251) Multivariable Calculus	-	4
M 311 (MATH 311) Ordinary Differential Equations/Systems	3	-
PHYS 295 Engineering Statics	3	-
PHYS 321 Electronics for Scientists	3	-
PHYS 301 Vector Analysis	-	3
Electives	3	3
	17	15

Pre-Law

Soazig Le Bihan, Coordinator

Pre-law students are required to choose a degree major in which they will specialize. No one major best prepares students for law school and no particular course of study is a prerequisite for admission to law school. The Pre-Law Advising Committee suggests that the best preparation for law school is a broad education which ensures exposure to the varieties of thought about the social, political, economic, philosophical, and cultural forces which have shaped law and the societies it governs. Pre-law students must develop substantial skills in writing and be able to think critically and logically.

The Pre-Law Advising Committee urges students to see one of its members **as soon as they consider going to law school.** Advice on the specific character of each student's pre-law program, help in preparation for the LSAT examination, and support in admission to law school are the aims of each member of the committee.

Pre-Law Advising Committee

- Soazig Le Bihan (Assistant Professor, Philosophy): Coordinator
- Len Broberg (Professor, EVST)
- James Burfeind (Professor, Sociology)
- Casey Charles (Professor, English)

- Amanda Dawsey (Assistant Professor, Economics)
- Dan Doyle (Professor, Sociology)
- Jerry Furniss (Professor, Management)
- James Lopach (Professor, Political Science)
- Michael Mayer (Professor, History)
- Jack Morton (Professor, Management)

Pre-Nursing

Pre-Nursing Advising Program, Lommasson Center, Room 269

The pre-nursing curriculum is a two-year program which is designed to provide the basic undergraduate education needed for entry into the professional portion of a baccalaureate nursing program.

Through an arrangement with the College of Nursing at Montana State University-Bozeman, The University of Montana-Missoula offers approved prerequisite courses for prenursing students. Students who intend to pursue the Bachelor of Science in Nursing degree offered through Montana State University can complete the 15 credits of sophomore level nursing courses in Bozeman. In addition, these 15 credits of sophomore level nursing courses are currently offered through a limited option on one of MSU's "Upper Division" campuses located at Billings, Great Falls, Kalispell, and Missoula. Students may apply for acceptance into clinical nursing (junior and senior years), to one of MSU's "Upper Division" campuses, up to a year prior to placement regardless of whether or not they have been admitted to MSU. Depending upon the specific placement, students can complete the entire nursing program in Missoula. It is highly competitive to be placed into the entire program available on MSU's Upper Division campus in Missoula

A grade of "C" (2.00) or better is required in the following specific courses for admission to clinical nursing. MSU's College of Nursing does not accept C- as a passing grade in required courses. Though a grade of "C" (2.00) is minimally acceptable, students are advised to attain the highest grade average possible in these classes for placement considerations at the upper-division level. Acceptance to clinical nursing is based on the average of the grades received in required prerequisite courses at the time of application. Admission is based strictly on grade prioritization. There is a competitive component to a successful application. At a minimum, a 2.50 cumulative GPA is required. MSU general education requirements need to be satisfied prior to graduation. Due to occasional changes in the curriculum and degree requirements, it is essential to contact the pre-nursing advisor before course selection and enrollment. The following courses may not be repeated more than once regardless of where taken.

Suggested Course of Study

First Year	A	S
BIOL 110N Principles of Biology (prereq. for BIOL 312), BIOL 112 Human Form and Function I or BIOL 113 Human Form and Function	3	-
BIOL 106N Elementary Medical Microbiology	-	3
CHMY 121N-123N (CHEM 151N-152N) Intro to General Chemistry/Intro to Organic and Biochemistry	3	3
CHMY 124N (CHEM 154N) Intro to Organic and Biochemistry Laboratory	-	2
COMM 111A Introduction to Public Speaking	-	3
WRIT 101 (ENEX 101) English Composition	3	-
M 115 (MATH 117) Probability & Linear Math	3	-
PSYX 100S (PSYC 100S) Introduction to Psychology	-	4
SOCI 101S (SOC 110S) Principles of Sociology	3	-
	15	15
Second Year	**A**	**S**
BIOL 312-313 Anatomy and Physiology I & II	4	4
HHP 236 Basic Nutrition	-	3
STAT 216 (MATH 241) Statistics	-	4
PSYX 230S (PSYC 240S) Developmental Psychology	3	-
PSYX 233 (PSYC 245) Fund of Psychology of Aging	3	-
General Education	6	3
	16	14

Individual programs may differ from the suggested course of study to better fill the needs of the particular student.
Students desiring admission to other schools of nursing are encouraged to obtain a catalog from the college and, in consultation with the pre-nursing advisor, develop a plan of study tailored to meet the specific course requirements of the college of their choice. In Montana the associate of science degree in nursing (ASN) can be obtained at MSU Northern, Havre; Miles Community College, Miles City; Montana Tech of The University of Montana, Butte, Salish Kootenai College, Pablo, and Colleges of Technology in Missoula, Helena, Great Falls, and Billings6. A BSN completion program can be obtained at MSU-Northern, Havre; Montana Tech of The University of Montana, Butte, and Salish Kootenai College, Pablo. A baccalaureate degree in nursing (BSN) can be obtained at Carroll College, Helena and Montana State University, Bozeman.

Department of Psychology

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Allen Szalda-Petree, Chair

Psychology is the science of the behavior of humans and other animals. The psychologist, using scientific methods, seeks to understand the causes and purposes of behavior. Psychologists pursue their research and its application in academia, business, government, health, military and social service. The department offers the Bachelor of Arts, Master of Arts and Doctor of Philosophy degrees.

Admission Requirements

To be admitted to either option of the psychology major, a student must satisfy the following requirements:

1. completion of 30 credits overall
2. completion of 6 credits in psychology courses, including PSYX 100S.

   In addition, to be admitted to the research option of the psychology major, students also should have:

3. a minimum overall GPA of 3.0

Students who intend to major in psychology but who have not yet met the credit hour requirements are admitted to the program as pre-psychology majors. Prior to meeting the above requirements for admission pre- psychology students should go to University College in the Lommasson Center for advising.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

To earn a Bachelor of Arts degree in psychology, the student must complete one of the options. Students are not restricted to the courses listed under either option, although one option must be completed by majors.

All majors are required to earn a "C" (2.00) or better in all psychology classes taken to fulfill requirements, including the Math course.

The Upper-division Writing Expectation must be met by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Majors are required to remain in periodic contact with departmental advisors to facilitate advanced and individual program planning, to deal with impending difficulties, and as a communication channel between student and department.

Students who are particularly interested in child, adult or family development should investigate the human and family development minor. See index.

General Option

The general option is intended for students who have a major interest in psychology, but do not intend to pursue graduate training in psychology.

1. PSYX 100S Introduction to Psychology
2. PSYX 120 Research Methods I
3. PSYX 222 (PSYC 220) Psychological Statistics
4. At least two of the following:
   - PSYX 250N (PSYC 270N) Fundamentals of Biological Psychology
   - PSYX 270S (PSYC 260S) Fundamentals of Learning
   - PSYX 280S (PSYC 265S) Cognition
5. At least four of the following:
   - PSYX 230S (PSYC 240S) Child and Adolescent Development
   - PSYX 233 (PSYC 245) Adult Development and Aging
   - PSYX 340S (PSYC 330S) Abnormal Psychology
   - PSYX 360S (PSYC 350S) Social Psychology
   - PSYX 385S (PSYC 351S) Psychology of Personality
6. At least one of the following:
   - M 115 (MATH 117) Probability & Linear Mathematics
   - M 162 (MATH 150) Applied Calculus

- M 171 (MATH 152) Calculus I

7. At least four other three-credit psychology courses, not to include PSYX 292, 298, 392, 398, 493, or 499 (PSYC 296, 298, 396, 398, 493 or 499).

Research Option

The research option provides the student with an adequate foundation for graduate studies in psychology.

1. PSYX 100S Introduction to Psychology
2. PSYX 120 Research Methods I
3. PSYX 222 (PSYC 220) Psychological Statistics
4. PSYX 320 Research Methods III
5. PSYX 297 Supervised Research (minimum of 2 credits)
6. At least two of the following:
   - PSYX 250N (PSYC 270N) Fundamentals of Biological Psychology
   - PSYX 270S (PSYC 260S) Fundamentals of Learning
   - PSYX 280S (PSYC 265S) Fund of Memory & Cognition
7. At least four of the following:
   - PSYX 230S (PSYC 240S) Developmental Psychology
   - PSYX 233 (PSYC 245) Fund of Psychology of Aging
   - PSYX 340S (PSYC 330S) Abnormal Psychology
   - PSYX 360S (PSYC 350S) Social Psychology
   - PSYX 385S (PSYC 351S) Psychology of Personality
8. At least one of the following:
   - PSYX 339 (PSYC 340) Current Topics in Developmental Psychology
   - PSYX 345 (PSYC 336) Child and Adolescent Psychological Disorders
   - PSYX 348 (PSYC 385) Psychology of Family Violence
   - PSYX 376 (PSYC 337) Principles of Cognitive Behavior Modification
   - PSYX 378S (PSYC 335S) Intro to Clinical Psychology
9. At least two of the following:
   - PSYX 352 (PSYC 372) Comparative Psychology
   - PSYX 356 ((PSYC 371) Human Neuropsychology
   - PSYX 377 (PSYC 301) Personalized Student Instruction
   - PSYX 400 History and Systems in Psychology
10. At least one of the following:
    - M 115 (MATH 117) Probability & Linear Mathematics
    - M 171 (MATH 152) Calculus I

Teacher Preparation in Psychology

Students who want to be licensed to teach psychology at the high school level must complete the BA degree requirements in psychology (general option). They also must complete a teaching minor in a second field of their choice and the professional licensure program in the School of Education. Students may also earn a teaching minor in psychology. See the Department of Curriculum and Instruction for information about admission to the Teacher Education Program and completion of these licensure programs.

Suggested Course of Study

First Year	A	S
PSYX 100S Introduction to Psychology	4	-
PSYX 105 (PSYC 110) Careers in Psychology	-	1
PSYX 120 Research Methods I	-	3
M 115 (MATH 117) Probability and Linear Math or M 162 or 171 (150 or 152) Applied Calculus/Calculus I	-	3-4
WRIT 101 (ENEX 101) Composition	3	-
Four General Education courses	6	6
Two elective courses	3	3
	16	17
Second Year	**A**	**S**
PSYX 222 (PSYC 220) Psychological Statistics	3	-
Three other 200-level psychology courses	3	6
Four General Education courses	6	6
Two elective courses	3	3
	15	15
Third Year	**A**	**S**
PSYX courses	3	6

PSYX 297 Supervised Research	-	2
PSYX 320 Research Methods III (upper-division writing)	3	-
Electives and General Education	9	7
	15	15
Fourth Year	**A**	**S**
PSYX courses	6	-
Electives	6	15-16
	12	15-16

Requirements for a Minor

To earn a minor in psychology the student must complete a minimum of 21 credits of psychology including:

1. PSYX 100S Introduction to Psychology
2. PSYX 120 Research Methods I
3. One of:
    - PSYX 230S (PSYC 240S) Developmental Psychology
    - PSYX 360S (PSYC 350S) Social Psychology
    - PSYX 385S (PSYC 351S) Psychology of Personality
4. One of:
    - PSYX 340S (PSYC 330S) Abnormal Psychology
    - PSYX 345 (PSYC 336) Child and Adolescent Psychological Disorders
    - PSYX 376 (PSYC 337) Principles of Cognitive Behavior Modification
    - PSYX 378 (PSYC 335S) Intro to Clinical Psychology
5. Two of:
    - PSYX 250N (PSYC 270N) Fundamentals of Biological Psychology
    - PSYX 270S (PSYC 260S) Fundamentals Psychology of Learning
    - PSYX 280S (PSYC 265S) Fundamentals of Memory & Cognition
    - PSYX 352 (PSYC 372) Comparative Psychology
    - PSYX 356 (PSYC 371) Human Neuropsychology

At least six of the 21 credits must be at the 300-level or above.

All minors are required to earn a "C" (2.00) or better in all psychology classes taken to fulfill requirements.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Psychology (PSYX)

U 100S Introduction to Psychology 4 cr. Offered every term. Introduction to the scientific study of behavior in humans and other animals. Credit not allowed for both PSY 100S and PSYC 100S.

U 105 (PSYC 110) Careers in Psychology 1 cr. Offered intermittently. Exploration of the various careers available in the general area of mental health research and practice.

U 107 (PSYC 113) Intergroup Dialogue 1 cr. Offered autumn. Reflective dialogue about issues of identity, diversity, and social justice.

U 120 Research Methods I 3 cr. Offered every term. Prereq., PSYX 100S. Experimental and quantitative methods employed in the scientific study of behavior.

U 191 (PSYC 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 199 Lower-Division Elective Variable cr.

U 222 (PSYC 220) Psychological Statistics 3 cr. Offered every term. Prereq., PSYX 100S, 120; M 115 (MATH 117), M 162 or 161 (MATH 150 or 152). Application of statistical techniques to psychological dat. Credit not allowed for both PSYX 222 (PSYC 220) and SOCI 202 (Soc 202).

U 230S (PSYC 240S) Developmental Psychology 3 cr. Offered every term. Prereq., PSYX 100S. An overview of research findings on development from infancy through adolescence, with emphasis on application.

U 233 (PSYC 245) Fundamentals of Psychology of Aging 3 cr. Offered intermittently. Prereq., PSYX 100S. An overview of theories and

research findings in the psychology of adulthood and aging.

U 250N (PSYC 270N) Fundamentals of Biological Psychology 3 cr. Offered every term. Prereq., PSYX 100S. Introduction to the relationships between biological structures and mechanisms and their corresponding psychological processes and events. Origins and adaptations of structures and behaviors as well as the methods used to study these relationships.

U 270S (PSYC 260S) Fundamentals of Psychology of Learning 3 cr. Offered autumn. Prereq., PSYX 100S. Basic theory and research on the nature of animal learning and behavior.

U 280S (PSYC 265S) Fundamentals of memory & Cognition 3 cr. Offered intermittently. Prereq., PSYX 100S. The acquisition and uses of knowledge. An examination of research and theories of human learning, memory, and thinking.

U 291 (PSYC 295) Special Topics Variable cr. (R-6) Offered intermittently. Prereq., PSYX 100S. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 292 (PSYC 296) Independent Study Variable cr. (R-6) Offered every term.

U 294 Seminar/Workshop 1 cr. (R-3) Offered intermittently. Prereq., consent of instr.; coreq., another psychology course. Taken in conjunction with another psychology course to provide additional content and discussion for honors students. Consent of the corequisite course instructor is required for this course.

U 297 Supervised Research Variable cr. (R-6) Offered every term.

U 298 (PSYC 298) Internship 1-6 cr. (R-6) Offered every term. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off-campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 320 Research Methods III 3 cr. Offered every term. Prereq., PSYX 100S, 120, and 222 (PSYC 220) and research option. An appreciation of the experimental approach to the scientific study of behavior through student-conducted experiments.

U 339 (PSYC 340) Current Topics in Developmental Psychology 3 cr. Offered intermittently. Prereq., PSYX 230S or 233 (PSYC 240S or 245). Topical reviews of theories, research and applications in developmental psychology.

U 340S (PSYC 330S) Abnormal Psychology 3 cr. Offered every term. Prereq., PSYX 100S. Description and classification of abnormal behavior.

U 345 (PSYC 336) Child and Adolescent Psychological Disorders 3 cr. Offered intermittently. Prereq., PSYX 100S and 230S (PSYC 240S). Study of causes, characteristics, assessment and treatment of emotional, social and intellectual disorders. The age span studied will range from infancy through adolescence.

U 348 (PSYC 385) Psychology of Family Violence 3 cr. Offered spring. Prereq., PSYX 100S; recommended prereq., PSYX 222 (PSYC 220) and 340S (PSYC 330S). Same as WGS 385. Exploration of theoretical explanations for the presence of violence in American families; research and interventions in such areas as child physical and sexual abuse, battering of women, marital rape, spousal homicide, etc.

U 352 (PSYC 372) Comparative Psychology 3 cr. Offered autumn. Prereq., PSYX 250N (PSYC 270N). Advanced evaluation and analysis of animal behavior through the synthesis of theory, research, and methods found in comparative psychology, behavioral biology, ethology, and sociobiology.

U 356 (PSYC 371) Human Neuropsychology 3 cr. Offered spring. Prereq., PSYX 250N (PSYC 270N). Study of the organization of the nervous system, functional neuroanatomy, neuropathology, neurological disorders, behavioral neurology, and clinical neuropsychology.

U 360S (PSYC 350S) Social Psychology 3 cr. Offered every term. Prereq., PSYX 100S. Individual behavior as a function of interpersonal interaction.

U 362 (PSYCH 352) Multicultural Psychology 3 cr. Offered autumn evennumbered years. Current theories and research on culture, race, and ethnicity, and how the sociocultural context influences psychological processes.

U 376 (PSYC 337) Principles of Cognitive Behavior Modification 3 cr. Offered intermittently. Prereq., PSYX 100S, 270S (PSYC 260S). Study of basic principles, assumptions, methodology and applications of behavior modification. Discussion of current literature relevant to behavioral assessment and treatment of major psychological disorders.

U 377 (PSYC 301) Personalized Student Instruction 3 cr. Offered every term. Prereq., PSYX 100S, consent of instr., and 3.0 GPA. Experience with the personalized student instruction method of teaching, gained through participating as a proctor in the introductory psychology course.

U 378S (PSYC 335S) Intro to Clinical Psychology 3 cr. Offered intermittently. Prereq., PSYX 100S and 340S (PSYC 330S). Clinical psychology as a science and a profession. Theoretical models and techniques of assessment and intervention. Case illustrations.

U 385S (PSYC 351S) Psychology of Personality 3 cr. Offered intermittently Prereq., PSYX 100S. Introduction to theories and research in personality. Intensive survey of theoretical concepts and a detailed examination of experimental methods and experiments in the field of personality.

U 391 (PSYC 395) Special Topics Variable cr. (R-6) Offered intermittently. Prereq., nine credits in psychology and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 392 (PSYC 396) Independent Study 1-3 cr. (R-3) Offered every term. Prereq., junior or senior standing and consent of instr.

U 397 Advanced Supervised Research 1-3 cr. (R-3) Offered every term. Prereq., 12 credits in psychology including PSYC 297 and consent of instr.

U 398 Internship 1-3 cr. (R-3) Offered every term. Prereq., consent of department chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 399 Upper-Division Elective Variable cr.

UG 400 History and Systems in Psychology 3 cr. Offered every term. Prereq., 15 credits in psychology. Origin and development of basic concepts and methods in scientific psychology.

UG 441 (PSYC 423) Addiction Studies 3 cr. Offered intermittently. Same as SOCI 433 (SOC 423) and SW 423. Examination of chemical dependency and behavioral compulsion, including alcohol and other drugs, gambling, eating disorders, sexual addictions. Ecosystems perspective on etiology, treatment, prevention, family dynamics, community response, and societal contributors.

U 442 (PSYC 485) Counseling Theories in Context 3 cr. Offered autumn. Prereq., PSYX 100S (PSYC 100S). Same as COUN 485 and SW 485. This course introduces students to the primary theories that constitute the intellectual foundation for common counseling and psychotherapy techniques, with a special focus on gender, interpersonal influence strategies and diversity issues.

UG 491 (PSYC 495) Special Topics Variable cr. (R-6) Offered intermittently. Prereq., 12 credits in psychology and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 493 Omnibus Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Academic credit for non-traditional educational experiences. Prior approval of a Psychology Department faculty member is required. Independent work under the University omnibus option. See index.

UG 494 Senior Seminar Variable cr. (R-6) Offered intermittently. Prereq., nine credits in psychology and consent of instr. Topics of current interest with critical examination of the literature.

U 499 Baccalaureate Thesis Variable cr. (R-6) Offered autumn and spring. Prereq., junior or senior standing and consent of instr.

G 501 Teaching of Psychology 3 cr. Offered autumn. Prereq., graduate standing in psychology and consent of instr. Exploration and practice of effective teaching techniques.

G 510 Trends in Psychological Research 1 cr. Offered autumn. Brief survey of the departmental faculty's ongoing research interests.

G 511 Professional Issues 1 cr. Offered autumn. Prereq., graduate standing in clinical psychology. Introduction to the professional role and skills in the clinical psychology field.

G 512 Field Placement - Clinical Variable cr. (R-12) Offered every term. Prereq., graduate standing in psychology and consent of instr. Supervised assessment and intervention experience in applied clinical settings.

G 515 Psychological Evaluation for Counseling 3 cr. Offered intermittently. Prereq., introduction to measurement and undergraduate statistics. Individual intelligence theory and measurement.

G 520 Advanced Psychological Statistics I 3 cr. Offered autumn. Prereq., undergraduate statistics and consent of instr. Introduction to descriptive and inferential statistics, probability distributions, null hypothesis significance testing, one and two sample techniques, analysis of variance and the general linear model.

G 521 Advanced Psychological Statistics II 4 cr. Offered spring. Prereq., PSYX 520 (PSYC 520) or consent of instr. Multiple comparisons among means, factorial ANOVA, random effects and mixed models, correlation, simple and multiple regression, analysis of covariance.

G 522 Multivariate Statistics 3 cr. Offered autumn. Prereq., PSYX 520 and 521 (PSYC 520 and 521). Introduction to matrix algebra, multivariate analysis of variance, multivariate analysis of covariance, simple slopes in multiple regression, discriminant analysis, canonical correlation, principal components analysis, factor analysis, cluster analysis.

G 523 Research Design 3 cr. Offered spring. Prereq., graduate standing in psychology. The examination and application of the principles and methods of experimental and quasi-experimental research design in psychology.

G 524 Tests and Measurements 3 cr. Offered autumn. Prereq., graduate standing in psychology or education. Introduction to measurement emphasizing correspondence between research and practice. Provides a theoretical and practical basis for evaluating and using measurement data.

G 525 Psychological Evaluation I 3 cr. Offered autumn. Prereq., undergraduate statistics and consent of instr. Individual tests of aptitudes and intellectual abilities; psychometric considerations in clinical assessment; objective personality assessment.

G 526 Psychological Evaluation II: Applications and Objective Methods 3 cr. Offered spring. Prereq., enrollment in doctoral program in psychology and consent of instr. Objective methods in psychological assessment; psychological evaluation techniques in the clinical context.

G 530 Clinical and Diagnostic Interviewing and 3 cr. Offered autumn. Prereq., graduate standing in clinical psychology, school psychology, or counseling. Microcounseling skills development through interactive practice and feedback.

G 531 Principles of Psychopathology 3 cr. Offered autumn. Prereq., enrollment in doctoral program in clinical or experimental psychology. The philosophical and scientific bases of major systems of psychotherapy are reviewed. Psychotherapy research methods, issues, and findings are introduced.

G 532 Advanced Psychopathology 3 cr. Offered autumn. Prereq., graduate standing in psychology or consent of instr. Symptoms, etiology, diagnostic criteria and treatment of the major psychological disorders, with an emphasis on current research findings.

G 534 Applied Clinical Methodology 1-4 cr. (R-24) Offered every term. Prereq., graduate standing in the clinical program and consent of instr. Theoretical and applied work in a supervised clinical setting.

G 536 Advanced Child and Adolescent Exceptionalities 3 cr. Offered spring. Prereq., graduate standing in psychology or consent of instr. Advanced study of the characteristics, etiology, assessment, and treatment of the emotional, social, and intellectual problems covering the span from infancy through adolescence. DSM and Education Code criteria will be compared.

G 540 Advanced Developmental Psychology 3 cr. Offered intermittently. Prereq., undergraduate course in developmental psychology or consent of instr. Psychological and behavioral development through the life span.

G 545 Field Placement in Human Development 1-6 cr. (R-9) Offered autumn and spring. Prereq., PSYX 540 (PSYC 540) or equiv. Individualized, applied experience working with and/or observing a particular population of interest, including children, adolescents, or older adults. Involves the completion of an independent project, which may comprise program assessment, research proposal development, etc.

G 546 History and Theories of Developmental Psychology 3 cr. Offered intermittently. Prereq., PSYX 540 (PSYC 540) or equiv. History, theories, and research in developmental psychology. Consideration of selected topics.

G 550 Advanced Social Psychology 3 cr. Offered spring evennumbered years. Prereq., undergraduate course in social psychology or consent of instr. Theory and experiment in the analysis of individual behavior in relation to social stimuli.

G 551 Advanced Personality 3 cr. Offered autumn oddnumbered years. Prereq., undergraduate course in personality or consent of instr. Theory and research on human personality and behavior. Emphasis on issues and topics of contemporary importance.

G 560 Advanced Learning 3 cr. Offered spring evennumbered years. Prereq., undergraduate course in learning or consent of instr. Principles and methods pertaining to the acquisition and retention of new behavior.

G 565 Advanced Cognition 3 cr. Offered autumn oddnumbered years. Prereq., undergraduate course in perception, cognition, or learning, or consent of instr. Examination of the acquisition of knowledge through perception and learning, the retention of knowledge, and the use of knowledge through thinking and reasoning.

G 571 Advanced Physiological Psychology 3 cr. Offered autumn even-numbered years. Prereq., consent of instr. Brain mechanisms and behavior; electrophysiological correlates of behavior.

G 580 Principles and Practices of Professional School Psychology 3 cr. Offered autumn. Prereq., graduate standing in school psychology. The theory, role, and function of school psychology as a profession; includes historical precursors and fit with current systems of psychology.

G 582 Behavioral Assessment and Intervention 3 cr. Offered autumn. Prereq., graduate standing in psychology or consent of instr. Introduces theoretical and practical applications of behavioral assessment and intervention. Students develop skills using behavioral observation, sampling and intervention design/implementation through supervised experience in applied settings.

G 583 Educational Assessment and Intervention 4 cr. Offered spring. Prereq., graduate standing in psychology or education. Develops educational assessment and intervention skills using problem-solving strategies to make educational decisions. Students develop assessment

and intervention design/implementation through supervised experience in applied settings.

G 584 Group and Crisis Intervention 3 cr. Offered spring even-numbered years. Prereq., graduate standing in psychology. The fundamental principles and evidence-based best practice in addressing child/adolescent mental health issues with implementation of group and/or crisis intervention.

G 587 School Psychology Methods 3 cr. (R-9) Offered every term. Prereq., graduate standing in school psychology and consent of instr. Applied school psychology work in a supervised setting.

G 588 School Psychology Internship Variable cr. (R-12) Offered autumn and spring. Prereq., enrollment in school psychology program or consent of instr. Supervised work experience in the role and functions of school psychologists.

G 594 Seminar Variable cr. (R-12) Offered intermittently.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered autumn and spring Prereq., consent of instr. Assigned readings and other special study projects.

G 597 Research Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr. Independent supervised research projects, other than thesis or dissertation.

G 599 Thesis/Research Project Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr. M.A. thesis or M.A. Research project

G 625 Psychological Evaluation III: Projectives and Integration 3 cr. Offered spring even-numbered years. Prereq., graduate standing in clinical program and consent of instr. Projective methods, emphasizing the Rorshach and TAT; integration and reporting of test findings.

G 629 Seminar in Measurement and Quantitative 1-3 cr. (R-12) Offered intermittently. Prereq., consent of instr. Advanced treatment of specialized research topics in measurement and quantitative psychology.

G 630 Ethics, Professional and Cultural Issues 3 cr. Offered spring. Prereq., enrollment in doctoral program in clinical or experimental psychology. Review of ethical principles and professional standards of psychologists. Analysis of the influence of cultural factors upon professional conduct.

G 631 Intervention 3 cr. (R-12) Offered every term. Prereq., graduate standing in the clinical psychology program and consent of instr. Review of clinical research and methodology. Specific treatment interventions are explored for the practitioner and also may serve as a valuable base for engaging in psychological consultation. Each offering will have a unique title.

G 632 Current Clinical Topics 3 cr. (R-12) Offered intermittently. Prereq., graduate standing in psychology and consent of instr. Current topics in clinical psychology with reviews of theory, research, and methodology. Each offering will have a unique title.

G 634 Advanced Applied Clinical Methodology 1-4 cr. (R-6) Offered every term. Prereq., PSYX 534 (PSYC 534) and consent of instr. Advanced clinical work in a supervised setting.

G 638 Clinical Psychology Internship 1-3 cr. (R-6) Offered every term. Prereq., proficiency in clinical techniques. Clinical internship offered by the psychology staff of a hospital, clinic or other approved agency in coordination with The University of Montana Clinical Psychology Program.

G 649 Seminar in Developmental Psychology 1-3 cr. (R-12) Offered intermittently. Prereq., consent of instr. Advanced treatment of specialized research topics in developmental psychology.

G 678 Seminar in Physiological Psychology 1-3 cr. (R-12) Offered spring even-numbered years. Prereq., consent of instr. Advanced treatment of specialized research topics in physiological psychology.

G 679 Seminar in Comparative Psychology 1-3 cr. (R-12) Offered intermittently. Prereq., consent of instr. Advanced treatment of specialized research topics in comparative psychology.

G 680 Consultation 3-4 cr. Offered spring even-numbered years. Prereq., graduate standing in school psychology. Theoretical background and case conceptualization in academic and behavioral consultation. Doctoral level also includes a supervised direct experience in applied settings.

G 681 Positive Behavior Supports and Ecological Bases of Behavior 3 cr. Offered spring odd-numbered years. Prereq., graduate standing in psychology or education. Examines ecological influences on individual behavior as part of assessment and intervention within this context; describes the features of positive behavior support.

G 683 Current Topics in School Psychology 1-3 cr. Offered intermittently. Prereq., graduate standing and consent of instructor. Current topics in school psychology. Each offering will have a unique title.

G 694 Seminar Variable cr. (R-12) Offered intermittently.

G 697 Advanced Research Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr. Independent research projects, other than thesis or dissertation.

G 699 Dissertation Variable cr. (R-18) Offered every term. Prereq., consent of instr. Doctoral dissertation research activities.

Faculty

Professors

- Ann Cook, Ph.D., The University of Montana, 2001 (Research)
- Christine Fiore, Ph.D., University of Rhode Island, 1990
- Nabil F. Haddad, Ph.D., University of Oklahoma, 1976 (Chair)
- Stuart Hall, Ph.D., University of Texas at Austin, 1989
- Helena Hoas, Ph.D., Umeå University, Sweden, 1987 (Research)
- Lynne S. Koester, Ph.D., University of Wisconsin, Madison, 1976
- Lois Muir, Ph.D., State University of New York at Stony Brook, 1982
- David Schuldberg, Ph.D., University of California, Berkeley, 1981
- Thomas Seekins, Ph.D., University of Kansas, 1983
- Paul S. Silverman, Ph.D., University of Georgia, 1977
- Allen Szalda-Petree, Ph.D., The University of Montana, 1990
- Richard Van den Pol, Ph.D., Western Michigan University, 1981
- Arlene Walker-Andrews, Ph.D., Cornell University, 1980 (Associate Provost)

Associate Professors

- Margaret E. Beebe-Frankenberger, Ph.D., University of California, Riverside, 2000
- Bryan Cochran, Ph.D., University of Washington, 2003
- Lucian G. Conway III, Ph.D., University of British Columbia, 2001
- Daniel J. Denis, Ph.D., York University, 2004
- Rosemary Hughes, Ph.D., University of Houston, 1989 (Research)
- Craig Ravesloot, Ph.D., The University of Montana, 1995 (Research)
- Wendy E. Shields, Ph.D., State University of New York at Buffalo, 1999
- Gyda I. Swaney, Ph.D., University of Montana, 1997
- Kimberly A. Wallace, Ph.D., University of Notre Dame, 1999
- Jennifer Waltz, Ph.D., University of Washington, 1993

Assistant Professors

- Cameo Borntrager, Ph.D., University of Tulsa, 2006
- Duncan G. Campbell, Ph.D., Washington State University, 2003
- Kari Harris, Ph.D., University of Kansas, 1998 (Research)
- Jackie Kibler, Ph.D., University of Kansas, 2001
- Greg R. Machek, Ph.D., Indiana University, 2004

Adjunct Faculty

- Cheryl Van Denburg, Ph.D., The University of Montana, 1993

Emeritus Professors

- Charles K. Allen, Ph.D., Ohio State University, 1963
- Laurence H. Berger, Ph.D., University of Washington, 1969
- George C. Camp, Ph.D., University of Illinois, 1971
- Frances A. Hill, Ph.D., Ohio State University, 1965
- John R. Means, Ph.D., University of Colorado, 1965
- David A. Strobel, Ph.D., The University of Montana, 1972
- James A. Walsh, Ph.D., University of Washington, 1963
- Herman A. Walters, Ph.D., Pennsylvania State University, 1962
- John Watkins, Ph.D., Columbia University, 1941
- Janet P. Wollersheim, Ph.D., University of Illinois, 1968

Religious Studies

- Courses
- Faculty

Paul A. Dietrich (Professor of Liberal Studies), Director

The course of study for students interested in concentrating in the study of religion is a Liberal Studies major with a Religious Studies option. The academic study of religions is coextensive with the broad field of humane learning in which questions pertaining to the meaning of human existence are most prominent. The study of religions in the University is therefore taken up in close conjunction with the humanities, arts, letters, and the several sciences.

In course offerings, two emphases prevail: first, the scholarly analysis and transmission of the literature and forms of the world's religions; second, the sensitization of the student to the value of religious studies for appreciating his/her cultural and social existence. Thus, courses are designed to illuminate religious traditions in historical depth as they inform modern cultures generally, and the individual within American cultural situations in particular.

The offerings in Religious Studies do not constitute a pre-professional program. They are intended to extend and deepen the student's education in the liberal arts.

Degree Requirements

Core Curriculum (courses numbered under 300)

Foreign Language, (Two years of a single foreign language) - 18-20 cr.

WRIT (ENEX 101) or equivalent - 3 cr.

Liberal Studies 151, (autumn or summer semester only) - 4 cr.

LS 152, (spring or summer semester only) - 4 cr.

LS 161 - 3 cr.

European Literature (including British) - 3 cr.

American Literature, including cross-listed and cognate courses in ENLT/LIT, MCLL, and LS) - 3cr.

European History (including British) - 3-4 cr.

American History - 3-4 cr

Native American Studies (NAS) or African-America Studies (AAS), including cross-listed and cognate courses in ANTH, GEOG/GPHY, SOC/SOCI) - 3 cr.

Asian Studies, (including cross-listed courses in ANTH, GEOG/GPHY, SOC/SCOI) - 3cr.

Philosophy (PHIL) or Political Science (PSC/PSCI) - 4 cr.

Three 200 Level Religion Courses

(At Least one (1) course in religions of Near Eastern/Mediterranean origin and one (1) in Religions of South Asian or East Asian origin and the third course in either category)

9 credits

Near Eastern/Mediterranean (Pick at least 1)

RELS 210 Intro to Old Testament/Hebrew Bible

RELS 211 Intro to New Testament

RELS 220 Judaism

RELS 225 Christianity

South or East Asian (Pick at least 1)

RELS 232 Buddhism

RELS 234 Hinduism

RELS 236 Chinese Religions

RELS 238 Japanese Religions

Upper-Division Requirements 27 credits

RELS 330 Theory & Method in the Study of Religion - 3cr

Seven (7) courses (21 credits) selected from among the following:

RELS/NAS 301 American Indian Religion & Philosophy

RELS 310 Topics in Biblical Studies

RELS 320 Ancient Judaism/Early Christianity

RELS 335 Western Religious Thought I: Ancient/Early Medieval

RELS 336 Western Religious Thought II: Late Medieval/Early Modern

RELS 353 Topics in South Asian Religions

RELS 354 Topics in East Asian Religions

RELS 360 Classics in Buddhist Literature

RELS 366 Tibetan Civilization

RELS 367 Approaches to the Study of Zen

RELS 368 Contemporary Buddhism in South & Southeast Asia

RELS 369 Contemplative Traditions of Asia

AAS 374 African-American Religious Experience

RELS 376 Contemporary Religious Thought

RELS 381 Comparative Ethics

AAS 450 Prayer and Civil Rights

RELS 400 Senior Capstone Seminar - 3cr.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Religious Studies (RELS)

U 210H Introduction to Hebrew Bible/Old Testament and the History of Ancient Israel 3 cr. Introduction to the literature, history and religion of ancient Israel. This course investigates the development of biblical texts in their ancient contexts, and introduces students to biblical studies as a modern academic discipline. Historical, comparative, literary, anthropological, and archeological perspectives are employed to illuminate the world of the biblical authors. No prior knowledge of the Bible, Judaism, or Christianity required.

U 130S Sociology of Religious Cults 3 cr. Offered spring. Unconventional religious groups in American society. Topics include recruitment, conversion, commitment, defection, leadership, belief systems, organizational structure and change.

U 195 Special Topics Variable cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship Variable cr. (R-6) Prereq., consent of faculty supervisor and the Internship Services office. Extended classroom experience which provides practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 211 Introduction to New Testament Studies 3 cr. An introduction to the literature of the New Testament and to the social and intellectual world of its authors. Emphasis on the cultural-historical contexts of earliest Christianity (ancient Judaism, Greco-Roman history and religion). Students will be introduced to the diverse cultures and religions of the ancient Mediterranean and to modern scholarly methods used in studying the New Testament.

U 220 Judaism 3 cr. An introduction to Judaism as a religion and to the history of Jewish peoples from antiquity to modernity. This course surveys the development of key social movements, literary expressions, ritual practices, and guiding concepts in Jewish traditions during the ancient, medieval, early modern, and modern periods. Focus on topics of import and interest in contemporary American, European, and Middle Eastern Jewish life and thought.

U 225 Christianity 3 cr. Offered every other year. Introduction to the historical development of Christian thought and practice in the cultures of antiquity and the medieval and the modern periods.

U 232H Buddhism 3 cr. Offered autumn. A historical introduction to the development of Buddhist thought and practice in the cultures of Asia and the West.

U 233 Traditions of Buddhist Meditation 3 cr. Offered autumn. Prereq. or coreq., RELS 232H. A critical and phenomenological introduction to meditation as the Buddhist method of systematic inquiry into the nature of the mind and its role in the construction of experience.

U 234 Hinduism 3 cr. Offered spring even-numbered years. Same as AS and LS 365. Critical exploration of selected aspects of Hindu thought, narrative and practice, both in contemporary and historical perspective. Focus primarily on India, but with consideration of Hinduism's transformation and impact beyond South Asia.

U 236 Chinese Religions 3 cr. An exploration of the development of thought and practice in and the interactions between the major religious movements of Chinese religion: Confucianism, Taoism, Buddhism, and fold religion/animism.

U 238 Japanese Religions 3 cr. Offered at least once every two years. An introductory exploration of Japan's unique religious synthesis of Buddhist, Shinto, Taoist, Confucian and folk/shamanistic traditions.

U 295 Special Topics Variable cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 300 Theory and Method in the Study of Religion 3 cr. A Survey of theories and methods in modern study of religion. Readings and discussions of selected pre-modern and modern texts will introduce major thinkers, and theories in the study of myth, ritual, and other social and literary phenomena commonly associated with "religion." Overview of social-theoretical, historical, psychological, theological, phenomenological, and comparative approaches to the question, What is religion?

UG 301E American Indian Religion and Philosophy 3 cr. Prereq., lower-division course in Perspective 5 or consent of instr. Same as NAS 301E. A study of selected ethical belief systems; origins, world views; religious ceremonies and the way they have been affected by Western civilization.

U 310 Topics in Biblical Studies 3 cr. (R-6) Selected topics in Hebrew Bible (Old Testament) and New Testament studies. Focus varies from year to year. Topics include: Israelite religion; prophets and prophecy; Israelite history and historiography; ancient Gospels; the letters and communities of Paul; early biblical interpretation; history of the biblical text; archaeology, iconography, and biblical literature; religion and politics in the bible.

U 320 Ancient Judaism and Early Christianity 3 cr. (R6) Selected topics in the history and literature of ancient Judaism and early Christianity. Focus varies from year to year. Topics include; the emergence of Judaism and Christianity in the Greco-Roman World; Imperialism and religion in Persian, Greek, and Roman times; religions of the ancient Near East and Mediterranean; narratives of Jewish and Christian origins; the historical Jesus; Paul between Judaism and Christianity; the early rabbinic movement; the Dead Sea Scrolls.

UG 335 Western Religious Thought I 3 cr. Offered autumn. Selected studies in the intellectual history of western religions, alternating between studies of periods and seminal thinkers. Emphasis will be on the ancient and medieval periods.

UG 336 Western Religious Thought II 3 cr. Offered spring. Selected studies in the intellectual history of western religions, alternating between studies of periods and seminal thinkers. Emphasis will be on the late medieval and early modern periods.

U 353 Topics in South Asian Religions 3 cr. (R-6) Offered at least once every three semesters, no prerequisites. This course will examine select topics of central importance with respect to the history of interaction between the major religions (Hinduism, Islam, Buddhism, Jainism, Sikhism) of South Asia.

U 354 Topics in East Asian Religions 3 cr. (R-6) Offered at least once every three semesters, no prerequisites. This course will examine select topics of central importance with respect to the history of interaction between the major religions (Confucianism, Taoism, Buddhism,

and folk amimism and shamanistm) of East Asia.

UG 360 Classics of Buddhist Literature 3 cr. (R-6) Offered spring. Close reading of a selection of core Buddhist texts drawn from various Asian cultures and spanning the three main phases of the tradition.

U 366 Tibetan Civilization 3 cr. Offered at least once every two years. An exploration of the history and culture of a unique civilization that has influenced greatly the cultures of Himalayan, East, and South Asia. Special attention will be given to Tibetan religions, but these always will be explored within the context of the society's political, social, economic, and other cultural developments.

U 367 Approaches to the Study of Zen Buddhism 3 cr. Offered at least once every two years; no prerequisites. An exploration of both key developments in the history of Zen Buddhist thought and practice and the variety of ways that Zen has been studied by Western popular and academic cultures.

U 368 Contemporary Buddhism in South and Southeast Asia 3 cr. To be offered once every two years; no prerequisites. As with other major religions, modernity and globalization have presented profound challenges to Buddhist traditions. In this course we will explore various contemporary issues that have affected Theravada Buddhist societies--colonial and post-colonial revivalism, religious nationalism, women's rights and social reform--as case studies in some of the major ways in which religions have confronted modernity.

U 369 Contemplative Tradition of Asia 3 cr. Offered at least once every two years. An exploration of the rich and diverse approaches to mental transformation and cultivation of gnosis as developed by several of Asia's major religious traditions, such as Buddhism, Jainism, Hinduism, Taoism, and Confucianism.

UG 370 Mysticism 3 cr. (R-6) An inquiry into the literature and interpretation of mysticism in the major religious traditions. Each offering will focus on a specific tradition or period.

U 376 Contemporary Religious Thought 3 cr. (R-6) Offered alternate years. Study of selected major critical and constructive proposals in modern religious thought in various traditions.

UG 381E Comparative Ethics 3 cr. Prereq., lower-division course in Perspective 5 or consent of instr. An examination of models for cross-cultural study, concentrating on the formation and exercise of values in eastern cultures as approached from the standpoint of western students.

U 395 Special Topics Variable cr. (R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study Variable cr. (R-6)

UG 495 Special Topics Variable cr. (R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Studies 3 cr. (R-9) Prereq., consent of instr. Work on selected problems by individual students under direct faculty supervision.

Faculty

Professors

- Bradley Clough, Ph.D., Columbia University, 1998
- Paul A. Dietrich, Ph.D., University of Chicago, 1981 (Director)
- Nathaniel Levtow, Ph.D., Brown University, 2006

Lecturer

- Mark Hanson, Ph.D., University of Virginia, 1993

Adjunct Faculty

- Thomas R. Lee, Ph.D., University of California, 1979

Russian Studies

Ona Renner-Fahey (Associate Professor Russian), and Robert H. Greene (Assistant Professor of History), Advisors

Students interested in Russian studies may choose a minor in Russian studies as listed below. Students will receive formal guidance for their interest in Russian studies and recognition for completing a defined program.

Requirements for a Minor

The following requirements must be successfully completed to obtain a minor in Russian studies:

1. Twelve credits of upper-division course work concerning the former Russian area and its successor states. The Russian Studies Faculty Committee will designate the courses which may be used for the minor. These twelve credits will include at least one course concerning Russian area studies in at least three of the following disciplines: anthropology, business administration, economics, modern and classical languages and literatures (not including the language requirement), geography, history, political science.
2. Second year proficiency in the Russian language.

Related Courses

Following is a list of possible course selections for the minor in Russian Studies. Students are required to consult with their advisors for course suggestions appropriate to the minor.

Anthropology

- 385 Indigenous Peoples and Global Development 3 cr.

Business Administration-Management

- 348 Entrepreneurship 3cr.
- 368 International Business 3cr.
- 465 World Trade and Commerce 3 cr.

Economics

- 374 Comparative Economic Systems 3 cr.

Geography

- 351 Geography of a Selected Region 3 cr.

History

- HSTR 326 (HIST 319H) Contemporary Europe 3 cr.
- HSTR 380H (HIST 331H) Foreign Relations of the Great Powers, 1870-Present 3 cr.
- HSTR 378 (HIST 332H) The Global Diplomacy of the Cold War 3 cr.
- HSTR 357 (HIST 344) Russia to 1881 3 cr.
- HSTR 358 (HIST 345) Russia Since 1881 3 cr.
- HSTR 363 (HIST 348) Eastern Europe: Past and Present 3 cr.
- HSTA 391 (HIST 395) Special Topics variable cr.
- HSTR 457 (HIST 445) The World of Anna Karenina 3 cr.
- HSTR 458 (HIST 446) The Russian Revolution, 1900-1930 3 cr.
- HSTR 472E (HIST 460E) Problems of Peace and National Security 3 cr.

Political Science

- PSCI 322 (PSC 321H) Politics of Western Europe 3 cr.
- PSCI 355 (PSC 355) Theories of Civil Violence 3 cr.

Russian

- 301 Oral and Written Expression 3 cr.
- 302 Oral and Written Expression II 3 cr.
- 308 Russian Cinema and Culture 3 cr.
- 312L-313L (306L-307L) Introduction to Russian Literature 9 cr.
- 391 (395) Special Topics Variable cr.
- 411 19th Century Major Russian Authors 3 cr.
- 412 20th Century Major Russian Authors 3 cr.
- 424 Russian Short Story 3 cr.
- 440 Russian Poetry 3 cr.
- 491 (495) Special Topics Variable cr.

Study in Russia

Primarily a language-based program taught by native Russian instructors for beginning through advanced language students.

Science

Andrew S. Ware, (Professor and Chair, Department of Physics and Astronomy)

Science courses are designed for students desiring scientific knowledge and insight but are either majoring in non-scientific subjects or have limited science backgrounds. Enrollment in Science courses may serve as an introduction to further study in the sciences, to fulfill general requirements, or to fill specific requirements of the elementary education major.

Courses

U = Undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Science (SCI)

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship Variable cr. (R-6) Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off-campus. Prior approval must be obtained from the faculty supervisor and the Center for Work-Based Learning. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 220E Technology, Ethics, and Society 3cr. An examination of ethical issues related to new technologies in the context of ethical theory in the western secular tradition. Focus will be on aplying central concepts, principles, and problems of ethical theory to particular areas of technology, such as artificial intelligence and robotics, social networks, nanotechnology, genetic ingineering, and privacy in a digital age.

U 225N General Science: Physical and Chemical Science 5 cr. Offered autumn. Prereq., MATH 100 or equiv. Integrated lectures, discussions, laboratory exercises, and demonstrations on topics in chemical and physical science for prospective elementary school teachers and the non-scientist. A two-hour laboratory session is required each week.

U 226N General Science: Earth and Life Science 5 cr. Offered spring. Prereq., SCI 225N and MATH 130 or equiv. Integrated lectures, laboratory exercises, and field trips on topics in earth and biological science for prospective elementary school teachers and the non-scientist. A two-hour laboratory session is required each week and one or two Saturday field trips.

U 296 Independent Study 1-9 cr. (R-9) Offered intermittently.

U 350 Environmental Perspectives 2 cr. Offered autumn and spring. Critical analysis of the assumptions and effects of past and present patterns of land use, based on readings drawn from both the sciences and humanities.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study 1-12 cr. (R-12) Offered intermittently.

U 493 Omnibus Variable cr. (R-8) Offered intermittently. Prereq., consent of instr. Independent work under the University omnibus option. See index.

U 494 Seminar Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Seminars and conferences designed to update teachers on developments in science and technology or to introduce interdisciplinary concepts.

U 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-12 cr. (R-12) Offered intermittently.

U 497 Research 1-10 cr. (R-10) Offered intermittently.

U 498 Internship Variable cr. (R-6) Offered intermittently. See SCI 198. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U G 596 Independent Study Variable cr. (R-12) Offered intermittently.

Department of Sociology

- Special Degree Requirements

- Suggested Course of Study
- Courses
- Faculty

Celia Winkler, Chair

"Sociology is the study of social life, social change, and the social causes and consequences of human behavior. Sociologists investigate the structure of groups, organizations, and societies, and how people interact within these contexts. Since human behavior is shaped by social factors, the subject matter of sociology ranges from the intimate family to the hostile mob; from organized crime to religious cults; from the divisions of race, gender and social class to the shared beliefs of a common culture (American Sociological Association 2002:1). The Sociology faculty at UM bring diverse theoretical perspectives to their courses and use a wide array of methodological strategies in their research and teaching. Their interests range from social issues facing our local community and the Northern Rocky Mountain region, to national and global concerns. Faculty research addresses both theoretical issues, such as the causes of criminal behavior, and practical matters, such as the effectiveness of prison rehabilitation programs or the impact of legislation on family policy and poverty programs.

In addition to a general sociology major, students may choose one of three options for structuring their course work. The general Sociology major provides a broad foundation in sociological theory and research, together with exposure to a variety of courses in the main substantive areas of the discipline. Students interested in crime and criminal justice can choose an option in Criminology, while students concerned with the causes and consequences of social inequality can select an option Inequality and Social Justice. Students interested in rural and environmental issues can pursue an option in Rural and Environmental Change. These options allow students to concentrate their studies in a particular area of interest while still acquiring a solid foundation in the discipline of Sociology.

Special Degree Requirements

The **general sociology major** requires a minimum of 33 sociology credits. Students may choose an option in **criminology, inequality and social justice**, or in **rural and environmental change.** These options require 39 sociology credits. All sociology majors must complete a required core and four courses from the major content list, in order to insure broad exposure to the field of sociology. No more than 60 sociology credits may count for graduation. In addition to meeting these departmental requirements, students must meet all University wide requirements, as specified in the catalog. These include: completing 120 credits, meeting the General Education requirements including the Upper-division Writing Proficiency Assessment, and taking 39 credits of upper-division course work. See the Academic Policies and Procedures section of this catalog for other requirements.

Upper-Division Writing Expectation: To meet the Upper- Division Writing Expectation of the Bachelor of Arts with a major in Sociology, students must successfully complete one course selected from SOCI 438, 441, 460 or 488; or any other upper-division writing course approved for general education (see Academic Policies and Procedures section of the catalog).

Required Course Work:

1. Core Courses (12 credits):
    - SOCI 101S (SOC 110S) Introduction of Sociology
    - SOCI 202 Social Statistics
    - SOCI 318 (SOC 201) Social Research Methods
    - SOCI 455 Classical Socialogical Theory
2. Major Content: four courses, two of which must be numbered 300 or above, (12 credits):
    - SOCI 211S (SOC 230S) Introduction to Criminology OR 330-Juvenile Delinquency
    - SOCI 220S Race, Gender and Class
    - SOCI 270 Introduction to Rural and Environmental Change
    - SOCI 275S Gender and Society
    - SOCI 306 Sociology of Work
    - SOCI 308 ociology of Education
    - SOCI 325 Social Stratification
    - SOCI 332 (SOC 300) Sociology of the Family
    - SOCI 342 Urban/Metropolitan Sociology
    - SOCI 345 (SOC 320) Sociology of Organizations
    - SOCI 346 Rural Sociology
    - SOCI 350 (SOC 340) The Community
    - SOCI 355 Population & Society
    - SOCI 382 (SOC 350S) Social Psychology & Social Structure
    - SOCI 470 Environmental Sociology
    - SOCI 485 Political Sociology

NOTE: Students in the criminology, inequality and social justice, and reach option may count only **one** course from their respective option as a major content course.
Sociology 101S (SOC110S) is a prerequisite for most courses numbered 200 and above. Additional prerequisites are listed in course descriptions.

Students who have not completed specified prerequisites may enroll only with the instructor's consent. All courses to be applied toward the major must be taken for a traditional letter grade. Majors are expected to earn a "C-" or better in all sociology courses.

To earn 120 credits in four years, students must average 30 credits per year, or 15 credits per semester. Requirements for general sociology majors allow considerable flexibility in choosing courses. However, requirements for the criminology, inequality and social justice, and rural and environmental change options are more stringent.

General Sociology Major:

Students whose primary interest is in a general sociology major are urged to develop a plan of study with their advisor; they must take three electives in addition to the core courses and major content requirements listed above. Any sociology course, including courses from any of the three options may be included in your study plan. The general sociology major prepares students for positions which require a bachelor's degree in one of the social science disciplines, including employment in a variety of government and private-sector agencies, or for a graduate program in sociology. It also provides valuable preparation for related fields such as law, social work, education, counseling, politics, and public administration.

Criminology Option:

Criminology has been an area of study within sociology since the inception of the discipline at the turn of the twentieth century. Contemporary criminology examines the making of laws, the nature and extent of crime, the causes of crime, and society's efforts to control crime through the juvenile and criminal justice systems. The option builds upon the required course work in sociology and allows students to pursue extended study of crime and the criminal justice system. In addition, the option provides opportunity for practical experience in juvenile and criminal justice systems through internship placement. The criminology option prepares students for employment in public and private criminal justice agencies, as well as graduate study in sociology, criminal justice, and law.

In addition to courses required of all sociology majors in the **core and content** areas, students concentrating in criminology must complete the following:

- SOCI 211S (SOC 230S) Introduction to Criminology **or** 330--Juvenile Delinquency
- SOCI 221 (SOC 235) Criminal Justice System
- **and** any **three** of the following courses:
    - SOCI 312 (SOC 333) Criminal Adjudication
    - SOCI 335 Juvenile Justice System
    - SOCI 362 (SOC 332) Sociology of Law Enforcement
    - SOCI 423 (SOC 334) Sociology of Corrections
    - SOCI 433 (SOC 423) Addiction Studies
    - SOCI 435 Law and Society
    - SOCI 438 Seminar in Crime and Deviance
    - SOCI 498 (SOC 490) Internship

Inequality and Social Justice Option:

Inequality is at the core of most sociological inquires. The option in inequality and social justice examines the causes and consequences of inequalities based on class, gender, race/ethnicity, disability, age, and sexual orientation. Social inequalities at the local, national, and global levels are studied, as are the political, legal, and social processes that contribute to or reduce inequalities. Ethical elements of social justice are considered with regard to inequality. An option in inequality and social justice prepares students for employment in a variety of government and private-sector agencies, especially in social services, or for graduate school in Sociology. It also provides valuable preparation for related fields such as law, social work, education, counseling, politics, and public administration.

Requirements, in addition to courses in the core and content areas, include:

- SOCI 220S Race, Gender and Class
- SOCI 441-Capstone: Inequality and Social Justice
- **and** any **three** or the following courses:
    - SOCI 275S Gender and Society
    - SOCI 325 Social Stratification
    - SOCI 371 (SOC 370S) Social Change and Global Development
    - SOCI 435 Law & Society
    - SOCI 443 (SOC 322) Sociology of Poverty
    - SOCI 444 Issues in Inequality
    - SOCI 485 Political Sociology
    - SOCI 498 (SOC 490) Internship

NOTE: No more than **one** course from the ISJ emphasis may be used to fill the requirements for major content courses.
RECOMMENDED: Students should take 498 (SOC 490) concurrent with 441.

Rural and Environmental Change Option:

Rural environments, residents and agencies are facing rapid social, economic, demographic and political change. This option develops analytical and practical skills for understanding rural and environmental change globally and in the American West, and its policy implications in such areas as rural health, welfare and work; community development and assessment; native peoples and natural resource

management. An option in rural and environmental change prepares students for employment with either a government, private or non-profit agency concerned with the above topics or for pursuing an advanced degree in sociology.
Requirements, in addition to courses in the **core and content** areas, include:

- 270-Introduction to Rural and Environmental Change
- 460-Capstone: Rural and Environmental Change
  Students should complete SOCI 270 and two REACH electives prior to taking SOCI 460.
- **and** any **three** of the following courses:
  - SOCI 346 Rural Sociology
  - SOCI 350 (SOC 340) The Community
  - SOCI 355 Population & Society
  - SOCI 371 (SOC 370S) Social Change and Global Development
  - SOCI 443 (SOC 322) Sociology of Poverty
  - SOCI 470 Environmental Sociology
  - SOCI 498 (SOC 490)--Internship

NOTE: No more than one course from the REACH emphasis may be used to fill the requirements for major content courses.

Teacher Preparation in Sociology

Students who want to be licensed to teach sociology at the high school level must complete the BA degree requirements in sociology (general sociology, no option required). They also must complete a teaching minor in a second field of their choice and the professional licensure program in the School of Education.
Students may also earn a teaching minor in sociology. See the Department of Curriculum & Instruction for information about admission to the Teacher Education Program and completion of these licensure programs.

Suggested Course of Study

General Sociology Majors:

First Year	A	S
SOCI 101S (SOC 110S) Introduction to Sociology	3	-
WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Math	-	3
Lower-division Writing course	-	3
Electives and General Education	9	9
	15	15

Second Year	A	S
SOCI 202 Social Statistics	3	-
SOCI 211S (SOC 230) Introduction to Criminology, SOCI 270 Introduction to Rural and Environmental Change, or SOCI 220S Race, Gender & Class	3	-
SOCI 221 (SOC 235) Criminal Justice System or elective	-	3
Sociology major content courses	3	6
General Education	6	6
	15	15

All sociology majors are expected to have their general education work completed by the end of their sophomore year. The bulk of the work in sociology should occur during the junior and senior years.

Third Year	A	S
SOCI 318 (SOC 201) Sociological Research Methods	3	-
SOCI 455 Classical Sociological Theory	-	3
Sociology major content course	3	-
Upper-division writing course	-	3
Option courses (Crim ISJ or REACH) or electives	9	9
	15	15

Fourth Year	A	S
SOCI 460 Capstone in Rural and Environmental Change (Rural option) or SOCI 441 Capstone in Inequality and Social Justice (ISJ option)	-	3
Option courses (Crim, ISJ, or Rural) or electives	15	12
	15	15

Students choosing an option in criminology are required to complete the core in their option prior to taking the criminology option elective courses. Students choosing the inequality and social justice option should take SOCI 498 (SOC 490) concurrent with SOCI 441. Students

choosing the rural and environmental change option should take SOCI 270 first and complete at least two option electives prior to taking SOCI 460.

Requirements for a Minor

To earn a minor in sociology the student must complete a minimum of 21 credits in sociology with at least 9 of these credits at the upper-division level. Students must take SOCI 101S (SOC 110S), 318 (SOC 201), 455 and two (2) major content courses.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Sociology (SOCI)

U 101S (SOC 110S) Introduction to Sociology 3 cr. Offered every term. Overview of the principles and concepts used in the study of human social interaction, groups, communities and societies. Required of all majors.

U 130S Sociology of Alternative Religions 3 cr. Offered spring. Same as RELS 130S. Unconventional religious groups in American society. Topics include recruitment, conversion, commitment, defection, leadership, belief systems, organizational structure and change.

U 191 (SOC 195) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 199 Lower-Division Electives Variable cr.

U 202 Social Statistics 3 cr. Offered every term. Prereq., M 115 (MATH 117) or consent of instr. Application of descriptive and inferential statistical techniques to sociological data. Required of all majors.

U 211S (SOC 230S) Introduction to Criminology 3 cr. Offered autumn. Prereq., SOCI 101S (SOC 110S). A critical examination of crime in society: how crime is defined, the extent and distribution of crime, theoretical explanations of criminal behavior, and crime control efforts.

U 212S Southeast Asian Culture and Civilization 3 cr. Offered intermittently. Same as AS and LS 212S. Introduction to the cultures, societies, and contemporary social problems of Southeast Asia.

U 220S Race, Gender and Class 3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S). Same as WGS 220S. Analysis of the intersecting structure and dynamics of race, gender and class. Focus on power relationships, intergroup conflict and minority-group status.

U 221 (SOC 235) Criminal Justice System 3 cr. Offered spring. Prereq., SOCI 101S (SOC 110S). A systematic survey of crime and the administration of justice in the United States, including the organizational structures, processes, and dynamics of law enforcement, criminal adjudication, and corrections.

U 225 Community and Environment 3 cr. Offered autumn. Same as EVST 225. Exploration of the various ways that communities address their environmental concerns. Introduction to relevant social science concepts.

U 270 Introduction to Rural and Environmental Change 3 cr. Offered autumn. Introduction to the study of relationships and interactions between people in rural societies and the environment.

U 275S Gender and Society 3 cr. Offered autumn. Same as WS 275S. Exploration of the social construction of gender, especially in western, post-industrial societies such as the U.S. How gender ideologies affect the social definition and position of men and women in work, family, sexual relationships, sexual divisions of labor, and social movements.

U 291 (SOC 295) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 306 Sociology of Work 3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S). An introduction to contemporary sociological debates on work including overwork, working poor, housework, globalization, mechanization, routinization, surveillance, and unions. Special focus on gender and class impacts on working life.

UG 308 Sociology of Education 3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S). The structure and operation of the educational system in the United States, with special attention to the organization and effectiveness of schools.

UG 312 (SOC 333) Criminal Adjudication 3 cr. Offered spring odd-numbered years. Prereq., SOCI 101S, 221 and either 211S or 330 (SOC 110S, 235 and either 230S or 330). An examination of adjudicatory processes applied to the criminally accused. Includes pretrial, trial, and sentencing practices and procedures. Special attention to the sociological dimensions of criminal adjudication: its cultural underpinnings, structural characteristics and interactional dynamics.

UG 314 (SOC 310) Extraordinary Group Behavior 3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S). The study of emergent social behavior including rumors, crowds, crazes, riots, panics, terrorism, revolutions and social movements.

U 318 (SOC 201) Sociological Research Methods 3 cr. Offered every term. Prereq., SOCI 101S (SOC 110S). Methods of research in the social sciences including naturalistic observation, interviewing, measurement, experiments, surveys, content analysis, and basic data analysis. Required of all majors.

U 325 Social Stratification 3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S). The origins, institutionalization and change of class, status, prestige, power and other forms of social inequality. Special attention to the effects of stratification on individuals.

UG 330 Juvenile Delinquency 3 cr. Offered spring. Prereq., SOCI 101S (SOC 110S). The study of juvenile delinquency as a social phenomenon, including the emergence of "juvenile delinquency" as a social and legal concept, the nature of delinquency, and theoretical explanations of delinquent behavior.

UG 332 (SOC 300) Sociology of The Family 3 cr. Offered spring. Prereq., SOCI 101S (SOC 110S). Same as WGS 300. Historical, cross-cultural, and analytical study of the family. Emphasis on ideology, social structures, and agency affecting family composition and roles.

UG 335 Juvenile Justice System 3 cr. Offered autumn odd-numbered years. Prereq., SOCI 101S and 211S or 330 (SOC 110S and 230S or 330). An analysis of the juvenile justice system in the United States, including the historical development of policies and practices. The role of various social agencies in defining, preventing, and responding to delinquency.

U 342 Urban/Metropolitan Sociology 3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S). Classical social theories of urban growth. Contemporary urbanization in local, regional, national and global contexts. Internal urban/metropolitan social organization in terms of race, ethnicity, social class and gender.

UG 345 (SOC 320) Sociology of Organizations 3 cr. Offered autumn. Prereq., SOCI 101S (SOC 110S). Historical and analytical study of organizations as social systems, with an emphasis on applying theoretical models to analyzing organizational behavior and change.

U 346 Rural Sociology 3 cr. Offered autumn. Prereq., SOCI 101S (SOC 110S); SOCI 318 (SOC 201) recommended. Demographic, economic and sociocultural change in rural communities with an emphasis on global economy, political structure, urbanization, and economic and social infrastructure. Special attention given to the rural west and Montana.

UG 350 (SOC 340) The Community 3 cr. Offered autumn. Prereq., SOCI 101S (SOC 110S). The study of families, peer groups, neighborhoods, voluntary associations, power structures, social classes and large scale organizations as they come together in local communities.

U 355 Population and Society 3 cr. Offered spring. Prereq., SOCI 101S (SOC 110S). An introduction to contemporary world population problems including population growth, trafficking, fertility, mortality, population policy, and the relationship between population and environment. Emphasizes gender issues in international context.

UG 362 (SOC 332) Sociology of Law Enforcement 3 cr. Offered autumn even-numbered years. Prereq., SOCI 101S, 221 and either 211S or 330 (SOC 110S, 235 and either 230S or 330). An examination of policing in society, with emphasis on the cultural context in which it occurs, its structural characteristics, and social psychological processes.

UG 371 (SOC 370S) Social Change and Global Development 3 cr. Offered autumn even-numbered years. Prereq., SOCI 101S (SOC 110S). Same as WGS 360. Introduction to the global roots and dimensions of social change. Broad perspective on the forces that have transformed how "development" has shifted from a process of economic growth and welfare assistance organized nationally to a process of globally organized economic, political and cultural change.

U 382 (SOC 350S) Social Psychology and Social Structure 3 cr. Offered autumn and spring. Prereq., SOCI 101S (SOC 110S). The study of the behavior of individuals in social contexts ranging from small groups to societies. Topics include attitude change, conformity, aggression, helping behavior, self-concept formation, and group cohesion and decision-making.

U 386 Preceptorship in Sociology 2-3 cr. Offered autumn and spring. Prereq., SOCI 101S (SOC 110S) and consent of instr. Assisting a faculty member by tutoring, conducting review sessions, helping students with research projects, and carrying out other class-related responsibilities. Open to juniors and seniors with instructor's consent. Proposals must be approved by department chair.

U 391 (SOC 395) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of new courses or one time offerings of current topics.

U 398 Internship Variable cr. (R-6) Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 399 Upper-Division Elective Variable cr.

UG 423 (SOC 334) Sociology of Corrections 3 cr. Offered spring even-numbered years. Prereq., SOCI 101S, 221 and either 211S or 330 (SOC 110S, 235 and either 230S or 330). An examination of the purposes, structures, and processes of jails, prisons, and community

corrections, including probation and parole. Emphasis on historical development and current trends and issues in corrections.

UG 424 Community Forestry and Conservation 3 cr. Offered spring even-numbered years. Same as FOR 424, RSCN 424. A review of agroforestry, community forestry and opportunities and constraints to the use of trees in rural development and protected areas management.

UG 433 (SOC 423) Addiction Studies 3 cr. Offered spring even-numbered years. Same as PSYX and SW 423. Examination of chemical dependency and behavioral compulsion, including alcohol and other drugs, gambling, eating disorders, sexual addictions. Ecosystems perspective on etiology, treatment, prevention, family dynamics, community response, and societal contributors.

UG 435 Law and Society 3 cr. Offered spring even-numbered years. Prereq., SOCI 101S and either 211S or 330 (SOC 110S and either 230S or 330) recommended. The study of the law and society, including the origin, institutionalization, and impact of law and legal systems.

UG 438 Seminar in Crime and Deviance 3 cr. Offered every term. Prereq., SOCI 101S, 221 and either 211S or 330 (SOC 110S, 235 and either 230S or 330). Advanced studies in criminology/deviance theory and research. Emphasis on public policies related to crime. This course will meet the upper-division writing expectation for sociology majors only.

UG 441 Capstone in Inequality & Social Justice 3 cr. Offered spring. Prereq., SOCI 101S, 220S (SOC 110S, 220S), one other inequality and social justice elective, and consent of instr. Research and writing on Inequity and Social Justice. Students bring together readings from other inequality content courses and/or independent readings, research methods training, and data and/or internship experience to write a final research paper on a topic of their choice within the ISJ area. Meets upperdivision writing expectation for sociology majors only.

UG 443 (SOC 322) Sociology of Poverty 3 cr. Offered autumn. Prereq., SOCI 101S (SOC 110S). An examination of the roots, prevalence and social characteristics of the poor. Analysis of policies intended to end poverty.

UG 444 Issues in Inequality 3 cr. Offered alternate years. Prereq. SOCI 101S (SOC 110S) and 220S. Analysis of selected topics in inequality and social justice. Possible topics include Native Americans, disabilities, age, sexual orientation, and gender. UG 455 Classical Social Theory 3 cr. Offered autumn and spring. Prereq., SOC 110S. Focus on the historical development of the field of sociology from 1850 to World War I. The classical writings of Comte, Tonnies, Weber, Durkheim, Marx, LePlay and Simmel emphasized. Required of all sociology majors.

UG 455 Classical Sociological Theory 3cr. Offered autumn and spring. Prereq., SOC 110S. Focus on the historical development of the field of sociology from 1850 to World War I. The classical writings of Comte, Tonnies, Weber, Durkheim, Marx, LePlay and Simmel emphasized. Required of all sociology majors.

UG 460 Capstone in Rural and Environmental Change 3 cr. Offered spring. Prereq., SOCI 101S, 270 (SOC 110S, 270) and at least 2 other rural and environmental change electives and consent of instr. Advanced study of theoretical and substantive issues related to rural, environmental, community, and development sociology; includes a substantial student research project. Meets upperdivision writing expectation for sociology majors only.

UG 470 Environmental Sociology 3 cr. Offered spring even-numbered years. Prereq., SOCI 101S (SOC 110S). Introduction to the field of environmental sociology and influential sociological perspectives on global environmental change. Case examples from agrarian and industrialized regions around the world.

UG 485 Political Sociology 3 cr. Offered spring odd-numbered years. Prereq., junior or senior standing. Analysis of political theory and behavior; social bases of power and policy determination; institutional interrelationships; intellectuals and ideologies; political trends and change; political participation and membership.

UG 488 Writing for Sociology 3 cr. Offered autumn and spring. Prereq., SOCI 101S (SOC 110S), 9 additional credits in sociology and satisfactory performance on the Upper-Division Writing Proficiency Assessment. Advanced study of variable topics or issues in sociology , with emphasis on writing for the discipline. This course satisfies the upper-division writing expectation for sociology majors only.

UG 491 (SOC 495) Special Topics Variable cr. (R-6) Offered intermittently. Prereq., SOCI 101S (SOC 110S). Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 492 (SOC 496) Independent Study 1-3 cr. (R-9) Offered every term. Prereq., SOCI 101S (SOC 110S) and consent of instr. Individual work with a faculty supervisor in an area of special interest. Proposals must be approved by department chair.

UG 494 Seminar/Workshop 2-3 cr. Offered intermittently. Prereq., SOCI 101S (SOC 110S) and at least junior standing. Selected sociological topics.

U 498 (SOC 490) Sociology Internship Variable cr. (R-12) Offered every term. Prereq., SOCI 101S, 318 and 202 (SOC 110S, 201 and 202); 2.75 GPA; junior standing and consent of instr. Supervised placement in an agency or business which involves work experience related to criminology, sociology, rural and environmental change and/or inequality and social justice.

G 520 Contemporary Social Theory 3 cr. Offered autumn. Prereq., SOCI 455. The major sociological theories developed since World War I, including an examination of the critical issues under debate.

G 530 Criminological Theory 3 cr. Offered autumn. Prereq., SOCI 221 & either 211S or 330 (SOC 235 and either 230S or 330).

Advanced study of the major theories of crime and criminality; includes the themes and theoretical perspectives of criminology together with relevant research findings.

G 538 Seminar in Crime and Deviance 3 cr. Offered intermittently. Advanced study of a specific criminological topic or issue with special emphasis on research and public policy. Possible topics include women and crime, cross-cultural criminal justice, sentencing, the social location of crime, drugs and crime, causal analysis of crime and criminality.

G 545 Seminar in Inequality and Social Justice 3 cr. Offered spring. Advanced study of variable topics in inequality and social justice held in a small group setting that maximizes opportunities for graduate student research, discussion, and writing.

G 561 Qualitative Methods 3 cr. Offered spring. Prereq., SOCI 101S and 318 (SOC 110S and 201). Introduction to the basic methods used to conduct qualitative studies including ethnography, focus group, interview and observation. Includes hands-on fieldwork projects, data coding and analysis, and research ethics. Draws on examples and literature from sociology.

G 562 Quantitative Methods 3 cr. Offered autumn. Prereq., SOCI 101S, 318 and 202 (SOC 110S, 201 and 202). Introduction to the basic methods used to conduct quantitative sociological research and program evaluation including proposal development, survey design, sampling techniques, data analysis, and dissemination of findings.

G 563 Social Data Analysis 3 cr. Offered spring. Prereq., SOCI 101S, 318 and 202 (SOC 110S, 201 and 202). A hands-on introduction to preparing sociological reports and documents, performing research and statistical tasks common to the field. Presumes no previous knowledge of microcomputers.

G 571 Seminar: Rural and Environmental Change 3 cr. Offered autumn. Utilizing a critical perspective, students examine rural and environmental transitions and their implications for policies and debates on managing growth, development and natural resources in rural areas.

G 590 Sociology Internship Variable cr. (R-6) Offered every term. Prereq., consent of instr. Supervised placement for graduate students in an agency or business which involves work experience related to criminology, sociology, rural and environmental change and/or inequality and social justice..

G 594 Graduate Seminar 3 cr. (R-9) Offered intermittently. Selected sociological topics.

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6)Offered every term. Prereq., consent of instr. Work with a faculty supervisor in an area of special interest.

G 597 Graduate Research 2-3 cr. (R-9) Offered every term. Directed research. Student must develop a specific research or evaluation proposal which is approved by the instructor prior to registration. Those students electing the professional paper option may apply three credits of 597 toward graduation.

G 598 Internship Variable cr. (R-6) Offered autumn and spring. Prereq., consent of department. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 Thesis/Professional Paper Variable cr. (R-6) Offered every term. Students may apply six credits of 599 toward graduation.

Faculty

Professors

- Robert W. Balch, Ph.D., University of Oregon, 1972
- James W. Burfeind, Ph.D., Portland State University, 1984
- Daniel P. Doyle, Ph.D., University of Washington, 1984
- Rebecca T. Richards, Ph.D., Utah State University, 1990

Associate Professor

- Teresa R. Sobieszczyk, Ph.D., Cornell University, 2000
- Celia C. Winkler, Ph.D., University of Oregon, 1996

Assistant Professors

- Kathy J. Kuipers, Ph.D., Stanford University, 1999
- Dusten R. Hollist, Ph.D., Washington State University, 2003
- Lyn C. Macgregor, Ph.D., University of Wisconsin-Madison, 2005

- Daisy M. Rooks, Ph.D., Unversity of California-Los Angeles, 2007

Women's and Gender Studies Program

- Special Degree Requirements
- Courses
- Faculty

Bryan Cochran and Elizabeth Hubble, Co-Directors

Women's and Gender Studies, an interdisciplinary program founded in 1990, encourages the production, discussion, and dissemination of knowledge about women's experiences, oppressions, and achievements, in Montana, the U.S., and the world. In the last decade this focus has broadened to include study of the social and cultural construction of gender, sex, and sexualities. By fostering awareness of cultural and international diversity, as well as of the circulations of power mediated by race, class, age, and sexual orientation, Women's and Gender Studies encourages students to think critically and to envision justice for all peoples.
The Women's and Gender Studies program is administered by the director, with assistance from the program coordinator, in consultation with the Women's and Gender Studies Steering Committee, an interdisciplinary group of faculty and professional associates with teaching, research, and scholarly interests in women and gender.
Students may include Women's and Gender Studies in their studies in two ways. They can major in Liberal Studies with an option in Women's and Gender Studies, or they can complete the Women's and Gender Studies minor. Students may select coursework from a wide variety of courses offered in the humanities, social sciences, natural sciences, law, education and other disciplines. Women's and Gender Studies offers scholarships, and sponsors or co-sponsors a variety of events including lectures, discussions, and performances that make a vibrant contribution to both the campus and the Missoula community life.
To be admitted, students must register with the Women's and Gender Studies directors, who will explain option or minor requirements and supervise their program.

Special Degree Requirements

For the Women's and Gender Studies option under the Liberal Studies major, the following requirements must be met (not necessarily in sequence):

1. Completion of Liberal Studies core curriculum. (See the Liberal Studies section of this catalog.)
2. Completion of WGS 119H or approved alternative.
3. At least 21 credits of course work in relevant, advisor- approved courses numbered above 299. At least 12 of these credits must be designated as "focus" courses and 9 more may be either focus or content courses. Each semester a list of these courses is published at pre-registration by the Women's and Gender Studies office, LA 138A, (406) 243- 2584. Typical choices are listed below, but may vary from year to year. WGS 398 (internships) may be applied toward these credits.

- **Group I: Examples of Focus Courses**
  - ANTH 201 Human Sexuality
  - ANTH 327 Anthropology of Gender
  - ART 480 Women Artists and Art History
  - COMM 380 Gender and Communication
  - COMM 480 The Rhetorical Construction of "Woman"
  - COMM 481 The Rhetoric of US Women's Activism, 1960-Present
  - LIT 331 (ENLT 321) Major Author's
  - LIT 335 (ENLT 336) Women & Lit
  - LIT 343 (ENLT 337) African-American Literature
  - LIT 378L (ENLT 372) Gay and Lesbian Studies
  - LIT 379L (ENLT 375L) Gender and Sexuality in 20th Century Fiction
  - LIT 420 (ENLT 421) Critical Theory
  - HSTA 387/WGS 370 (HIST/WGS 370) Women's History to 1865
  - HSTA 388/371 (HIST/WGS 371) Women's History 1865 to the Present
  - HSTA 418 (HIST 470) Women and Slavery
  - HSTA 419 (HIST 471) Southern Women
  - LS/MCLG 320 Women in Antiquity
  - LS 381* Women and Film
  - NAS 342 Gender Studies in Native American Studies
  - PHIL 429 Feminist Ethics
  - PSYX 348 (PSYC 385) Psychology of Family Violence
  - RELS 370* Mysticism:
  - SW 323 Women and Social Action in the Americas
  - SW 324 Gender and the Politics of Welfare
  - SOCI 220S (SOC 220S) Race, Gender & Class
  - SOCI 332 (SOC 300) Sociology of the Family
  - SOCI 371 (SOC 370S) Soc Change and Global Devl
- **Group II: Examples of Content Courses**

- ANTH 329 Social Change in Non-Western Societies
- LIT 300 (ENLT 301)* Literary Criticism
- LIT 305/NAS 329 (ENLT 329) Lit by and About Native American's
- FRCH 311 Survey of French Lit
- GRMN 441 19th Century German Literature
- HSTR 300* The Historian's Craft
- HSTR 382 (HIST 350)* Background Curr Crisis
- HSTA 311 (HIST 351)* Early America
- HSTR 368 (HIST 387) Iran Between Two Revolutions
- HSTR 435 (HIST 485) Latin Amer: Mem of Politics & Politics of Mem
- HHP 371 Introduction to Peer Health Education
- MCLG 302/HSTR 301 (HIST 302H) Ancient Greek Social History
- PSCI 343 Politics of Social Movements
- PSCI 431 Politics of Global Migration
- PSCI 452 (PSC 450E) Utopianism and its Critics
- PSCI 463 (PSC 463S) Development Administration
- PSCI 474 (PSC 472) Civil Rights Seminar
- PSYX 348 (PSYC 385) Psychology of Family Violence
- RELS 336* Medieval Christian Thought
- SW 410E Ethics and the Helping Professions
- SW 420 Child Abuse and Child Welfare
- SOCI 443 (SOC 322) Sociology of Poverty
- SOCI 355 Population and Society
- SOCI 371 (SOC 370S) Social Change and Global Development
- SOCI/FOR 424 Comm Forestry & Conservation

*These are generic courses. The specific course focus must be on women, as listed here. Check with the Women's and Gender Studies directors before enrolling.
Other courses not listed here may be applied toward the option or the minor if approved by the Women's and Gender Studies directors.

Requirements for a Minor

The Women's and Gender Studies minor is available to students in all majors. It consists of 20 credits. Students must complete four required courses or approved alternatives: (1) WGS 119H, Philosophical Perspectives on Women in the Western Hemisphere, or WGS 263S, Introduction to Women's and Gender Studies, (2) WGS 275, Gender and Society, (3) WGS 363, Feminist Theories and Methods, and (4) WGS 463, Women's Studies Capstone (2 credits). In addition, students must complete three upper-division (300- or 400-level) elective courses (nine credits) from the list of Women's and Gender Studies "content" and "focus" courses. Students may apply WGS 398, Cooperative Education (internships), toward their elective credits. All requests for substitutions or equivalency must be approved by the director(s) of the Women's and Gender Studies Program.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Women's and Gender Studies (WS)

U 119H Philosophical Perspectives on Women in the Western Hemisphere 3 cr. Offered spring. Same as LS and PHIL 119H. Introduction to the discipline and scope of Western philosophy focusing on women as the subject rather than men. A chronological study following the ideological development in the West of social attitudes and scientific theses.

U 263S Introduction to Women's and Gender Studies 3 cr. Offered autumn. Broad overview of gender and women's issues from a social science perspective. Relevant topics related to the sociological and psychological aspects of gender across culture are explored, including masculinity, femininity, violence, reproductive health, cultural diversity in the expression of gender, issues in sexual orientation, and media contributions to these issues.

U 275S Gender and Society 3 cr. Offered annually. Same as SOCI 275S. Exploration of the social construction of gender, especially in western, post-industrial societies such as the U.S. How gender ideologies affect the social definition and position of men and women in work, family, sexual relationship, sexual divisions of labor, and social movements.

U 294 Seminar 1-6 cr. (R-6) Offered intermittently.

U 295 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 320 Women in Antiquity 3 cr. Offered intermittently. Same as MCLG and LS 320. Examination of varied sources from Ancient Greece, the Hellenistic World, and republican and imperial Rome to clarify the place of women in communities. Women's contribution to community and the mechanisms by which communities attempted to socialize female populations.

U 323 Women and Social Action in the Americas 3 cr. Offered intermittently. Prereq., one of SW 100, SOCI 101S (SOC 110S), or ANTH 101H or consent of instr. Same as SW 323. Focus on women's experiences of and contributions to social change in North, South and Central America in the mid- to late-20th century. Through case studies, testimonials, discussions with activists and Internet connections examine social constructions of gender, compare forms of social action in diverse cultural, political and historical contexts, link practice to theories of social participation, and reflect on lessons learned from women's experiences.

U 324 Gender and the Politics of Welfare 3 cr. Offered intermittently. Prereq., SW 100 or consent of instr. Same as SW 324. Exploration of the relationship between gender ideologies and the development of social welfare policies. Examination of historic and contemporary social welfare policies, practices and debates in the United States through a gender lens.

UG 327 Anthropology of Gender 3 cr. Offered spring even-numbered years. Same as ANTH 327. Prereq., ANTH 201 or consent of instructor. Comparative study of the history and significance of gender in social life.

U 336 American Women Writers 3 cr. Offered spring odd-numbered years. Prereq., LIT 300 (ENLT 301) or consent of instr. Same as LIT 335 (ENLT 336). Consideration of political and aesthetic purposes in women's fiction through a progression of 19th century literary forms: a cautionary seduction novel, sentimental and domestic novels, realism, naturalism, and utopianism.

UG 342 Gender Studies in Native American Studies 3 cr. Offered intermittently. Same as NAS 342. Focus on American Indian gender relations and their cultural continuity and historical evolution. National in scope with concentration on certain tribes. Group analysis of contemporary gender issues relevant to Native American peoples.

U 363 Theories and Methods of Feminist Inquiry 3 cr. Offered spring. In-depth exposure to feminist views and critique of the ethics and methods of scientific, social, and literary inquiry. Includes exposure to primary sources and current societal and global issues and movements, research finding, and literature exemplifying these methods of inquiry and the gendered dimensions of such inquiry.

UG 370 Women in America: to the Civil War 3 cr. Offered autumn. Same as HSTA 387 (HIST 370). Interpretive overview of women's experiences in America before the Civil War. Exploration of new definitions of womanhood and "women's sphere" emerging from women's varied experiences in the American colonies and the American Revolution; how immigrant, poor, slave, and western women transgressed the boundaries of their sphere; and how women-from both inside and outside their assigned sphere-reshaped their roles in American society.

UG 371 Women in America: from the Civil War 3 cr. Offered spring. Same as HSTA 388 (HIST 371). Interpretive overview of women's experiences in America after the Civil War. Exploration of such topics as women's associations, the battle for suffrage, organized feminism and its opponents, the industrialization of housework, women in the workforce, reproductive rights, and welfare. Particular attention to women's experiences shaped by class and race as well as by gender.

U 372L Gay and Lesbian Studies 3 cr. Offered intermittently. Prereq., LIT 300 (ENLT 301) or consent of instr. Same as LIT 378L (ENLT 372). Review of the history of the gay and lesbian movement in the twentieth century as a basis for understanding the political, social, and sexual issues that influenced homoerotic cultural representation in plays, films, and novels.

U 379L Gender and Sexuality in English Fiction 3 cr. Offered yearly. Same as LIT 379L (ENLT 375L) and LS 379. Major 19th or 20th century novels and short stories written in English in different parts of the world and how these texts explore changing concepts of gender and sexuality.

U 380 Gender and Communication 3 cr. Offered autumn. Same as COMM 380. The meaning of gender in our culture and how gender is displayed and perpetuated through our private and public verbal and nonverbal interactions.

U 396 Independent Study Variable cr. (R-12) Offered intermittently.

U 397 Research Variable cr. (R-6) Offered intermittently.

U 395 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 398 Internship Variable cr.(R-6) Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 463 Women's and Gender Studies Capstone 2 cr. Offered spring. Prereq., WGS 119H, WGS 263S,WS 275S. Capstone course for the Women's and Gender Studies minor.

U 493 Omnibus Variable cr.(R-6) Offered intermittently. Prereq., consent of instr. Independent work under University omnibus option. See index.

U 495 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study Variable cr. (R-9) Offered intermittently.

U 497 Research Variable cr. (R-6) Offered intermittently.

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study 1-6 cr.(R-6) Offered intermittently. Prereq., consent of instr.

Women's and Gender Studies Steering Committee/Faculty

Professors

- Betsy Bach, Ph.D., University of Washington (Communication Studies)
- Casey Charles, J.D., Hastings College fo the Law, 1978; Ph.D. SUNY Buffalo, 1992 (English)
- Janet L. Finn, Ph.D., University of Michigan, 1995 (Social Work and Anthropology)
- Christine Fiore, Ph.D., University of Rhode Island, 1990 (Psychology)
- Rita Sommers-Flanagan, Ph.D., The University of Montana, 1989 (Psychology)
- Linda Rutland Gillison, Ph.D., University of Minnesota, 1975 (Classics and Liberal Studies)
- Sara Hayden, Ph.D., University of Minnesota, 1994 (Communication Studies)
- Anya Jabour, Ph.D., Rice University, 1995 (History)
- Jennifer McNulty, Ph.D., University of North Carolina at Chapel Hill, 1993 (Mathematical Sciences)
- Ruth Vanita, Ph.D., Delhi University, 1992 (Liberal Studies)
- Heather Bruce, Ph.D., University of Utah, 1997 (English)
- G. G. Weix, Ph.D., Cornell University, 1990 (Anthropology)
- Ione Crummy, Ph.D., Stanford University, 1992 (French)

Associate Professors

- Karen Ruth Adams, Ph.D., University of California-Berkeley, 2000 (Political Science)
- Hiltrudis Arens, Ph.D., University of Maryland, 1997 (German)
- Jill Bergman, Ph.D., University of Illinois, Urbana, 1999 (English)
- Bryan Cochran, Ph.D., University of Washington, 2003 (Psychology)
- Sarah Halvorson, Ph.D., University of Colorado-Boulder, 2000 (Geography)
- Maxine Jacobson, Ph.D., University of Utah, 1997 (Social Work)
- Kathleen Kane, Ph.D., University of Texas, 1997 (English)
- Kimber Haddix McKay, Ph.D., University of California-Davis, 1997 (Anthropology)
- Teresa Sobieszczyk, Ph.D., Cornell University, 2000 (Sociology)
- Jennifer Waltz, University of Washington, 1993 (Psychology)
- Celia Winkler, Ph.D., University of Oregon, 1996 (Sociology)
- Stephen Yoshimura, Ph.D., Arizona State University, 2001 (Communication Studies)

Assistant Professors

- Julie Edwards, MS, University of Illinois, Urbana-Champaign (Archivist)
- Lynn Itagaki, Ph.D., UCLA, 2005 (English)
- Kathy Kuipers, Ph.D., Stanford University, 1999 (Sociology)
- Jody Pavilack, Ph.D., Duke Univeristy, 2003 (History)
- Daisy Rooks, Ph.D., Duke University, 2007 (Sociology)
- Kathleen Ryan, Ph.D., University of North Carolina-Greensboro, 2001, (English)
- Tobin Shears, Ph.D., Northwestern University, 2008 (History and Religion)
- Christina Yoshimura, Ph.D., Arizona State University, 2004 (Communication Studies)

Continuing Education and Summer Programs

Sharon E. Alexander, Dean

Mission

Continuing Education (CE) is the outreach arm of The University of Montana, and its mission reflects The University of Montana's commitment to provide high quality, innovative outreach programs that serve the lifelong learning needs of the citizens of Montana and beyond. Continuing Education's primary goal is to provide access to UM's vast array of educational opportunities.

Continuing Education partners with academic units and external agencies to develop programs; write grant and contract proposals, for external funding; and offer focused training programs that contribute to the economic development of Montana. CE programs are delivered using a variety of delivery formats.

Continuing Education is located in the James E. Todd building, east of the University Center, and provides access to state-of-the-art technology in every room. In addition, CE provides conference and event planning, including equipment rental, technical support and

logistical assistance. For more information, visit the website.

Extended Learning Services (XLS) is the operational entity that encompasses UMOnline, Summer Semester, Wintersession, Off-campus programs and Professional Development Services. The mission of XLS is to connect the resources of The University of Montana to a diverse audience by facilitating access to educational opportunities through online learning, summer and winter programs, off-campus courses and degrees and professional development programs. http://umt.edu/xls

UM Online courses are available to students both on- and off- campus at times and places convenient to the learner. Degree programs, General Education courses and many other online courses are offered each semester and Wintersession. For more information and course schedules, select UMOnline at the website http://umt.edu/xls/umonline.

Summer Semester offers several options for traditional and non-traditional students throughout the summer months. Graduate and undergraduate courses are offered in more than 30 disciplines, along with workshops and seminars. For more information about Summer Semester, visit http://umt.edu/xls/summer.

Wintersession offers UM students an opportunity to earn up to 6 credits during the 3-week session in January. Credits earned during Wintersession count toward full-time Spring Semester status. For example, students registered for 3 credits during Wintersession and 9 credits during the Spring Semester are considered full-time students. Students registered for 12 or more credits during the Spring Semester do not pay additional tuition for courses scheduled during Wintersession. Financial Aid applies to credits earned during Spring, including Wintersession. For more information, visit http://umt.edu/xls/wintersession.

Professional Development Services offers academic credit and non-credit courses, programs, workshops, seminars and conferences. Course delivery includes face-to-face, online, blended learning, travel and experiential learning opportunities. For more information about taking or sponsoring professional development courses, visit http://umt.edu/xls/pds.

Off-Campus Courses and Programs offer learners with additional opportunities to earn academic credit and complete programs in many disciplines in locations other than Missoula. Designed to meet the diverse needs of students, programs are offered at locations throughout Montana and beyond using traditional classroom methods, videoconferencing and Internet instruction. For more information, visit http://www.umt.edu/xls/offcampus.

Community and Professional Services

The mission of the Community and Professional Services Department is to provide comprehensive non-credit training opportunities to a broad spectrum of professional and community groups. The unit is responsible for the development and implementation of programs that included professional development, technical support, training, creative solutions, enhanced solutions and communications. These programs focus on health and the environment by offering custom tailored workshops, conferences, reports, strategic planning, regional training and community outreach programs. CPS works to empower community organizations by providing services that enable them to increase their levels of skill and efficiency. For more information, visit http://www.umt.edu/ce/cps/.

Osher Lifelong Learning Institute at The University of Montana

The mission of the Osher Lifelong Learning Institute at The University of Montana (MOLLI) is to promote lifelong learning and personal growth for adults over fifty. The institute offers an accessible and innovative learning environment for older adults from all backgrounds and levels of education. Faculty members include emeritus and current UM faculty, as well as professionals from the community. Program offerings include lectures, ongoing discussions, short courses, and interest groups covering topics from the humanities, sciences and the arts, as well as community and regional issues. For more information, visit http://www.umt.edu/ce/plus50.

College of Forestry and Conservation

- Special Degree Requirements
- Graduate Programs
- Faculty

James Burchfield, Interim Dean

The undergraduate curricular programs at the College of Forestry and Conservation (CFC) provide the knowledge and skills for students to become effective national resource professionals. They offer a sequence of learning experiences that build the necessary confidence and critical thinking capabilities to help solve some of humanity's most pressing problems in the stewardship of our shared natural heritage.

Undergraduate programs at the College of Forestry and Conservation have evolved into a unique action-oriented, interdisciplinary experience where students integrate real-world issues into their coursework. Students will utilize the latest technologies in the assessment and analysis of natural resource challenges, and they will simultaneously apply this learning in multiple field settings across the unparalleled natural settings of Montana.

The five undergraduate majors in the College are science degrees, leading to a Baccalaureate of Science (B.S.) degree. These majors are

Forestry, Recreation Management, Wildlife Biology, Resource Conservation, and Wildland Restoration. These majors all provide a strong foundation in knowledge about natural systems, science, analytical skills, and policy, but each is tailored to the specialized needs of a particular career track or research discipline in the natural resources management professions. Students have an opportunity to emphasize the disciplinary concentration of their choosing, but all students will receive a balance of ecological, physical, and social sciences.

Students uncertain about which specific major best meets their interests and needs will find that the ability to move between majors early in their student career is facilitated by a common foundational core of coursework. Each major's curricular program is designed to fulfill the broad educational goals for all graduates of The University of Montana, as well as the specific disciplinary requirements of civil service and professional accrediting organizations.

Preparation to Enter the College of Forestry and Conservation

Students planning to enter the College of Forestry and Conservation should attain a sound background in English, social studies, mathematics, biology, and other sciences. Entering freshmen and non-resident transfer students will be admitted in accordance with general university admission requirements listed previously in this catalogue. Resident transfer students or current UM students wanting to change their major to the College of Forestry and Conservation must have a grade point average of 2.0 or higher to be admitted.

Educational Framework at the College of Forestry and Conservation

Students at the College of Forestry and Conservation are expected to demonstrate a range of capabilities before graduation so they can better address the multiple demands facing modern natural resource managers. The College fosters learning through a combination of innovative teaching and scholarship with a focus on state of the art knowledge in the major fields and emerging natural resource challenges. Each major's curriculum follows a similar seven part structure that encourages the sequenced development of foundational knowledge, applied skills, and creative problem-solving. The following description illustrates how the curricula are organized to present the most efficient and engaging pathway to the full development of student capabilities:

Foundations of Science

Students will be required to have a solid understanding of the primary physical, chemical, and biological drivers of natural systems. Required for all students are an introductory course in inorganic chemistry and a basic biological science course (there are several introductory biology classes that will apply, depending on a student's major). Students in the Wildland Restoration major and the Forest Operations option within the Forest Management major will also take an introductory course in physics. Recreation Management majors will take introductory coursework in psychology or sociology to understand social drivers in relation to natural systems. Additionally, all students are encouraged to take one of the four introductory courses offered by the College that draw together multiple disciplines to demonstrate the historical and cultural dimensions of conservation: The Nature of Montana (RSCN 121S); Careers in Natural Resources (WBIO/FOR 180); Wildlife and People (WBIO 105N); or International Forestry (RSCN/FOR 170). In the sophomore year most students will take an introductory course in soils to become familiar with the cycling of energy and nutrients in terrestrial ecosystems while students in the Wildlife Biology major will take coursework in molecular biology and genetics. In their junior year all students take an upper division ecology class. The University's general education requirements and specific College majors ensure all students take additional natural and social science classes to provide the foundations necessary to understand and manage the natural and social systems underlying human uses of natural resources.

Quantitative and Analytical Skills

All students at the College will attain the quantitative analytical and measurement foundations needed for their professional or research career path . The freshmen level quantitative requirement rests on a proficiency in mathematics that is obtained through one of two routes depending on major : a college algebra/linear math/probability track or an introductory calculus track. All sophomore students take a statistics class which many fulfill through a special course in the analysis of multiple forms of measurement of natural resource characteristics, called Biometrics. Although not required for all majors, most students decide to take a special course in mapping that combines the common applications of geographic information systems (GIS) and the basic attributes of spatial analysis.

Applied Field Skills

A tremendous advantage of an education at the College of Forestry and Conservation is the proximity of an unlimited field laboratory in both the managed and untrammeled landscapes of Montana. All undergraduates will have multiple opportunities to learn in field settings as a part of lab sections associated with many of CFC's courses. Some specific academic opportunities, such as the College's Wilderness and Civilization Program, will take students on extended backcountry trips to gain first-hand knowledge of wild settings. Exceptional hands-on learning experiences are provided at the College's Lubrecht Experimental Forest located less than 30 miles from campus on the Blackfoot River. Since students must demonstrate competency and confidence in outdoor field work to be a successful natural resource professional, students are required to select a sophomore-level field measurements course within their major. Although advanced transfer students (>59 transfer credits) to the College or Wildlife Biology students may apply other relevant experiences to their field training requirement, completion of a field measurements course is expected before students may enroll in upper division courses, as the needed skills to succeed in subsequent, more advanced field labs depend on a solid core of field capabilities.

Communication

Effectiveness in addressing our shared problems in natural resource management depends on a person's ability to communicate. College of

Forestry and Conservation students will graduate with considerable training in written communication with both lower-division requirements at the 200-level and a series of upper division courses where writing constitutes the major part of course expectations. Each major in the College provides a "distributed writing" menu for students entering into upper-division courses, such that each student will take at least three classes where writing skills are evaluated. Students will also fulfill university-wide writing requirements, including the successful passage of the Writing Proficiency Examination prior to entering into upper division coursework. All students take a public speaking class. Students wishing to gain more experience in public speaking and communication can also take a special class Natural Resources Interpretation.

Professional specialization

Each academic major in the College contains a sequence of courses and learning experiences tailored to the student's specific professional aspirations. Clusters of courses within a major prepare students to obtain the necessary knowledge and professional competencies to perform the tasks of a modern resource manager or research scientist. Course work combines biophysical and social science training to allow students to recognize and navigate the complexities and context of conservation sciences and natural resources management. Thus, each major has courses representing both ecological and policy development processes, as well as a progression of classes covering the knowledge areas and topics of major natural resources disciplines. Students will take a core of required courses (described in the section below) as well as a balanced selection of "professional electives" to acquire sufficient balance and depth in their chosen field to emerge with an identified professional specialty.

Work Experience and Service Learning

Students at the College of Forestry and Conservation will apply what they have learned in real-world settings prior to graduation. This work experience can be obtained in many ways, via internships, summer employment, study abroad opportunities, or specially designed "service learning" courses. Service experiences will allow students to obtain credit, learn new material, and offer critical work to established organizations to advance conservation goals. In general, requirements for work experience or internships will be counted based on the number of hours worked over the course of a student's entire undergraduate career, with 400 hours or more of work necessary for graduation.

Capstone experience

Each academic major in the College offers an opportunity for students to synthesize previous learning in a real-world project via either an undergraduate research project or the completion of a special, integrative "capstone" course. Undergraduate research projects are designed through close supervision of a student's academic advisor, while the capstone courses bring together a team of faculty who facilitate student oriented problem solving through a focus on an applied management problem or real world case studies that offer vital experience in the preparation of students for their professional careers.

Other University-wide requirements for Academic Achievement

The University of Montana has established standards for graduation of all students that include demonstrated proficiencies in oral and written communication and symbolic systems as well as a selection of diverse learning experiences identified as "general education courses." The College's expectations for writing and quantitative skills more than fulfill university-wide requirements for communication and symbolic systems, and many of the courses offered by CFC also fulfill the categories within general education requirements. All CFC majors also offer sufficient opportunity for students to choose among the full range of UM courses as "free electives," such each person might be able to explore new areas of learning at their own discretion.

Student Advising

All College of Forestry and Conservation students will have a full-time faculty advisor as well as the extensive advising support provided by the College's Office of Student Services. Students are paired with a faculty advisor who matches their academic and professional interest and serves as a mentor and advocate for students as they progress through individual academic achievements. Students may change their advisor at any time as their specific interests develop or change. New students needing an advisor and current students who wish to change advisors should contact the College's Office of Student Services. Students are required to consult with their advisors before each registration period and remain responsible for fulfilling the published requirements for graduation.

Graduation Auditing

All students will complete a graduation audit in the semester prior to their graduation to make sure that they have a sure pathway for successful completion of their chosen major.

Faculty

Professors

- Donald J. Bedunah, Ph.D., Texas Tech University, 1982
- Jill M. Belsky, Ph.D., Cornell University, 1991
- William T. Borrie, Ph.D., Virginia Polytechnic Institute and State University, 1995
- Perry J. Brown, Ph.D., Utah State University, 1971 (Dean)

- James A. Burchfield, Ph.D., University of Michigan, 1991 (Associate Dean)
- Edwin J. Burke, Ph.D., Colorado State University, 1978
- Wayne A. Freimund, Ph.D., University of Minnesota, 1993
- Paul Krausman, Ph.D., University of California-Santa Cruz, 1993
- L. Scott Mills, Ph.D., University of California, Santa Cruz, 1993
- Norma Nickerson, Ph.D., University of Utah, 1989 (Research)
- Daniel H. Pletscher, Ph.D., Yale University, 1982 (Director, Wildlife Biology Program)
- Donald F. Potts, Ph.D., State University of New York, 1979 (Chair of Forest Management)
- LLoyd Queen, Ph.D., University of Nebraska, Lincoln, 1988
- Steven W. Running, Ph.D., Colorado State University, 1979
- Stephen F. Siebert, Ph.D., Cornell University, 1990
- Diana Six, Ph.D., University of California, Riverside, 1997
- Ronald H. Wakimoto, Ph.D., University of California, 1978 (Chair of Society and Conservation)
- R. Neil Moisey, Ph.D., The University of Montana, 1997
- Martin Nie, Ph.D., Northern Arizona, 1998
- Mike Patterson, Ph.D., Virginia Polytechnic Institute and State University, 1993 (Chair of Society and Conservation)

Associate Professors

- Elizabeth Crone, Ph.D., Duke University, 1995
- Lisa A. Eby, Ph.D., Duke University, 2001
- John M. Goodburn, Ph.D., University of Wisconsin-Madison, 2004
- David Naugle, Ph.D., South Dakota
- Scott Woods, Ph.D., Colorado State University, 2001
- John Kimble, Ph.D., Oregon State University, 1995 (Research)
- Woodman Chung, Ph.D., Oregon State University, 2002
- Christopher Keyes, Ph.D., Oregon State University, 2002 (Research)

Assistant Professors

- David Affleck, Ph.D., Yale University, 2006
- Keith Bosak, Ph.D., University of Georgia (Athens), 2006
- Cory Cleveland, Ph.D., University of Colorado-Boulder, 2001
- Solomon Dobrowski, Ph.D., University of California (Davis), 2005
- Elizabeth D. Dodson, Ph.D., Oregon State University, 2004
- Mark Hebblewhite, Ph.D., University of Alberta, 2006
- Cara Nelson, Ph.D., University of Washington, 2004
- Tyron Venn, Ph.D., University of Queensland, 2004
- Laurie Yung, Ph.D., University of Montana, 2003 (Research)
- Andrew Larson, Ph.D., University of Washington, 2009
- Laurie Marczek, Ph.D., University of British Columbia, 2007
- James Riddering, Ph.D., University of Montana, 2004 (Research)
- Carl Seielstad, Ph.D., University of Montana, 2003 (Research)

Faculty Associates

- Carol Brewer, P:h.D., University of Wyoming, 1993
- Thomas DeLuca, Ph.D., Iowa State University, 1993
- Michael Mitchell, Ph.D., North Carolina State University, 1995
- Anna Sala, Ph.D., University of Barcelona, 1992
- Rich Harris, Ph.D., University of Montana, 1993
- Peter Kolb, Ph.D., University of Idaho, 1996
- Christopher Sevheen, Ph.D., University of Montana, 1981
- Kathy Tonnessen, Ph.D., University of California-Berkley, 1982
- Robert Crabtree, Ph.D., University of Idaho, 1988
- Michael Schwartz, Ph.D., University of Montana, 2001

Emeritus Professors

- David H. Jackson, Ph.D., University of Washington, 1975
- Alan McQuillan, Ph.D., University of Montana, 1981
- Stephen F. McCool, Ph.D., University of Minnesota, 1970
- Thomas J. Nimlos, Ph.D., University of Wisconsin, 1959
- Robert D. Pfister, Ph.D., Washington State University, 1972
- Robert R. Ream, Ph.D., University of Wisconsin, 1963
- Jack Ward Thomas, Ph.D., University of Massachusetts, 1972
- Hans R. Zuuring, Ph.D., Iowa State University, 1975
- Paul B. Alaback, Ph.D., Oregon State University, 1980

Forestry

Bachelor of Science in Forestry

Forest Operations and Applied Restoration Option

In addition to special degree requirements listed previously, the students selecting the Forest Operations and Applied Restoration option must complete the following required courses or their equivalent, if transferred from another college or university. Transference and equivalency will be determined by the University and College of Forestry and Conservation. Electives may be taken at any time, keeping in mind these requirements as well as the University's General Education requirements for graduation.

First Year	Credits
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3
WRIT 101 (ENEX 101) College Writing I	3
M 151 (MATH 121) Precalculus	4
BIOL 120N General Botany (including lab)	3
M 162 (MATH 150) Applied Calculus	4
PHYS 111N and PHYS 113N Fundamentals of Physics I and Fundamentals of Physics I Lab	5
ECNS 201S (ECON 111S) Introduction to Microeconomics	3
FOR 180 Careers in Natural Resources or RSCN 121 Nature of Montana	2
FOR 200 Natural Resources Measurements Camp	2
Electives and General Education	4
Second Year	**Credits**
FOR 235 Problem Solving for Forest Operations	4
FOR 201 Forest Biometrics	3
FOR 210N Introductory Soils	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
FOR 241 Dendrology	3
FOR 250 Geographic Information System Practicum	2
FOR 265 Elements of Ecological Restoration	3
Nature and Society Elective	3
Electives and General Education	3
Third and Fourth Years	**Credits**
FOR 302 Forest Mensuration	3
FOR 320 Forest Economics	3
FOR 330 Forest Ecology	3
FOR 385 Watershed Hydrology	3
FOR 340 Forest Products Manufacturing	2
FOR 341 Timber Harvesting and Forest Roads	3
FOR 347 Multiple Resource Silviculture	3
FOR 351 Photogrammetry and Remote Sensing	3
FOR 422 Natural Resources Policy & Administration	3
FOR 435 Advanced Timber Harvesting and Forest Roads	5
FOR 436 Forest Operations Evaluation and Project Planning	3
FOR 437 Forest Operations and Applied Restoration Capstone	3
FOR 455 Riparian Ecology and Management	3
Electives and General Education	22
The following courses satisfy the nature and society elective requirement:	
EVST 167H Nature and Society	3
EVST 225 Community and Environment	3
EVST 327E Environmental Ethics I	3

Forest Resources Management Option

In addition to special degree requirements listed previously, the students selecting the Forest Resources Management option must complete the following required courses or their equivalent, if transferred from another college or university. Transference and equivalency will be determined by the University and College of Forestry and Conservation. Electives may be taken at any time, keeping in mind these requirements as well as the University's General Education requirements for graduation.

First Year	Credits
BIOL 120N General Botany	3
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3
COMM 111A Introduction to Public Speaking or DRAM 111A Acting for Non-Majors	3
ECNS 201S (ECON 111S) Introduction to Microeconomics	3
WRIT 101 (ENEX) 101 Composition	3
M 151 (MATH 121) Precalculus	4
M 162 (MATH 150) Applied Calculus	4
Electives and General Education	5
Second Year	**Credit**
FOR 201 Forest Biometrics	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
FOR 210N Introductory Soils	3
FOR 240 Tree Biology	2
FOR 241N Dendrology	3
FOR 250 Geographic Information System Practicum	2
Social Science Restricted Elective(Select one course from the following list)	
SOCI/EVST 225 Community and Environment	3
EVST 167 nature and Society	3
RSCN 370 Wildland Conservation Policy and Governance	3
Management Applications Restricted Elective (Select at least five credits from the following list)	
FOR 230 Fire Management	2
FOR 232 Forest Insects and Diseases	2
FOR 360 Range Management	3
RECM 217S Wildland Recreation Management	3
FOR 275 Wildlife Conservation	2
Electives and General Education	4
Third and Fourth Years	**Credits**
FOR 302 Forest Mensuration	3
FOR 320 Forest Economics	3
FOR 330 Forest Ecology	3
FOR 340 Forest Products Manufacturing	2
FOR 341 Timber Harvesting and Forest Roads	3
FOR 347 Multiple Resource Silviculture	3
FOR 351 Photogrammetry and Remote Sensing	3
FOR 385 Watershed Hydrology	3
FOR 422 Natural Resource Policy	3
FOR 440 Timber Management I	3
FOR 481 Forest Planning	3
Professional Electives	15
Electives and General Education	26
Professional Electives: Students must select at least five courses among the three areas of emphasis listed below so that at least 15 total professional elective credits are included in the degree program.	
Biophysical Sciences (select at least one course)	
WBIO 373 Wildlife Techniques	2
WBIO 370 Wildlife Habitat Conservation & Management	3
FOR 332 Forest Entomology	3
FOR 342 Wood Anatomy, Properties and Identification	3
BIOL 316 Plant Form and Function	5
BIOL 350 Rocky Mountain Flora	3
BiOL 444 Plant Physiology	4
BIOL 223 Genetics and Evolution	4
PHYS 111N and PHYS 113N Fundamentals of Physics I and Fundamentals of Physics I Lab	5
FOR 430 Forest Meteorology	3
FOR 350 Geographic Information Systems and Applications	3
Management Applications (select at least one course)	

	2
FOR 360 Range Management*	3
RECM 217S Wildland Recreation Management*	3
FOR 455 Riparian Ecology and Management	3
FOR 307 Forest Vegetation Management Models	3
FOR 447 Advanced Silviculture	3
FOR 331 Wildland Fuel Management	3
FOR 485 Watershed Management	3
FOR 441 Timber Management II	3
FOR 480 Forest and Rangeland Area Planning and Design	3
RECM 310 Natural Resources Interpretation	3
Policy and Social Sciences (select at least one course)	
SOC/EVST 225 Community and Environment*	3
EVST 167 Nature and Society*	3
FOR 423 Montana Wilderness Policy and Politics	3
FOR 424 Community Forestry and Conservation	3
FOR 379 Collaboration in Natural Resources Decisions	3
FOR 475 Sociology of the Environment and Development	3
FOR 425 natural Resource and Environmental Economics	3
RSCN 370 Wildland Conservation Policy and Governance*	3
RECM 481 Recreation Behavior	3
RECM 482W Wilderness and Protected Area Management	3
RECM 485 Recreation Planning	3

***If these courses are selected as restricted electives they may not be used to fulfill professional electives**

Range Resources Management Option

In addition to special degree requirements listed previously, students electing the range resources management option must complete the following required courses, or their equivalent if transferred from another college or university. Transference and equivalency will be determined by the University and College of Forestry and Conservation. Electives may be taken at appropriate times, keeping in mind these requirements as well as the University's General Education requirements for graduation.

First Year	Credits
BIOL 120N General Botany	3
CHMY 121N (CHEM 151) Introduction to General Chemistry	3
COMM 111A Introduction to Public Speaking	3
ECNS 201S (ECON 111S) Introduction to Microeconomics	3
WRIT 101 (ENEX 101) Composition	3
GEOG 102N Introduction to Physical Geography	3
M 151 (MATH 121) Precalculus	4
M 162 (MATH 150) Applied Calculus	4
Summer	**Credits**
FOR 200 Natural Resources Measurements Camp	2
Second Year	**Credits**
BIOL 350 Rocky Mountain Flora	3
FOR 201 Forest Biometrics	3
FOR 210N Introductory Soils	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
FOR 230 Forest Fire Management	2
FOR 275 Wildlife Conservation	2
Electives and General Education	10-16

Third and Fourth Years: FOR 320, 330, 351, 360, 361, 362, 385, 410, 455, 460, 461, 462, 463, 480.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Forestry (FOR)

U 140 Introduction to Urban Forestry 2 cr. Offered spring. An introduction to urban forestry principles and practices. Benefits of the urban forest. Topics covered include plant species selection, site design, site assessment, planting, watering, fertilization, insects and diseases, pruning and tree care, inventory of property values, and community forestry development.

U 180 Careers in Natural Resources 2 cr. Offered autumn and spring. Same as WBIO 180 and RECM 180. Subject matter and fields of study within natural resources management. Topics include forestry, wildlife biology, range, water, recreation management, forest products production, and other opportunities for careers in natural resources.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study Variable cr. (R-3) Offered every term. Prereq., consent of instr. Problems course designed to allow individual research at the undergraduate level.

U 200 Natural Resources Measurements Camp 2 cr. Offered summer. Intensive two-week resident camp at the Lubrecht Experimental Forest. Introduction to the common measurements and skills used in identifying, quantifying, and understanding natural resources.

U 201 Forest Biometrics 3 cr. Offered autumn. Prereq., M 115 (MATH 117) or M 151 (MATH 121) or equivalent. Introduction to probability and statistical methods for forestry and environmental sciences covering natural resource applications of common probability distributions, data analysis, hypothesis testing, and regression.

U 210N Introductory Soils 3 cr. Offered autumn and spring. Prereq., CHEM 151N. An introduction to the chemical, physical, biological and morphological properties of soils.

U WRIT 222 (FOR 220) Technical Approaches to Writing 2 cr. Offered every term. Emphasis on strategy, style and tone in effective technical prose. Traditions of technical writing and how to adopt a wide range of tones and styles in writing various technical documents to diverse audiences. Focus on more effective technical sentences, paragraphs and larger writing components. Assignments include analyses, summaries, employment documents, research reports, case studies and editing/revision exercises.

U 230 Forest Fire Management 2 cr. Offered spring. Presuppression and suppression of fire and the uses of fire in management practices. Fire weather, the measurement of fire weather, the factors that influence fire behavior, and fire management decisions.

U 232 Forest Insects and Diseases 2 cr. Offered spring. Identification, significance of and remedies for insect infestations and infectious and non-infectious diseases of forests and forest products.

U235 Problem Solving for Forest Operations 4 cr. Offered autumn. Prereq., MATH 150, PHYS 121, GEOS 100N strongly recommended. Introduction to problem solving including the fundamentals of statics and mechanics of materials presented in the context of forest operations.

U 240 Tree Biology 2 cr. Offered autumn and spring. Suggested coreq., FOR 241N. The physical and biological requirements for the growth and development of trees. Discussions of: identification, classification, range, and economic importance of the major tree species of North America.

U 241N Dendrology 3 cr. Offered autumn and spring. Prereq., BIOL 120N; suggested coreq., FOR 240. Methods and techniques for identifying the major families of North American trees, based on gross morphological and anatomical features. Building and use of identification keys.

U 250 Geographic Information System Practicum 2 cr. Offered every term. A practical introduction to the use of geographic information systems for storing, retrieving, analyzing and displaying spatial data.

U 265 Elements of Ecological Restoration 3 cr. Offered autumn. Prereq., one course in the ecological or biological sciences. Overview of the natural and social science elements of ecological restoration, including the ecological foundations of restoration, restoration, restoration goals and practices in terrestrial and aquatic habitats, philosophical and ethical challenges involved, and current restoration initiatives in Montana and the United States. Includes Saturday field trips.

U 275 Wildlife Conservation 2 cr. Offered spring. Prereq., sophomore standing or consent of instr. Principles of animal ecology and framework of wildlife administration as a basis for the conservation of wild birds and animals, and biodiversity. For non-wildlife biology majors.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors; new courses or one-time offerings of current topics.

U 296 Independent Study Variable cr. (R-3) Offered every term. Prereq., consent of instr. Individual research at the undergraduate level.

U 302 Forest Mensuration 3 cr. Offered spring. Prereq., FOR 201. The theory and practice of timber inventory and growth projection, including field measurements, sampling procedures, statistical methods, inventory compilation, and stand growth simulation under specified

management prescriptions. Stand growth under specified management prescriptions.

UG 307 Forest Vegetation Management Models 3 cr. (R-6) Offered autumn. Prereq., FOR 202 or consent of instr. Hands on experience in applying the common simulation models used by forest managers in forecasting the development of forest vegetation. Includes elements of model building and evaluation.

U 311 Field Studies in Ecological land Human Communities 2-3 cr. (R-12) Offered every term. Prereq., consent of instr. Via extended backcountry travel, experiential examination of the structure and function of the ecosystems occurring within the course area. Also investigates the relationship of those ecosystems with the people that manage, live, and work in the area. Offered by the Wild Rockies Field Institute.

UG 320 Forest and Environmental Economics 3 cr. Offered autumn and spring. Prereq., M 162 (MATH 150); ECNS 201S (ECON 111S). Economic techniques to support decision making about the allocation of scarce resources, and management of forests for timber and other ecosystem services.

UG 330 Forest Ecology 3 cr. Offered autumn and spring. Same as RSCN 330. Prereq., BIOL 120N or BIOL 108N, 109N; prereq. or coreq., FOR 210N. Examination of physical and biological factors affecting forest structure, composition, and function, including biodiversity, disturbance, and nutrient cycling. Field labs throughout Northern Rockies including developing skills in field observation, data interpretation and problem solving.

UG 331 Wildland Fuel Management 3 cr. Offered autumn. Prereq., FOR 230 or equiv. Fire ecology, western vegetation types; planning for prescribed use of fire; fuel management objectives and techniques: mechanical, chemical, prescribed fire; smoke management considerations.

UG 332 Forest Entomology 3 cr. Offered intermittently. Prereq., FOR 232. Classification, identification, life cycles, and control of insects which injure forests and forest products.

U 335 Environmental Entomology 3 cr. Offered autumn. Prereq., BIOL 108 or equivalent. An introduction to the importance of insects in ecosystem function and process, and their use in ecological monitoring as indicators of ecological change, degradation, and the efficacy of ecological restoration efforts. Will also cover effects of climate change and biological invasions in the context of both pest and beneficial insect species.

UG 340 Forest Products Manufacturing 2 cr. Offered autumn. Prereq., junior standing or consent of instr. Survey of the manufacture of wood-based products generated from timber harvest. Laboratory field trips to several local manufacturing facilities.

U 341 Timber Harvesting and Forest Roads 3 cr. Offered spring. Prereq., FOR 200. An overview of harvesting system capabilities and selection for multiple resource objectives. Fundamentals of forest road management. Best management practices as they apply to forest operations in Montana and the western United States.

UG 342 Wood Anatomy, Properties and Identification 3 cr. Offered spring. Prereq., BIOL 120N or FOR 240, 241N. Lecture and laboratory investigation of the structure, identification and physical and mechanical properties of the commercial tree species of North America.

U 345 Sustaining Human Society and the Natural Environment 3-6 cr. Offered Winter and Summer. Same as RECM 345. These field-based, experiential classes focus on the environmental and conservation concerns, as well as the modern and traditional cultures, of Australia, New Zealand, or Fiji.

UG 347 Multiple Resource Silviculture 3 cr. Offered autumn and spring. Prereq., FOR 330 or BIOL 340 or equiv. An introduction to the concepts and application of silvicultural techniques to forest ecosystems to meet multiple resource objectives.

U350 Geographic Information Systems and Applications 3 cr. Offered autumn. Prereq. or coreq., FOR 250. Introduction to the basic concepts and techniques of computerized spatial data management and analysis systems and application to natural resource management.

UG 351 Photogrammetry and Remote Sensing 3 cr. Offered spring. Prereq., MATH 121. The theory and application of photo- and electro-optical remote sensing for mapping resources and developing information systems.

UG 360 Range Management 3 cr. Offered autumn and spring. Same as RSCN 360. Prereq., junior standing or consent of instr. An introduction to rangelands and their management, grazing influences, class of animal, grazing capacity, control of livestock distribution, improvements, competition and interrelationships with wildlife. Laboratory exercises to gain on-site experience on topics and concepts presented in lectures.

U 361 Range Forage Plants 3 cr. Offered autumn. Same as RSCN 361.Prereq., FOR 360 and BIOL 165N. Description, identification, forage value and ecology of forage plants of the western United States; important weed species, management of grazing lands, and the relationship of ecophysiology and morphology to grazing response.

U 362 Range Livestock Production 3 cr. Offered spring odd numbered years. Same as RSCN 362. Prereq., FOR 360 or consent of instr. An introduction to livestock production in natural systems and the role of livestock production in the world food situation; emphasizes selection, production and management principles of beef cattle systems.

U 365 Foundations of Restoration Ecology 3 cr. Primary ecological theories that inform the practice of ecological restoration. Topics include the dynamic nature of ecological systems, ecophysiological constraints on plant responses, biodiversity and ecosystem functioning, population dynamics and metapopulation theory, and statistical issues and study design.

UG 379 Collaboration in Natural Resources Decisions 3 cr. Offered intermittently. Same as EVST and RSCN 379. Political and social processes affecting natural resource decisions. Examination of cases of multi-party collaboration in forestry, range, and watershed management issues..

U 385 Watershed Hydrology 3 cr. Offered autumn and spring. Same as RSCN 385.An introduction to physical and biological controls over water movement and storage in the environment, and how those controls are affected by land management practices.

U 386 Watershed Hydrology Laboratory 1 cr. Offered autumn and spring. Coreq., FOR 385 or consent of instr. An introduction to basic watershed measurement and analysis techniques. Lab exercises designed around the use of spreadsheets and computer graphics.

U 395 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study 1-3 cr. (R-10) Offered every term. Prereq., consent of instr. Individual study or research problems.

U 398 Internship Variable cr. Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 404 Wilderness in the American Context 4 cr. Same as RECM 404. An expansive treatment of the history of the wilderness preservation movement in the United States. Introduction to the successive influences of philosophy, science, art and politics on society's relationship with wilderness. Discussion of the Wilderness Act of 1964.

U 405 Management of the Wilderness Resource 4 cr. Same as RECM 405. An ecology-based treatment of wilderness management. Brief overview of fundamental ecological principles followed by an examination of their specific and often unique applications to wilderness ecosystems. Presentation of basic wilderness management principles and guidelines. Discussion of nonconforming wilderness uses.

U 406 Wilderness Management Planning 3 cr. Same as RECM 406. Exploration of basic planning theory, concepts, effective plan writing, and the characteristics of successful planning and implementation. In-depth treatment of the Limits of Acceptable Change planning framework. Comparison and evaluation of the different planning approaches used by the four wilderness managing agencies.

U 407 Managing Recreation Resources in Wilderness 3 cr. Same as RECM 407. Examination of strategies to management recreation in a wilderness setting. Addresses management of visitor use and experiences, measuring and monitoring biophysical and social impacts, effective education and interpretation, and law enforcement.

UG 408 Global Biogeochemical Cycles 3 cr. Offered spring odd numbered years. Same as BIOL/GEO/CCS 407. Exploration of how variations in the availability or utilization of critical Earth elements influences the atmosphere, the oceans, and the terrestrial biosphere including the natural and agricultural ecosystems on which we depend.

UG 410 Soil Morphology, Genesis and Classification 3 cr. Offered spring odd-numbered years. Prereq., FOR 210N. The morphological characteristics of soils, how the horizons formed and an introduction to the Soil Taxonomy classification system used in this country. Field trips will be included.

UG 415 Environmental Soil Science 3 cr. Offered intermittently. Prereq., FOR 210N. A detailed analysis of how natural and anthropogenic disturbances influence soil processes and how those processes in turn influence our environment. Specific topic areas include nutrient cycling, water quality, xenobiotic compounds, metal contamination, and the remediation of contaminated soils.

UG 422 Natural Resources Policy and Administration 3 cr. Offered autumn and spring. Same as RSCN 422. Policy formation in the United States and a survey of the major resource policies interpreted in their historical and political contexts.

UG 424 Community Forestry and Conservation 3 cr. Offered spring. Same as SOC 424 and RSCN 424. A review of agroforestry, community forestry, and opportunities and constraints to the use of trees in rural development and protected areas management.

UG 425 Natural Resource and Environmental Economics 3 cr. Offered spring. Prereq., Math 150, and at least one of ECON 111, FOR 225, and FOR 320. Introduction to analytical approaches for economic analysis of management of non-renewable resources, fisheries, forests, threatened and endangered species, and the atmosphere.

UG 430 Forest Meteorology 3 cr. Offered autumn odd numbered years. Prereq., Consent of instr. A brief introduction to synoptic and mesoscale meteorology, followed by more intense study of physics in the forest environment: transfers of heat, light and momentum and their influences on plant structure, function, productivity and survival.

UG 435 Advanced Timber Harvesting and Forest Road 5 cr. Offered autumn. Prereqs., FOR 235, 347, 340, 351; Coreq., FOR 436. This course covers the fundamentals of logging feasibility and cost analyses of various timber harvesting systems including the characteristics

and performance of ground vehicles, cable and aerial systems; cost factors and cost analysis procedures; safety issues; and environmental impacts of harvesting systems as well as forest road location, surveying, design, construction and maintenance, and management of existing road systems.

UG 436 Forest Operations Evaluation and Project Planning 3 cr. Offered autumn. Prereq., FOR 320. Coreq., FOR 436. This course introduces sensitivity analysis; break-even analysis; risk analysis; multistage sequential analysis; multiattribute analysis; project planning; and contracting.

UG 437 Forest Operations and Applied Restoration Capstone 3 cr. Offered spring. Prereq., FOR 385, 435, EVST 167. FOR 230 and 360 strongly recommended. Principles of ecological restoration and techniques for implementing restoration strategies for terrestrial and aquatic systems.

UG 440 Timber Management I 3 cr. Offered autumn. Prereq., FOR 302, 336, 341. The management and manipulation of the timber resource on private lands to reach multiple objectives, with a focus on the planning of forest operations.

UG 441 Timber Management II 3 cr. Offered spring. Prereq., FOR 440 the immediately preceding autumn semester. The management and manipulation of the timber resource on private lands to reach multiple objectives, with a focus on the administration of forest operations.

UG 442 Technical Processing of Wood Products 5 cr. Offered spring. Prereq., FOR 340 and 342. Lecture, discussion, laboratory manufacture, and evaluation of solid and composite wood products. Exercises include lumber manufacture and drying at College's sawmill; plywood, laminated beam manufacture and strength testing; particle board and flakeboard manufacture and testing.

U 444 Integrative Ecology Restoration 3 cr. Lectures and field trips address key aspects of restoration planning on terrestrial sites (including use of native plant materials and plant-soil bioregulation) and in aquatic systems (including hydrologic and geomorphic components of project design and fish and invertebrate monitoring). Students are required to develop and submit a restoration plan for their final project.

U 445 Ecological Restoration Practicum 3-6 cr. Real-world experience in the practice of ecological restoration. Students will design and implement aspects of a restoration plan for a CFC-maintained property, private entity, nonprofit group, management agency, or other sponsor.

UG 447 Advanced Silviculture 3 cr. Offered autumn. Prereq., FOR 347. Examination of silvicultural topics such as regeneration practices, thinning/stand density concepts, and silvicultural systems at an advanced level.

UG 455 Riparian Ecology and Management 3 cr. Offered spring. Same as RSCN 455. Coreq. or prereq., FOR 385 and one introductory ecology course or consent of instr.. Importance of riparian/wetland areas and the complexities associated with their management for short and long term benefits.

UG 460 Range Inventory and Analysis 3 cr. Offered autumn. Same as RSCN 460. Prereq., FOR 360 and one course in statistics. Methods of measuring range and shrub-land vegetation at individual and community level for determining plant composition, changes following treatments, and carrying capacity of range livestock and native ungulates.

UG 461 Animal Nutrition 3 cr. Offered spring. Prereq., FOR 360 or consent of instr. Elements of animal nutrition, physiology of ruminant nutrition, nutritional characteristics of forage plants related to nutrition requirements of livestock and wildlife, and nutritional strategies of free-roaming animals.

UG 462 Range Ecology 3 cr. Offered spring. Same as RSCN 462. Prereq., FOR 360 and one course in plant ecology. Applied ecology of rangeland uses by various biota, synecological response to grazing, fire, herbicides, fertilizers and mechanical treatments, structural and functional responses of grassland systems to disturbance.

UG 463 Range Improvement 3 cr. Offered autumn. Same as RSCN 463. Prereq., FOR 360. Methods of improving rangelands, including grazing systems, control of weeds, controlled burning, seeding, fertilization and mechanical soil treatments.

UG 465 Restoration Ecology 3 cr. Offered spring. Prereq., senior standing and a course in ecology. Same as EVST 465. Philosophy and practice of restoring damaged ecosystems. Restoration planning including improvement of degraded soils, site preparation for revegetation, and case studies.

UG 475 Sociology of Environment and Development 3 cr. Offered annually. Same as RSCN 475. Examines key social forces that influence how individuals, groups and nation-states understand and live within their bio-physical environments, especially policies and processes relating to development, corporate capitalism, globalization, culture, class and other forms of power and social relations. Pays close attention to ways both indigenous and introduced resource use and management practices (including conservation) variably impact people of different races, classes, genders, cultures and livelihood practices.

U 476 Managing Recreation Resources in Wilderness 3 cr. Same as RECM 476. Examination of strategies to management recreation in a wilderness setting. Addresses management of visitor use and experiences, measuring and monitoring biophysical and social impacts, effective education and interpretation, and law enforcement.

UG 480 Forest and Rangeland Area Planning and Design 3 cr. Offered autumn. Prereq., senior standing, WBIO 370, RECM 310, FOR 347 or FOR 360; senior or graduate standing; or consent of instr. A multidisciplinary planning team approach to developing detailed, site-specific resource management planning for units of forest and rangeland at the area or watershed level. Includes use of geographic information systems, computer modeling, and linear programming.

UG 481 Forest Planning 3 cr. Offered spring. Prereq., FOR 422 or consent of instr. Integrated multiple use planning at the forest-wide level: defining multi-resource management goals, generating management alternatives, projecting outcomes, assessing environmental impacts, and implementing preferred option.

UG 485 Watershed Management 3 cr. Offered autumn. Same as RSCN 485. Prereq., FOR 385 or consent of instr. Effects of land management practices on water and sediment yields from wildland watersheds. Introduction to statistical methods in hydrology. Introduction to water yield and sediment modeling techniques.

U 494 Seminar in Ecological Restoration 1 cr. This seminar provides a forum for students to share the results of restoration projects conducted through FOR 445, Ecological Restoration Practicum. Each student will lead at least one seminar during the semester.

UG 495 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-3 cr. (R-10) Offered every term. Prereq., consent of instr. Individual study or research problems.

U 497 Senior Thesis 3 cr. Offered autumn and spring. Prereq., senior standing and consent of instr. Preparation of a major paper based on study or research in a field selected according to the needs and objectives of the student.

UG 498 Internship Variable cr. Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off-campus. Prior approval must be obtained from faculty advisor and Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 500 Forest Growth and Yield 3 cr. Offered spring. Prereq., FOR 202 or consent of instr. Offered alternate years. Theory and methods for projecting quantitative measures of tree and stand growth over time; includes analysis of computer growth and yield models used in the region.

G 501 Research Methods 3 cr. Offered autumn. Prereq., a course in statistics or consent of instr. The nature of scientific research, planning research projects, organization and presentation of research results. Emphasis on the development of study plans for specific research projects.

G 503 GIS: Methods and Applications I 3 cr. Offered autumn. Prereq., consent of instr. Introduction to the theory and development of statistical gradient and predictive distribution models in the resource and conservation sciences. Course will develop climatic, edaphic, biophysical, and inventory data sources for use in predictive distribution modeling. Survey of multiple modeling approaches, limitations and assumptions, and applications in the resource and conservation fields. Emphasis on the integration of GIS and raster analysis methods with spatial and non-spatial statistical techniques.

G 504 GIS: Methods and Applications II 3 cr. Offered spring. Prereq., FOR 503. Continuation of 503.

UG 505 Sampling Methods 3 cr. Offered spring. Prereq., FOR 201 or equiv.; consent of instr. Fundamentals of statistical sampling emphasizing natural and environmental resource applications. Principles of inferences and alternative estimators are studied in the context of simple random, systematic, unequal probability, stratified, and 3P/Poisson designs. Variable radius plot sampling, line intersect sampling, and other probability proportional to size designs used in forest and ecological inventories are also covered.

G 508 Modeling Forest Dynamics 3 cr. Offered autumn odd numbered years. Prereq., FOR 500 and some experience with statistical methods and a programming language. Introduction to the construction of simulation models for forecasting change in forest vegetation. Survey of alternative modeling approaches followed by construction of a simulator. Includes specification of conceptual model, statistical analysis of data, and programming a working simulator.

G 511 Soil Chemistry 3 cr. Offered spring odd-numbered years. Prereq., FOR 210N, 330. A series of lectures on soil chemistry in the beginning of the semester, emphasizing water and nutrient movement, followed by a series of laboratory and lecture classes on soil chemistry, emphasizing data interpretation and problem solving.

G 513 Natural Resource Dispute Resolution 3 cr. Offered spring. Same as LAW 613 and EVST 513. Provides a conceptual framework for understanding the history of ideas that have shaped the policies, institutions, and strategies used to resolve natural resource and other public policy conflicts in the American West. Focus on natural resource and environmental dispute resolution.

G 520 Forest Resource Economics 3 cr. Offered autumn. Prereq., FOR 320 or equiv., an upper-division or graduate level course in microeconomics, and consent of instr. The demand for, and supply of, commodity products from the forest, including characteristics of demand for stumpage, logs and processed products, forest management and harvesting decisions, and the supply of stumpage, intermediate and processed products.

G 532 Forest Ecosystem Analysis 3 cr. Offered autumn. Prereq., FOR 330 or equiv. Current research on important processes in forest

ecosystems, including carbon, water and nutrient cycles, with emphasis on recent computer simulation models.

G 533 Use of Fire in Wildland Management 3 cr. Offered autumn even-numbered years. Prereq., consent of instr. Western fire ecology and the planned use of fire. Wildlife, range and forestry applications of prescribed fire. Seminars and discussions; research applications.

G 545 Silviculture Research 1 cr. (R-6) Offered intermittently. Prereq., graduate standing and consent of instr.; prereq. or coreq., FOR 347 or equiv. Reading and discussion of scientific literature related to silvicultural practice and science. Different topic each semester. Students become familiar with silviculture literature, develop skills for scrutinizing scientific literature, and examine silvicultural topics in detail.

G 547 Forest Vegetation Dynamics 3 cr. Offered autumn. Prereq., consent of instr. Role of disturbances, plant interactions, tree architecture, and structure on forest stand development. Laboratory provides experience with vegetation development reconstruction. Discusses even-aged, uneven-aged, single- and mixed-species stand development as well as landscape linkages.

G 548 Forest Stand Dynamics and Culture 1 cr. Offered intermittently. Prereq., FOR 347 or equiv. One-week continuing education course designed to present emerging concepts in stand dynamics and stand culture to practicing silviculturists. Topics include even- and uneven-aged stand dynamics and density control, fire management, fertilization, and stand health.

G 551 Digital Image Processing 4 cr. Offered autumn even numbered years. Prereq., FOR 351 or equiv. and consent of instr. Fundamentals of electro-optical digital remote sensors, data compilation, preprocessing, and pattern recognition.

G 560 American Wilderness Philosophy and Policy 4 cr. Same as RECM 560. History of the American Wilderness idea and associated policies, including the Wilderness Act and implementing regulations. Current management challenges also covered.

G 561 Managing Wilderness Ecosystems 4 cr. Same as RECM 562. Current research, theory, and management approaches to recreation management in wilderness, including monitoring and management of visitor impacts and experiences.

G 562 Managing Recreation Resources in Wilderness Settings 3 cr. Same as RECM 562. Current research, theory, and management approaches to recreation management in wilderness, including monitoring and management of visitor impacts and experiences.

G 563 Wilderness Planning: Theory, Management Frameworks, and Application 4 cr. Same as RECM 563. Planning theory and effective plan development, including principles and practices of public involvement. Includes examination of primary planning frameworks.

G 565 Advanced Problems in Restoration Ecology 3 cr. Offered autumn. Same as RSCN 565. Prereq., graduate standing and consent of instructor. This is a student-driven course that explores current topics in the theory and practice of restoration. Students will develop and implement a collaborative research project related to a current problem in restoration ecology or ecological restoration.

G 570 Political Ecology 3 cr. Same as RSCN 570. Graduate seminar on key theories, issues and literature in the subfield of Political Ecology, an interdisciplinary environmental social science approach which integrates how political, economic, cultural and ecological processes interact and shape society nature relations. Case examples are drawn from both the North and South.

G 571 International Conservation and Development 1-3 cr. (R-2) Offered fall and spring. Prereq., graduate standing and consent of instructor. Critical review of selected international natural resource development, conservation and management approaches and experiences.

G 579 Advanced Natural Resources Conflict Resolution 3 cr. (R-4) Offered autumn. Same as EVST 579 and LAW 679. Prereq., FOR 513 or consent of instr. Current topics in theory and practice. Development and discussion of research topics. Topics vary.

G 582 Tropical Ecosystems and Management 3 cr. Offered spring. Prereq., graduate standing or consent of instr. Introduction to tropical forests and agroecosystems, and a critical examination of their management and conservation within the context of ecological, socioeconomic and political change.

G 586 Snow Hydrology 3 cr. Offered spring. Prereq., graduate standing or consent of instr. The physics of snow formation, distribution and ablation. Snow and forest management in the subalpine zone.

G 594 Graduate Seminar in Forestry 1 cr. (R-3) Offered autumn and spring. Prereq., graduate standing. Presentation by students, staff and visitors of issues and topics in their fields.

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study 1-3 cr. (R-10) Offered every term. Prereq., consent of instr. Individual study or research problems.

G 598 Internship Variable cr. (R-15) Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 Professional Paper Variable cr. (R-15) Offered autumn and spring. Preparation of Master of Ecosystem Management professional

paper.

G 622 Advanced Problems in Environmental Policy 3 cr. Offered Spring even-number years. Examines environmental policy problems and contemporary issues in environmental policy, law, and administration. Policy tools, concepts and research resources introduced. Numerous problems, themes, and issues in environmental policy analyzed. Readings-based seminar; students lead most reviews and discussions.

G 697 Graduate Research Variable cr. (R-15) Offered every term. Independent graduate research in forest management, wood science, soils, wildlife management, silviculture, recreation and other topic areas.

G 699 Thesis Variable cr. (R-15) Offered every term. Preparation of thesis/dissertation.

Recreation Management

- Special Degree Requirements
- Courses

The B.S. in Recreation Management degree is designed to prepare students for professional positions developing and managing nature-based recreation experiences and park resources for public land management agencies, nonprofit organizations, and the nature-based tourism industry. Students pursuing this degree must choose between an option in Recreation Resources Management or Nature-Based Tourism. The Recreation Resources Management option provides the educational background necessary for evaluating and managing wild lands to protect their recreational, heritage, and ecological values. The Nature-Based Tourism option is designed to combine an understanding of social, cultural, political, environmental, and economic contexts surrounding tourism in a natural resource setting. All students learn the processes and conceptual skills needed to determine alternative management strategies, make management decisions, and carry out management programs. Included are courses leading to an understanding of the basic ecological characteristics of recreational lands. Students also take courses dealing with human behavior and management. Emphasis is placed on presenting problems that would be encountered while managing national parks and forests, state and regional parks, wilderness areas, and other recreation resources of international and national significance. The degree and Recreation Resources Management option are accredited by the National Recreation and Parks Association and the American Association for Leisure and Recreation.

Special Degree Requirements

Students pursuing the B.S. in Recreation Management degree complete the following courses (or their equivalent if transferred from another college or university). Transfer credits and course equivalency will be determined by the University and the College of Forestry and Conservation. In addition, students are required to take a practicum in recreation management, RECM 460. This is a work-learning experience that involves at least 10 weeks full-time employment in a professional work environment. RECM 460 has a prerequisite of 400 previous hours of relevant work experience. Electives may be taken at any time, keeping in mind these courses as well as the University's General Education requirements for graduation. See also the graduation requirements for the College of Forestry and Conservation listed previously in the catalog.

Recreation Resources Management Option

First Year	Credits
RECM 110S Introduction to Recreation Management	3
RECM 180 Introduction to Natural Resources Issues or WBIO 105N Wildlife and People or RSCN 121 S Nature of Montana	2-3
WRIT 101 (ENEX 101) Composition	3
BIOL 108N Diversity of Life or BIOL 121N Introductory Ecology	3
PSYX 100S (PSYC 100S) Introduction to Psychology	4
CHMY 121N (CHEM 151N) Intro to General Chemistry	3
M 115 (MATH 117) Probability and Linear Mathematics	3
Electives and General Education	9
Summer	**Credits**
FOR 200 Natural Resources Measurements Camp	2
Second Year	**Credits**
FOR 210N Introduction to Soils	3
RECM 210 Nature-Based Tourism	3
RECM 230 Programming in Recreation	3
STAT 216 (MATH 241) Statistics, FOR 201 Forest Biometrics or SOCI 202 Social Statistics	3-4
RECM 217S Wildland Recreation Management	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
ECNS 201S (ECON 111S) Principles of Microeconomics	3
FOR 250 Geographic Information System Practicum	2

COMM 111A Public Speaking	3
Electives and General Education	3
Third Year	**Credits**
FOR 330 Forest Ecology or 462 Range Ecology	3
RECM 380 Recreation Administration and Leadership	4
FOR 385 Watershed Hydrology	3
RECM 300 Recreation Behavior	3
RECM 310 Natural Resources Interpretation	3
RECM 450 Pre-practicum Professional Preparation	1
FOR 422 Natural Resource Policy or WBIO 410 Wildlife Biology and Biopolitics	3
Electives and General Education	9
Summer	**Credits**
RECM 460 Practicum in Recreation	6-9
Fourth Year	**Credits**
RECM 482 Wilderness and Protected Area Managements	3
RECM 484 Field Techniques	3
RECM 485 Recreation Planning	4
FOR 422 Natural Resource Policy OR WBIO 410 Wildlife Biology and Biopolitics	3
Electives and General Education	9-14

Nature-Based Tourism Option

First Year	**Credits**
RECM 110S Introduction to Recreation Management	3
RECM 180 Introduction to Natural Resources Issues or WBIO 105N Wildlife and People or RSCN 121 S Nature of Montana	2-3
WRIT 101 (ENEX 101) Composition	3
BIOL 108N Diversity of Life or BIOL 121N Introductory Ecology	3
SOCI 101S (SOC 110S) Principles of Sociology	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3
CHMY 121N (CHEM 151N) Intro to General Chemistry	3
M 115 (MATH 117) Probability and Linear Mathematics	3
Electives and General Education	6
Summer	**Credits**
FOR 200 Natural Resources Measurements Camp	2
Second Year	**Credits**
FOR 210N Introduction to Soils	3
RECM 210 Nature-Based Tourism	3
RECM 230 Programming in Recreation	3
STAT 216 (MATH 241) Statistics, FOR 201 Forest Biometrics or SOCI 202 Social Statistics	3-4
SOCI 202 (SOC 202) Social Statistics	3
RECM 217S Wildland Recreation Management	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
ACTG 201 (ACCT 201) Principles of Financial Accounting	3
COMM 111A Public Speaking	3
Electives and General Education	6
Third Year	**Credits**
FOR 330 Forest Ecology or 462 Range Ecology	3
MKTG 360 Marketing Principles	3
RECM 380 Recreation Administration and Leadership	4
RECM 300 Recreation Behavior	3
RECM 310 Natural Resources Interpretation	3
RECM 450 Pre-practicum Professional Preparation	1
Electives and General Education	12
Summer	**Credits**
RECM 460 Practicum in Recreation	6-9
Fourth Year	**Credits**

RECM 451 Tourism and Sustainability	3
RECM 483 Commercial Recreation, Marketing, and Tourism	3
RECM 484 Field Techniques	3
FOR 475 Sociology of Environment and Development	3
FOR 422 Natural Resource Policy OR WBIO 410 Wildlife Biology and Biopolitics	3
MKTG 362 Consumer Behavior	3
FOR 379 Collaboration in Natural Resource Decisions	3
Electives and General Education	3-7

Courses

U=for undergraduate credit only, UG= for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Recreation Management (RECM)

U 110S Introduction to Parks, Recreation and Tourism 3 cr. Offered autumn and spring. The basic motivations and socio-economic determinants of recreation needs and preferences. History of the development of the resources base, trends in user participation, classification of recreation lands, recreation opportunities and needs, management objectives, economics of outdoor recreation, and definitions of leisure and recreation.

U 180 Careers in Natural Resources 2 cr. Offered autumn and spring. Same as FOR 180, WBIO 180. Subject matter and fields of study within natural resources management. Topics include forestry, wildlife biology, range, water, recreation management, forest products production and other areas of opportunity for students seeking careers in natural resources.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 210 Nature-Based Tourism 3 cr. Offered autumn. Introduction to the tourism and commercial recreation industries. Provides initial link between the natural environment and business operations. Combination of introductory business philosophies, economics, and natural resource management into a framework for future reference and course work.

U 217 Wildland Recreation Management 3 cr. Offered autumn and spring. Prereq., RECM 110S or option in forest resources management. The management of land as an environment for outdoor recreation. Understanding the relationship between the visitor, resource base and management policies. Recreation planning on multiple use forest lands, parks, wilderness areas and private lands.

U 230 Programming in Recreation 3 cr. Offered autumn. Prereq., RECM 110S. Principles of program planning for organized offerings in recreation. Selection, adaptation and evaluation of activities.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 300 Recreation Behavior 3 cr. Offered autumn. Prereq., RECM 217. This course provides an understanding of recreation behavior in wildland and nature-based tourism oriented settings. Students will learn about theories/conceptual frameworks from social and environmental psychology and their application to visitor management issues in the wildland recreation and nature-base tourism fields.

U 310 Natural and Cultural Resources Interpretation 3 cr. Offered spring. Prereq., one biology course; one public speaking course. Principles, concepts, techniques essential to providing high quality interpretive programs in natural or cultural history.

U 345 Sustaining Human Society and the Natural Environment 3 cr. Offered Winter and Summer. Same as FOR 345. These field-based, experiential classes focus on the environmental and conservation concerns, as well as the modern and traditional cultures, of Australia, New Zealand, or Fiji.

UG 371 Wilderness Issues Lecture Series 1 cr. (R-3) Offered spring. Same as EVST 371and RSCN 371. Explores current issues in wilderness preservation, management and research.

UG 380 Recreation Administration and Leadership 4 cr. Offered spring. Prereq., RECM 110S, 217 and 230 or consent of instr. Personnel, leadership, finance, facilities, programs and public relations. Coordination with youth serving institutions, government agencies, and private or commercial organizations.

U 395 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

U 396 Independent Study 1-6 cr. (R-6) Offered every term.

U 398 Internship Variable cr. Offered every term. Prereq., consent of instr. Extended classroom experience which provides practical

application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 404 Wilderness in the American Context 4 cr. Same as FOR 404. Same as FOR 404. An expansive treatment of the history of the wilderness preservation movement in the United States. Introduction to the successive influences of philosophy, science, art and politics on society's relationship with wilderness. Discussion of the Wilderness Act of 1964.

U 405 Management of the Wilderness Resource 4 cr. Same as FOR 405. An ecology-based treatment of wilderness management. Brief overview of fundamental ecological principles followed by an examination of their specific and often unique applications to wilderness ecosystems. Presentation of basic wilderness management principles and guidelines. Discussion of nonconforming wilderness uses.

U 406 Wilderness Management Planning 3 cr. Same as FOR 406. Exploration of basic planning theory, concepts, effective plan writing, and the characteristics of successful planning and implementation. In-depth treatment of the Limits of Acceptable Change planning framework. Comparison and evaluation of the different planning approaches used by the four wilderness managing agencies.

U 407 Managing Recreation Resources in Wilderness 3 cr. Same as FOR 407. Examination of strategies to management recreation in a wilderness setting. Addresses management of visitor use and experiences, measuring and monitoring biophysical and social impacts, effective education and interpretation, and law enforcement.

U 450 Pre-Practicum Professional Preparation 1 cr. Offered autumn. A pre-practicum class to provide orientation for the practicum, RECM 460, in recreation management.

U 451 Tourism and Sustainability 3 cr. Offered spring. Prereq., RECM 210 and 217. Theories and conceptual models are applied to analyzing relationships between the integration of planning theories to sustainability concepts.

UG 460 Practicum in Recreation 1-15 cr. (R-15) Offered every term. Prereq., RECM 380, senior standing, and consent of instr. Supervised pre-professional practice in approved recreation management agencies.

UG 481 Managing Wildland Resources and Visitors 4 cr. Offered autumn. Prereq., RECM 217. Balancing the needs of people for recreation with the impact of recreational use.

UG 482 Wilderness and Protected Area Management 3 cr. Offered autumn. Prereq., RECM 217, 370. Examination of the origin, evolution, and application of the park concept on state, federal, and international levels. Evaluation of legislation, philosophy, and policy leading to consideration of goals, objectives, and strategies for park management.

UG 483 Commercial Recreation, Marketing and Tourism 3 cr. Offered autumn. Prereq., RECM 217. Interactions between wildland recreation areas and the private sector are reviewed. Linkages between natural resources and the tourism industry are discussed. Principles of marketing for the private sector within this context are presented.

U 484 Recreation Management Field Techniques 3 cr. Offered autumn. Prereq., FOR 210, 330. Field measurement and management techniques critical in recreation management. Includes measurement of recreation impacts on biophysical and social attributes of recreational settings.

UG 485 Recreation Planning 4 cr. Prereq., RECM 217. Offered autumn. Needs of recreation opportunities and response to those needs through planning, demand assessment and resource analysis.

U 493 Omnibus Variable cr. (R-10) Offered intermittently. Independent work under the University omnibus option. See index.

UG 495 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses or one-time offerings of current topics.

U 496 Independent Study Variable cr. (R-6) Offered every term. Prereq., consent of instr. Individual study of research problems.

U 497 Senior Thesis 1-3 cr. (R-3) Offered autumn and spring.

UG 498 Internship Variable cr. Offered autumn and spring. Prereq., consent of instr. Extended classroom learning during placements off campus. Prior approval must be obtained from faculty advisor and Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 500 Recreation Research Methods 3 cr. Offered spring odd-numbered years. Prereq., one course in statistics. Methods used in recreation research.

G 560 American Wilderness Philosophy and Policy 4 cr. Same as FOR 560. History of the American Wilderness idea and associated policies, including the Wilderness Act and implementing regulations. Current management challenges also covered.

G 561 Managing Wilderness Ecosystems 4 cr. Same as FOR 561. Ecosystem science and policies and management practices related to managing specific resources, such as air, wildlife, and water, within wilderness. Management of non-conforming uses is also covered.

G 562 Managing Recreation Resources in Wilderness 3 cr. Same as FOR 562. Current research, theory, and management approaches to recreation management in wilderness, including monitoring and management of visitor impacts and experiences.

G 563 Wilderness Planning: Theory, Management Frameworks, and Application 4 cr. Same as FOR 563. Planning theory and effective plan development, including principles and practices of public involvement. Includes examination of primary planning frameworks.

G 565 Advanced Problems in Restoration Ecology 3 cr. Offered autumn. Same as FOR 565. Prereq., graduate standing and consent of instructor. This is a student-driven course that explores current topics in the theory and practice of restoration. Students will develop and implement a collaborative research project related to a current problem in restoration ecology or ecological restoration.

G 594 Graduate Seminar in Recreation 1 cr. (R-3) Offered autumn and spring. Prereq., graduate standing. Presentations by students, staff and guest speakers of issues and topics in their fields.

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-10) Offered every term. Prereq., consent of instr. Individual study or research problems.

G 597 Research Variable cr. (R-12) Offered every term. Prereq., graduate standing. Independent graduate research in recreation management.

G 598 Internship Variable cr. (R-12) Offered every term. Prereq., consent of instr. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from faculty advisor and Internship Services office.

G 599 Professional Paper Variable cr. (R-15) Offered every term. Preparation of professional paper.

G 697 Research 1-15 cr. (R-15) Offered every term.

G 699 Thesis Variable cr. (R-15) Offered every term. Prereq., graduate standing. Preparation of thesis.

Resource Conservation

Bachelor of Science in Resource Conservation

In addition to special degree requirements listed previously, students selecting the Bachelor of Science in Resource Conservation should contact their advisors to approve curriculum. The challenging and rapidly evolving field of environmental conservation requires broad training and the ability to integrate and communicate across disciplines. Resource Conservation is an interdepartmental undergraduate major that prepares students for the diverse opportunities that now exist in environmental conservation, natural resource management and efforts to build more sustainable livelihoods and communities. Students can choose a more structured area of study to prepare for graduate work in the natural sciences, such as ecology, hydrology, or soils, or emphasize emerging sub-disciplines such as fire ecology and adaptive strategies for climate change. Students can also integrate across disciplines and focus on natural resource policy, wilderness studies, community forestry, or international conservation. Example of possible program in the conservation option:

Conservation Option

3 Communication Courses:

- 1 oral (COMM 111 or DRAM 111)
- WRIT 222 (FOR 220) Tech Writing (or transfer equivalent)
- Upper-division writing (also required for GER)

3 Quantitative Courses:

- 1 Statistics course from the following: M 121 (MATH 111), M 122 (MATH 112), M 151 (MATH 121), M 162 (MATH 150), or M 115 (MATH 117)
- 1 statistics course from the following: STAT 216 (MATH 241), SOCI 202 (SOC 202), FOR 201
- 1 course of either GIS or math (Math of above not already taken or FOR 250)

FOR 200- Camp

CHMY 121 (CHEM 151)

1 general biology course from the following: BIOL 108, 110, 120, 121, or transfer equivalent

1 soils course (FOR 210)

1 ecology course from the following: FOR 330, BIOL 340, RSCN 462, or transfer equivalent

1 policy course from the following: FOR 422, RSCN 370, WBIO 410, or transfer equivalent

Student have to take at least 36 traditional letter-graded credits within the College - and courses with the FOR, RECM, RSCN, or WBIO prefix will work.

Terrestrial Sciences Option

The terrestrial sciences option is designed to provide students with a solid scientific foundation in the biological and physical science aspects of terrestrial conservation. The curriculum consists of a required core of science classes and an individualized curriculum of upper-division science courses chosen by the student in consultation with a faculty advisor. The curriculum must include at least 12 credits in forestry or wildlife biology at the upper-division level in addition to those specified below. This is an ideal option for those students who want to specialize their undergraduate education in areas such as forest ecology, hydrology, forest soils, biometrics, fire, or remote sensing.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Resource Conservation (RSCN)

U 170N International Environmental Change 3 cr. Offered spring. An introduction to natural and anthropogenic environmental change from ancient to contemporary times. Exploration of the historical role and importance of ecological disturbance on the development and maintenance of terrestrial ecosystems around the world. Introduction to fields of study available in the College of Forestry and Conservation.

U 121S Nature of Montana 3 cr. Offered fall. An exploration of the major natural resource management issues facing the people of Montana and the social processes to manage environmental conflicts. Provides an introduction to the function of ecological systems and the impacts of human uses on the environment and looks at strategies for addressing global climate change, ex-urban population growth, and protecting environmental quality.

U 210N Introductory Soils 3 cr. Offered autumn and spring. Same as FOR 210N. Prereq., CHEM 151N. An introduction to the chemical, physical, biological and morphological properties of soils.

U 271N Issues in Wilderness Ecology 3 cr. Offered spring. A study of forestry and wildlife issues which affect the maintenance of wilderness integrity. Topics include: global climate changes; management of wildfires, cattle grazing and noxious weeds; game management; threatened and endangered species, including grizzly bears, wolves, bird and fish species.

U 273 Wilderness and Civilization Field Studies Variable 1-3 cr. (R-6) (R-6) Offered autumn and spring. Field studies in ecology and conservation. Includes natural history, field journaling, ecological monitoring, protected area management, and community conservation. One-day trips as well as extended backcountry trips. Part of the Wilderness and Civilization program.

U 274 Yellowstone Studies 1 cr. Offered spring. Ecological and sociopolitical perspectives on the greater Yellowstone ecosystem. Topics include winter ecology, biodiversity conservation, national park planning and management, winter recreation, fire, and wildlife. Field course in the Yellowstone area.

U 321 Field Studies of Energy Systems in Montana 2-3 cr. Offered Summer. Via an extended bicycle tour of Montana, students examine a variety of energy developments and their environmental, social, and economic implications.

UG 330 Forest Ecology 3 cr. Offered autumn and spring. Same as FOR 330. Prereq., BIOL 120N or BIOL 108N, 109N; prereq. or coreq., FOR 210N. Examination of physical and biological factors affecting forest structure, composition, and function, including biodiversity, disturbance, and nutrient cycling. Field labs throughout Northern Rockies including developing skills in field observation, data interpretation and problem solving.

U 345 Watershed Dynamics 3 cr. Coreq. EVST 391, EVST 392, RSCN 346, EVST 291. Offered each autumn by Northwest Connections. Via hands on application in rural Montana, students investigate watershed function; introductory stream hydrology and morphology; and fish, amphibian and aquatic furbearer habitat characteristics. The course also explores impacts of road building, timber harvest, and watershed fragmentation on watershed and stream function, fish habitat, and fish populations.

U 346 Forests and Communities 3 cr. Coreq., EVST 391, EVST 392, RSCN 345, EVST 291. Offered each autumn by Northwest Connections. Via backcountry travel and hands on field application in rural Montana, students will be immersed in the ecology of forested ecosystems in Northwest Montana, including plant succession, fire ecology, soil science and wildlife ecology.

UG 360 Range Management 3 cr. Offered autumn and spring. Same as FOR 360. Prereq., junior standing or consent of instr. An introduction to rangelands and their management, grazing influences, class of animal, grazing capacity, control of livestock distribution, improvements, competition and interrelationships with wildlife. Laboratory exercises to gain on-site experience on topics and concepts

presented in lectures.

U 361 Range Forage Plants 3 cr. Offered autumn. Same as FOR 361.Prereq., FOR 360 and BIOL 165N. Description, identification, forage value and ecology of forage plants of the western United States; important weed species, management of grazing lands, and the relationship of ecophysiology and morphology to grazing response.

U 362 Range Livestock Production 3 cr. Offered spring odd numbered years. Same as FOR 362. Prereq., FOR 360 or consent of instr. An introduction to livestock production in natural systems and the role of livestock production in the world food situation; emphasizes selection, production and management principles of beef cattle systems.

UG 370S Wildland Conservation Policy and Governance 3 cr. Offered autumn and spring. Examination of the historical, philosophical, and legislative background for development and management of our national system of wilderness areas, wild and scenic rivers, trails, and national parks; their place in our social structure.

UG 371 Wilderness Issues Lecture Series 1 cr. (R-3) Offered spring. Same as EVST 371and FOR 371. Explores current issues in wilderness preservation, management and research.

U 373 Wilderness and Civilization 3 cr. (R-6) Offered autumn and spring. Social and cultural perspectives on the wilderness idea and wildland practices. Course topics include history of wilderness and the wilderness movement, various philosophical viewpoints on wilderness, protected area management issues, and how wilderness fits into larger landscapes and societies.

UG 380S Environmental Conservation 3 cr. Offered autumn. Prereq., junior standing. The interrelationships of resource conservation problems and programs; management and conservation in the context of an expanding economy

U 385 Watershed Hydrology 3 cr. Offered autumn and spring. Same as FOR 385.An introduction to physical and biological controls over water movement and storage in the environment, and how those controls are affected by land management practices.

U 398 Internship Variable cr. Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 403 Contemporary Tribal Resource Issues 3 cr. Same as NAS 403. Acquaints students with contemporary tribal resource management and environmental policies.

UG 422 Natural Resources Policy and Administration 3 cr. Offered autumn and spring. Same as FOR 422. Policy formation in the United States and a survey of the major resource policies interpreted in their historical and political contexts.

U 423 Montana Wilderness Policy and Politics 2 cr. Examination of congressional legislative processes and congressional efforts concerning wilderness and roadless public lands management, particularly in Montana. Consideration of economic, social and political factors affecting how congress and the executive branch determine the fate of roadless lands.

UG 424 Community Forestry and Conservation 3 cr. Offered spring. Same as SOC 424 and FOR 424. A review of agroforestry, community forestry, and opportunities and constraints to the use of trees in rural development and protected areas management.

UG 449 Climate Change Ethics and Policy 3 cr. Offered Spring. Same as EVST 449 and CSS 449. This course focuses on the ethical dimensions of climate change policy. It will cover the following major topics: (1) climate change, personal and collective responsibilities, (2) ethics, climate change and scientific uncertainty, (3) distributive justice and international climate change negotiations, (4) intergenerational justice and climate change policy.

UG 455 Riparian Ecology and Management 3 cr. Offered spring. Same as FOR 455. Coreq. or prereq., FOR 385 and one introductory ecology course or consent of instr.. Importance of riparian/wetland areas and the complexities associated with their management for short and long term benefits.

UG 460 Range Inventory and Analysis 3 cr. Offered autumn. Same as FOR 460. Prereq., FOR 360 and one course in statistics. Methods of measuring range and shrub-land vegetation at individual and community level for determining plant composition, changes following treatments, and carrying capacity of range livestock and native ungulates.

UG 462 Range Ecology 3 cr. Offered spring. Same as FOR 462. Prereq., FOR/RSCN 360 and one course in plant ecology. Applied ecology of rangeland uses by various biota, synecological response to grazing, fire, herbicides, fertilizers and mechanical treatments, structural and functional responses of grassland systems to disturbance.

UG 463 Range Improvement 3 cr. Offered autumn. Same as FOR 463. Prereq., FOR/RSCN 360. Methods of improving rangelands, including grazing systems, control of weeds, controlled burning, seeding, fertilization and mechanical soil treatments.

UG 475 Sociology of Environment and Development 3 cr. Offered annually. Same as FOR 475. Examines key social forces that influence how individuals, groups and nation-states understand and live within their bio-physical environments, especially policies and processes relating to development, corporate capitalism, globalization, culture, class and other forms of power and social relations. Pays close attention to ways both indigenous and introduced resource use and management practices (including conservation) variably impact

people of different races, classes, genders, cultures and livelihood practices.

UG 485 Watershed Management 3 cr. Offered autumn. Same as FOR 485. Prereq., FOR/RSCN 385 or consent of instr. Effects of land management practices on water and sediment yields from wildland watersheds. Introduction to statistical methods in hydrology. Introduction to water yield and sediment modeling techniques.

G 565 Advanced Problems in Restoration Ecology 3 cr. Offered autumn. Same as FOR 565. Prereq., graduate standing and consent of instructor. This is a student-driven course that explores current topics in the theory and practice of restoration. Students will develop and implement a collaborative research project related to a current problem in restoration ecology or ecological restoration.

G 570 Political Ecology 3 cr. Same as FOR 570. Graduate seminar on key theories, issues and literature in the subfield of Political Ecology, an interdisciplinary environmental social science approach which integrates how political, economic, cultural and ecological processes interact and shape society nature relations. Case examples are drawn from both the North and South.

G 571 International Resource Management 1-3 cr. Yearlong course. Students register for one credit autumn semester and one credit spring semester. Final grade assigned at end of the year. Prereq., graduate standing and consent of instr. Critical review of selected international natural resource development, conservation and management approaches and experiences.

Wildlife Biology

- Special Degree Requirements
- Requirements for a Minor
- Courses

Daniel H. Pletscher, Professor, Wildlife Biology Director

Wildlife Biology is the study of wild animals, their habitats, and their conservation. The Bachelor of Science in Wildlife Biology degree constitutes the preprofessional training for future employment in wildlife biology and management, and provides an excellent background in general ecology. The educational requirements for certification by The Wildlife Society can be met within the framework of the undergraduate program.

While employment opportunities do exist in wildlife conservation for students with the baccalaureate degree, many students plan to continue their education through the master's degree to qualify for wildlife management or research positions.

Three optional curricula are offered in the Wildlife Biology Program: terrestrial, aquatic, and honors. All three options follow the same schedule of courses for the freshman and most of the sophomore year, then pursue different curricula for the last two years. Each leads to a B.S. in Wildlife Biology. The University is well-suited for instruction in wildlife biology because of the excellent opportunities for field instruction and research, and the presence of such facilities as the Lubrecht Experimental Forest, Yellow Bay Biological Station at Flathead Lake, the Montana Forest and Conservation Experiment Station, the Montana Cooperative Wildlife Research Unit, and the Theodore Roosevelt Memorial and Bandy ranches.

High School Preparation: In addition to general University admission requirements, the student should elect four years of mathematics and three years of science, including biology, chemistry and physics.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

The Upper-division Writing Expectation must be met by successfully completing BIOL 341 and two courses selected from BIOL 304, 306, 316, 366, WBIO 408, 470, 497 (senior thesis).
The student must complete the requirements for one of the options indicated below. A reading knowledge of a modern foreign language is suggested for students electing preparation for graduate work leading to a doctorate.

To obtain the B.S. in Wildlife Biology, the student must have a 2.5 grade point average or higher in all courses taken at The University of Montana.

Suggested sequence subject to frequent change. Some courses are offered more than one semester/year.

Terrestrial and Aquatic Options

First Year	Credits
BIOL 110N Principles of Biology	4
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3
CHMY 123N (CHEM 152N) Introduction to Organic and Biochem	3
CHMY 124N (CHEM 154N) Introduction Organic & Biochem Laboratory	2
WRIT 101 (ENEX 101) College Writing I	3

WBIO 180 Careers in Natural Resources	2
M 162 (MATH 150) Applied Calculus	4
Electives and General Education	8-14

Summer	Credits
Experiential Learning	2
(For a list of options, see the Wildlife Biology Office.)	

Second Year	Credits
BIOL 221 Cell and Molecular Biology	4
BIOL 223 Genetics and Evolution	4
BIOL 350* Rocky Mountain Flora	3
COMM 111A Introduction to Public Speaking	3
STAT 216 (MATH 241) Statistics or WBIO 240 Introduction to Biostatistics	3-4
WRIT 222 (FOR 220) Technical Approach to Writing or WBIO 245 Science Writing or WRIT 201 (ENEX 200) College Writing II	2-3
Electives and General Education	11-15

*BIOL 350 is not required for the Aquatic option

Terrestrial Option

Third Year	Credits
Two of the following:	
BIOL 304 Ornithology	4
BIOL 306 Mammalogy	4
BIOL 308 Biology and Management of Fishes	4
And one of the following	
FOR 347 Multiple Resource Silviculture	3
FOR 360 Range Management	3
And	
BIOL 340 Ecology	3
BIOL 341 Ecology Lab	2
WBIO 370 Wildlife Habitat Conservation	3
Electives and General Education	8-14

Fourth Year	Credits
WBIO 446 Wildlife Physiological Ecology	3
WBIO 470 Conservation of Wildlife Populations	3
WBIO 494 Senior Seminar	1
WBIO 480 The Upshot: Applied Wildlife Management	3
And one of the following	
WBIO 410 Wildlife Policy and Biopolitics	3
WBIO 475 Case Histories in Conservation Policy	3
FOR 422 Natural Resources Policy and Administration	3
Electives and General Education	16-22

Aquatic Option

Third Year	Credits
BIOL 308 Biology and Management of Fishes	4
BIOL 340 Ecology	3
BIOL 341 Ecology Lab	2
BIOL 366 Freshwater Ecology	5
BIOL 400-401 General Parasitology and Laboratory OR BIOL 406 Insect Behavior and Evolution OR BIOL 410 Insect Biology	4
WBIO 446 Wildlife Physiological Ecology	3
Electives and General Education	5-11

Fourth Year	Credits
WBIO 494 Senior Seminar	1

BIOL 316 Plant Form and Function	5
WBIO 408 Advanced Fisheries Science	3
FOR 385 Watershed Hydrology	3
WBIO 480 The Upshot: Applied Wildlife Management	3
And one of the following	
WBIO 410 Wildlife Policy and Biopolitics	3
FOR 422 Natural Resource Policy and Administration	3
WBIO 475 Case Histories in Conservation Policy	3
Electives and General Education	12-18

Wildlife Biology Honors Emphasis

The honors curriculum is designed particularly for students with strong academic records who intend to do graduate work. Entrance into this emphasis is open only to students who, at the beginning of the junior year of the wildlife biology program, have a grade-point average of 3.5 or above and who petition the faculty for entrance.

Honors students must complete either WBIO 370, 470 and 494 (terrestrial option) or BIOL 308, 366 and WBIO 494 (aquatic option). Honors students are encouraged to enroll also in WBIO 497 Senior Thesis. The balance of the coursework for the junior and senior years will be developed in consultation with the honors student's faculty advisor and committee appointed by the director of the wildlife biology program.

All students in the honors emphasis are required to meet with their faculty advisor prior to autumn semester registration of their junior and senior years to work out their course schedules.

Requirements for a Minor

To earn a minor in wildlife biology, the student must successfully complete the following coursework: BIOL 108N, 109N, 201N, 350; FOR 275; FOR 330 or 360; WBIO 105, 180.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Wildlife Biology (WBIO)

U 105N Wildlife and People 3 cr. Offered autumn. Intended for non-wildlife majors. Interactions of wildlife and people in today's society.

U 170 Fish Interest Group 1 cr. Offered autumn. Discussion section for incoming students who do not qualify for freshman interest group in Wildlife Biology.

U 171 Wildlife Interest Group 1 cr. Offered autumn. Discussion section for incoming students who do not qualify for freshman interest group in Wildlife Biology.

U 180 Careers in Natural Resources 2 cr. Offered autumn and spring. Same as FOR 180, RECM 180. Subject matter and fields of study within natural resources management. Topics include forestry, wildlife biology, range, water, recreation management, forest products production and other areas of opportunity for students seeking careers in natural resources.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 240 Introduction to Biostatistics (Honors) 3 cr. Offered autumn even-numbered years. Prereq., calculus and consent of instr. Same as BIOL 240. Introduction to statistical ecology: distributions, hypothesis testing, and fitting models to data with emphasis on problems in ecological sampling.

U 245 Science Writing 3 cr. Offered spring. Prereq., WRIT 101 (ENEX 101) or equiv. Discussion of different types of science writing and focus on methods to achieve more fluent prose. Includes material on logic, inference, and developing arguments that rely on data.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 370 Wildlife Habitat Conservation and Management 3 cr. Offered autumn and spring. Prereq., junior standing in wildlife biology, an ecology class, or consent of instr. Application of principles of wildlife biology to conservation and management of wild bird and mammal habitats including field applications.

UG 373 Wildlife Techniques 2 cr. Offered spring. Prereq., any statistics course; one 300-level ecology or wildlife biology course. Lab and field oriented class in commonly-used wildlife research and management techniques.

U 374 Hunter Check Stations 1 cr. (R-2) Offered autumn. Students learn techniques for determining species, age and sex of game animals, then work 3-5 days as volunteers at hunter check stations operated by management agencies.

U 395 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study 1-6 cr. (R-6) Offered every term.

U 398 Internship Variable cr. Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 408 Advanced Fisheries Science 3 cr. Offered spring. Prereq., WBIO/BIOL 308. Quantitative analysis and interpretation of fish populations and community data for use in management. Selection, application and evaluation of management techniques.

UG 410 Wildlife Policy and Biopolitics 3 cr. Offered autumn. Overview of the laws affecting wildlife and how those laws are initiated, implemented, and enforced; impact of politics, interest groups, and agency jurisdictions.

UG 441 Field Methods in Fishery Biology and Management 1-4 cr. Offered autumn and spring. Prereq., BIOL 308 or 357; consent of instr. Same as BIOL 415. Internship with practicing biologists to learn techniques for evaluating and managing aquatic habitats and fish populations.

UG 446 Wildlife Physiological Ecology 3 cr. Offered spring. Same as BIOL 446. Prereq., BIOL 221, 223 and 340. How physiological and biochemical processes in animals influence behavior and ecology. Application of physiological approaches to wildlife conservation such as assessment of animal health, nutritional condition, and physiological performance.

UG 460 International Wildlife Conservation Issues 2 cr. Offered spring. Prereq., a course in wildlife biology and/or conservation biology. Review of major international wildlife conservation issues with emphasis on the social context of the issues and applied solutions.

UG 470 Conservation of Wildlife Populations 3 cr. Offered autumn and spring. Prereq., 300-level animal ecology class and senior standing. Application of population ecology principles and theory to the conservation and management of wildlife populations.

UG 472 Wildlife Handling and Chemical Immobilization 2 cr. Offered spring. Field techniques associated with wildlife capture and handling. Ethical and legal issues, field organization, animal care and handling, chemical immobilization, veterinary emergencies and human safety.

UG 475 Case Histories in Conservation Policy 3 cr. Offered spring. Prereq., senior or graduate standing in conservation major or consent of instr. Understanding development and primary aspects of conservation policy. Exercises in policy analysis as individuals and in team efforts.

UG 480 The Upshot: Applied Wildlife Management 3 cr. Offered spring. Designed for students to apply their knowledge in the development of wildlife management planning.

UG 494 Senior Wildlife Seminar 1 cr. Offered autumn and spring. Prereq., senior standing in wildlife biology or consent of instr. Analysis and discussion led by students of current topics in wildlife biology.

UG 495 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, new courses, or one-time offerings of current topics.

U 496 Independent Study Variable cr. (R-10) Offered every term. Prereq., consent of instr. Original investigations or problems not related to student's thesis.

U 497 Senior Thesis 1-3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr.; senior standing. Preparation of major paper based on study or research of a topic selected with an advisor according to needs and objectives of student.

U 498 Internship 1-6 cr. Offered every term. Prereq., consent of department. Extended classroom experience that provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 540 Research Design 3 cr. Offered spring odd-numbered years. Prereq., introductory statistics course or consent of instr. Examination of study designs for experiments, quasiexperiments, observational studies, and sampling surveys with an emphasis on application.

G 542 Current Issues in Biometrics 1 cr. (R-3) Offered every term. Prereq., introductory statistics course or consent of instr. Exploration of current topics in biometrics through discussions, student presentations, and analysis.

G 560 Wildlife Landscape Ecology 3 cr. Offered spring. Examination of how various spatial and temporal scales influence wildlife and their habitats.

G 562 Wildlife Habitat Modeling 3 cr. Offered autumn, odd years. Prereq., consent of instr. A survey of theory and applications in the study of resource selection by animals.

G 570 Applied Population Ecology 3 cr. Offered spring even-numbered years. Prereq., courses in ecology, statistics, and calculus. Application of advanced population ecology tools and concepts to the evaluation of human perturbations on wildlife populations. Topics include methods to detect declining trends, the interacting components of population viability analysis, and identification of strategies to reverse declines.

G 572 Model Selection and Inference 3 cr. Offered autumn odd-numbered years. Prereq., one semester of 400-level statistics/biometry or consent of instr. Comparison and overview of statistical approaches commonly used in applied ecology, including frequentist/ANOVA models, information theoretic and Bayesian methods.

G 575 Frontiers in Conservation Research 2 cr. (R-6) Offered autumn. Prereq., upper-level course in conservation genetics or populations genetics. Same as BIOL 575. Exploration of current topics in conservation biology with emphasis on genetic issues in conservation.

G 576 Ecological Modeling and Analysis 2-3 cr. Offered every term. Prereq., consent of instr. Investigation of mathematical and statistical problems in ecology and wildlife biology. Specific material each semester is determined by student interest.

G 580 Readings in Population Dynamics 1 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Discussion of recent papers on interface of population dynamics, ecological interactions, and wildlife management.

G 594 Graduate Seminar in Wildlife Biology 1 cr. (R-3) Offered autumn and spring. Prereq., graduate standing in wildlife biology or consent of instr. Analysis of selected problems in wildlife biology and conservation.

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-10) Offered every term. Prereq., graduate standing and consent of instr. Original investigations or problems not related to student's thesis.

G 597 Research Variable cr. Offered every term. Prereq., graduate standing in wildlife biology or consent of instr. Graded pass/not pass only.

G 599 Professional Paper Variable cr. (R-6) Offered every term. Prereq., graduate standing in wildlife biology and consent of instr. Professional paper written in the area of the student's major interest based on either primary or secondary research. Subject matter must be approved by graduate committee. Graded pass/not pass only.

G 697 Research 1-15 cr. (R-15) Offered every term.

G 699 Thesis Variable cr. (R-10) Offered every term. Prereq., graduate standing in wildlife biology. Preparation of thesis.

Wilderness Studies

Laurie Yung (Assistant Professor) Director of Wilderness Institute

Students who successfully complete the requirements of the Wilderness and Civilization Program are eligible for the Wilderness Studies minor. Wilderness and Civilization is an interdisciplinary campus and field-based program. Each year, 25 students investigate wildland conservation and the human-nature relationship through the lenses of policy, ecology, art, Native American Studies, and literature. Wilderness and Civilization combines the strengths of classroom and field learning, interactive classes, innovative faculty, and applied learning through internships. Field trips include extended backcountry trips as well as shorter field trips examining ecology, environmental issues, land use, and natural history. Wilderness and Civilization offers students the opportunity to explore contemporary conservation debates, make connections between disciplines, and learn how to work for positive change.

Wilderness and Civilization is an undergraduate, immersion program geared toward sophomore-, junior-, and senior-level students in any major. Students take a 16-17.0 credits of campus and field-based courses during the fall, and then continue in the spring with an art course, an internship, a 1.0 credit field course, and a 1.0 credit lecture series. The Wilderness and Civilization program is administered by the Wilderness Institute of the College of Forestry and Conservation. The program is offered in collaboration with the College of Arts and Sciences, the School of Fine Arts, and the Davidson Honors College.

Students must apply for admission to the Wilderness and Civilization program, which is limited to 25 students each year. Applicants must have a cumulative GPA of 3.0 or higher for all college and university work. Applications are due by April 1 and are available at the Wilderness Institute, University Hall 303.

Requirements for a Minor in Wilderness Studies

To earn a minor in wilderness studies the student must successfully complete the Wilderness and Civilization program and the course requirements below (23-24.0 credits).

Course # and Description	Credits
RSCN 373 Wilderness and Civilization	3
LIT 373 (ENLT 371) Literature and the Environment/Honors	3
RSCN 271N Wilderness Ecology/Honors	3
NAS 303E Ecological Perspectives of Native Americans	3
ART 324A Environmental Drawing Seminar	3
RSCN 273 Wilderness and Civilization Field Studies	3
RSCN 398 Internship: Wildlands Community Project	2
RECM 371 Wilderness Lecture Series and RSCN 370S Wildland Conservation Policy and Governance or RSCN 423 Montana Wilderness Policy and Politics	3
Total	23-24

Requirements for minors in Wildland Restoration and Willdlife Biology are listed within their majors section of the catalog.

Faculty

Professors

Donald J. Bedunah, Ph.D., Texas Tech University, 1982

Jill M. Belsky, Ph.D., Cornell University, 1991

William T. Borrie, Ph.D., Virginia Polytechnic Institute and

State University, 1995

Perry J. Brown, Ph.D., Utah State University, 1971 (Dean)

James A. Burchfield, Ph.D., University of Michigan, 1991
(Associate Dean)

Edwin J. Burke, Ph.D., Colorado State University, 1978

Thomas H. DeLuca, Ph.D., Iowa State University, 1993

Carl Fiedler, Ph.D., University of Minnesota, 1990 (Research)

Wayne A. Freimund, Ph.D., University of Minnesota, 1993
(Chair of Society and Conservation)

Paul Krausman, Ph.D., University of California-Santa Cruz,
1993

L. Scott Mills, Ph.D., University of California, Santa Cruz,
1993

Norma Nickerson, Ph.D., University of Utah, 1989 (Research)

Daniel H. Pletscher, Ph.D., Yale University, 1982 (Director, Wildlife Biology Program)

Donald F. Potts, Ph.D., State University of New York, 1979

LLoyd Queen, Ph.D., University of Nebraska, Lincoln, 1988

Steven W. Running, Ph.D., Colorado State University, 1979

Stephen F. Siebert, Ph.D., Cornell University, 1990

Diana Six, Ph.D., University of California, Riverside, 1997

Ronald H. Wakimoto, Ph.D., University of California, 1978
(Chair of Society and Conservation)

Scott Woods, Ph.D., Colorado State University, 2001

Associate Professors

Donald J. Bedunah, Ph.D., Texas Tech University, 1982

Jill M. Belsky, Ph.D., Cornell University, 1991

William T. Borrie, Ph.D., Virginia Polytechnic Institute and
State University, 1995

Perry J. Brown, Ph.D., Utah State University, 1971 (Dean)

James A. Burchfield, Ph.D., University of Michigan, 1991
(Associate Dean)

Edwin J. Burke, Ph.D., Colorado State University, 1978

Thomas H. DeLuca, Ph.D., Iowa State University, 1993

Carl Fiedler, Ph.D., University of Minnesota, 1990 (Research)

Wayne A. Freimund, Ph.D., University of Minnesota, 1993
(Chair of Society and Conservation)

Paul Krausman, Ph.D., University of California-Santa Cruz,
1993

L. Scott Mills, Ph.D., University of California, Santa Cruz,
1993

Norma Nickerson, Ph.D., University of Utah, 1989 (Research)

Daniel H. Pletscher, Ph.D., Yale University, 1982 (Director, Wildlife Biology Program)

Donald F. Potts, Ph.D., State University of New York, 1979

LLoyd Queen, Ph.D., University of Nebraska, Lincoln, 1988

Steven W. Running, Ph.D., Colorado State University, 1979

Stephen F. Siebert, Ph.D., Cornell University, 1990

Diana Six, Ph.D., University of California, Riverside, 1997

Ronald H. Wakimoto, Ph.D., University of California, 1978
(Chair of Society and Conservation)

Scott Woods, Ph.D., Colorado State University, 2001

Assistant Professors

David Affleck, Ph.D., Yale University, 2006

Keith Bosak, Ph.D., University of Georgia (Athens), 2006

Woodam Chung, Ph.D., Oregon State University, 2002

Cory Cleveland, Ph.D., University of Colorado-Boulder, 2001

Solomon Dobrowski, Ph.D., University of California (Davis),
2005

Elizabeth D. Dodson, Ph.D., Oregon State University, 2004

Mark Hebblewhite, Ph.D., University of Alberta, 2006

Cara Nelson, Ph.D., University of Washington, 2004

Carl Seielstad, Ph.D., University of Montana, 2003

Tyron Venn, Ph.D., University of Queensland, 2004

Laurie Yung, Ph.D., University of Montana, 2003

Adjunct Faculty

Research Professors

Carol Brewer, P:h.D., University of Wyoming, 1993

Thomas DeLuca, Ph.D., Iowa State University, 1993

Michael Mitchell, Ph.D., North Carolina State University, 1995

Anna Sala, Ph.D., University of Barcelona, 1992

Research Associate Professors

Rich Harris, Ph.D., University of Montana, 1993

John Kimble, Ph.D., Oregon State University, 1995

Peter Kolb, Ph.D., University of Idaho, 1996

Christopher Sevheen, Ph.D., University of Montana, 1981

Research Assistant Professors

James Riddering, Ph.D., university of Montana, 2004

Kathy Tonnessen, Ph.D., University of California-Berkley, 1982

Emeritus Professors

David H. Jackson, Ph.D., University of Washington, 1975

Alan McQuillan, Ph.D., University of Montana, 1981

Stephen F. McCool, Ph.D., University of Minnesota, 1970

Thomas J. Nimlos, Ph.D., University of Wisconsin, 1959

Robert D. Pfister, Ph.D., Washington State University, 1972

Robert R. Ream, Ph.D., University of Wisconsin, 1963

Robert W. Steele, Ph.D., Colorado State University, 1975

Jack Ward Thomas, Ph.D., University of Massachusetts, 1972

Hans R. Zuuring, Ph.D., Iowa State University, 1975 (Chair of Forest Management)

Wildland Restoration

Bachelor of Science in Wildland Restoration

In addition to special degree requirements listed previously, the students selecting the Bachelor of Science in Wildland Restoration must complete the following required courses or their equivalent, if transferred from another college or university. Transference and equivalency will be determined by the University and College of Forestry and Conservation. Electives may be taken at any time, keeping in mind these

requirements as well as the University's General Education requirements for graduation.

Wildland Restoration (Aquatic Option)

First Year	Credits
WRIT 101 (ENEX 101) Composition	3
BIOL 110 Principles of Biology	4
GEO 101/102 (GEOS 100N/101N) General Geology/Lab	3
COMM 111A Intro to Public Speaking	3
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3
CHMY 123 (CHEM 152N) Introduction to Organic and Biological Chemistry	3
M 171 (MATH 152) Calculus I	4
FOR/RECM/WBIO 180 Careers in Natural Resources	2
FOR 200 Natural Resources Measurements Camp	2
Electives and General Education	3
Second Year	**Credits**
M 172 (MATH 153) Calculus II	4
FOR 201 Forest Biometrics or WBIO 240 Intro to Biostatistics or STAT 216 (MATH 241) Statistics	3
FOR 265 Elements of Ecological Restoration	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
PHYS 121N Fundamentals of Physics with Calculus or PHYS 221N Fundamentals of Physics	5
BIOL 221 Cell and Molecular Biology	4
BIOL 223 Genetics and Evolution	4
Electives and General Education	5
Third and Fourth Year	**Credits**
FOR 385 Watershed Hydrology	3
BIOL 366 Freshwater Ecology	5
FOR 365 Foundation of Restoration Ecology	3
FOR 445 Ecological Restoration Practicum	3-6
FOR 422 Natural Resource Policy & Administration	3
FOR 444 Integrative Ecology Restoration	3
FOR 494 Seminar in Ecological Restoration I	3
Rest/Aquatic Electives - At least nine credits must be completed from the following:	**Credits**
BIOL 308 Biology and Management of Fishes	4
FOR 455 Riparian Ecology and Management	3
FOR 485 Watershed Management	3
GEOS 460 Process Geomorphology	4
GEOS 431 Environmental Geochemistry	3
FOR 250 GIS Practicum	2
FOR 210N Soils	3
GEO 250 River Systems	3
GEO 420 Hydrogeology	3
Rest/Aquatic Electives - At least nine credits must be completed from the following:	**Credits**
ECNS 433 Environmental Economics	3
FOR 320 Forest Environmental Economics	3
FOR 379 Collaboration in Natural Resource Decisions	3
FOR 475 Sociology of Environment and Development	3
FOR/RSCN 449 Climate Change Ethics and Policy	3

Wild Land Restoration (Terrestrial Option)

First Year	Credits
WRIT 101 (ENEX 101) Composition	3
BIOL 110 Principles of Biology	4
BIOL 120 General Botany	3
COMM 111A Intro to Public Speaking	3
CHMY 121N (CHEM 151N) Introduction to General and Inorganic Chemistry	3

CHMY 123 (CHEM 152N) Introduction to Organic and Biological Chemistry	3
M 162 (MATH 150) Calculus	4
FOR/RECM/WBIO 180 Careers in Natural Resources	2
FOR 200 Natural Resources Measurements Camp	2
Electives and General Education	6
Second Year	**Credits**
FOR 201 Forest Biometrics or WBIO 240 Intro to Biostatistics or STAT 216 (MATH 241) Statistics	3
FOR 295 Elements of Ecological Restoration	3
WRIT 222 (FOR 220) Technical Approaches to Writing	2
FOR 210N Introductory Soils	3
FOR 230 Forest Fire Management	3
PHYS 111N/113N Fundamentals of Physics I & Fundamentals of Physics Lab I or PHYS 211N/213N Fundamentals of Physics with Calculus I & Physic Lab I with Calculus	5
BIOL 221 Cell and Molecular Biology	4
BIOL 223 Genetics and Evolution	4
Electives and General Education	4-5
Third and Fourth Year	**Credits**
FOR 330 Forest Ecology or BIOL 340 Ecology	3
FOR 385 Watershed Hydrology	3
FOR 445 Ecological Restoration Practicum	3-6
FOR 444 Integrative Ecology Restoration	3
FOR 422 Natural Resource Policy & Administration	3
FOR 365 Foundation of Restoration Ecology	3
FOR 494 Seminar in Ecological Restoration	1
BIOL 350 Rocky Mountain Flora	3
Rest/Terrestrial Electives: At least nine credits must be completed from:	
BIOL 316 Plant Form & Function	3
FOR 335 Environmental Entomology	3
FOR 250 GIS Practicum	2
FOR 331 Fuels Management	3
FOR 415 Environmental Soil Science	3
FOR 485 Watershed Management	3
FOR 360 Range Management	3
FOR 462 Range Ecology	3
BIOL 444 Plant Physiology	3
BIOL 448 Terrestrial Plant Ecology	3
WBIO 370 Wildlife Habitat Conservation and Management	3
WBIO 470 Conservation of Wildlife Populations	3
MCB 423 Microbial Ecology: Applications	3
Electives and General Education	26
Rest/Social-Science Electives: At least three credits must be completed from:	
ECNS 433 Environmental Economics	3
FOR 320 Forest Economics	3
FOR 379 Collaboration in Natural Resource Decisions	3
FOR 475 Sociology of Environment and Development	3
FOR/RSCN 449 Climate Change Ethics and Policy	3

Wild Land Restoration Minor

To earn a minor in Wild Land Restoration, students must fulfill the course requirements listed below.

Minor in Wildland Restoration (new requirements as of Autumn 2009)	
FOR 265 Elements of Ecological Restoration	3
FOR 365 Foundations of Restoration Ecology	3
FOR 330 Forest Ecology or BIOL 340 Ecology or BIOL 366 Fresh Water Ecology	3
FOR 201 forest Biometrics or WBIO 240 Introduction to Biostatistics or STAT 216 (MATH 241) Statistics	3-4

FOR 210N Introductory Soils	3
BIOL 350 Rocky Mountain Flora or FOR 385 Watershed Hydrology	3
Three credits from the following Natural Science Electives:	
BIOL 308 Biology & Management of Fishes	3
BIOL 350 Rocky Mountain Flora	3
BIOL 448 Terrestrial Plant Ecology	3
WBIO 370 Wildfire Habitat Conservation	3
WBIO 470 Conservation of Wildlife Populations	3
FOR 331 Wildland Fuel Management	3
FOR 335 Environmental Entomology	3
FOR 347 Silviculture	3
FOR 360 Range Management	3
FOR 385 Watershed Hydrology	3
Three credits from the following Social Science Electives: (If one of the proposed social science electives also is required for the students major degree, a second social science elective must be taken)	
FOR 422 Natural Resource Policy & Administration	3
FOR 489E Ethics & Management of Public Lands	3
FOR 379 Collaboration in Natural Resource Decisions	3
FOR 475 Sociology of Environment & Development	3
FOR/RSCN 449 Climate Change Ethics & Policy	3
FOR 482 Wilderness & Protected Areas Management	3

College of Health Professions and Biomedical Sciences

David S. Forbes, Dean

Lori J. Morin, Assistant Dean for Student Affairs

The College of Health Professions and Biomedical Sciences offers the Bachelor of Arts in Social Work, the Doctor of Pharmacy (Pharm.D.) degree; the Master of Science degrees in Neuroscience, Pharmaceutical Sciences, and Toxicology; the Master of Public Health degree, the Master of Social Work degree, the Doctor of Physical Therapy degree, and the Doctor of Philosophy (Ph.D.) degrees in Biomedical Sciences, Neuroscience, and Toxicology.

The focus of these programs is to provide a composite of educational experiences that will produce a well-educated person and a highly trained, professional social worker, health care practitioner or scientist.

Health Science

- Courses

Health science courses are concerned with fundamental issues in human health and disease and are, therefore, interdisciplinary in both scope and content. They have been designed not only for students anticipating careers in medicine, dentistry, nursing, public health, pharmacy, medical technology, physical therapy, cytotechnology, and numerous other health care professions and services, but for all students interested in individual and community health, the clinical and paramedical arts, and the biomedical sciences. Health sciences courses are listed under two designations: 1) Health Sciences; 2) other disciplines.

Health Science Courses

Health Sciences

- 195 Special Topics
- 201 Living Well: Health and Disability
- 325 Introduction to Gerontology
- 326 Geriatric Practicum
- 327 Montana Gerontology Society Meeting
- 389 Recent Advances in Clinical Medicine
- 395 Special Topics
- 495 Special Topics

Anthropology

- 265 Human Sexuality
- 267 Human Genetics
- 343 Culture and Population
- 388 Native American Health and Healing
- 444 Culture, Health and Healing

Health and Human Performance

- 184 Personal Health and Wellness
- 236N Nutrition

Microbiology

- 106N Elementary Microbiology
- 107 Elementary Microbiology Laboratory
- 302 Medical Microbiology

Social Work

- 322 Explorations in Gerontology
- 423 Addiction Studies

Pharmacy

- 110N Use and Abuse of Drugs
- 324 Medicinal Plants
- 395 Indian Health Issues
- 423 Drug Induced Malnutrition

Philosophy

- 421 Medical Ethics

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Health Sciences (HS)

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201 Living Well: Health and Disability 2 cr. Offered autumn and spring. The development and implementation of exercise programs for individuals with physical disabilities or chronic illness.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 320 American Indian Health Issues 2 cr. Offered spring. Same as PHAR 320. An overview of the health issues, health care delivery and payment that affect American Indians.

UG 324 Medicinal Plants 2-3 cr. Offered autumn. Same as PHAR 324 and BMED 324. Plants and other natural substances which nourish, heal, injure, or alter the conscious mind.

U 325 Introduction to Gerontology 3 cr. Offered spring. Prereq., junior standing or consent of instr. An interdisciplinary discussion of the health and social issues of older persons, utilizing didactic presentations, clinical demonstrations, and curricular modules.

U 326 Geriatric Practicum 1-3 cr. (R-3) Offered spring. Prereq., HS 325. Service learning experience in geriatrics in a setting compatible with the student's major and interests.

U 327 Montana Gerontology Society Meeting 1 cr. (R-3) Offered spring. Attendance and participation in the Montana Gerontology Society meeting held annually in April.

U 389 Recent Advances in Clinical Medicine 1 cr. (R-3) Offered spring. Prereq., junior or senior standing. Weekly presentations throughout the semester by local clinical medical practitioners describing in non-technical terms recent advances in their specialities.

U 395 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 430 Health Aspects of Aging 3 cr. Offered spring. Same as HHP and SW 430. Overview of the health aspects of aging in the United States including biological theories of aging, normal physiological changes associated with aging systems, common pathological problems associated with aging, cultural and ethnic differences in the health of elders, health promotion and healthy aging, and the health care continuum of care for older persons.

UG 495 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

School of Physical Therapy and Rehabilitation Science

- Curriculum and Application Process
- Special Degree Requirements
- Courses
- Faculty

Reed Humphrey, Chair

The professional program in physical therapy grants the Doctor or Physical Therapy (D.P.T.) degree. The program has an entry-level D.P.T. program, an entry-level D.P.T./M.B.A. program, and a post-entry level transitional D.P.T. program. The following section describes the profession and the pre-professional requirements and application procedures. This information also is available on the program website at www.health.umt.edu/schools/pt.

The Profession

Physical Therapy is a health care profession concerned with the habilitation and rehabilitation of individuals having limitations resulting from pathological, surgical, or traumatic conditions. The profession is also concerned with prevention of disability in an effort to promote maximal use of an individual's capacities. Physical therapists are trained to evaluate neurological, musculoskeletal, cardiovascular, respiratory, and integumentary disorders. Exercise and physical agents, such as heat, cold, light, electricity, and massage are used to promote healing, relieve pain, maintain or restore strength, and improve joint range of motion and functional capabilities. Physical therapists play key roles in: 1) the physical therapy diagnosis and treatment of musculoskeletal injuries, 2) wellness and injury prevention, 3) rehabilitating injured workers to return to their jobs, 4) rehabilitating senior citizens after debilitating disease to enable them to remain independent, 5) helping handicapped children to live within the least restrictive environment, 6) preventing and treating sports related injuries, and 7) conducting research in the basic and clinical sciences. Knowledge of the psychological and social ramifications of disability affecting the individual and his or her family is an integral part of physical therapy intervention.

Physical therapy is practiced in diversified settings, including hospitals, clinics, skilled nursing facilities, sports medicine programs, public schools, and private practices. Legislation in Montana permits direct public access to physical therapists for evaluation and treatment without a physician referral. Even so, physical therapists remain committed to functioning as an integral member of the health care team.

The physical therapy educational program at The University of Montana seeks to prepare physical therapists who have a broad base of skills upon graduation, and who will be able to implement physical therapy services in many settings, especially rural environments. Rural settings require a physical therapist to serve not only as a provider of direct patient care, but to fulfill the roles of administrator, supervisor, teacher, consultant, and researcher. Students successfully completing the professional program meet the competencies for physical therapy as determined by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, a Doctor of Physical Therapy degree, and are prepared for state licensure.

The Physical Therapy Program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association through 2018.

High School Preparation:

Specific high school courses are not required but a background is recommended in mathematics, chemistry, biology, physics, English, and other communication skills.

Pre-Professional Physical Therapy Curriculum and Application Process

Students wishing to apply to the professional physical therapy program at The University of Montana-Missoula may select any major for their undergraduate degree. While pre-physical therapy is not a degree granting major at the University, prospective applicants should list pre- professional physical therapy (PPPT) as their second major. This will allow them also to receive advising from the School of Physical Therapy and Rehabilitation Science in order to assure adequate preparation for the professional program. In addition to completing a baccalaureate degree, applicants must take the following prerequisite courses and meet the additional application requirements listed. All prerequisite courses must be taken for a traditional letter grade and must be completed with a grade of "C" (2.00) or better.

Prerequisite Courses and Credits

Human Anatomy and Physiology: minimum of two semesters or two to three quarters of human anatomy and physiology. This course work must be completed in a Biology, Anatomy and/or Physiology department. A full sequence must be completed of two semesters or two to three quarters, depending upon what is offered by the institution. A comparative vertebrate anatomy and an animal physiology course may be substituted for human anatomy and physiology.

Chemistry: minimum of two semesters or three quarters of chemistry with laboratory. A full sequence must be completed of two semesters or two to three quarters, depending upon what is offered by the institution.

Physics: minimum of two semesters or three quarters of physics with laboratory. A full sequence must be completed of two semesters or two to three quarters, depending upon what is offered by the institution.

Statistics: minimum of one semester or quarter of statistics course work.

Exercise Physiology: minimum of one semester or quarter of exercise physiology with laboratory. Online lecture-only courses do not meet this requirement.

Social Sciences: minimum of two semesters or three quarters of social/behavioral science classes. These classes may include courses offered by Psychology, Educational Psychology, Sociology, Social Work, Cultural Geography and Anthropology departments.

Certification in adult, child, and infant CPR is assumed.

Computer literacy is assumed. You should be able to utilize email communication, word processing, statistical and spreadsheet programs and be able to complete searches on the Web.

Suggested Prerequisite Courses at The University of Montana-Missoula

BIOL 312, 313 Anatomy and Physiology I, II or SCN 201, 202	8
CHMY 121N, 123N, 124N (CHEM 151N, 152N, 154N) Intro to General Chemistry, Intro to Organic & Biochem and Laboratory	8
PHYS 111N and 113N, 112N and 114N Fundamental Physics I, II	10
HHP 377-378 Exercise Physiology with laboratory (Exempt from HHP 226 prerequisite)	4
PSYX 100S (PSYC 100S) Introduction to Psychology or SOCI 101S (SOC 110) Introduction to Sociology or ANTH 101H Introduction to Anthropology or PSYX 340S (PSYC 330S) Abnormal Psychology or PSYX 230S (PSYC 240S) Developmental Psychology	7
STAT 216 (MATH 241) Introduction to Statistics or PSYX 222 (PSYC 240S) Psychological Statistics or SOCI 202 Social Statistics	4
HHP 288, 289 Advanced First Aid/CPR.	
Computer literacy required.	

Additional Requirements for Application

Because the professional program is sequential, students must enter the program in the autumn semester of the first professional year.

Online application and information about admissions policies for the professional program are available from the School of Physical Therapy and Rehabilitation Science website www.health.umt.edu/schools/pt. Application fees are required with one going to PTCAS and another going to the School of Physical Therapy and Rehabilitation Science. Questions about admission should be addressed to physical.therapy@umontana.edu.

The application documentation must be submitted online by December 15 (PTCAS application and School Supplemental application) and the supporting documents must be forwarded directly to the Chair, Student Selection Committee, School of Physical Therapy and Rehabilitation Science, arriving no later than December 15, preceding the autumn semester of the year for which admission is requested. The Graduate Record Exam (GRE) must be completed by November 15 and the scores sent to The University of Montana. (Institution code 4489, Department code 0619)

To be considered for admission, an applicant must have obtained a cumulative grade average of at least 2.75 (on a four-point scale) in all college courses for which the applicant has registered, as well as a minimum of 3.00 in the required pre-requisite course work. Some preference will be given to Montana residents. To qualify as a resident applicant, the student must be a Montana resident on the closing date for submission of the application for admission.

In addition to these requirements, applicants must demonstrate an appreciation and knowledge of the practical duties and responsibilities of the physical therapist through direct exposure in a variety of clinical settings (a minimum of 80 hours of work or observation under the direct supervision of a physical therapist before application). At least 3 different clinical settings must be included in the 80 hours of observation - outpatient, inpatient acute care, rehab/sub-acute rehab, skilled nursing/extended care, school/pediatrics, or home health. These observation hours must be completed before application submission. Applicants are expected to participate in activities beyond their academic pursuits, such activities should include employment, volunteer activities (school, sport, community, or church) and employment/volunteer activities interacting with people with disabilities.

Application documentation includes three letters of recommendation, one of which must be from a licensed physical therapist. These letters

will be submitted electronically through the PTCAS application.

After completed applications have been received, the Selection Committee will screen the applications based on grade average in pre-requisite courses, overall grade average, GRE scores, stated purpose, evidence of leadership, honors, community service, and letters of recommendation. Based upon the results of this screening, only those applicants who appear best qualified will be invited for a personal interview. Although an invitation to appear for interview does not assure the applicant a place in the class, the final selection will be made from those interviewed. All applicants will be notified in writing of their status.

Professional Physical Therapy Program

The professional entry-level D.P.T. program is 33 months in length. Enrollment is limited to 34 students in each class. All students pay first level graduate tuition and fees plus a tuition surcharge each Autumn and Spring Semesters. The students will also pay first level tuition and fees for two summer sessions.

Joint MBA/DPT Program

Students who wish to participate in this joint dual degree program must satisfy the normal admission requirements for both The School of Physical Therapy and Rehabilitation Science's entry -level DPT program and The School of Business Administration's MBA program. Students cannot enter the joint program until they have been accepted separately by both schools. If accepted by both programs, permission to participate in the joint program must be obtained from both the Chair of the DPT program and the Director of the MBA program. Students completing this dual degree program will receive two separate degrees, the DPT and the MBA. Requirements consist of competing 32 credits for the MBA including 8 transferred in from the School of Physical Therapy and Rehabilitation Science and 118 total credits for the DPT including 8 transferred from the School of Business Administration. Students will work with faculty advisors from both programs to determine an appropriate curricular schedule.

Special Degree Requirements

Once admitted into the professional entry-level Physical Therapy Program, all students must achieve a C grade or higher (or a CR, in credit/no credit) in all required courses in the physical therapy curriculum. Because courses in the curriculum are sequential, a student who fails to achieve a C grade (or a CR, in credit/noncredit courses) in any course may not be allowed to continue in the next semester of the professional program. The student must retake the course at the next offering. Students must maintain a minimum 2.50 grade average while in the professional entry-level D.P.T. program. Students who do not maintain this average will be on academic probation and must achieve the 2.50 grade average in order to graduate. Students who fail to progress in the expected manner for two consecutive years will be dismissed from the Physical Therapy Program subject to review by the Academic Requirements Committee and the Dean of the College of Health Professions and Biomedical Sciences. Students also must comply with all School academic and professional conduct policies as outlined in the Physical Therapy Program Student Handbook. All students enrolled in the program are expected to maintain a full-time academic course load (minimum of 12 semester credits) during each semester of the program.

Professional Physical Therapy Curriculum

First Professional Year	A	S
PT 503 Physical Therapy and Health Care System	4	-
PT 510 Applied Clinical Anatomy and Kinesiology	5	-
PT 516 Musculoskeletal Evaluation I	6	-
PT 519 Musculoskeletal Evaluation II	-	6
PT 520 Development Through the Life Span	-	3
PT 526 Physical Therapy Interventions I	4	-
PT 527 Electrophysiological Testing	-	2
PT 528 Physical Therapy Interventions II	-	4
PT 529 Biomechanics and Exercise Interventions	2	-
PT 536 Neurosciences for the Health Professions	-	5
PT 560 Introduction to Research	-	1
PT 582 Clinical Experience I	-	1
Total	21	22

Summer Session	Credits
PT 587 Clinical Internship I	4

Second Professional Year	A	S
PT 525 Clinical Medicine and Pharmacology	2	-
PT 561 Research in Physical Therapy	2	-
PT 562 Scholarly Project I	1	-
PT 563 Cardiopulmonary Physical Therapy	3	-
PT 565 Physical Therapy for Children	2	-

PT 566 Advanced Anatomy Laboratory	(1)	(1)
PT 567 Neurorehabilitation I	3	-
PT 568 Neurorehabilitation II	-	2
PT 569 Orthopedic Physical Therapy I	3	-
PT 572 Practice and Administration	-	2
PT 573 Orthopedic Physical Therapy II	-	2
PT 575 Physical Therapy Interventions III	-	4
PT 576 Synthesis of Clinical Evaluation and Intervention	-	1
PT 578 Physical Therapy Interventions IV	-	4
PT 588 Clinical Internship II	-	4
PT 671 Scholarly Project II	-	1
Total	16-17	19-20

Summer Session	**Credits**
PT 589 Clinical Internship III	5

Third Professional Year	**A**	**S**
PT 626 Primary Care in Physical Therapy	3	-
PT 627 Prevention, Wellness, and Education	2	-
PT 672 Research in Physical Therapy II	2	-
PT 570 Psychology of Illness and Disability	2	-
PT 676 Clinical Mastery in Physical Therapy	4	-
PT 679 Trends in Clinical Practice (may be repeated)	4	-
PT 690 Clinical Internship IV	-	12
Total	17	12

Seven credits of professional elective course work are required for the D.P.T. These may be satisfied by PT 671, 672, 679 sections or courses outside the school. Only 6 credits may be independent study.

Total credits required for graduation: 118

Transitional D.P.T. Curriculum

The mission of the transitional Doctor of Physical Therapy (tDPT) curriculum is to provide an affordable, practical, and career-enhancing plan of study that allows licensed physical therapists to transition their current entry-level professional degree to the Doctor of Physical Therapy degree. The program of study offers licensed physical therapists with an academic degree in Physical Therapy the opportunity to earn the Doctor of Physical Therapy (DPT) degree. The focus of the program is to bridge the gap between current DPT and prior degree entry-level expectations. The program is delivered in a distance-education format, although students are required to attend a weekend during the course of study for a two-day seminar in concepts of professionalism in an autonomous profession and other requirements as identified in the program of study.

Admission Requirements

Applicants must:

- Provide evidence of being currently licensed to practice physical therapy in a state or jurisdiction of the United States; and
- Complete a graduate admission application supplied by the School of Physical Therapy and Rehabilitation Science at The University of Montana, including official transcripts from the institution awarding the entry-level physical therapy degree.
- Scores from the Graduate Record Examination (GRE). Candidates without available GRE scores may also satisfy admission requirements by supplying evidence meeting the following criteria:
- The applicant has a graduate degree in the field from an accredited institution, along with at least one other qualification from (a), (b), or (c) below.
  OR
- The applicant has a GPA from an accredited undergraduate institution sufficient for success in the graduate program along with at least two other qualifications from (a), (b), or (c) below.
- (a) Extensive, high-level, and relevant experience in the field of physical therapy as documented in the tDPT application.
  (b) Record of high quality scholarly contributions such as publications in peer-reviewed journals or presentations at relevant professional meetings.
  (c) Demonstration of ability to function with excellence in the discipline through submission of a writing sample (as requested in the tDPT application).
- Agree to the program of study in the School of Physical Therapy and Rehabilitation Science prior to matriculation. The admissions committee will review the application and transcript(s) to ensure compliance with entry-level accreditation requirements for the DPT degree. Credits earned in the tDPT curriculum in combination with those previously earned in the professional phase of entry-level preparation and other relevant coursework must be commensurate with the requirements for completion of the entry-level DPT degree awarded at The University of Montana.

Individuals with a master's degree can complete the tDPT curriculum in five consecutive semesters; bachelor's degree participants require an additional five courses, adding two semesters (seven total semesters).

Minimum Grade and Academic Progression Requirements

Students must receive a minimum grade of C in all tDPT courses. Students who receive a grade of C- or lower must repeat the course to achieve a grade of B or better to pass the course. Repetition of courses will result in additional tuition charges. Students must achieve a grade point average of 3.0 or greater in the prescribed program of study to graduate from the tDPT curriculum. Only the grades within the tDPT curriculum will be included in the calculation of the GPA. Failure to maintain a 3.0 GPA for two semesters will result in dismissal from the tDPT curriculum.

Degree Requirements

For candidates holding an entry-level master's degree, successful completion of a 20 credit core curriculum that includes:

Semester One

PT 652 Pharmacology in Rehabilitation (2 cr.)
PT 654 Clinical Decision Making: Guide to PT Practice (1cr)

Semester Two

PT 653 Legal and Ethical Issues for PTs (1 cr.)
PT 655 Business and Marketing (2 cr.)

Semester Three

PT 656 Coding and Reimbursement (1 cr.)
PT 651 Medical Imaging and Rehabilitation (2 cr.)
PT 657 Professionalism: The Doctoring Profession (2 cr.)

Semester Four

PT 650 Screening for Medical Disorders (2 cr.)
PT 658 Critical Assessment and Application of Best Evidence (3 cr.)

Semester Five

PT 659 Capstone Project (4 cr.)

For bachelor's candidates, semesters 1-4 are the same as above; semester 5-7 are as follows:

Semester Five

PT 660 Management of Patients with Musculoskeletal Disorders (2 cr.)
PT 661 Management of Patients with Cardiovascular and Pulmonary Disorders (2 cr.)

Semester Six

PT 662 Management of Patients with Neurological Disorders
(2 cr.)
PT 663 PT Management of Patients with Integumentary Disorders (2 cr.)

Semester Seven

PT 664 Wellness and Health Promotion (2 cr.)
PT 659 Capstone Project (4 cr.)

Candidates unable to complete PT 659 by the course completion date will receive an incomplete grade. The incomplete must be resolved within one month of receipt; otherwise a failing grade will be issued and the course must be repeated with an additional tuition charge.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G= for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Physical Therapy (P T)

U 496 Independent Study Variable cr. (R-12) Offered intermittently. UG 497 Research 1-10 cr. (R-10) Offered autumn and spring. Prereq., consent of instr.

UG 497 Research 1-10 cr. (R-10) Offered autumn and spring. Prereq., consent of instr.

G 503 Physical Therapy and the Health Care System 4 cr. Offered autumn. An introduction to physical therapy and its relationship to the health care system. Topics include introduction to the PT literature, medical terminology, medical records, communication, ethics, and professional issues in physical therapy.

G 510 Applied Clinical Anatomy and Kinesiology 5 cr. Offered autumn. Prereq., course in human anatomy and consent of instr. Anatomy of the neuromusculoskeletal system and body cavities in relation to movement, function and clinical correlates.

G 516 Musculoskeletal Evaluation I 6 cr. Offered autumn. Coreq., PT 510, 529. Principles of physical therapy examination and evaluation including pathology, imaging, patient interviews, tests and measures.

G 519 Musculoskeletal Evaluation II 6 cr. Offered spring. Prereq., PT 510, 516. Continuation of PT 516. Physical therapy examination and evaluation including pathology, imaging, patient interviews, tests and measures.

G 520 Development Through the Life Span 3 cr. Offered spring. Prereq., PT 510, 511. Process-based learning course covering human development with emphasis on motor development including pediatrics and geriatrics and a review of geriatric care programs.

G 525 Clinical Medicine and Pharmacology 2 cr. Offered autumn. Pathology, evaluation, differential diagnosis, pharmacology, management of oncological, endocrine, metabolic, GI, renal, and immunological pathology.

G 526 Physical Therapy Interventions I 4 cr. Offered autumn. Coreq., PT 516, 529. Basic skills of transfers, bedmobility, gait assistive device use, soft tissue mobilization, and application of physical agents.

G 527 Electrophysiological Testing and Therapeutics 2 cr. Offered spring. Physiology, indications, contraindications, and application of physical agents. Theory and application of electrodiagnosis and electrotherapy procedures.

G 528 Physical Therapy Interventions II 4 cr. Offered spring. Prereq., PT 526, 529. Coreq., PT 519. Continuation of PT 526. Basic principles of PNF. Application and prescription of therapeutic exercise to various patient problems and environments, including gait functional training, and aquatics. Emphasis on equipment analysis and patient education.

G 529 Biomechanics and Exercise Interventions 2 cr. Offered autumn. Coreq., PT 516, 526. Principles of upper extremity biomechanics, exercise prescription, and exercise and other therapeutic interventions for the upper extremity and cervical spine.

G 536 Neurosciences for the Health Professions 5 cr. Offered spring. Anatomy of the head and neck, and neuroanatomy of the human nervous system with emphasis on evaluation of central nervous system lesions and pathological conditions, clinical applications to physical therapy.

G 560 Introduction to Research 1 cr. Offered spring. Introduction to the research process in physical therapy including evidence based practice, faculty research tracks, and laboratories. Includes beginning literature review for special/research project.

G 561 Research Methods in Physical Therapy 2 cr. Offered autumn. Prereq., STAT 216 (MATH 241). Research design and statistical analyses in physical therapy and related sciences.

G 562 Scholarly Project I 1 cr. Offered autumn. Directed research with individual faculty advisor to develop proposal for research/special project.

G 563 Cardiopulmonary Physical Therapy 3 cr. Offered autumn. Prereq., PT 528, PT529. Cardiovascular and pulmonary pathology, pharmacology, and differential diagnosis. Physical therapy assessment and interventions for patient's with cardiovascular and/or pulmonary disease.

G 565 Physical Therapy for Children 2 cr. Offered autumn. Prereq., PT 520, PT 536. Evaluation and intervention of neuromotor and musculoskeletal physical therapy rehabilitation of children. Physical therapy for children in school systems.

G 566 Advanced Anatomy Laboratory 1 cr. Offered autumn and spring. Prereq., PT 510, 511. Regional dissection and study of the back, neck, upper extremity and lower extremity, including clinical correlates.

G 567 Neurorehabilitation I 3 cr. Offered autumn. Prereq., PT 536. Neurologic physical therapy assessment and intervention of adults with cerebrovascular accidents, Parkinson disease, or multiple sclerosis. Motor control and motor learning and application to physical therapy neurorehabilitation. Includes wheelchair and home assessment.

G 568 Neurorehabilitation II 2 cr. Offered spring. Prereq., PT 536. Neurologic physical therapy assessment and intervention of adults with traumatic brain injury or spinal cord injury.

G 569 Orthopedic Physical Therapy I 3 cr. Offered autumn. Prereq., PT 510, 516, 519, 528, 529. Patient/client management of orthopedic condition of the extremities.

G 570 Psychology of Illness and Disability 2 cr. Offered autumn. Psychological response to illness and disability to include patient motivation, patient/professional interaction, and treatment of persons with chronic pain.

G 572 Practice and Administration 2 cr. Offered spring. Organization and management of the physical therapy department with emphasis on the therapist's role as administrator, supervisor and consultant.

G 573 Orthopedic Physical Therapy II 2 cr. Offered spring. Prereq., PT 516, 519, 569. Patient/Client management of orthopedic conditions of the spine.

G 575 Physical Therapy Interventions III 4 cr. Offered spring. Prereq., PT 528, PT 529. Coreq., PT 578. Includes units in burns and wound care, prosthetics, plus the American Disabilities Act and the management of chronic disability.

G 576 Synthesis of Clinical Evaluation and Intervention 1 cr. Offered spring. Synthesis and analysis of PT evaluation and intervention through case reports.

G 577 Applied Clinical Teaching in Physical Therapy 1-2 cr. Offered autumn. Teaching experience in practical application of clinical therapy.

G 578 Physical Therapy Interventions IV 4 cr. Offered spring. Prereq., PT 528, PT 529. Coreq., PT 575. Physical therapy assessment and interventions are addressed in the areas of occupational health, pelvic floor dysfunction, obstetric client care, advanced orthotics and activities of daily living.

G 582 Clinical Experience I 1 cr. Offered spring. Clinical experience in physical therapy departments.

G 587 Clinical Internship I 4 cr. Offered summer. Prereq., PT 582. Seven weeks of full-time clinical experience with emphasis on developing patient treatment skills.

G 588 Clinical Internship II 4 cr. Offered spring. Prereq., PT 587. Five weeks of full-time clinical experience with emphasis on patient evaluation and continuation of developing patient treatment skills.

G 589 Clinical Internship III 5 cr. Offered summer. Prereq., PT 588. Eight weeks of full-time clinical experience with emphasis on learning about administrative issues, problem-solving, time management, and communication skills. Continuation of development of patient treatment and evaluation skills.

G 594 Seminar Variable cr. (R-6) Offered autumn and spring.

G 595 Special Topics Variable cr. (R-4) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6) Offered autumn and spring.

G 597 Research 1-10 cr. (R-10) Offered autumn and spring. Prereq., consent of instr.

G 626 Primary Care 3 cr. Offered autumn. Differential diagnosis of system pathology including basic verbal and physical screening, laboratory tests and pharmacological intervention. Clinical medicine of infectious diseases, hematology, gastrointestinal and urogenital systems.

G 627 Prevention, Wellness, and Education 2 cr. Offered autumn. Nutrition, health promotion, patient and support network education, exercise/fitness, disease and injury prevention, life span emphasis.

G 650 Screening for Medical Disorders 2 cr. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding appropriate referral of a patient to a physician for evaluation of medical conditions outside the scope of physical therapy.

G 651 Medical Imaging and Rehabilitation 2 cr. Offered autumn, summer. Prereq. Enrolled in t-DPT curriculum. Provide the physical therapy clinical learner with the tools needed to interpret and apply specialized medical imaging information to the rehabilitation patient.

G 652 Pharmacology in Rehabilitation 2 cr. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Provide clinical learners with the primary drug classes and the physiologic basis of their action.

G 653 Legal and Ethical Issues for Physical Therapists: Considerations in Risk Management 1 cr. Offered spring, summer. Prereq. Enrolled in t-DPT curriculum. Foundational information as to the legal, ethical and administrative decision making process often facing physical therapists in clinical practice.

G 654 Clinical Decision Making: Guide to Physical Therapist Practice 1 cr. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Provide ways to utilize the Guide to PT Practice for effective and efficient clinical decision making.

G 655 Business and Marketing 2 cr. Offered spring, summer. Prereq. Enrolled in t-DPT curriculum. Enhance the PT clinical learner's appreciation of business and management practices needed to succeed within the current healthcare landscape.

G 656 Coding and Reimbursement 1 cr. Offered autumn, summer. Prereq. Enrolled in t-DPT curriculum. Educate the clinical learner in analyzing reimbursement of current billing, accounts receivable, collection procedures and use of proper coding.

G 657 Professionalism: The Doctoring Profession 2 cr. Offered summer. Prereq. Enrolled in t-DPT curriculum. This seminar course provides the clinical learner with the opportunity to analyze and discuss the roles/responsibilities and challenges/opportunities inherent in doctoral level physical therapy practice.

G 658 Critical Assessment and Application of Best Evidence 3 cr. Offered autumn, spring. Prereq. Enrolled in t-DPT curriculum. Develop skills in the application of evidence-based practice as a model for effective clinical decision-making.

G 659 Capstone Project 4 cr. Offered spring, summer. Prereq. Enrolled in t-DPT curriculum. Development of the skills needed by physical therapists to fulfill their role as effective participants in the research process. Guide student through the capstone case report completion process.

G 660 Management of Patients with Musculoskeletal Disorders 2 cr. Offered autumn, spring, summer. Prereq., enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with musculoskeletal disorders.

G 661 Management of Patients with Cardiovascular and Pulmonary Disorders 2 cr. Offered autumn, spring and summer. prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities and decision-making processes regarding appropriate patient management of persons with cardiovascular and/or pulmonary disorders.

G 662 Management of Patients with Neurological Disorders 2 cr. Offered autumn, spring, summer. Prereq., enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with neurological disorders.

G 663 Management of Patients with Integumentary Disorders 2 cr. Offered autumn, spring, summer. Prereq., Enrolled in t-DPT curriculum. PT's role, responsibilities, and decision-making processes regarding patients with integumentary disorders.

G 664 Wellness and Health Promotion 2 cr. Offered autumn, spring, summer. Prereq., Enrolled in t-DPT curriculum. PT role, responsibilities, and decision-making processes regarding patient/client involvement with wellness and health promotion.

G 671 Research in Physical Therapy I 1 cr. Offered spring. Prereq., D.P.T. student. Data collection for research/special project.

G 672 Research in Physical Therapy II 2 cr. Offered autumn. Data analysis, writing of research manuscript, presentation of project.

G 673 Advanced Practice and Administration II 2 cr. Offered spring. Topics build on content presented in PT 503 and 572. Emphasis on identifying key niches in health care and development of a business plan.

G 676 Clinical Mastery in Physical Therapy 4 cr. Offered autumn. Learner-centered course synthesizing PT examination, evaluation, diagnosis, prognosis, intervention, outcomes, reimbursement, education, delegation, and wellness.

G 679 Trends in Clinical Practice 1-2 cr. (R-4) Offered autumn. Focus on advanced clinical topics in physical therapy.

G 690 Clinical Internship IV 12 cr. Prereq., PT 589. Custom-designed clinical internship of 15 weeks. Includes writing and presentation of case study or special project.

G 696 Independent Study 1-4 cr. (R-4) Offered intermittently.

G 697 Research 1-10 cr. (R-10) Offered autumn and spring. Prereq., consent of instr.

Faculty

Professors

- Reed Humphrey, Ph.D., University of Pittsburgh, 1986; P.T., Virginia Commonwealth University, 1994 (Chair)
- Charles Leonard, Ph.D., Medical College of Pennsylvania, 1985; P.T. , Duke University, 1978

Associate Professors

- Beth Ikeda, M.S., D.P.T., Massachusetts General Hospital Institute of Health Professions, 1989, 2004, P.T., Mayo School of Health Related Science, 1981
- James J. Laskin, Ph.D., University of Alberta, 2001; P.T., University of Saskatchewan, 1987

Assistant Professors

- Steven Fehrer, Ph.D., University of Minnesota, 1984; P.T., Arcadia University, 1995
- David L. Levison, M.H.S., Indianapolis Krannert School of Physical Therapy, 1996; P.T., University of Montana, 1986
- Kimberly J. Mize-Humphrey, D.P.T., Rocky Mountain University of Health Professions, 2006., P.T., University of Wisconsin-LaCrosse, 1996
- Ryan Mizner, Ph.D., University of Delaware, 2005; P.T., University of Delaware, 2000
- Sara Scholtes, Ph.D., Washington University, 2009; P.T., Washington University, 2004

Nora Staael Evert Physical Therapy & Rehabilitation Clinics

UM Sports & Orthopedic Clinic

- Brenda Mahlum, D.P.T., Rocky Mountain University of Health Professions, 2006; P.T., University of North Carolina, 1984
- Mary Coar, B.S., P.T., The University of Montana, 1993

New Directions Wellness Center

- Susan Ostertag, D.P.T., Arizona School of Health Sciences, 2007, B.S., P.T., University of Montana, 1993
- Jessica Malouf, D.P.T., University of Montana, 2008
- Molly Blair, B.S., University of Montana, 2002

School of Public and Community Health Sciences

- Special Degree Requirements
- Courses
- Faculty

Craig Molgaard, Professor and Chair

The School of Public and Community Health Sciences is an interdisciplinary program that offers the Master of Public Health (M.P.H.) degree and a Certificate of Public Health (C.P.H.). The program is designed to prepare individuals for public health practice who can effectively address the challenges of rural and global health. Predominantly on-line, web-based instruction allows both traditional students and working professionals to pursue a degree or certificate. This program addresses current and forecasted needs for graduate education in public health. The program's focus on rural and global population health problems assists in promoting improvement in the health of the people of Montana and throughout the world.

Special Degree Requirements

For the M.P.H. degree, all students must successfully complete 42 graduate credits, including 36 required core credits and 6 elective credits. The following core courses are required:

- PUBH 510 Introduction to Epidemiology
- PUBH 520 Fundamentals of Biostatistics
- PUBH 530 Administration and Management in the U.S. Health Care System
- PUBH 535 Health Policy
- PUBH 540 Social and Behavioral Sciences in Public Health
- PUBH 550 Program Evaluation and Research Methods
- PUBH 560 Environmental and Rural Health
- PUBH 570 Ethical Issues in Public Health
- PUBH 580 Rural Health Issues in a Global Context
- PUBH 591 Practicum
- PUBH 593 Professional Portfolio
- PUBH 599 Professional Paper

M.P.H. students may take 6 or more elective credits of courses offered from the School of Public and Community Health Sciences or from other departments in order to create a plan of study that tailors the learning experience to the needs of the student. PUBH elective courses include:

- PUBH 512 Neuroepidemiology
- PUBH 515 Public Health Genetics
- PUBH 595 Special Topics
- PUBH 596 Independent Study
- PUBH 597 Research

For the Certificate of Public Health, students must complete any 12 pre-approved credits from the above list of core courses. Approval of a specific 12 credit program is part of the Certificate of Public Health admission process.

Courses

G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Public Health (PUBH)

G 510 Introduction to Epidemiology 3 cr. Offered autumn. Principles and methods of epidemiologic investigation, descriptive and analytic epidemiology techniques, disease frequency, risk determination, study designs, causality, and validity.

G 512 Neuroepidemiology 3 cr. Offered spring odd-numbered years. An overview of the fundamental considerations of the history, scope, and methods of neuroepidemiology as a subfield of epidemiology. Specific neurologic diseases and injuries will be studied as to distribution and risk factors, as well as the relationship to international public health.

G 515 Public Health Genetics 3 cr. Offered autumn. Basic principles of genetics and genomics, application to public health practices and research. Includes issues in public health genetics such as informed consent, screening for genetic susceptibility, and ethical, legal and social implications.

G 520 Fundamentals of Biostatistics 3 cr. Offered Autumn. This course is designed for graduate students and practitioners in public health, biomedical sciences, and related fields. The course introduces basic vocabulary, concepts, and methods of biostatistics. The goals is to provide an introduction to how biostatistics works. Topics will include descriptive statistics, probability, random variables, probability distributions, statistical inference, chi-square analysis, linear regression, and correlation.

G 530 Administration and Management in the U.S. Health Care System 3 cr. Offered autumn. The U.S. healthcare system including the rural system. Organization, management, evaluation, and finance.

G 535 Health Policy 3 cr. Offered autumn. The evolution and intersection of international, federal, state, and local public health policy.

G 540 Social and Behavioral Sciences in Public Health 3 cr. Offered spring. Behavioral and social factors relevant to the identification and solution of public health problems, principles of health behavior change, applications, and assessment of interventions.

G 550 Program Evaluation and Research Methods 3 cr. Offered summer. Prereq., PUBH 510 or equiv. and consent of instr. Covers purpose statements, standards, study designs, sampling, measurement, methods for data collection and analysis, interpretation, and report preparation. Models of evaluation described, and similarities and differences between research and evolution methods explored.

G 560 Environmental and Rural Health 3 cr. Offered spring. Relationship of people to their physical environment, how this relationship impacts health, and efforts to minimize negative health effects.

G 570 Ethical Issues in Public Health 3 cr. Offered summer even-numbered years. Focus on the values and moral issues that underlie U.S. public health policies. Course examines ethical decision making in areas such as policy development, research, environmental health, occupational health, resource allocation, and genetics.

G 580 Rural Health Issues in a Global Context 3 cr. Offered summer. Prereq., 15 core credits and consent of instr. Analysis of public-health themes. Focus on rural concerns and transnational influences. Includes human rights, health equity, mobile and vulnerable populations, and transnational competence.

G 591 Practicum 3 cr. Offered autumn and spring. Prereq., admission into the M.P.H. program and consent of instructor. Semester long, supervised graduate practicum in a health science setting, followed by an oral defense.

G 593 Professional Portfolio 3 cr. Offered autumn and spring. Prereq., admission to the M.P.H. program and consent of instructor. Integrates the student's practice experience and knowledge gained through course work, practicum, and possibly professional papers and research with the goals and learning objectives of the M.P.H. program into a portfolio. Students will present and defend their portfolio to illustrate their growth as a professional public health practitioner at the end of their M.P.H. program

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics. Previous topics have included Global Health and Epidemiology of Infectious Disease.

G 596 Independent Study Variable cr. (R-6) Offered autumn and spring. Prereq., admission to the M.P.H., program and consent of instructor. Supervised readings, research, or public health practice.

G 597 Research 3 cr. (R-6) Offered autumn and spring. Prereq., admission to the M.P.H. program and consent of instructor. With the guidance of their faculty advisor, students will develop a written proposal specific to the goals of their research project, and carry out the project.

G 599 Professional Paper 3 cr. Offered autumn and spring. Prereq., admission to the M.P.H. program and consent of instructor. Students will write and submit an original research paper to a peer-reviewed public health or medical journal. Students may also fulfill the professional paper requirement by presenting a conference paper or conference poster to a local, regional, or national \meeting.

Faculty

Public Health Core

Professors

- Amanda L. Golbeck, Ph.D., University of California at Berkeley, 1983 (Biostatistics); M.A., University of California at Berkeley, 1979 (Statistics); M.A., University of California at Berkeley, 1977 (Anthropology)
- Craig Molgaard, Ph.D., University of California at Berkeley, 1979 (Anthropology/Health and Medical Sciences); M.P.H. University of California at Berkeley, 1982 (Epidemiology); M.A., University of California at Berkeley, 1976 (Anthropology) (Chair)

Associate Professors

- Kari Harris, Ph.D., The University of Kansas, 1998 (Behavioral Psychology); M.P.H., The University of Kansas School of Medicine, 1997; M.S., Central Washington University, 1992 (Organizational Development)

MPH Program Faculty

Professors

- Peter Koehn, Ph.D., University of Colorado, 1973 (Political Science)
- K. Ann Sondag, Ph.D., Southern Illinois, Carbondale, 1988 (Health and Human Performance)
- Willard O. Granath, Ph.D., Wake Forest University, 1982 (Biological Sciences)
- Janet L. Finn, Ph.D., University of Michigan, 1995 (Social Work and Anthropology)
- Tom Seekins, Ph.D. University of Kansas, 1983 (Department of Psychology and the Rural Institute)

Associate Professors

- Jean T. Carter, Ph.D., The University of Arizona, 1997; Pharm.D., The University of Arizona, 1993 (Pharmacy Practice)
- Kimber Haddix McKay, Ph.D., University of California at Davis, 1998 (Anthropology)
- Elizabeth Putnam, Ph.D., University of Texas-Houston, 1989 (Biomedical and Pharmaceutical Sciences)
- Gilbert Quintero, Ph.D., University of Arizona, 1998 (Anthropology)

Assistant Professors

- Duncan Campbell, Ph.D., Washington State University, 2003 (Psychology)
- Bryan Cochran, Ph.D., University of Washington, 2003 (Psychology)
- Curtis Noonan, Ph.D., Colorado State University, 2000 (Biomedical and Pharmaceutical Sciences and Pharmacy Practice)
- Robin Saha, Ph.D., University of Michigan, 2002 (Environmental Studies)

Research Associate Professors

- Donna Bainbridge, Ph.D., Boston University, 1990 (Rural Institute)
- Ann Cook, Ph.D., The University of Montana, 2001 (Research, Psychology)
- Kathleen Humphries, Ph.D., The University of California at Davis, 1995 (Rural Institute)

Research Assistant Professors

- Meg Ann Traci, Ph.D., University of Montana, 2000 (Rural Institute)
- Tony Ward, Ph.D., University of Montana, 2001 (Biomedical and Pharmaceutical Sciences)
- Lawrence L. White, M.H.A., St. Louis University, 1970 (Health Administration, School of Public and Community Health Sciences

Project and Research Directors

- Rosemary Hughes, Ph.D., University of Houston, 1989 (Rural Institute)
- Craig H. Ravesloot, Ph.D., University of Montana, 1995 (Rural Institute)

School of Public and Community Health Sciences Faculty Affiliates

- Elizabeth Ciemins, Ph.D., University of California at Berkeley, 2003; M.P.H., University of California at Los Angeles, 1994 (Research Director, Center for Clinical Translation Research, Billings Clinic)
- Lawrence Edward Firsch, M.D., Harvard Medical School, 1971; M.P.H. University of Washington, 1995 (Associate Professor, Northeastern Ohio University College of Medicine and Pharmacy; Executive Medical Director for Patient Safety and Quality, Vancouver Island Health Authority, British Columbia, Canada)
- Suzanne Reid Hawley, Ph.D., Loma Linda University, 2002; M.P.H., Loma Linda University, 1999 (Assistant Professor) and MPH Program Director, University of Kansas School of Medicine-Wichita, Department of Preventive Medicine and Public Health
- Steven D. Helgerson, M.D., University of Washington School of Medicine, 1973; M.P.H., University of Washington School of Public

Health and Community Medicine (State Medical Officer, Montana Department of Health and Human Services)
- Martha Katz, M.P.A., Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, 1976 (Director of Health Policy, Healthcare Georgia Foundation, Adjunct Associate Professor, Georgia State University Institute of Public Health)
- Marshall W. Krueter, Ph.D., University of Utah, 1971 (Retired Professor, Institute of Public Health, College of Health and Human Sciences, Georgia State University)
- Cindy Laukes, M.A., University of Iowa, 1990 (Clinical Research Director, Montana Neuroscience Institute, Clinical Research Manager, Montana Cancer Institute)
- Lolem Ngong, M.P.H., University of Kansas School of Medicine-Witchta, 2001 (WESTAT Contractor, Centers for Disease Control land Prevention, Division of Tuberculosis Elimination)
- Angelia Paschal, Ph.D., Kent State University, 2003; M.Ed., University of Mississippi, 1992 (Assistant Professor, University of Kansas School of Medicine-Witchita, Department of Preventive Medicine and Public Health)
- Lisa Pascopella, Ph.D., Albert Einstein College of Medicine, 1993; M.P.H., University of California at Berkeley, 1999 (Research Administrator and Faculty, FJ Curry national Tuberculosis Center, University of California-San Francisco)

Skaggs School of Pharmacy

- Admission
- Pre-Pharmacy Program
- Special Degree Requirements
- Courses
- Faculty

Pharmacy is the study of the biological, chemical, and physical characteristics of medicinal substances and the utilization of these substances in the prevention, treatment, and control of illness and disease. It also encompasses a study of the systems of delivering health care and the function of the professional pharmacist within these systems.

The Skaggs School of Pharmacy was established in 1907 at Montana State College and was transferred to the University in 1913. The pharmacy program consists of two departments, Pharmacy Practice and Biomedical and Pharmaceutical Sciences.

The Skaggs School of Pharmacy is a member of the American Association of Colleges of Pharmacy. The entry-level doctor of pharmacy program is fully accredited by the Accreditation Council for Pharmacy Education, 20 North Clark Street, Suite 2500, Chicago IL 60602-5109, telephone (312) 664-3575, (800) 533-3606; FAX (312) 664-4652.

The curriculum offered by the Skaggs School of Pharmacy consists of a six year program leading to the entry-level Pharm.D. degree. The first two years, or pre-professional portion of the curriculum, are spent in studies of the basic biological and physical sciences, and in course work necessary to satisfy the University general education requirements. During the first three years of the professional program, students devote their time to the study of the biomedical and pharmaceutical sciences and pharmacy practice. Areas of study include biochemistry, microbiology, medicinal chemistry, pharmaceutics, pharmacology, social administrative pharmacy, and therapeutics. The final professional year is entirely experiential.

A program of selected electives allows the student to obtain further educational experience in specialized areas of pharmaceutical knowledge. Students in the professional program may choose elective courses in specific areas of interest which include community pharmacy practice, management, research and teaching, or hospital and institutional pharmacy practice. All students must confer with assigned advisors prior to each registration period and receive approval of proposed courses.

In addition to their formal educational program, students, to become registered pharmacists, must complete practical experience or internship under the direction of a registered pharmacist and pass an examination given by the State Board of Pharmacy.

Career opportunities exist in the fields of community pharmacy, institutional pharmacy, federal or state government service, public health agencies, and with the pharmaceutical industry in sales positions or in manufacturing. Those with advanced degrees are in demand for research positions and in pharmaceutical education.

High School Preparation: In addition to the general University admission requirements, algebra, trigonometry, biology, chemistry, physics and a course in computers are recommended.

Admission

The general requirements for admission to the University are listed separately in this catalog.

Pre-Pharmacy Program

The pre-pharmacy curriculum, which requires a minimum of two years of full-time study, may be taken at any accredited college or university.

Students at The University of Montana-Missoula may enter the pre-pharmacy program during any semester. It is recommended that students considering pharmacy as a major declare a pre-pharmacy major as early as possible in order to receive appropriate advising. Upon

designating pre-pharmacy as a major, students will be assigned an advisor within the pharmacy program.

Professional Pharmacy Program

Students must apply for admission to the professional program. Class size in the professional pharmacy program is restricted and admission to the program is competitive. The admission process is designed to admit the best overall class into professional study. Completed applications are evaluated by the Skaggs School of Pharmacy Admissions Committee. Acceptances are made by the pharmacy faculty and the dean based on the recommendations of the committee.

Since very few elective credits are available in the professional pharmacy curriculum, students will be expected to have completed all General Education requirements except for the upper-division writing and ethics requirements prior to entering the professional curriculum. Students must complete all General Education requirements before entering pharmacy practice experience rotations during the final year of the program. Applicants will be screened based on academic record (both overall and in the required pre-pharmacy course work) and Pharmacy College Admission Test scores (refer to www.pcatweb.info for test dates). To be eligible for admission, students must have a minimum grade point average of 2.5 on a 4 point scale, both overall and in required pre-professional courses. **Students must earn grades of at least a C (not C-) in all required pre-pharmacy courses.** For the past several years there have been more than four applicants for each opening, and the grade point average of the entering class has been about 3.5. In addition, applicants must present proof of having completed at least 60 hours of volunteer or paid service in a pharmacy, other health care, or social field, and an evaluation form filled out by someone involved with the applicant in such an experience. A personal interview is also required.

As a state supported institution, the Skaggs School of Pharmacy gives all applicants from the Montana University System equal consideration for admission into the professional pharmacy program. There is no restriction on admission of out-of-state students; however, Montana residents are given priority among students with equal qualifications. Students will be notified of their admission status in writing. In the past, student with only international coursework have not been admitted to the professional pharmacy program.

The curriculum of the professional pharmacy program is sequential. Therefore, students may enter the program in the autumn semester only. Application forms for admission to the professional curriculum may be obtained from the website of the College of Health Professions and Biomedical Sciences (www.health.umt.edu). Applications must be post marked by February 15 preceding the autumn semester of the year for which admission is requested.

An application fee must be submitted with the application. Admission for one academic year cannot be deferred to another academic year. Official transcripts of all academic courses taken must be forwarded directly to the Skaggs School of Pharmacy.

The professional pharmacy curriculum must be taken in residence at the University. Students transferring from other accredited schools of pharmacy may be admitted with advanced standing, determined on the basis of credits accepted, provided they are in good academic standing. Transfer credit for required professional courses taken at other institutions is accepted only for those courses which are deemed equivalent and in which a letter grade of C (2.00) or better is obtained.

Academic Progression

The general University academic standing requirements are listed separately in this catalog. See index.

Students in the professional pharmacy curriculum must maintain cumulative, professional, and pharmacy grade point averages of 2.0 or higher. The professional grade point average consists of all required course work in the professional curriculum. The pharmacy grade point average consists of all courses with a pharmacy (BMED or PHAR) prefix.

Students enrolled in the professional pharmacy program must maintain satisfactory academic progress. **Students must earn grades of at least C- in all required courses in the professional pharmacy curriculum.** Students in the professional program who have a pharmacy or professional grade point average of less than 2.0 or who receive a grade of D or F in any required course in the professional curriculum will be placed on academic probation. A student must petition to continue in the professional pharmacy program if he or she is on probation. A student will be dismissed from the professional pharmacy program if he or she is on probation for a total of three terms, not necessarily consecutive, subject to review by the dean. A student will be removed from probation when a grade point average of 2.0 has been achieved and all grades in required professional pharmacy courses are C- or better.

Students who have failed ten or more credits of required professional course work or who fail to progress in the expected manner for two consecutive years may be dismissed from the professional pharmacy program, subject to review by the Academic Standards Committee and the dean.

Students dismissed from the program for substandard performance will not be readmitted, except in cases where substantiation is made to the faculty, by written petition, that the substandard performance was the result of circumstances that no longer exist, or that the student has demonstrated the capability and desire to perform satisfactory work since his or her dismissal from the program.

Students leaving the program on their own volition are guaranteed readmission if they are in good academic standing and exit by interview with the assistant dean for student affairs. Those students leaving the program on their own volition and not in good standing must reapply for admission.

The professional pharmacy curriculum consists of an integrated sequence of required courses which is designed to be completed in four consecutive years. With appropriate justification, part-time study in the professional pharmacy program may be allowed. Students desiring

to be enrolled in part-time study must make their request by petition to the Academic Standards Committee. Because the curriculum is revised periodically, students who take longer than the normal number of years to complete the professional program will be required to complete curricular changes applicable to the class in which they graduate. Because the Pharmacy program is academically intense, employment beyond the minimal, part-time work is not recommended.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Degree candidates must:

1. Meet the general University requirements for graduation.
2. Earn a grade point average of 2.0 or higher in each of the following areas:
    1. all courses attempted at The University of Montana-Missoula (cumulative GPA).
    2. all courses which carry a pharmacy (BMED or PHAR) prefix (pharmacy GPA).
    3. all required courses in the professional pharmacy curriculum (professional GPA).
3. Required pharmacy course work must be completed with a grade of C- or better.
4. Complete at least six full academic years, including pre-pharmacy instruction, and a minimum of eight semesters of professional instruction as a full-time student registered for a minimum of twelve credits per semester.
5. Complete not less than 200 credits of course work.

Licensure in Montana

An applicant for licensure as a registered pharmacist in Montana must pass national examinations as required by the Montana State Board of Pharmacy. To qualify for the examinations, the applicant must be of good moral character and a graduate of an accredited school of pharmacy; however, an applicant will not receive a license until an internship is completed.

Internship Regulations

1. The internship requirement for licensure as a registered pharmacist in Montana is regulated by the Montana State Board of Pharmacy. Students must be registered with the Board of Pharmacy as a pharmacy intern in order to accrue internship hours.
2. Only those students who have completed the first year of the professional pharmacy curriculum may begin their internship.
3. The internship requirement consists of 1,500 hours of experience in an approved pharmacy setting. The student also may acquire hours concurrently with school attendance in courses, clinical pharmacy programs, or demonstration projects which have been approved by the Board of Pharmacy.
4. Many courses and programs currently offered by the School of Pharmacy are approved and applicable toward fulfilling the internship requirement.
5. Students will receive credit for internship time and/or courses taken if such experience is certified by the preceptor and/or instructor and approved by the Board of Pharmacy.

Pre-Pharmacy Curriculum

The courses shown here must be completed before entering the professional pharmacy program. The sequence of courses is illustrative and, if proper prerequisites are satisfied, the student may alter the order in which the courses are taken.

In addition, applicants to the professional pharmacy program must present proof of having completed at least 60 hours of volunteer or paid service in a pharmacy, other health care, or social field, and one letter of evaluation from someone involved with the applicant in such an experience. The Pharmacy College Admission Test (PCAT) must be taken during the second pre-pharmacy year.

Pre-Pharmacy First Year	A	S
CHMY 141N, 143N (CHEM 161N, 162N) College Chemistry I, II	5	5
M 162 (MATH 150) Applied Calculus (prereq. M 151 (MATH 121) or appropriate placement score)	4	-
ECNS 201S (ECON 111S) Principles of Microeconomics or ECNS 202S (ECON 112S) Principles of Macroeconomics	-	3
WRIT 101 (ENEX 101) English Composition	3	-
Social science elective chosen from: PSYX 100S Introduction to Psychology or SOCI 101S (SOC 110S) Introduction to Sociology	-	3
*Electives and General Education	4	5
Total	16	16

Pre-Pharmacy Second Year	A	S
CHMY 221, 222 Organic Chemistry I, Organic Chemistry I Lab	3	3
CHMY 223 Organic Chemistry II	2	-
BIOL 221 Cell and Molecular Biology (prereq., BIOL 110N or equiv.)	4	-

STAT 216 (MATH 241) Statistics or PSYX 222 (PSYC 220) Psychological Statistics or SOCI 202 Social Statistics (prereq., M 162 (MATH 150) or M 115 (MATH 117)	-	4
PHYS 111N-113N Fundamental of Physics I	-	5
Communications elective chosen from: COMM 111A Introduction to Public Speaking or DRAM 111A Acting for Nonmajors	3	-
*Electives and General Education	4	4
Total	16	16

*Students must complete the University's General Education requirements. Due to the limitation of elective credits in the professional pharmacy curriculum, students are advised to complete the lower-division General Education requirement during the pre-pharmacy curriculum.

Professional Pharmacy Curriculum

Students must apply for admission to the professional program. For requirements see the section on Admission. Students enrolled in the professional pharmacy curriculum are assessed a supplemental fee. This fee does not apply to pre-pharmacy students. Refer to the fees section of this catalog for details. Students must demonstrate proficiency in pharmaceutical calculation by successfully completing a competency assessment prior to entering the second professional year. Students, except those exempt, must complete the University Upper-Division Writing Proficiency Assessment prior to entering the second professional year.

The Upper-division Writing Requirement must be met by successfully completing PHAR 550 or an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

First Professional Year	**A**	**S**
BIOC 380 Elementary Biochemistry	4	-
BMED 328 Antimicrobial Agents	-	3
BMED 331 Pharmaceutics	-	4
BMED 341, 342 Physiological Systems I, II	4	4
BMED 361-362 Pharmaceutical Sciences Lab	1	1
MICB 302 Medical Microbiology	3	-
PHAR 309 Pharmacy Practice I	3	-
PHAR 310 Pharmacy Practice II	-	2
PHAR 363 Pharmaceutical Care Lab I	-	1
PHAR 371-372 Integrated Studies	1	1
Total	16	16

Second Professional Year Autumn/Spring Intersession:

PHAR 480 Community Pharmacy Introductory Experience	-	3

	A	**S**
BMED 421, 422 Medicinal Chemistry I, II	3	3
BMED 432 Biopharmaceutics/Pharmacokinetics	3	-
BMED 443, 444 Pharmacology and Toxicology	4	4
PHAR 412 Pharmacy Practice III–Social and Behavioral Pharmacy	-	2
PHAR 451, 452 Therapeutics I, II	3	3
PHAR 460 Pharmaceutical Care Lab II	1	-
PHAR 463 Pharmaceutical Care Lab III	-	1
PHAR 471, 472 Integrated Studies	1	1
Electives	1	2
Total	16	16

Third Professional Year Autumn/Spring Intersession:

PHAR 481 Hospital Pharmacy Introductory Experience	-	3

	A	**S**
PHAR 505 Pharmacy Practice IV--Pharmaceutical Care	3	-

PHAR 506 Pharmacy Practice V–Advanced Pharmaceutical Care	-	3
PHAR 513 Pharmacoeconomics and Outcomes Research	-	3
PHAR 514E Pharmacy Ethics	-	3
PHAR 550 Drug Literature Evaluation	3	-
PHAR 553, 554 Therapeutics III and IV	4	4
PHAR 557 Public Health in Pharmacy	2	-
PHAR 560 Pharmaceutical care Lab IV	1	-
PHAR 563 Pharmaceutical Care Lab V	-	1
PHAR 571, 572 Integrated Studies	1	1
PHAR 578 Portfolio Assessment & APFE Orientation	-	1
Total	14	16

Fourth Professional Year	**A**	**S**
PHAR 579 Community Pharmacy Advanced Pharmacy Practice Experience	4	-
PHAR 580 Hospital Pharmacy advanced Pharmacy Practice Experience	-	4
PHAR 581 Inpatient Advanced Pharmacy Practice Experience	4	-
PHAR 582 Ambulatory Care Advanced Pharmacy Practice Experience	-	8
PHAR Elective Pharmacy Practice Experience	8	8
Total	16	20

Required credits: 200

Department of Pharmacy Practice

Michael P. Rivey, Chair

The Department of Pharmacy Practice provides academic course work for the Doctor of Pharmacy and Masters degrees, conducts research in the broad area of health care, and provides service to the profession of pharmacy and other health care disciplines.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Pharmacy (PHAR)

U 110N Use and Abuse of Drugs 3 cr. Offered autumn and spring. Drug dependence and abuse.

U 195 Special Topics Variable cr. (R-16) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 309 Pharmacy Practice I: Introduction to Pharmacy 3 cr. Offered autumn. Prereq., M 162 (MATH 150) and admission to the professional pharmacy program. An introduction to the prescription and pharmaceutical calculations and to the role of the pharmacist in systems involved in health care delivery.

U 310 Pharmacy Practice II: Law and Dispensing 2 cr. Offered spring. Prereq., PHAR 309. Federal and state laws and regulations pertaining to pharmacy practice. Introductory dispensing laboratory.

U 320 American Indian Health Issues 2 cr. Offered spring. Same as HS 320. An overview of the health issues, health care delivery and payment that affect American Indians.

UG 324 Medicinal Plants 2-3 cr. Offered autumn. Same as BMED 324 and HS 324. Plants and other natural substances which nourish, heal, injure, or alter the conscious mind.

U 363 Pharmaceutical Care Lab I 1 cr. Coreq. PHAR 310. Practice in technical and legal aspects of drug dispensing, prescription and OTC drug counseling, and sterile intravenous (IV) admixture.

U 371 Integrated Studies I 1 cr. Prereq., first professional year standing in pharmacy. Small group conferences designed to develop

professional skills while integrating material from other pharmacy courses.

U 372 Integrated Studies II 1 cr. Prereq., PHAR 371. Continuation of 371.

U 380 Pharmacy Practicum 1-2 cr. (R-3) Offered autumn and spring. Prereq., PHAR 309. Supervised professional experience in the Student Health Service Pharmacy.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 397 Research 1-3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Individual participation in library or laboratory research.

U 412 Pharmacy Practice III–Social and Behavioral Pharmacy 2 cr. Offered spring. Prereq., second professional year standing and a course in communication. The social, economic, legal, ethical, and psychological factors involved in professional and patient relationships of pharmacists.

UG 451 Therapeutics I 3 cr. Offered autumn. Prereq., second professional year standing; coreq., PHAR 471; prereq. or coreq., BMED 328, 421 and 443. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care.

UG 452 Therapeutics II 3 cr. Offered spring. Prereq., PHAR 451; coreq., PHAR 472; prereq. or coreq., BMED 422, 432 and 444. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care.

U 460 Pharmaceutical Care Lab II 1 cr. Offered autumn. Prereq., second professional year standing, PHAR 310. Introduction to parenteral practice application, applied patient interview assessment, and communication skills for practice.

U 463 Pharmaceutical Care Lab III 1 cr. Coreq. PHAR 412. Practice counseling and patient-care skills with emphasis on non-prescription drugs and devices. Includes individual in-service presentations.

U 471 Integrated Studies III 1 cr. Offered autumn. Prereq., second professional year standing in pharmacy. Small group conferences designed to develop professional skills while integrating material from first and second year professional pharmacy courses.

U 472 Integrated Studies IV 1 cr. Offered spring. Prereq., PHAR 471. Continuation of 471.

U 480 Community Pharmacy Introductory Pharmacy Practice Experience 3 cr. (R-6) Offered every term. Prereq., completion of first professional year. Supervised professional experience in community pharmacy.

U 481 Hospital Pharmacy Introductory Pharmacy Practice Experience 3 cr. (R-6) Offered every term. Prereq., completion of first professional year. Supervised professional experience in a hospital pharmacy.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 497 Research 1-3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Individual participation in library or laboratory research.

U 505 Pharmacy Practice IV–Pharmaceutical Care 3 cr. Offered autumn. Prereq., third professional year standing in Pharm.D. program. Applications of advanced drug therapy monitoring and disease state management.

U 506 Pharmacy Practice V–Professional Practice Management 3 cr. Offered spring. Prereq., PHAR 505. Aspects of dispensing, management, communications, disease state monitoring, and legal issues related to the provision of pharmaceutical care.

UG 513 Pharmacoeconomics and Outcomes Research 3 cr. Offered spring. Prereq., third professional year standing or consent of instr. Introduction to assessing the economic, clinical and humanistic outcomes of pharmacotherapy.

U 514E Case Studies in Pharmacy Ethics 3 cr. Offered spring. Prereq., third professional year standing or consent of instr. A practical discussion of pharmacy ethics, as it relates to pharmacy practice.

UG 516 Advanced Pharmacy Administration 2 cr. Offered intermittently. Prereq., consent of instr. Analysis of the pharmaceutical industry.

UG 550 Drug Literature Evaluation 3 cr. Offered autumn. Prereq., third professional year standing in pharmacy. Scientific and statistical evaluation of the drug and medical research literature to formulate solutions for patient-specific pharmacotherapy problems.

UG 553 Therapeutics III 4 cr. Offered autumn. Prereq., PHAR 452, 472: prereq. or coreq., PHAR 571. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care.

UG 554 Therapeutics IV 4 cr. Offered spring. Prereq., PHAR 553, 571; prereq. or coreq., PHAR 572. Intended for Pharm.D. students. Pharmacotherapeutics of common disease states emphasizing pathophysiology and the selection, monitoring, and individualization of drug therapy. Applies the basic pharmaceutical sciences to patient care.

UG 556 Psychopharmacotherapeutics 2 cr. Offered autumn. Prereq., PHAR 452 or consent of instr. A discussion of the more common childhood and adult psychiatric disorders with emphasis on a pharmacologic approach to their treatment.

UG 557 Public Health in Pharmacy 2 cr. Offered autumn. Prereq., PHAR 452, 472. Discussion of the roles and responsibilities of pharmacists in public health and the role of drugs in public health programs.

U 558 Physical Assessment 2 cr. Offered spring. Coreq., PHAR 554. Basic physical assessment skills for the pharmacist's proper interpretation of patient response to drug therapy.

U 560 Pharmaceutical Care Lab IV 1 cr. Coreq PHAR 505. Practice in professional communication and pharmaceutical care interventions and recommendations.

U 563 Pharmaceutical Care Lab V 1 cr. Coreq., PHAR 506. Practice in professional communication and pharmaceutical care interventions and recommendations.

UG 571 Integrated Studies V 1 cr. Offered autumn. Prereq., third professional year standing in Pharm.D. program. Small group conferences designed to develop the professional skills needed to practice pharmaceutical care while integrating material from the professional pharmacy curriculum.

U 572 Integrated Studies VI 1 cr. Offered spring. Prereq., third professional year standing in Pharm.D. program. Small group conferences designed to develop professional skills while integrating material from other pharmacy courses.

U 573 Institutional Pharmacy 3 cr. Offered autumn. Prereq., PHAR 309 and BMED 331. The pharmacist's role and activities in drug distribution and control in hospitals and related institutions with an emphasis on the preparation and administration of sterile products.

U 578 Portfolio Assessment and APPE Orientation 1 cr. Offered spring. Prereq., final semester in didactic PHARM D curriculum. Preparation and assessment of the student portfolio and orientation for the final experiential year of the professional pharmacy program.

U 579 Community Pharmacy Advanced Pharmacy Practice Experience Variable cr. (R-12) Offered every term. Prereq., completion of didactic courses in the Pharm. D. program. Supervised professional experience in the patient care functions of the pharmacist in the community pharmacy setting.

U 580 Hospital Pharmacy Advanced Pharmacy Practice Experience Variable cr. (R-12) Offered every term. Prereq. Completion of didactic courses in the Pharm.D. program. Supervised professional experience in the patient care functions of the pharmacist in the hospital pharmacy setting.

U 581 Inpatient Advanced Pharmacy Practice Experience Variable cr. (R-12) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the clinical functions of the pharmacist in the inpatient hospital setting.

U 582 Ambulatory Care Advanced Pharmacy Practice Experience Variable cr. (R-16) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the clinical functions of the pharmacist in the ambulatory care setting.

U 583 Drug Information Advanced Pharmacy Practice Experience 4 cr. (R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the provision of drug information by the pharmacist.

U 584 Specialized Services Advanced Pharmacy Practice Experience 4 cr. (R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in specialized practice settings, such as home infusion, compounding, and nuclear pharmacies..

U 585 Geriatric Advanced Pharmacy Practice Experience 4 cr. (R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience with geriatric patients in the long term care and/or other pharmacy setting.

U 586 Clinical Specialty Advanced Pharmacy Practice Experience 4 cr. (R-16) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the clinical functions of the pharmacist in specialty settings or with specialized groups of patients.

U 587 Administrative Advanced Pharmacy Practice Experience 4 cr. (R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in the administrative aspects of providing pharmaceutical care.

U 588 Research Advanced Pharmacy Practice Experience 4 cr. (R-8) Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in a research setting.

U 589 Education Advanced Pharmacy Practice Experience 4 cr. Offered every term. Prereq., completion of didactic courses in the Pharm.D. program. Supervised professional experience in teaching in a pharmacy curriculum.

UG 593 Current Research Literature 1 cr. (R-6) Offered autumn and spring. Readings and discussion of current research literature.

UG 594 Seminar 1 cr. (R-6) Offered autumn and spring. Prereq., senior or graduate standing.

UG 595 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., senior or graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 596 Independent Study Variable cr. (R-9) Offered every term.

UG 597 Research Variable cr. (R-6 for undergraduates; R-10 for graduates) Offered every term. Prereq., senior or graduate standing. Individual participation in library or laboratory research.

G 599 Thesis Variable cr. (R-10) Offered every term.

G 603 Professional Practice IV–Pharmaceutical Care 4 cr. Offered autumn. Prereq., third professional year standing in Pharm.D. program and acceptance into M.B.A. program. Aspects of dispensing, management, communications, disease state monitoring, and legal issues related to the provision of pharmaceutical care.

G 604 Professional Practice V–Advanced Professional Practice 4 cr. Offered spring. Prereq., PHAR 603. Applications of advanced drug therapy monitoring and disease state.

Faculty

Professors

- Douglas R. Allington, Pharm.D., University of South Carolina, 1988
- Donna G. Beall, Pharm.D., University of Florida, 1984
- Gayle A. Hudgins, Pharm.D., Duquesne University, 1976
- William J. Docktor, Pharm.D., University of Michigan, 1977
- David S. Forbes, Ph.D., University of Wisconsin, 1973 (Dean)
- Sarah Johnston Miller, Pharm.D., Mercer University, 1985
- Lori J. Morin, Pharm D., M.B.A., The University of Montana, 1981 (Assistant Dean for Student Affairs)
- Michael P. Rivey, M.S., University of Iowa, 1982 (Chair)

Associate Professors

- Sherrill Brown, Pharm.D., University of Missouri, Kansas City, 2003
- Jean T. Carter, Ph.D., University of Arizona, 1997
- Vincent J. Colucci, Pharm.D., Idaho State University, 1995
- Lawrence A. Dent, Pharm.D., Idaho State University, 1993

Assistant Professors

- Katy Hale, Pharm.D., University of Washington, 2004
- Kendra Procacci, Pharm.D., University of Wyoming, 2004

Instructors

- Genine Thormahlen, Pharm.D., The University of Montana, 2004
- Lisa Wrobel, Pharm.D., The Unviersity of Montana, 2003

Adjunct Assistant Professors

- Lisa C. Barnes, M.B.A., The University of Montana, 1994

Department of Biomedical and Pharmaceutical Sciences

Ricahrd J. Bridges, Chair

The Department of Biomedical and Pharmaceutical Sciences offers a curriculum in support of the Doctor of Pharmacy (Pharm.D.) degree and graduate programs in the biomedical and pharmaceutical sciences. Degree programs include the M.S. in Neuroscience, Pharmaceutical Sciences, and Toxicology; and the Ph.D. in Neuroscience, Biomedical Sciences, and Toxicology. These programs provide education and training in pharmacology, toxicology, neurobiology, neurochemistry, medicinal chemistry, and molecular genetics. Program graduates are well prepared for careers in academia, government and industry.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Biomedical and Pharmaceutical Sciences (BMED)

U 145N Introduction to Cancer Biology 3 cr. Introduction to basic concepts in cancer biology, treatment, and prevention. Includes discussions of the history of cancer, nonmenclature, prevention, cellular and molecular mechanisms, pathology, treatment, and familial cancers.

U 195 Special Topics Variable cr. (R-16) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 324 Medicinal Plants 2-3 cr. Offered autumn. Plants and other natural substances which nourish, heal, injure, or alter the conscious mind.

U 328 Antimicrobial Agents 3 cr. Offered spring. Prereq., BIOC 380, MICB 302. Chemical characteristics, biochemical mechanisms, and pharmacological properties of drugs used in treating infections caused by microorganisms.

U 331 Pharmaceutics 4 cr. Offered spring. Prereq., CHEM 222, first professional year standing. Physical pharmacy and dosage forms.

U 341 Physiological Systems I 4 cr. Offered autumn. Prereq., CHEM 222, PHYS 121N, BIOL 221. Principles of anatomy, normal and abnormal physiology.

U 342 Physiological Systems II 4 cr. Offered spring. Prereq., BMED 341. Continuation of 341.

U 347 Introduction to Neuroscience 3 cr. Offered autumn. Prereq., introductory chemistry and biology. Same as BIOL 347. The molecular and cellular physiology of the human nervous system. Topics range from the basis of electrical and chemical signaling in neurons to the organization of the nervous system and its functions in generating behavior.

U 361 Pharmaceutical Sciences Laboratory 1 cr. Offered autumn. Coreq., PHAR 309, BMED 341. Laboratory experience in the pharmaceutical sciences.

U 362 Pharmaceutical Sciences Laboratory 1 cr. Offered spring. Prereq., BMED 361; coreq., BMED 331 and 342. Continuation of 361.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 397 Research 1-3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Individual participation in library or laboratory research.

U 401 Use of Animals in Research 2 cr. Offered intermittently. Prereq., consent of faculty supervisor. An introductory course to the care and use of laboratory animals in research. Includes lecture and some hands-on instruction with inanimate models and live animals.

UG 421 Medicinal Chemistry I 3 cr. Offered autumn. Prereq., BIOC 380. The chemistry of organic compounds used medicinally and their biochemical mechanisms of action.

UG 422 Medicinal Chemistry II 3 cr. Offered spring. Prereq., BMED 421. Continuation of 421.

U 430 Pharmacogenetics 2 cr. Offered alternate years. Prereq., BIOC 380, BMED 421, 432. The genetic basis of differential drug activity.

UG 432 Biopharmaceutics and Pharmacokinetics 3 cr. Offered spring. Prereq., BMED 331 and pharmaceutical calculation proficiency requirement, or consent of instr. Drug absorption, distribution and elimination.

UG 443 Pharmacology and Toxicology 4 cr. Offered autumn. Prereq., second professional year standing. Basic principles of pharmacology, toxicology and therapeutics.

UG 444 Pharmacology and Toxicology 4 cr. Offered spring. Prereq., BMED 443. Continuation of 443.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 497 Research 1-3 cr. (R-6) Offered autumn and spring. Prereq., consent of instr. Individual participation in library or laboratory research.

G 501 Care and use of Laboratory Animals in Research 2 cr. Offered intermittently. Prereq., consent of faculty supervisor. An introductory course to the care and use of laboratory animals in research. Includes lecture and some hands-on instruction.`

G 545 Research Laboratory Rotations 2-3 cr. (R-6) Offered autumn and spring. Prereq., BMED 443 or graduate standing. Experience in research methods in departmental research laboratories.

G 581 Research Seminar in Biomedical Science 1 cr. (R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in biomedical science.

G 582 Research Seminar in Neuroscience 1 cr. (R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in neuroscience.

G 583 Research Seminar in Toxicology 1 cr. (R-9) Offered autumn and spring. Oral and written presentations of experimental research results and selected literature topics in toxicology.

G 593 Current Research Literature 1 cr. (R-6) Offered autumn and spring. Readings and discussion of current research literature.

G 594 Seminar 1 cr. (R-6) Offered autumn and spring. Prereq., senior or graduate standing.

UG 595 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., senior or graduate standing. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered every term.

G 597 Research Variable cr. (R-10) Offered every term.

G 599 Thesis Variable cr. (R-10) Offered every term.

G 600 Advanced Cellular Biochemistry 4 cr. Offered every spring. Prereq., BIOC 380 or 481, or consent of instr. Same as BIOC 600. Exploration on a molecular level the regulation of structure, function, and dynamics of eukaryotic cells. Topics include membranes, cytoskeleton, transcription, translation, signal transduction, cell motility, cell proliferation, and programmed cell death.

G 605 Biomedical Research Ethics 1 cr. Offered spring. Overview of biomedical research ethics and regulations. Topics include ethics and morality in science, scientific integrity, conflicts of interest, human and animal experimentation, intellectual property, plagiarism.

G 607 Topics in Epidemiology 1-3 cr. (R-9) Offered autumn or spring. Prereq., BMED 609 or equiv. Current topics in epidemiology.

G 609 Biomedical Statistics 3 cr. Offered autumn. Experimental design and statistical analysis relevant to the biomedical sciences.

G 610 Neuropharmacology 3 cr. Offered alternate years. Prereq., BMED 613 or 661 or consent of instr. Focus on current areas of research and research technologies in neuropharmacology. Development of presentations and research grant proposals.

G 613 Pharmacology I 4 cr. Offered autumn. Prereq., BIOC 380 or equiv. Fundamentals of pharmacology and drug action.

G 614 Pharmacology II 4 cr. Offered spring. Prereq., BMED 613. Fundamentals of pharmacology and drug action. Continuation of BMED 613.

G 615 Molecular Pharmacology 3 cr. Offered alternate years. Prereq., BMED 600, 613 or consent of instr. Focus on the molecular world of receptors and their interactions with related cellular components and ultimately with binding ligands, both physiological and pharmaceutical. Major emphasis in pharmacodynamics with some time devoted to related pharmacokinetic parameters.

G 620 Cardiovascular Pharmacology and Toxicology 3 cr. Offered alternate years. Prereq., BMED 613 or 641, or consent of instr. Recent advances in pharmacology and toxicology of the cardiovascular system. In-depth study of regulatory mechanisms and the effect of immune response and xenobiotics on cardiovascular function.

G 621 Drug Design, Development and Discovery with lab 4 cr. Offered alternate years. Prereq., Organic Chemistry and Biochemistry or consent of instr. Introduction to the main concepts in medicinal chemistry. Laboratory experience in instrumental analysis, interpreting NMR, MS cleavage, and structure elucidation.

g 622 Drug Pharmacodynamic-Drug Receptor Interactions with lab 4 cr. Offered alternate years. Organic Chemistry and Biochemistry or consent of instr. Introduction and topical coverage of how drugs form complexes with biological targets to cause an array of responses.

G 623 Drug Diversity and Target-Oriented Synthesis 3 cr. Offered alternate years. Organic Chemistry and Biochemistry or consent of instr. Topics in chemogenomics and diversity oriented synthesis will be covered.

G 625 Drug Synthesis 3 cr. Offered intermittently. An introduction to the past and current synthetic approaches and total syntheses of biologically active drugs.

G 626 Research Methods in Biochemical Pharmacology 1- 3 cr. (R-6) Offered every term. Prereq., consent of instr. Laboratory course intended to familiarize students with the instruments, and expertise of current research techniques in the biomedical sciences.

G 627 Professional Development 1 cr. Offered autumn and spring. Prereq., Organic Chemistry and Biochemistry or consent of instr. Developmental training in presentations, writing, reviewing, literature research, teaching, research methods, grant writing, ethics, and business aspects in medicinal chemistry.

G 630 Pharmacogenetics 3 cr. Offered alternate years. Prereq., BIOC 380 or 481. The genetic basis of differential drug activity.

G 632 Advanced Pharmaceutics 1-3 cr. (R-6) Offered intermittently. Advanced studies of dosage formulations, biopharmaceutics, and pharmacokinetics.

G 635 Academic Development Seminar 2 cr. Offered alternate years. Prereq., admission to graduate program. Designed to improve skills in teaching, design and implementation of hypothesis testing, and grant writing with emphasis on the biological and chemical sciences.

G 637 Topics in Biomedical Science 1-3 cr. (R-9) Offered autumn or spring. Prereq., BMED 613, or 641, or 661. Current topics in the biomedical sciences.

G 641 Toxicology I–Principles of Toxicology 3 cr. Offered autumn. Prereq., BIOC 481 or equiv. Introduction to toxicology. Topics include general principles, risk assessment, organ system toxicology, introduction to carcinogenesis, and genetic toxicology.

G 642 Toxicology II–Toxic Agents 3 cr. Offered spring. Prereq., BMED 641. Toxic agents and the diseases caused by those agents. Includes common toxicants in the environment and occupational settings as well as drug induced toxicity.

G 643 Cellular and Molecular Toxicology 3 cr. Offered autumn. Prereq., BMED 641. Cellular and molecular mechanisms of toxicity. Includes apoptosis, regulation of cell cycle, genetic toxicology, and signal transduction pathways in toxicity.

G 644 Immunotoxicology 3 cr. Offered alternate years. Prereq., MICB 410 or equiv. The impacts of xenobiotic agents on the immune system.

G 645 Respiratory Toxicology 3 cr. Offered alternate years. Prereq., BMED 641. The lung and associated immune systems and their response to inhaled immunogenic and toxicological agents.

G 646 Neurotoxicology 3 cr. Offered alternate years. Prereq., BMED 641 or 661. Mechanisms of major neurotoxins and neurological disease.

G 647 Topics in Toxicology 1-3 cr. (R-9) Offered autumn or spring. Prereq., BMED 613, or 641, or 661. Current topics in toxicology.

G 657 Topics in Immunology 1-3 cr. (R-9) Offered autumn or spring. Prereq., MICB 410 or equiv. Current topics in immunology.

G 661 Neuroscience I 4 cr. Offered autumn. Prereq., BIOC 380 or equiv. Overview of the structure and function of the nervous system.

G 662 Neuroscience II 4 cr. Offered spring. Prereq., BMED 661. Fundamentals of developmental neuroscience, behavioral and cognitive neuroscience, and computational neuroscience.

G 667 Topics in Neurobiology 1-3 cr. (R-9) Offered every year. Prereq., BMED 661. Current topics in neuroscience.

G 697 Research 1-9 cr. (R-20) Offered every term.

G 699 Dissertation 1-9 cr. (R-20) Offered every term.

Faculty

Professors

- Howard D. Beall, Ph.D., University of Florida, 1991
- Richard J. Bridges, Ph.D., Cornell University Medical College, 1987 (Chair)
- J. Douglas Coffin, Ph.D., State University of New York Health Sciences Center at Syracuse, 1989
- Vernon R. Grund, Ph.D., University of Minnesota, 1974 (Associate Dean for research and Graduate Education)
- Andrij Holian, Ph.D., Montana State University, 1975 (Director, Center for Environmental Health Sciences)
- Michael Kavanaugh, Ph.D., Oregon Health Sciences University-Portland, 1987(Director, Center for Structural and Functional Neuroscience)
- Diana I. Lurie, Ph.D., University of Pennsylvania, 1989
- Nicholas Natale, Ph.D., Drexel University, 1978
- Charles M. Thompson, Ph.D., University of California, Riverside, 1982

Associate Professors

- Fernando Cardozo-Pelaez, Ph.D., University of Southern Florida, 1996
- Lilian Calderon-Garciduenas, M.D., Ph.D., University of North Carolina, 2001

- John Gerdes, Ph.D., University of California, Riverside, 1982
- Darrell Jackson, Ph.D., Washington State University, 1990
- Curtis W. Noonan, Ph.D., Colorado State University, 2000
- Keith K. Parker, Ph.D., University of California, San Francisco, 1977
- Mark A. Pershouse, Ph.D., University of Texas-Houston, 1993
- Elizabeth A. Putnam, Ph.D., University of Texas-Houston, 1989
- Kevan Roberts, Ph.D., Christie Hospital in Manchester, U.K., 1984
- David M. Shepherd, Ph.D., Oregon State University, 1999
- Jerry R. Smith, Ph.D., University of Mississippi, 1977

Assistant Professors

- J. Josh lawrence, Ph.D., University of Wisconsin-Madison, 1999
- Erica L. Woodahl, Ph.D., University of Washington, 2004

Lecturer

- David S. Freeman, Ph.D., University of Washington, 1974

Research Associate Professors

- C. Sean Esslinger, Ph.D., Colorado State University, 1992
- Dianne L. DeCamp, Ph.D., University of Delaware, 1988
- David J. Poulsen, Ph.D., University of Delaware, 1995

Research Assistant Professors

- Kathleen M. George, Ph.D., Northwestern University, 1994
- Christopher T. Migliaccio, Ph.D., University of California-Davis, 2000
- Anthony Ward, Ph.D., The University of Montana, 2001

Emeritus Professors

- Todd G. Cochran, Ph.D., University of Washington, 1970
- Charles L. Eyer, Ph.D., Washington State University, 1976
- Rustem S. Medora, Ph.D., University of Rhode Island, 1965

School of Social Work

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Ryan Tolleson Knee, Chair

Social work is a human service profession concerned with the prevention of social problems, the maintenance of satisfying social relationships and the enhancement of human development. It focuses on people and their social environment. Social workers employ a range of knowledge and skills as the basis for constructive intervention on behalf of various client populations. The Bachelor of Arts and Master of Social Work degrees are offered. The Bachelor of Arts degree prepares graduates for generalist social work practice. The Master of Social Work degree prepares graduates for advanced integrated practice.

The undergraduate major in social work is available for those who wish to prepare for: (1) professional employment in the social services; (2) entry into a graduate school of social work; (3) graduate education in other helping service professions. The graduate degree in social work prepares graduates for advanced social work practice. Students can enroll in a two year full-time program or in a part-time option. See The University of Montana Graduate Catalog for a description of the Master of Social Work program. Both the Bachelor of Arts degree and the Master of Social Work degree are fully accredited by the Council on Social Work Education.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Thirty-seven credits in social work courses are required for the B.A. degree. The following courses must be successfully completed: SW 100, 200, 300, 310, 350, 360, 400, 488, and 10 credits in SW 489 over two semesters.

Requirements for the B.A. degree include course work outside the School of Social Work providing content in the social and behavioral sciences, human biology, and human diversity. Required course work includes ECNS 101S (ECON 100S); PSCI 210S (PSC 100S); SOCI

101S (SOC 110S); PSYX 100S, 230S, 233 (PSYC 100S, 240S, 245); BIOL 100N or PSYX 250N; ANTH 180S or SOCI 220S. No fewer than six of these eight course requirements must be completed before enrollment will be permitted in required 300-level social work courses

To enroll in required 300- and 400-level social work courses, social work majors are required to have earned and to maintain a 2.5 grade average for all college course work. In order to insure that they have complied with all course prerequisites, grade point average requirements and compliance with professional social work ethics, students must complete a formal Application to the Social Work Major for school approval prior to admission to required social work courses at the 300-level or above.

Social work majors are required to complete a two-semester practicum placement (SW 489, Field Work Practicum, 10 credits). Refer to the SW 489 course description for admission and completion requirements regarding this specific course.

The Upper-division Writing Expectation must be met by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog. SW 310 will satisfy this requirement. Social work majors who wish to explore more specialized study in such areas as children, exceptional persons or the family should consider the Human and Family Development minor program, which is described elsewhere in the catalog. The School of Social Work offers a Title IV-e Child Welfare Training Program for eligible B.A. and M.S.W. students interested in a career in child protective services. The Gerontology Fellows Program is available to undergraduate students pursuing a career in gerontological or intergenerational social work. The Hartford Scholars Practicum Partnership Program is available to masters students wishing to pursue a career in gerontological or intergenerational social work.

Social work majors are expected to conduct themselves according to the ethical standards of the National Association of Social Workers as well as those applicable to students of the University. Other professional expectations are described in the BSLO Student Handbook, available from the school or on web page [www.health.umt.edu/sw/bsw_pa.html].

Majors in social work are assigned a faculty advisor with whom they are required to meet at least once per semester as soon as the social work major is declared. A school advising guide is available to all students at the School of Social Work office or on the web page [www.health.umt.edu/sw/default.htm]. The Master of Social Work requirements are detailed in The University of Montana Graduate online Catalog [www.umt.edu/grad/].

Suggested Course of Study

First Year	A	S
M 105 (MATH 107) (or higher) Contemporary Mathematics	-	3
PSCI 210S (PSC 100S) Introduction to American Government	-	3
PSYX 100S (PSYC 100S) Introduction to Psychology	3	-
SOCI 101S (SOC 110S) Principles of Sociology	-	3
SW 100 Introduction to Social Welfare	3	-
General Education	7	9
Total	16	15
Second Year		
SW 200 Introduction to Social Work Practice	4	-
BIOL 100N The Science of Life	-	3
ECNS 101S (ECON 100S) Economic Way of Thinking	3	-
PSYX 230S (PSYC 240S) Developmental Psychology	-	3
PSYX 233 (PSYC 245) Fund of Psychology of Aging	-	3
ANTH 180S Race and Minorities or SOC 220S Race and Ethnic Relations	3	-
General Education	6	6
Total	16	15
Third Year		
SW 300 Human Behavior and Social Environment	4	-
SW 310 Social Welfare Policy and Services	-	3
SW 350, 360 Social Work Intervention Methods I, II	4	4
Electives	6	9
Total	14	16
Fourth Year		
SW 400 Social Work Research	3	-
SW 488 Field Work Practicum Seminar	2	-
SW 489 Field Work Practicum	5	5
Electives	4	9

Total	14 14

Minor in Gerontology

Students in the Gerontology Minor program will study issues of aging from an interdisciplinary perspective and come to understand the interplay between them, including health and medical as well as social and psychological needs of older persons. Although this interdisciplinary minor is housed in the School of Social Work, students in other majors may complete the minor in consultation with both the Chair of the Gerontology Minor and the students' academic advisors in their respective departments. Students must consult with their major advisor to select electives, practicum or volunteer experiences, and integrating courses that will meet the requirements of the minor. The minor will require successful completion of four required core courses (12 credits), an integrating course with gerontological content within the student's major (3 credits), one or two elective courses (3-6 credits), and a practicum course within the student's major (3 credits) for a total of 21-24 credits. Core courses are:

- HS 325 Introduction to Gerontology 3 cr.
- SW 455 Social Gerontology 3 cr.
- PSYX 233 (PSYC 245) Fund of Psychology of Aging 3cr.
- HS 430 Health Aspects of Aging 3 cr.

Students should contact the School of Social Work for a complete list of appropriate major and elective courses.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Social Work (S W)

U 100 Introduction to Social Welfare 3 cr. Offered autumn and spring. Overview of human services, programs and problems in meeting social welfare needs, with emphasis on the complexity of social services and their historical development. Analysis of the value, attitudinal, economic and political factors that condition the provision of these services.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 198 Internship Variable cr. (R-3) Offered autumn and spring. Prereq., consent of instructor. Application of classroom learning in off campus internship placements. Prior approval must be obtained from the School of Social Work practicum coordinator and from the Center for Work-Based Learning. A maximum of 6 credits of Internship (198, 398,) may count toward graduation.

U 200 Introduction to Social Work Practice 4 cr. Offered autumn and spring. Prereq., SW 100, sophomore standing. Introduction to social work as a profession, including an examination of goals, guiding philosophy and basic assumptions. Emphasis on a generalist framework of social work practice and the development of beginning analytical and practice skills.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 300 Human Behavior and Social Environment 4 cr. Offered autumn and spring. Prereq., SW 200. Prereq. or coreq., PSYC 240S, junior standing. Using the ecological-social systems framework, the integration of knowledge and concepts from the social and behavioral sciences for analysis and assessment of problems and issues relevant to professional social work practice.

UG 310 Social Welfare Policy and Services 3 cr. Offered autumn and spring. Prereq., SW 200. Social welfare history, program planning and analysis with review of selected policies on the national level. Includes international comparisons. Upper-division writing course.

U 323 Women and Social Action in the Americas 3 cr. Offered autumn odd-numbered years. Prereq., one of SW 100, SOCI 101S (SOC 110S), or ANTH 101H or consent of instr. Same as WS 323. Focus on women's experiences of and contributions to social change in North, South and Central America in the mid to late-20th century. Through case studies, testimonials, discussions with activists and Internet connections examine social constructions of gender, compare forms of social action in diverse cultural, political and historical contexts, link practice to theories of social participation, and reflect on lessons learned from women's experiences.

U 324 Gender and the Politics of Welfare 3 cr. Offered autumn even-numbered years. Prereq., SW 100 or consent of instr. Same as WS 324. Exploration of the relationship between gender ideologies and the development of social welfare policies. Examination of historic and contemporary social welfare policies, practices and debates in the United States through a gender lens.

UG 350 Social Work Intervention Methods I 4 cr. Offered autumn and spring. Prereq., SW 200; coreq., SW 300. The study and application of the generalist model of social work practice and related techniques and procedures for the assessment, intervention and prevention of problems in social functioning. Emphasis on individuals and families.

UG 360 Social Work Intervention Methods II 4 cr. Offered autumn and spring. Prereq., SW 350. The study and application of the

generalist model of social work practice and related techniques and procedures for the assessment, intervention and prevention of problems in social functioning. Emphasis on groups and communities.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses or one-time offerings of current topics.

UG 398 Internship Variable cr. (R-3) Offered autumn and spring. Application of classroom learning in off campus internship placements. Prior approval must be obtained from the School of Social Work practicum coordinator and the Center for Work-Based Learning. A maximum of 6 credits of Internship (198, 398) may count toward graduation.

UG 400 Social Work Research 3 cr. Offered autumn and spring. Prereq., SW 360. Utilization of social research findings in social work practice. Techniques for the collection and analysis of clinical data. Special emphasis on research methodology for the assessment of practitioner and program effectiveness.

UG 410E Ethics and the Helping Professions 3 cr. Offered spring. Prereq., completion of twelve credits in social work or a related discipline or consent of instructor. Analysis of specific ethical dilemmas from personal, professional and policy perspectives. Focus on ethical issues common to the helping professions and utilizing codes of ethics as guides to decision-making. The relationship between professional ethical issues and the development of social policy.

UG 420S Child Abuse and Child Welfare 4 cr. Offered autumn. Prereq., junior standing or consent of instr. Signs and symptoms of physical and sexual abuse and neglect, family dynamics in abuse and neglect, the legal context, programs of prevention and intervention, foster care, special needs adoptions and related issues in child welfare.

UG 423 Addiction Studies 3 cr. Offered spring. Same as PSYC and SOC 423. Examination of chemical dependency and behavioral compulsions, including alcohol and other drugs, gambling, eating disorders, sexual addictions. Ecosystems perspective on etiology, treatment, prevention, family dynamics, community response, and societal contributors. Students engage in a service learning community project which is integrated into the classroom through initial training, regular reflection, and other activities.

UG 430 Health Aspects of Aging 3 cr. Offered spring. Same as HHP and HS 430. Overview of the health aspects of aging in the United States including biological theories of aging, normal physiological changes associated with aging systems, common pathological problems associated with aging, cultural and ethnic differences in the health of elders, health promotion and healthy aging, and the health care continuum of care for older persons.

UG 434 Social Work and the Law 3 cr. Offered spring even-numbered years. Prereq., junior standing. Contemporary implication of social work practice in a judicial arena.

UG 450 Children and Youth at Risk 3 cr. Offered autumn or spring. Focus on the aspects of society that pose a threat to today's youth and the ramification of those threats on youth development and behavior. Resilience and protective factors for youth at risk and strategies to work with those youth. Attention to related systems in Missoula and Montana, including juvenile justice, mental health, child protection, substance abuse, and education.

UG 455S Social Gerontology 3 cr. Offered autumn. Examination of the field of social gerontology, including an examination of the major bio/psycho/social/cultural/spiritual theories of aging, the service system, social and health issues, family and care giving dynamics, social policy, and end of life concerns.

UG 460 Domestic Violence 3 cr. Offered intermittently. Examination of domestic violence in relation to its societal context, with attention to sex role socialization, interpersonal dynamics, and family consequences. Emphasis on etiology, treatment, intervention and prevention.

UG 465 Social Work in a Global Context 3 cr. Offered spring even-numbered years. Prereq., upper-division or graduate standing. Examination of globalization, human rights, poverty, international aid, and gender issues; their relationship to social work and social justice, and strategies for action.

UG 470 Mental Health Practice in Rural Settings 2 cr. Offered autumn odd-numbered years. Prereq., upper-division or graduate standing. Examination of rural settings and how state and federal policy influence the quality and accessibility of mental health care programs and services.

UG 475 Death, Dying and Grief 3 cr. Offered intermittently. Examination of death, dying and grief from an ecological perspective, focusing on the processes of dying and theories of grief. Emphasis on physical, social, psychological, spiritual, and cultural influences that surround death and grief. Consideration of cultural norms, attitudes toward death, medical, legal and ethical issues of dying. Focus on normal and complicated grief.

UG 480 Professional Development in Child Welfare 1 cr. Prereq., junior standing. Offered intermittently. Exploration of diverse issues related to child welfare. Designed to help students and youth workers develop an integrated knowledge base and practice skills for working with youth.

U 485 Counseling Theories in Context 3 cr. Offered spring. Prereq., PSYX 100S. Same as COUN 485 and PSYX 442 (PSYC 485). This course introduces students to the primary theories that constitute the intellectual foundation for common counseling and psychotherapy techniques, with a special focus on gender, interpersonal influence strategies, and diversity issues.

U 488 Field Work Practicum Seminar 2 cr. Offered every term. Coreq., SW 489. Consideration and discussion of practicum-related matters, professional development, and issues confronting the profession.

UG 489 Field Work Practicum Variable cr. (R-10) Offered every term. Prereq., SW 350 and 360 and approved application to practicum coordinator. Coreq., SW 488. Practicum must be taken over two consecutive semesters for a total of 10 credits. Minimum of one credit per semester. Cumulative grade average of 2.75 or above in SW 100, 200, 300, 350 and 360 and a 3.0 grade average for SW 200, 350 and 360 are required. Supervised field work in public and private agencies and institutions. Successful completion of the field work practicum requires a passing performance on the school administered professional social work competency examination.

U 493 Omnibus Variable cr. (R-10) Offered intermittently. Prereq., 10 credits in social work. Independent work under the University omnibus option. See index.

UG 494 Seminar Variable cr. (R-9) Offered intermittently. Prereq., 9 credits in social work.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr.

G 500 Orientation 1 cr. Prereq., admission to M.S.W. program. Seminar introducing M.S.W. students to program philosophy and social work's theory and value base.

G 505 Foundations of Social Work Practice 2 cr. Prereq., admission to M.S.W. program. Introductory practice course that examines generalist social work practice, dominant theoretical influences, and forces shaping social work over time.

G 510 Human Behavior and Social Environment I 3 cr. Prereq., admission to M.S.W. program. Introduction to and critical consideration of social work perspectives on human behavior as influenced by the social environment. Particular attention is paid to biological, psychological, social, cultural and spiritual influences.

G 511 Human Behavior and Social Environment II: Difference, Diversity and Oppression 3 cr. Prereq., admission to M.S.W. program and SW 510 or consent of instr. Advanced course on human behavior and social environment that addresses difference and diversity, histories and mechanisms of discrimination and oppression, and frameworks for thought and practice that recognize diversity and promote social justice.

G 515 Practice with Individuals and Families in a Community Context 4 cr. Prereq., admission to M.S.W. program or consent of instr. Practice-oriented course building on students' developing knowledge of engagement, assessment, intervention and evaluation and the application to practice with individuals and families in context of community.

G 520 Social Work Research Methods 3 cr. Prereq., admission to M.S.W. program or consent of instr. Introduction to principles, methodologies, technologies, and statistical approaches of human service research. Emphasis on beginning capabilities in evaluation of social work practice and skill development regarding use of published research.

G 521 Advanced Research and Program Evaluation 3 cr. Prereq., SW 515. The use of research within the integrated practice model of social work through evaluation of practice and program evaluation. Advanced statistical concepts are applied to direct practice and five types of program evaluation.

G 525 Practice with Groups and Communities 4 cr. Prereq., admission to M.S.W. program or consent of instr. Practice oriented course addressing theories, frameworks, principles, and skills of group and community work. Dynamics of group work and examination of modalities such as mutual aid and social action groups.

G 530 History of Social Policy, Justice and Change 3 cr. Prereq., admission to M.S.W. program or consent of instr. Foundation in social welfare policy and services; examination of relationship between history social welfare policy and emergence of social work profession. Introduction to frameworks for policy analysis.

G 531 Methods of Social Policy Analysis 3 cr. Prereq., SW 530. Focus on the analysis of existing or proposed policies specific to oppressed populations, rural areas and isolated communities.

G 535 Advanced Integrated Practice 4 cr. Prereq., consent of instr. Builds on the skills, knowledge, and values of the foundation generalist and practice courses.

G 545 Practice of Organizational Leadership 4 cr. Prereq., consent of instr. Advanced training in professional leadership and how to effectively conceive, plan, design, implement, manage, assess, and change contemporary organizations.

G 550 Counseling Techniques and Strategies 2 cr. Offered autumn. Prereq., admission to MSW program or consent of instr. Practice-oriented course addressing strategies of clinical intervention, case studies, and philosophy of care.

G 551 Couples and Family Therapy 3 cr. Offered spring. Prereq., admission to the MSW program, SW 505, or consent of instructor. Course explores family-centered methods of clinical social work interventions with couples and families that can be applied in a variety of

settings.

G 552 Psychopathology and Assessment for Social Work 3 cr. Prereq., admission to the MSW program, SW505, or permission of instructor. Focus on current problems of children, adolescents, and adults of all ages that can be classified as a mental disorder under the DSM of the system. Includes information on theories within the bio-psycho-social paradigm of causality of disorders/conditions; on methods of assessment, including DSM-IV; and an understanding of how social injustice, oppression and poverty impacts healthy growth and development across the life span.

G 576 Foundation Integrative Seminar I 1 cr. Prereq., admission to M.S.W. program, SW 505, 587; coreq., SW 589. Seminar accompanying first semester foundation practicum in which students discuss experience with goal of integrating theory and practice.

G 577 Foundation Integrative Seminar II 1 cr. Prereq., admission to M.S.W. program, SW 505, 587; coreq., SW 589. Seminar accompanying second semester foundation practicum in which students discuss experience with goal of integrating theory and practice.

G 578 Advanced Integrative Seminar I 1 cr. Prereq., SW 586; coreq., SW 588. Critical analysis of how predominant social work theories and professional values and skills are being incorporated into the practicum.

G 579 Advanced Integrative Seminar II 1 cr. Prereq., SW 578; coreq., SW 589. Critical analysis of how predominant social work theories and professional values and skills are being incorporated into the practicum. Advanced portfolio development.

G 586 Foundation Practicum I 2 cr. Prereq., admission to M.S.W. program; coreq., SW 586. First semester foundation field practicum experience in a supervised setting designed to provide opportunities to integrate classroom learning and field experiences.

G 587 Foundation Practicum II 2 cr. Prereq., admission to M.S.W. program, SW 505, 587; coreq., SW 588. Second semester foundation field practicum experience in a supervised setting designed to provide opportunities to integrate classroom learning and field experiences.

G 588 Concentration Practicum I 2 cr. Prereq., SW 587, 589; coreq., SW 578. Advanced supervised field work in public and private agencies and institutions.

G 589 Concentration Practicum II 2 cr. Prereq., SW 588; coreq., SW 579. Advanced supervised field work in public and private agencies and institutions.

G 593 Professional Portfolio 1 cr. (R-2) Prereq., foundation courses. Summative and in-depth written analysis of course work and practicum experience.

G 594 Graduate Seminar 3 cr. (R-9) Offered autumn or spring. Prereq., admission to M.S.W. program or consent of instr. In-depth analysis of a current social work issue.

G 595 Special Topics Variable cr. (R-9) Offered autumn and spring. Prereq., admission to M.S.W. program or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Offered autumn or spring. Prereq., admission to M.S.W. program or consent of instr. Work on selected problems by individual students under direct faculty supervision.

G 597 Research Variable cr. (R-9) Offered autumn or spring. Prereq., admission to M.S.W. program or consent of instr. Directed individual graduate research and study appropriate to background and objectives of the student.

Faculty

Professors

- Cynthia Garthwait, M.S.S.W., University of Wisconsin, Madison, 1974 (Chair)
- Janet Finn, Ph.D., University of Michigan, 1995

Associate Professors

- Timothy Conley, Ph.D., Boston College, 2001
- Ryan Tolleson Knee, Ph.D., University of Denver, 1999

Assistant Professors

- Jim Caringi, Ph.D., University of New York, 2007
- Cathryn O'Day, M.S.W., Ph.D., Colorado State University, 2008

Adjunct Assistant Professors

- Doreen Antenor, J.D., The University of Montana, 1996

- Tondy Baumgartner, M.S.W., Walla Walla College, 1998
- Michaela Conway, M.S.W., San Diego State University, 1978
- Kerrie Ghenie, M.S.W., Walla Walla College, 2000
- Diane Haddon, M.S.W., Michigan State University, 1977
- Michael Perry, M.S.W., Eastern Washington University, 1991
- Tamara Tolleson Knee, M.S.W., University of Denver, 1994
- Jennifer Walrod, M.P.A., The University of Montana, 2002
- Charlie Wellenstein, M.S.W., Eastern Washington University, 1991

Emeritus Professors

- Mary Birch, M.S.W., Columbia University, 1966
- Frank Clark, Ph.D., University of Oregon, 1969
- Robert Deaton, Ed.D., University of Nevada, Reno, 1980
- Charles Horejsi, Ph.D., University of Denver, 1971
- John Spores, Ph.D., University of Michigan, 1976

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Department of Applied Arts and Sciences

Cathy Corr, Chair

The Department of Applied Arts and Sciences provides instruction in five disciplines: communication, mathematics, psychology, science, and writing. The courses from these disciplines are general education core classes for the Associate of Arts Degree (AA) as well as compose the general education core of Associate of Applied Science Degrees (AAS).

Associate of Arts-A.A. Degree

The Department of Applied Arts and Sciences oversees the Associate of Arts Degree. The Associate of Arts Degree is a general education transfer degree and does not officially include a major or minor course of study. To receive an Associate of Arts degree all students must successfully complete all the general education requirements as described by Montana Board of Regents policy 301.10, Appendix 1. Students preparing for specific baccalaureate degree majors may decide to choose specific general education courses that meet the requirements for a major. Students seeking the AA are not required to sit for the upper-division writing proficiency assessment (WPA). The minimum grade average for the 60 credits required for graduation is 2.00 in all courses taken on the traditional letter grade (A-F) basis. Courses in required general education areas must have a C- minimum.

Students may enter in the autumn or spring semester. Following is a suggested first year course of study. Courses numbered below 100 or with a "D" designation and courses with a "T" suffix on the course number do not count toward the 60 credit requirement or general education course requirements, but do count as financial aid credits.

Course Choices:

First Semester

Appropriate writing course-to be determined by placement score (3 cr)

Appropriate mathematics course-to be determined by placement score (3 cr)

Electives within the general education groups (9 cr)

Second Semester

Continue with writing course requirement (3 cr)

Continue with mathematics course requirement (3 cr)

Electives within the general education groups (9 cr)

Areas of Emphasis within an Associate of Arts Degree

Although the AA does not officially include a major or minor course of study, students may elect to choose classes in a specific area of interest. Advisors within the departments guide this process.

Courses

U = for undergraduate credit only. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Applied Arts and Sciences (AASC)

U 100 Introduction to the University Experience 3 cr. Offered autumn. Introduction to academic life: exposure to campus recourses (e.g. library, computer labs, career and student services); exploration of personal goals and motivation; introduction to various academic disciplines; introduction to ASUM and other student groups; exploration of diversity issues, ethical issues, ethical issues, and student accountability; and extensive advising.

U 167H Nature and Society 3 cr. Same as EVST 167H. Offered intermittently, autumn and spring. Prereq., WRIT 101, WTS 101 or ENEX 101. Explores the relationship between ideas about nature and the development of political and social ideas, institutions, and practices in primarily western (Euro-American) society. Course is an elective for students in the 2-year AA and AAS degree programs. Credit not allowed for both AASC 167H and EVST 167H.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study 1-6 cr. (R-6) Offered intermittently.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Communications (COM)

U 150S Interpersonal Communication 3 cr. Offered every term. Focus on communicating and listening more clearly to improve personal and professional relationships. Topics include forms of communication, communication and identity, emotion, conflict, climates, gender, and cultural diversity. Credit not allowed for both COM 150S and COMM 110S.

U 160A Oral Communications 3 cr. Offered every term. Introduction to techniques for preparing and delivering effective presentations as well as constructive crediticism. Credit not allowed for both COM 160A and COMM 111A.

U 195T Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study 1-6 cr. (R-6) Offered intermittently.

U 217A Oral Interpretation of Literature 3 cr. Offered autumn. Introduction orally presenting literature to an audience. Focus is on analyzing and performing prose, drama, poetry, and children's literature to express point of view.

U 242 Argumentation 3 cr. Offered intermittently. Prereq., COM 160A, COMM 111A, or consent of instr. Focus on developing, presenting, evaluating, and responding to written and spoken arguments with an emphasis on critical decision-making. Credit not allowed for both COM 242 and COMM 242.

U 260S Survey of Children's Communication 3 cr. Offered every semester. Focus on communication processes and contemporary communication environments of children and adolescents. Topics include language development and the brain, nonverbal communication development, media, contracting, bullying, and gender.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296T Independent Study 1-6 cr. (R-6) Offered intermittently.

Literature (LIT)

U 110L (WTS 120L) Introduction to Literature 3 cr. Offered each term. Study of how readers make meaning of texts and how texts influence readers. Emphasis on interpreting literary texts: close reading, critical analysis, and effective writing.

U 120L (WTS 121L) Poetry 3 cr. Offered every term. An introduction to the techniques of reading and writing about poetry with emphasis on the lyric and other shorter forms. Credit not allowed for both ENLT 121L, WTS 121L, and LIT 120L.

Mathematics (M)

U 065 (MAT 002D) Prealgebra 3 cr. Offered every term. Prereq., appropriate placement score. Arithmetic and basic algebra skills needed for Introductory Algebra. Topics include integers and rational numbers, decimals and percentages with applications, ratios and proportions with applications, single variable linear equations with applications, introduction to graphing, exponents, factoring, and an introduction to polynomials. Credit does not count toward a certificate or degree. Credit does not count toward Associate of Arts, Associate

of Applied Science, or Baccalaureate degrees.

U 090 (MAT 005D) Introductory Algebra 3cr. Offered every term. Prereq., M 065 (M 002D) or appropriate placement score. Review of arithmetic principles of integers and rational numbers, linear equations in one or two unknowns, and operations with polynomials and rational expressions. Credit does not count toward an Associate of Arts, Associate of Applied Science, or Baccalaureate degree.

U 095 (MAT100D) Intermediate Algebra 3 cr. Offered autumn and spring. Prereq., M 095 (MAT 005D) or appropriate placement score. Topics include linear equations and systems of linear equations, inequalities, applications and graphing; polynomials; rational expressions and equations; radicals, rational exponents and complex numbers; quadratic equations; introduction to exponential and logarithmic functions. Credit does not count toward Associate of Arts or Baccalaureate degrees.

U 105 Contemporary Mathematics 3 cr. Offered every term. Prereq., M 090 (MAT 005) with a grade of B- or better, or M 095, or appropriate placement score. An introduction to mathematical ideas and their impact on society. Intended for students wishing to satisfy the general education mathematics requirement.

U 111 (MAT 110T) Technical Mathematics 3 cr. Offered autumn and spring. Designed to provide the mathematical background necessary for success in the industrial areas. Topics covered include percent, ratio proportion, formula evaluation, basic algebra and geometry concepts, trigonometry, measurement, statistics, and graphing. markdowns, inventory turnover, and other basic formulas. Credit does not count toward Associate of Arts or Baccalaureate degrees.

U 115 (MAT 117) Probability and Linear Math 3 cr. Offered every term. Prereq., M 090 (MAT 005D) with a grade of B- or better, M 095 (MAT 100D), or appropriate placement score. Systems of linear equations and matrix algebra. Introduction to probability with emphasis on models and probabilistic reasoning. Examples of applications of the material in many fields.

U 121 (MAT 118) College Algebra 3 cr. Offered autumn and spring. Prereq., M 095 (MAT 100D) or appropriate placement score. Intended to strengthen algebra skills. The study of functions and their inverses: polynomial, rational, exponential, and logarithmic functions.

U 122 (MAT 119) College Trigonometry 3 cr. Offered autumn and spring. Prereq., M 121 (MAT 118 or MATH 111) or appropriate placement score. Preparation for calculus based on college algebra. Review of functions and their inverses, exponential and logarithmic functions. Trigonometric functions and identities, polar coordinates and an optional topic such as conic sections or parametric functions.

U 151 (MAT 120) Precalculus 4 cr. Offered autumn and spring. Prereq., M 095 (MAT 100D) or appropriate placement score. Algebraic, trigonometric, exponential/ logarithmic functions of one real variable and their graphs. Inverse functions, complex numbers and polar coordinates. Conic sections.

U 162 (MAT 145) Applied Calculus 4 cr. Offered spring. Prereq., M 151 (MAT 120) or appropriate placement score. Introduction to differentiation and integration of elementary function. Introduction to ordinary differential equations. Emphasis is on applications in technical fields including electronics technology. Graphing calculators used.

U 196T Independent Study Variable cr. (R-6) Offered intermittently.

Psychology (PSYX)

U 100S Introduction to Psychology 4 cr. Offered every term. Introduction to the scientific study of behavior in humans and other animals. Credit not allowed for both PSYC 100S, PSY 100S and PSYX 100S.

U 161S (PSY 110S) Fundamentals of Organizational Psychology 3 cr. Offered autumn and spring. Foundation in the psychological processes that influence behavior of people in work settings.

U 191 (PSY 195T) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 192 (PSY 196T) Independent Study 1-6 cr. (R-6) Offered intermittently.

U 194T Seminar Work Attitudes 1 cr. Offered spring. Introduction to the working environment and the indificual's responsibility to working relationships.

U 230S (PSY 201) Developmental Psychology 3 cr. Offered autumn and spring. Prereq., PSYX 100S. The study of human physical, cognitive and psychosocial development throughout the life span. Content covers major theories, the influence of genetics, and the environment from a chronological aspect.

U 291 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 292 Independent Study Variable cr. Offered every term.

U 294 Seminar/Workshop 1 cr. (R-3) Offered intermittently. Prereq., consent of instr.; coreq., another psychology course. Taken in conjunction with another psychology course to provide additional content and discussion for honors students. Consent of the corequisite

course.

U 298 Internship Variable cr. (R-6) Offered every term. Prereq., consent of department. Extended classroom experience which provides pratcial application of classroom learning during placements off campus. Prior approval must be obtained from the Program department.

Science (SCN)

U 095 Special Topics 1-6 cr. Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 100N Issues in Biology 3 cr. Offered autumn and spring. An introductory course for students with little science background. This course explores several issues relating to human biology such as cancer, drug abuse, population growth, and genetic engineering. Also includes discussions of fundamental biological concepts such as evolution, biodiversity, and basic cell and molecular biology.

U 115 Anatomy 3 cr. Offered Intermittently. Structures of the human body and their basic functions.

U 120T Technical Physics I 4 cr. Offered autumn. Prereq., M 095 (MAT 100 or MATH 100). Introduction to models, measurements, vectors, motion in a straight line, motion in a plane, Newton's laws of motion, application of Newton's laws, and circular motion and gravitation.

U 121T Technical Physics II 4 cr. Offered spring. Prereq., SCN 120T. Introduction to work and energy, impulse and momentum, rotational motion, equilibrium of a rigid body, elasticity, heat, and thermodynamics.

U 150 Nutrition 3 cr. Offered autumn and spring. Nutritional needs throughout the life cycle and measures to assist in the meeting of those needs in health or stress/disease.

U 175N Introduction to Physical Science 3 cr. Offered every term. Prereq., or coreq., M 090 (MAT 005D) (M 095 (MATH 100) suggested). An introduction to the basic principles of physics, chemistry, environmental and earth sciences with emphasis on the scientific method and process. (Suitable for students with little science background).

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study Variable cr. (R-6) Offered intermittently.

U 201N Anatomy and Physiology I 4 cr. Offered autumn and spring. Prereq., introductory science course or college-prep high school biology course recommended. Comprehensive knowledge of human form and function necessary for students preparing for health-related professions. Emphasis on structure, function and homeostatic regulation of body systems with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers tissues through nervous system. Required, integrated laboratory includes some dissection.

U 202N Anatomy and Physiology II 4 cr. Offered autumn and spring. Prereq., SCN 201N. Continuation of 201N. Comprehensive knowledge of human form and function necessary for students in health-related programs. Emphasis on structure function and homeostatic regulation of body systems with presentation of basic concepts in chemistry and microbiology as they relate to human anatomy and physiology. Covers endocrine through reproductive systems. A cadaver lab is included.

U 220 Human Physiology 4 cr. Offered autumn. Prereq., SCN 201N, 202N. In-depth exploration of principles and clinical consequences of the physiology of selected human organ systems. Building upon basic concepts covered in SCN 201N and 202N, students study membrane functions, neural physiology, nervous system integration, endocrine and peripheral nervous system function and coordination, circulatory, respiratory, renal, and digestive physiology.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Writing Studies (WRIT)

U 095 (WTS 100D) Developmental Writing 3 cr. Offered every term. Prereq., placement or referral by WRIT 101 (WTS 101) instructor. Designed for students who need instruction and practice integrating critical thinking, reading and writing before entering the required first-year writing course. Grading A-F or NC (no credit). Credit does not count toward Associate of Arts or Baccalaureate degrees.

U 101 College Writing I 3 cr. Offered every term. Prereq., WRIT 095 or passing score on placement test. Instruction and practice in both the expository writing and research process. Emphasis on the use of specific techniques of writing to develop style, unity, clarity, and force of ideas, and structure. Students are expected to write without major errors in sentence structure or mechanics. Grading A-F, or NC.

U 121 Introduction to Technical Writing 3 cr. Offered every term. Course assumes a basic computer literacy. Passing score on placement test or consent of instructor. Introduction to technical writing situations with appropriate formats. Emphasis writing with document design and graphic placement introduced. Students are expected to write without major faults in grammar or usage.

U 184A Beginning Creative Writing: Multiple Genre 3 cr. Offered every term. Prereq., WRIT 101 (WTS 101 or ENEX 101) or consent of instr. A beginning writing workshop to explore various types of creative writing with opportunities for students to write, revise and discuss writing techniques that students may wish to explore further in specialized classes.

U 185A Beginning Creative Writing: Fiction 3 cr. Offered intermittently. Prereq., WRIT 101 (WTS 101 or ENEX 101) or consent of instr. A beginning writing workshop focused on the reading, discussion, and revision of students' short fiction. Students also will be introduced to models of fiction techniques. No prior experience in writing short fiction required.

U 186A Beginning Creative Writing: Poetry 3 cr. Offered intermittently. Prereq., WRIT 101 (WTS 101 or ENEX 101) or consent of instr. A beginning writing workshop focused on the reading, discussion, and revision of students' poems. Students also will be introduced to variety of poetic techniques. No prior experience in writing poetry required.

U 191T (WTS 195T) Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 192T (WTS 196T) Independent Study 1-6 cr. (R-6) Offered intermittently.

U 221 (WTS 215) Intermediate Technical Writing 3 cr. Offered intermittently. Prereq., WRIT 121 (WTS 115), WRIT 101 (WTS 101 or ENEX 101), or consent of instr. Continuation of technical writing with emphasis on technical text including editing for technical content, graphic placement, and document design as seen through the eye of the audience. Current critical issues in technical writing are discussed.

U 240E Arguments and Contemporary Issues 3 cr. Offered every autumn and spring. Prereq., WRIT101. Writing-intensive course which examines perspectives on contemporary issues. Emphasis on analysis, evaluation, and synthesis; students construct arguments in response to issues raised in class.

U 291T (WTS 295T) Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 292T (WTS 296T) Independent Study 1-6 cr. (R-6) Offered intermittently.

Department of Applied Computing and Electronics

Thomas Gallagher, Chairman

The Department of Applied Computing and Electronics of The University of Montana College of Technology collaborates with business and industry to prepare graduates to compete in and contribute to a dynamic global society. Students engage in experiential learning embracing technical education, effective communication, problem solving, professionalism, and workplace skills. The department promotes life-long learning to empower students in an ever-changing world. More details on programs available through the department can be found on the web: http://ace.cte.umt.edu.

Special Degree Requirements

General education requirements are integrated into the following programs. Refer to the Academic Policies and Procedures section of this catalog for the specific requirements.

Computer Aided Design- Certificate of Applied Science

Thomas Gallagher, Director

The Computer Aided Design program introduces students to graphic communications; computer-aided design and modeling systems; geographic information systems; surveying; written communication; and business practices. Graduates are prepared to pursue entry-level, professional careers as technicians supporting civil engineering firms, surveyors, and land-use planners.

First Year	A	S
BUS 103S Principles of Business	-	3
CRT 111 Fluency in Information Technology	3	-
CRT 182T Computer Aided Design I	2	-
CRT 195 Special Topics: Computer Aided Design II	3	-
CRT 195 Special Topics: Graphics Communication	3	-
CRT 172 Introduction to Computer Modeling	-	3
CRT 175 Geospatial Technologies	-	3
CRT 184 Civil Design Technologies	-	4
HEO 195 Special Topics: Surveying	3	-
M 121 (MAT 118) College Algebra	3	-
WRIT 101 (WTS 101) College Writing I	-	3

TOTAL	17	16

Computer Technology-A.A.S. Degree

Students in the Computer Technology program prepare for careers in the field of information technology. The mission of the program is to prepare students to meet the needs of users within an organization and societal context through the selection, creation, application integration, and administration of information technology. The program balances technical expertise with the professional skill set needed in a dynamic society. The degree program allows students to specialize in network management or information systems through program options.

Students are accepted into the program autumn term. Prior to entering the program, students shall demonstrate proficiency in keyboarding and basic computing skills, using word processing, spreadsheets, Internet software, and file management.

The University of Montana College of Technology is a Cisco Regional Training Center and a member of the Computer Technology Industry Association (Comp TIA). Opportunities exist for professional certification from Cisco (CCNA), Microsoft (MCT, MCSA), and Comp TIA (A+, Network+ and Security+).

Network Management Option

The Network Management option provides specialization for supporting computing in a networking environment. Students install, configure, monitor, troubleshoot, and manage network connectivity, server-based computing systems, and intranetworking technologies.

Autumn Entry:

First Year	**A**	**S**
BUS 103S Principles of Business	3	-
CRT 111 Fluency in Information Technology	3	-
CRT 112 Operating System Fundamentals	-	3
CRT 121 Introduction to Programming	-	3
CRT 122E Ethics and Information Technology	-	3
CRT 151 Networking Basics	3	-
CRT 152T Routers and Router Basics	-	3
CRT 172 Introduction to Computer Modeling	-	3
M 115 (MAT 117) Probability and Linear Mathematics	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	15	15
Second Year	**A**	**S**
COM 160A Oral Communications	-	3
CRT 210T Advanced Operating Systems	3	-
CRT 215T Server Technologies	3	-
CRT 216T Network Infrastructure	-	3
CRT 222T Security Seminar	-	3
CRT 231 Object-Oriented Programming	3	-
CRT 251T Switching Basics and Intermediate Routing	3	-
CRT 252T WAN Technologies	-	3
CRT 285T PC Hardware Support	3	-
CRT 289T Professional Certification	-	1
CRT 290T Computer Technology Internship	-	2
Total	15	15

Information Systems Management Option

The Information Systems Management option provides specialization in acquiring and supporting the software applications and hardware used in organizations. Students analyze, design, develop, implement, and support windows-based applications, database applications, and web-based applications. Business process is modeled and requirements defined for information technology resources.

Autumn Entry:

First Year	**A**	**S**
BUS 103S Principles of Business	3	-
COM 160A Oral Communications	3	-

CRT 111 Fluency in Information Technology	3	-
CRT 112 Operating System Fundamentals	-	3
CRT 121 Introduction to Programming	-	3
CRT 122E Ethics and Information Technology	-	3
CRT 151 Networking Basics	-	3
CRT 172 Introduction to Computer Modeling	-	3
M 115 (MAT 117) Probability and Linear Mathematics	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	15	15
Second Year	**A**	**S**
ACTG 101 (ACC 132T) Accounting Procedures I	4	-
CRT 203 Systems Analysis	-	3
CRT 210T Advanced Operating Systems	3	-
CRT 231 Object-Oriented Programming	3	-
CRT 263 Web Design and Development	-	3
CRT 275 Database Design and Implementation	3	-
CRT 285T PC Hardware Support	3	-
CRT 289T Professional Certification	-	1
CRT 290T Computer Technology Internship	-	2
Directed Electives	-	6
Total	16	15

Directed Electives Options:

- ACTG 201 (ACC 133T) Principles of Financial Accounting
- BUS 125T Principles of Marketing
- BUS 135T Business Law
- BUS 243T Psychology of Management and Supervision
- BUS 250T Entrepreneurship
- WRIT 121 (WTS 115) Introduction to Technical Writing
- COM 150S Interpersonal Communications

A student may request substitution of other courses in the areas of Business, Communication, or Information Technology to fulfill the directed elective requirement provided a clear connection can be made between a course, a student's career objective, and the degree program. All substitution requests require departmental approval.

Computer System Technician Certificate of Applied Science

Students graduating with the Computer System Technician certificate will be able to install, configure, troubleshoot, repair, update, and support client-based personal computer operating systems, personal computer hardware, and basic network and Internet connectivity issues. They will define and apply basic information security practices, safety procedures, and environmental practices.

First Year	**S**	**A**
BUS 103S Principles of Business	-	3
CRT 111 Fluency in Information Technology	3	-
CRT 112 Operating System Fundamentals	3	-
CRT 151 Networking Basics	3	-
CRT 210T Advanced Operating Systems	-	3
CRT 121 Introduction to Programming	-	3
CRT 172 Introduction to Computer Modeling	-	3
CRT 285T PC Hardware Support	-	3
CRT 289T Professional Certification A+	-	1
M 095 (MAT 100D) Intermediate Algebra	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	15	16

Electronics Technology-A.A.S. Degree

Steven Rice, Director

Students in the Electronics Technology program learn to troubleshoot, calibrate, test, and repair electronic components and circuit boards

used in a wide range of electronic equipment including computers and communication equipment. Training includes working knowledge of direct and alternating current theory, semiconductor circuits, instrumentation, automatic controls, data communications, computerized communication links, and operational amplifiers. Students become familiar with robotics, electronic communications theory, and modes of RF communications.

Students are awarded the Associate of Applied Science degree upon successful completion of the program. Students may enter autumn semester only.

First Year	A	S
CRT 111 Fluency in Information Technology	3	-
CRT 112 Operating Systems Fundamentals	-	3
EET 111 Basic Electronics	4	-
EET 112 Electronics Lab I	3	-
EET 113 Circuits Kit	1	-
EET 121 Semiconductors	-	4
EET 122 Electronics Lab II	-	3
EET 123 Amplifier Kit	-	1
M 151 (MAT 120) Precalculus	4	-
M 162 (MAT 145) Applied Calculus	-	4
PSYX 161S (PSY 110S) Fund of Organizational Psychology	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	18	18
Second Year	**A**	**S**
EET 227 Digital Electronics	4	-
EET 234T Automatic Controls	4	-
EET 240T Robotics	-	3
EET 241T Instrumentation	-	3
EET 242T Electronics Lab III	-	3
EET 260 Data Communications	-	3
EET 270T Wireless Communications	4	-
EET 280T Electronics Capstone	-	2
SCN 120T-121T Technical Physics I, II	4	4
Total	16	18

Energy Technology-A.A.S. Degree

Ashley Preston, Director

Students in the Energy Technology program are introduced to the full suite of energy sources and technologies. Graduates are general practitioners equipped with skills in: design, installation, and maintenance of diverse energy technologies and systems; sales, operations, and management; regulatory compliance; basic electricity and power systems; energy storage and distribution; site assessment; basic energy economics; efficiency and conservation strategies; project management. Students may enter the program autumn or spring term. Further information can be found at http://ace.cte.umt.edu/energy/

First Year	A	S
BUS 160S Issues in Sustainability	3	-
CAR 235 Building Energy Conservation	-	3
CRT 172 Introduction to Computer Modeling	3	-
EET 111 Basic Electronics	-	4
EET 112 Electronics Lab I	-	3
M 121 College Algebra	-	3
NRG 101 Introduction to Energy Systems I	3	-
NRG 102 Introduction to Energy Systems II	-	3
SCN 175N Integrated Physical Sciences	3	-
WRIT 101 (WTS 101S) College Writing I	3	-
Total	15	16

Summer Session	Credits
NRG 191 Energy Practicum (60 Hours)	2
Total	2

Second Year	A	S
BUS 103S Principles of Business	-	3
CAR 209T Project Management	3	-
EVST 101 Environmental Science	3	-
M 122 College Trigonometry	3	-
NRG 213 Power Systems Technology	3	-
NRG 290 Energy Internship	-	2
NRG 295 Special Topics: Energy Storage and Distribution Systems	-	3
Select 5 Energy Electives (see list below)	6	9
Total	18	17

Energy Elective Requirement: Students must select a total of 5 energy related electives or 4 energy related electives and 1 general elective.

Energy-Related Electives:

- GEO191 Special Topics: Fossil Fuels (3 cr)
- NRG 241 Alternative Fuels (3 cr)
- NRG 242 Solar and Wind and Energy Systems (3 cr)
- NRG 295 Special Topics: Fuel Cells (3 cr)
- NRG 295 Special Topics: Bioenergy (3 cr)
- NRG 295 Special Topics: Fundamentals of Photovoltaic Design and Installation (3 cr)
- NRG 295 Special Topics: Introduction to Geothermal Energy Systems (3 cr)

General Electives

- BUS 135T Business Law (3 cr)
- BUS 250T Entrepreneurship (3 cr)
- CAR 236T Building for Solar Energy (3 cr)
- CAR 240T Alternative Construction Materials (3 cr)
- COM 150S Interpersonal Communications (3 cr)
- COM 160A Oral Communications (3 cr)
- CRT 111 Fluency in Information Technology (3 cr)
- CRT 182 Computer Aided Design and Drafting (2 cr)
- EET 234T Automatic Controls (4 cr)
- EET 241T Instrumentation (3 cr)
- NRG 295 Special Topics: Energy Choices and Sustainability (3 cr)
- PSYX 162 Organizational Psychology (3 cr)
- SCN 120T Technical Physics I* (3 cr)
- SCN 121T Technical Physics II* (3 cr)

*Completion of both can be considered in lieu of SCN 175N Integrated Physical Science (3 cr)

Accounting Technology-A.A.S. degree

Computer Support Option

Students interested in a career which prepares them to work as accounting technicians with a specialty in information technology may select the Accounting Technology, Computer Support option. This program is detailed in the Business Technology Department section of this catalog.

Courses

Computer Applications (CAPP)

U 115 (CRT 115T) MS Word 3 cr. Offered autumn and spring. Prereq., CAPP 134 (CRT 108). Analysis of the concepts of advanced work processing document production underlying mastery of the software. Business-related application projects utilizing critical thinking included. Speed and timing component to increase skills essential for employment.

U CAPP 120 (CRT 100) Introduction to Computers 2 cr. Offered autumn and spring. Introduction to computer terminology, hardware, and software, including wire/wireless communications and multimedia devices. Students utilize word processing, spread sheet, database, and presentation applications to create projects common to business and industry in a networked computing environment. Internet research, email usage, and keyboarding proficiency are integrated.

U CAPP 134 (CRT 108) Basic MS Word 2 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or basic computer experience and consent of instr. Preparation of business forms, correspondence, mail merges, columnar projects, and reports using up-to-date software.

Business related application projects, graphics, and printer operation are included.

U CAPP 156 (CRT 180T) MS Excel 3 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or 103T; and M 090 (MAT 005D) or M 095 (MAT 100D). Emphasis on the use of workbooks and sheets to solve business problems. Includes projects relating to data and graphs/charts.

Computer Technology (CRT)

U 111 Fluency in Information Technology 3 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or demonstrated computing experience. Introduces the skills and concepts of information technology, both from practical and a more theoretical point of view. During lectures and interactive computer labs, students will explore a wide range of digital and information technologies, including common PC applications, networking, databases, privacy, and security. Credit not allowed for both CRT 111 and CS 111.

U 112 Operating System Fundamentals 3 cr. Offered spring. Prereq. CAPP 120 (CRT 100) or demonstrated computing experience. Introduction to operating system concepts through the use of contemporary software. Emphasizes file system management, networking, installation, maintenance, management, and disaster recovery practices using both the command interpreter and graphical user interface.

U 121 Introduction to Programming 3 cr. Offered autumn and spring. Prereq., M 095 (MAT 100D) and demonstrated computing experience. An introduction to object-oriented programming using an even-driven paradigm. Basic concepts of control structures, data handling, documentation, and error control. Fundamentals of algorithm design and structured software development.

U 122E Ethics and Information Technology 3 cr. Offered spring. Prereq., WRIT 101 (WTS 101). Exploration of ethical issues in the field of computing. Skills needed to identify and analyze various ethical concerns. Standard ethical concepts and theories, methods of ethical analysis. Strong emphasis on practical application of the ethical process.

U 151 Networking Basics 3 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or demonstrated computer experience. Introduction to networking field including terminology; protocols; local-area and wide-area networks; the OSI model; topologies; IP addressing; cabling and cabling tools; routers and router programming; Ethernet and network standards; and wireless technologies.

U 152T Routers and Routing Basics 3 cr. Offered spring. Prereq., CRT 151 and CRT 112T or consent of instr. Covers router theory and technologies including configurations, IOS software management, routine protocol configuration, TCP/IP, access-lists and introduction to LAN switching.

U 172 Introduction to Computer Modeling 3 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or demonstrated computing experience. Problem solving and data modeling using computer productivity software. Emphasis using spreadsheets and databases for data analysis. Formal presentation of results. Credit not allowed for both CRT 172 and CS 172.

U 175 Geospatial Technologies 3 cr. Offered Spring. Basics of geospatial technologies; remotely sensed imagery, GIS, and GPS and how each of the individual areas can be used together to analyze spatial datasets. Students will explore a wide range of spatial data and will learn to apply these data sets to real-world solutions.

U 181T Introduction to Database Software 2 cr. Offered intermittently. Prereq., CAPP 120 (CRT 100). Basics of using a current database software package to solve business problems.

U 182T Computer Aided Design and Drafting 2 cr. Offered autumn. Prereq., CAPP 120 (CRT 100) or demonstrated computer experience. An introduction to computer aided design and drafting software for production of drawings and plans for architecture and engineering systems. Fundamentals of two dimensional drafting and drawing management for professional design.

U 184 Civil Design Technologies 4 cr. Offered spring. prereq. CRT 182T. Introduces students to computer aided design software for common survey and engineering design and drafting applications. Topics include collection of survey data; the coordinate geometry system; surfaces; subdivision and land planning; road design and corridor modeling; utilities; site grading and drainage; mapping; and 3D visualization.

U 188T Computers and Law 3 cr. Offered autumn. Prereq., CAPP 120 (CRT 100)and LEG 185T. Intermediate concepts of computer systems, operating systems, graphical environments, electronic mail, Internet, and file management. A variety of applications including word processing, spreadsheet, database, presentation, and law-related software are included.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study Variable cr. (R-6)

U 203 Systems Analysis 3 cr. Offered spring. Prereq., CRT 172. Analysis of the system development life cycle. Emphasis on planning, analyzing, designing, implementing and supporting information systems to meet business requirements. Covers feasibility studies, time and cost estimates, modeling tools, design tools, implementation and support strategies. A simulated business design project will be developed.

U 205T Food Service Management Computer Applications 2 cr. Offered spring. Prereq., CAPP 120 (CRT 100). Introduction to computerized applications relevant to the food service industry. Includes spreadsheet, recipe management and word processing software;

appropriate industry reports, create menus and fliers; import, export and scale recipes; analyze nutrition; and calculate food cost.

U 209T Project Management 3 cr. Offered intermittently. Prereq., CRT 172. Investigation of topics in project management including scope, definition, risk, procurement and the RFP. Management of time, cost, quality, and human resources. Concepts are reinforced with PM software.

U 210T Advanced Operating Systems 3 cr. Offered autumn. Prereq., CRT 112T, 151. In-depth study of a secure, multi-user, client-based network operating system. Topics include installation, administration of resources, performance, network services, and security.

U 215T Server Technologies 3 cr. Offered autumn. Prereq., CRT 112T, CRT 151. Server technologies commonly used in local area networking. Topics include installation, administration, storage, application services, network services, security, reliability, and availability.

U 216T Network Infrastructure 3 cr. Offered spring. Prereq., CRT 210T. Principles and implementation of enterprise networking services. Topics include Protocol Binding, DNS, DHCP, WINS, Remote Access, IP Routing, IP Security, Network Address Translation, and Certificate Services.

U 222T Security Seminar 3 cr. Offered spring. Prereq., CRT 210T. Examination of general information technology security concepts. Topics include access control, authentication, attack methods, remote access, web security, wireless networks, cryptography, internal infrastructure security, and external attacks. Security procedures, organizational policies, risk management and disaster recovery addressed.

U 231 Object-Oriented Programming 3 cr. Offered autumn. Prereq., CRT 121. Design and implementation of software using College of Technology Department of Applied Computing and Electronics 223 object-oriented programming practices. The class framework is used to apply the object-oriented techniques of encapsulation, polymorphism, and inheritance.

U 251T Switching Basics and Intermediate Routing 3 cr. Offered autumn. Prereq., CRT 152T. Covers router configurations including advanced IP addressing techniques, variable length subnet masking, intermediate routing protocols, Ethernet switching, virtual LANs, spanning-tree protocol, and VLAN trucking protocol.

U 252T WAN Technologies 3 cr. Offered spring. Prereq., CRT 251T. Project-based course in wide-area networking including advanced IP addressing techniques, network address translation, port address translation, DHCP, WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management, and introduction to optical networking.

U 255T Advanced Routing 3 cr. Offered intermittently. Prereq., consent of instr. Analysis, design, and implementation of inter-network routing techniques. Topics include scalability, routing protocols, optimization, and security.

U 256T Remote Access 3 cr. Offered intermittently. Prereq., consent of instr. Analysis, design, and implementation of remote access technologies including connectivity, access control, bandwidth utilization, fault tolerance, redundancy, and integrity.

U 257T Multilayer Switching 3 cr. Offered intermittently. Prereq., consent of instr. Analysis, design, and implementation of reliable, scalable, multiplayer switched LANs. Topics include VLANS, switching protocols, routing, redundancy, multicasting, quality of service, security, and transparency.

U 258T Network Troubleshooting 3 cr. Offered intermittently. Prereq., consent of instr. Network troubleshooting using baselines, configuration documentation, and a building-block approach through analysis of each layer in the OSI networking model.

U 260 Digital Publishing and Design 3 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or 103T or consent of instr. A comprehensive foundation of layout and design principles to integrate digital media essential for effective print-based and web-based business publications.

U 263 Web Design and Development 3 cr. Offered autumn and spring. Prereq., CAPP 120 (CRT 100) or consent of instr. Provides a background and foundation skills required for designing and implementing Web sites for public and private organizations. Marketing and design techniques are applied using state-of-the-art software.

U 270 C++ Programming 3 cr. Offered intermittently. Prereq., CRT 121. Object oriented programming using C++. Implementation of structured programming concepts along with construction of classes to create data types for defining objects.

U 275 Database Design and Implementation 3 cr. Offered autumn. Prereq., CRT 172 or consent of instr. Relational database design including: requirements analysis, data structure, entity relationships, normalization, relational algebra and integrity. Physical implementation focusing on data storage; retrieval and modification; concurrency; optimization; security; SQL; and XML.

U 285T PC Hardware Support 3 cr. Offered autumn. Prereq., CRT 103T, CRT 112T. In-depth study of personal computer hardware. Focus on field replaceable components. Topics include: storage devices, processors, system boards, memory, ports, cabling, power supplies, multimedia devices, printers, and troubleshooting.

U 289T Professional Certification 1 cr. Offered spring. Prereq., consent of instr. Review objectives of an information technology industry-based professional certification. Certification objectives, preparation strategies, and exam strategies included. Course can be repeated for different industry-based professional certifications.

U 290T Computer Technology Internship 2 cr. Offered autumn and spring. Prereq., last semester in program, minimum of "C" in all CRT courses, and approval of program director. Not open to non-majors. On-the-job training in positions requiring information technology competencies. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Students work a minimum of six hours each week at an approved site and attend a weekly one-hour seminar.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296T Independent Study 1-6 cr. (R-6) Offered intermittently.

Electronics Technology (EET)

U 111 Basic Electronics 4 cr. Offered autumn. Study of current flow, direct current circuits, alternating current circuits, and concepts of power. The introduction of time-varying currents and impedances using circuit analysis and problem solving techniques.

U 112 Electronics Lab I 3 cr. Offered autumn. Coreq., EET 111. The use of basic electronic test instruments and troubleshooting. Building circuits using resistive, capacitive and inductive components.

U 113 Circuits Lab 1 cr. Offered autumn. Coreq., EET 111. Covers proper techniques of soldering and tool usage. Electronic technical language, hands on troubleshooting skills and basic electronic measurements are involved.

U 121 Semiconductors 4cr. Offered spring. Prereq., EET 111, 112. Coverage of diode, bipolar transistors and field effect transistor circuits used n electronic applications. The study and analysis of the components and circuits used in semiconductor electronics and an introduction to operational amplifiers.

U 122 Electronics Lab II 3 cr. Offered spring. Coreq., EET 121. Bread-boarding, troubleshooting and measuring the electronic characteristics of diodes, bi-polar transistors, JFETS and operational amplifiers. The impact of impedance matching, filtering and power effects on stages of electronic circuits will be covered.

U 123 Amplifier and Power Supply Lab 1 cr. Offered spring. Coreq., EET 121. An audio amplifier and dual regulated power supply will be built throughout the semester.

U 195T Special Topics 1-6 cr. (R-6) Offered Intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 227 Digital Electronics 4 cr. Offered autumn. Prereq., EET 103. Explores digital electronic circuits and devices that make up a computer system. Topics include binary and hexadecimal number systems, Boolean algebra and digital logic theory, simple logic circuits, combinational logic, and sequential logic. Also covered is the analog-to-digital and digital-to-analog interfaces between a digital system and the real (analog) world. Includes hands-on labs.

U 232 Microprocessors 4 cr. Offered spring. Prereq., EET 227. Explores microprocessor architecture, design, and operations; machine language and assembly language programming; hardware input/output interfacing; and design applications. Includes hands-on labs incorporating an individual student trainer based on the Intel 8085A microprocessor.

U 234T Automatic Controls 4 cr. Offered autumn. Prereq., EET 227. Explores the theory, terminology and components used in automatic control of industrial machines and processes. Uses the servomechanism as a representative control system to analyze open-loop, closed-loop, proportional, integral, and differential control strategies. The use of transducers and computers in automatic control systems in the industrial control setting is emphasized.

U 240T Robotics 3 cr. Offered spring. Prereq. or coreq., EET 232, EET 234T or consent of instr. Explores physical and operating characteristics of a robot. Topics include robot configurations, power supplies, control systems, end effectors, sensors, stepper motors and stepper controls. Robot programming also is covered and a typical robot is programmed to perform repetitive actions. Includes hands-on labs.

U 241T Instrumentation 3 cr. Offered spring. Prereq., EET 227T. The study and analysis of industrial measuring and process control instrumentation in both analog and digital form. Proper selection, use and interpretation of measurement equipment and data.

U 242T Electronics Lab III 3 cr. Offered spring. Coreq., EET 241T Bread-boarding, building, repairing and troubleshooting electronic circuits using the equipment normally found in an electronic shop. Correlating measurement information in solving electronic problems.

U 260 Data Communications 3 cr. Offered autumn. Prereq., EET 103T. Explores the principles, applications, and theory of data communication systems. Topics include communication concepts and terminology, analog and digital channel characteristics, signaling techniques for analog and digital data, communication codes, transmission media, and standards and protocols for various data communication systems including computer networks, and the public switched telephone network. Includes hands-on labs.

U 270T Wireless Communications 4 cr. Offered autumn. Prereq., EET 103T. Explores audio and radio frequency (RF) circuits. Topics include AM and FM signal modulation and demodulation, RF transmitters, RF receivers, RF amplifiers, audio amplifiers, oscillators, mixers, and antennas. Includes hands-on labs.

U 280T Electronics Capstone 2 cr. Offered spring. Prereq., EET 227T. Completion of project prototypes. Includes comprehensive final project from conception to market.

U 295T Special Topics 1-6 cr. (R-6) Offered Intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Energy Technology (NRG)

U 101 Introduction to Energy Systems I 3 cr. Autumn only. A survey of traditional energy systems and technologies. Introduces conventional primary energy sources--coal, oil, gas, nuclear--and examines the technologies used to capture, convert, distribute, store, and utilize these energy sources. Consideration is given to physical and engineering aspects, as well as economic, social environmental, and political factors that determine the sustainability of these sources.

U 102 Introduction to Energy Systems II 3 cr. Prereq., NRG 101 or consent of instructor. Spring only. Same as CCS 102. A survey of renewable energy systems and technologies. Addresses physical and technical aspects of wind, solar, geothermal, hydro, tidal, biological, and wave energy systems. Consideration is given to engineering, economic, social, environmental, and political factors that determine implementation and sustainability. Credit not allowed for both NRG 102 and CCS 102.

U 191 Practicum 2 cr. Offered summer only. Prereq., consent of instructor. Same as CCS 191. The practicum provides students with a supervised field experience. Students will gain hands-on experience with energy specific technologies. This opportunity increases students' occupational awareness and professionalism.

U 195 Special Topics 1-6 cr (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study 1-6 (R-6) Offered intermittently.

U 213 Power Systems Technology 3 cr. Autumn only. A review of the principles of electricity, magnetism, and transformer action; the application of these principles in the operation of single-phase and three-phase ac/dc motors, alternators, and generators; and the control methods for these electrical devices.

U 241 Alternative Fuels 3 cr. Autumn only. Identifies alternative fuel sources; explores fuel characteristics; identifies and evaluates the infrastructure required to produce, store, distribute, and use them; discusses emission and conversion efficiencies; assesses social, environmental, and economic impacts.

U 242 Solar and Wind Systems 3 cr. Spring only. Same as CCS 242. Introduction to the fundamentals of solar and wind energy for the design and installation of solar and wind systems. Includes an overview of the physics and chemistry of the resource and the technology, and will prepare students for a career in renewable energy or for installing a renewable energy system on their own home. Credit not given for NRG 242 and CCS 242.

U 290 Internship 2 cr. Offered spring. Consent of instructor required. Same as CCS 290. Students complete a field experience at an energy-related site or in an energy-related industry. A series of career development seminars and activities related to the field experience are completed in parallel.

U 295 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296 Independent Study 1-6 cr. (R-6) Offered intermittently.

Department of Business Technology

- Special Degree Requirements
- Courses

Brian Larson, Chair

The Business Technology Department of The University of Montana College of Technology collaborates with business and industry to prepare graduates to compete in and contribute to a dynamic global society. The department attracts and retains skilled faculty with the professional experience and theoretical background to utilize diverse instruction which reflects current and emerging business practices. Faculty actively engage student in the learning process by integrating experiential technical education and empowering students to adapt to an ever-changing world.

Students may choose from six Associate of Applied Science degree programs and four Certificate of Applied Science programs. Degree programs include Accounting Technology with an option in Computer Support; Administrative Management; Food Service Management; Medical Information Technology with options in Health Information Coding Specialty, and Medical Administrative Assisting; Paralegal Studies; and Management with options in Entrepreneurship, and Sales and Marketing. Certificate of Applied Science programs include Culinary Arts, Customer Relations, Medical Reception, and Sales and Marketing.

Students may attend classes on U of M College of Technology East and UM Mountain campuses. Programs may contain day, evening and weekend classes.

Special Degree and Certificate Requirements

General education requirements are integrated into the following programs. Refer to the Academic Policies and Procedures section of this catalog for the specific requirements.

Accounting Technology-A.A.S. Degree

Lisa Swallow, Director

Almost all organizations need either in-house financial staff or outside bookkeeping/accounting services to aid with financial data compilation and reporting. Bookkeepers and accountants maintain financial records and often participate in strategic planning and other fiscal decisions. Graduates work in small businesses as full charge bookkeepers or large businesses as members of accounting staffs. They are required to communicate extensively with vendors, clients, and employees and are often key players in business projections, cash forecasting, and budgeting. This program provides students the marketable skills for employability in a variety of organizations including service, retail, non-profit, governmental, and accounting firms. Program graduates use technology to gather, compile and analyze data. They communicate budgetary and accounting information to non financial colleagues and managers. Students considering this program should be analytical, detail-oriented, and enjoy using current technology.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	A	S
ACTG 101(ACC 132T) Accounting Procedures I	4	
ACTG 201 (ACC 133T) Principles of Financial Accounting		4
ACTG 180 (ACC 134T) Payroll Accounting Applications	-	3
BUS 103S Principles of Business	-	3
BUS 135T Business Law	-	3
BUS 160S Issues in Sustainability	3	-
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 156 (CRT 180T) MS Excel	-	3
M 115 (MAT 117) Probability & Linear Math	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	15	16
Second Year	**A**	**S**
ACTG 215 (ACC 232T) Foundations of Government and Not for Profit Accounting	-	3
ACTG 202 (ACC 234T) Principles of Managerial Accounting	3	-
ACTG 211 (ACC 236T) Income Tax Fundamentals	4	-
ACTG 250 (ACC 250T) Accounting Capstone	-	4
ACTG 291 (ACC 195T) Financial Planning	3	
ACTG 298 (ACC 290T) Accounting Internship	-	2
COM 160A Oral Communications	-	3
CRT 172 Introduction to Computer Modeling	3	-
ECNS 201S (ECON 111S) Principles of Microeconomics	3	-
WRIT 240E (WTS 240) Argument and Contemporary Issues	-	3
Total	16	15

Computer Support Option

This option provides students with a technical background in computer hardware, operating systems, Internet technologies, networking/telecommunications, and application software. In addition to accounting technician training, students selecting this option will be prepared to manage and maintain local area networks and install, maintain and troubleshoot software. They will be trained to configure PC hardware as well as to utilize and secure various operating systems.

Students considering the rigorous program should be analytical, technology-oriented and enjoy detail. Upon successful completion of the A.A.S. - Accounting Technology with Computer Support Option, the student will also be awarded a Computer Technician Certificate and will have the opportunity to complete an industry-based certification exam.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	A	S
ACTG 101(ACC 132T) Accounting Procedures I	4	
ACTG 201 (ACC 133T) Principles of Financial Accounting	-	4
ACTG 180 (ACC 134T) Payroll Accounting	-	3
BUS 103S Principles of Business	3	-
CRT 111 (CRT 103T) Fluency in Information Technology	3	-
CRT 112 Operating System Fundamentals	-	3
CRT 151T Networking Basics	-	3
CAPP 156 (CRT 180T) MS Excel	-	3
M 115 (MAT 117) Probability and Linear Math	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	16	16
Second Year	**A**	**S**
ACTG 202 (ACC 234T) Principles of Managerial Accounting	3	-
ACTG 211 (ACC 236T) Income Tax Fundamentals	4	-
ACTG 250 Accounting Capstone	-	4
ACTG 298 (ACC 290T) Accounting Internship	-	2
COM 160A Oral Communications	3	-
CRT 121 Introduction to Programming	-	3
CRT 122E Ethics and Information Technology	-	3
CRT 172 Introduction to Computer Modeling	-	3
CRT 210T Advanced Operating Systems	3	-
CRT 285T PC Hardware Support	3	-
CRT 289T Professional Certification A+	-	1
Total	16	16

Administrative Management-A.A.S. Degree

Cheryl Galipeau, Director

The Administrative Management Program allows students to advance the career proficiencies acquired in the Customer Relations certificate program by earning an Associate of Applied Science Degree. The Administrative Management program prepares graduates to meet the administrative and information needs of business and industry. Students gain proficiency in computer, management, and information technologies. They complete an academic component to gain an understanding of professional responsibilities in our global society. Graduates of this program become vital members of executive teams with the ability to assume supervisory, organizational, and communication roles in the coordination of administrative services. An Associate of Applied Science Degree in Administrative Management opens opportunities for graduates in a variety of business settings.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	A	S
BUS 103S Principles of Business	3	-
BUS 106T Records and Information Management	2	-
BUS 135T Business Law	-	3
BUS 140T Customer Service	-	4
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 134 (CRT 108) Basic MS Word	-	2
CAPP 156 (CRT 180T) MS Excel	-	3
COM 150S Interpersonal Communications	-	3
HMR 110T Introduction to Public Relations	3	-
M 115 (MAT 117) Probability and Linear Math	3	-
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-

Total	16	15

Second Year	A	S
ACTG 100 (ACC 131T) Essentials of Accounting	4	-
BUS 240T Administrative Support for the Automated Office	2	-
BUS 243T Psychology of Management and Supervision	4	-
CAPP 115T MS Word	3	-
COM 160A Oral Communications	-	3
CRT 172 Introduction to Computer Modeling	3	-
CRT 260 Digital Publishing and Design	-	3
CRT 263 Web Design and Development	-	3
HMR 290T Administrative Management Internship	-	2
WRIT 240E (WTS 240) Argument and Contemporary Issues	-	3
Total	16	14

Customer Relations-Certificate of Applied Science

Cheryl Galipeau, Director

The Customer Relations program provides students with the skills to promote excellent customer relations in business settings. Courses related to the service industry, service-level decisions, formulation of service policies, customer service management, and staff development are included. Students gain knowledge of customer care, effective communication, and the importance of public relations to promote a positive company image. Students develop an understanding of challenges and conflicts while servicing both internal and external customers. Emphasis in business, computers, and psychology provide a solid background for customer relations positions in the current business environment.

A Certificate of Applied Science is awarded for successful completion of the program.

Students entering autumn semester may complete the program in two semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	A	S
BUS 103S Principles of Business	3	-
BUS 106T Records and Information Management	2	-
BUS 135T Business Law	-	3
BUS 140T Customer Service	-	4
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 134 (CRT 108) Basic MS Word	-	2
CAPP 156 (CRT 180T) MS Excel	-	3
COM 150S Interpersonal Communications	-	3
HMR 110T Introduction to Public Relations	3	-
M 115 (MAT 117) Probability and Linear Math	3	-
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	16	15

Culinary Arts-Certificate of Applied Science

Tom Campbell, Director

The Bureau of Labor Statistics indicates the hospitality field is America's number one retail employer and predicts its growth will increase 30 percent over the next two years. Students entering the Culinary Arts Certificate program or Food Service Management degree program prepare for careers in the hospitality industry. Students develop skills to seek employment in hotels, restaurants, resorts, casinos, clubs, catering, and corporate dining. Culinary careers encompass hospitality management, sales, product development, or entrepreneurship. To meet the growing demand of the hospitality industry, two program options are available.

Students may earn a Culinary Arts Certificate of Applied Science or a Food Service Management Associate of Applied Science degree.

The Culinary Arts program is two semesters and provides an introduction to the field of culinary arts. Students prepare for an entry-level position in the expanding and challenging food service industry. This program incorporates comprehensive hands-on learning experiences complemented by supportive courses designed to prepare students for a wide range of career opportunities. This program allows a seamless transition into the Food Service Management degree.

Students are awarded a Certificate of Applied Science after successfully completing the program.

Students may enter the Culinary Arts certificate program autumn semester and early application is encouraged.

Autumn Entry:

First Year	A	S
CAPP 120 (CRT 100) Introduction to Computers	2	-
COM 150S Interpersonal Communication	3	-
CUL 151T Introduction to Food Service Industry	5	-
CUL 175T Food Service Sanitation	2	-
FSM 180T Nutritional Cooking	-	3
M 115 (MAT 117) Probability and Linear Math	3	-
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Food Station Experience from following courses:		
CUL 156T Dining Room Procedures		
CUL 157T Pantry and Garde-Manger		
CUL 158T Short Order Cookery		
CUL 160T Soups, Stocks, and Sauces		
CUL 161T Meats and Vegetables		
CUL 165T Baking and Pastry	-	10
Total	18	16

Food Service Management-A.A.S. Degree

Tom Campbell, Director

The Food Service Management program culminates in an Associate of Applied Science Degree. This program combines theory, practical training, and industry experience to prepare students for entry-level and management positions in the diverse and dynamic hospitality industry. The degree program is designed to continue principles taught in the culinary arts certificate program. The spectrum of learning is expanded to include more in-depth professional studies thereby enhancing employment options. Accreditation by the American Culinary Federation ensures graduates' eligibility for certification as an ACF "Certified Culinarian".

Technical subject areas include introduction to the industry, basic baking, patisserie, cost control, dining room service, garde manger, nutritional cooking, fundamental cooking principles, short order cookery, a la carte stations, menu planning, supervised internship, and the recognized sanitation certificate awarded by the National Restaurant Association Educational Foundation.

The Associate of Applied Science degree is awarded upon successful completion of the program.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry :

First Year	A	S
CAPP 120 (CRT 100) Introduction to Computers	2	-
COM 150S Interpersonal Communication	3	-
CUL 151T Introduction to Food Service Industry	5	-
CUL 175T Food Service Sanitation	2	-
FSM 180T Nutritional Cooking	-	3
M 115 (MAT 117) Probability and Linear Math	3	-
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Food Station Experience from following courses:		
CUL 156T Dining Room Procedures		
CUL 157T Pantry and Garde-Manger		
CUL 158T Short Order Cookery		
CUL 160T Soups, Stocks, and Sauces		
CUL 161T Meats and Vegetables		

CUL 165T Baking and Pastry	-	10
Total	18	16
Second Year	**A**	**S**
BUS 234T Psychology of Management and Supervision	-	4
CRT 205T Food Service Management Computer Applications	-	2
FSM 270 Purchasing and Cost Controls	5	-
FSM 271 Food Service Management Capstone	-	4
FSM 275T Patisserie	-	2
FSM 290T Internship	-	4
Food Station Experience from following courses:		
CUL 156T Dining Room Procedures		
CUL 157T Pantry and Garde-Manger		
CUL 158T Short Order Cookery		
CUL 160T Soups, Stocks, and Sauces		
CUL 161T Meats and Vegetables		
CUL 165T Baking and Pastry	10	-
Total	15	16

Management-A.A.S. Degree

Brian Larson, Director

The Management program provides graduates with the skills required to own and operate their own businesses or become sales representatives and managers of retail organizations.

Entrepreneurship Option

Students selecting the Entrepreneurship option will focus on venture initiation, constructing business plans, generating financing, and beginning operations. Areas of study focus on the critical factors involved in accounting, sales strategy, advertising and marketing issues complemented with supervisory skills. Students gain knowledge of basic disciplines of business through both classroom and hands-on training. Computer technology and web development are added components to assist students to compete in today's changing business climate. Applications of the elements learned are included where practical. Successful graduates will depart with a comprehensive business plan and presentation skills required to approach financiers.

The Associate of Applied Science degree is awarded upon successfully completing the program.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	**A**	**S**
ACTG 101 (ACC 132T) Accounting Procedures I	4	
ACTG 201 (ACC 133T) Principles of Financial Accounting		4
BUS 112T Professional Sales	2	-
BUS 113T Psychology of Selling	-	3
BUS 125T Principles of Marketing	3	-
BUS 135T Business Law	-	3
CAPP 120 (CRT 100) Introduction to Computers	2	-
CRT 172 Introduction to Computer Modeling	-	3
M 115 (MAT 117) Probability and Linear Math	3	-
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	-	3
WRIT 101 (WTS 101) College Writing I	3	-
Total	17	16
Second Year	**A**	**S**
ACTG 180 (ACC 134T) Payroll Accounting	3	-
ACTG 291 (ACC 295T) Financial Planning	-	3
BUS 224T Advertising and Promotion	-	3
BUS 243T Psychology of Management and Supervision	4	-
BUS 250T Entrepreneurship	-	3

BUS 290T Management Internship	2	-
COM 160A Oral Communications	-	3
CRT 260 Digital Publishing and Design	3	-
CRT 263 Web Design and Development	-	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3	-
WRIT 240E (WTS 240E) Argument and Contemporary Issues	-	3
Total	15	18

Sales and Marketing Option

Students selecting the Sales and Marketing option combine the technical sales and promotional related courses as a foundation for seeking middle to advanced positions in the sales and marketing field. Students will be required to complete sales presentations using appropriate techniques applying consultative and negotiation selling skills. Students will study and demonstrate effective sales techniques, plan and implement effective visual displays and presentations, and develop strong record keeping skills and management of accounts. Additional emphasis in computer skills, accounting, and technical writing provide students the needed edge for this competitive career.

An Associate of Applied Science degree is awarded to students successfully completing the program.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	**A**	**S**
ACTG 101 (ACC 132T) Accounting Procedures I	4	
ACTG 201 (ACC 133T) Principles of Financial Accounting		4
BUS 109T Visual Merchandising and Display	-	3
BUS 112T Professional Sales	2	-
BUS 113T Psychology of Selling	-	3
BUS 125T Principles of Marketing	3	-
CAPP 120 (CRT 100) Introduction to Computers	2	-
CRT 172 Introduction to Computer Modeling	-	3
HMR 110T Introduction to Public Relations	-	3
M 115 (MAT 117) Probability and Linear Math	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	17	16
Second Year	**A**	**S**
ACTG 180 (ACC 134T) Payroll Accounting	3	-
BUS 135T Business Law	-	3
BUS 224T Advertising and Promotion	-	3
BUS 243T Psychology of Management and Supervision	-	4
BUS 290T Management Internship	2	-
COM 160A Oral Communications	3	-
CRT 260 Digital Publishing and Design	3	-
CRT 263 Web Design and Development	-	3
ECNS 201S (ECON 111S)Principles of Microeconomics	3	-
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	3	-
WRIT 240E (WTS 240E) Argument and Contemporary Issues	-	3
Total	17	16

Sales and Marketing-Certificate of Applied Science

Brian Larson, Director

Students in the Sales and Marketing program are trained in sales and supportive tasks relating to retail or wholesale organizations. They study the application of the latest counselor selling techniques to assist clients in meeting needs. The curriculum also involves marketing activities, bookkeeping functions, and merchandising skills.

Students are awarded a Certificate of Applied Science after successfully completing the program.

The Sales and Marketing program satisfies the requirements for the first year of the Management degree, Sales and Marketing option.

Students entering autumn semester may complete the program in two semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	A	S
ACTG 101 (ACC 132T) Accounting Procedures I	4	-
ACTG 201 (ACC 133T) Principles of Financial Accounting	-	4
BUS 109T Visual Merchandising and Display	-	3
BUS 112T Professional Sales	2	-
BUS 113T Psychology of Selling	-	3
BUS 125T Principles of Marketing	3	-
CAPP 120 (CRT 100) Introduction to Computers	2	-
CRT 172 Introduction to Computer Modeling	-	3
HMR 110T Introduction to Public Relations	-	3
M 115 (MAT 117) Probability and Linear Math	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	17	16

Medical Information Technology- A.A.S. Degree

Brian Larson, Interim Director

The Medical Information Technology program provides three options for students with the flexibility of choosing a career in health information coding specialty, medical administrative assisting or medical transcription. The course of study includes general as well as administrative duties of a medical facility. These duties involve scheduling appointments, interacting with patients, submitting patient insurance claims using current coding procedures, and maintaining medical and financial records. Additionally, students are exposed to the principles of medical ethics and medical legal issues facing health providers. All Students in the Medical Information Technology degree options acquire work-related skills through internship experiences. Students successfully completing this program are awarded the Associate of Applied Science degree.

Health Information Coding Specialty Option

Students are trained to analyze health records and to accurately abstract and code procedures and diagnoses utilizing legal and regulatory standards. An understanding of anatomy, medical terminology and disease processes will provide students with the necessary tools to determine correct codes and sequences.

Upon completion of this program, students are eligible to sit for national certification examinations offered through American Health Information management Association. Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Autumn Entry:

First Year	A	S
CAPP 120 (CRT 100) Introduction to Computers	-	2
M 115 (MAT 117) Probability and Linear Math	-	3
MED 152T Insurance Processing for Coding Specialists	-	2
MED 154T Beginning Medical Terminology	2	-
MED 155T Medical Software Applications	-	1
MED 161T Medical Administrative Procedures	4	-
MED 165T Healthcare Data and Content	-	2
PSYX 100S (PSY 110S) Introduction to Psychology		
SCN 201N-202N Anatomy and Physiology I	4	
SCN 202N Anatomy and Physiology II		4
WRIT 121 (WTS 115) Introduction to Technical Writing	3	
Total	17	14
Second Year	**A**	**S**
BIOL 106N Medical Microbiology	-	3
COM 150S Interpersonal Communications	-	3

MED 210T Basic ICD Coding	3	-
MED 217T Terminology for Health Professions	3	-
MED 220T Basic Ambulatory Coding	3	-
MED 240T Intermediate ICD Coding	-	3
MED 250T Intermediate CPT Coding	-	3
MED 290 Internship (180 hours)	-	3
PHA 160T Survey of Pharmacy Products	3	-
WRIT 240E (WTS 240E) Argument and Contemporary Issues	3	-
Total	15	15

Medical Administrative Assisting Option

Medical administrative assistants are trained to effectively greet patients, supervise office personnel, schedule appointments, post charges and payments, submit insurance claims using current coding procedures, maintain patient records, calculate payroll, create and update the office procedures manual, assist in improving work flow and office efficiencies, and transcribe letters and patient chart notes. Students successfully completing the program are awarded the Associate of Applied Science degree. Students may enter either autumn or spring semester.

Autumn Entry:

First Year	**A**	**S**
BUS 106T Records and Information Management	2	-
BUS 140T Customer Service	-	4
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 134 (CRT 108) Basic MS Word	2	-
CAPP 115T (CRT 115T)MS Word	-	3
M 115 (MAT 117) Probability and Linear Math	-	3
MED 153T Insurance Processing	-	3
MED 154T Beginning Medical Terminology	2	-
MED 155T Medical Software Applications	-	1
MED 161T Medical Administrative Procedures	4	-
SCN 115 Anatomy	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	15	17
Second Year	**A**	**S**
ACTG 100 (ACC 131T)Essentials of Accounting	4	-
ACTG 180 (ACC 134T) Payroll Accounting	-	3
BUS 240T Administrative Support for the Automated Office	2	-
BUS 243T Psychology of Management and Supervision	4	-
COM 150S Interpersonal Communications	3	-
COM 160A Oral Communications	-	3
CRT 172 Introduction to Computer Modeling	-	3
MED 165T Healthcare Data and Content	-	2
MED 217T Terminology for Health Professions	3	-
MED 290T Medical Information Internship	-	3
Total	16	14

Spring Entry:

First Year		**S**
BUS 106T Records and Information Management	-	2
CAPP 120 (CRT 100) Introduction to Computers	-	2
M 115 (MAT 117) Probability and Linear Math	-	3
MED 154T Beginning Medical Terminology	-	2
SCN 115 Anatomy	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	-	3
Total	-	15
Second Year	**A**	**S**

ACTG 100 (ACC 131T) Essentials of Accounting	-	4
BUS 140T Customer Service	-	4
BUS 240T Administrative Support for the Automated Office	2	-
COM 150S Interpersonal Communications	3	-
COM 160A Oral Communications	3	-
CAPP 134 (CRT 108) Basic MS Word	2	-
CAPP 115T MS Word	-	3
MED 153T Insurance Processing	-	3
MED 155T Medical Software Applications	-	1
MED 161T Medical Administrative Procedures	4	-
MED 165T Healthcare Data and Content	-	2
MED 217T Terminology for Health Professions	3	-
Total	17	17
Third Year	**A**	
ACTG 180 (ACC 134T) Payroll Accounting	3	-
BUS 243T Psychology of Management and Supervision	4	-
CRT 172 Introduction to Computer Modeling	3	-
MED 290T Medical Information Internship	3	-
Total	13	-

Medical Transcription Option

Medical transcriptionists are trained to work in a variety of settings utilizing an understanding of medical terminology along with administrative and transcription skills. Preparation includes transcription of medical charts, reports and correspondence as well as administrative office duties for maintaining patient records and complying with legal policies and HIPAA guidelines.

Student successfully completing the program are awarded the Associate of Applied Science degree. Students may enter either autumn or spring semester.

Autumn Entry

First Year	**A**	**S**
BUS 106T Records and Information Management	-	2
BUS 120T Transcription and Text Editing	-	2
COM 150S Interpersonal Communications	3	-
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 134 (CRT 108) Basic MS Word	2	-
CRT 115T Advanced Document Production	-	3
M 115 (MAT 117) Probability and Linear Math	-	3
MED 154T Beginning Medical Terminology	2	-
MED 161T Medical Administrative Procedures	4	-
MED 165T Healthcare Data and Content	-	2
SCN 115 Anatomy	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	16	15
Second Year	**A**	**S**
ACTG 100 (ACC 131T) Essentials of Accounting	4	-
CRT 172 Introduction to Computer Modeling	3	-
MED 217T Terminology for Health Professions	3	-
MED 256T-257T Medical Transcription I, II	3	3
MED 290T Medical Information Internship	-	3
PHA 160T Survey of Pharmacy Products	3	-
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	-	3
WRIT 240E (WTS 240E) Argument and Contemporary Issues	-	3
Directed electives	-	3
Total	16	15
Directed Elective Options		
BUS 103S Principles of Business		3

BUS 240T Administrative Support for the Automated Office	2
CAPP 156 (CRT 180T) MS Excel	3
MED 152T Insurance Processing for Coding Specialists	2
MED 155T Medical Software Applications	1

Spring Entry:

First Year		**S**
CAPP 120 (CRT 100) Introduction to Computers	-	2
CAPP 134 (CRT 108) Basic MS Word	-	2
M 115 (MAT 117) Probability and Linear Math	-	3
MED 154T Beginning Medical Terminology	-	2
SCN 115 Anatomy	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	-	3
Total	-	15

Second Year	**A**	**S**
ACTG 100 (ACC 131T) Essentials of Accounting	-	4
BUS 106T Records and Information Management	-	2
BUS 120T Transcription and Text Editing	2	-
COM 150S Interpersonal Communication	3	-
CAPP 115T (CRT 115T) MS Word	3	-
MED 161T Medical Administrative Procedures	4	-
MED 165T Healthcare Data and Content	-	2
MED 256T Medical Transcription I	-	3
MED 217T Terminology for Health Professions	3	-
PHA 160T Survey of Pharmacy Products	3	-
WRIT 240E (WTS 240E) Arguments and Contemporary Issues	-	3
Total	18	14

Third Year	**A**
CRT 172 Introduction to Computer Modeling	3 -
MED 257T Medical Transcription II	3 -
MED 290T Medical Information Internship	3 -
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	3 -
Directed elective	3 -
Total	15 -

Directed Elective Options

BUS 103S Principles of Business	3
BUS 240T Administrative Support for the Automated Office	2
CAPP 156 (CRT 180T) MS Excel	3
MED 152T Insurance Processing for Coding Specialists	2
MED 155T Medical Software Applications	1

Medical Reception-Certificate of Applied Science

Brian Larson, Interim Director

The Medical Reception curriculum provides students with the skills needed to provide exceptional service to patients in a medical setting. In this role the essential duties performed include scheduling appointments, screening telephone calls, obtaining and entering patient registration information, releasing appropriate medical information, maintaining medical records and managing patient flow. Medical Reception students are instructed in the financial transactions of a practice and will have a clear understanding of all the activities in the billing and collection cycle. Students are provided a broad overview of medical law and the principles of medical ethics as well as the guidelines established by HIPAA.

Students successfully completing the program are awarded a Certificate of Applied Science.

Autumn Entry:

First Year	**A**	**S**
ACTG 100 (ACC 131T)Essentials of Accounting	4	-

BUS 106T Records and Information Management	-	2
BUS 140T Customer Service	-	4
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 134 (CRT 108) Basic MS Word	2	-
M 115 (MAT 117) Probability and Linear Math	-	3
MED 153T Insurance Processing	-	3
MED 154T Beginning Medical Terminology	2	-
MED 155T Medical Software Applications	-	1
MED 161T Medical Administrative Procedures	4	-
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	17	16

Spring Entry:

First Year		**S**
BUS 106T Records and Information Management	-	2
CAPP 120 (CRT 100) Introduction to Computers	-	2
M 115 (MAT 117) Probability and Linear Math	-	3
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	-	3
WRIT 121 (WTS 115) Introduction to Technical Writing	-	3
Total	-	13
Second Year	**A**	**S**
ACTG 100 (ACC 131T) Essentials of Accounting	4	-
BUS 140T Customer Service	-	4
CAPP 134 (CRT 108) Basic MS Word	2	-
MED 153T Insurance Processing	-	3
MED 154T Beginning Medical Terminology	2	-
MED 155T Medical Software Applications	-	1
MED 161T Medical Administrative Procedures	4	-
Total	12	8

Paralegal Studies-A.A.S. Degree

Tom Stanton, Director

This program is approved by the American Bar Association. The Paralegal Studies program prepares students for challenging and diverse careers in private law practices and in the law-related areas of business, industry, and government. The goals of the Paralegal Studies program are to enable students, through theoretical and practical legal education, to understand the function of law, to work as paralegal's in the effective delivery of legal services, and to enhance the legal profession. This program is designed to equip students with skills to analyze legal issues and to perform a variety of activities including drafting legal documents, interviewing clients, conducting legal research, and preparing cases for trial. Students utilize current technology through Internet research and legal and general office software applications. Paralegal studies students receive the necessary legal training to take advantage of new career opportunities in all sectors of the economy. Students are exposed to the principles of legal ethics and are cautioned regarding restrictions against the unauthorized practice of law by layperson's.

The Associate of Applied Science degree is awarded upon successful completion of the program.

Students entering autumn semester may complete the program in four semesters as outlined below. Students entering spring should meet with advisor prior to selecting courses.

Students attend classes on both the Mountain and East campuses.

Autumn Entry:

First Year	**A**	**S**
ACTG 100 (ACC 131T)Essentials of Accounting	-	4
CAPP 120 (CRT 100) Introduction to Computers	2	-
CAPP 134 (CRT 108) Basic MS Word	-	2
LEG 183T Contracts	-	2

LEG 184T Legal Ethics	2	-
LEG 185T Introduction to Paralegal Studies	3	-
LEG 186T Introduction to Legal Research	2	-
LEG 187T Legal Research/Writing I	-	2
LEG 188T Principles of Real Estate	-	2
LEG 189T Criminal Procedures	-	3
M 105 (MAT 107) Contemporary Math	3	-
PSCI 210S (PSC 100S) Introduction to American Government	-	3
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	3	-
WRIT 101 (WTS 101) College Writing I	3	-
Total	18	18
Second Year	**A**	**S**
COM 160A Oral Communications	3	-
CRT 188T Computers and Law	3	-
LEG 270T Civil Litigation	3	-
LEG 282T Contemporary Legal Issues	-	3
LEG 283T Trial Preparation	-	3
LEG 285T Family Law	-	3
LEG 286T Legal Research/Writing II	2	-
LEG 287T Legal Research/Writing III	-	2
LEG 288T Estate Administration	-	2
LEG 290T Paralegal Studies Internship	-	2
SOCI 101S (SOC 110S) Introduction to Sociology	3	-
WRIT 240E (WTS 240E) Argument and Contemporary Issues	3	-
Total	17	15

Courses

U = for undergraduate credit only. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Accounting (ACTG)

U 100 (ACC 131T) Essentials of Accounting 4 cr. Offered autumn and spring. Introduction to basic double-entry accounting. Emphasis on analyzing, journalizing, and posting transactions; trial balance, worksheet, financial statements, and adjusting/closing procedures, cash control and completing the accounting cycle.

U 101 (ACC 132T) Accounting Procedures I 4 cr. Offered autumn and spring. basic double-entry accounting. Emphasis on analyzing, journalizing, and posting transactions; trial balance, worksheet, financial statements, and adjusting/closing procedures, accounting systems, and cash control.

U 180 (ACC 134T) Payroll Accounting 3 cr. Offered autumn and spring. Prereq., ACTG 101 (ACC 132T) with competency test score of 75% or greater. Comprehensive payroll course including computation/preparation of paychecks, completing deposits and payroll tax returns, informational returns and issues relating to identification and compensation of independent contractors. Includes state and federal payroll law. Introduction to Montana's Department of Labor and Industry, Unemployment Insurance Division, an State Compensation Insurance Fund.

U 191 (ACC 195T) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201 (ACC 133T) Principles of Financial Accounting 4 cr. Offered autumn and spring. Prereq., ACTG 101 (ACC 132T) with competency test score of 75% or better. Expansion of ACTG 101 (ACC 132T) including receivables, inventories, plant and intangible assets, and expanded liabilities. Includes partnerships, corporations, long-term liabilities, investments in debt and equity securities, and the statement of cash flow.

U 202 (ACC 234T) Principles of Managerial Accounting 3 cr. Offered autumn. Prereq., ACTG 101-201 (ACC 132T-133T or ACTG 201 or consent of instr. Continuation of accounting series with a focus on managerial accounting topics. Includes cost classification, variable and absorption costing, job order costing and standard costing. JIT, total quality management, quality costs and activity-based costing also will be addressed. Credit not allowed for both ACTG 202 (ACC 234T) and ACCT 202.

U 211 (ACC 236T) Income Tax 4 cr. Offered autumn. Prereq., ACTG 180 (ACC 134T) with a "C" grade or better. An introduction to taxation concepts, principles and theory. Extensive tax return preparation emphasizing sole proprietorships and individuals.

U 215 (ACC 232T) Foundations of Government and Not for Profit Accounting 3 cr. Offered spring. Prereq., ACTG 101-201 (ACC 132T-133T) or ACTG 201, or consent of instr. Continuation of accounting series with a focus on managerial accounting topics. These topics include cost classification, variable and absorption costing, job order costing and standard costing. JIT, total quality management, quality costs and activity-based costing included.

U 237 Strategies for Business Entities 3 cr. Offered autumn. Prereq., ACTG 101 (ACC 132T) or consent of instr. Legal, accounting, and tax strategies relating to corporations, partnerships, sole proprietorships, LLCs and LLPs. Includes tax preparation projects.

U 250 Accounting Capstone 4 cr. Offered spring. Prereq., ACTG 202, 211, 237 (ACC 234T, 236T, 237T), or equivalent. and consent of instr. Capstone class integrating accounting software, income and payroll tax preparation, financial statement preparation, ratio analysis, financial report writing and presentation.

U 291 (ACC 295T) Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 298 (ACC 290T) Accounting Internship 2 cr. Offered autumn and spring. Prereq., last semester in program, minimum grade of "C" in all ACC courses, and approval of program director. On-the-job training in positions related to the accounting field. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Students work a minimum of 90 hours at an approved site and attend scheduled one-hour seminars.

Business (BUS)

U 103S Principles of Business 3 cr. Offered autumn and spring. Introduction to the world of business. Examines capitalism, the economic environment, the types of business organizations, management, marketing, production, labor, financing, and business/governmental relations. Credit not allowed for both BUS 103S and BADM 100S.

U 105T Deciding Majors and Careers 2 cr. Offered autumn and spring. Develop skills to implement major and career decisions within the University and in transition to business and industry.

U 106T Records and Information Management 2 cr. Offered autumn and spring. Introduction to alphabetic filing techniques and electronic database records management. Current technical developments utilizing automated records systems, biometric access control devices, electronic file organization, ergonomics, the Internet, image technology, and integrated security systems.

U 109T Visual Merchandising and Display 3 cr. Offered spring. Introduction to various techniques used by retailers in the merchandising and displaying of goods. Analysis of different approaches and methods for effectiveness in actual retail settings. Includes display principles of balance, color, and focal point statements.

U 112T Professional Sales 2 cr. Offered autumn. Includes the steps in opening, presenting, demonstrating, handling objections, and closing the sale. Students gain expertise through role-playing activities and written presentations.

U 113T Psychology of Selling 3 cr. Offered spring. Development of selling techniques which are used by many of the world's best companies and explanation of why they work. Includes the psychological reasons that prevent a prospect from purchasing a product or service and the techniques to motivate a prospect to buy.

U 120T Transcription and Text Editing 2 cr. Offered autumn and spring. Prereq., WRIT 121 (COM 115), CAPP 134 (CRT 108). Techniques of accurate and rapid transcription from taped material. Computers are used as input devices. Includes making formatting and printing decisions with various types of business correspondence. Increases competency in spelling, grammar, and punctuation.

U 125T Principles of Marketing 3 cr. Offered autumn. An overview of marketing activities including the consumer buying decision process, distribution channels, the planning process, and new marketing trends. Students learn how to introduce a new product into the marketplace, target markets, and promote products through advertising and package design.

U 135T Business Law 3 cr. Offered spring. An overview of law as it applies to business transactions. Topics include the nature and source of law; courts and procedure; contracts, sales, and employment; commercial paper; bailment's; property; business organizations; insurance; wills and estate planning; consumer and creditor protection; torts; criminal law; and agency law. Credit not allowed for both BUS 135T and BADM 257.

U 140T Customer Service 4 cr. Offered spring. Designed to prepare employees and managers to meet customers' expectations. Review of customer service philosophy and techniques. Services marketing, quality issues, service design and delivery, customer interaction systems, complaint handling and service recovery, customer relationships, loyalty management, and operations are addressed.

U 160S Issues in Sustainability 3 cr. Offered autumn and spring. This literature-intensive course is intended to expose the student to a variety of essays addressing the balance of economic development with the principles of sustainability and social equity. The student is offered an introduction to sustainability concepts, natural systems/cycles and environmental economics. Natural capitalism and triple bottom line maximization is explored, along with the role of corporations and small businesses in sustainable development. A survey of issues surrounding corporate social responsibility and sustainability-driven innovation will be conducted.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new

courses, or one-time offerings of current topics.

U 196T Independent Study Variable cr. (R-9) Offered intermittently.

U 224T Advertising and Promotion 3 cr. Offered spring. Exposure to the history and fundamentals of advertising; in-depth exploration of advertising media, budget plans, ad campaign designs, and in-house promotion designs; and the production of actual radio, television, and print advertising.

U 240T Administrative Support for the Automated Office 2 cr. Offered autumn. Prereq., CAPP 134 (CRT 108). Overview of the procedures and scope of the administrative assistant's role in today's automated office, including traditional and electronic communications, operation of multi-media equipment, and managing office technology.

U 242T Supervision 3 cr. Offered spring. The supervisor's role in management, organizing, staffing, and training of personnel as well as managing problem performance. Includes motivating employees, improving departmental productivity as well as the legal concerns of supervision.

U 243T Psychology of Management and Supervision 4 cr. Offered autumn. Management theory, research, and the practice of management. Topics covered include leadership styles and techniques, effective communication approaches, time management, decision making, delegation, and the basic functions of supervisory skills.

U 250T Entrepreneurship 3 cr. Offered spring. Prereq., CAPP 120 (CRT 100). An overview of the skill areas and business principles needed to start and operate a small business. Includes developing a business plan, identifying sources of capital formation, managing growth, and marketing issues related to new ventures.

U 290T Management Internship 2 cr. Offered autumn and spring. Prereq., consent of instr. On-the-job training in positions related to each student's career goal in management. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness. Students work a minimum of six hours each week at an approved site and attend a weekly one-hour seminar.

U 296T Independent Study Variable cr. (R-9) Offered intermittently.

Culinary Arts (CUL)

U 151T Introduction to Food Service Industry 5 cr. Offered autumn. Introduction to fundamentals in food handling practice, history, cooking methods, tool and equipment skills, safety and sanitation, recipe and menu development.

U 156T Dining Room Procedures 3 cr. Offered autumn and spring. Prereq., CUL 151T with a "C" or better. Introduction to foundations of dining room service and protocol. Includes techniques in dining room service. Personal hygiene, applied math, basic culinary terminology, beverage management, and table side cooking methods are practiced.

U 157T Pantry and Garde-Manger 3 cr. Offered autumn and spring. Prereq., CUL 151T with a "C" or better. Identification of fresh greens, vegetables, and fruits, general and specific uses, standards of quality, preparation, and presentation. Covers entrée salads, cold sauces, appetizers, finger sandwiches, pâtés, gelatins, mousses, ice carvings, as well as banquet and buffet presentation.

U 158T Short Order Cookery 4 cr. Offered autumn and spring. Prereq., CUL 151T with a "C" or better. Hands-on experience in all facets of short order cookery. Emphasis on coordination, speed, presentation, and basic food preparation as well as cooking methods.

U 160T Soups, Stocks, and Sauces 3 cr. Offered autumn and spring. Prereq., CUL 151T with a "C" or better. Hands-on preparation of basic soups, stocks, sauces, glazes, thickening agents, and garnishes.

U 161T Meats and Vegetables 3 cr. Offered autumn and spring. Prereq., CUL 151T with a "C" or better. Hands-on experience with the fundamental cooking methods for meats, vegetables, grains, legumes, and pastas.

U 165T Baking and Pastry 3 cr. Offered autumn and spring. Prereq., CUL 151T, M 095 (MAT 100D) with a "C" or better or consent of instr. Introduction to various ingredients and how they affect the finished product. Covers six basic functions of ingredients and the techniques of scaling, pan preparation, sifting, chocolate, and pastry bag work.

U 175T Food Service Sanitation 2 cr. Offered fall. Introduction to fundamentals in safe and sanitary food handling practices. Emphasis on development of a well-designed food safety program centered on Hazard Analysis Critical Control Point (HACCP)

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study 1-6 cr. (R-6) Offered intermittently.

Food Service Management (FSM)

U 180T Nutritional Cooking 3 cr. Offered spring. Prereq., CUL 151T, M 108 (MAT 114T) or consent of instr. Principles of healthy and

nutritious culinary procedures. Adjustment of classic methods to suit preparations designed to extend variety on "lighter" menus.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study 1-6 cr. (R-6) Offered intermittently.

U 270 Purchasing and Cost Controls 5 cr. Offered autumn. Prereq., CUL 151T, M 095 (MAT 100D); or consent of instr. Principles of purchasing foods and materials based on needs, specifications, availability, and seasonality. Costs of doing business including products, labor, facilities, and preparing financial statements.

U 271 Food Service Management Capstone 4 cr. Offered spring. Prereq., FSM 270, coreq., CRT 205T. Coordinates with computer applications course to create virtual food establishments. Includes capstone experience integrating menu planning/design, facilities, publicity, labor, purchasing, and kitchen preparation culminating in a formal, multi-course dinner.

U 275T Patisserie 2 cr. Offered spring. Prereq., CUL 165T, M 095 (MAT 100D) or consent of instr. Advanced principles and techniques in preparing custard sauces, pastry cream, puddings, custards, mousses, Bavarians, soufflés, ices, crepes, fruits, and dessert sauces. Emphasis on presentation of plated desserts.

U 290T Internship 4 cr. Offered spring. Prereq., enrolled in final semester of program, minimum of "C" in all CUL and FSM courses, or recommendation of Culinary Program Director. On-the-job training in position related to each student's career goal. This experience increases students' skills, prepares them for initial employment, and increases occupational awareness and professionalism. Students work a minimum of twelve hours each week at an approved site and attend scheduled one-hour seminars.

U 295T Special Topics 1-9 cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Human Resources (HMR)

U 110T Introduction to Public Relations 3 cr. Offered autumn and spring. Introduction to the origin, scope, and nature of public relations activities. Investigation of policies, strategies, and procedures available to an organization in establishing and controlling its communications. Exploration of the impact of public relations and media through case studies and writing exercises.

U 290T Administrative Management Internship 2 cr. Offered autumn and spring. Prereq., last semester in program, minimum of "C" in program courses, and approval of program director. On the job training in positions related to each student's career goal in the administrative field. This experience increases students' skills, prepares them for initial employment and advancement on the job, and increases occupational awareness and professionalism. Students work 90-hours at an approved site and attend a weekly one hour seminar.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Paralegal Studies (LEG)

U 183T Contracts 2 cr. Offered spring. Sources of law affecting the formation, enforceability, and interpretation of contracts. Includes the necessary elements of a contract, the basic doctrines of contract law, and practical approaches to drafting a contract.

U 184T Legal Ethics 2 cr. Offered autumn. Introduction to ethics for the paralegal, including confidentiality, paralegal-attorney relationship, fee arrangements, Code of Professional Conduct, attorney-client privilege, fiduciary responsibilities, and public service.

U 185T Introduction to Paralegal Studies 3 cr. Offered autumn. Introduction to the paralegal career including ethical and professional standards. Overview of the American legal system, substantive areas of practice, legal analysis and investigation, law office administration and related terminology.

U 186T Introduction to Legal Research 2 cr. Offered autumn. Prereq., acceptance into program or consent of instr. Introduction to legal research focusing on how to find, use, understand, and correctly cite law library resources.

U 187T Legal Research and Writing I 2 cr. Offered spring. Prereq., LEG 186T. Advanced legal research focusing on how to find, use, understand, and correctly cite legal resources. Electronic research methods are presented. Application of legal research to writing is introduced.

U 188T Principles of Real Estate 2 cr. Offered spring. Prereq., LEG 185T or consent of instr. The study of property law focusing on the nature and ownership of real property, title insurance, legal descriptions, and the transactional aspects of financing methods involving trust indentures, mortgages, and contracts for deed, with closing and recording procedures.

U 189T Criminal Procedures 3 cr. Offered spring. Criminal prosecution and defense representation with an overview of criminal law principles. Training in criminal procedure involving felonies and misdemeanors in federal, Montana, and municipal courts.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new

courses, or one-time offerings of current topics.

U 196T Independent Study 1-6 cr. (R-6) Offered intermittently.

U 270T Civil Litigation 3 cr. Offered autumn. Prereq., LEG 185T. Introduction to rules governing civil litigation involving the general nature of how lawsuits arise including client interviews and data gathering, pleading and practice from the filing of suit to file preparation for trial, and core considerations of ethics and professionalism.

U 282T Contemporary Legal Issues 3 cr. Offered spring. Prereq., LEG 270T or consent of instr. Capstone experience designed to investigate topical legal issues of immediate importance. Although the course has delineated structure, the nature of the course will allow both relevant concentrated focus as well as traditional disciplined examination of numerous areas of law practice and theory. The various peagogical modules will offer students the opportunity to explore statutory structure, analyze case law, and draft legal forms.

U 283T Trial Preparation 3 cr. Offered spring. Prereq., LEG 270T. Case and claim analysis, collecting and preserving evidence, locating witnesses, jury selection, trial notebook development, posttrial assistance, and investigative techniques with emphasis on concluding litigation and postjudgment procedures.

U 285T Family Law 3 cr. Offered spring. Prereq., LEG 185T or consent of instr. Study of Montana law relating to marriage, husband and wife, parent and child, termination of marriage, adoption, joint and sole custody arrangements and modifications, child support guidelines, and juvenile issues. Includes preparation of standard family law documents.

U 286T Legal Research and Writing II 2 cr. Offered autumn. Prereq., LEG 187T. Advanced legal research and writing with emphasis on drafting and composing legal memoranda; legal research skills and development of legal writing ability.

U 287T Legal Research and Writing III 2 cr. Offered spring. Prereq., LEG 286T. Continued development of legal research and writing skills including advanced legal theory/case law synthesis, drafting correspondence, pleadings, discovery documents, persuasive writing. Upon completion of this course, the student will be able to: research, analyze, synthesize, and prioritize law cases, treatises, doctrines, theory of the law, legal rules, and other information and draft appropriate correspondence, pleadings, motions, briefs, discovery documents or memoranda relating to that information as would be anticipated in a law office.

U 288T Estate Administration 2 cr. Offered spring. Prereq., LEG 185T or consent of instr. This course provides an overview of the law as it applies to wills, trusts, and other estate matters. Topics include the nature and sources of the law relating to wills, trusts, and estates, estate planning, intestate succession, family protection, probate, and estate taxes.

U 290T Paralegal Studies Internship 2 cr. Offered autumn and spring. Prereq., last semester in program, minimum of "C" in LEG courses, and approval of program director. On-the-job experience as a paralegal trainee under the supervision of an employer, attorney, or court official. This experience increases students' skills, prepares them for initial employment and advancement on the job, and increases occupational awareness and professionalism. Students work a minimum of 90 hours at an approved site and attend a weekly one-hour seminar.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Medical Information Systems & Medical Assisting (MED)

U 152T Insurance Processing for Coding Specialists 2 cr. Offered spring. Prereq., MED 161T Introduction to insurance claim processing for the major medical insurance programs. Emphasis on completing universal insurance forms to maximize reimbursement as well as troubleshoot denied or underpaid claims.

U 153T Insurance Processing 3 cr. Offered autumn and spring. Prereq. or coreq., MED 161T or consent of instr. An introduction to insurance claim processing for the major medical insurance programs. Basic knowledge of CPT and ICD-9 procedural and diagnostic coding. Emphasis on completing universal insurance forms to maximize reimbursement as well as trouble shoot denied or underpaid claims.

U 154T Beginning Medical Terminology 2 cr. Offered autumn and spring. Introduction to a medical word building system using Greek and Latin word roots, combining forms, suffixes, and prefixes.

U 155T Medical Software Applications 1 cr. Offered spring. Prereq., MED 153T; prereq. or coreq. MED 161T; or consent of instr. A medical software package is used to enter and update patient data, enter charges, payments and adjustments, and generate management reports, insurance forms, and patient statements.

U 161T Medical Administrative Procedures 4 cr. Offered autumn. An introduction to the necessary skills and qualities required to function successfully in the medical arena. Emphasis on medicolegal and ethical responsibilities, records management and financial management of the medical practice, and interpersonal communications to include patient reception, telephone techniques and appointment scheduling.

U 165T Healthcare Data and Content 2 cr. Offered spring. In-depth study of origin, use, content and structure of health records; storage and retrieval systems; numbering and filing systems; documentation requirements; use and structure of health care data sets; and how these components relate to primary and secondary record systems. Additional topics include gathering, compilation and computing of healthcare

related statistics, use of research and statistical methods for developing healthcare data into information for various requesters.

U 201T Medical Assisting Clinical Procedures I 4 cr. Offered autumn. Prereq., M 090 (MAT 005D), SCN 201N-202N. Skill development necessary to assist health care practitioners in all aspects of patient care in the medical office clinical setting. Includes achieving competency in prepping patients for a physical examination, charting, medication administration, basic medical laboratory skills.

U 202T Medical Assisting Internship I 1 cr. Offered autumn. Prereq., consent of instructor. Placement in a medical office for a guided experience providing the student with a practical application of learned medical office administrative skills. Direct supervision will be the responsibility of a designated person at the site. The students will spend six hours per week to total 90 hours in assigned clinical rotations.

U 203T Medical Assisting Clinical Procedures II 3 cr. Offered spring. Prereq., MED 201T. Continuation of MED 201T. Continued skill development in assisting health care practitioners in all aspects of patient care in the medical office clinical setting. Includes achieving competency in aseptic technique, diagnostic procedure techniques, and patient education.

U 204T Medical Assisting Internship II 3 cr. Offered spring. Prereq., MED 201T; coreq., MED 203T. Placement in selected physicians' offices and clinics for a guided learning experience providing the student with a practical application of knowledge and skills acquired in the classroom and laboratory setting. The student will be provided the opportunity to perform various clinical procedures under supervision. The students will spend 12 hours per week to total 180 hours in assigned clinical rotations.

U 210T Basic ICD Coding 3 cr. Offered autumn. Prereq., MED 153T, MED 165T or consent of instr. Introductory foundation for utilizing the International Classification of Diseases coding for classification of morbidity and mortality information for statistical purposes and for indexing medical records by disease and operation.

U 216T Terminology for Health Professions I 2 cr. Offered autumn. Prereq., MED 154T; prereq. or coreq., SCN 115 or SCN 201N-202N. A system approach to medical word building including pathology of body systems, abbreviations, and special procedures including radiographic, surgical, and laboratory.

U 220T Basic Ambulatory Coding 3 cr. Offered autumn. Prereq., MED 153T, MED 165T or consent of instr. Foundation for utilizing the CPT coding system to increase compatibility and comparability of medical data among users and providers.

U 240T Intermediate ICD Coding 3 cr. Offered spring. Prereq., MED 210T or consent of instr. Comprehensive foundation for utilizing the International Classification of Diseases coding for classification of morbidity and mortality information for statistical purposes and for indexing medical records by disease and operation.

U 250T Intermediate CPT Coding 3 cr. Offered spring. Prereq., MED 220T or consent of instr. Comprehensive application of the CPT coding system to assign codes for services, supplies and equipment for comparative analysis, research and reimbursement.

U 256T Medical Transcription I 3 cr. Offered autumn and spring. Prereq., CAPP 134 (CRT 108); prereq. or coreq., MED 216T. An introduction to the transcription of authentic physician-dictated medical reports in a variety of medical specialties. Emphasis on the development of accuracy and speed in interpreting, transcribing and editing medical dictation for content and clarity.

U 257T Medical Transcription II 3 cr. Offered autumn and spring. Prereq., MEDC 256T. Advanced medical transcription of realistic physician-dictated medical reports in a variety of medical specialties. Emphasis on production and increased speed in interpreting, transcribing and editing medical dictation for content and clarity.

U 270T Terminology for Health Professions II 2 cr. A systems approach to medical word building including pathology of body systems, pharmacology, abbreviations, and special procedures including cardiovascular, pulmonary and gastrointestinal.

U 280E Ethics in Health Professions 3 cr.

U 290T Medical Information Technology Internship 3 cr. Offered autumn and spring. Prereq., last semester in program, minimum of "C" in MED courses, and approval of program director. On-the-job training in positions related to each student's career goal in the medical information field. This experience increases students' skills, prepares them for initial employment and advancement on the job, and increases occupational awareness and professionalism. Students work a minimum of 135 hours at an approved site and attend a weekly one-hour seminar.

U 296T Independent Study 1-6 cr. (R-6) Offered intermittently.

College of Technology

Barry Good, Dean

Lynn Stocking, Associate Dean

Alan Fugleberg, Associate Dean

Our mission, as the two-year college of The University of Montana, is to provide open access to higher education that expands opportunities

for Montana residents. We are a gateway to comprehensive education, delivering high quality, student-centered, professional, technical, transfer, and workforce programs and courses.

The College of Technology offers programs and services on two campuses-the East Campus at 909 South Avenue West and the West Campus at 3639 South Avenue West. Enrollment Services, Financial Aid Office, Registrar's Office, Career Services Office, and administrative offices are located at the East Campus. All business technology programs, applied computing and electronics programs, culinary arts programs, health professions programs, as well as the branch of the Mansfield Library, The Bookstore at the College of Technology, and a dining room are located on the East Campus. All industrial programs are located on the West Campus.

Students may attend courses at three campus sites. Courses are scheduled at a variety of times between 7 a.m. and 10 p.m., Monday through Saturday. Department chairs and/or program directors may be contacted for specific scheduling information.

Associate of Applied Science and Certificate of Applied Science Programs

The Associate of Applied Science degree and Certificate of Applied Science programs offered in the College are designed to lead an individual to employment in a specific career or career cluster. In some instances, particularly in Health Professions, the degree or certificate is a prerequisite for taking a licensing examination. The Associate of Applied Science degree is not typically considered a transfer degree, although opportunities do exist in The University of Montana and some other baccalaureate degree-granting institutions for continuing in programs such as the University's Bachelor of Applied Science degree program.

The College's Surgical Technology and Respiratory Care programs are reviewed by their respective Joint Review Committees and accredited by the Commission on Accreditation of Allied Health Education Programs. The Food Service Management program is accredited by the American Culinary Federation Educational Institute Accrediting Commission, the Paralegal Studies program is approved by the American Bar Association, and the Nursing programs are approved by the Montana Board of Nursing.

Associate of Arts Degree Program

The Associate of Arts Degree is a general education transfer degree and does not officially include a major or minor course of study. To receive an Associate of Arts degree all students must successfully complete all the general education requirements as described by Montana Board of Regents policy 301.10 Appendix 1. Students seeking the AA are not required to sit for the upper-division writing proficiency assessment. The minimum grade average for the 60 credits required for the AA is 2.0.

Bachelor of Applied Science Degree Program

A Bachelor of Applied Science degree is offered by The University of Montana in Missoula through the College of Arts and Sciences in collaboration with the UM College of Technology. The initial contact for this degree is the College of Technology . This degree program is available for students who have completed approved Associate of Applied Science degrees. See the College of Arts and Sciences/Applied Science section of this catalog.

Credit Applicable Toward an Associate of Arts and Baccalaureate Degrees

The following College of Technology courses have been approved to count as elective credit, and/or General Education credit for the Associate of Arts and baccalaureate degrees. With departmental approval, some may count toward major or cognate requirements. With departmental approval, up to 10 additional credits from courses not on this list may be counted. Refer to the sections on Technical Courses and Credit Maximums in this catalog. See index.

- AASC 100, 101
- BUS 103S
- COM 150S, 160A, 217A, 242, 260S
- CAPP120 (CRT 100), 134(CRT 108)
- CRT121, 122E, 172, 203, 260, 270, 280
- EET 232, 260
- FSM 270, 271
- M 095 (MAT 100D), 115 (MAT 120), 121(MAT 117), 122 (MAT 118), 151 (MAT 119), 162 (145)
- NUR all courses (except 295T)
- PSYX 100S (PSY 100S), 161S (PSY 110S), 230S (PSY 201)
- SCN 100N, 115, 150, 175N, 201N, 202N
- WRIT 101 (WTS 101), 121 (WTS 115), 221 (WTS 215) , 240E (WTS 240E)
- LIT 110L (WTS 120L), 120L (WTS 121L)
- WRIT 184A

Academic Support Services

Services designed to increase the success of students enrolled at The University of Montana College of Technology are available at the College. Such services include the Academic Support Center's tutoring and computer-based academic learning tools, study skills workshops, basic skills developmental courses, disability services for students, academic and financial aid reinstatement and follow-up assistance, individual student retention services, and other learning support activities.

Faculty

- Nick Arthur B.S., University of North Texas, 1997 (Health Professions)
- Thomas Campbell, Certified Executive Chef, 1990 (Business Technology)
- Dora Cardillo, B.S., TTR, CPFT, Boise State University, 1985 (Health Professions)
- Cathy Corr, M.Ed., Montana State University, 1989 (Applied Arts and Science, Chair)
- Josef Crepeau, M.A., University of Montana, 1994 (Applied Arts and Science)
- Anne Delaney, M.B.A., University of Montana, 2002 (Health Professions, Chair)
- Tammy Dutton, MSN, University of Phoenix, 2007 (Health Professions)
- Deborah Fillmore, M.E., University of Montana, 2000, R.N. (Health Professions)
- Cheryl Galipeau, M.E., University of Montana, 1999 (Business Technology)
- Cec Gallagher, Ed.D., Montana State University, 1998 (Academic Support)
- Patty Gauthier, M.S., Montclair State College, 1986 (Health Professions)
- Tom Gallagher, M.S. Western Washington University, 1996 (Applied Computing and Electronics, Chair)
- James Headlee, M.E., Northern Montana College, 1987 (Industrial Technology)
- Colin Henderson, Ph.D., University of New Mexico, 1985 (Applied Arts and Sciences)
- Karen Hill, M. A., University of Montana , 1998, R.N. (Applied Arts and Sciences)
- Penny Jakes, M.E., University of Montana, 1981 (Applied Computing and Electronics)
- Daneen Jeppson, F.N.P., M.S.N., University of Utah, 1980 (Health Professions)
- Brian Larson, (Business Technology, Chair)
- Mary McHugh, PharmD, University of Montana, 2007 (Health Professions)
- Mark Medvetz, M.F.A., University of Montana, 1989 (Applied Arts and Sciences)
- Carrie W. Miller, M.S.N., University of Phoenix, 2006 (Health Professions)
- Ed Moore, M.E., University of Montana, 1988 (Applied Arts and Sciences)
- Mary Nielsen, M.S.N., Clarkson College, 2000, R.N. (Health Professions)
- Sue Olson, M.E., University of Montana, 1996 (Business Technology)
- Tim Olson, M.B.A., University of Montana, 1997, C.P.A. (Business Technology)
- Mark Raymond, AWS Certified Welding Inspector, BS, University of Montana, 2007 (Industrial Technology)
- Steven Rice, M.E., Northern Montana College, 1991 (Applied Computing and Electronics)
- Niki Robinson, M.E., University of Montana, 2000 (Business Technology)
- Bob Shook, M.S., Utah State University, 1989, American Welding Society Certified Welding Inspector, 1989 (Industrial Technology)
- Deborah Sloan, Ph.D., University of Montana, 2005 (Applied Arts and Sciences)
- Thomas Stanton, J.D., University of Cincinnati, 1991 (Business Technology)
- Steve Stiff, B.S., M.Ed., University of Montana, 2001, 2007 (Applied Computing and Electronics)
- Thomas Siegel, Certified Executive Chef, 1994 (Business Technology)
- Lynn Stocking, M.E., University of Montana, 1987 (Associate Dean; Director, Academic Computing; Business Technology)
- Linda Strelnik, B.S., University of Montana, 1976, CST/CFA (Health Professions)
- Lisa Swallow, M.S., California State University, Chico, 1990, C.P.A., C.M.A. (Business Technology)
- Rhonda Tabish, Certificate, 1974 (Applied Computing and Electronics)
- John Walker, M.B.A., University of Montana, 1990 (Industrial Technology)

Adjunct Faculty

- John Anderson, M.S., Seattle University, 1974 (Applied Arts and Sciences)
- Susan Anderson, M.B.A., University of Oregon, 1989 (Business Technology)
- Aimee Ault, B.A., Pacific University, 2002. A.A.S., University of Montana, 2007 (Business Technology)
- Donna Bakke, M.A., University of Montana, 2005 (Business Technology)
- Elias Baied, C.S.T., University of Montana, 2007 (Health Professions)
- Kristi Bailey, C.S.T./C.F.A., College of Technology, 1994 (Health Professions)
- B.J. Banister, A.A.S., University of Montana, 1999 (Health Professions)
- Richard Bayless, M.S., Ohio University, 1984 (Applied Arts and Sciences)
- Anthony Becker, M.B.A., University of Montana, 2003 (Business Technology)
- Michelle Boller, M.A., George Washington University, 2004 (Business Technology)
- Alysia Braddock, A.A.S., University of Montana, 2001 (Health Professions)
- Susann Bradford, M.S., University of Montana, 1992 (Applied Arts and Sciences)
- Kathy Brauer, B.A. Ed., University of Montana, 1984 (Health Professions)
- Nicholas Burk, B.A., Washington State University, 2000(Applied Arts and Sciences)
- Dianne Burke, M.S., University of Houston, 1984 (Applied Computing and Electronics)
- Debra Burleigh-Gilbert, M.S.N., Loyola University of New Orleans, 2007 (Health Professions)
- Bridget Carson, M.F.A., University of Montana, 2006 (Applied Arts and Sciences)
- Peter Costello, B.A., University of Montana, 1985 (Applied Computing and Electronics)
- Jeff Crews, D.Ed., University of Montana, 2008 (Applied Computing and Electronics)
- Andrew Darland, M.A., Central Michigan University, 2005(Applied Computing and Electronics)
- Janet Derrington, M.S.N., University of Pennsylvania, 1977 (Health Professions)
- Mark Dickson, B.S., University of Nevada-Reno, 1997 (Applied Computing and Electronics)
- Creg Dieziger, A.A.S., ITT Technical Institute, 1993 (Applied Computing and Electronics)
- Colleen Dowdall, J.D., University of Montana, 1981 (Business Technology)
- Mary Jeanne Doyle, M.S., Eastern Kentucky University, 1985 (Applied Arts and Sciences)

- Ted Etter, M.T.E., Eastern Oregon State College, 1993 (Applied Computing and Electronics)
- Ethan Eyestone, A.A.S., University of Montana, 2001 (Health Professions)
- Rodney Frost (Industry Technology)
- Bill Gillespie, M.I.S.M., University of Phoenix, 2006 (Applied Computing and Electronics)
- Scott Grasky, B.S., The University of Montana-Western, 2002 (Industrial Technology
- Jim Harris (Industrial Technology)
- Kerry Haney, B.S. Pharmacy, University of Wyoming, 1998 (Health Professions)
- Brooke Hewes, M.A., University of Montana, 2006 (Applied Arts and Sciences)
- Wally Higgins, B.A., University of Montana, 1974 (Applied Computing and Electronics)
- Colleen Holmquist, A.A., University of Montana, 1994 (Health Professions)
- Dale Horton, M.S., University of Montana, 1976 (applied Computers and Electronics)
- Andrea Johnson, M.A., Appalachian State University, 2004 (Applied Arts and Sciences)
- Lois Johnson, B.S.N, Montana State University, 1992 (Health Professions)
- Scott Johnson, B.S., University of Montana, 1981 (Business Technology)
- Brian Kerns, M.S., Northwestern University, 1981 (Applied Computing and Electronics)
- Kim Larson (Business Technology)
- Donnie Laughlin, B.A., University of Montana, 1968 (Industrial Technology)
- Scott Louis, RTT California Community College for Health Sciences (Health Professions)
- James Mason, B.S. University of Montana, 2001, B.S., University of Montana-Western, 2008 (Industrial Technology)
- Elizabeth McLemore, M.Ed., University of Montana, 2008 (Applied Arts and Sciences)
- Linda McManus, B.S.N., Montana State University, 1987 (Health Professions)
- Stephanie Metcalf, B.S.N., University of Colorado, 1988 (Health Professions)
- Elizabeth Micklus, M.I.S., University of Montana, 2005 (Applied Arts and Sciences)
- Lori Mitchell, B.S.N., Montana State University, 2005 (Applied Arts and Sciences)
- David Morris, C.S.T., College of Technology, 1986 (Health Professions)
- David Neu, M.F.A., University of Montana, 1993 (Industrial Technology)
- Brad Platts (Industrial Technology)
- Ashley Preston, Ph.D., The University of Montana, 2001 (Applied Arts and Sciences)
- Swarna Reddy, Ph.D., Byelorussian State Uuniversity, 1994 (Applied Arts and Sciences)
- Larry Reinholz, , A.A.S. Diesel Technology, 2005, Fork Lift Certification, 2003, CDL Class A Interstate (Industrial Technology)
- Kim Reiser, M.A., University of Montana, 2000 (Applied Arts and Sciences)
- Troy Savage, B.S., Montana State University, 1982 (Applied Computing and Electronics)
- Leif Schneider, B.S., Oregon State University, 2006 (Applied Computing and Electronics)
- Tammie Slater-Smith, M.F.A., University of Montana, 2000 (Applied Arts and Sciences)
- Todd Stedl, Ph.D., Uuniversity of Washington, 2003 (Applied Arts and Sciences)
- Michael Steffenson, A.A.S., Alexandria Technical College, 1990 (Industrial Technology)
- Linda Eagleheart Thomas, Ph.D., University of Montana, 2002 (Applied Arts and Sciences)
- Megan Tenney, A.A.S, University of Montana, 1997 (Health Professions)
- Teresa Thompson, J.D., University of Montana, 1986 (Business Technology)
- Lucy Threlkeld, B.S.N., Winston Salem State Uuniversity, 1997 (Health Professions)
- Laurie Trudeau, A.S., Spokane Falls Community College, 1998 (Health Professions)
- Bonnie Weglin, A.A.S., Apollo College of Medical and Dental Careers, 1994 (Health Professions)
- Carol Wenderoth, M.S., Montana State University, 1983 (Business Technology)
- Christopher Wheeler, B.B.A., University of Montana, 2000 (Business Technology)
- Jeff Wongstrom, B.S., University of Michigan, 1986 (Applied Computing and Electronics)
- Alex Wood, A.A.S., ITT Technical Institute, 1991 (Applied Computing and Electronics)
- Kim Zupan, M.F.A., University of Montana (Industrial Technology)

Department of Health Professions

- Special Degree Requirements
- Courses

Anne Delaney, Chair

Special Degree and Certificate Requirements

The Health Professions Department of the University of Montana seeks to prepare students to be health practitioners who are technically competent and who are effective in a variety of clinical, agency and community settings. The Health Professions Department offers five Associate of Applied Science (A.A.S.) Degrees, one Associate of Science (A.S.) Degree, and one Certificate of Applied Science (CAS) program with courses and learning experiences that contribute to understanding the health needs of individuals and society. Clinical affiliations and on-site experiences are essential elements of all programs; local communities, their agencies, and organizations are a valuable resource and provide cooperative learning experiences in health delivery systems.

The goals of the Health Professions Department are:

1. To provide programs of study which integrate a variety of health-related disciplines to prepare students for careers in health professions.

2. To contribute to the liberal education of students through courses designed to provide an understanding of human health, fitness and health delivery systems.
3. To meet the continuing education needs of health professionals.

The Health Professions Department offers A.A.S. degrees in Medical Assisting, Practical Nursing (PN), Radiologic Technology, Respiratory Care, Surgical Technology, an A.S. degree in Registered Nursing (ASRN), and a Certificate in Applied Science (CAS) in Pharmacy Technology. Admission to a specific Health Professions (HP) program requires documented completion of the Associate of Arts (AA) prerequisite courses as required by the specific HP program to which the student is applying. **The AA prerequisite courses are different for each HP program and are listed in the specific program description in this catalog.** A prerequisite course may be attempted a maximum of two (2) times. Any general prerequisite course required for an HP program must be taken prior to acceptance into the program. Additional requirements for admission to each of the HP programs vary and are also listed in the specific program descriptions.

Students enter The University of Montana as AA General Studies majors and select courses from the required prerequisite courses **after conferring with an HP advisor**. Assessment of writing for placement in writing courses follows University guidelines and is offered during orientation and at various times during the semester. Math placement is determined by a placement test. Placement testing assures that students are enrolled in the appropriate course to ensure success in writing and math studies.

Admission to a health program requires a completed application for the specific program to which the student is applying, with documented completion of the program specific prerequisite courses. For program specific admission requirements and grade point average (GPA) expectations, please refer to the individual program descriptions or contact the specific HP Program Director. Applications can be obtained on the respective HP Program webpage. Students must submit a separate application to each HP program they desire admission to. If a student is accepted to multiple programs, the student can only accept admission to one HP program and must decline admission to the other program(s). Deadlines for applications are April 1 and November 1.

Students provide proof of the following health requirements prior to beginning the clinical portion of HP programs:

1. Tuberculosis testing using the purified protein derivative (PPD) or chest x-ray (positive results will require a physician's letter before a student can continue in clinical settings).
2. Hepatitis B vaccine (HBV) for clinical experiences with potential exposure to blood-borne pathogens. A three-injection series is required and may be obtained at Curry Health Center or other health care providers. Students are urged to begin this series as soon as notified of acceptance into an HP program. An acceptable level of hepatitis B immunity must be demonstrated by a post vaccination titer test performed by a medical laboratory.
3. American Heart Association adult, child and infant CPR certification for health care providers.
4. Eye exams are required for surgical technology students due to work with lasers in surgery.
5. Respiratory care students must pass neonatal resuscitation (NRP) prior to their neonatal clinical experience. Respiratory care students are also required to have a physical exam, a ten-panel drug screen, and a police backgrounds check prior to entering clinical experiences.

Many licensing bodies/employing institutions in health care have increasingly stringent requirements and background checks as conditions for licensing or employment. If students have a concern about this they should contact the licensing board for their specialty (contact information may be obtained from appropriate HP Program Director).

Course Fees and Supplies

Most programs in the Health Professions Department include courses with course fees and special supplies requirements. To obtain a complete listing of these additional items and costs, call the College of Technology Admissions Office at 406- 243-7865.

Health Professions AA Prerequisites

The groups of courses are different for each HP program and are listed in the specific program description Some program courses may not be offered in all semesters. Consult the HP Program Director or Program Advisor regarding which courses to take and when to enroll.

There are other courses which will enhance HP program studies and improve a student's ability to provide quality health care. Students may take these additional courses prior to acceptance to a HP program. Courses should be selected with the assistance of an approved HP program advisor, as taking too many courses may adversely affect financial aid. These courses include, but are not limited to:

- BIOL 106N Elementary Medical Microbiology
- CHMY 121N (CHEM 151N) Introduction to General Chemistry
- CHMY 122N (CHEM 152N) Introduction to General Chemistry Laboratory
- CHMY 124N (CHEM 154N) Introduction to Organic and Biological Chemistry Laboratory
- M 115 (MAT 117) Probability and Linear Mathematics
- M 121 (MAT 118)College Algebra
- MED 154T Beginning Medical Terminology
- MED 280E Medical Ethics
- PSYX 100S (PSY 100S)Introduction to Psychology
- PSYX 161S (PSY 110S)Organizational Psychology
- PSYX 230S (PSY 201) Developmental Psychology (prereq. PSY 100S)

- SCN 150 Nutrition
- SCN 175N Integrated Science
- SCN 220 Human Physiology
- SOCI 101S (SOC 110S)Introduction to Sociology

Medical Assisting-A.A.S. Degree

Students in Medical Assisting are trained in front office administrative skills and back office clinical skills to assist healthcare practitioners in administering to the needs of patients. Students gain skills in scheduling, medical office accounting systems, medical coding and billing, transcription, phone triage and are trained to assist with medical examinations and treatment and to work as a team member in the medical office environment. Students learn to take medical histories and obtain vital signs, give medications and injections (under supervision), draw blood, perform diagnostic tests and office laboratory procedures, sterilize instruments and maintain equipment. Additionally, Medical Assisting students are exposed to the principles of medical ethics and medical legal issues facing health care providers. Students successfully completing the program are awarded the Associate of Applied Science degree..

Students must earn a "C" or better in all courses in order to continue in the program. A course maybe attempted a maximum of two times. As some courses are offered fall or spring semester only, it is important to obtain advising with the Program Director each semester prior to registering for the next semester. Students may apply for either autumn or spring semester program admission.

Upon award of the A.A.S. degree in Medical Assisting, students are eligible to take the Registered Medical Assistant (RMA) national registration exam administered by the American Medical Technologists upon completion of the program. Students are responsible for filing required forms, associated fees, and grade transcripts.

First Year	A	S
ACTG 100 (ACC 131T) Essentials of Accounting	-	4
BS 140T Customer Service.	4	-
COM 150S Interpersonal Communications	-	3
CAPP 120 (CRT 108) Introduction to Computers or competency	2	-
CAPP 134 (CRT 108) Basic MS Word	-	2
M 105 Contemporary Math	3	-
MED 154T Beginning Medical Terminology	2	-
MED 195T Terminology for Health Professions	-	3
PSYX 100S (PSY 100S) Introduction to Psychology	4	-
SCN 201N Anatomy and Physiology	-	4
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	18	16
Second Year	**A**	**S**
MED 153T Insurance Processing	3	-
MED 155T Medical Software Applications	-	1
MED 201T Medical Assisting Clinical Procedures I	4	-
MED 202T Medical Assisting Internship I	1	-
MED 203T Medical Assisting Procedures II	-	3
MED 204T Medical Assisting Internship II	-	3
MED 256T Medical Transcription I	-	3
MED 280E Medical Ethics	-	3
PHA 160T;Pharmacological Products	3	-
PSYX 230 (PSY 201) Developmental Psychology	-	3
SCN 202N Anatomy and Physiology	4	
Total	15	16

Pharmacy Technology-Certificate

Mary McHugh, Program Director

In the Pharmacy Technology Program at the University of Montana-College of Technology, students are prepared to function in hospital-based pharmacies and retail pharmacies. The two semesters and wintersessionof the program include classroom, lab, and clinical site learning opportunities. Lab and internship hours allow students to integrate their classroom knowledge into the practical setting. Students are required to rotate to clinical sites and some may be outside the Missoula area.

The Pharmacy Technology Program is an Autumn entry program. Applicants to the Pharmacy Technology program must complete the program specific application packet and achieved required writing, math, and computer skills. Students should place in Level 3 or higher in the ALEKS Math Assessment, and should attain a 7 or better on the E-Write assessment. Students who do not score high enough on

assessments should consult with an advisor to arrange enrollment in the necessary courses to build their skills. Students must either complete the Into to Computers (CAPP 120) or pass the challenge for CAPP 120.

Once accepted into the program, all students are expected to complete the PHA classes with a B or higher to proceed to the next semester.

After successfully completing the program, students are awarded a Certificate of Applied Science and are well prepared and encouraged to sit for the national technician certification examination such as that offered through the Pharmacy Technician Certification Board (PTCB). The Pharmacy Technology program is accredited by the American Society of Health System Pharmacists (ASHP).

Conviction of a crime (misdemeanor or felony) could leave an individual ineligible for participation in the certifying test and/or becoming registered in Montana as a certified pharmacy technician. Additionally, the Montana State Board of Pharmacy Application for Pharmacy Technician Registration includes a number of questions regarding personal history, including but not limited to criminal charges. Please contact the PTCB (Pharmacy Technician Certification Board), ptcb.org, and the Montana State Board of Pharmacy (http://mt.gov/kli/bsd/) if this is a potential problem.

Current salary range in Montana is from $9 per hour to $20 per hour, depending on employer, job duties, and experience.

Pharmacy Technology Program Curriculum:

First Year	A	S
PHA 100T Introduction to Pharmacy Practice	3	-
PHA 101T Pharmacy Calculations	3	-
PHA 102T Pharmacology	6	-
PHA 103T Hospital and Community Practice*	-	6
PHA 105T Internship	-	5
Total	15	14

*In order to facilitate access to the laboratory, PHA 103, Hospital and Community Practice, is offered during the January Wintersession. The program director will provide a complete schedule at the beginning of the autumn semester.

Practical Nursing-Certificate

Mary Nielsen, Program Director

The College of Technology offers an Associate of Applied Science degree (AAS) in Practical Nursing. Applicants for the PN program must have a high school diploma or equivalency, have completed the AA prerequisite courses with a minimum grade of C, except in SCN 201N and 202N which requires a B or higher grade, and possess a cumulative GPA of at least 2.75.

Admission to the program also requires completion of the application which can be obtained on the UM COT Nursing webpage. Application deadlines are April 1 and November 1. A student may apply while enrolled in the AA prerequisite courses with acceptance to the program to be determined after the currently completed semester grades are finalized.

The 20 students who meet the selection criteria will be accepted into the Nursing program. Applicants must prove computer literacy either by successfully passing a challenge examination, transferring in an equivalent course or passing CAPP 120.

Students learn practical nursing skills through independent study, lectures, simulation demonstrations, and practice in a nursing skills lab. Under instructor supervision, students also provide patient care in a variety of health care settings. The program is approved by the Montana State Board of Nursing.

Students must provide proof of having met the following health requirements to the Nursing Program Administrative Associate, on or before the first day of class:

1. Tuberculosis testing using the PPD (Purified Protein Derivative) or chest x-ray (positive results will require a physician's letter before a student can continue in clinical settings);
2. Hepatitis B vaccine, (HBV, a three injection series that may be obtained at Curry Health Center and other health care providers);
3. Measles, mumps and rubella (MMR) immunization (for those born before 1956 and not required to have an MMR a titer must be completed);
4. Tetanus shot; and
5. CPR training for health care providers.

Many licensing bodies and employing institutions in health care have increasingly stringent requirements and background checks as conditions for licensing or employment. If a student has concerns about this, she/he should contact the licensing board for nursing at dlibsdnur@mt.gov.

Practical Nursing program graduates are eligible to write the National Council Licensing Examination (NCLEX) for Practical Nurses. After licensure, graduates typically find employment in hospitals, nursing homes, physician offices and other health care agencies. They work

under the supervision of a registered nurse, physician, dentist, osteopath or other health care provider as specified in the State of Montana Nurse Practice Act.

A.A. Prerequisite Courses

A.A. prerequisite courses must be completed prior to application to the program. An AA prerequisite course may be attempted a maximum of two (2) times.

PN Prerequisites	A/S
CHMY 121N (CHEM 151N) Introduction to General Chemistry	3
CHMY 122N (CHEM 152N) Introduction to General Chemistry Laboratory	1
M 121 (MAT 118) College Algebra (requires a placement test)	3
NUR 101 Introduction to Nursing	1
PSYX 100S (PSY 100S) Introduction to Psychology	4
SCN 150 Nutrition (Suggested prerequisite is SCN 100N, Issues in Biology)	3
SCN 201N-202N Anatomy and Physiology	8
WRIT 101 (WTS 101) College Writing I (requires a placement test)	3

Students must prove competence with computer technology in one of the following three ways: Acceptable transfer credit for CAPP 120 (CRT 100); Pass the challenge exam for CAPP 120 (CRT 100); Take and pass CAPP 120 (CRT 100).

Students who have begun the PN program under an earlier catalog will have a slightly different course of study. Please see a program advisor for the correct schedule of courses.

Scope and Sequence of the Practical Nursing Program:

First Year Start in Spring	A	S
NUR 110 (NUR 103) Fundamentals of Nursing	-	7
NUR 125 (NUR 154) Pharmacology I	-	3
NUR 146; Gerontology	-	2
NUR 155 Core Concepts of Mental Health Nursing	2	-
NUR 156 (NUR 155) Core Concepts of Adult Nursing	7	-
NUR 168 (NUR 160) Core Concepts of Maternal/Child Nursing	3	-
NUR 173 (NUR 169 Leadership Issues	2	-
NUR 170 NCLEX Review (elective)	2	-
Total	16	12
First Year Start in Autmn	**A**	**S**
NUR 110 (NUR 103) Fundamentals of Nursing	7	-
NUR 125 (NUR 154) Pharmacology I	3	-
NUR 146; Gerontology	2	-
NUR 155 Core Concepts of Mental Health Nursing	-	2
NUR 156 (NUR 155) Core Concepts of Adult Nursing	-	7
NUR 168 (NUR 160) Core Concepts of Maternal/Child Nursing	-	3
NUR 173 (NUR 169 Leadership Issues	-	2
NUR 170 NCLEX Review (elective)	-	2
Total	12	16

Registered Nursing-Associate of Science Degree

Mary Nielsen, Program Director

The Associate of Science degree program articulates with the PN program and requires at least two additional semesters of fulltime study. Applicants must have completed a PN program with the AA prerequisite courses listed in the practical nursing course of study, and have a cumulative GPA of at least 2.75, submit three letters of reference from employers or former instructors, produce a proctored essay and possibly meet with an interview committee prior to being accepted into the A.S. program. The number of students accepted into the A.S. program is limited to 10 each autumn and spring. Application deadlines are April 1 and November 1. All candidates who meet the admission requirements will be considered. The A.S.N. degree program is approved by the State Board of Nursing.

The requirements for all students entering the program are:

1. Ttuberculosis testing using the PPD (Purified Protein Derivative) X 2 testing or chest x-ray (positive results will require a physician's

letter before a student can continue in clinical settings)
2. Hepatitis B vaccine (HBV, a three injection series that may be obtained at Curry Health Center and other health care providers)
3. Measles, mumps and rubella (MMR; for those born before 1956 and not required to have an MMR, a titer must be completed)
4. Tetanus shot, and;
5. CPR training for health care providers.

There is further advanced learning and skill development in the A.S.N. degree program, in lecture, lab and clinical settings. Upon completion, graduates earn an Associate of Science degree in Nursing (ASRN) and are eligible to write the NCLEX for Registered Nurses. Graduates are prepared for employment as registered nurses in acute care facilities, geriatric care centers, industrial setting, and in public and private health care agencies.

Prerequisite courses	**A**	**S**
Have completed all PN Prerequisites		
BIOL 106N Elementary Medical Microbiology	3	-
SCN 220 Human Physiology (required if student has not taken SCN 202)	4	–
SOCI 101S (SOC 110S) Introduction to Sociology	-	3

RN First Year Start in Autumn	**A**	**S**
NUR 273 (NUR 240) LPN to RN Transition	2	-
NUR 230 Pathophysiology	3	-
NUR 255 (NUR 250) Complex Mental Health Nursing	2	-
NUR 268 (NUR 260) Complex Care Maternal/Child Nursing	3	-
NUR 265 Advanced Adult Physiological Needs	-	4
NUR 275 Management, Ethics and Internship	-	2
Total	10	6

RN First Year Start in Spring	**A**	**S**
NUR 273 (NUR 240) LPN to RN Transition	-	2
NUR 230 Pathophysiology	-	3
NUR 255 (NUR 250) Complex Mental Health Nursing	-	2
NUR 268 (NUR 260) Complex Care Maternal/Child Nursing	-	3
NUR 265 Advanced Adult Physiological Needs	4	-
NUR 275 Management, Ethics and Internship	2	-
Total	6	10

Radiologic Technology-A.A.S. Degree

Anne Delaney, Program Director

A Radiologic Technologist uses critical thinking and independent judgment to obtain a diagnostic imaging study while maintaining quality patient care and minimizing radiation exposure. Technologists are employed in acute care settings, ambulatory care settings, physicians' offices, in education, and in management or sales positions. With additional education and training, radiographers may be employed in radiation therapy, computed tomography, mammography, magnetic resonance imaging, diagnostic medical sonography, nuclear medicine, special vascular imaging and cardiac catheterization.

The Associate of Applied Science degree in Radiologic Technology requires students to successfully complete the AA prerequisite courses prior to applying to the program. Students admitted to the University of Montana may enroll in the AA prerequisite courses. Students must pass SCN 201N-202N with a minimum grade of 'B' and have a minimum cumulative GPA of 2.75 in the AA prerequisite courses to apply to the Radiologic Technology program. A course may be attempted a maximum of two times. As some courses are offered autumn or spring semester only, it is important to obtain advising with the Program Director each semester prior to registration. Application to the program is required spring semester the year prior to the autumn semester program start. Students may apply while enrolled in the AA prerequisite courses with acceptance to the program to be determined after spring grades are finalized. The program classes begin autumn semester each year with four semesters consisting of classroom and clinical education. A ten-week summer clinical rotation is required between the first and second years and consists of 40 hour per week of clinical instruction.

Once accepted in the program, all students are expected to complete SCN 202N and all courses with a RAD rubric with a minimum grade of "B" to continue in the program.

The Radiologic Technology program is approved by the American Registry of Radiologic Technologists (ARRT) and accredited by the Northwest Association of Schools and Colleges. When all requirements for the associate degree are completed, the student will be eligible to take the national certification examination administered by the American Registry of Radiologic Technologists. Upon successful completion of this examination, the student becomes a Registered Radiologic Technologist , R.T.(R)ARRT.

Students entering the program are required to rotate to clinical sites outside the Missoula area on a periodic basis. These rotations will take place during any term or session of the second year. These sites may include, but are not limited to, Ronan, Hamilton, and Polson, Montana.

Transportation and housing are the student's responsibility.

AA Prerequisite Courses

To be successfully completed prior to application to the program. An AA Prerequisite course may be attempted a maximum of two (2) times:

M 115 (MAT 117) Probability and Linear Math or M 121 (MAT 118)College Algebra	3
SCN 175N Integrated Physical Sciences	3
SCN 201N Anatomy and Physiology	4
WRIT 121 (WTS 115) Introduction to Technical Writing or WRIT 101 College Writing	3
Total	13

Students must prove competence with computer technology in one of the following three ways: Acceptable transfer credit for CAPP 120; Pass the challenge exam for CAPP 120; Take and pass CAPP 120.

Radiologic Technology Program Curriculum

First Year	A	S
COM 160A Oral Communications	–	3
PSYX 161S (PSY 110S)Organizational Psychology or PSYX 100S (PSY 100S) Introduction to Psychology	3	–
RAD 110 Introduction to Radiology and Patient Care	3	-
RAD 111 Radiological Procedures I	3	-
RAD 121 Radiographic Imaging I	-	4
RAD 151 Radiographic Clinical Education I	-	8
RAD 112 Radiological Procedures II	-	3
SCN 202N Anatomy and Physiology	4	-
Total	13	18
Summer Session	**A**	**S**
RAD 161 Radiographic Clinical Education II	12	
Total	10	
Second Year	**A**	**S**
MED 280E Ethics in Health Professions	-	3
RAD 222 Radiographic Imaging II	3	-
RAD 241 Radiographic Protection	2	-
RAD 245 Radiographic Analysis	-	2
RAD 251 Radiographic Clinical Education III	8	-
RAD 261 Radiographic Clinical Education IV	-	9
Total	13	14

Respiratory Care-A.A.S. Degree

Nicholas Arthur, Program Director

Respiratory Care is an allied health specialty. It is an important part of modern medicine and health care. Respiratory Care encompasses the care of patients with respiratory problems in the hospital, clinic, and home.

Respiratory therapists, as members of a team of health care professionals, work to evaluate, treat, and manage patients of all ages with respiratory illnesses and other cardiopulmonary disorders in a wide variety of clinical settings. Respiratory therapists must behave in a manner consistent with the standards and ethics of all health care professionals. In addition to performing respiratory care procedures, respiratory therapists are involved in clinical decision-making (such as patient evaluation, treatment selection, and assessment of treatment efficacy) and patient education. The scope of practice for respiratory therapist includes, but is not limited to:

- acquiring and evaluating clinical data;
- assessing the cardiopulmonary status of patients;
- performing and assisting in the performance of prescribed diagnostic studies, such as drawing blood samples, performing blood gas analysis, pulmonary function testing, and applying adequate recording electrodes using polysomnographic techniques;
- utilizing data to assess the appropriateness of prescribed respiratory care;
- establishing therapeutic goals for patients with cardiopulmonary disease;
- participating in the development and modification of respiratory care plans;
- case management of patients with cardiopulmonary and related diseases;
- initiating ordered respiratory care, evaluating and monitoring patients' responses to such care, modifying the prescribed respiratory

therapy and cardiopulmonary procedures, and life support endeavors to achieve desired therapeutic objectives;
- initiating and conducting prescribed pulmonary rehabilitation;
- providing patient, family, and community education;
- promoting cardiopulmonary wellness, disease prevention, and disease management;
- participating in life support activities as required; and
- promoting evidence-based medicine, research, and clinical practice guidelines.

Starting salaries are excellent with premiums paid for evening, night, and weekend shifts. Jobs are plentiful throughout the United States. Graduates are eligible to take the credentialing examinations administered by the National Board for Respiratory Care (NBRC) which lead to the Registered Respiratory Therapist (RRT) credential. Licensure requirements in the state of Montana also are met by successful completion of the NBRC Entry Level (CRT) examination.

The program is 4 ½ semesters in length which includes the AA prerequisite courses and a summer session. The Respiratory Care program is accredited by the Commission on Accreditation of the Allied Health Education Programs (CAAHEP), 35 East Wacker Drive, Suite 1970, Chicago, IL 60601, (312) 553-9355. Graduates receive the degree of Associate of Applied Science in Respiratory Care.

Students accepted to the program are required to rotate to clinical sites outside the Missoula area on a periodic basis. These rotations take place during the spring semester, summer session and autumn semester of the second year. These sites may include, but are not limited to: Kalispell, Ronan, Polson, Butte, Billings, Bozeman, Hamilton, Helena, Coeur d'Alene and Lewiston, Idaho and Spokane, Washington. **Transportation and housing are the student's responsibility.**

Program Admission Requirements

1. Completion of all general health core courses with a minimum 2.75 GPA in the core courses.
2. Minimum grade of B minus in SCN 201N and a minimum grade of C in SCN 202N.
3. Previous health care experience is preferred. Applicants are required to "job shadow" a Respiratory Care practitioner in the workplace. Consult the Respiratory Care Program Director for details.
4. Submit completed application packet to the HP Administrative Assistant by April 1 for autumn entry into the program.

Note: If a student has not completed the general health core courses until the end of summer session, he/she should still apply in spring semester and request a provisional acceptance contingent upon successful completion of general health core courses during the summer session.

AA Prerequisite Courses

To be successfully completed prior to application to the program. An AA prerequisite course may be attempted a maximum of two (2) times.

M 115 (MAT 117) Probability and Linear Mathematics Probability and Linear Math or M 121 (MAT 118)College Algebra	3
PSYX 161S (PSY 110S)Organizational Psychology	3
SCN 201N-202N Anatomy and Physiology	8
WRIT 121 (WTS 115) Introduction to Technical Writing or WRIT 101 (WTS 101) College Writing I	3
Total	17

Respiratory Care Program Curriculum

Autumn Entry	A	S
RES 120T Ethics and Health Care Communication	2	-
RES 129T Patient Care and Assessment	4	-
RES 131T Respiratory Care Fundamentals	6	-
RES 133T Respiratory Care Pharmacology	3	-
RES 150T Respiratory Care Laboratory I	1	-
RES 231T Respiratory Critical Care	-	4
RES 232T Respiratory Pathology and Disease	-	3
RES 235T Cardiopulmonary Anatomy and Physiology	-	3
RES 250T Respiratory Care Laboratory II	-	2
RES 255T Clinical Experience I	-	5
Total	16	17

Summer Session	
RES 260T Respiratory Care Laboratory III	1
RES 265T Clinical Experience II	6
Total	7

Autumn Semester	A
RES 241T Perinatal and Pediatric Respiratory Care	3
RES 242T Respiratory Management	1
RES 252T Respiratory Care Review	2
RES 270T Respiratory Care Laboratory IV	2
RES 275T Clinical Experience III	7
Total	15

Surgical Technology-A.A.S. Degree

Debbie Fillmore, Program Director

Students in the program are educated to be Surgical Technologists who work as part of the surgical team to ensure the operative procedure is conducted under optimal conditions. The ST is responsible for three phases (preoperative, intraoperative, and postoperative) of patient care with minimal direction. All surgical team members must adhere to the principles of asepsis and the practice of sterile technique. The ST normally functions in a sterile capacity by passing instruments, equipment and supplies to the surgeon during the surgical procedure but may also perform many non-sterile duties throughout the workday.

Students admitted to The University of Montana enter as Associate of Arts (AA) General Studies majors and select the specific prerequisite courses required for their chosen area of study after meeting with the program advisor.

The Associate of Applied Science Degree (AAS) in Surgical Technology requires students successfully complete, or be in the process of completing, the A.A. prerequisite courses at the time of program application. Students must apply to the ST program by November 1. Students may apply while enrolled in the A.A. prerequisite courses with acceptance to the program to be determined after the Autumn semester grades are finalized. The course, SCN 201N, Anatomy and Physiology I, must be passed with a grade of B (3.0). All other prerequisite courses must be passed with a grade of C (2.0). The program-specific courses begin spring semester.

Once accepted to the program, a student must complete each Surgical Technology-specific course (those courses with a SUR prefix) with a minimum grade of 'C' (80%) in order to continue in the ST program. All other required courses must also be passed with a grade of "C". Course grading scales may vary. If a student does not pass the required courses, he/she will not be able to continue in the program and will need to apply for readmission. If a student is re-admitted, he/she will be required to complete skills labs, SUR 102T and SUR 202T, to ensure sterile technique skills are acceptable for patient care. A student may take any required course a maximum of two (2) times.

A student will become a member of the Association of Surgical Technologists (www.ast.org) during the first year in the program. A student anticipating program completion will write the National Certification Exam prior to graduation. A student who successfully completes the ST program is awarded an A.A.S. degree in Surgical Technology. The credential of Certified Surgical Technologist (CST) will be awarded to a student upon passing the National Certification Exam and graduation from the ST program. The credential of Certified is awarded by the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

Students are required to rotate sites during the clinical portion of their education. **During the last semester of the program, internships may be outside the Missoula area. Transportation and housing are the student's responsibility.**

The University of Montana College of Technology Surgical Technology Program also has Outreach campuses in Butte and Billings. The Butte site is the Montana Tech of The University of Montana College of Technology campus in collaboration with St James Healthcare. The Billings site is the Montana State University-Billings College of Technology campus in collaboration with St Vincent Healthcare and Billings Clinic. Students at those sites take the equivalent A.A .prerequisite courses on their respective campuses. The Surgical Technology-specific courses begin spring semester. Students must apply to the ST program by November 1. Students may apply while enrolled in the A.A. prerequisite courses with acceptance to the program to be determined after fall grades are finalized. The classroom portion of the ST program curriculum is delivered in web-based format using the Blackboard course delivery system from the Missoula campus. Lab and clinical courses are conducted on each Outreach campus. Outreach students are required to travel to Missoula to write the National Certification Exam and to participate in Commencement exercises. Prospective students may contact the Outreach Office at 406-243-7871 for more information regarding the ST Program on the Butte and Billings campuses. Please refer to the specific course catalogs on the Butte and Billings campuses for prerequisite requirements.

The ST program is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP), 1361 park St., Clearwater, FL 33756; phone 727-210-2350, www.caahep.org.

AA Prerequisite Courses

A student may apply to the program either following completion of the AA prerequisite courses or during the semester completing the courses. Any required course may be attempted a maximum of two (2) times.

WRIT 121 (WTS 115) Introduction to Technical Writing or WRIT 101 (WTS 101) College Writing I	3
CAPP 120 (CRT 100) Computer Applications	2
M 105 Contemporary Math	3

MED 154T Beginning Medical Terminology	2
PSYX 100S (PSY 100S)Introduction to Psychology	4
SCN 201N Anatomy and Physiology I	4
Total	18

Surgical Technology Program Curriculum:

First Year	A	
BIOL 106N Elementary Microbiology	-	3
SCN 202N Anatomy and Physiology II	-	4
ST 100 Introduction to Safe Patient Care	-	3
ST 115 Surgical Lab I	-	2
ST 154 Surgical Pharmacology	-	3
Total	-	15
Second Year	**A**	**S**
ST 200 Operating Room Techniques	5	-
ST 201 Surgical Procedures I	4	-
ST 215 Surgical Lab II	2	-
ST 250 Surgical Clinical I	4	-
MED 280 Ethics in Health Professions	3	
ST 202 Surgical Procedures II	-	5
ST 251 Surgical Clinical II	-	5
ST 298 Surgical Internship	-	5
Total	18	15

Please note: Surgical Technology course numbers, titles and rubries have changed.

Courses

U = for undergraduate credit only. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Nursing (NUR)

U 101 Introduction to Nursing 1 cr. Offered each semester. This online course is a prerequisite to the Practical Nursing program. Student will be presented with an introductory level of the core concepts of nursing practice and other issues such as the legal concerns and ethical/cultural issues that face professional nurses on a consistent basis.

U 110 Fundamentals of Nursing 7 cr. Offered autumn and spring. Prereq: acceptance into the Practical Nursing Program. Introduces learners to the clinical skills essential for the nursing role. Also includes complex concepts and behaviors of nursing roles within the context of the nursing process, holistic care and health care. Emphasizes the theoretical and practical concepts of nursing skills required to meet the needs of clients in a variety of settings.

U 125 Pharmacology 3 cr. Offered autumn and spring. Prereq: acceptance into the Practical Nursing Program. Students learn a structured systematic approach to the study of drug therapy through caring, communication, professionalism, critical thinking, and clinical judgment. Medications are studied according to drug classes, and therapeutic families. Students will learn to apply the nursing process to drug therapy with an emphasis on accessing relevant information to ensure client safety.

U 146 Gerontology 2 cr. Offered autumn and spring. Prereq: acceptance into the Practical Nursing Program. Introduces the student to the skills and knowledge needed to provide nursing care to aging clients. Topics explored include current trends (including legal and ethical issues) in gerontological nursing, developmental stages and transitions associated with aging, expected age-related physiological changes, and assessment findings, recognition and management of acute and chronic illness that commonly occur in the older adult population, promotion of health for the older adult client, end-of-life issues and care.

U 155 Core Concepts of Mental Health Nursing 2 cr. Offered autumn and spring. Prereq: successful completion of semester 1 of the PN nursing program. Exploration of physiological, psychological, sociocultural, spiritual, and environmental factors associated with mental health/illness affecting individuals and families. Focus will be placed on basic concepts of psychiatric nursing, therapeutic modalities, as well as psychiatric disorders including psychopharmacological management.

U 156 Core Concepts of Adult Nursing 7 cr. Offered spring and autumn. Prereq: successful completion of semester 1 of the PN nursing program. Prepares the student to care for clients experiencing common, well-defined health alterations in settings where stable clients are anticipated. Students are introduced to standardized nursing procedures and customary nursing and collaborative therapeutic modalities.

U 166 Clinical Capstone Experience 2 cr. Offered intermittently. Prereq: all first semester practical nursing courses and consent of instr. Capstone course that allows the student to work collaboratively with an identified LPN preceptor, performing the role expectations for care in that workplace setting.

U 168 Core Concepts of Maternal/Child Nursing 3 cr. Offered autumn and spring. Prereq: successful completion of semester 1 of the PN nursing program. Information about fetal development and prenatal and postnatal care of the mother and newborn emphasizing caring, communication, professionalism, and critical thinking. Role of the nurse in meeting the needs of the family is emphasized. Clinical application of caring for the mother and newborn will allow the student to demonstrate acquired knowledge.

U 170 NCLEX Review 2 cr. Offered autumn and spring. Prereq: Successful completion of all courses in the first semester of the practical nursing program. Preparation for the national test for LPN licensure.

U 173 Leadership Issues 2 cr. Offered autumn and spring. Prereq: successful completion of semester 1 of the PN nursing program. Capstone course that provides the Practical Nursing student information regarding the current status of vocational nursing. There is a forty-five hour clinical/precepted component to provide the student opportunity to apply theoretical knowledge in the long-term care setting**.**

U 196T Independent Study 1-6 cr. (R-6) Offered intermittently.

U 230 Pathophysiology 3 cr. Offered spring and autumn. Prereq: successful acceptance into the ASRN Nursing Program. An introduction to the basic principles and processes of pathophysiology including cellular communication, genes and genetic disease, forms of cellular injury, fluid and electrolyte/acid base balance, immunity, stress coping and illness, and tumor biology. Pathophysiology of the most common alterations according to body system will also be discussed as well as the latest developments in research related to each area.

U 255 Complex Care Needs of the Mental Health Client 2 cr. Offered spring and autumn. Explores physiological, psychological, sociocultural, spiritual and environmental factors associated with mental health/illness. Focus is placed on psychotherapeutic management in the continuum of care, milieu management and special populations with emphasis on individuals, families and communities.

U 265 Advanced Adult Physiological Needs II 4 cr. Offered spring and autumn. Prepares the student to provide nursing care to adult clients experiencing acutely changing conditions in settings where outcomes are less predictable. Emphasis is placed on the nurse's response to emergent/life-threatening/rapidly changing conditions. Topics covered include collaborative therapeutic modalities related to acute/complex neurological, cardiac, respiratory, hematological, endocrinological events, shock, sepsis/SARS, complex burns, etc.

U 268 Complex Care Needs-Maternal/Child 3 cr. Offered spring and autumn semester. Prepares the student to provide care to maternal/child clients experiencing acutely changing conditions in settings where outcomes are less predictable. Topics include care of the client during childbirth, high-risk pregnancies, obstetrical emergencies, neonatal emergencies, and infants and children requiring complex collaborative care.

U 273 PN to RN Transition 4 cr. Offered autumn and spring. Prereq: admission to the registered nursing program and current unencumbered LPN license. Focus on the role transition from LPN to RN in relation to the concepts and principles of holistic nursing care. Focus is on the continuing development of roles and responsibilities of the RN as defined by the scope of practice standards, nursing theory and conceptual models.

U 275 Management, Ethics, & Internship 2 cr. Prereq: Successful completion of first semester of the registered nursing courses and current unencumbered LPN license. Focuses on the principles of professional nursing management, leadership and ethics. Students develop knowledge and skills in decision making as staffing, directing and controlling. Emphasis is on the use of leadership knowledge and skills in affecting change. Integration of knowledge of ethical factors as they relate to health and illness.

Pharmacy Technology (PHA)

U 100 Introduction to Pharmacy Practice 3 cr. Offered autumn. Introduction to pharmacy practice as a career. Includes history and personnel relating to pharmaceutical services and ethical standards of the occupation. Introduction to federal and state laws regulating pharmacy practice with emphasis on Montana State Pharmacy Law regulating pharmacy technicians. Preparation, maintenance, and storage of pharmacy records. Basic concepts of computer operations with emphasis on software designed for use in pharmacy. Development of skills necessary for the pharmacy technician to communicate effectively in the following ways: 1) as a representative of the profession of pharmacy, 2) as an intermediary between the pharmacist and patient, and 3) as an intermediary between the pharmacist and other health care professionals.

U 101 Pharmacy Calculations 3 cr. Offered autumn. Calculations used in pharmacy practice; includes various systems of weights and measures, dosage determinations, percentage preparations, reducing and enlarging formulas, dilution, and concentration.

U 102 Pharmacology 6 cr. Offered autumn. Prereq., admission into Pharmacy Technology program. Study of the properties, reactions, and therapeutic value of the primary agents in the major drug classes.

U 103 Hospital and Community Practice 6 cr. Offered spring. Prereq., PHA 100T, PHA 101T. Practices in hospital and community pharmacy settings. In addition to lectures, students receive hands-on experience in dispensing prescriptions, computer order entry, labeling, patient profiles, non-sterile compounding, and sterile IV admixture preparation. Guest speakers and video presentations supplement lectures and skills practice. Good communication skills are emphasized.

U 105 Pharmacy Technology Internship 5 cr. Offered spring. Prereq., PHA 100T, 101T, 102T. Training and experience in a variety of hospital and community pharmacy settings under supervision of a pharmacist. Emphasizes practical experience in outpatient dispensing, inpatient dispensing, unit-dose systems, IV admixture systems, bulk and sterile compounding, purchasing and inventory control, and effective communications.

U 160 Survey of Pharmaceutical Products 3 cr. Offered autumn. Fundamental principles of pharmacology and the implications of medication use. Includes the law as it pertins to drug use, dosage forms, routes of administration as well as the pharmacologic actions and uses of drugs.

U 195 Special Topics 1-6 cr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study 1-6 cr. (R-6) Offered intermittently.

Radiologic Technology (RAD)

U 110 Introduction to Radiology and Patient Care 3 cr. Offered fall. Introduction to the field of radiology and its mix of technical equipment, lab work, hospital environment, patient care and team work.

U 111 Radiographic Procedures I 3 cr. Offered fall. Preparation in the procedures associated with radiology in standard radiographic environments.

U 112 Radiographic Procedures II 3 cr. Offered spring. Knowledge and skills necessary to perform standard and specialty radiographic procedures. Emphasis on radiographic specialty procedures, pathology, and advanced imaging.

U 121 Radiographic Imaging I 4 cr. Offered spring. Introduction to fundamental physics principles underlying radiology and diagnostic ex-ray production. Topics include electromagnetic waves, electricity and magnetism, electrical energy, and power and circuits as they relate to radiography. Factors of image quality and exposure methods: density, contrast, recorded detail, distortion, technique charts, manual and automatic exposure control, and tube rating charts.

U 151 Radiographic Clinical Education I 8 cr. Offered spring. Introduction to patient management and basic radiographic procedures in the clinical setting. Emphasis on mastering positioning of the chest and extremities, manipulating equipment, and applying principle of ALARA.

U 161 Radiographic Clinical Education II 12 cr. Offered summer. Additional experience in patient management and more complex patient procedures. Emphasis on positioning of the spine, pelvis, head and neck, and thorax and adapting procedures to meet patient variations.

U 222 Radiographic Imaging II 3 cr. Offered autumn. Offers students more technical and detailed information on the use of image receptor systems, processing principles, advanced digital imaging systems and imaging modalities used in radiology.

U 241 Radiographic Protection 2 cr. Offered autumn. Principles of radiation protection and radio biology. Topics include the effects of ionizing radiation on body tissues, protective measures for limiting exposure to the patient and personnel, and radiation monitoring devices.

U 245 Radiographic Analysis 2 cr. Offered spring. An overview of imaging concepts as a review for the national boards. Topics include a systematic approach for image evaluation, patient care, radiation protection and the physics of radiographic imaging.

U 251 Radiographic Clinical Education III 8 cr. Offered autumn. Experience in patient management specific to fluoroscopic and advanced radiographic procedures. Emphasis on applying appropriate technical factors to all studies and positioning of gastrointestinal and urological studies.

U 261 Radiographic Clinical Education IV 9 cr. Offered spring. Continuation of instruction in all basic radiographic procedures and experience in advanced areas. Emphasis on equipment operation, pathological recognition, pediatric and geriatric variations, and radiation protection requirements.

Respiratory Care (RES)

U 120T Perspectives in Health Care Communications 2 cr. Offered autumn. Introduction to oral and written health communications as well as a brief overview of ethical and legal implications of respiratory care practice.

U 129T Patient Care and Assessment 4 cr. Offered autumn. Prereq., SCN 201N-202N. Introduction to nursing- related knowledge and skills with emphasis on application of microbiology to aseptic technique. Assessment of the respiratory system with cardiopulmonary diagnostic and laboratory tests interpretation.. Medical terminology integrated throughout the course. Peer and instructor review of selected clinical competencies in a laboratory setting.

U 131T Respiratory Care Fundamentals 6 cr. Offered autumn. Prereq., acceptance into the Respiratory Care program. Orientation to basic respiratory care science including the application of principles of physics. Emphasis on theory, operation and troubleshooting of equipment used at the entry level of practice. Microbiology in relation to equipment processing, pulmonary rehabilitation and home care

included.

U 133T Respiratory Care Pharmacology 3 cr. Offered autumn. Prereq., acceptance into the Respiratory Care Program or consent of instr. Principles of basic chemistry introduced with an application to pharmacology as related to the pulmonary system. Cardiovascular and related pharmacology studied in preparation for ACLS and ventilator management.

U 150T Respiratory Care Laboratory I 1 cr. Offered autumn. Prereq., acceptance into the Respiratory Care program. Basic clinical competencies taught in RES 131T are studied in a laboratory setting. Peer and instructor review included. Students earn their BLS certification.

U 231T Respiratory Critical Care 4 cr. Offered spring. Prereq., RES 120T, 129T, 131T, 133T, 150T. Continuation of RES 131T. Physiology, indication, contraindications, and application of mechanical ventilation. Emphasis on patient assessment, monitoring,, stabilization and weaning during assisted pressure breathing. Analysis of the various modes of ventilation, including optimizing the patient-ventilator interface in the adult through various advanced airway techniques. Rhythm strip interpretation in preparation for ACLS.

U 232T Respiratory Pathology and Disease 3 cr. Offered spring. Prereq., RES 120T, 129T, 131T, 133T, 150T. Special lectures in medicine and disease as related to the cardiopulmonary system. Emphasis on recognition of signs and symptoms of disease and implications for treatment through the study of selected case studies. Neonatal and pediatric diseases included.

U 235T Cardiopulmonary Anatomy and Physiology 3 cr. Offered spring. Prereq., RES 120T, 129T, 131T, 133T, 150T or consent of instr. Principles of physiologic chemistry are introduced and applied to the macro and micro anatomy of the cardiopulmonary system with a focus on structure and function. Application made to pathology and assessment of patients receiving mechanical ventilation.

U 241T Perinatal and Pediatric Respiratory Care 3 cr. Offered autumn. Prereq., RES 260T, 265T. Study of perinatal and pediatric respiratory care with emphasis on assessment, resuscitation and mechanical ventilation of the neonate and pediatric patient. The theory of Neonatal Resuscitations (NRP) will be presented.

U 242T Respiratory Management 1 cr. Offered autumn. Prereq., RES 260T, 265T. Study of respiratory care departmental organization and administration procedures.

U 250T Respiratory Care Laboratory II 2 cr. Offered spring. Prereq., RES 120T, 129T, 131T, 133T, 150T. A continuation of RES 150T with emphasis on adult critical care. Clinical competencies taught in RES 231T and RES 235T are studied. Peer and instructor review included.

U 252T Respiratory Care Review 2 cr. Offered autumn. Prereq., RES 260T, 265T. A review of respiratory care in preparation for credentialing exams. Students must take an Entry Level Self-Assessment Exam, a Written Registry Self- Assessment Exam, and a Clinical Simulation Self-Assessment Exam.

U 255T Clinical Experience I 5 cr. Offered spring. Prereq., RES 120T, 129T, 131T, 133T, 150T. Emphasis on the student directly performing basic clinical skills in a patient care setting to include hospitals, home care, and pulmonary function laboratories. Students also participate in physician rounds.

U 260T Respiratory Care Laboratory III 1 cr. Offered summer. Prereq., RES 231T, 232T, 235T, 250T, 255T. Peer and instructor review are included. Students will be Advanced Cardiac Life Support (ACLS) and Pediatric Advance Life Support (PALS) certified at the end of this class.

U 265T Clinical Experience II 6 cr. Offered summer. Prereq., RES 231T, 232T, 235T, 250T, 255T. Continuation of clinical skills learned in RES 255T. Introduction to adult critical areas along with sleep and cardiac diagnostics. Students also participate in physician rounds.

U 270T Respiratory Care Laboratory IV 2 cr. Offered autumn. Prereq., RES 260T, 265T. A continuation of RES 260T with an emphasis on neonatal and pediatric critical care. Clinical competencies introduced in RES 241T are studied. Peer and instructor review are included. Students will be Neonatal Resuscitation (NRP) certified at the completion of the class.

U 275T Clinical Experience III 7 cr. Offered autumn. Prereq., RES 260T, 265T, 270T. Continuation of RES 265T with critical care of the adult. Neonatal and pediatric critical care experiences also emphasized along with teaching skills in selected areas. Students also participate in physician rounds.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Surgical Technology (SUR)

U 101 Introduction to Safe Patient Care 3 cr. Offered spring. Prereq., admission to the program. Provides an orientation to the scrub and circulatory roles of the surgical technologist in the preoperative, intraoperative and postoperative periods. Entry level skills and theories are emphasized.

U 115 Surgical Procedures Lab I 2 cr. Offered spring. Prereq., admission to the program. Orientation to the physical organization of the central processing department with emphasis on documentation, sterilization, and preparation of instruments/supplies.

U 154 Surgical Pharmacology 3 cr. Offered spring. Prereq., admission to the program, MAT 005. Basic overview of the medications that are commonly used before, during and after a surgical procedure.

U 164 Microbiology for the Surgical Technologist 3 cr. Offered spring. Prereq., admission to the program basics of microbiology and techniques for prevention and control of disease before, during, and after surgery.

U 200 Operating Room Techniques 5 cr. Offered autumn. Prereq., completion of all second semester courses. Focus on the scrub and circulator roles of the surgical technologist in the preoperative, intraoperative, and postoperative periods. More complex skills and theories; impact of new technologies in the 21 century st operating room.

U 201 Surgical Procedures I 4 cr. Offered autumn. Prereq., completion of all second semester courses. A study of surgical procedures following the patient through the preoperative, intraoperative, and post-operative stages of specific surgical specialties.

U 202 Surgical Procedures II 5 cr. Offered spring. Prereq., completion of all third semester courses. A study of surgical procedures following the patient through the preoperative, intraoperative, and postoperative stages of CV/thoracic, orthopedic, neurological, and ophthalmic specialties.

U 215 Surgical Procedures Lab II 2 cr. Offered autumn. Prereq., completion of all second semester courses. Orientation to the physical organization of the surgical suite, demonstration and return demonstration of perioperative competencies in the campus lab.

U 250 Surgical Lab Practicum I 4 cr. Offered autumn. Prereq., completion of all second semester courses and successful completion of SUR 202T. Perioperative experience in the minor surgical procedure role through a supervised clinical hospital rotation.

U 251 Surgical Lab Practicum II 5 cr. Offered spring. Prereq., completion of all third semester courses. Perioperative experience in the major surgical procedure role through a supervised clinical hospital rotation.

U MED 280E (SUR 204E) Ethics in Health Professions 3 cr. Offered autumn. Ethical decision-making tools for addressing common ethical issues in the health professions.

U 298 Surgical Internship 5 cr. Offered spring. Prereq., completion of all third semester courses, SUR 205T, SUR 206T. Capstone experience in the perioperative role in preparation for initial employment, increasing occupational awareness and professionalism. Students take call for emergency surgeries alongside experienced hospital staff.

Department of Industrial Technology

Alan P. Fugleberg, Associate Dean & Chair

The mission of the Department of Industrial Technology is to provide the regional workforce with credentialed, skilled, and competent entry-level technicians, and to be responsive to emerging workforce needs. The Department encourages the development of teamwork and interpersonal communication skills required in the workplace. It also stresses the importance of a strong work ethic and the value of continuing education and lifelong learning. The instruction for the Certificate of Applied Science and A.A.S. degree programs are primarily delivered at the West Campus at 3639 South Avenue West. Some instruction is delivered at the East Campus or Mountain Campus.

Special Certificate and Degree Requirements

The general education requirements are included in the following courses of study. Refer to the Academic Policies and Procedures section of this catalog for the specific requirements.

Course Fees, Tools, and Supplies

Courses in all programs in the Department of Industrial Technology include additional course fees and require special tools and supplies for which students must pay. To obtain a complete listing of these additional items and costs, contact the program directors.

Building Maintenance-Certificate of Applied Science

The mission of the Building Maintenance Program is to provide the regional workforce with credentialed, skilled and competent building maintenance professionals, and to be responsive to emerging workforce needs.

Students in the Building Maintenance program are trained as building maintenance professionals who maintain commercial buildings. Subject matter in the program includes plumbing, electricity, carpentry, and heating/air conditioning. Students learn physical and electrical theories that enable them to understand building systems. In addition, they study building cleaning, landscape maintenance, pool care, computers, and boiler operation. Water treatment is discussed in both the pool and boiler courses. The program introduces current environmental and energy problems that can be reduced through efficient building operation. It also encourages resource development, teamwork and interpersonal skills required on the job.

Students are awarded a Certificate of Applied Science upon successfully completing the program. Contact John Walker, Program Director, at 406-243-7645 or john.walker@umontana.edu for more information.

Autumn and Spring Entry:

Course	A	S
BME 122T Electricity	-	5
BME 123T Carpentry	6	-
BME 127T Low Pressure Boilers	-	3
BME 128T Maintenance	6	-
BME 130T Heating and Air Conditioning	-	6
CAPP 120 (CRT 100) Introduction to Computers	2	-
M 111 (MAT 110T) Technical Mathematics	3	-
PSYX 163 (PSY 105T) Work Attitudes	-	1
WRIT 121 (WTS 115) Introduction to Technical Writing or WRIT 095 (WTS 100) Developmental Writing	-	3
Total	17	18

Carpentry - Certificate of Applied Science and A.A.S. Degree

The mission of the Carpentry Program is to provide the regional workforce with credentialed, skilled and competent carpenters and to be responsive to emerging workforce needs.

The Carpentry program provides students the opportunity to learn carpentry skills in a competency-based learning environment. Students work hand-in-hand with professional carpenters both on campus and at construction sites.

Students use hand and power tools with blueprints to build foundation forms, frame buildings, side and roof buildings, and apply roofing materials. They install windows, doors, stairs, attic vents, insulation, vapor barriers, and drywall. Students learn methods for installing trim, locksets, suspended ceilings, countertops, cabinets, and flooring. They also learn to operate forklifts, generators, compressors, and compactors.

In addition to general education courses, students in the program learn the various steps of becoming a carpenter, including safe practices. Students construct real-world projects and can earn a Certificate of Applied Science or an Associate of Applied Science degree from the University of Montana. The program often has a waiting list. Prospective students are encouraged to apply one year prior to anticipated school attendance. Contact Donnie Laughlin, Program Director, at 406-243-7692 or Donnie.Laughlin@umontana.edu for more information.

First Year	A	S
CAR 120T Framing Carpentry Lecture	4	-
CAR 121T Framing Carpentry Lab	3	-
CAR 130T Concrete Carpentry	4	-
CAR 131T Concrete Carpentry Lab	4	-
CAR 140T Exterior and Interior Finish Carpentry	-	4
CAR 141T Interior and Exterior Finish Carpentry Lab	-	5
BUS 242T Supervision	-	3
CAPP 120 (CRT 100) Introduction to Computers	2	-
M 111 (MAT 110T) Technical Mathematics	-	3
WRIT 101 (WTS 101) College Writing I	-	3
Total	17	18

Successful completion of the courses listed above results in the award of a Certificate of Applied Science in Carpentry.

Second Year	A	S
CAR 220T Advanced Carpentry Lecture	-	4
CAR 221T Advanced Carpentry Lab	-	3
CAR 230T Building Management	3	-
CAR 231T Building Management Lab	3	-
CAR 236T Building for Solar Energy	3	-
CAR 240T Alternative Construction Materials	3	-
CAR 241T Applied Building Practices Lab	-	6
CRT 182T Computer Aided Design & Drafting.	2	-
WEL 119T Welding for Carpenters	-	2
Total	14	15

Successful completion of the first and second year courses listed above results in the awarding of an Associate of Applied Science Degree in Carpentry.

Diesel Technology- A.A.S. Degree

The mission of the Diesel Technology Program is to provide the regional workforce with credentialed, skilled and competent diesel technicians and to be responsive to emerging workforce needs.

Students in the Diesel Technology program train to be diesel mechanics that repair diesel-powered trucks and heavy equipment. Students study hydraulics, electrical systems, fuel systems, power trains, air conditioning, brakes and suspension, engine theory, and engine diagnosis, beginning with basic principles and proceeding to an advanced level of system technology. Along with these core courses, students take classes in welding, machining, computers, communications, and math. Credit for independent study is available to those desiring additional instruction in diesel mechanics. Students who complete the program successfully are awarded the Associate of Applied Science degree.

The program often has a waiting list. Prospective students are encouraged to apply one year prior to anticipated school attendance. Contact the Jim Headlee, Program Director, at 406-243-7648 or Jim.Headlee@umontana.edu for more information.

Autumn Entry:

First Year	A	S
CAPP 120 (CRT 100) Introduction to Computers	-	2
DET 120T Electrical Systems	-	8
DET 128T Engine Service I	4	-
DET 135T Power Trains	7	-
M 111 (MAT 110T) Technical Mathematics	-	3
MPR 115T Related Metals Processes	-	3
PSYX 161S (PSY 110S) Fundamentals of Organizational Psychology	3	-
WEL 111T Welding	2	-
Total	17	18
Second Year	**A**	**S**
DET 221T Brakes, Suspension, and Undercarriage	6	-
DET 225T Hydraulics	6	-
DET 229T Engine Service II	-	7
DET 230T Air Conditioning	-	3
DET 231T Fuel Systems	-	5
DET 235T Advanced Power Trains	-	2
TRK 106T Commercial Driver's License (CDL) Training (offered intermittently)	-	(1)
WEL 139T Welding Maintenance and Repair	2	-
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	17	17-18

Power Generation

(Not available in 2009-2010)

Power generation has become a major industry within the overall diesel industry with many companies needing qualified generator technicians to service, test and repair gaseous powered systems. A University of Montana College of Technology diesel technology student may enroll in the power generation option upon successful completion of the two year diesel program, or a perspective student with industry related experience may petition to join the program. The power generation student can expect to be introduced to the concept of gas powered generators, controls, general setup/ testing and troubleshooting techniques. Generator tear-down and assembly is experienced enhancing the student's ability to understand the operation and overhaul principles of a power generator. Students also will experience operation, set-up and adjustment of typical fuel systems as found on gaseous powered generator systems including diagnostic principles. Common types of control units also will be covered with control safety of the system being the primary consideration.

Summer Session	Credits
DET 270T Diesel and Gaseous Fueled Engines	3 cr.
DET 271T Power Generators	5 cr.

Heavy Equipment Operation-Certificate of Applied Science

The mission of the Heavy Equipment Operation Program is to provide the regional workforce with credentialed, skilled and competent

heavy equipment operators and to be responsive to emerging workforce needs. The Heavy Equipment Operation Program provides students a basic understanding of fundamental machine functions and is designed to develop apprentice-level skills in the operation of heavy equipment.

Students are trained to safely and properly operate and maintain a variety of heavy equipment, including crawler-tractors, graders, scrapers, front-end loaders, excavators, backhoes, and dump trucks. Students develop an understanding of basic surveying techniques, receive extensive training in safety regulations and procedures, and learn how to handle controls precisely and judge distances accurately. The program also promotes an awareness of potential job site difficulties and allows students to gain knowledge of the work ethic expected by employers in the construction industry.

A Certificate of Applied Science is awarded after the program is successfully completed.

The program often has a waiting list for admittance. Prospective students are encouraged to apply one year prior to anticipated school attendance. Contact Rod Frost, Program Director, at 406-243-7843 or Rodney.Frost@umontana.edu for more information.

Autumn Entry	A	S
CAPP 120 (CRT 100) Introduction to Computers	2	-
HEO 140T Basic Surveying	2	-
HEO 146T Safety and Basic Controls	5	-
HEO 148T Operational Skill Building	5	-
HEO 150T Job Simulation	-	6
HEO 151T Service and Maintenance	2	-
HEO 153T Construction Theory and Specialized Equipment	-	5
M 111 (MAT 110T) Technical Mathematics	3	-
MPR 112T Related Metals Processes	-	1
PSYX 163 (PSY 105T) Work Attitudes	-	1
TRK 106T Commercial Truck Driving License Training (offered intermittently)	(1)	-
WRIT 121 (WTS 115) Introduction to Technical Writing or WRIT 095 (WTS 100) developmental Writing	-	3
Total	20	16

Recreational Power Equipment-Certificate of Applied Science

The mission of the Recreational Power Equipment Program is to provide the regional workforce with credentialed, skilled, and competent power equipment technicians and to be responsive to emerging workforce needs.

The Recreational Power Equipment Program prepares students to repair and maintain a wide variety of two-cycle and four-cycle engines and related equipment. Students work on motorcycles, ATVs, snowmobiles, outboard motors, and personal watercraft. Units of instruction include mechanical, fuel, and electrical systems. The program also encourages the development of teamwork and interpersonal skills required on the job.

For more detailed information including program costs, tool requirements, student class schedules, and course syllabi, visit: www.cte.umt.edu/departments/industrial/rec_power

Credit for independent study is available to those desiring additional instruction in recreational power equipment. Contact Mike Steffenson, Program Director, at 406-243-7693 or Michael.Steffenson@umontana.edu for more information.

Autumn Entry	A	S
CAPP 120 (CRT 100) Introduction to Computers	2	-
M 111 (MAT 110T) Technical Mathematics	-	3
MPR 115T Related Metals Processes	3	-
PSYX 163 (PSY 105T) Work Attitudes	-	1
SET 160T Basic Electricity	3	-
SET 176T Motorcycle/ATV Engines, Suspension, and Chassis	3	-
SET 177T Motorcycle/ATV Electrical and Fuel Systems	4	-
SET 178T Marine Electrical and Fuel Systems	-	4
SET 179T Marine Powerheads and Lower Units	-	6
SET 180T Snowmobile Maintenance and Repair I	2	-
SET 181T Snowmobile Maintenance and Repair II	-	2
SET 182T Computer Applications for Motor Sports	-	1
WRIT 121 (WTS 115) Technical Writing or WRIT 095 (WTS 100) Developmental Writing	-	3
Total	17	20

Welding Technology - Certificate of Applied Science and A.A.S. Degree

The mission of the Welding Technology Program is to provide the regional workforce with credentialed, skilled, and competent welders and to be responsive to emerging workforce needs. The Welding Technology Program prepares students to operate and troubleshoot a variety of welding power sources and related equipment. The program prepares students to solve problems found within the welding industry using computational skills and other problem-solving techniques essential to welding and steel fabrication. It also encourages the development of teamwork and interpersonal skills required on the job.

Welding students develop skills in six different welding processes–oxyacetylene (OAW), shielded metal arc (SMAW), gas metal arc (GMAW), flux core arc, (FCAW), submerged arc (SAW), and gas tungsten arc welding (GTAW). Beyond the development of welding skills and understanding of the process, they also study other vital skills, such as blueprint reading and layout skills, metallurgy, and gain an understanding of how heating and cooling cycles affect the properties of metals. Students also study the design of jigs and fixtures and how to incorporate these into an automated welding system.

The Welding Technology Program also has courses that provide for a solid background in the metals industry. Such courses are Computer Aided Design and Drafting (CADD), OSHA Rules and Compliance, and Related Metals Processes. Metals Fabrication I & II utilize all of the gained knowledge with an instructor approved/student designed project.

Welding technology students have the opportunity to become certified to American Welding Society Standards and receive documentation stating qualifications.

Students are awarded the Certificate of Applied Science upon successful completion of the first year of the Welding Technology program. Students are awarded the Associate of Applied Science degree upon successfully completing the two-year program.

The program often has a waiting list. Prospective students are encouraged to apply one year prior to their anticipated school attendance. For more detailed information including program costs, tool lists, class schedules, and course syllabi, visit our web site at:www.cte.umt.edu/department/industrial/welding_technology, or contact Bob Shook, Program Director, at 406-243-7644 or Bob.Shook@umontana.edu

Autumn Entry:

First Year	A	S
CAPP 120 (CRT 100) Introduction to Computers	2	-
M 111 (MAT 110T) Technical Mathematics	3	-
MPR 114T Related Metals Processes	3	-
PSYX 163 (PSY 105T) Work Attitudes	-	1
WEL 180T Welding Metallurgy	4	-
WEL 181T Shielded Metal Arc Welding (Plate) and Thermal Cutting	4	-
WEL 182T Blueprint Reading and Development	-	3
WEL 194T Layout Techniques	2	-
WEL 184T OSHA Rules and Compliance	-	1
WEL 185T Flux Core Arc Welding	-	4
WEL 189T Metal Fabrication I	-	4
WEL 195T Special Topics	-	(1)
Total	16	14

Successful completion of the courses listed above results in the award of a Certificate of Applied Science in Welding.

Second Year	A	S
BUS 242T Supervision	-	3
CRT 182T Computer Aided Design and Drafting	2	-
MPR 214T Advanced Related Metals Processes	3	-
WEL 280T Gas Tungsten Arc Welding	4	-
WEL 281T Metal Fabrication II	-	4
WEL 282T Pipe Welding-SMAW and GTAW	4	-
WEL 283T Gas Metal Arc Welding	-	4
WEL 285T Automation in Welding	-	3
WEL 286T Welding Certification and Codes	-	2
WRIT 121 (WTS 115) Introduction to Technical Writing	3	-
Total	18	16

Courses

U = for undergraduate credit only. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Building Maintenance (BME)

U 122T Electricity 6 cr. Offered spring. The electrical laws and principles pertaining to DC and AC circuits. Includes current, voltage, resistance, power, load, panels, feeders, lamps, motors, and fuses. Introduction to wiring methods and materials in conformance with the National Electric Code (NEC). Includes installation and replacement of light fixtures, heaters, GFCI's, switches, receptacles, and electrical thermostats.

U 123T Carpentry 6 cr. Offered autumn. Application of carpentry principles and techniques. Construction and maintenance of foundation, floor, wall, ceiling, and roof systems. Includes safe use of tools and materials common to the industry. Additional topics are painting, masonry, insulation, and ventilation of commercial buildings.

U 127T Low Pressure Boilers 3 cr. Offered spring. The fundamentals of low pressure boiler operation and maintenance. Covers steam, feed-water, fuel, and draft systems. Includes boiler water treatment and hot water heating systems. Introduces safe mechanical operating procedures used in the industry.

U 128T Maintenance 6 cr. Offered autumn. Maintenance principles pertaining to lawns, groundcovers, trees, swimming pools, plumbing, and building cleaning. Emphasis is placed on safe application of chemicals; maintenance frequency; and the identification and safe uses of associated tools and materials.

U 130T Heating and Air Conditioning 6 cr. Offered spring. The fundamentals of heating, ventilating, and air conditioning. Covers heating and refrigeration cycles, gas furnaces, refrigerants, system evacuation and charging, and components used in associated systems. Introduces the basic mechanical service procedures used in the industry.

U 228T Machine and Equipment Installation 2 cr. Offered spring. Tools and procedures for installing, leveling, and aligning equipment and machinery. Mechanical advantage formulas presented in physics are demonstrated. Included are safe loads for ropes, jacks, slings, and blocks and tackles. Skills pertaining to the proper use of ladders, scaffolds, safety belts, and life nets used in maintenance work are discussed.

Carpentry (CAR)

U 120T Framing Carpentry Lecture 4 cr. Introduction to the carpentry trade, including history, career opportunities, and requirements. The course covers building materials, fasteners, adhesives, hand tools, and power tools. Students learn about and are required to build a small building with a floor, walls, ceiling, and a roof. Windows and exterior door are also installed.

U 121T Framing Carpentry Lab 3cr. Lab to accompany CAR 120T.

U 130T Concrete Carpentry 4 cr. This course includes advanced blueprint reading, material estimating, site layout, measurement, and differential leveling. Concrete forms are constructed, including continuous, pier, grade beam, slabs, and footings. Form application and construction methods are demonstrated. Cutting, bending, splicing, and tying of reinforcing steel is required. Students learn methods for handling, placing, and finishing concrete. Manufactures forms are introduced for walls, columns, deck slabs, roof slabs, beams, and girders.

U 131T Concrete Carpentry Lab 4 cr. Lab to accompany CAR 130T

U 140T Exterior and Interior Finish Carpentry 4 cr. Study of various types of siding, gutter systems, roof venting requirements, and framing with metal studs. Installation of sheathing, exterior siding, roofing felt, shingles, insulation vapor barriers, and stairs on small building constructed in Carpentry 1. Installation of wood and metal doors including frames, locksets, and closers. Demonstration of materials, layout and installation of suspended ceilings. Selection and installation of countertops, base cabinets and wall cabinets. Window, door, floor, ceiling trim and drywall are installed in a small building

U 141T Interior and Exterior Finish Carpentry Lab 5 cr. Lab to accompany CAR 140T.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study variable cr. (R-6) Offered intermittently

U 220T Advanced Carpentry Lecture 4 cr. The process of angular measurement, using transits, theodolites, electronic distance measuring devices, lasers, and trigonometric calculating to lay out foundations and determine elevations. Installation of standing seam, lap seam, and built-up roofing systems; concrete, vinyl, wooden, tile, and carpeted floors as well as radiant heating; paneling, wainscoting, movable partitions, curtain walls and fire-rated commercial wall construction. Advanced stair systems, including shop built and prefabricated stairs, balustrades, mitered risers and treads, and layout of elliptical fastening methods, and assembly techniques. Project planning, scheduling, estimating, and management skills included.

U 221T Advanced Carpentry Lab 3 cr. Laboratory to accompany CAR 220T.

U 230T Building Management 3 cr. Introduction to building business and project management including overhead costs, payroll costs, estimating and scheduling. Covers elements of payroll computation and preparation, payroll tax returns, information returns, and identification and compensation of independent contractors. Students are introduced to building cost estimating, and scheduling of subcontractors and building inspections.

U 231T Building Management Lab 3 cr. Laboratory to accompany CAR 130T.

U 235T Building Energy Conservation 3 cr. Study of the analysis techniques used for reduction of energy consumption and energy management, including energy accounting and energy auditing. Residential and commercial building energy efficiency opportunities will be covered. Other topics addressed include motors, pumps, green building, and purchasing energy supplies. Career opportunities in energy efficiency will be discussed.

U 236T Building for Solar Energy 3 cr. Study of the basics of solar energy and design with emphasis on passive solar applications. The elements and design patterns for successful passive solar buildings are covered in detail. Design requirements for solar generated electricity and solar heated water are considered. Also covered are designing new and remodeled buildings to b e solar ready, solar retro-fits, and other applications.

U 240T Alternative Construction Materials 3 cr. Review of alternative construction materials and other alternative building materials, as well as building materials using recycled components. Re-use of salvaged materials and use of nontraditional building methods such as straw bale and rammed earth construction will be covered.

U 241T Applied Building Practices 6 cr. Offered spring. Prereq., CAR120T, 121T, 130T, 131T, 140T, 141T. Students work on a variety of projects either at the college or in the community to practice and develop their skills as well as learn new skills. Knowing and following OSHA rules and regulations is emphasized. Expectation of professional quality product.

Diesel Technology (DET)

U 120T Electrical Systems 8 cr. Offered spring. The theory of AC/DC electricity including Ohm's Law, magnetism, wiring diagrams, and circuit analysis. Starting, charging, and related systems are covered in-depth using test equipment commonly found in heavy equipment repair facilities. Electronic systems are reviewed and tested using common electronic test equipment.

128T Engine Service I 4 cr. Offered autumn. Introduction to the construction and operation of internal combustion engines with the diesel engine being examined in detail. The use of measuring tools and related special tools is covered extensively along with common manufacture rebuild procedures. Start-up and running practices are demonstrated on various running diesel engines.

U 135T Power Trains 7 cr. Offered autumn. Chassis and drive train components used in light and heavy-duty trucks and other equipment. Clutches, manual transmissions, differentials, and final drives are covered.

U 196T Independent Study Variable cr. (R-6) Offered every term.

U 221T Brakes, Suspension, and Undercarriage 6 cr. Offered autumn. Air brake design, construction, and operating principles including an in-depth study of diagnostic procedures for troubleshooting and repairing brake systems. Suspension systems and undercarriage design and repair are covered along with common axle alignment procedures found in industry.

U 225T Hydraulics 6 cr. Offered autumn. Theory and application of hydraulics relative to mobile construction equipment and industrial hydraulic systems. Includes valves, pumps, motors, actuators, and related hydraulic components, system maintenance, troubleshooting, and repair.

U 229T Engine Service II 7 cr. Offered spring. Prereq., DET 128T. A continuation of Engine Service I with a major emphasis placed on the rebuilding of a diesel engine. Engine components repair and failure analysis are reviewed along with tune-up and running of diesel engines commonly found in the heavy equipment trade. Shop flat-rate procedures, work order procedures, and warranty requirements are covered.

U 230T Air Conditioning 3 cr. Offered spring. Prereq., DET 120T, DET 225T. Principles, theories, and the hazards of working with R-12 and R-34, including laws governing these refrigerants. An in-depth study of the components of an air conditioning system including hands-on practice. Discharging and charging principles are discussed, including leakage testing and other general diagnostic principles found in the field.

U 231T Fuel Systems 5 cr. Offered spring. A comprehensive study of diesel fuel injection systems to include: Cummins, Roosa Master, Caterpillar, Detroit Diesel, and Bosch. Disassembly and repair of these systems are covered in-depth along with calibration practices. Installation, timing, and on-engine adjustments are made on diesel engines. On-engine diagnosis of the fuel systems using special diesel engine diagnostic tools is reviewed.

U 235T Advanced Power Trains 2 cr. Offered spring. Prereq., DET 135T. A continuation of DET 135T with an emphasis on heavy automatic transmission, torque converters, and powershift transmission. In-depth coverage of component review troubleshooting and repair.

U 270T Diesel and Gaseous Fueled Engines 3 cr. Offered summer. Prereq., completion of an accredited diesel program or consent of instr. Overview of the diesel engine and its operating principles including the fuel systems found in the power generation field. Both mechanical and electronic type systems studied in depth. Gaseous/spark ignited internal combustion with in-depth look at both the ignition system and

fuel system. Emission systems, preventive maintenance and general tune-up included.

U 271T Power Generators 5 cr. Offered summer. Prereq., completion of accredited diesel program and DET 270T. Introduction to generators as found in the power generation field including the review of electrical laws that pertain to A/C and D/C current. The operation of a typical internal combustion powered generator will be covered in depth including troubleshooting and rebuilding practices found in the power generation field. Generator mounting/alignment practices and generator installations, including flow requirements for combustion and cooling.

U 272T Power Generation Controls 4 cr. Offered summer. Prereq., completion of accredited diesel program and DET 271T. Operation of the generator and controls including governing devices and other specialized devices such as reverse power relays and volt/amp reactive power factor (VAR) controllers. Intensive troubleshooting including in depth coverage of service and repair of control systems.

Heavy Equipment Operation (HEO)

U 140T Basic Surveying 2 cr. Offered autumn. Basic principles of surveying and the use of surveying equipment. Calculation of angles and distances to determine grade elevations. Introduction to Global Positioning Systems, lasers and their relationship to the heavy equipment operator.

U 142T Basic Surveying II 1 cr. Offered spring. Prereq., HEO 140T. Students' plan and layout projects undertaken by the program within the community. The students participate in staking and controlling the project by using skills acquired in HEO 140T. Emphasis is on earthwork surveying.

U 146T Safety and Basic Controls 5 cr. Offered autumn. Orientation to the safe operation and basic control of crawler-tractors, scrapers, front-end loaders, motor graders, backhoes, trucks, and other heavy equipment units. Sufficient time is allowed for the development of basic machine operational skills.

U 148T Operational Skill Building 5 cr. Offered autumn. Prereq., HEO 146T. Advancement of basic skills. Proper understanding and operation of heavy equipment is pursued. Time is allowed for development of proper operational techniques.

U 150T Job Simulation 6 cr. Offered spring. Prereq., HEO 146T, HEO 148T. Incorporates learned skills into entry-level, industrial situations. Emphasis is on advanced equipment usage, problem definition and resolution, project-type earth moving assignments, proper equipment, and safety regulations. Course may allow participation in cooperative project efforts within the community.

U 151T Service and Maintenance 2 cr. Offered autumn. Different types of lubricants and their applications, scheduled and preventive maintenance procedures, and importance of periodic services and maintenance. Also included are safety procedures and regulations.

U 153T Construction Theory and Specialized Equipment 5 cr. Offered spring. Prereq., M 111 (MAT 110T). Study of construction principles, specialized equipment, production estimates, and various related subjects.

Metals Processes (MPR)

U 112T Related Metals Processes 1 cr. Offered spring. Use of hand tools and machines which relate to the repair of heavy equipment. Instruction covers fasteners, layout, bench metal, threads and threading, drills and drilling, and tool sharpening.

U 114T Related Metals Processes 3 cr. Offered autumn. Instruction and use of drills, files, threads and threading processes, basic lathe, drill press, and band saw operation, including precision measuring instruments. Fasteners, layout procedures, and basic hand tools are covered.

U 115T Related Metals Processes 3 cr. Offered autumn and spring. A basic metalworking course covering fasteners, layout, bench metal, heat treating, threads and threading, drills and drilling, basic machining, and tool sharpening.

U 214T Advanced Related Metals Processes 3 cr. Offered autumn. Prereq., MPR 114T or 115T. Advanced skill development using machine tools such as milling machines, lathes, surface grinders, and drill presses, emphasizing safety and providing greater complexity than provided in MPR 114T. Welding and machining are used together demonstrating how sequencing work improves quality and productivity.

U 196T Independent Study Variable cr.(R-6) Offered intermittently. Prereq., consent of instr.

Small Engine Technology (SET) (Recreational Power Equipment)

U 160T Basic Electricity 3 cr. Offered autumn. The theory of AC/DC electricity including Ohm’s Law, magnetism, series circuits, parallel circuits, the use of meters, and electrical test equipment. Includes electrical symbols, soldering, storage batteries, cranking motors, and electrical safety.

U 176T Motorcycle/ATV Engines, Suspension, and Chassis 3 cr. Offered autumn. Study of the design and function of several types of engines, transmissions, suspension, and brake systems.

U 177T Motorcycle/ATV Electrical and Fuel Systems 4 cr. Offered autumn. Prereq., SET 160T. Principles of ignition, charging, and

cranking systems. Design and function of carburetor, fuel injection, and lubrication systems. Hands-on diagnosis of problems and testing of systems.

U 178T Marine Electrical and Fuel Systems 5 cr. Offered spring. Prereq., SET 160T. Theory of and testing and troubleshooting of problems with ignition, charging, and cranking systems. Includes the design, testing, and troubleshooting of marine carburetion and fuel injection systems.

U 179T Marine Powerheads and Lower Units 6 cr. Offered spring. Prereq., SET 178T. Theory of design, function and components of outboard motor powerheads and lower units. Includes basic rigging, power trim and tilt, propping, and personal watercraft design, function, and maintenance.

U 180T Snowmobile Maintenance and Repair I 2 cr. Offered autumn. Prereq., SET 177T. The repair and maintenance of air cooled and liquid cooled engines. Includes clutch, track, and rear suspension service and maintenance.

U 181T Snowmobile Maintenance and Repair II 2 cr. Offered spring. Prereq., SET 180T. Principles and theory of snowmobile electrical, fuel, front suspension, and brake systems.

U 182T Computer Applications for Motorsports Professionals 1 cr. Offered spring. Prereq., CRT 100. Use of recreational power equipment software for parts retrieval, invoicing and payment methods. Students build, query, and create reports using database software, and create a business plan for a hypothetical dealership.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study Variable cr. (R-6) Offered intermittently.

Truck Driving (TRK)

U 106T Commercial Driver's License (CDL) Training 1 cr. Offered intermittently. Prereq., consent of instr. Individual schedule. Truck safety, operation, and maintenance review. Schedule and obtain Class A Commercial Driver's License (CDL).

Welding Technology (WEL)

U 111T Welding 2 cr. Offered autumn. Basic and intermediate processes of shielded metal arc welding (SMAW) and oxyacetylene welding are covered in flat, horizontal, and vertical positions in a variety of joint configurations. Instruction in the oxyacetylene cutting process.

U 119T Welding for Carpenters 2 cr. Offered spring. Basic welding processes of shielded metal arc welding (SMAW), flux core arc welding (FCAW) are covered in the flat, horizontal, and vertical positions in a variety of joint configurations. The instruction in flux core arc welding is focused on the carpentry building trades. Instruction in the oxyacetylene cutting process is also provided. Safe operation of equipment is covered and work is evaluated to industrial standards. This course is designed for carpentry students.

U 139T Welding Maintenance and Repair 2 cr. Offered autumn. Prereq., MPR115T, WEL 111T. Combines the skills gained in welding and machine shop for practical applications such as repairing a broken cylinder block. Major emphasis is placed on repair techniques. Common repair procedures using machine shop and welding equipment is demonstrated.

U 180T Welding Metallurgy 4 cr. Offered autumn. Covers the manufacturing of iron and steel. Examination of physical and mechanical properties. Phase changes with the application of heating and cooling cycles. Ferrous crystal types and properties. Suggested welding procedures for low, medium, and high carbon steels, alloy steels, and cast iron.

U 181T Shielded Metal Arc Welding (Plate) and Thermal Cutting 4 cr. Offered autumn. Theory and safe operation of shielded metal arc welding (SMAW) of carbon steel on plate and structural components in all positions to industry standards. Visual inspection and destructive testing used to determine acceptability based upon industry standards (American Welding Society Structural Welding Code-Steel). Power sources and electrodes are covered in depth. Materials are prepared using mechanical plate shears and thermal cutting techniques. Thermal cutting techniques are examined relative to theory of operation and safe practices. Processes used are oxy-fuel cutting, plasma arc cutting, and air carbon arc cutting. Theory and operation of oxyacetylene welding examined.

U 182T Blueprint Reading and Development 3 cr. Offered spring. Prereq., WEL 183T. Practical experience in reading and drawing orthographic projections, interpreting dimensions, notes, scales, and welding symbols. Isometric projection (pictorial), sections, and auxiliary views with practical experience using conventional drafting tools and computer aided drafting (CAD).

U 183T Layout Techniques 2 cr. Offered autumn. Encompasses layout on material of various shapes using blueprints and practical layout techniques on pipe and structural steel. Use of contour markers and a review of geometric construction. Computation of approximate costs is included.

U 184T OSHA Rules and Regulations 1 cr. Offered spring. Study of the Occupational Safety and Health Administration rules and regulations that affect the welding and construction industries.

U 185T Flux Core Arc Welding 4 cr. Offered spring. Theory, practice, and safe operation of flux core arc welding equipment. Coupons

are welded in the flat, horizontal, and vertical positions to industry standards using a variety of welding electrodes, diameters, and power sources, which prepare students for welding qualification to the American Welding Society Structural Welding Code specifications.

U 189T Metal Fabrication I 4 cr. Offered spring. Prereq., MPR 114T; WEL 181T; coreq., WEL 182T, 185T. Conception, design, and construction of a metal structure to industry standards using shears, presses, and other machine tools common to the welding industry. Skills are developed in the areas of shielded metal arc welding and flux core arc welding, oxyacetylene cutting, plasma arc cutting, and air carbon arc cutting.

U 195T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196T Independent Study Variable cr. (R-6) Offered intermittently.

U 280T Gas Tungsten Arc Welding 4 cr. Offered autumn. The theory and safe operation of Gas Tungsten Arc Welding (GTAW). Examination of power source controls and operation along with associated consumables such as gasses, electrode filler materials for carbon steel, stainless steel, and aluminum. Welding skill development according to industry standards using these materials in the flat, horizontal, and vertical positions.

U 281T Metal Fabrication II 4 cr. Offered spring. Prereq., MPR 114T, MPR 214T; WEL 181T, 185T, 182T, 183T, 280T, 283T.Students combine all knowledge and skills developed in the welding program to design and draw a full set of plans (blueprints) for an instructor-approved project using extensive welding, metal fabrication equipment, machining processes and automation. High quality performance, consistent with business and industry required.

U 282T Pipe Welding-SMAW and GTAW 4 cr. Offered autumn. Prereq., WEL 181T; coreq., WEL 280T. Emphasis on skill development in the welding of pipe sections to extremely high quality levels as required by national codes and standards. Pipe welding using GTAW for the root pass and SMAW for the remaining passes in all positions. Visual inspection and destructive testing used to evaluate work according to industry standards.

U 283T Gas Metal Arc Welding 4 cr. Offered spring. Prereq., WEL 185T. Theory and safe operation of Gas Metal Arc Welding (GMAW). Theory of flux core arc welding applied to GMAW. Primary focus on application, practical skill development, and producing welds that meet industry standards. Metals welded are low carbon steel, stainless steel, and aluminum. Short circuit arc and spray arc transfer used. Examination of gas and electrode selection.

U 285T Automation in Welding 3 cr. Offered spring. Application of the welding process to automation. Examination of simple automation techniques such as tools, clamping, and fixturing to aid in the rapid joining of production runs. Increasing complexity is examined leading into equipment that carries the welding gun, tractors, and carriages by fully automated systems with the student performing set-up and troubleshooting (Submerged Arc Welding) and automated parts processing (optical tracer torch). Programmable controllers are investigated and used. Programming and use of a PUMA 650 Industrial Robot.

U 286T Welding Certification and Codes 2 cr. Offered spring. Prereq., WEL 181T, 185T. Fundamental concepts and requirements of the American Society of Mechanical Engineers (ASME) and American Welding Society (AWS) are examined. Through laboratory experience students are provided the opportunity to qualify (certify) under the two codes mentioned above.

U 295T Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

School of Art

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Julia Galloway, Director

The School of Art provides a comprehensive education in studio art, including intensive hands-on studio practice, art history, criticism, and theory. Programs provide thorough professional training for students interested in careers in the field of art.
Degree offerings include the B.A., B.F.A., M.A., and M.F.A. in Art. Areas of specialization are Ceramics, Drawing, Painting, Photography, Printmaking and Sculpture. An M.A. degree in Studio Art and/or Art History is also offered, as well as courses that prepare students for licensure for teaching art.

Advanced Placement Policy

All students, including those who have taken AP examinations, must submit a portfolio to challenge art classes. Undergraduate students may challenge foundations courses only (Art 101A, Visual Language: Drawing; 102A, Visual Language: 2-D Design; and 103A, Visual Language: 3-D Design).

Portfolios are reviewed at the beginning of each semester. The challenge process waives the requirement to take a specific class, but does not provide any credits. The process of portfolio reviews is as follows: students submit a portfolio of ten .jpeg files or pieces of actual work to the school office two weeks prior to the beginning of the semester. If challenging more than one course, students submit examples of work for each course, for example: ten drawing samples for 101A, ten color works for 102A, and/or ten 3-D pieces for 103A.

Transfer Students

Students with transfer credits from another institution must contact the school director for review of transfer transcripts to assess course equivalents.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Students pursuing Bachelor of Fine Arts or Bachelor of Arts degrees with a major in Art must earn a "C" (2.00 on a 4.00 scale) grade or better in all Art courses fulfilling requirements in order to graduate.

Bachelor of Fine Arts Review Process

All students initially enter as Bachelor of Arts (B.A.) candidates. Students interested in earning the Bachelor of Fine Arts Degree (B.F.A.) must comply with following:

1. Must have and maintain a 3.0 grade point average in Art and a 2.5 overall GPA.
2. Students apply for the B.F.A. program once they have completed 33-45 Art credits. B.F.A. portfolio reviews take place once each semester. A transfer student who enters with more than 45 earned credits must be reviewed the first semester of their residency.
3. The following course selections are review prerequisites: ART 150H, 151H, 101A, 102A, 103A, four 200-level studio courses, and two 300-level studio courses.
4. Should a student not be admitted to the B.F.A. program in their first application, a second and final application the following semester is encouraged.
5. Applications for the B.F.A. program must include: the application form with the area faculty signature, statement of purpose, and portfolio. Applications are reviewed each semester prior to registration. Incomplete or late applications will not be considered.

Bachelor of Fine Arts with a major in Art

For the Bachelor of Fine Arts degree, areas of specialization are: Ceramics, Drawing, Painting, Photography, Printmaking and Sculpture. This is a professional degree requiring 75 credits in art distributed as follows: art fundamentals, 9; beginning art history, 6; photography, 3; ceramics, 3; printmaking, 3; sculpture, 3; painting, 3; drawing, 3; introductory art criticism, 3; upper-division art history, 6; upper-division art criticism, 3; upper-division studio courses outside area of specialization, 12; upper-division studio courses in the area of specialization, 12; professional practices/senior thesis, 6.

Bachelor of Arts with a major in Art

Students seeking the Bachelor of Arts degree with a major in Art must complete 57 credits in art: art fundamentals, 9; beginning art history, 6; photography, 3; ceramics, 3; printmaking 3; sculpture, 3; painting, 3; drawing, 3; introductory art criticism, 3; upper-division art history, 6; upper-division (300- and 400-level) art studio courses, 12; upper-division art criticism, 3.

Bachelor of Arts with a major in Art, specialization in Art Education

Art education is an area of specialization designed for the student seeking licensure (K-12) in the extended major teaching field of art.

A student must complete ART 101A, 102A, 103A, 150H, 151H, 203L, 215A, 223, 229A, 235, 240A, 323, 407, 408 and one course chosen from ART 233A or DAN 427, nine credits in upper-division studio courses, six credits in upper-division art history courses, 3 credits in upper-division art criticism.

For licensure to teach Art K-12, a student must gain admission to Teacher Education and Student Teaching and meet the requirements for teacher certification (see the College of Education section of this catalog).

Suggested Course of Study: B.A./B.F.A. Degree.

Credits in parentheses are additional requirements for the B.F.A.

First Year	F	S
Art 101A Visual Language: Drawing	3	-
Art 102A Visual Language: 2-D Design	-	3
Art 103A Visual Language: 3-D Design	3	-
ART 150H-151H Art of World Civilization	3	3

Two sections of studio class i.e. ART 235 Sculpture I	-	3
and/or ART 233 Printmaking I	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
Other General Education courses	3	3
	15	15
Second Year		
ART 203L Introduction to Art Criticism	3	-
ART 223 Drawing I	3	-
ART 229A Ceramics I	-	3
ART 215A Photography I	3	-
ART 240A Painting I	-	3
General Education	6	9
	15	15
Third Year		
Art History (300-level)	3	3
Studio II courses	6	6
Studio courses (B.F.A. option courses)	(3)	(3)
Art 303L or 403L Art Criticism	3	3
General Education	3	6
	15-18	15-18
Fourth Year		
Studio courses (B.F.A., courses in specialization)	(3)	(3)
Studio art courses (300-400 level)	3	3
ART 494 Professional Practices (B.F.A.)	(3)	-
ART 499 Senior Thesis (B.F.A.)	-	(3)
Elective & General Education	6-12	6-12
	15-18	15-18

Requirements for a Minor

Art History/Criticism

To earn a minor in art history/criticism the student must complete at least 24 credits to include the following; ART 101A; ART 150H, 151H, ART 203L; 9 credits from 300-level art history courses; 3 credits from ART 303L, or 400-level art history and criticism courses.

Art Studio

To earn a minor in art studio the student must complete at least 27 credits to include the following: ART 101A, 102A, 103A; ART 150H, 151H; 9 credits from ART 215A, 229A, 233A, 235, 240A, or 223; and 3 credits in 300-level studio courses.

Courses

U=for undergraduate credit only, UG-for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Art (ART)

Studio Courses

U 101A Visual Language: Drawing 3 cr. Offered autumn and spring. An introduction to visual language, concepts, and studio practicum. Focus on basic skills development in rendering volume, pictorial depth, and figure/ground relationships. Research in historical and contemporary approaches to drawing.

U 102A Visual Language: 2-D Design 3 cr. Offered autumn and spring. Prereq. or coreq., ART 101A. An introduction to the formal elements and principles of design, color theory, and predominant western and non-western historical styles. Emphasis on solving specific design problems.

U 103A Visual Language: 3-D Design 3 cr. Offered autumn and spring. Basic three-dimensional course for both general education and beginning art students. Prerequisite to beginning sculpture and beginning ceramics. Emphasis placed on conceptualization and formal development of the 3-D object in the areas of form, mass, scale, texture, space and color.

U 129A Ceramics for Non-Majors 3 cr. Offered intermittently. A general introduction to art using ceramics. Less specialized than

Ceramics I for art majors. Credit not allowed toward a B.A., B.F.A., or minor in art.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 215A Photography I 3 cr. Offered autumn and spring. Prereq., ART 101A. Introduction to photography as an art form. Exposure, camera basics, composition, developing, printing, print finishing techniques. Focus on technical expertise and issues of content and personal expression.

U 223 Drawing I: Figure Drawing 3 cr. Offered autumn and spring. Prereq., ART 101A, 103A and 150H or 151H. Study of human anatomy with an emphasis on rendering and interpreting the figure. Research in historical and contemporary figuration as a basis for developing a portfolio.

U 229A Ceramics I 3 cr. Offered autumn and spring. Prereq., ART 103A. Introduction to clay as a historical and contemporary art-making medium. Basic methods of building with clay, with emphasis on handbuilding; elementary solutions to problems of glazing and surface treatment.

U 233A Printmaking I 3 cr. (R-9) Offered autumn and spring. Prereq., ART 101A. Introduction to various printmaking media.

U 235 Sculpture I 3 cr. Offered autumn and spring. Prereq., ART 103A. Introduction to fundamental technical skills and new processes in various materials. Further development of the formal concerns within three-dimensional design. Issues of content and formal criticism as it relates to personal expression.

U 240A Painting I 3 cr. Offered autumn and spring. Prereq., ART 101A, 102A, 150H and 151H. Acrylic and oil painting emphasizing composition and application of color theory. Research in historical and contemporary strategies.

U 293 Omnibus Variable cr. (R-10) Offered intermittently. University omnibus option for independent work. See index.

U 295 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 315 Photography II 3 cr. Offered autumn and spring. Prereq., ART 101A and 215A. Further exploration of photography as an art form. Survey of different approaches to cameras, films, chemical and digital processes, presentation techniques. Emphasis on issues of content and personal expression.

U 317 Digital Photography I 3cr. Offered autumn or spring. Prereq., ART 101A, 215A. Introduction to digital photographic manipulation. Survey of techniques, theory and potential for creative expression as an art form.

U 318 Alternative Process Photography 3 cr. Offered intermittently. Prereq., ART 101A, 215A. Introduction to historic, experimental and alternative process photography. Survey of techniques, theory and potential for creative expression as an art form.

UG 323 Drawing II 3 cr. (R-12) Offered autumn and spring. Prereq., ART 101A, 102A, 150H, 151H, 203L, and 223. Exploration and production of drawings with emphasis on individual expression. Studio practicum, lectures, critiques, reading and writing.

UG 324A Environmental Drawing Seminar 3 cr. Offered Spring. A drawing seminar specifically designed for the Wilderness and Civilization program. Students will explore and develop individual ideas with various media based on the curriculum of the Wilderness Program.

UG 329 Ceramics II 3 cr. (R-12) Offered autumn and spring. Prereq., ART 103A and 229A. Further exploration of the ceramic process introducing more complex ways of handbuilding and developing the art of throwing. Examination of the technology and chemistry of clay, glazes and high temperature oxidation and reduction firing.

U 330 Clay and Glaze 3 cr. Offered autumn. Prereq., ART 103A, 229A. In-depth study of the physical and chemical properties of clays and glazes. Hands-on testing of various clay and glaze formulas and an introduction to kiln firing.

UG 333 Printmaking II 3 cr. (R-12) Offered autumn and spring. Prereq., ART 233A. Continued work in various printmaking media.

UG 335 Sculpture II 3 cr. (R-12) Offered autumn and spring. Prereq., ART 103A or 235. Focus on contemporary issues and a deeper engagement with materials. Development and execution of clear sculptural responses to material-based and topic-based assignments.

UG 340 Painting II: The Figure 3 cr. Offered autumn and spring. Prereq., ART 150H, 151H, 203L, 223, and 240A. Exploration of painting with emphasis on the human figure and classical compositions and techniques, studio practicum, lectures, critiques, reading and writing.

UG 341 Painting II 3 cr. (R-9) Offered autumn and spring. Prereq., ART 150H, 151H, 203L, and 340. Includes ART 341: Process and Abstraction and ART 341: Contemporary Issues and Methods. Studio practicum, lectures, critiques, reading and writing.

UG 390 Supervised Internship Variable cr. (R-12) Offered autumn and spring. Special internships under direction of department faculty allowing students practical experience in a chosen area.

U 393 Omnibus Variable cr. (R-10) Offered intermittently. University omnibus option for independent work. See index.

UG 395 Special Topics Variable cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 414 Photography III 3 cr. (R-9) Offered autumn or spring. Prereq., ART 101A, 215A, 315. Further exploration of photographic theory, criticism, technique and expression as an art form.

UG 415 Independent Study in Photography 2-6 cr. (R-12) Offered intermittently. Prereq., ART 215A, 315, and consent of instructor. Advanced photographic techniques.

UG 416 Advanced Research in Photography 3 cr. (R-9) Offered intermittently. Pre-req., consent of instructor. Investigation of photography with emphasis on student proposals, including specific technical and conceptual aspects.

UG 423 Independent Study in Drawing 2-6 cr. (R-12) Offered intermittently. Prereq., ART 101A, 102A, 150H, 151H, 203L, 223, and 323, and consent of instructor. Advanced drawing techniques.

UG 424 Advanced Research in Drawing 3 cr. (R-9) Offered intermittently. Prereq., ART 323 and consent of instructor. Investigation of drawing with emphasis on student proposals, including specific technical and conceptual aspects.

UG 429 Independent Study in Ceramics 2-6 cr. (R-12) Offered intermittently. Prereq., ART 103A, 229A, 3 credits of ART 329, 3 credits of ART 330 and consent of instructor. Continued exploration of ceramic art. Individualized approach with student initiative in determining projects.

UG 430 Advanced Research in Ceramics 3 cr. (R-9) Offered intermittently. Investigation of ceramics with emphasis on student proposals, including specific technical and conceptual aspects.

UG 433 Independent Study in Printmaking 2-6 cr. (R-12) Offered intermittently. Prereq., 6 credits in ART 333, consent of instructor. Independent projects in printmaking.

UG 434 Advanced Research in Printmaking 3 cr. (R-9) Offered intermittently. Investigation of printmaking with emphasis on student proposals, including specific technical and conceptual aspects.

UG 435 Independent Study in Sculpture 2-6 cr. (R-12) Offered autumn and spring. Prereq., ART 103A, 235, 335, consent of instructor. Advanced techniques in sculpture.

UG 436 Advanced Research in Sculpture 3 cr. (R-9) Offered intermittingly. Prereq., ART 103A or 135, 235, 335, and consent of instructor. Thorough investigation and articulation of the communicative elements of art. Emphasis on the craftsmanship of ideas and the refinement of personal aesthetics as they pertain to sculptural production.

UG 440 Independent Study in Painting 2-6 cr. (R-12) Offered autumn and spring. Prereq., ART 101A, 102A, 150H, 151H, 203L, 223, 240A, 340, and 341 and/or consent of instructor. Minimum of 9 credits of 300-level painting courses. (Exceptions for special circumstances such as January term courses, study abroad, etc.) Independent projects in painting.

UG 442 Advanced Research in Painting 3 cr. (R-9) Offered intermittently. Prereqs., ART 101A, 102A, 150H, 151H, 203L, 223, 240A, 323, 340, and 341 and/or consent of instructor. Investigation of painting with emphasis on student proposals, including specific technical and conceptual aspects.

UG 490 Supervised Internship Variable cr. (R-12) Offered intermittently. Prereq., consent of instructor. Special internships under direction of department faculty allowing students practical experience in a chosen area.

U 493 Omnibus Variable cr. (R-10) Offered intermittently. University omnibus option for independent work. See index.

UG 494 Professional Practices Seminar 3 cr. Offered autumn. Prereq., senior or graduate status. Required of all graduating B.F.A. students. Introduction to professional practices and standards in the visual arts, including presentation, portfolio development, career and exhibition opportunities, arts advocacy and graduate school.

UG 495 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 499 Senior Thesis 3 cr. Offered spring. Prereq., senior status, ART 494, and successful passage of B.F.A. review. Required of B.F.A. students. Focus on completion of artwork and preparation for the required spring B.F.A. exhibition. Further exploration of professional practices topics and career opportunities.

G 515 Graduate Studio in Photography 2-6 cr. (R-18) Offered autumn and spring. Prereq., consent of instructor. Students work on projects of specific interest in the field with a faculty member.

G 523 Graduate Studio/Drawing 2-12 cr. (R-24) Offered autumn and spring. Prereq., consent of instructor. Advanced research in drawing.

G 525 Graduate Studio/Design 2-6 cr. (R-12) Offered autumn and spring. Prereq., consent of instructor. Advanced research in design.

G 529 Graduate Studio/Ceramics 3-6 cr. (R-18) Offered autumn and spring. Prereq. consent of instructor. Advanced research in ceramics.

G 533 Graduate Studio/Printmaking 2-12 cr. (R-24) Offered autumn and spring. Prereq., consent of instr. Advanced research in printmaking.

G 535 Graduate Studio/Sculpture 2-6 cr. (R-18) Offered autumn and spring. Prereq., consent of instructor. Advanced research in sculpture.

G 540 Graduate Studio/Painting 3-6 cr. (R-18) Offered autumn and spring. Prereq., consent of instructor. Advanced research in painting.

G 580 Graduate Teaching Assistant Seminar 3 cr. Offered autumn. Prereq., graduate standing. Preparation to teach foundation and entry level art courses.

G 594 Seminar Variable cr. (R-6) Offered intermittently.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study 2-6 cr. (R-18) Prereq., consent of instructor. Offered intermittently.

G 598 Internship 2-6 cr. (R-12) Offered intermittently. Prereq., consent of instructor.

G 699 Thesis and Terminal Project Variable cr. (R-12) Offered autumn and spring.

Art History

U 100L Art Appreciation 3 cr. Offered autumn and spring. An introduction to the visual arts exploring various approaches to understanding art, art history and terminology, techniques and media, motivating factors behind the creative act.

U 150H Art of World Civilization: Ancient to Medieval Art 3 cr. Offered autumn. Survey of history of visual art from prehistory to 1400.

U 151H Art of World Civilization : Early Modern to Contemporary Art 3 cr. Offered spring. Survey of history of visual art from 1400 to the Present.

U 336H History of Architectural Design: Pre-history to 1850 3 cr. Offered autumn. Same as DRAM 336H. Knowledge and understanding of architectural styles, designs and choices of the built environment from prehistory megalithic architecture to the start of the modern age.

UG 367H Art of the Ancient Americas 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Same as NAS 367H. Development of major ceremonial and urban centers throughout the Americas before the coming of Europeans. Analysis of how the visual arts articulate ancient world views or cosmologies in relation to nature. Focus on various strategies of reading the structure and meaning encoded in the layout of cities, stone sculpture, wall murals, ceramics, precious metals, and textiles.

UG 368H Latin American Art 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Same as NAS 368H. Exploration of themes in the development of Latin American art from the colonial period to the present including Renaissance ideals in the "New World", syncretism of European, African, and indigenous roots, the Black Legend, and the advent of such movements as Academism, Modernism, Social Realism, Magic Realism and Post-Modernism.

UG 380H Ancient Greek Civilization and Culture 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Same as LS 340H and MCLG 360H. Ancient Greek works of art and architecture, related to and explained by contemporary ideas and values of Greek society.

UG 381H Roman and Early Christian Art in Context 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Same as LS 341H and MCLG 361H. A survey of the various media used in Roman art; the social political, and economic contexts in which the media were developed; and the transition (technical, iconographic, and contextual) to the art of the Early Christian period.

UG 384H Art of the Renaissance 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Exploration of the arts of 1450-1600 in western Europe. Focus on themes such as the recovery of the classical past, development of scientific naturalism and linear perspective, and the evolution of major art forms architecture, urbanism, religious altarpieces and devotional images, fresco and oil

paintings, monumental sculpture, etc.

UG 389H American Art 1860 to the Present 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. American painting, sculpture and architecture from the Civil War to the present.

UG 450H Advanced Research in Art History 2-6 cr. (R-6) Offered autumn and spring. Prereq., ART 150H-151H, a 300-level art history course and consent of instructor. Advanced research in art history topics agreed upon by student and instructor.

UG 451H Seminar in Art History and Criticism 3 cr. (R-9) Offered intermittently. Prereq., ART 150H-151H, a 300-level art history course and consent of instructor. Upper-division seminar in varying topics of art history and criticism.

UG 480H Women Artists and Art History 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. A survey of major women artists in context of social history and aesthetics from ancient to modern times. Analysis of feminism and works by contemporary women artists in film and video.

UG 484H African Art 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Broad investigation of the visual arts of Africa; historical civilizations, including Egypt, and colonial and post-colonial societies; methodologies for study of non-western societies; "Primitivism;" and the importance of African Art for the development of western art.

UG 485H Spanish Art 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. Exploration of the history of Spanish art from the cave paintings to the 21th century. Focus on Spanish art and aesthetics and Spain's cultural identity through the visual arts.

UG 486H Art of the 19 Century 3 cr. Offered autumn. Prereq., ART 150H or 151H or consent of instructor. Exploration of major themes in European art from 1800 to 1900. Focus on major cultural and intellectual trends such as Neoclassicism, Romanticism, Realism, Impressionism and early Modernism.

UG 487H Art of the 20th Century 3 cr. Offered spring. Prereq., ART 150H or 151H or consent of instructor. Exploration of major themes in the development of art of the 20th century. Focus on major cultural and intellectual trends of the Modern and Post-Modern ages.

G 550 Graduate Studies/Art History 2-6 cr. (R-12) Offered autumn and spring. Prereq., consent of instructor. Research in art history and art theories.

G 597 Research in Art History 3-9 cr. (R-18) Offered intermittently. Prereq., consent of instructor.

G 698 Methodologies in Art History 3-9 cr. (R-9) Offered intermittently. Prereq., consent of instructor. Investigation of the discipline of art history, its elements, boundaries, historiography, and practitioners.

Art Criticism

U 203L Introduction to Art Criticism 3 cr. Offered autumn and spring. Prereq., ART 150H-151H. Introduction to a range of methods and philosophies in art criticism.

UG 303L Contemporary Art and Art Criticism 3 cr. Offered autumn and spring. Prereq., ART 203L or consent of instructor. Survey of artists, art works, critics and theories from 1960's to the present. Introduction to major art movements and ideas of the Post-Modern era. Special emphasis given to firsthand experiences with art at local venues and direct engagement with contemporary art criticism published in newspapers, journals, magazines, and other media.

UG 403L Renaissance Theory and Criticism 3 cr. Offered intermittently. Prereq., ART 150H or 151H or consent of instructor. An exploration of the writings of major thinkers of the 14th-16th centuries, including theoretical treatises, works of literature, contracts, and personal diaries.

UG 452 Advanced Research in Art Criticism 2-6 cr. (R-6) Offered intermittently. Prereq., consent of instructor.

G 501 Graduate Critiques Seminar 1 cr. (R-4) Offered autumn and spring. Prereq., consent of instructor. Weekly meetings to critique graduate student work.

G 503 Critical Theories in the Visual Arts 3 cr. Prereq., consent of instructor. Seminar on the history of art criticism as a particular type of discourse about art. Contemporary theories of Modernism including Formalism, Abstraction, Marxism, and Social Realism; and Postmodernism including Deconstruction, Revisionism, and Feminism. Required of all M.A. and M.F.A. students in art.

Art Education

UG 314A Elementary School Art 3 cr. Offered autumn and spring. Visual art teaching methods for future elementary school teachers to include production of original works in a variety of media, methods of critique, curricular components, media management, resources and guided teaching experiences in a school setting.

UG 407 Teaching Art K-12 for Fine Arts Majors 3 cr. Offered autumn. Prereq., ART 101A, 102A, 103A; ART 150H, 151H; and junior

standing. Preparation for art specialists to include history and current trends in curriculum development, teaching procedures, child growth and development in art, resources, evaluation, advocacy and directed teaching experiences in school setting.

UG 408 Teaching Art K-12 for Fine Arts Majors 3 cr. Offered spring. Prereq., ART 101A, 102A, 103A, and 407. Continuation and practical application of ART 407.

UG 427 Advanced Research in Art Education 2-6 cr. (R- 12) Offered intermittently. Prereq., ART 101A, 102A, 103A and ART 314A or 407. Advanced research in art education topics and/or field experiences.

Summer Arts Education Institute

(Offered through College of Visual and Performing Arts)

G 581 Arts Education Institute 1 cr. (R-4) Same as DRAM, MUS 581. Offered summers. Open forum with national and regional speakers, panels, and symposia to promote discussion, understanding, and direction on significant national issues in the arts and art education.

G 582 Arts Education Seminar I 2 cr. (R-4) Same as DRAM, MUS 582. Offered summers. Topics vary.

G 583 Arts Education Seminar II 1-2 cr. (R-4) Prereq., ART 582. Same as DRAM, MUS 583. Continuation of ART 582.

G 584 Arts Education Seminar III 1-2 cr. (R-4) Prereq., ART 583. Same as DRAM, MUS 584. Continuation of ART 583.

G 585 Arts Education Seminar IV 1-2 cr. (R-4) Prereq., ART 584. Same as DRAM, MUS 585. Continuation of ART 584

G 586 Arts Education Seminar V 1-2 cr. (R-8) Same as DRAM, MUS 586. Continuation and synthesis of preceding seminars.

G 587 Arts Education Practicum 1 cr. (R-4) Same as DRAM, MUS 587. Offered summers. The active application of concepts and theories presented during the Arts Education Institute and the arts education seminars within a small group setting.

G 588 Arts Education Apprenticeship 1 cr. (R-4) Same as DRAM, MUS 588. Exploration of art forms to develop new artistic and communicative perceptions and awareness.

G 589 Arts Education Field Project 1 cr. (R-4) Same as DRAM, MUS 589, creative/research activities.

Faculty

Professors

- James Bailey, M.F.A., University of Wisconsin-Madison, 1989
- Mary Ann Bonjorni, M.F.A., University of California-Santa Barbara, 1986
- Hipolito Rafael Chacón, Ph.D., University of Chicago, 1995
- Julia Galloway, M.F.A., University of Colorado-Boulder, 1995
- Elizabeth Lo, M.F.A., The University of Montana, 1974
- Cathryn Mallory, M.F.A., University of Oklahoma, 1985
- Barbara Tilton, M.F.A., Vermont College of Norwich, 1996

Associate Professors

- Bradley Allen, M.F.A., Southern Illinois University, 2005
- Valerie Hedquist, Ph.D., University of Kansas, Lawrence, 1990
- Elizabeth Dove, M.F.A., Vermont College of Norwich, 1999

Assistant Professors

- Kevin Bell, M.F.A., University of Oregon-Eugene, 2002
- Trey Hill, M.F.A., San Jose State University, 2002

Adjunct Asisstant Professors

- Karina Hean, M.F.A., New Mexico State University-Las Cruces, 2005
- Steven Krutek, M.F.A., The University of Montana, 2006
- Edgar Smith, M.A., The University of Montana, 2004: M.F.A., Ohio University, 1989

Emeritus Professors

- Marilyn Bruya, M.F.A., Bard College, 1986

- James G. Todd, M.F.A., The University of Montana, 1969

College of Visual and Performing Arts

Stephen Kalm, Dean

The College of Visual and Performing Arts is a comprehensive professional school committed to leadership in teaching, scholarship, professional performance and service at state, regional, national and international levels. The College is comprised of outstanding artist/faculty/scholars, staff and administrative personnel, all of whom are committed to providing a challenging, positive educational environment for students as well as an atmosphere characterized by collegiality, cooperation and interdependence.

The mission of the College of Visual and Performing Arts is to serve the University, the State of Montana, and the nation as a cultural center of national significance and as a leader in the performing and visual arts, arts education, and new media and technologies. In pursuit of this mission the College seeks to:

- serve students at The University of Montana-Missoula by teaching each of the performing and visual arts with rigor and devotion, and by offering preparation and experience that will enable students to take their places in the world of art, to perform and create with grace and maturity, and to teach with expertise and perspective;
- serve the University at large, as well as the community, state, region and nation, by presenting concerts, productions, and exhibitions of high quality, and by offering educational and research opportunities in the arts for non-majors as well as majors;
- provide national leadership in the arts by enhancing the excellence of traditional arts curricula, instruction and research with innovative and imaginative programs that utilize new technologies, new media, and new cultural and intellectual environments;
- inspire the pursuit of excellence, encouraging creativity and expression through the arts.

The College of Visual and Performing Arts offers an interdisciplinary masters program for teachers entitled the *Creative Pulse*. Offered during Summer sessions, the program is designed to develop Masters Teachers in the Arts, Sciences and Humanities. For more information, visit www.umt.edu/creativepulse

School of Theatre & Dance

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Mark Dean, Director

The School of Theatre & Dance is accredited by the National Association of Schools of Theatre (NAST) and is a member of the Association for Theatre in Higher Education (ATHE) and the United States Institute for Theatre Technology (USITT). The school is housed in the Performing Arts and Radio/Television Center, which includes three theatre/dance performance spaces and television/radio studios. The program is production-oriented with approximately ten major productions presented each year including contemporary, historical, period, musical, and experimental plays, as well as dance concerts. The Montana Repertory Theatre, a professional touring company based at UM, often involves students both on and off stage. The faculty is strong, possessing a diversity of educational and professional theatre and dance backgrounds.

The Bachelor of Arts with a major in Dance allows the student who plans to enter a dance career to select another major to complement that objective. The Bachelor of Arts with a major in Drama provides the student with a broad liberal arts education and a general focus in theatre. The degree allows the student to complete an additional major and may form the basis for further training on the graduate level. The Bachelor of Arts with a major in Drama and an area of specialization in Education Endorsement Preparation is designed for the student seeking teaching endorsement in the field of theatre. The Bachelor of Fine Arts with a major in Dance or Drama is a professionally oriented degree designed for the student who plans to pursue a career in theatre, dance, or a related field. Areas of specialization are: Acting, Design/Technology, Choreography and Performance, and Teaching. Graduate programs lead to the Master of Arts in Drama or Integrated Arts and Education and the Master of Fine Arts in Drama with areas of specialization in Acting, Design/Technology, or Directing.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Advisement

Each Theatre & Dance major must have a faculty advisor who is assigned by the school and who is usually from the student's area. The school, through its advisement program, often recommends non-theatre and dance electives and specific General Education courses to the student depending on the student's area. Majors may not take core or area-required courses on a credit/no credit basis.

Auditions and Portfolio Reviews

Actors, dancers, designers and technicians undergo periodic review in the form of auditions or portfolio presentations. These ongoing evaluations provide each student with the opportunity and challenge of individualized critiques from faculty and professional staff.

Writing Expectation

All students, unless exempted, must pass an approved writing course before attempting the Writing Proficiency Assessment (WPA). Students are exempted from this requirement by transferring more than 27 semester credits at the time of their initial registration at the University.

The following Theatre & Dance course is designated as a Writing course for 2009-2010. Students are cautioned that approved courses may change from year to year. To be used for General Education, a course must be listed as approved in the catalog and in the Course Schedule for the semester a student registers for it.

- DRAM 320H Theatre History I

The Following Theatre & Dance courses are designated as upper-division Writing courses for 2009-2010. Students are cautioned that approved courses may change from year to year.

- DAN 494 Junior/Senior Dance Seminar
- DRAM 321H Theatre History II

Bachelor of Arts with a major in Dance

The following courses constitute the complete Dance requirements for the Bachelor of Arts degree:

Dance	Credits
201A Beginning Composition (offered spring, odd-numbered years)	2
202 Rehearsal and Performance (performing in one piece equals one credit)	2
300 Modern III (or higher level)	15
301 Intermediate Composition (offered spring, odd-numbered years)	2
304 Ballet III (or higher level)	8
307 Jazz Dance III (or appropriate level)	2
334 20th-Century Dance (offered autumn, even-numbered years)	3
335L World Dance	3
340 The Science of Dance Movement (offered spring, even-numbered years)	3
397 Junior Creative or Research Project (students must complete projects for graduation)	3
420 Contact Improvisation	2
425 Dance Pedagogy (offered autumn, even-numbered years)	3
427 Teaching Movement in the Schools (offered autumn, odd-numbered years)	3
428 Internship in Children's Dance	2
494 Junior/Senior Dance Seminar (offered spring, odd-numbered years)	3
497 Senior Creative or Research Project (students must complete projects for graduation)	3
Drama	
107A section 02 or 05 Theatre Production I: Construction Crew (Costume) or 340 Intermediate Costume Construction	3
378 section 02 Stage Management Practicum I: Dance	1
Total	65

There is an Admission Audition which a prospective major must pass at the end of the first year to continue in the program. All students must take DAN 195: Freshman Seminar prior to auditioning for the major.

Bachelor of Arts with a major in Drama

The following courses constitute the complete Drama requirements for the Bachelor of Arts degree:

Drama	Credits
103A Introduction to Theatre Design	3
106A Theatre Production I: Run Crew	1
107A Theatre Production I: Construction Crew	3
108 Intro to House Management	1
202 Stagecraft I	3

203 Stagecraft II	3
207 Theatre Production II: Construction Crew	3
214 Acting I (or DRAM 111A)	3
220L Dramatic Literature I (Script Analysis)	3
320H Theatre History I	3
321H Theatre History II	3
379 Introduction to Directing	3
Drama/Dance/Media Arts electives (by advisement)	9
Senior project	
Total	41

Education Endorsement Preparation Specialization

The Education Endorsement Preparation specialization is designed for the student seeking an endorsement in the major teaching field of Drama.

Dance	Credits
327 Dance in Elementary Education	2
Drama	**Credits**
103A Introduction to Theatre Design	3
106A-107A Theatre Production (Running and Production Crews)	4
108 Introduction to House Management	1
202 Stagecraft I	3
203 Stagecraft II	3
210 Voice and Speech I	2
214-215 Acting I, II	6
220L Dramatic Literature I (Script Analysis)	3
244 Stage Makeup	2
320H-321H Theatre History I, II	6
327 Drama in Elementary Education	2
371 Stage Management I	2
379 Introduction to Directing	3
402 Methods of Teaching Theatre	2
Senior Project	
Total	44

For endorsement to teach Drama, a student also must gain admission to Teacher Education and Student Teaching and meet all the requirements for certification as a secondary teacher (see the School of Education section of this catalog).
The demand in Montana high schools for teaching of courses in this field is limited. Students should complete the required second endorsement (major or minor) in a field other than Economics, Geography, Journalism, Psychology or Sociology.

Bachelor of Fine Arts with a major in Drama

Normally, a student should declare intent to pursue the B.F.A. degree no later than the beginning of the second year of a four-year program. The student must declare an area of specialization, either acting or design/technology.
Requirements for these areas are specified below.

A student may elect a special concentration in directing, music theatre, or another discipline in addition to the B.F.A. core and area specialization requirements. The program is designed in consultation with the student's advisor and must be approved by the faculty. The special concentration may require five years to complete.

A senior project is required of all B.A. students and B.F.A. students completing the acting or design/technology specialization. The senior project is usually production-related and has both practical and written components. Requirements for the project vary and are outlined in the School of Theatre & Dance Handbook.

The following courses are required of all B.F.A. students majoring in Drama with an area of specialization in Acting or Design/Technology:

Core Courses

Drama	Credits
106A Theatre Production I: Running Crew	1

107A Theatre Production I: Construction Crew	3
108 Introduction to House Management	1
202 Stagecraft I	3
203 Stagecraft II	3
206 Theatre Production II: Running Crew	1
214 Acting I (or DRAM 111A if Design/Tech)	3
220L Dramatic Literature I (Script Analysis)	3
320H-321H Theatre History I, II	6
379 Introduction to Directing	3
Total	27

Acting Specialization

Students who intend to pursue the acting specialization will normally enter the University as Bachelor of Arts students in Drama.

To be taken in addition to core courses:

Drama	Credits
210 Voice and Speech I	2
211 Voice and Speech II	2
215 Acting II	3
216A Production Acting I	1
244 Stage Makeup	2
310 Voice and Speech III	3
312 Physical Performance Skills I	2
313 Physical Performance Skills II	2
314 Acting III	3
315 Acting IV	3
316 Production Acting II	1
412 Physical Performance Skills III	3
414 Acting V (repeat once)	6
415 Acting VI (repeat once)	6
416 Production Acting III	1
420 Singing for Actors	2
435 Advanced Acting: Personal Performance	3
439 Advanced Acting: Professional Skills	3
Senior Project	
Sub total	48
Core Courses	27
Total	75

Design/Technology Specialization

Students wishing to pursue a B.F.A. with a specialization in design/technology must:

1. Complete a one-year residency at the UM-Missoula campus which includes a minimum of 12 credits in design/technology.
2. Attain a cumulative 2.5 overall GPA and a 3.0 GPA in design/technology coursework.
3. Present a theatre resume and portfolio consisting of class and production work.
4. Prepare a written statement explaining their educational and professional goals.

Students who intend to pursue the design/technology specialization will normally enter the University as Bachelor of Arts students in Drama.

To be taken in addition to core courses:

Drama	Credits
103A Introduction to Theatre Design	3
104 Drawing Fundamentals	3
106A Theatre Production I: Running Crew	1

107A Theatre Production I: Construction Crew (repeat once)	6
206 Theatre Production II: Running Crew	1
231 Drafting for the Theatre I	3
Choose one from:	3
331 Drafting for the Theatre II	
332 CAD for the Theatre	
341 Flat Pattern Design and Drafting	
307 Production Construction I	3
371 Stage Management I	2
Choose one from (Junior Project):	2
308 Production Team I	
309 Production Design I	
Choose one from (Senior Project):	3
408 Production Team II	
409 Production Design II	
Electives (minimum of 12 upper-division)	18
Subtotal	48
Core Courses	27
Total	75

Junior Projects

A junior project is required of all B.F.A. design/technology specialization students. The junior project is usually production-related and has both practical and written components. Requirements for the project are outlined in the School of Theatre & Dance Handbook.

Bachelor of Fine Arts with a major in Dance

The School of Theatre & Dance offers two areas of specialization, one in choreography and performance and the other in teaching. Each requires the same 48 credits in core courses, plus additional specified credits in each area of specialization. All majors are required to do a junior and a senior creative or research project and a production project.

Core Courses	Credits
Dance	
201A Beginning Composition (offered spring, odd-numbered years)	2
304 Ballet III (or higher level)	12
320 Improvisation (offered autumn, even-numbered years)	2
334 20th-Century Dance (offered autumn, even-numbered years)	3
335L World Dance	3
340 The Science of Dance Movement (offered spring, even-numbered years)	3
397 Junior Creative or Research Project (students must complete project for graduation)	3
420 Contact Improvisation (offered autumn, odd-numbered years)	2
425 Dance Pedagogy (offered autumn, even-numbered years)	3
426 Dance as a Healing Art (offered autumn, even-numbered years)	2
428 Internship in Children's Dance	2
494 Junior/Senior Dance Seminar (offered spring, odd-numbered years)	3
497 Senior Creative or Research Project (students must complete projects for graduation)	3
Drama	
106A Theatre Production I: Running Crew	1
107A section 02 or 05 Theatre Production I: Construction Crew (Costume) or 340 Intermediate Costume Construction	3
378 section 02 Stage Management Practicum I: Dance	1
Total	48

Choreography and Performance Specialization

Dance	Credits
202 Rehearsal and Performance (performing in one piece equals one credit)	2
300 Modern III	6
301 Intermediate Composition (offered autumn, odd-numbered years)	2

329 Conditioning: Pilates Mat (repeat once)	2
400 Modern IV	6
421 Advanced Improvisation	3
429 Advanced Techniques in Modern Dance	6
Drama	
111A Acting for Non-Majors I (or 214 Acting I)	3
Subtotal	30
Core Courses	48
Total	78

Teaching Specialization

Dance	Credits
300 Modern III (or higher level)	18
328 Teaching Creative Movement for People with Disabilities	1
425 section 02 Intermediate Dance Pedagogy (offered spring, odd-numbered years)	3
427 Teaching Movement in the Schools (offered autumn odd-numbered years)	6
491 Teaching Projects (assisting in a technique class for one semester)	2
Subtotal	30
Core Courses	48
Total	78

There is an admission audition which a prospective major must pass at the end of the first year to continue in this program. All students must take DAN 195: Freshman Seminar prior to auditioning for the major.

Special Projects

Junior and senior projects must be planned with the student's project advisor and all journals and papers will be submitted to that advisor. All choreography/performance B.F.A. candidates are required to choreograph for both projects, but the senior project must be a piece of choreography produced off-campus in the Missoula community. Teaching B.F.A. candidates must choreograph for the junior project and complete a teaching project in the Missoula community for the senior project. Students also are required to meet the campus-wide General Education requirements. Students are urged to consult with their advisors before General Education courses are selected.

Suggested Course of Study

The recommended curriculum for the **B.A., major in Dance** is:

First Year	
DAN 195 Freshman Seminar	1
DAN 200A Modern II (or DAN 100A, if needed)	6
DAN 201A Beginning Composition	2
DAN 204A Ballet II	8
DAN 207A Jazz Dance II	2
Electives and General Education	11
Total	30
Second Year	
DAN 204A Ballet II	4
DAN 300 Modern III (or 200A, if needed)	6
DAN 301 Intermediate Composition	2
DAN 307 Jazz Dance III	2
DRAM 378 section 02 Stage Management Practicum I: Dance	1
DAN 335L World Dance	3
Electives and General Education	12
Total	30

The recommended curriculum for the **B.A., major in Drama** is:

First Year	
DRAM 103A Introduction to Theatre Design	3
DRAM 107A Theatre Production I: Construction Crew	3
DRAM 202 Stagecraft I	3
DRAM 203 Stagecraft II	3
DRAM 214 Acting I (or 111A Acting for Non-Majors I)	3
DRAM 220L Dramatic Literature I (Script Analysis)	3
Electives and General Education	14
Total	32
Second Year	
DRAM 207 Theatre Production II: Construction Crew	3
DRAM 320H Theatre History I	3
DRAM 321H Theatre History II	3
Electives and General Education	23
Total	32

The recommended curriculum for the **Acting student in the B.F.A., major in Drama** is:

First Year	
DRAM 106A Theatre Production I: Running Crew	1
DRAM 107A Theatre Production I: Construction Crew	3
DRAM 108 Introduction to House Management	1
DRAM 202 Stagecraft I	3
DRAM 203 Stagecraft II	3
DRAM 214-215 Acting I, II	6
DRAM 220L Dramatic Literature I (Script Analysis)	3
Electives and General Education	10
Total	30
Second Year	
DRAM 206 Theatre Production II: Running Crew	1
DRAM 210-211 Voice and Speech I & II	4
DRAM 244 Stage Makeup	2
DRAM 312-313 Physical Performance Skills I, II.	4
DRAM 314-315 Acting III, IV	6
DRAM 320H Theatre History I	3
DRAM 321H Theatre History II	3
Electives and General Education	7
Total	30

The recommended curriculum for the **Design/Technology student in the B.F.A., major in Drama** is:

First Year	
DRAM 103A Introduction to Theatre Design	3
DRAM 104 Drawing Fundamentals	3
DRAM 106A Theatre Production I: Running Crew (two semesters)	2
DRAM 107A Theatre Production I: Construction Crew	6
DRAM 108 Introduction to House Management	1
DRAM 202 Stagecraft I	3
DRAM 203 Stagecraft II	3
DRAM 220L Dramatic Literature (Script Analysis)	3
DRAM 231 Drafting for the Theatre I	3
Electives and General Education	6
Total	33
Second Year	
DRAM 107A Theatre Production I Construction Crew	3
DRAM 206 Theatre Production II: Running Crew (two semesters)	2
DRAM 307 Production Construction I	3

DRAM 320H Theatre History I	3
DRAM 321H Theatre History II	3
DRAM 331 Drafting for the Theatre II or DRAM 332 CAD for the Theatre or DRAM 341 Flat Pattern Design and Drafting	3
Electives and General Education	15
Total	32

The recommended curriculum for the **Choreography and Performance** or **Teaching student in the B.F.A., major in Dance** is:

First Year

DAN 195 Freshman Seminar	1
DAN 204A Ballet II or DAN 304 Ballet III	4
DAN 300 Modern III (or DAN 200A Modern II)	6
DRAM 106A Theatre Production: Running Crew	1
DRAM 107A section 02 or 05 Theatre Production I: Construction Crew (Costume) or DRAM 340 Intermediate Costume Construction	3
Electives and General Education	9
Total	24

Second Year

DAN 201A Beginning Composition	2
DAN 202 Rehearsal and Performance	2
DAN 300 Modern III (or DAN 200A Modern II)	6
DAN 304 Ballet III (or DAN 204A Ballet II)	4
DAN 320 Improvisation	1
DAN 329 Conditioning: Pilates Mat I	2
DAN 340 Science of Dance	1
DRAM 378 section 02 Stage Management Practicum I: Dance	1
Electives and General Education	12
Total	31

Requirements for a Minor

Minor in Drama

Theatre & Dance provides the student the opportunity to focus the minor in a particular area such as acting, costume, etc. 27 credits, including a common core of 16 credits, are required for the minor. An advisor in Theatre & Dance should be consulted for guidelines regarding the specific focus.

Drama	Credits
103A Introduction to Theatre Design	3
106A Theatre Production I: Running Crew	1
107A Theatre Production I: Construction Crew	3
202 or 203 Stagecraft I or II	3
220L Dramatic Literature I	3
320H or 321H Theatre History I or II	3
Focused area	11
Total	27

Minor in Dance

30 credits are required.

Dance	Credits
100A Modern Dance I (or appropriate level)	4
104A Ballet I (or appropriate level)	4
107A Jazz Dance I (or appropriate level)	2
200A Modern II	4
201A Beginning Composition	2
202 Rehearsal and Performance (performing in one piece equals one credit)	2
204A Ballet II (or appropriate level)	2
300 Modern III	3

334 20th-Century Dance	3
320 Improvisation and 420 Contact Improvisation	4
or	
329 Conditioning: Pilates Mat and 340 The Science of Dance Movement	4
or	
426 Dance as a Healing Art and 428 Internship in Children's Dance	4
Total	30

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Dance (DAN)

U 100A Modern Dance I 2 cr. (R-4) Offered autumn and spring. Introduction to basic modern dance vocabulary through exercises for alignment, strength and flexibility and combinations across the floor.

U 104A Ballet I 2 cr. (R-4) Offered autumn and spring. Introduction to basic ballet positions and steps.

U 107A Jazz Dance I 2 cr. (R-4) Offered autumn and spring. Introduction to basic strengthening and stretching exercises and stylistic characteristics of jazz.

U 108A Dance Forms I 2 cr. (R-4) Offered autumn and spring. Introduction to basic dance vocabulary and technique in a particular style.

U 194 Dance Seminar 1 cr. Offered autumn and spring.

U 195 Special Topics Variable cr. (R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 200A Modern II 2 cr. (R-12) Offered autumn and spring. Prereq., DAN 100A. Continuation of the modern dance vocabulary at an advanced-beginner level.

U 201A Beginning Composition 2 cr. (R-4) Offered spring. Prereq., DAN 200A. Basic use of space, time and energy in dance. Movement composition studies assigned each week.

U 202 Rehearsal and Performance 1-4 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Open to students who are choreographing a dance for a concert or to those who have been selected through audition to perform.

U 204A Ballet II 2 cr. (R-12) Offered autumn and spring. Prereq., DAN 104A. Continuation of the ballet vocabulary at an advanced-beginner level.

U 207A Jazz Dance II 2 cr. (R-12) Offered autumn. Prereq., DAN 107A. Continuation of the jazz vocabulary at an advanced-beginner level.

U 234L Dance in Cinema 3 cr. Offered spring odd-numbered years. Survey of the history of dance and movement on film, with specific focus on the use of and reasons for choreography in popular movies of specific decades.

U 294 Dance Seminar 1 cr. Offered autumn and spring. One-time offerings of current topics.

UG 300 Modern III 3 cr. (R-12) Offered autumn and spring. Prereq., DAN 200A. Extension of the modern dance vocabulary through lengthier combinations of movement.

UG 301 Intermediate Composition 2 cr. (R-6) Offered autumn odd-numbered years. Prereq., DAN 201A and 6 credits of dance technique. Explores ways to manipulate several dancers in space, through repetition of shapes, through related rhythms. May include choreography for videotape.

U 302 Dance Touring 1-4 cr. (R-24) Offered autumn and spring. Prereq., audition. Rehearsal and touring to the community.

UG 304 Ballet III 2 cr. (R-8) Offered autumn and spring. Prereq., consent of instr. Development of ability to combine steps; carriage of head and arms.

U 307 Jazz III 2 cr. (R-12) Offered autumn. Prereq., DAN 204A or equiv. skill and consent of instr. Continuation of 207A.

U 320 Improvisation 2 cr. (R-6) Offered autumn even-numbered years. Exploration of stimulus, structure and performance of improvised movement. Elements such as space, shape, motion, time, quality, form and awareness emphasized. Instructor-designed structures,

transitioning to student-designed scores, culminating in improvised performance.

U 327 Dance in Elementary Education 2 cr. (R-4) Offered autumn and spring. Open to majors in elementary education. Techniques and applications for using movement in the public school setting. Focus on movement elements, lesson design and planning, standards for dance, multiple intelligence theory, assessment, classroom management techniques and multi-culturalism.

U 328 Teaching Creative Movement for People with Disabilities 1 cr. (R-4) Offered autumn and spring. Students interact with adults with developmental disabilities in an adaptive dance class where movement is used as a therapeutic modality for people with cognitive and physical impairments. Students interact with the participants, engage as role models and gain beginning teaching experience.

UG 329 Conditioning: Pilates Mat 1 cr. (R-8) Offered autumn and spring. Pilates mat (floor) exercises to build core control, strength and flexibility.

UG 334 20th-Century Dance 3 cr. Offered autumn even-numbered years. Discussion of primary movements and major figures in American modern dance, including multi-cultural influences and some parallel movements in the visual art world.

UG 335L World Dance 3 cr. (R-6) Offered autumn odd-numbered years. Investigation of dances of diverse cultures. Study of dance as: an emblem of cultural identity, social order, power and gender-specific behavior; an expression of religion and/or ritual; a classical art form; and as a medium for personal expression in Western and non-Western world cultures.

U 340 The Science of Dance Movement 3 cr. Offered spring even-numbered years. Study of the skeletal system and how it relates to dance movement. Basic kinesthetic principles, conditioning for dancers, and injury recognition and prevention.

U 394 Dance Seminar 1 cr. (R-2) Offered autumn and spring. One-time offerings of current topics.

U 395 Special Topics Variable cr. (R-24) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study: Dance Projects 1-3 cr. (R-24) Offered autumn and spring. Prereq., consent of instr.

U 397 Junior Creative or Research Projects 1-6 cr. (R-6) Offered autumn and spring. Prereq., B.F.A. dance major. Independent study in choreography or a research paper which could be on such subjects as teaching styles, multiple intelligence theory, dance historical topics, dance injuries, etc. An initial proposal, a journal, and a paper are required.

UG 400 Modern IV 3 cr. (R-12) Offered autumn and spring. Prereq., DAN 300. Performance of exercises and combinations that are technically demanding in strength, balance, weight, agility and line.

UG 404 Ballet IV 2 cr. (R-8) Offered autumn and spring. Prereq., DAN 304, 4 cr., or equiv. skill and consent of instr. Develops petite and grand allegro.

UG 420 Contact Improvisation 2 cr. (R-6) Offered autumn odd-numbered years. The art of moving with one or more partners while using a shifting point of contact and supporting each other's weight. Skills such as rolling, suspending, falling and recovering together explored through physical sensations that use weight, counter-balance and yielding.

UG 421 Advanced Improvisation 3 cr. (R-6). Prereq., Dan 320, 420. Exploration of improvisation and contact improvisation as performance art forms. Instructor and students collaboratively design, rehearse, and publicly perform improvisational scores.

UG 425 Dance Pedagogy 3 cr. (R-9) Offered autumn even-numbered years. Prereq., DAN 428. Methods and experiences in teaching modern dance, ballet and jazz.

UG 426 Dance As a Healing Art 2 cr. (R-6) Offered spring. Study of body movement as a reflection of inner emotional states. How changes in movement lead to changes in the psyche, promoting health and growth. Exploration of techniques for experiencing the inter-connection between movement and emotional expression.

UG 427 Teaching Movement in the Schools 3 cr. Offered autumn odd-numbered years. Prereq., consent of instr. Experience in planning, observing and directing creative movement as a teaching tool in K-5.

UG 428 Internship in Children's Dance 2 cr. (R-8) Offered autumn and spring. Students participate and gain beginning level teaching experience in two of four dance classes for children ranging in ages from 3 ½ to 12 years old.

UG 429 Advanced Techniques of Modern Dance 3 cr. (R-12) Offered autumn and spring. Prereq., DAN 400, 6 cr., or equiv. skill, and consent of instr. Continuation of DAN 400.

UG 491 Teaching Projects 1-6 cr. (R-24) Offered autumn and spring. Prereq., consent of instr. Independent study that may involve either assisting in the teaching of a dance technique class or actually planning and teaching it.

U 494 Junior/Senior Dance Seminar 3 cr. (R-6) Offered autumn even-numbered years. Seminar to discuss both practical and

philosophical issues confronting dance students about to enter the "real" world.

UG 495 Special Topics Variable cr. (R-24) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study: Dance Projects 1-6 cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

U 497 Senior Creative or Research Projects 3 cr. (R-6) Offered autumn and spring. Prereq., Dance major. Independent study in choreography or teaching. If the student is a B.F.A. candidate the project must take place off-campus in the Missoula community. The student is responsible for setting up the project. An initial proposal, a journal, and a paper are required.

Drama (DRAM)

U 101L Theatre Appreciation 3 cr. Offered autumn and spring. The various elements of play production and dance. The basic artistic principles underlying dance, theatre and all of the arts.

U 103A Introduction to Theatre Design 3 cr. Offered autumn. Basic understanding of the principles of design for the theatre and television, including the production elements of scenery, costumes and lighting.

U 104 Drawing Fundamentals 3 cr. Offered spring. Students will begin to develop skills in drawing the human form, perspective, and architecture.

U 106A Theatre Production I: Running Crew 1 cr. (R-4) Offered autumn and spring. Operation and running a show backstage on a scenery, costume, or prop crew for a major school production.

U 107A Theatre Production I: Construction Crew 3 cr. (R-9) Offered autumn and spring. The construction and completion of scenery, costumes and props under supervision. Most assignments involve very basic construction techniques. Involves two 4-hour labs a week.

U 108 Introduction to House Management 1 cr. (R-3) Offered every term. Introduction to the skills and experience of the front-of-house staff for a theatrical production.

U 111A Acting for Non-Majors I 3 cr. Offered every term. An introduction to the skills and techniques required of the actor to be effective in communication with others on stage and off stage.

U 112A Acting for Non-Majors II 3 cr. Offered autumn and spring. Prereq., DRAM 111A. Continuation of 111A.

U 166 History of Musical Theatre 3 cr. Offered autumn and spring. Same as MUS 166. Exploration of origins, developing trends, and cultural/historical contexts of musical theatre through films, lectures, and discussion.

U 195 Special Topics Variable cr. (R-6) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 200 Beginning Theatre Workshop Variable cr. (R-8) Offered autumn and spring. Credit for students engaged in any aspect of production including acting, directing, lighting, stagecraft, makeup, costumes, properties, business and publicity.

U 202 Stagecraft I 3 cr. Offered autumn. Fundamental theories and hands-on application in the areas of costuming, lighting, and sound.

U 203 Stagecraft II 3 cr. Offered spring. Fundamental theories and hands-on application in the areas of scenery, properties, and rigging.

U 206 Theatre Production II: Running Crew 1 cr. (R-4) Offered autumn and spring. Prereq., DRAM 106A. Operation and running a show backstage, as in scenery, costumes, or props for a major school production.

U 207 Theatre Production II: Construction Crew 3 cr. (R-6) Offered autumn and spring. Prereq., DRAM 107A. The construction and completion of scenery, costumes and props. Advanced construction assignments; supervision of a small construction crew.

U 210 Voice and Speech I 2 cr. Offered autumn. Voice production, phonetics and speech for the stage.

U 211 Voice and Speech II 2 cr. Offered spring. Prereq., DRAM 210. Continuation of 210.

U 214 Acting I 3 cr. Offered autumn. Intensive development of basic acting skills through psycho-physical technique: dramatic action, image-making and improvisation.

U 215 Acting II 3 cr. Offered spring. Prereq., DRAM 214. Continuation of 214. Further exploration of improvisation, textual links and development of performance project.

U 216A Production Acting I 1 cr. (R-4) Offered autumn and spring. Credit for acting in approved Theatre & Dance productions.

U 220L Dramatic Literature I 3 cr. Offered autumn. The study of representative texts in dramatic literature as a foundation for play analysis.

U 231 Drafting for the Theatre I 3 cr. Offered spring. Drawing techniques for the theatre with an emphasis on drafting as utilized by technicians, designers, stage managers and directors.

U 244 Stage Makeup 2 cr. Offered spring. Principles of and practice in theatrical makeup. Students will work on makeup for major productions.

U 296 Independent Study: Theatre Projects Variable cr. (R-12) Offered autumn and spring. Independent study in all the arts of the theatre.

UG 300 Theatre Workshop Variable cr. (R-20) Offered autumn and spring. Prereq., previous work in drama or theatre courses. Advanced laboratory production in all the arts of the theatre.

UG 301 Playwriting 3 cr. (R-6) Offered intermittently. Prereq., consent of instr. Techniques and practice in writing short and full-length plays.

U 306 Summer Theatre Variable cr. (R-12) Offered summer. Prereq., consent of instr. Practicum in school-approved summer theatre companies in the capacity of actor, designer, director, stage manager and/or technician.

U 307 Production Construction I Variable cr. (R-12) Offered autumn and spring. Prereq., DRAM 107A and/or consent of instr. Students serve as the construction crew in either the sound, light, costume, or scene shop for school productions.

UG 308 Production Team I Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Students function as part of the production team in a role of responsibility (i.e., master electrician, cutter, first hand, master carpenter, etc.) for a school production. These assignments and duties may serve also as part of the required junior project.

UG 309 Production Design I Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Students function as a member of the production team in a role of responsibility (i.e., scenic designer, costume designer, light designer, etc.) for a school production. These assignments and duties may serve also as part of the required junior project.

UG 310 Voice and Speech III 3 cr. Offered autumn. Prereq., DRAM 211. Dialects, accents, and continued development of good voice and speech skills.

UG 311 Voice and Speech IV 3 cr. Offered spring. Prereq., DRAM 310. Integration of voice and speech skills, vocal character.

UG 312 Physical Performance Skills I 2 cr. Offered autumn. Basics of physical performance: collaboration, concentration, centering, balance, agility, and body awareness through a variety of stage movement techniques.

UG 313 Physical Performance Skills II 2 cr. Offered spring. Prereq., DRAM 312. Physical characterization: exploring weight, rhythm, tempo, and kinesthetic relationships through Laban, animal studies, and Michael Chekhov.

UG 314 Acting III 3 cr. Offered autumn. Prereq., DRAM 215. Scene study and characterization. Works selected from realism and poetic realism.

UG 315 Acting IV 3 cr. Offered spring. Prereq., DRAM 314. Selected scenes and projects from European and American realistic texts such as Chekhov, Ibsen, Strindberg, Shaw, and O'Neill.

U 316 Production Acting II 1 cr. (R-4) Offered autumn and spring. Prereq., DRAM 216A. Credit for acting in approved Theatre & Dance productions.

UG 320H Theatre History I 3 cr. Offered autumn. A survey of the major developments of the theatre from primitive beginnings to the 19th century, including various cultures and their representative plays and performances throughout the world.

UG 321H Theatre History II 3 cr. Offered spring. Prereq., DRAM 320H. Continuation of 320H. The many and varied periods of the 19th and 20th centuries as reflected in the theatre of the times.

U 327 Drama in Elementary Education 2 cr. (R-4) Offered autumn and spring. Exploration, implementation and experience in teaching strategies for using drama in elementary education. Focus on techniques and applications for teaching drama and for utilizing drama as a tool for teaching other subject matter.

UG 331 Drafting for the Theatre II 3 cr. Offered autumn. Prereq., DRAM 231 or consent of instr. Scene design including elevations, drop-point perspective, measured drawings for furniture, and other techniques used by scene designers.

UG 332 Computer-Aided Drafting and Computer Applications for the Theatre 3 cr. (R-6) Offered autumn. Prereq., DRAM 231. Computer drafting for scenery, costumes, lighting, and sound design drawings, including 2-D and 3-D plans, layouts and renderings. Work

with CAD, photo manipulation, spreadsheet, database, and word processing programs.

UG 333 Scenic Painting 1-3 cr. (R-6) Offered spring. Introduction to the basic skills needed as a scenic artist. Emphasis on the varied materials and techniques used in the scenic studio, color mixing, and interpretation of the designer's work.

UG 334 Scene Design I 3 cr. Offered autumn. Prereq., DRAM 103A, 202, 203. Introduction to the problems encountered in designing scenery, analyzing of script, research and practical demands of theatre conventions. Projects include those for theatre, musicals, opera, dance and television.

UG 335 Scene Design II 3 cr. Offered spring. Prereq., DRAM 334. A continuation of the techniques and projects in 334.

U 336H History of Architectural Design: Pre-history to 1850 3 cr. Offered autumn. Same as Art 336H. Knowledge and understanding of architectural styles, designs and choices of the built environment from prehistoric megalithic architecture to the start of the modern age.

U 340 Intermediate Costume Construction 3 cr. Offered spring. Intermediate costume construction focusing on the development of skills needed to function as a stitcher.

UG 341 Flat Pattern Design and Drafting 3 cr. Offered autumn. Prereq., DRAM 202. Pattern design using the flat pattern method, pattern drafting of various garment parts, advanced principles of fitting.

UG 343 Textile Selection and Manipulation 3 cr. Offered spring alternate years. Analysis of fibers, yarns, structures and finishes, as related to selection and use for the theatre. Basic dyeing, distressing and painting.

UG 344 Costume History 3 cr. Offered intermittently. History of Western costume from ancient Egypt to the present day.

UG 346 Costume Design I 3 cr. Offered autumn. Prereq., DRAM 103A, 202, 203. Introduction to principles and practices of stage costume design.

UG 351 Theatre Lighting I 3 cr. Offered autumn. Prereq., DRAM 103A, 202, 203. Introduction to principles and practices of theatre lighting design. Training for position of lighting designer for theatre. Design requirements and decisions, color, development of stage picture; concentration on proscenium theatre design concepts.

U 352 Master Electrician for the Stage 2 cr. Offered intermittently. Prereq., DRAM 107A, Lighting, DRAM 202, or consent of instr. Training for the position of master electrician and assistant lighting designer. Practical application of production planning, lighting paperwork, overseeing lighting crews, advanced electrical theory, power distribution, and creative problem solving. Students will work on major school productions.

UG 361 Theatre Sound I 3 cr. Offered autumn. Prereq., DRAM 103A, 202, 203 or consent of instr. Introduction to principles and practices of theatre sound design. Training for position of sound designer for theatre. Principles, practices, and equipment used to create finished sound designs for theatre, dance and related areas.

U 371 Stage Management I 2 cr. Offered autumn. Prereq., DRAM 103A, 202, 203. Beginning study of the duties of the stage manager concentrating on the rehearsal process in the non-professional theatre situation.

UG 374 Technical Direction 3 cr. Offered intermittently. Prereq., DRAM 231, 331 or consent of instr. Training for position of technical director. The role and scope of technical direction, production scheduling, design analysis, budgets and bookkeeping, and methods of construction.

U 378 Stage Management Practicum I 1-3 cr. (R-6) Offered autumn and spring. Prereq., DRAM 371 or consent of instr. Stage management practicum involving stage managing a showcase production or assistant stage managing a major show. Involves evening work.

UG 379 Introduction to Directing 3 cr. Offered spring. Prereq., DRAM 103A, 214 or 111A, 220L. Open to juniors, seniors and graduate students. Introduction to the analytical skills, staging and conceptual techniques of the director; includes some practical application in scene work.

U 385 Spirit Squad 2 cr. (R-4) Offered autumn and spring. UM cheer and dance team selected during audition process each spring; students perform routines at the intermediate jazz level. Development of current dance performance, leadership, communication and organizational skills. (Only four credits of DRAM 385, HHP 100-179, MS 203 and MS 315 may count toward a degree.)

U 393 Omnibus Variable cr. (R-10) Offered intermittently. University omnibus option for independent work. See index.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study: Theatre Projects Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr.

U 398 Internship Variable cr. Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical

application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 400 Professional Theatre 9 cr. (R-18) Offered spring. Prereq., consent of instr. Laboratory experience in total play production through participation in state, regional, national and international touring production programs.

UG 401 Professional Performance: Touring 1-9 cr. (R-18) Offered spring. Prereq., consent of instr. Students experience the rigors and develop the skills required for actors in touring theatre; creating characters and maintaining consistent performances through three months of intensive travel and varying venues.

UG 402 Methods of Teaching Theatre 2 cr. (R-6) Offered autumn. Prereq., consent of instr. Building and addressing specific curriculum in theatre arts.

UG 407 Production Construction II Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Students serve as construction crew in one of the shops for productions.

UG 408 Production Team II Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Students serve as a member of the production team in a role of responsibility (i.e., master electrician, sound board operator, cutter, first hand, etc.) for major productions. These assignments and duties may serve also as part of the required senior project.

UG 409 Production Design II Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Students serve as a member of the production team in a role of designer (i.e., set designer, costume designer, light designer, etc.) for major productions. These assignments and duties may serve also as part of the required senior project.

UG 412 Physical Performance Skills III 3 cr. Offered autumn. Prereq., DRAM 313. Extremes of performance: stage combat, martial arts, and biomechanics/theatre of the grotesque.

UG 413 Physical Performance Skills IV 3 cr. Offered spring. Prereq., DRAM 412. Advanced specialized physical skills such as period styles, advanced combat/choreography, and commedia.

UG 414 Acting V: Studio 3 cr. (R-6) Offered autumn. Prereq., DRAM 315. Selected speeches, scenes and projects from verse drama, especially Shakespeare.

UG 415 Acting VI: Studio 3 cr. (R-6) Offered spring. Prereq., DRAM 414. Selected scenes and projects from various historical and stylistic periods.

U 416 Production Acting III 1 cr. Offered autumn and spring. Performance of an approved role in a school production accompanied by written self-assessment.

U 420 Singing for Actors 2 cr. (R-4) Offered spring. Prereq., audition, acting specialization, or consent of instr. Development and presentation of musical numbers in a dramatic context. A broad-based acquaintance with music theatre literature is acquired, and techniques for approaching songs are explored with an eye toward developing competency in music theatre forms.

UG 433 Advanced Scene Painting 3 cr. (R-9) Offered spring. Prereq., DRAM 333 and/or consent of instr. Students will explore advanced scene painting techniques.

UG 435 Advanced Acting: Personal Performance 3 cr. Offered autumn. Prereq., DRAM 415 or consent of instr. Developing personal performance skills. UG 436 Advanced Acting: Solo Performance 3 cr. Offered spring. Prereq., DRAM 435 or consent of instr. Creating solo performance material from original material or existing texts.

UG 436 Advanced Acting: Solo Performance 3 cr. Offered spring, Prereq., DRAM 435 or consent of instr. Creating solo performance material from original material or existing texts.

UG 437 Advanced Acting: Acting for the Camera I 3 cr. Offered autumn. Prereq., DRAM 414 or consent of instr. Beginning techniques in acting for the camera.

UG 438 Advanced Acting: Acting for the Camera II 3 cr. Offered spring. Prereq., DRAM 414 or consent of instr. Extended work in techniques in acting for the camera. Work in different areas of film and video acting,

UG 439 Advanced Acting: Professional Skills 3 cr. Offered spring odd-numbered years. Prereq., DRAM 414 or consent of instr. Developing professional skills, material for the actor, professional portfolio, resume audition material, commercial acting, performance market research.

UG 440 Advanced Acting: Contemporary Theatre 3 cr. Offered spring even-numbered years. Prereq., DRAM 414 or consent of instr. Performance and scene work in contemporary practice and theory.

UG 441 Draping 3 cr. Offered spring. Prereq., DRAM 341. Garment design based on manipulation of fabric on a body form; emphasis on creative solutions to design problems and the interrelationships between fabric, design, and form.

UG 442 Tailoring 3 cr. Offered spring alternate years. Prereq., consent of instr. Principles used in the construction of tailored garments.

UG 444 Advanced Makeup 2 cr. (R-6) Offered autumn and spring. Prereq., DRAM 244 or consent of instr. Characterization, prosthesis, wigs, masks and special problems. Students will work on makeup for major productions.

UG 446 Costume Design II 3 cr. (R-9) Offered spring. Prereq., DRAM 346. Advanced techniques in costume design; possible topics include design for dance, opera, large scale drama and musicals.

UG 451 Theatre Lighting II 3 cr. Offered spring. Prereq., DRAM 351 or consent of instr. Advanced study of principles and practices of theatre lighting design. Training for position of light designer for theatre. Design requirements and decisions, color, development of stage picture; thrust and arena theatre.

UG 461 Theatre Sound II 3 cr. Offered spring. Prereq., DRAM 361 or consent of instr. Advanced study of principles and practices of theatre sound design. Training for position of theatre sound designer. Principles, practices and equipment used to create sound and music designs for the theatre, dance and related areas.

UG 471 Stage Management II 2 cr. Offered intermittently. Prereq., DRAM 371 or consent of instr. Additional study of stage management concentrating on pre-rehearsal duties, aspects of maintaining a show's integrity as established by the director, inter-production relationships, supervision of crews and union contracts. Understanding a stage manager's need for paperwork and writing skills. Students encouraged to enroll in DRAM 478 to use skills in a living situation.

UG 478 Stage Management Practicum II 3 cr. (R-9) Offered autumn and spring. Prereq., DRAM 471 or consent of instr. Stage managing a major show in the drama season in the Montana or Masquer Theatres or assistant stage managing for an Equity stage manager on a Montana Repertory Theatre production.

UG 479 Directing I 4 cr. (R-12) Offered autumn. Prereq., DRAM 379 and consent of instr. Directing skills for the advanced student; extensive scene work.

UG 480 Directing II 4 cr. (R-12) Offered spring. Prereq., DRAM 479. Continuation of 479. Course material coordinated with laboratory projects.

U 493 Omnibus Variable cr. (R-24) Offered intermittently. Prereq., consent of school director. Independent work under the University omnibus option. See index.

UG 494 Seminar 2 cr. (R-6) Offered intermittently. Prereq., 10 credits in drama or in English dramatic literature and consent of instr. Intensive study of dramatic theory relating to acting, directing, design and dramaturgy.

UG 495 Special Topics Variable cr. (R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study: Theatre Projects Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr.

UG 497 Research Variable cr. (R-12) Offered autumn and spring. Prereq., consent of instr.

UG 498 Internship Variable cr. Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 500 Professional Theatre 9 cr. (R-18) Offered spring. Prereq., consent of instr. Laboratory experience in total play production through participation in state, regional, national and international touring production programs.

G 501 Problems in Playwriting 1-3 cr. (R-12) Offered intermittently.

G 503 Introduction to Design Graduate Studies 2 cr. Offered autumn. Introduction to the design/technology program, research, history and expectations of program.

G 507 Technical Production Assignment 2-4 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Production assignment made by the faculty. Student assigned a responsible technical position such as technical director, master electrician, sound engineer, cutter/draper or scenic artist. Credit variable and will be assigned by faculty.

G 508 Design Production Assignment 2-4 cr. (R-24) Offered autumn and spring. Prereq., consent of instr. Production design assignment made by the faculty. Student designs an element of a Theatre & Dance production with the supervision of a faculty designer.

G 509 Graduate Rendering Techniques 2 cr. Offered spring. Students will begin to develop personal design styles using both traditional and digital drawing and rendering techniques.

G 510 Problems in Voice/Speech 3 cr. (R-12) Offered intermittently. Prereq., consent of instr.

G 512 Problems in Movement/Dance 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr.

G 514 Graduate Acting I 3 cr. (R-12) Offered autumn. Prereq., consent of instr. Intensive rehearsal and project work with emphasis on integration of advanced skills.

G 516 Problems in Acting 1-3 cr. (R-18) Offered autumn and spring. Prereq., consent of instr.

G 517 Studio Training for the Actor 1-3 cr. (R-18) Offered autumn and spring. Prereq., consent of instr. Work in such areas as combat/movement training, improvisation for performance, experimental theatre, and various genre/period styles in performance.

G 520 Introduction to Graduate Study 2 cr. Offered autumn. Introduction to basic research and writing skills.

UG 521 Performance Theory and Criticism 3 cr. Offered spring. Survey of the theories, elements and ingredients of multi-cultural live performance forms, including theatre, popular entertainment, ceremonies, and other public events. Includes instruction in and application of various approaches to the criticism of live performance.

G 522 Graduate Seminar in Theatre History 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Selected topics and issues with individual research projects presented in seminar concerning various genres, periods, themes, and cultural contexts in theatre history.

G 523 Graduate Seminar in Dramatic Literature 3 cr. (R-9) Offered intermittently. Prereq., consent of instr. Selected topics with individual research projects presented in seminar concerning various genres, periods, and themes in dramatic literature.

G 525 Graduate Design Seminar I 2 cr. Offered autumn. This course is designed to teach graduate students effective research, collaboration, and script-analysis methodologies and exploration practices.

G 526 Graduate Design Seminar II 2 cr. Offered spring. This course is designed to continue the design process skills developed in Seminar I of effective research, collaboration and script analysis methodologies and exploration practices.

G 530 Graduate Scene Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific design skills in scenery.

G 533 Graduate Computer-Aided Drafting and Design 3 cr. (R-6) Offered autumn. Students will further their understanding for how CADD software is used to create complete, accurate draftings for design and technology in theatre and theatre-related activities.

G 535 Problems in Scene Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in scene design.

G 540 Graduate Costume Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific design skills in costuming.

G 545 Problems in Costume Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in costume design.

G 550 Graduate Light Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific design skills in light design.

G 555 Problems in Light Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in light design.

G 560 Graduate Sound Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific design skills in sound design.

G 565 Problems in Sound Design 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Development of specific technical skills in sound design.

G 571 Graduate Stage Management 3 cr. Offered autumn. Prereq., consent of instr. Study of duties of stage manager in rehearsal and performance process. Includes stage managing a production for a faculty or guest-artist director.

G 574 Technical Direction 3 cr. Offered autumn and spring. Prereq., consent of instr. Role and scope of technical direction, production scheduling, design analysis, budgets and bookkeeping and methods of construction.

G 575 Problems in Theatre Management 1-6 cr. (R-18) Offered intermittently. Prereq., consent of instr.

G 577 Technical Direction Practicum 3 cr. (R-12) Offered autumn and spring. Prereq., consent of instr. Technical direction of a major show in the drama season in the Montana or Masquer Theatres.

G 578 Stage Management Practicum 1-6 cr. (R-18) Offered autumn and spring. Prereq., consent of instr. Practical work in stage

management projects.

G 579 Directing III 3 cr. Offered autumn odd-numbered years. Prereq., DRAM 480 or consent of instr. Formalist styles of dramatic material. Through a variety of tools, textual and linguistic analysis, metrical and rhetorical analysis, archetypes, and musical structures, students analyze, interpret and stage projects drawn from opera and pre-modern drama, especially Shakespeare.

G 580 Directing IV 3 cr. Offered spring. Prereq., DRAM 579. Exploration of image; time manipulation; construction, delineation and manipulation of space; multi-media and nonlinear storytelling.

G 581 Arts Education Institute 1 cr. (R-4) Offered summer. Same as ART, MUS 581. Open forum with national and regional speakers, panels, and symposia to promote discussion, understanding, and direction on significant national issues in the arts and arts education.

G 582 Arts Education Seminar I 2 cr. (R-4) Offered summer. Prereq., Same as ART, MUS 582. Topics vary.

G 583 Arts Education Seminar II 1-2 cr. (R-4) Offered summer. Prereq., DRAM 582. Same as ART, MUS 583. Continuation of 582.

G 584 Arts Education Seminar III 1-2 cr. (R-4) Offered summer. Prereq., DRAM 583. Same as ART, MUS 584. Continuation of 583.

G 585 Arts Education Seminar IV 1-2 cr. (R-4) Offered summer. Prereq., DRAM 584. Same as ART, MUS 585. Continuation of 584.

G 586 Arts Education Seminar V 1-2 cr. (R-8) Offered summer. Prereq., DRAM 585. Same as ART, MUS 586. Continuation and synthesis of preceding seminars.

G 587 Arts Education Practicum 1 cr. (R-4) Offered summer. Same as ART, MUS 587. The active application of concepts and theories presented during the Arts Education Institute and the arts education seminars within a small group setting.

G 588 Arts Education Apprenticeship 1 cr. (R-4) Offered summer. Same as ART, MUS 588. Exploration of art forms to develop new artistic and communicative perceptions and awareness.

G 589 Arts Education Field Project 1 cr. (R-4) Offered summer. Same as ART, MUS 589. Creative/research activities.

G 594 Seminar 1-3 cr. (R-12) Offered intermittently. Prereq., consent of instr.

G 595 Special Topics Variable cr. (R-18) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study 1-6 cr. (R-24) Offered autumn and spring. Prereq., consent of instr.

G 597 Research 1-6 cr. (R-24) Offered autumn and spring. Prereq., consent of instr.

G 598 Internship 2-6 cr. (R-24) Offered intermittently. Prereq., consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office.

G 599 Professional Paper Variable cr. (R-4) Offered autumn and spring.

G 679 Directing V 3 cr. Offered intermittently. Prereq., DRAM 580. The history and literature of directing.

G 680 Problems in Directing 1-3 cr. (R-18) Offered autumn and spring. Prereq., consent of instr.

G 699 Thesis Variable cr. (R-12) Offered autumn and spring.

Faculty

Professors

- Randy Bolton, Ph.D., Florida State University, 1981
- Mark Dean, M.F.A., Wayne State University, 1991 (Director)
- Greg Johnson, M.F.A., New York University, 1974
- Karen Kaufmann, M.A., Antioch University, 1993
- Michael Monsos, M.F.A., The University of Montana, 2001

Associate Professors

- Michele Antonioli, M.F.A., Texas Christian University, 1988
- Nicole Bradley Browning, M.F.A., Arizona State University, 2000
- Alessia Carpoca, M.F.A., Northwestern University, 2003

Assistant Professors

- John Kenneth DeBoer, M.F.A., Virginia Commonwealth University, 2007
- Heidi Jones Eggert, M.F.A., Arizona State University, 2000
- Jere Lee Hodgin, M.F.A., University of Georgia, 1973
- Ezra LeBank, M.F.A., Smith College, 2008
- Ann C. Wright, Ph.D., The University of Texas at Austin, 2005

Emeritus Professors

- Juliette Crump, M.A., George Washington University, 1975
- Christine Milodragovich, M.A., Washington State University, 1973
- Bill Raoul, M.A., University of Washington, 1969

School of Media Arts

- Special Degree Requirements
- Courses
- Faculty

Richard Hughes, Director

The School of Media Arts offers a uniquely integrated curriculum on both the graduate and undergraduate level that is centered in digital technology as a storytelling and artistic medium. There are two areas of specialization within the School: Digital Filmmaking and Integrated Digital Media. The school offers a Master of Fine Arts in Media Arts, a Bachelor of Fine Arts in Media Arts and a Media Arts Minor. For more information on the academic programs, faculty, and students, please visit our website at: www.umt.edu/mediaarts.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

The Media Arts Graduate Program

The Media Arts Graduate Program is a three-year program for students pursuing the M.F.A. degree. It offers a spacious and secure graduate lab that serves as a comprehensive post-production space. It focuses on digital filmmaking and provides the student with comprehensive training in the areas of writing, directing and editing. For application information please visit our website at www.umt.edu/mediaarts.

Bachelor of Arts in Media Arts

The B.A. program offers two areas of specialization. The course of instruction in the digital filmmaking area focuses on the three primary components of pre-production, production and post-production and includes directing, writing, sound design, and editing. The course of instruction in the integrated digital media area focuses on the relationship between digital technology and aesthetics and includes still image, motion design, sound design and web design. History and theory courses in both areas provide students with a deeper understanding of artistic principles and best practices. The undergraduate program has a large production space including a green screen area, two computer labs with 40 total stations and an audio recording room. For more information please visit our website at www.umt.edu/mediaarts.
The course of study for the Bachelor of Arts degree in Media Arts is as follows:

A. Prerequisites

Offered every term. Each student must complete the four core classes (12 credits) from one of the areas of specialization (for course descriptions see Courses section):

Digital Filmmaking

MAR 101L Introduction to Media Arts - 3 cr. - open to all university students and may be taken any semester

MAR 112A Intro to Non-Linear Editing - 3 cr.

MAR 210 Creation of Media Story - 3 cr.

Both are open to all university students and may be taken in the same semester.

Students must achieve a 3.5 grade point average for these two courses in order to qualify for the following:

MAR 211 Principles of Digital Video Production -3cr.

Integrated Digital Media

MAR 111A Integrated Digital Art -3cr.

MAR 102 Digital Technology in the Arts -3cr.

Both are open to all university students and may be taken in the same semester.

Students must achieve a 3.5 grade point average for these two courses in order to qualify for the following:

MAR 201 Intro to Digital Still Imaging -3cr.

MAR 202 Intro to Motion Design -3cr.

Both may be taken in the same semester.

B. Application to the Major

Upon satisfactory completion of the core curriculum, the student then applies to the B.A. program. Acceptance requires faculty approval, a 3.0 GPA in Media Arts classes and no less than a 2.5 GPA in the student's overall studies. Please see the Media Arts office for complete information on the application process.

C. Required courses for the Major

Once accepted as a major, the student must then complete 30 credits in one of the two specializations (see below) for a total of 42 credits. GPA requirements continue through each assessment period with annual reviews occurring at the end of spring semester each year.

Specialization in Integrated Digital Media:

MAR 221 Fundamentals of Digital Design

MAR 222 Fundamentals of Digital Compositing

MAR 321 Digital Image Design Techniques

MAR 322 Digital Compositing I

MAR 325 Fundamentals of Digital Animation

MAR 330 Principles of Sound Design

MAR 340 Principles of Web Design

MAR 422 Digital Compositing II

MAR 425 Techniques of Digital Animation

MAR 440 Web Design Techniques

Specializing in Digital Filmmaking:

MAR 250 Visions of Film

MAR 251 Digital Video Production Techniques

MAR 252 Screenwriting

MAR 253 Digital Video Production Lab

MAR 301 Digital Film Practices

MAR 330 Principles of Sound Design

MAR 355 Directing the Fiction Film

MAR 356 Directing Lab

MAR 357 Techniques of Non-Linear Editing

MAR 442 Experimental Film

MAR 450 Topics in Film and Media Studies

MAR 455 Visions of Documentary Film

Advisement

Upon acceptance into the B.A. program in Media Arts, each student is assigned a faculty advisor from their area of specialization. Students will not be assigned a Media Arts faculty advisor until then. Please see the School Director for details.

Media Arts Minor

This program is designed to supplement the work of those undergraduate students whose major area of study can be enhanced through the application of media arts principles and technologies. For more information please visit our website at www.umt.edu/mediaarts.

A. Required Courses for the Minor

Offered every term. Each student must complete the four core classes (12 credits) from one of the areas of specialization listed below. For course descriptions see Courses section.

Digital Filmmaking

MAR 101L Introduction to Media Arts - 3cr.

MAR 112A Intro to Non-Linear Editing - 3cr.

MAR 210 Creation of Media Story - 3cr.

Both are open to all university students and may be taken in the same semester.

Students must achieve a 3.5 grade point average for these two courses in order to qualify for the following:

MAR 211 Principles of Digital Video Production- 3cr.

Integrated Digital Media

MAR 111A Integrated Digital Art - 3cr.

MAR 102 Digital Technology in the Arts - 3cr.

Both are open to all university students and may be taken in the same semester.

Students must achieve a 3.5 grade point average for MAR 112A and MAR 210 in order to qualify for MAR 211.

MAR 201 Intro to Digital Still Imaging - 3cr.

MAR 202 Intro to Motion Design - 3cr.

Both may be taken in the same semester.

B. Elective Classes

Students must complete nine additional credits outside of their major that support their work and development in Media Arts. These credits need to be approved by the School. Please see the School Director for a complete list of acceptable courses.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R.

Media Arts (MAR)

U 101L Introduction to Media Arts 3 cr. Offered autumn and spring. Overview of the media arts and their interaction, integration and development in the creation of story beginning with early years of photography and movie-making through the introduction of radio and television up to the digital revolution.

U 102 Digital Technology in the Arts 3 cr. Offered every term. An introduction to the relationship between aesthetics and the emerging capacities of digital technology. The course will explore the basic evolution of hardware, system software, and the internet and will present a brief history of the pioneers of both traditional and digital art. It will also look at contemporary and emerging trends in the artistic application of digital technology.

U 111A Fundamentals of Integrated Digital Art 3 cr. Offered autumn and spring. A project oriented editing and design course that focuses on artistic expression and its relationship to digital technology. Using Final Cut Pro, Adobe Photoshop and Adobe After Effects, students will create audio/visual work in both the still image and time based mediums.

U 112A Intro to Non-Linear Editing 3 cr. Offered each term. Study of the history, process and philosophy of narrative film/video editing and an introduction to Final Cut Pro nonlinear editing software.

U 195 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 201 Intro to Digital Still Imaging 3 cr. Offered autumn and spring. Prereq., MAR 102 and MAR 111A. This course provides a thorough introduction to the practices of digital still imagery, with emphasis on content, layering, and digital manipulation of images. Production techniques, project planning, narrative, and the integration of various forms of digital design are fundamental components of this course.

U 202 Intro to Motion Design 3 cr. Offered autumn and spring. Prereqs., MAR 102 and MAR 111A This project oriented course will introduce students to the basic technical and aesthetic components of digital motion design using the industry standard software programs Photoshop and After Effects.

U 210 Creation of Media Story 3 cr. Offered autumn and spring. An introduction to screenwriting and visualization for media story. Focus is on developing visual writing skills and effective utilization of critical story elements.

U 211 Principles of Digital Video Production 3 cr. Offered every term. Prereq., MAR 112A, MAR 210. The study and application of basic aesthetic, narrative and organizational principles as well as technical applications integral to the production process of short video works; preparation of scripting formats for narrative and experimental works; shot selection and design; fundamental camera and sound operations; capturing and editing; production planning.

U 221 Fundamentals of Digital Image Design 3 cr. Offered autumn. Prereq., Media Arts Major. Introduction to the fundamental concepts, principles and practices of digital still imaging in order to establish a common aesthetic and technical language necessary to develop quality designs on the computer.

U 222 3D Motion Design 3 cr. Offered autumn. Prereq., Media Arts Major. Introduction to fundamental concepts, principles and practices of digital compositing and rendering in order to establish a common aesthetic and technical language necessary to develop quality time-based art and design.

U 250 Visions of Film 3 cr. Offered autumn. Prereq., MAR 112A, MAR 210. Study of major film theories that led to the constitution of visual film language and their application in contemporary film narrative and direction.

U 251 Digital Video Production Techniques 3 cr. Offered autumn. Prereq., Media Arts Major; Coreq., 253. Intermediate study of digital video cameras, lighting, sound, and their use in specific production situations.

U 252 Screenwriting 3 cr. Offered autumn. Prereq., Media Arts Major. Intermediate level writing class devoted to short films, with an emphasis on writing camera-ready scripts for spring production. Feature film structure and techniques also discussed.

U 253 Digital Video Production Lab 1 cr. Offered autumn. Prereq., Media Arts Major; Coreq., MAR 251. Incorporates studio and on-location production work.

U 295 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296 Independent Study 1-6 cr. (R-6) Offered intermittently. Prereq., consent of instr.

U 301 Digital Film Practices 1-6 cr. (R-6) Offered every term. Prereq., Media Arts Major. Practical application of the principles of production through work on graduate and upper level undergraduate projects, either as a crew member, production manager, designer, editor, director of photography or actor.

U 321 Digital Image Design Techniques 3 cr. Offered spring. Prereq., MAR 221. Introduction to the digital vector based graphics and drawing using Adobe Illustrator and the process of integration between Photoshop and Illustrator, as well as their relationship to video production and animation.

U 322 Digital Compositing I 3 cr. Offered spring. Prereq., MAR 222, 321. Project-oriented course which builds on the fundamentals of compositing introduced in MAR 222. Students create a more sophisticated body of integrated 2D work that explores multi-layered digital art and design in greater detail.

U 324 Stop Motion Animation Techniques 3 cr. Offered winter and summer sessions. Guides students through the active creation of several individual stop motion animation projects while developing their knowledge and expertise in traditional stop motion animation techniques using modern computing technology.

U 325 Fundamentals of Digital Animation 3 cr. Offered autumn. Prereq., MAR 321, 322. Introduction to two-dimensional digital animation, focusing on character and motion design animation fundamentals including: cell animation (frame by frame), motion-tweening, working with key frames and motion paths, moving elements on a 2D stage, object choreography and text animation.

U 330 Principles of Sound Design 3 cr. Offered autumn. Prereq., Media Arts Major. Introduction to fundamental concepts, principles and practices of digital sound recording and editing in order to establish a common aesthetic and technical language necessary to develop quality audio design.

U 340 Principles of Web Design 3 cr. Offered spring. Exploration of the fundamental techniques and principles of creating an interactive web site. Focus is on general website structure, directory structure, content, design and navigation.

U 355 Directing the Fiction Film 3 cr. Offered spring. Prereq., Media Arts Major. Coreq., MAR 356. Developing, directing and editing a five to seven minute fiction movie. In depth work on creation of shooting script, casting, work with actors and location work. Emphasis on collaborative process and diligence and preparation in all levels of production.

U 356 Directing Lab 1 cr. Offered spring. Prereq., Media Arts Major. Coreq., MAR 355. Incorporates studio, on location production and post-production computer lab time.

U 357 Techniques of Non-Linear Editing 3 cr. Offered spring. Prereq., Media Arts Major. Investigation of different techniques of narrative editing, including continuity, construction and montage. Students edit short project using supplied footage. Emphasis on finding and shaping the story. Final project uses student's own footage from the project in MAR 355.

U 396 Independent Study 1-6 cr. (R-12) Offered intermittently. Prereq., consent of instr.

U 422 Digital Compositing II 3 cr. Offered spring. Prereq., MAR 322. Combines the common aesthetic and technical language with solid design principles. Students immerse themselves in the making of a body of integrated-digital 3D work that explores the technical and aesthetic possibilities of multi-layered x y z plane actualizations.

U 425 Techniques of Digital Animation 3 cr. Offered spring. Prereq., MAR 325, 422. Advanced techniques of 2D animation using Macromedia Flash as well as integrating those techniques with the basic 3D digital animation capabilities of Adobe After Effects, including virtual lighting and the virtual camera.

U 440 Web Design Techniques 3 cr. Offered spring. Prereq., MAR 325, 422. Project-based class in advanced techniques of 2-D animation using Macromedia Flash as well as integrating those techniques with the basic 3-D digital animation capabilities of Adobe After Effects, including virtual lighting and the virtual camera.

U 442 Experimental Film 3 cr. Offered autumn. Prereq., Media Arts Major. Surveying a wide range of experimental cinema (film/video) from the 1920's to the present with a central focus being artistic practice in the context of historic and cultural concerns. Students will also create projects focusing on exploring film/video both as a form of personal expression and as a medium, rather than as mass entertainment.

UG 443 Documentary: Theory and Practice 3 cr. Designed to bring together Film Studies students (theorists) and Media Arts students (filmmakers) so they may draw from their respective fields to collaborate on the production of documentaries. After exposure to both documentary history and criticism, students will be required to work with a team of producers in learning the basic skills involved in documentary production.

U 450 Topics in Film and Media Studies 3 cr. Offered autumn. Prereq., Media Arts Major. Research and exploration of contemporary film, video, digital art and design. Focus on areas of student research both in commercial and non-commercial venues and styles.

U 455 Visions of Documentary Film 3 cr. Offered autumn. Prereq., Media Arts Major. Production of short experimental works of non-fiction. Emphasis on pre-production articulation of ideas and goals that lead to competent dramatic footage of actual events and people. Applied concepts: personal point-of-view, metaphor as organizing principle, articulation of subject/thesis, complexity of story, embedded meanings, use of visual motif.

U 465 Special Projects 3 cr. Offered spring. Prereq., Media Arts Major. Focus on the production of short commercial works, including advertisements, industrial work, "how to" video, as well as paper projects with potential clients. Students develop a DVD/Web portfolio for entry into the profession upon graduation. The class serves as a synthesis point for analysis and presentation of techniques and principles learned throughout the program.

U 470 Advanced Acting for Film I 3 cr. Offered autumn. Introduction to acting techniques needed to work competently in realistic film work. Consists of acting in several exercises and scenes shot in the studio, as well as research into different film acting styles.

U 471 Advanced Acting for Film II 3 cr. Offered spring. A project-based course that combines actors and directors in the collaborative creation of a short fiction film.

UG 495 Special Topics 1-12 cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study 1-12 cr. (R-12) Offered intermittently. Prereq., consent of instr.

G 508 Media Production 4 cr. Offered autumn and spring. Introduction to visual composition, photo and video manipulation and layering on the digital platform. Projects begin with static image composition and move to video time-based work using software-compositing programs.

G 509 Media Production 4 cr. Offered spring. Continuation of production and post-production practices and techniques introduced in MAR 508.

G 515 Editing Dramatic Action 4 cr. Offered autumn. Prereq., graduate standing in the Media Arts program. Study and application of the principles of editing narrative. Beginning with animated storyboards created from scenes written by the student, the class edits existing footage in action and dialogue scenes. Study of history of editing as well as analysis of classic editing techniques.

G 577 Media Directing I 4 cr. Offered autumn. Study of dramatic action, human psychology, and the patterns of story as applied to script analysis and directing for stage and video. Students will analyze and stage scenes from existing dramatic works and adapt them for use in video and film format.

G 578 Media Directing II 4 cr. Offered spring. Production process and direction for one-camera video/film. Technical elements of camera operation, lighting and principles of shot selection are studied. Scenes are staged and shot, both in studio and on location.

G 579 Media Directing III 4 cr. Offered autumn. Continuation of video/film directing techniques at a more advanced level, including location shooting work, as well as development of a production team. A script, developed in Writing I is shot on location during this semester.

G 580 Principles of Cinematography 4 cr. Offered autumn. Intermediate study of digital cinematography including color theory, composition, lens choice, continuity, camera movement/support, lighting for film and video, and grip in both studio and location situations.

G 586 Media Writing I 4 cr. Offered spring. Prereq., MAR 577. Advanced writing principles, including the creation of layering and density through further exploration of character and the use of dramatic irony. The semester begins with the creation of the shooting script from the same script used in Directing III. Students also work on pitching full-length film stories and develop short, related treatments. Group creation of story is explored in the development of ideas for a commercial campaign.

G 587 Media Writing II 4 cr. Offered autumn. Prereq., MAR 586. Continued work in media writing at an advanced level.

G 595 Special Topics 1-6 cr. (R-12) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, and one-time offerings of current topics.

G 596 Independent Study 1-6 cr. (R-12) Offered autumn and spring. Prereq., consent of instr.

G 597 Research 1-12 cr. (R-12) Offered intermittently.

G 601 Graduate Media Research 3 cr. Offered autumn. Prereq., graduate standing in media arts. Beginning analysis and articulation of story structures in classic film. Application of qualitative research techniques, with a research portfolio due at the end of the semester.

G 680 Media Directing IV 4 cr. Offered spring. Prereq., MAR 577, 578, 579. In depth analysis of significant works in film and media story with emphasis on genre and question of narrative voice. Students analyze and articulate creation of story in foreign film, areas of narrative de-construction, performance art, installation work and theoretical literature dealing with media in other art forms. Several short projects are completed, based on this area of research

G 687 Final Portfolio Production 4 cr. Offered autumn. Ongoing production and content work relating to thesis projects.

G 688 Media Production Lab 3 cr. (R-6) Offered autumn and spring. Participation as support/design team member for another student's thesis work.

G 690 Media Apprenticeship 3 cr. (R-6) Offered autumn and spring. Work outside of program in an area of professional interest.

G 699 Final Portfolio Post-Production 6 cr. Offered spring. Final work on thesis portfolio. Approval by the student's thesis committee is required for graduation.

Faculty

Professors

- Martin Fromm, M.F.A., The University of Idaho, 1992

- Richard P. Hughes, M.M., M.F.A., The University of Montana, 1999
- Michael R. Murphy, M.F.A., The University of Montana, 1994

Associate Professor

- Mark Shogren, M.F.A., Ohio University, 2003

Assistant Professors

- Andrew J. Smith, M.F.A., University of Iowa, 1997
- Gregory Twigg, M.F.A., The University of Montana, 2001

School of Music

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Maxine Ramey, Interim Director

The School of Music offers students who have demonstrated talent in music the opportunity to continue further study either for a profession or an avocation and to acquire at the same time a broad general education. Complete sequences of courses are given to prepare a student for a career as a teacher or supervisor of music in the elementary/secondary schools; for a career directed toward composition, the music technology industry, private teaching, or concert work; or, for a thorough training in music within the structure of a broad liberal arts curriculum.

Degree programs at the undergraduate level include the Bachelor of Music Education; Bachelor of Music with areas of specialization in performance or composition/music technology; and Bachelor of Arts in music. Graduate degree programs include the Master of Music with areas of specialization in music education, performance, composition/technology; and musical theater.

The University of Montana-Missoula is an accredited institutional member of the National Association of Schools of Music.

In general, admission as a major in the School of Music is by certificate from the high school from which the student graduates. The faculty of the School of Music is more concerned with evidence of talent, conspicuous achievement in music, promise of development, and scholarship in general than it is in the precise content of the program which the prospective music student has followed prior to admission to the University.

The School of Music welcomes the opportunity for prospective students and parents to consult with faculty and administration by paper and electronic correspondence and/or by appointment interviews on the campus. Every student wishing to become a music major or minor must take the Music Theory Assessment Examination and a Piano Proficiency Evaluation during orientation and also must audition and be accepted officially into the applied studio of a music faculty member prior to confirmation as a fully-admitted major or minor in music.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

1. For the Bachelor of Music Education degree, course requirements in Curriculum A must be completed.
2. For the Bachelor of Music degree, course requirements in Curriculum B must be completed.
3. For the Bachelor of Arts degree, course requirements in Curriculum C must be completed.
4. All majors seeking an undergraduate degree in music and who are registered for 5 or more credits must participate in an ensemble specified by their degree curriculum each semester of residence of the regular school year. (See specific curricula for maximum ensemble credits applicable toward minimum degree requirements.)

   Majors whose principal performance area is wind/percussion must register for:

   - Music 110A/310, section 1, Symphonic Wind Ensemble (or Music 110A/310, section 2, University Concert Band, or Music 108A/308, section 1, University Orchestra, if designated) every semester.

   String majors must register for:

   - Music 108A/308, section 1, University Orchestra, every semester.

   B.M., Vocal Performance, and B.A., voice, majors must register for:

   - a minimum of 4 credits in Music 107A, section 1 (University Choir).

Upon completion of the upper-division recital performance, B.M., Vocal Performance, and B.A., voice, majors may enroll in:

- Music 307, section 1 (University Choir),
- Music 307, section 2 (Chamber Chorale),
- Music 307, section 3 (Women's Chorus),
- Music 313 (Opera Theater), or
- Music 350, section 11 (Jubes)

B.M.E. voice majors must take a minimum of:

- 6 credits in 107A/307, section 1 (University Choir) and
- 1 cr. of 104A (Marching Band).

Ensemble requirements for piano and organ are listed separately for each curriculum.

5. Seniors pursuing the B.M.E. or B.A. degrees and deemed outstanding in performance ability by their applied music teacher may perform a one-half recital only. Students in the B.M. program must present a full recital, a requirement which may be satisfied at the discretion of the area faculty by giving two half recitals.
6. Candidates for all undergraduate degrees in music enrolled in performance study above the Music 100A level shall take divisional juries as scheduled by area faculties. Students may be excused from divisional juries if graduating in that semester, or if they have performed a half or full recital that term, or have successfully completed an upper-division recital performance during that semester.
7. Successful completion of all lower-division music core requirements is necessary for admission to upper-division academic study in music and for students pursuing the B.M.E. degree, student teaching in music. Transfer students shall be admitted to 300 or above courses with the stipulation that lower-division requirements be completed within their first two semesters of residence.

   The required lower- division core includes:

   - Music 135L (Introduction to Music Literature) 3 cr.
   - Music 111-112 (Theory I, II), 4 cr.
   - Music 211-212 (Theory III, IV), 4 cr.
   - Music 137-138 (Aural Perception I, II), 4 cr.
   - Music 237-238 (Aural Perception III, IV), 4 cr.
   - Music 115A-116A (Piano in Class I, II), 2 cr.
   - Music 215-216 (Intermediate Piano in Class I, II), 2 cr. (B.M.E. and B.M. only)
   - Music 220 (Upper-Division Required Performance)
   - and for those pursuing the B.M.E. and B.M. degrees, Music 219 (Piano Proficiency Assessment).
8. All candidates for undergraduate music degrees must complete 39 music and/or non-music credits numbered 300 or above to meet graduation requirements for the first baccalaureate degree. Upper-division credits transferred from other four-year institutions will count toward the 39-credit requirement. Upper-division large and chamber ensembles and non-required applied study may not count as upper-division music electives within the minimum degree requirements except as designated for a particular degree program.
9. Upon successful completion of the Upper-Division Writing Proficiency Assessment, students will complete the Upper-Division Writing Expectation. Candidates for Curriculum A may satisfy this requirement with one course from the MUS 420-425 series or an upper-division writing course which will also satisfy teacher certification requirements. Candidates for Curriculum B and Curriculum C will satisfy this requirement with one course from the MUS 424, 436, or 437.
10. All lower-division music courses, as well as MUS 324H- 325H, counted toward the major must be passed with a grade of C- or better.

Requests for exceptions to any published music degree requirements require written approval by the music faculty executive committee and in the case of general university requirements, the Graduation Appeals Subcommittee.

Curriculum A- Bachelor of Music Education Degree

For students who feel the challenge and vital service opportunity in the teaching profession and whose high school background includes experience in musical organizations, the University offers the Bachelor of Music Education degree. Included in this curriculum are state requirements for certification for public school teaching (see School of Education for special certification requirements) and training and background for instructing instrumental and choral groups and teaching general music (K-12).

Music course requirements total 71 credits:

- 151 (Major Performance Area I), 2 cr.
- 251 (Major Performance Area II), 2 cr.
- 351 (Major Performance Area III), 1 cr.
- 100A (Performance Study), 2 cr.;
- 107A/307, section 1 (University Choir), 108A/308 (Orchestras), 104A (Marching Band), 110A/310 (Concert Bands), 150A/350 (Piano Ensembles) or 196/496 (Independent Studies/Piano Accompanying) 7 cr. of which 2 cr. must be 104A for music education majors with brass, percussion or woodwind principal and 1 cr. must be 104A for music education majors with keyboard, voice or string principal. Only students with keyboard as their principal performance area may include Music 150A/350 and/or 196/496 to a maximum of 3 cr.
- 111-112 (Theory I, II), 4 cr.

- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 115A-116A (Piano in Class I, II), 2 cr. (except keyboard principals)
- 215-216 (Intermediate Piano in Class I, II), 2 cr. (except keyboard principals)
- 219 (Piano Proficiency Assessment)
- 220 (Upper-Division Required Performance)
- 117 (Voice in Class), 1 cr. (except voice principals)
- 124-125 (String Instruments in Class I, II), 2 cr.
- 126 (Double Reed Class), 1 cr.
- 127 (Flute and Single Reed Class), 1 cr.
- 128 (Upper Brass Class), 1 cr.
- 129 (Lower Brass Class), 1 cr.
- 130-131 (Percussion Instruments I, II), 2 cr.
- 324H-325H (History of Music I, II), 6 cr.
- 302 (Instrumental Conducting), 2 cr.
- 303 (Choral Conducting), 2 cr.
- 305 (Instrumental Methods and Materials), 2 cr.
- 306 (Choral Methods and Materials), 2 cr.
- 322-323 (General Music Methods and Materials I, II) 6 cr.
- 388 (Concert Attendance)
- 428 (Orchestration), 2 cr.
- upper-division music electives for keyboard principals 4 cr.; for voice principals, 4 cr.; and for orchestral instrument principals, 3 cr.

Students taking keyboard as principal performance area must complete Music 346 (Advanced Functional Piano) 1 cr. and 430 (Piano Methods and Materials I) 3 cr. in addition to upper-division music electives.

At least 39 credits, music or non-music, numbered 300 or above is required.

Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double degree program requires a minimum of 150 credits.

Curriculum B-Bachelor of Music Degree

The serious instrumentalist or vocalist may enroll for preparation leading to the Bachelor of Music degree in performance while students with a strong interest in composition and music technology may select the B.M. specialization designed to challenge and prepare them for a career in this field. Prior to full acceptance, all candidates for the Bachelor of Music degree in performance must successfully pass a special entrance audition in an applied area. Composition and music technology students must also obtain approval of the appropriate faculty. This degree does not qualify a student for public school teaching in Montana.

Areas of Specialization in the Bachelor of Music Degree Program Include:

Piano (B 1)

Music course requirements for an option in piano performance total 85 credits:

- 151 (Major Performance Area I), 4 cr.
- 251 (Major Performance Area II), 6 cr.
- 351 (Major Performance Area III), 8 cr.
- 451 (Major Performance Area IV), 8 cr.
- 107A/307 (Choral Ensembles), 108A/308 (Orchestras), 104A (Marching Band), 110A/310 (Concert Bands), 150A/350 (Piano Ensembles) or 196/496 (Independent Studies/Piano Accompanying), 8 cr. of which at least 4 must be in 150A/350 or 196/496 and at least 2 in 107A/307, 108A/308, or 110A/310
- 100A (Secondary Keyboard Study), 2 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 220 (Upper-Division Required Performance)
- 302 or 303 (Instrumental Conducting or Choral Conducting), 2 cr.
- 324H-325H (Music History I, II), 6 cr.
- 346 (Advanced Functional Piano), 1 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- 430-431 (Piano Pedagogy I, II), 6 cr.
- 432-433 (Keyboard Literature I,II) 6 cr.

- 445 (Senior Recital), 2 cr.
- upper division music electives, 3 cr.

A minimum of 24 non music credits is required for piano majors. At least 39 credits, music or non-music, numbered 300 or above is required.

Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double-degree program requires a minimum of 150 credits.

Organ Performance (B-2)

Music course requirements for a specialization in organ performance total 85 credits:

- 151 (Major Performance Area I), 6 cr.
- 251 (Major Performance Area II), 6 cr.
- 351 (Major Performance Area III), 8 cr.
- 451 (Major Performance Area IV), 8 cr.
- 107A/307 (Choral Ensembles), 108A/308 (Orchestras), 104A (Marching Band), 110A/310 (Concert Bands), 150A/350 (Piano Ensembles) or 196/496 (Independent Studies/Piano Accompanying), 8 cr.of which at least 4 must be in 150A/350 or 196/496 and at least 2 in 107A/307, 108A/308, or 110A/310
- 100A (Secondary Keyboard Study), 2 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 220 (Upper-Division Required Performance)
- 303 (Instrumental Conducting or Choral Conducting), 2 cr.
- 324H-325H (Music History I, II), 6 cr.
- 346 (Advanced Functional Piano), 1 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- 430-431 (Piano Pedagogy I, II)), 6 cr.
- 445 (Senior Recital), 2 cr.
- 496 Independent study in organ construction, design and pedagogy, 2 cr.
- upper division music electives, 5 cr.

A minimum of 28 non music credits is required for organ majors to include 10 credits in French or German. At least 39 credits, music or non-music, numbered 300 or above is required.

Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double-degree program requires a minimum of 150 credits.

Piano Performance and Pedagogy (B-3)

Music course requirements for an option in piano performance and pedagogy total 85 credits:

- 151 (Major Performance Area I), 4 cr.
- 251 (Major Performance Area II), 6 cr.
- 351 (Major Performance Area III), 8 cr.
- 451 (Major Performance Area IV), 8 cr.
- 107A/307 (Choral Ensembles), 108A/308 (Orchestras), 104A (Marching Band), 110A/310 (Concert Bands), 150A/350 (Piano Ensembles) or 196/496 (Independent Studies/Piano Accompanying), 8 cr.s. of which at least 4 must be in 150A/350 or 196/496 and at least 2 in 107A/307,, or 110A/310
- 100A (Secondary Keyboard Study), 2 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 220 (Upper-Division Required Performance)
- 302 or 303 (Instrumental Conducting or Choral Conducting), 2 cr.
- 324H-325H (Music History I, II), 6 cr.
- 333 (Practicum), 4 cr.
- 346 (Advanced Functional Piano), 1 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- 430-431 (Piano Pedagogy I, II), 6 cr.

- 432-433 (Keyboard Literature I, II), 6 cr.
- 445* (Senior Recital), 2 cr.
- 496 (Readings in Piano Pedagogy), 2 cr.
- upper division music electives, 3 cr.

A minimum of 24 non-music credits is required for piano majors of which piano performance and pedagogy majors must take Introduction to Psychology 100S, 4 cr., Child and Adolescent Development 240S, 3 cr., and Teaching Creative Movement in the Schools, DAN 427, 3 cr. At least 39 credits, music or non-music, numbered 300 or above is required.

*Piano Performance/Pedagogy Senior Recital may be two half-recitals. One half-recital may include pedagogical lecture/demonstration and/or collaborative repertoire.

Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double-degree program requires a minimum of 150 credits.

Voice Performance (B 4)

Music course requirements for an option in voice total 84 credits:

- 151 (Major Performance Area I), 4 cr.
- 251 (Major Performance Area II), 4 cr.
- 351 (Major Performance Area III), 4 cr.
- 451 (Major Performance Area IV), 4 cr.
- a minimum of 4 credits in 107A, section 1 (University Choir) and, upon completion of the upper-division recital performance, 107A/307, section 1 (University Choir), 107A/307, section 2 (Chamber Chorale), 307, section 3 (Women's Chorus), 113A/313 (Opera Theater), or 150A/350, section 11 (Jubileers) for an additional 4 credits
- 113A/313 (Opera Theater), 2 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 219 (Piano Proficiency Assessment)
- 220 (Upper-Division Required Performance)
- 324H-325H (Music History I, II), 6 cr.
- 115A-116A (Piano in Class I, II), 2 cr.
- 215-216 (Intermediate Piano in Class I, II), 2 cr.
- 181-182 (Diction), 4 cr.
- 303 (Choral Conducting), 2 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 342-343 (Vocal Repertoire I, II), 4 cr.
- 388 (Concert Attendance)
- 441 (Vocal Pedagogy), 2 cr.
- 445 (Senior Recital), 2 cr.
- Upper Division music electives, 11 cr.

A minimum of 31 non-music credits is required to include Drama 111A (Acting for Non-Majors I), 3 cr., and 10 credits of foreign language chosen from French, German or Italian. At least 39 credits, music or non-music, numbered 300 or above is required.

Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double degree program requires a minimum of 150 credits.

Instrumental Performance (B 5)

Music course requirements for an option in an orchestral instrument (strings, winds, percussion) total 85 credits:

- 151 (Major Performance Area I), 6 cr.
- 251 (Major Performance Area II), 6 cr.
- 351 (Major Performance Area III), 8 cr.
- 451 (Major Performance Area IV), 8 cr.
- 108A/308 (Orchestras) or 110A/310 (Concert Bands), 8 cr.
- 150A/350 (Chamber Ensembles),4 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 219 (Piano Proficiency Assessment)

- 220 (Upper-Division Required Performance)
- 115A-116A (Piano in Class I, II), 2 cr.
- 215-216 (Intermediate Piano in Class I, II), 2 cr.
- 324H-325H (Music History I, II), 6 cr.
- 302 (Instrumental Conducting), 2 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- 445 (Senior Recital), 2 cr.
- Upper Division music electives, 8 cr. to include (for string majors only) 409 (Pedagogy of Strings).

A minimum of 24 non-music credits is required. At least 39 credits, music or non-music, numbered 300 or above is required. Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double degree program requires a minimum of 150 credits.

Composition and Music Technology (B-6)

Music course requirements for a major in composition and music technology total 85 credits:

- 151 (Major Performance Area I) 2 cr.
- 251 (Major Performance Area II), 2 cr.
- 351 (Major Performance Area III, 1 cr
- 107A/307 (Choral Ensembles), 108A/308 (Orchestras), 104A (Marching Band), or 110A/310 (Concert Bands), 113A/313 (Opera Theater), 114A/314 (UM Jazz Bands), 150A/350 (Chamber Ensembles) or 196/496 (Independent Study/Piano Accompanying), 8 cr., of which at least 4 must be in 107A/307 section 1, 108A/308 or 110A/310
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 115A-116A (Piano in Class I, II), 2 cr.
- 215-216 (Intermediate Piano in Class I, II), 2 cr.
- 219 (Piano Proficiency Assessment)
- 220 (Upper-Division Required Performance)
- 159 (Composition I), 4 cr.
- 170 (Introduction to Music Technology), 2 cr.
- 271 (Sequencing, Synthesis, and Notation), 2 cr.
- 259 (Composition II), 4 cr.
- 135L (Introduction to Music Literature) 3 cr.
- 324H-325H (Music History I, II), 6 cr.
- 302 (Instrumental Conducting) or 303 (Choral Conducting) 2 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 379 (Counterpoint), 3 cr.
- 388 (Concert Attendance)
- 359 (Composition I), 6 cr.
- 459 (Composition II), 3 cr.
- 428 (Orchestration) 2 cr.
- 429 (Interactivity and Digital Signal Processing), 2 cr.
- 466 (Computer Music Programming), 2 cr.
- 424 (Music of the 20th Century), 3 cr.
- 499 (Professional Projects), 2 cr.
- and 2 credits of upper-division music elective

Maximum credits applicable toward music requirements for this degree: Large and Chamber Ensembles, 8 cr.; Music 151, 2 cr.; 251, 2 cr.; 351, 2 cr. (1 cr. as upper-division music elective); 451, 2 cr. (as upper-division electives).

A minimum of 24 non-music credits is required. At least 39 credits, music or non-music, numbered 300 or above, is required.

Composition/Technology students must pass a faculty jury examination of representative work in composition at the end of their sophomore year. Seniors present a full recital of original music (Music 499, Professional Projects) including compositions for small, medium, and large vocal or instrumental ensembles, as well as works that employ music technology.

Degrees are possible in both Curriculum A and B if all requirements in both curricula are completed. A double degree program requires a minimum of 150 credits.

Curriculum C-Bachelor of Arts Degree in Music

Music students with an interest in a broader liberal arts education may choose one of the specializations in curriculum C. With more opportunities to take electives outside of music, this program offers flexibility for students with diverse interests, including those who pursue a double major. The Bachelor of Arts Degree in Music may be particularly attractive to students who wish to pursue graduate

degrees in academic areas of music, or for those who seek careers in institutions or music-related industries. Students may choose from one or more of the following areas of specialization: (C-1) Musical Studies, (C-2) Applied Music, (C-3) Music History, and (C-4) Composition and Music Technology.

Minimum credit requirements for this degree are 51 credits in music and 51 credits of non music courses. At least 36 of the non-music credits must be in the College of Arts and Sciences, to include foreign language, 10 cr., and Liberal Studies 151L-152L, 8 cr.

At least 39 music and/or non-music credits must be numbered 300 or above.

Students in curriculum C will participate in ensembles as required by the School of Music once MUS 151 status or higher has been achieved. Students who have completed an upper-division required performance on an instrument or voice, or have otherwise been placed in Applied Music 351 or 451 may take ensembles for upper-division credit.

Maximum music credits applicable toward this degree: Performance, 16 cr.; Large Ensemble Music, 8 cr. (maximum upper-division Large Ensemble Music credits: 4 cr.); Chamber Ensemble Music, 4 cr..

Students with keyboard as their principal instrument must take a minimum of 2 Large Ensemble Music credits and may take Music 150A/350 (Piano Ensembles) and/or Music 196/496 (Independent Studies/Piano Accompanying) to a maximum of 12 credits Large and Chamber Ensemble Music.

Those with voice as their principal must take a minimum of 2 to 4 credits in 107A, section 1 (University Choir), depending on specialization, and, upon completion of the upper-division required proficiency, 107A/307, section 1 (University Choir), 107A/307, section 2 (Chamber Chorale), 307, section 3 (Women's Chorus), 113A/313 (Opera Theater), or 150A/350, section 11 (Jubileers) for an additional 4 credits.

See Specializations C-1 through C-4 for specific ensemble and course requirements.

Specialization in Musical Studies (C-1)

Music course requirements for a specialization in musical studies total 51 credits:

- 151 (Major Performance Area I), 2 cr.
- 251 (Major Performance Area II), 2 cr.
- 351 (Major Performance Area III), 2 cr.
- 108A/308 (Orchestras), 104A (Marching Band), or 110A/310 (Concert Bands), 5cr. (Keyboard and Voice principals see above)
- Chamber Ensemble Music 113A/313, 114A/314, 150A/350, 0–4 cr. (Keyboard principals see above)
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 220 (Upper-Division Required Performance)
- 115A-116A (Piano in Class), 2 cr
- 324H-325H (Music History I, II), 6 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- Upper division music electives, 6 cr.
- Upper division academic music electives, 4 cr.

Minimum credit requirements for this degree is 51 credits in music and 51 credits of non-music courses. At least 36 of the nonmusic credits must e in the College of Arts and Sciences, to include foreign language, 10 cr., and Liberal Studies 151L-152L, 8 cr.

At least 39 credits, music or non-music, numbered 300 or above are required.

Specialization in Applied Music (C-2)

Music course requirements for a specialization in applied music total 51 credits:

- 151 (Major Performance Area I), 2 cr.
- 251 (Major Performance Area II), 2 cr.
- 351 (Major Performance Area III), 2 cr.
- 451 (Major Performance Area IV), 2 cr.
- 108A/308 (Orchestras), 104A (Marching Band), or 110A/310 (Concert Bands), 8cr. (Keyboard and Voice principals see above)
- Chamber Ensemble Music 113A/313, 114A/314, 150A/350, 0–4 cr. (Keyboard principals see above)
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.

- 237-238 (Aural Perception III, IV), 4 cr.
- 220 (Upper-Division Required Performance)
- 115A-116A (Piano in Class), 2 cr
- 324H-325H (Music History I, II), 6 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- upper division academic music electives, 4 cr.
  Minimum credit requirements for this degree is 51 credits in music and 51 credits of non-music courses. At least 36 of the non-music credits must be in the College of Arts and Sciences, to include foreign language, 10 cr., and Liberal Studies 151L-152L, 8 cr..

At least 39 credits, music or non-music, numbered 300 or above are required.

Specialization in Music History (C-3)

Music course requirements for a specialization in music history total 51 credits:

- 151 (Major Performance Area I), 2 cr.
- 107A/307 (Choral Ensembles), 108A/308 (Orchestras), 104A (Marching Band), or 110A/310 (Concert Bands), or 196/496 (Independent Study Piano Accompanying), 2 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 115A-116A (Piano in Class I, II), 2 cr.
- 136H (Music of the World's Peoples), 3 cr.
- 220 (Upper Division Required Performance)
- 115A-116A (Piano in Class), 2 cr
- 324H-325H (Music History I, II), 6 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- 424 (Music of the 20th Century to Present), 3 cr.
- 436/437 (Topics in Music History/Cultural Studies), 6 cr.
- 499 (Senior Research Project), 2 cr.
- Upper division academic music electives, 2 cr.

Minimum credit requirements for this degree is 51 credits in music and 51 credits of non-music courses. At least 36 of the non-music credits must be in the College of Arts and Sciences, to include foreign language, 10 cr., and Liberal Studies 151L-152L, 8 cr.

At least 39 Credits, music or non-music, numbered 300 or above are required.

Specialization in Composition and Music Technology (C-4)

Music course requirements for a specialization in composition and music technology total 51 credits:

- 151 (Major Performance Area I), 2 cr.
- 107A/307 (Choral Ensembles), 108A/308 (Orchestras), 104A (Marching Band), or 110A/310 (Concert Bands), or 196/496 (Independent Study Piano Accompanying), 2 cr.
- 111-112 (Theory I, II), 4 cr.
- 211-212 (Theory III, IV), 4 cr.
- 135L (Introduction to Music Literature), 3 cr.
- 137-138 (Aural Perception I, II), 4 cr.
- 237-238 (Aural Perception III, IV), 4 cr.
- 115A-116A (Piano in Class I, II), 2 cr.
- 117, 124-131 Voice/Instruments in Class, 4 cr.
- 159 (Composition I) 2 cr.
- 170 (Introduction to Music Technology), 2 cr.
- 220 (Upper-Division Required Performance)
- 259 (Composition II), 2 cr.
- 271 (Sequencing, Synthesis, and Notation), 2 cr.
- 324H-325H (Music History I, II), 6 cr.
- 361-362 (Form and Analysis I, II), 4 cr.
- 388 (Concert Attendance)
- 359 (Composition I), 1 cr
- 459 (Composition II), 1 cr
- 428 (Orchestration) 2 cr.

Minimum credit requirements for this degree is 51 credits in music and 51 credits of non-music courses. At least 36 of the non-music credits

must be in the College of Arts and Sciences, to include foreign language, 10 cr., and Liberal Studies 151L-152L, 8 cr..

At least 39 Credits, music or non-music, numbered 300 or above are required.

Suggested Course of Study

Bachelor of Music Education (A)

First Year	**A**	**S**
MUS 107A 110A, 150A, 196 Ensembles	1	1
MUS 111-112 Theory I, II	2	2
*MUS 115A-116A Piano in Class I, II	1	1
*MUS 117 Voice in Class	1	-
MUS 135L Introduction to Music Literature	–	3
MUS 137–138 Aural Perception I, II	2	2
MUS 151 Major Performance I	1	1
PSYX 100S (PSYC 100s) Introduction to Psychology	–	4
Electives and General Education (WRIT 101) (ENEX 101)	6	-
	14	17
Second Year		
MUS 107A–110A, 150A, 196 Ensembles	1	1
MUS 124–125 Strings in Class I, II	1	1
MUS 126–129 Woodwinds or Brass in Class	1	1
MUS 211–212 Theory III, IV	2	2
*MUS 215–216 Intermediate Piano in Class I, II	1	1
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237–238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	1	1
MUS 324H–325H Music History I, II	3	3
Professional Education	3	3
Electives and General Education	-	3
	15	18
Third Year		
MUS 100A Performance Study	1	-
MUS 126 131 Woodwinds, Brass or Percussion in Class	2	2
MUS 302 Instrumental Conducting	2	-
MUS 303 Choral Conducting	2	-
MUS 305 Instrumental Methods and Materials	2	-
MUS 306 Choral Methods and Materials	2	-
MUS 307, 310, 350, 496 Ensembles	1	1
MUS 322-323 General Music Methods and Materials I, II	3	3
MUS 351 Major Performance III	1	-
MUS 428 Orchestration	2	-
Electives and General Education	4	6
	17	17
Fourth Year		
MUS 100A Performance Study	1	-
MUS 307, 310, 350, 496 Ensembles	1	-
MUS 338 Concert Attendance	-	0
Upper division music electives	3–4	–
**Student Teaching	–	12
Professional education	7	-
Electives and General Education	6	-
	18	12

*Keyboard principals do not enroll in Music 115A-116A or 215-216 but must take 346 and 430 as upper-division music electives. Voice

principals do not take Music 117.

**May be scheduled autumn semester with appropriate adjustments in remaining schedule.

Bachelor of Music, Specialization in Piano Performance (B 1)

First Year		
MUS 107A 110A, 150A, 196 Ensembles	1	1
MUS 111-112 Theory I, II	2	2
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	2	2
Electives and General Education (WRIT 101) (ENEX 101)	7	6
	14	16
Second Year		
MUS 107A, 110A, 150A, 196 Ensembles	1	1
MUS 211-212 Theory III, IV	2	2
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	3	3
MUS 324H-325H Music History I, II	3	3
MUS 100A Secondary Keyboard Performance	1	1
Electives and General Education	3	3
	15	15
Third Year		
MUS 307 310, 350, 496 Ensembles	1	1
MUS 346 Advanced Functional Piano	–	1
MUS 351 Major Performance III	4	4
MUS 361-362 Form and Analysis I, II	2	2
MUS 430-431 Piano Pedagogy I, II	3	3
MUS 302/303 Inst. or Choral Conducting	2	-
Electives and General Education	3	4
	15	15
Fourth Year		
MUS 307, 310, 350, 496 Ensembles	1	1
MUS 432-433 Keyboard Literature I, II	3	3
MUS 388 Concert Attendance	-	0
MUS 445 Senior Recital	-	2
MUS 451 Major Performance IV	4	4
*Upper division music electives	3	-
Electives and General Education	5	4
	16	14

A minimum of 24 non-music credits is required for piano majors. At least 39 credits, music or non-music, numbered 300 or above is required.

Bachelor of Music, Specialization in Organ Performance (B-2)

First Year		
MUS 107A, 110A, 150A, 196 Ensembles	1	1
MUS 111-112 Theory I, II	2	2
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	3	3
Electives and General Education (WRIT 101)(ENEX 101)	6	5
	14	16
Second Year		

MUS 107A, 110A, 150A, 196 Ensembles	1	1
MUS 211-212 Theory III, IV	2	2
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	3	3
MUS 324H-325H Music History I, II	3	3
MUS 100A Secondary Keyboard Performance	1	1
Electives and General Education	3	3
	15	15

Third Year

MUS 307 310, 350, 496 Ensembles	1	1
MUS 346 Advanced Functional Piano	–	1
MUS 351 Major Performance III	4	4
MUS 430-431 Piano Pedagogy I, II	3	3
MUS 303 Choral Conducting	2	-
Upper-division music electives	-	2
French or German	5	5
	15	15

Fourth Year

MUS 307 310, 350, 496 Ensembles	1	1
MUS 361-362 Form and Analysis I, II	2	2
MUS 388 Concert Attendance	-	0
MUS 445 Senior Recital	-	2
MUS 451 Major Performance IV	4	4
MUS 496 Organ constr., design & pedagogy	-	2
*Upper division music electives	3	-
Electives and General Education	5	4
	15	15

A minimum of 28 non-music credits is required for organ majors to include 10 credits in French and/or German. At least 39 credits, music or non-music, numbered 300 or above is required.

Bachelor of Music, Specialization in Piano Performance and Pedagogy (B-3)

First Year

MUS 107A, 110A, 150A, 196 Ensembles	1	1
MUS 111-112 Theory I, II	2	2
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	2	2
Electives and General Education (WRIT 101)(ENEX 101)	7	6
	14	16

Second Year

MUS 107A 110A, 150A, 196 Ensembles	1	1
MUS 211-212 Theory III, IV	2	2
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	2	2
MUS 324H-325H Music History I, II	3	3
MUS 100A Secondary Keyboard Performance	1	1
Electives and General Education (PSYX 100S)(PSYC 100S)	4	4
	15	15

Third Year

MUS 307, 310, 350, 496 Ensembles	1	1
MUS 346 Advanced Functional Piano	1	-

MUS 351 Major Performance III	3	3
MUS 361-362 Form and Analysis I, II	2	2
MUS 430-431 Piano Pedagogy I, II	3	3
MUS 333 Practicum	-	1
MUS 302/303 Instrum. or Choral Conducting	2	-
Electives and Gen Ed	3	6
	14	16
Fourth Year		
MUS 307, 310, 350, 496 Ensembles	1	1
MUS 333 Practicum	2	1
MUS 388 Concert Attendance	-	0
MUS 432-433 Keyboard Literature I, II	3	3
MUS 445 Senior Recital	-	2
MUS 451 Major Performance IV	3	3
*Upper division music electives	3	-
Electives and General Education	6	5
	16	14

A minimum of 24 non-music credits is required for piano majors of which piano performance/pedagogy majors must take introduction to Psychology 100S, 4 cr., Child and Adolescent Development 240S, 3 cr., and Teaching Creative Movement in the Schools, DAN 427, 3 cr..

At least 39 credits, music or non-music, numbered 300 or above is required.

Bachelor of Music with Major in Music, Voice Performance (B 4)

First Year	**A**	**S**
MUS 107A Ensembles	1	1
MUS 111-112 Theory I, II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	2	2
MUS 181-182 Diction for Singers	2	2
Electives and General Education (WRIT 101)(ENEX 101)	6	3
	16	16
Second Year		
MUS 107A Ensembles	1	1
MUS 211-212 Theory III, IV	2	2
MUS 215-216 Intermediate Piano in Class I, II	1	1
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	2	2
MUS 324H-325H Music History I, II	3	3
Foreign language	5	5
	16	16
Third Year		
MUS 307, 313, 350 Ensembles	1	1
MUS 303 Choral Conducting	2	-
MUS 313 Opera Theater	1	1
MUS 342-343 Vocal Repertoire I, II	2	2
MUS 351 Major Performance III	2	2
MUS 361-362 Form and Analysis I, II	2	2
MUS 441 Vocal Pedagogy	–	2
Upper-division music electives	3	-
Electives and General Education	3	3
	16	13

Fourth Year

MUS 307, 313, 350 Ensembles	1	1
MUS 388 Concert Attendance	-	0
MUS 445 Senior Recital	–	2
MUS 451 Major Performance IV	2	2
Upper division music electives	2	3
*Electives and General Education	8	6
	13	14

*Must include Drama 111A (Acting for Non-Majors I), 3 cr..

Bachelor of Music with Major in Music, Instrumental Performance (B 5)

First Year

MUS 108A, 110A Ensembles	1	1
MUS 111-112 Theory I, II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	3	3
Electives and General Education (WRIT 101)(ENEX 101)	6	3
	15	15

Second Year

MUS 108A, 110A Ensembles	1	1
MUS 211-212 Theory III, IV	2	2
MUS 215-216 Intermediate Piano in Class I, II	1	1
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	3	3
MUS 324H-325H Music History I, II	3	3
Electives and General Education	3	3
	15	15

Third Year

MUS 308, 310 Ensembles	1	1
MUS 302 Instrumental Conducting	–	2
MUS 350 Chamber Ensembles	1	1
MUS 351 Major Performance III	4	4
MUS 361-362 Form and Analysis I, II	2	2
Upper division music electives	2	2
Electives and General Education	6	3
	16	15

Fourth Year

MUS 308, 310 Ensembles	1	1
MUS 350 Chamber Ensembles	1	1
MUS 388 Concert Attendance	-	0
MUS 445 Senior Recital	–	2
MUS 451 Major Performance IV	4	4
*Upper division music electives	2	2
Electives and General Education	6	5
	14	15

*String principals also must take Music 409 (Pedagogy of Strings).

Bachelor of Music with Major Music, Composition and Music Technology (B-6)

First Year

MUS 107A-110A Ensembles	1	1
MUS 111-112 Theory I, II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	1	1
MUS 159 Composition I	2	2
MUS 170 Introduction to Music Technology	2	-
Electives and General Education (WRIT 101)(ENEX 101)	3	3
	14	15

Second Year

MUS 107A-110A Ensembles	1	1
MUS 211-212 Theory III, IV	2	2
MUS 215-216 Intermediate Piano in Class I, II	1	1
MUS 219 Piano Proficiency Assessment	-	0
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	1	1
MUS 259 Composition II	2	2
MUS 271 Sequence, Syntheses, and Notation	2	-
MUS 324H-325H Music History I, II	3	3
Electives and General Education	3	3
	17	15

Third Year

MUS 302 Instrumental Conducting OR	-	-
MUS 303 Choral Conducting	-	2
MUS 307, 310, 313, 314, or 350 Ensembles	1	1
MUS 351 Major Performance III	1	-
MUS 359 Composition III	3	3
MUS 361-362 Form and Analysis I, II	2	2
MUS 379 Counterpoint	-	3
MUS 424 Music of the 20th Century to the Present	3	-
MUS 428 Orchestration	2	-
Electives and General Education	3	6
	15	17

Fourth Year

MUS 307, 310, 313, 314,or 350 Ensembles	1	1
MUS 388 Concert Attendance	-	0
MUS 429 Interactivity and Digital Signal Processing	-	2
MUS 459 Composition IV	3	-
MUS 466 Computer Music Programming	2	-
MUS 499 Professional Project	-	2
Upper-division music electives	2	-
Electives and General Education	7	8
	15	13

*MUS 424 is offered only Fall semester in odd-numbered years. Students will have the opportunity to enroll in either the third or fourth year.

Bachelor of Arts in Music, Specialization in Musical Studies (C-1)

First Year

MUS 107A-110A Ensembles	1	1
MUS 111-112 Theory I,II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2

MUS 151 Major Performance I	1	1
Elective and General Education (WRIT 101)(ENEX 101)	7	6
	14	16

Second Year

MUS 107A-110A Ensembles	1	1
MUS 211-212 Theory III ,IV	2	2
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	1	1
MUS 324H-325H Music History I, II	3	3
LS 151L-152L Intro to Humanities	4	4
Electives and General Education	3	3
	16	16

Third Year

MUS 307, 310, 313, 350 Ensembles	1	-
MUS 351 Major Performance III	1	-
MUS 361-362 Form and Analysis I, II	2	2
Foreign Languages	5	5
Upper-division Music Electives	3	3
Electives and General Education	3	5
	15	15

Fourth Year

MUS 388 Concert Attendance	-	0
Upper-division academic music electives	2	2
Electives and General Education	12	12
	14	14

Specialization in Applied Music (C-2)

First Year

MUS 107A-110A Ensembles	1	1
MUS 111-112 Theory I,II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I	1	1
Elective and General Education (WRIT 101)(ENEX 101)	7	6
	14	16

Second Year

MUS 107A-110A Ensembles	1	1
MUS 211-212 Theory III ,IV	2	2
MUS 220 Upper-Division Required Performance	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 251 Major Performance II	1	1
MUS 324H-325H Music History I, II	3	3
LS 151L-152L Intro to Humanities	4	4
Electives and General Education	3	3
	16	16

Third Year

MUS 307, 310, 313, 350 Ensembles	1	1
MUS 351 Major Performance III	1	1
MUS 361-362 Form and Analysis I, II	2	2
Foreign Languages	5	5
Electives and General Education	6	6
	15	15

Fourth Year

MUS 307, 310, 313, 350 Ensembles	1	1
MUS 388 Concert Attendance	-	0
MUS 451 Major Performance IV	1	1
Upper-division academic music electives	2	2
Electives and General Education	10	10
	14	14

Specialization in Music History (C-3)

* Students in curriculum C-3 will participate in ensembles as required by the School of Music upon achieving MUS 151 status or higher. An audition will determine semester of eligibility for acceptance into MUS 151. * UDRP to consist of an example of scholarly writing to be approved by music faculty.

First Year

MUS 107A-110A Ensembles*	1	1
MUS 111-112 Theory I,II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I*	1	1
MUS 136 Music of the World's Peoples	-	3
Elective and General Education	6	3
	13	16

Second Year

MUS 211-212 Theory III ,IV	2	2
MUS 220 Upper-Division Required Proficiency*	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 324H-325H Music History I, II	3	3
LS 151L-152L Intro to Humanities	4	4
Electives and General Education	4	4
	15	15

Third Year

MUS 424 Music of 20th Century to Present	3	-
MUS 436/437 Topics in History/Cultural Studies	-	3
MUS 361-362 Form and Analysis I, II	2	2
Foreign Languages	5	5
Electives and General Education	6	6
	16	16

Fourth Year

MUS 388 Concert Attendance	-	0
MUS 436/437 Topics in History/Cultural Studies	-	3
MUS 499 Senior Research Project	2	-
Music electives	2	-
Electives (music, non-music)	10	12
	14	15

Specialization in Composition and Music Technology (C-4)

First Year

MUS 107A-110A Ensembles*	1	1
MUS 111-112 Theory I,II	2	2
MUS 115A-116A Piano in Class I, II	1	1
MUS 135L Introduction to Music Literature	-	3
MUS 137-138 Aural Perception I, II	2	2
MUS 151 Major Performance I*	1	1
MUS 159 Composition I	1	1
MUS 170 Introduction to Music Technology	-	2
Elective and General Education	6	3

	14	16

* Students in curriculum C will participate in ensembles as required by the School of Music upon achieving MUS 151 status or higher. An audition will determine semester of eligibility for acceptance into MUS 151.

Second Year		
MUS 117, 124-131 Voice/Instruments in Class	1	1
MUS 211-212 Theory III ,IV	2	2
MUS 220 Upper-Division Required Performance*	-	0
MUS 237-238 Aural Perception III, IV	2	2
MUS 259 Composition II	1	1
MUS 271 Sequence, Synthesis, and Notation	2	-
MUS 324H-325H Music History I, II	3	3
LS 151L-152L Intro to Humanities	4	4
Electives and General Education	-	3
	15	16

Third Year		
MUS 117, 124-131 Voice/Instruments in Class	1	1
MUS 359 Composition III	1	-
MUS 461-462	2	2
Foreign Languages	5	5
Electives and General Education	6	6
	15	14

Fourth Year		
MUS 388 Concert Attendance	-	0
MUS 459 Composition IV	1	-
MUS428 Orchestration	2	-
Electives (music, non-music)	12	15
	15	15

Requirements for a Minor

To receive a non-teaching minor in music the student must earn at least 27 music credits to include the following:

- 135L (Introduction to Music Literature) 3 cr.
- 151 (Major Performance I) 2 cr.
- 2 cr. chosen from Music 107A (Choral Ensembles), 108A (Orchestras), 104A (Marching Band), 110A (Concert Bands), 113A (Opera Theater), 114A (UM Jazz Bands), 150A (Chamber Ensembles), taken concurrently with 151
- 111-112 (Music Theory I, II) 4 cr.
- 137-138 (Aural Perception I,II) 4 cr.
- 12 cr. of music electives which must be approved in advance by the Music Department. Contact the office at the School of Music for detailed information.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Music (MUS)

U 100A Performance Study 1-2 cr. Offered autumn and spring. Prereq., consent of instr. Individual instruction in voice, piano, organ, harpsichord, carillon, string, wind and percussion instruments. A total of 6 credits is allowed in any one performance area. All private instruction requires concurrent ensemble participation.

U 104A Marching Band 1 cr. Offered autumn. See MUS 107A for repeatability limitations. A musical organization of brass, woodwinds, percussion, and auxiliary units open to all University students with no audition required.

U 107A Choral Ensembles 1 cr. Offered autumn and spring. Open to all University students. Audition places students according to appropriate ensemble and proper seating/section. Music majors refer to curricula for specific requirements. Non-music majors may apply 8 credits of 107A- 110A, 113A/313, 114A/314, and 150A/350 toward graduation.

U 108A Orchestras 1 cr. Offered autumn and spring. See MUS 107A for repeatability limitations. Open to all University students by audition. Rehearsal and performing experience in a broad range of symphonic, choral, operatic and concerto repertoire in the University Orchestra and the Missoula Symphony.

U 110A Concert Bands 1 cr. Offered autumn and spring. See MUS 107A for repeatability limitations. Major musical organizations open to all University students. Audition required for Symphonic Wind Ensemble.

U 111 Theory I 2 cr. Offered autumn. Coreq., MUS 137. Material and structure of music. Application of principles in tow-, three-, and four-part writing and the keyboard.

U 112 Theory II 2 cr. Offered spring. Prereq., MUS 111. Coreq., MUS 138. Continuation of MUS 111.

U 113A Opera Theatre 1 cr. (R-8) Offered autumn and spring. Prereq., consent of instr. Study and performance of the standard opera repertoire.

U 114A UM Jazz Bands 1 cr. (R-8) Offered autumn and spring. Prereq., consent of instr. Study and performance of the jazz repertoire.

U 115A Piano in Class I 1 cr. Offered autumn. Music reading, techniques, and harmonization skills acquired through study of solo and ensemble repertoire in a contemporary electronic piano laboratory.

U 116A Piano in Class II 1 cr. Offered spring. Prereq., MUS 115A. Continuation of 115A.

U 117 Voice in Class I cr. Offered autumn and spring. Breathing, resonance, vowel formation and posture as related to tone production. Simple vocals, methods of producing crescendo, diminuendo, legato, staccato, flexibility, velocity. Sight reading. The teaching of vocal techniques.

U 118A Singing for Non-Majors 2cr. Offered autumn and spring. An introduction to the skills which enable and enhance artistic singing. As a group, students work to understand and exercise good tone production, musicality, and performance skills.

U 120 Music Fundamentals 2 cr. Offered autumn. Basic principles of notation, including clefs, scales, intervals, cords and rhythm.

U 124 String Instruments in Class I 1 cr. (R-2) Offered autumn. Group instruction for beginning students on violin, viola, cello and bass, with emphasis on teaching procedures.

U 125 String Instruments in Class II 1 cr. (R-2) Offered spring. Prereq., MUS 124. Continuation of 124.

U 126 Double Reed Class 1 cr. (R-2) Offered autumn. Basic instruction in oboe and bassoon, with emphasis on teaching procedures.

U 127 Flute and Single Reed Class 1 cr. (R-2) Offered spring. Basic instruction in flute, clarinet, and saxophone, with emphasis on teaching procedures.

U 128 Upper Brass Class 1 cr. (R-2) Offered autumn. Basic instruction in trumpet and horn, with emphasis on teaching procedures.

U 129 Lower Brass Class 1 cr. Offered spring. Basic instruction in trombone, baritone, and tuba, with emphasis on teaching procedures.

U 130 Percussion Instruments I 1 cr. (R-2) Offered autumn. Basic instruction in percussion instruments, with emphasis on teaching procedures.

U 131 Percussion Instruments II 1 cr. (R-2) Offered spring. Prereq., MUS 130. Continuation of 130. Basic instruction in percussion instruments, with emphasis on teaching procedures.

U 132L History of Jazz 3 cr. Offered autumn. The development of jazz in the 20th century with emphasis on critical listening and the recognition of important trends and people in its history.

U 133L History of Rock and Roll 3 cr. Offered autumn and spring. A study of the roots, components, and development of the musical art form “Rock and Roll”. Significant performing artists and movements with the style identified and presented. Includes traditional lecture with substantial use of audio and visual aids.

U 134L Music Appreciation 3 cr. Offered autumn and spring. The development of music listening skills. Exploration of the relationship between musical materials and the expressive qualities of a musical composition or performance. Concert attendance required. No musical background is expected. For non majors only. Credit not allowed for both MUS 134L and 135L.

U 135L Introduction to Music Literature 3 cr. Offered spring. Prereq., for non-majors consent of instr. A survey of representative examples of the standard music literature of the Western European tradition. Particular attention to musical styles and forms and their relationship to musical understanding and effective listening. A basic knowledge of music fundamentals is expected. Credit not allowed for both MUS 134L and 135L.

U 136H Music of the World’s Peoples 3 cr. Offered autumn and spring. Introduction to the diversity of music among the world’s peoples. Selected music systems throughout the world examined in their broad cultural contexts: religious, historical, and social. Introduction to ethnomusicology-a combination of musicology, anthropology and other related disciplines.

U 137 Aural Perception I 2 cr. Offered autumn. Coreq., MUS 111. A laboratory course in singing and dictation to supplement Theory I.

U 138 Aural Perception II 2 cr. Offered spring. Prereq., MUS 137; coreq., MUS 112. Continuation of 137.

U 142 Jazz Theory and Improvisation I 2 cr. Offered autumn. A performance oriented course to provide a basic understanding of jazz harmony. Application of scales and melodic patterns in improvising over various harmonic progressions.

U 143 Jazz Theory and Improvisation II 2 cr. Offered spring. Prereq., MUS 142. Continuation of 142.

U 147A Beginning Folk Guitar 2 cr. Offered autumn. A beginning course in the fundamentals of playing folk guitar. Includes introduction to the rudiments of music.

U 150A Chamber Ensembles 1 cr. Offered autumn and spring. See MUS 107A for repeatability limitations. Prereq., consent of instr. String, woodwind, brass, percussion, piano and vocal ensembles as appropriate to meet student needs.

U 151 Major Performance Area I 1-4 cr. (R-12) Offered autumn and spring. Prereq., audition and consent of instr. Instruction in voice, piano, organ, string, wind and percussion instruments. Students entering 151 must show talent for solo performance and evidence of the equivalent of a minimum of four years prior study. All private instruction requires concurrent ensemble participation.

U 159 Composition I 2 cr. (R-4) Offered autumn and spring. Prereq., consent of instr. An introduction to the basic art of music composition. May be substituted for upper division electives for students not majoring in theory or composition.

U 161 Language of Music I 3 cr. Offered autumn. Music fundamentals including scales, intervals, triads, and rhythm as they are written and heard. Practical application to the voice and/ or keyboard.

U 162 Language of Music II 3 cr. Offered spring. Prereq., MUS 161. Continuation of 161 with emphasis on analysis of musical examples and aural recognition of basic harmonic patterns.

U 170 Introduction to Music Technology: Digital Audio and Multitracking 2 cr. Offered autumn and spring. Composition of computer music through recording, editing, and processing sound with digital audio software. Study of the theory and application of digital audio recording, multitracking, and digital signal processing, and electroacoustic music history. Survey of historical and current electronic and computer music composers, pieces, and practices.

U 181 English and Italian Diction for Singers 2 cr. Offered autumn even-numbered years.

U 182 German and French Diction for Singers 2 cr. Offered spring odd-numbered years.

U 195 Special Topics Variable cr. (R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Studies in Music 1-3 cr. (R-9) Offered autumn and spring.

U 211 Theory III 2 cr. Offered autumn. Prereq., MUS 112 and 138; coreq., MUS 237. Continuation of 112.

U 212 Theory IV 2 cr. Offered spring. Prereq., MUS 211; coreq., MUS 238

U 215 Intermediate Piano in Class I 1 cr. Offered autumn. Prereq., MUS 116A or equiv. Continuation of 116A.

U 216 Intermediate Piano in Class II 1 cr. Offered spring. Prereq., MUS 215. Continuation of 215, culminates in piano functional examination.

U 218 Intermediate Piano in Class (Honors) 1 cr. Offered intermittently. Prereq., placement examination. Accelerated offering of the material covered in MUS 215 and 216.

U 219 Piano Proficiency Assessment 0 cr. Repeat 8 times. All majors pursuing a B.M. or B.M.E. degree must successfully complete all sections of the Piano Proficiency Assessment in order to attain upper-division standing in music. The eight-part exam is administered at the end of each semester. Successfully completed assessments will receive a grade of CR.

U 220 Upper-Division Required Performance 0 cr. All majors seeking upper-division standing must present a juried public performance on his/her performing instrument of acceptable quality prior to enrollment in upper-division music coursework. A previous divisional jury based on performance ability, repertoire and sight-reading is a prerequisite for this performance. Successful completion of this requirement requires approval from a 2/3 majority of the music faculty in attendance. Successfully completed performances will receive a grade of CR.

U 237 Aural Perception III 2 cr. Offered autumn. Prereq., MUS 112 and 138; coreq., MUS 211. A lab course in singing and dictation to supplement Theory III.

U 238 Aural Perception IV 2 cr. Offered spring. Prereq., MUS 237; coreq., MUS 212. See 237.

U 251 Major performance Area II 1-4 cr. (R-12) Offered autumn and spring. Prereq., audition and consent of instr. Continuation of 151. All private instruction requires concurrent ensemble participation.

U 259 Composition II 2 cr. (R-4) Offered autumn and spring. Prereq., 4 credits of MUS 159. Original work in composition may be substituted for upper-division electives for students not majoring in theory or composition.

U 271 Sequencing, Synthesis, and Notation 2 cr. Offered autumn. Prereq., MUS 170. Composition of computer music using MIDI sequencing, sampling, and synthesis software, and score preparation using music notation software. Study of the theory and application of MIDI, synthesis algorithms, and effects processing, and the practice of music engraving.

U 295 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings by visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 302 Instrumental Conducting 2 cr. (R-4) Offered spring. Prereq., upper-division standing in music. Conducting methods and practice. Teaching methods and materials.

U 303 Choral Conduction 2 cr. (R-4) Offered autumn. Prereq., upper-division standing in music. A study of the techniques of choral conducting. Emphasis on issues encountered in various ensemble settings.

U 304 Advanced Marching Band 1 cr. (R-4) Offered autumn. Prereq., MUS 104A or consent of instr. A musical organization of brass, woodwinds, percussion, and auxiliary units open to all University students.

U 305 Instrumental Methods and Materials 2 cr. (R-4) Offered autumn. Prereq., upper-division standing in music. Coreq., C&I 302. Development of practical knowledge to effectively instruct and administer the instrumental music program in the elementary and secondary schools.

U 306 Choral Methods and Material 2 cr. (R-4) Offered spring. Prereq., upper-division standing in music. Development of practical knowledge of effectively instruct and administer the choral program in the elementary and secondary schools.

U 307 Choral Ensembles 1 cr. Offered autumn and spring. Prereq., upper-division standing in voice. See MUS 107A for description.

U 308 Orchestras 1 cr. Offered autumn and spring. Prereq., upper-division standing in instrument of participation. See MUS 108A for description.

U 310 Concert Bands 1 cr. Offered autumn and spring. Prereq., upper-division standing in instrument of participation. See MUS 110A for description.

U 313 Opera Theater I cr. (R-8) Offered autumn and spring. Prereq., consent of instr. See 114A for description.

U 314 UM Jazz Bands 1 cr. (R-8) Offered autumn and spring. Prereq., consent of instr. See 114A for description.

U 322 General Music Methods and Materials I 3 cr. Offered autumn. Prereq., upper-division standing in music and C&I 200. Development of practical knowledge to effectively instruct and administer general music classes in the public schools, grades K-12.

U 323 General Music Methods and Materials II 3 cr. Offered spring. Prereq., upper-division standing in music and C&I 200. Continuation of 322.

U 324H History of Music I 3 cr. Offered autumn. Prereq., MUS 135L. The history of music in Western civilization from its origins to 1750 and its relationship to general cultural development. Introduction to basic research skills in music. Emphasis on listening for style characteristics through representative recorded repertoire.

U 325H History of Music II 3 cr. Offered spring. Prereq., MUS 135L. The history of music in Western civilization from 1750 to modern times. See MUS 324H.

U 333 Practicum in Piano Pedagogy 1-2 cr. (R-4) Offered intermittently. Prereq. or coreq., MUS 430, 431. Student teaching of young pianists.

U 335 Music Education in the Elementary Schools 3 cr. Offered autumn and spring. Prereq., C&I 200. Integration of fundamental skills and basic rudiments of music into the various aspects of teaching music creatively in the elementary school. For non-music majors only.

U 342 Vocal Repertoire I 2 cr. Offered autumn odd-numbered years. Prereq., upper-division standing in music. Comprehensive acquaintance with styles and interpretation in British, German, and possible additional repertoire genres.

U 343 Vocal Repertoire II 2 cr. Offered spring even-numbered years. Prereq., upper-division standing in music. Comprehensive acquaintance with styles and interpretation in American, French and possible additional genres.

U 345 Junior Recital 2 cr. Coreq., MUS 351. Offered autumn and spring.

U 346 Advanced Functional Piano 1 cr. Offered intermittently. Prereq., upper-division standing in music. Offered alternate years. Techniques of harmonization, transposition, sight-reading, modulation, and improvisation.

U 350 Chamber Ensembles 1 cr. Offered autumn and spring. Prereq., consent of instructor. See MUS 150A.

U 351 Major Performance Area III 1-4 cr. (R-12) Offered autumn and spring. Prereq., upper-division standing in music and consent of instr. Continuation of 251. All private instruction requires concurrent ensemble participation.

U 359 Composition III 3 cr. (R-6) Offered autumn and spring. Prereq., upper-division standing in music and 4 credits in MUS 259. Creative writing of music.

U 361 Form and Analysis I 2 cr. Offered autumn. Prereq., upper-division standing in music. Detailed harmonic and formal analysis of representative works from the Baroque period to the present.

U 362 Form and Analysis II 2 cr. Offered spring. Prereq., upper-division standing in music and MUS 361. Continuation of 361.

U 379 Counterpoint I 3 cr. Offered intermittently. Prereq., upper-division standing in music. Writing and analysis of contrapuntal styles through the 18th century.

U 380 Counterpoint II 3 cr. Offered intermittently. Prereq., MUS 379. Continuation of 379.

U 388 Concert Attendance 0 cr. All music majors pursuing a B.M., B.M.E., or B.A. degree must attend and/or participate in a minimum of 154 approved recitals/concerts prior to graduation. Students will receive recital credits each semester they are enrolled and should register for 388 the semester they apply for graduation. Successful completion of attendance requirements will be graded CR.

U 395 Special Topics Variable cr. (R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Studies in Music 1-3 cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

U 409 Pedagogy of Strings 1-2 cr. (R-4) Offered intermittently. Prereq., upper-division standing in music and consent of instr. Procedures and materials in class string instruction.

UG 424 Music of the 20th Century to the Present 3cr. Offered intermittently. Prereq., MUS 325 and upper-division standing in music. Detailed analysis and comparison of selected instrumental, vocal and keyboard compositions of the 20th Century.

UG 428 Orchestration 2 cr. Offered autumn. Prereq., upper-division standing in music. Orchestrating and transcribing for orchestra and band instruments.

UG 429 Interactivity and Digital Signal Processing 2 cr. Offered spring. Prereq., MUS 271 and upper-division standing in music. Composition of interactive computer music using a graphical programming environment for MIDI, synthesis, and digital signal processing. Study of graphical programming, interactive composition and performance, generating and processing MIDI data, synthesizing computer-generated sound, and processing digital audio in real-time.

UG 430 Piano Methods and Materials I 2cr. Offered autumn odd-numbered years. Prereq., upper-division standing in music or consent of instr. Methods and materials for teaching piano classes in public schools and private studios. Procedures in teaching beginning, intermediate and advanced students in private studios. Practical demonstrations and supervised laboratory experience with children's classes.

UG 431 Piano Methods and Materials II 2 cr. Offered spring even-numbered years. Prereq., MUS 430. Continuation of 430.

UG 432 Keyboard Literature I 2 cr. Offered autumn even-numbered years. Prereq., upper-division standing in music. Keyboard literature from the developments of the Baroque era to the contemporary period including the suite, sonata, character pieces, etc.

UG 433 Keyboard Literature II 2 cr. Offered spring odd-numbered years. Continuation of 432.

UG 436 Topics in Music History 3 cr. (R-3) Offered intermittently. Prereq. MUS 325H and upper division standing in music or consent of instructor. Course materials will examine the development of musical styles, genres, forms and aesthetics important to Western music, introducing students to research methods in musicology.

UG MUS 437 Cultural Studies in Music 3cr. (R-3) Offered intermittently. Prereq. MUS 325H and upper division standing in music, or consent of instructor. Course materials will examine music's contemporary role within cultures and societies around the world, introducing students to research methods in cultural studies and ethnomusicology.

UG 441 Vocal Pedagogy 2 cr. Offered autumn odd-numbered years or spring even-numbered years. Prereq., upper-division standing in music. Procedures, philosophies and terminology used in the teaching of singing. Individual and group techniques.

U 445 Senior Recital 1-2 cr. Offered autumn and spring. Coreq., MUS 451.

U 451 Major Performance Area IV 1-4 cr. (R-12) Offered autumn and spring. Prereq., upper-division standing in music and consent of instr. Continuation of 351. All private instruction requires concurrent ensemble participation.

U 459 Composition IV 3 cr. (R-6) Offered autumn and spring. Prereq., 3 credits in MUS 359. A continuation of composition with writing in the larger forms.

UG 466 Computer Music Programming 2 cr. Offered autumn. Upper-division standing in music. Composition of computer music through programming. Study of object oriented programming, synthesis and digital signal processing techniques, music-generating algorithms, sound spatialization, graphical user interface design, and external control.

UG 495 Special Topics Variable cr. (R-9) Offered autumn and spring. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Studies in Music 1-3 cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

U 499 Professional Projects 1-4 cr. (R-4) Offered autumn and spring.

G 500 Secondary Performance Area 1-2 cr. (R-6) Offered every term. Prereq., audition and consent of instr. Continuation of 100.

G 511 Advanced Conducting 2 cr. (R-6) Offered intermittently. Prereq., MUS 331 and consent of instr. Class and/or individual study of the art of conducting with emphasis on performance with university performing groups.

G 512 Repertoire for Public School Music Students 2 cr. (R-4) Offered intermittently. Prereq., graduate standing in music. Concentrated study of repertoire for instrumental or vocal soloists, chamber ensembles or large ensembles.

G 520 Research in Music 2 cr. Offered autumn and summer. Prereq., graduate standing in music. Research problems: their statement, organization, techniques, tabulation of materials, and concepts necessary for interpretation of data. Development of a research proposal.

G 521 Psychology of Music 2 cr. Offered intermittently. Prereq., graduate standing in music. Investigation of the perception, processing and cognition of music. Psychological foundations of musical behavior: psychoacoustics, measurement and prediction of musical ability, functional music, music and society, music learning, and effective response to music.

G 522 Philosophy of Music 2 cr. Offered intermittently. Prereq., graduate standing in music. An investigation of the meaning of music, the relationship to various societies and social structures and the leading philosophical ideas which relate to music and music instruction.

G 525 Seminar in Vocal Literature 2 cr. (R-6) Offered intermittently. Prereq., graduate standing in music. Concentrated study of opera literature, song literature or choral literature.

G 526 Seminar in Instrumental Literature 2 cr. (R-4) Offered intermittently. Prereq., graduate standing in music. Concentrated study of symphonic literature or instrumental chamber music literature.

G 551 Major Performance Area 1-4 cr. (R-12) Offered every term. Prereq., audition and consent of instr. Continuation of 451.

G 554 Analytical Techniques I 3 cr. Offered autumn odd-numbered years. Prereq., graduate standing in music. A survey of the theoretical approach of leading composers from the polyphonic period to the present.

G 555 Analytical Techniques II 3 cr. Offered spring even-numbered years. Prereq., MUS 554. Continuation of 554.

G 559 Composition Variable cr. (R-6) Offered intermittently. Prereq., consent of instr. Continuation of 459.

G 581 Arts Education Institute 1 cr. (R-4) Offered summer. Same as ART, DRAM 581. Open forum with national and regional speakers, panels, and symposia to promote discussion, understanding, and direction on significant national issues in the arts and arts education.

G 582 Arts Education Seminar I 2 cr. (R-4) Offered summer. Same as ART, DRAM 582. Topics vary.

G 583 Arts Education seminar II 1-2 cr. Offered summer. Prereq., MUS 582. Same as ART, DRAM 583. Continuation of 582.

G 584 Arts Education Seminar III 1-2 cr. (R-4) Offered summer. Prereq., MUS 583. Same as ART, DRAM 584. Continuation of 583.

G 585 Arts Education Seminar IV 1-2 cr. (R-4) Offered summer. Prereq., MUS 584. Same as ART, DRAM 585. Continuation of 584.

G 586 Arts Education Seminar V 1-2 cr. (R-8) Offered summer. Prereq., MUS 585. Same as ART, DRAM 586. Continuation and synthesis of preceding seminars.

G 587 Arts Education Practicum 1 cr. (R-4) Offered summer. Same as ART, DRAM 587. The active application of concepts and theories presented during the Arts Education Institute and the arts education seminars within a small group setting.

G 588 Arts Education Apprenticeship 1 cr. (R-4) Offered summer. Same as ART, DRAM 588. Exploration of art forms to develop new artistic and communicative perceptions and awareness.

G 589 Arts Education Field Project 1 cr. (R-4) Offered summer. Same as ART, DRAM 589. Creative/research activities.

G 593 Professional Projects Variable cr. (R-4) Offered intermittently. Prereq., graduate standing in music.

G 595 Special Topics Variable cr. (R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6) Offered intermittently. Prereq., consent of instr. Students must have projects approved by a music faculty member before enrolling.

G 599 Thesis Variable cr. (R-10) Offered intermittently. Prereq., graduate standing in music.

Faculty

Professors

- Margaret Baldridge, D.M.A., Eastman School of Music, 1994
- Anne Basinski, M.M. Indiana University, 1989
- Lance R. Boyd, M.F.A., University of Minnesota, 1968
- Fern Glass, M.M., Yale University, 1978
- Steven Hesla, M.M., University of Illinois, 1972
- Stephen Kalm, D.M.A., The City University of New York, 2000 (Dean)
- Robert LedBetter, D.M.A., University of North Texas, 1993
- Maxine Ramey, M.M., Michigan State University, 1981(Director)
- Margaret Schuberg, M.M., The University of Montana, 1980
- Patrick Williams, M.A., Eastern Michigan University, 1973

Associate Professors

- Mary Jane Belz, Ph.D., University of Minnesota, 1994
- David Cody, D.M., Indiana University, 2000
- Gary Funk, D.M.A., Arizona State University, 1982
- Christopher Hahn, D.M.A., University of Oklahoma, 2005
- Luis Millan, D.M.A., Michigan State University, 1997
- Charles Nichols, Ph.D., Stanford University, 2003

Assistant Professors

- Jennifer Gookin Cavanaugh, D.M.A., University of Washington, 2002
- Kevin Griggs, D.A., University of Northern Colorado, 2004
- Kimberly James, D.M., Indiana University, 2006
- James Randall, Ph.D., University of Illinois, 2004
- James Smart, M.M., Arizona State University, 2003

Adjunct Assistant Professors

- Jeffrey Brandt, M.M., University of Montana, 2004
- Nancy Cooper, D.M.A., Eastman School of Music, 1983
- Johan Eriksson, M.M., Northern Illinois University, 2003
- David Morgenroth, M.M., University of North Texas, 1998

Instructors

- Don Beller, M.M., VanderCook College of Music, 1975
- Roger Logan, B.M., University of Idaho, 1976

Emeritus Professors

- Thomas Cook, D.A., University of Northern Colorado
- Gerald H. Doty, Ed.D., Indiana University
- Esther England, B.A., The University of Montana
- William Manning, M.M., Drake University
- Joseph Mussulman, Ph.D., Syracuse University
- Florence Reynolds, D.M.A., Eastman School of Music

- Donald W. Simmons, Ed.D., University of Illinois

Davidson Honors College

- Curriculum
- Assessment of Personal and Academic Goals
- Admission
- Courses
- Faculty

James McKusick, Dean

The Davidson Honors College is a campus-wide association of faculty and students united by a common concern for academic and personal excellence. Its mission is to foster intellectual and civic values, and to support the best possible teaching and learning circumstances for participating faculty and students.

The College offers an academic and social home to talented and motivated students as they pursue their undergraduate education. Students from all major areas in the College of Arts and Sciences and the professional schools are welcome, as well as students who are undecided about a major. Honors is not a major in itself, but an enhancement to General Education in the liberal arts and sciences as well as to virtually all undergraduate majors on campus.

The Honors College building, at the center of the campus, provides a large student lounge, study rooms, classrooms and a computer center for student use. The Honors Students' Association plans and conducts a variety of social and academic activities as well as community service projects throughout the year. Special Honors dormitory floors and living units are available.

The Davidson Honors College also sponsors The University of Montana Office for Civic Engagement, an office that coordinates student service activities in the community and beyond, and supports the integration of community service experience into the academic curriculum.

Curriculum

In accordance with our mission, the DHC is committed to offering students the additional resources, challenges, and encouragement to be active and collaborative learners. DHC students are expected to:

- -be intellectually curious;
- -develop research and life-long learning skills and habits;
- -increase their abilities to write and speak effectively;

- -learn skills to succeed and engage in cooperative and collaborative learning;
- -develop skills and habits of community and public service.

Honors students are expected to pursue these student learning outcomes inside the classroom and out, in their work and their recreation, in volunteer service, membership in clubs and organizations, participation in campus and civic governance, in independent study, pursuit of their hobbies and interests, and in formal course work.

Honors courses are limited in enrollment to 20 students and usually are conducted in a discussion or seminar format, emphasizing critical thinking, the development of written and oral communication skills, direct contact with the faculty, and use of original texts or "hands-on," participatory experience. These courses are taught by outstanding faculty selected according to their department's standards of excellence. Course offerings vary somewhat and represent many academic departments and subject areas. Honors courses typically fulfill General Education and many common major requirements.

Some Honors courses are offered as a part of Freshman Interest Groups. In these groupings, a cohort of students enrolls for the same two or three courses in a given semester. Each class meets separately with its own instructor, but the same students are in all classes. Frequently in contact with one another and dealing with the same issues daily, these students tend to have a more intense learning experience than those in individual classes.

At the junior and senior level students are offered a selection of Honors seminars. These seminars are open to students from all disciplines. The aim of these seminars is to assist students in applying different methods of inquiry and research, in using the insights of various disciplines, in integrating the students' knowledge, and in developing well-informed personal stances toward the material and issues studied.

In their senior year, students complete an Honors thesis or research project, assuming responsibility, together with a faculty mentor, for an original scholarly research or creative project. This project may coincide with a departmental requirement, and is intended to prepare students to fulfill roles of intellectual, moral, and cultural leadership as they realize their places in society.

Assessment of Personal and Academic Goals

A college education invites students to formulate goals and reflect on their progress toward attaining them. Davidson Honors College students are responsible for evaluating their aims and attainments from year to year in collaboration with an advisor. Entering students are asked to assess their abilities and resources and begin to formulate interests and aims in light of the student learning outcomes mentioned previously.

Requirements

Davidson Honors College students are required to complete a minimum of seven Honors courses, including HC 121L and a senior Honors research project (which may be counted as one Honors course). HC 120, Introduction to Honors, also is required of all first-year students. As this is a one-credit course, it does not count toward the seven Honors courses required to graduate. Details are available in the Davidson Honors College office or on the DHC web site at www.umt.edu/dhc.

It also is recommended that all students include in their curriculum at least one course or independent study project which includes an experience of volunteer community service or study abroad.

To maintain good standing in the Davidson Honors College, students must take at least one Honors course per year and maintain an overall cumulative grade point average of 3.0 or above. Academic progress is reviewed each semester. Those whose grades are below the 3.0 standard are given an academic warning. A student whose cumulative grade point average falls below 3.0 is placed on academic probation and remains in this status until the cumulative grade point average rises to 3.0 or higher. Suspension from the Honors College occurs when the term grade point average of a student on probation is below 3.0. A suspended student may be reinstated when the cumulative grade point average rises to 3.0 or higher.

Graduation through the Davidson Honors College requires a cumulative grade point average of 3.0 or higher, and 3.4 in the major field. Upon successful completion of the requirements, students will receive their bachelor degrees as "University Scholars" in their respective majors and have this distinction noted on their diplomas. Graduation through the Davidson Honors College is not connected with the distinctions "with honors" and "with high honors" bestowed on the recommendation of major departments according to certain grade point averages and/or on the basis of exams or other means of assessment in the senior year.

Scholarships

The Davidson Honors College administers the Presidential Leadership Scholarships for incoming freshmen, and several other scholarship programs for currently enrolled students. For further information about these scholarship programs, contact the Honors College. Honors students and those transferring from other institutions are eligible for the general scholarship program. For further information, contact the Financial Aid Office. The Honors College also coordinates University of Montana participation in the National Merit Scholarship program. Four-year awards are available to National Merit finalists who have indicated UM as their first choice for attending college, as well as to semi-finalists. Interested students should contact the Honors College for details as soon as they know their status in the competition.

Admission to the DHC

Students applying to the Davidson Honors College should show evidence of academic talent and motivation. Generally, a minimum high school GPA of 3.5 is expected, as well as an ACT score of 27 or higher, or SAT combined score of 1800. These criteria are not absolute and highly motivated students are encouraged to apply.

Applications particularly are welcomed from older or non-traditional students and students from varied racial and ethnic backgrounds. College transfer students with a record of strong academic performance (GPA of 3.5 or higher) also are welcome to apply. *The Davidson Honors College Application for Admission* must be postmarked by December 31. Note that all applicants to the Davidson Honors College also must complete a separate application for admission to The University of Montana-Missoula.

Presidential Leadership Scholarships

The Presidential Leadership Scholarships are The University of Montana's premier academic scholarships, recognizing outstanding talent, academic performance, leadership, and contribution to the community. These awards are renewable for four years, subject to satisfactory performance by the student. Each scholarship includes a full or partial tuition waiver, the value of which varies according to the amount of tuition each year.

Eligible candidates for the Presidential Leadership Scholarship must be recent high school graduates who have not previously enrolled as a regular college or university student. Recent finalists for the Presidential Leadership Scholarship posted an average of 3.93 GPA, SAT combined score of 2120, or ACT composite score of 32.

All Davidson Honors College applications for admission received by December 31 of each year will be considered for the Presidential Leadership Scholarship.

Contact:
The Davidson Honors College
The University of Montana
Missoula, MT 59812
Phone: (406) 243-2541
e-mail: dhc@mso.umt.edu
web site: www.umt.edu/dhc

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Honors College (HC)

Note: All HC courses require consent of the Honors College unless otherwise noted.

U 120 Introduction to Honors 1 cr. Offered autumn. Interdisciplinary offerings by various faculty. Orientation to practical and theoretical issues facing students entering college.

U 121L Ways of Knowing 3 cr. Offered autumn and spring. A critical assessment of contrasting epistemological stances expressed in various views of God, nature and the self.

U 194 Seminar Variable cr. (R-6)

U 195 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 196 Independent Study Variable cr. (R-6) Prereq., consent of instr.

U 198 Internship Variable cr. Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 202 Introduction to Student Leadership 3 cr. Offered spring. This service-learning course provides students with a broad overview of leadership development through engagement with campus and community organizations. Students will examine a variety of leadership models, analyze their own capacity for ethical leadership, and develop a personal leadership philosophy.

U 295 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 298 Internship Variable cr. (R-6) Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 320E Research Portfolio Seminar 2 cr. Offered autumn and spring. Designed to assist undergraduate students with their independent

research projects. This seminar enables students conducting research in separate disciplines to apply the intellectual strategies and to explore the ethical concerns common to research in most disciplines.

U 395 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 396 Independent Study Variable cr. (R-6) Offered intermittently. Prereq., consent of instr.

U 398 Internship Variable cr. (R-6) Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 495 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

U 496 Independent Study Variable cr. (R-3) Prereq., consent of instr.

U 498 Internship Variable cr. (R-6) Prereq., consent of instr. Practical application of classroom learning during placements off campus. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 499 Honors Thesis/Project Variable cr. (R-9) Prereq., consent of thesis/project director and dean of Honors College.

Faculty

Professor

- **James McKusick, Ph.D, Yale University, 1984 (Dean)**

Graduate School

Perry Brown, Dean

The College of Arts and Sciences and the professional schools offer graduate study at both the masters and doctoral level. Admission and graduation for these graduate programs are administered by the Graduate School. Information on specific programs should be directed to the appropriate college or school. Please refer to the graduate school website for degree programs offered http://life.umt.edu/grad.

Intercultural Youth and Family Development

Lynne Sanford Koester (Professor of Psychology), Director

This master's degree program is designed for students who wish to engage in culturally-relevant volunteer work or paid employment in the realm of child and family assistance. It is affiliated with the United States Peace Corps as a partner school for their master's international program. Requirements include one year of full-time instruction at UM, a significant period of time engaging in internship work in an applied intercultural setting, and a final professional paper or thesis. Internships will typically be 1-2 years and will involve work in a culture other than one's own. Students participating in this program are expected to gain the following background and competencies:

- important interculturally-informed helping skills for working with youth, women, families and communities in culture other than their own
- a solid background in issues, concerns, and critiques regarding assistance and interventions across culture, both historically and currently
- opportunity to pursue and participate in a significant field experience, working with an established helping agency in another culture or country.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Intercultural Youth and Family Development (IYFD)

G 501 Intercultural Aspects of Human Development I 3 cr. Offered autumn. Explorations of child rearing practices, parenting beliefs, and cultural variations in infancy and early child development.

G 502 Intercultural Aspects of Human Development II 3 cr. Offered spring. Explorations of cultural variations in later childhood, adolescence and adulthood, with particular focus on issues such as multicultural adoption, identity, and the role of poverty.

G 510 Applied Intercultural Skills Development 2 cr. Offered autumn. Focus on applied skills in two areas: crosscultural negotiation and

conflict management; program development and grant writing.

G 520 Critical Thinking 3 cr. Exploration of psychological, political, spiritual, ethical, and practical dimensions of offering assistance cross-culturally. This course includes discussion of ethical and personal issues related to intercultural work, gender and development, trauma, program evaluation, etc.

G 595 Special Topics 2-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study 1-6 cr. (R-6) Offered every term. Directed readings and other individualized study topics guided by faculty.

G 598 Internship 1-6 cr. (R-6) Offered every term. Introduction to service learning in applied settings, usually local.

G 599 Professional Project 1-2 cr. (R-2) Offered every term. Final Master's project related to internship; may be presented as a grant proposal, policy analysis, or portfolio.

G 698 Intercultural Internship 1-4 cr. (R-4) Offered every term. Supervised intercultural experience through Peace Corps, VISTA, or other organization approved by program faculty.

G 699 Thesis 1-2 cr. (R-2) Offered every term. Final master's thesis based on research related to internship placement.

Faculty

- Lynne Sanford Koester, Ph.D., The University of Wisconsin, 1976
- Otto Koester, M.A., The University of Wisconsin, 1974
- Nancy Seldin, Ed.D., The University of Montana, 1992, MPH, 1973
- Rita Sommers-Flanagan, Ph.D., The University of Montana, 1989.

Interdisciplinary Program

The following courses are designed for doctoral students in the Individual Interdisciplinary Program who may not find appropriate course numbers available from an existing doctoral discipline.

Courses

U= for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Graduate Studies-Interdisciplinary (GS)

G 696 Independent Study Variable cr. (R-8) Offered every term. Prereq., consent of instr. Original investigations of problems not part of dissertation.

G 697 Advanced Research Variable cr. (R-9) Offered every term. Prereq., consent of instr. Independent research projects other than dissertation.

G 699 Dissertation Variable cr. (R-18) Offered every term. Prereq., consent of instr. Doctoral dissertation research activities.

School of Journalism

- Special Degree Requirements
- Courses
- Faculty

Peggy Kuhr, Dean

Carol Van Valkenburg, Chair, Department of Print Journalism

Ray Ekness, Chair, Department of Radio-Television

Courses in the School of Journalism examine the news media emphasizing their history, privileges and responsibilities and provide instruction in skills required for careers with newspapers, radio and television stations, magazines, web sites, print and online news services and related agencies. The School of Journalism offers Bachelor of Arts and Master of Arts degrees in journalism and radio-television. Students select options in print, photojournalism, broadcast news or broadcast production.

A quality education in journalism is built on a strong liberal arts foundation. Therefore, at the undergraduate level, at least 80 of the 120 credits required for graduation must be outside the School of Journalism and 65 of those credits must be in the College of Arts and Sciences or be General Education courses in the professional schools or colleges.

For further information about the master's degree program, contact the Director of Graduate Studies, School of Journalism, The University of Montana, Missoula, MT 59812, or (406)243-2227.

Pre-Professional Program

In the first two years of study students are enrolled in pre-journalism or pre-radio-television and take courses primarily in the liberal arts and sciences. Journalism and radio-television courses in the pre-professional curriculum may be taken at The University of Montana-Missoula or at another school with a program accredited by the Accrediting Council for Education in Journalism and Mass Communications. All non-journalism courses in the curriculum may be completed at any college or university.

Students in the first two years of study may enter the preprofessional program during any semester. However, requirements in the pre-professional curriculum should be completed by the end of the second year of study to enable students to apply for admission to the professional program during the spring of the sophomore year.

Students should have completed at least 45 credits before applying for the professional program. At the time of application, students should have either completed all courses listed in the pre-professional curriculum or be taking the courses needed to fulfill requirements. A grade point average of 2.5 or better is required of applicants.

Professional Program

Students interested in print, photojournalism or broadcast news apply for admission to the two-year professional programs in journalism. Those interested in broadcast production apply for the radio-television professional program. Applications are accepted only in spring and granted only for admission in autumn semester. Deadline for applications is March 1. The admissions process is designed to admit the best overall class into the professional program.

Completed applications are evaluated by the School of Journalism Admissions Committee and acceptances are made by the faculty and dean based on the committee's recommendations. The primary admissions criteria are the students' grade point averages, both overall and in the pre-professional program, the student's progress in completing the pre-professional curriculum, and an evaluation of work submitted by the student. Successful applicants will have demonstrated, among other qualities, promise and professional aptitude through the quality of their course work and their overall performance in the pre-professional program, and will have demonstrated an interest in pursuing a career in journalism or broadcast production. Students with deficiencies in these requirements may on occasion be admitted provisionally. Once deficiencies are removed from the students' record they will be given full admission status. The curriculum of the journalism professional programs is sequential. Therefore, students will enter the professional programs in the autumn semester only.

Applications for admission to the professional programs may be obtained from the Office of the Dean, School of Journalism. Applications must be received no later than March 1 proceeding the autumn semester for which admission is requested. A $15 nonrefundable application fee must accompany the application. Transcripts of all academic courses taken must be forwarded directly to the School of Journalism. Admission for one academic year cannot be deferred to another academic year. Students transferring from other ACEJMC-accredited programs in journalism or radio-television may be admitted on a space available basis. Transfer credit for pre-professional and professional courses taken at other institutions is accepted only for those courses that are deemed equivalent and in which a letter grade of C- or better is obtained.

Academic Progression

The general University academic standing requirements are listed separately in this catalog. See index.

Admission to the professional program requires a cumulative grade average of 2.5. Students enrolled in the professional journalism program must maintain satisfactory academic progress. Students who have been admitted and whose grade average subsequently falls below a 2.5 must meet with their advisors to discuss their progress before classes resume the following semester. In addition, students in the professional program who do not earn a grade of C- or better in required journalism courses in the fall semester of the junior year will be suspended from taking further professional program courses and must reapply in spring semester for admission the following fall. Students in the professional programs who have a cumulative or professional grade point average less than 2.0 will be placed on academic probation. Students on academic probation must achieve at least a 2.0 grade average for the semester and raise their overall grade average or face suspension from the University. Because the professional programs are intensive, employment beyond minimal part-time is not recommended.

Students dismissed from the program for substandard performance will not be readmitted, except in cases where substantiation is made to the faculty, by written petition, that the substandard performance was the result of circumstances that no longer exist, or that the student has demonstrated the capability and desire to perform satisfactory work since his or her dismissal from the program.

Students leaving the program for any reason, whether in good standing or on academic suspension, must reapply for admission.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Pre-Professional Curriculum

The following courses must be completed prior to admission to any of the School of Journalism professional programs. Students who are unsuccessful in gaining admission to the professional programs should realize that completion of the pre-professional program fulfills a significant portion of the University General Education Requirement.

Core requirements for all pre-professional students in the School of Journalism:

- JOUR 100-Introduction to Mass Media
- JOUR 270 Reporting or JOUR 280 Reporting for Broadcast
- WRIT 101 (ENEX 101) College Writing I
- One mathematics course numbered greater than 100 (if fulfilling this requirement with transfer work, course must satisfy UM's General Education math requirement.)
- HSTA 101H or 102H (HIST 151H, 152H), or an equivalent transfer course in American history, plus a second history course taught in the history department.
- At least one University general education course of three credits or more in each of the following subjects: economics, political science, and natural science.
- One humanities course of three credits or more from the following list: LS 151L, LS152L, PHIL 200E, PHIL 201E, PHIL 251, PHIL 253, LIT 110L (ENLT 120L), LIT 120L (ENLT 121L), LIT 210L (ENLT 224L), LIT 211L (ENLT 225L), LIT 234 (ENLT 222L), LIT 235 (ENLT 223L), HC 121.
  Transfer credit to meet this humanities requirement must be approved by the journalism or R-TV chair.
  In addition, before graduation, students must complete two semesters of a modern foreign language.
  In addition to the core, students seeking admission to the photojournalism professional program must also complete JOUR 227-Photojournalism.
  In addition to the core, students seeking admission to the broadcast journalism radio-television programs must also complete:
- R-TV 150-Introduction to Radio Production
- R-TV 151-Introduction to Radio-Television Production
- COMM 111A-Public Speaking

Professional Programs

Students in the professional programs must earn a C- or better grade in all journalism or R-TV required skills courses or they must repeat the course.

Upon admission to the professional program, students majoring in journalism with a print option will take the following courses:

First Year:
Autumn semester:

- JOUR 331-Public Affairs Reporting
- JOUR 380-News Editing I
- JOUR 488-Preparing for an Internship

Spring semester:

- JOUR 367-Law of Mass Communication
- JOUR 475-Print and Web Editing and Design

Second Year:
Autumn semester:

- JOUR 481-Senior Seminar
- JOUR 333-Magazine Freelance Writing or
- JOUR 415-Feature Writing

All students must also complete JOUR 490, a one credit supervised internship. This internship may not be taken until after the successful completion of JOUR 331.
Also, students must successfully complete a 3-credit visual literacy requirement. This may be met by any of the following courses:

- R-TV 151-Introduction to Television Production
- JOUR 227-Photojournalism
- JOUR 475-Print and Web Editing and Design

Students must complete electives that will bring the total number of credits before graduation in journalism or radio-television to at least 35.
Students majoring in journalism with a photojournalism option must complete:

First Year:
Autumn semester:

- JOUR 328-Advanced Photojournalism
- JOUR 380-News Editing I
- JOUR 488-Preparing for an Internship

Spring semester:

- JOUR 367-Law of Mass Communication
- JOUR 475-Print and Web Editing and Design
- JOUR 417-Multimedia Projects

Second Year:
Autumn semester:

- JOUR 418-Digital Studio and Location Lighting
- JOUR 481-Senior Seminar

Before graduation, students must also complete JOUR 490, a one-credit supervised internship. Students must complete electives that bring the total number of journalism credits to at least 35. Electives include, JOUR 420-Native News (offered spring) and Jour 429-Documentary Photojournalism (offered spring).

Students majoring in journalism with a broadcast option must complete:

First Year:
Autumn semester:

- R-TV 360-Advanced Broadcast Reporting
- R-TV 489-Preparing for an Internship

Spring semester:

- R-TV 361-Newscast Reporting and Producing
- JOUR 367-Law of Mass Communication

Second Year:
Autumn semester:

- R-TV 460-Broadcast Newsroom-Editorial
- R-TV 494-Broadcast Senior Seminar

Students also must complete electives that will bring the total number of credits before graduation in journalism or radio-television to at least 35.

Students majoring in Radio-Television must complete:

First Year:
Autumn semester:

- R-TV 350-Television Directing and Production
- R-TV 489-Preparing for an Internship

Spring semester:

- R-TV 351-Advanced Television Directing and Production
- JOUR 367-Law of Mass Communication

Second Year:
Autumn semester:

- R-TV 450-Broadcast Newsroom-Production
- R-TV 494-Broadcast Senior Seminar

If students complete more than 40 credits in journalism or radio-television they must take additional credits outside of the School of Journalism to meet the graduation requirement of at least 80 credits outside the school. All journalism and radio-television majors must acquire practical experience through pre-approved internships (JOUR 490 or R-TV 490) or other employment approved by the faculty.

All journalism and radio-television majors must meet the Upper-division Writing Expectation by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures section of this catalog. See index.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Journalism (JOUR)

U 100 Introduction to Mass Media 3 cr. Offered autumn and spring. A survey of the history, development and current status of the mass media in society, including newspapers, magazines, radio, television, books, movies, recordings and the World Wide Web. Includes ethical, political, financial and other issues that face today's mass media industry.

U 165 Current Events/Honors 2 cr. Offered autumn and spring. Survey of world, national and local news intended to make students familiar with the context and vocabulary necessary to understand the news, what makes it, and the implications that stem from it.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 227 Digital Photojournalism 3 cr. Offered autumn and spring. This class focuses on the basics of digital photography including the camera, lenses and workflow using Adobe Photoshop and Bridge. Students will learn how to see and capture light, composition, depth of field, exposure and metering. There will be weekly assignments and a final project. Students will have a weekly lab in which they will learn more about their equipment and Photoshop.

U 270 Reporting 3 cr. Offered every term. Prereq., JOUR 100. Fundamentals of reporting and writing news for print and broadcast media.

U 285 Sports Journalism 3 cr. Offered intermittently. Prereq., JOUR 270. Study and practice of sports journalism in print and broadcast, including its history and its finest examples.

U 295 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 328 Advanced Photojournalism 3 cr. Offered autumn. Prereq., JOUR 227. Advanced black and white and color photography. Students shoot news, features, sports, illustration and picture stories.

U 331 Public Affairs Reporting 3 cr. Offered autumn. Prereq., JOUR 270. Study and practice of reporting public issues with emphases on news sources, interpretive writing and the coverage of local, state and federal governments.

UG 333 Magazine Freelance Writing 3 cr. Offered autumn. Prereq., JOUR 331 or consent of instr. The techniques of reporting, writing and selling articles to regional and national magazines.

U 367 Law of Mass Communications 3 cr. Offered spring. Prereq., JOUR 270 or consent of instr. Overview of issues related to journalism and the law. Exploration of libel, privacy, prior restraints, access and other First Amendment questions along with ethical problems peculiar to media news gathering.

UG 375 Kaimin Reporting 1-3 cr. (R-3) Offered autumn and spring. Prereq., JOUR 331. Reporting for the Montana Kaimin.

UG 380 News Editing I 3 cr. Offered autumn. Prereq., JOUR 270. Fundamentals of editing and headline writing for the print media.

UG 389 Literature of Journalism 3 cr. Offered intermittently. Study of literary journalism focusing on fiction and nonfiction by American journalists.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Advanced Journalism Problems Variable cr. (R-6) Offered every term. Prereq., consent of the dean. Independent study.

UG 400 Online News 1-2 cr. Offered autumn and spring. Prereq., JOUR 270, 570 or 227, and consent of instr. Practical experience in reporting, writing and photographing news stories to appear on the School of Journalism Web page.

UG 412 Media and Cultures 2 cr. Offered autumn. Critical examination of the U.S. media's reporting on the growing multi-cultural movement that is transforming the country and of newsroom diversity issues related to the employment of journalists of color and women. Examination of the risks of error and insult--such as stereotyping and conveying and strengthening misconceptions--inherent in writing about minority cultures.

UG 415 Feature Writing 3 cr. Offered spring. Prereq., JOUR 331 or JOUR 570. Classroom instruction and practical experience in applying

feature-writing techniques to the coverage of news, entertainment and sports for print and electronic media.

UG 417 Multimedia Projects 3 cr.3 cr. Offered spring. Prereq., Jour 328 or consent of instr. Focus on creative and technical challenges involved in multimedia storytelling. Instruction in audio, video, reporting software, editing and photography skills necessary to produce compelling multimedia projects. Students will work on three in-depth multimedia projects throughout the semester.

U 418 Digital Studio and Location Lighting 3cr. Offered autumn. Prereq., JOUR 328 or consent of instr. A workshop-style class that centers on the technical aspects of digital still and video camera lighting. Instruction in studio and on-location lighting and the use of portable strobes. Weekly assignments will include editorial portraiture, fashion and food illustrations, and sports. Students will also learn business practices for freelance photography. Students must provide a professional still digital SLR with lenses and portable strobe.

U 420 Native News Honors Project Variable cr. (R-6) Offered spring. Prereq., consent of instr. Researching, photographing and designing stories about Montana's Native American community. Photojournalism students travel with reporters to Montana's seven Indian reservations to document in depth stories on a single topic.

U 421 Reporting for Native News Honors Project Variable cr. (R-6) Offered spring. Prereq., consent of instr. Researching, reporting and editing stories about Montana's Native American community. Reporters travel to Montana's seven Indian reservations to investigate in depth a single story topic. Editors coach reporters and edit their stories. The stories appear in a publication distributed throughout the state and nation.

UG 429 Documentary Photojournalism 3 cr. Offered spring. Prereq., JOUR 328 or consent of instr. Production of an in-depth documentary project involving a social issue with intent to educate or implement change. Students write, shoot and design final project in book form.

UG 430 Community News Service Variable cr. (R-6) Offered autumn and spring of legislative years. Prereq., JOUR 331, 380, consent of instr. Writing and editing articles for computer bulletin-board news service serving Montana's community newspapers.

UG 440 Montana Journalism Review Variable cr. (R-6) Offered spring. Prereq., consent of instr. Students assist writing, editing, design and overall production and distribution of the Montana Journalism Review, a publication of the School of Journalism.

UG 471 Investigations 3 cr. Offered spring. Prereq., JOUR 331 for print students, R-TV 361 for broadcast students. Introduction to methods and ethics of investigative reporting, emphasizing computer-assisted research and analysis of public records and databases.

UG 475 Print and Web Editing and Design 3 cr. Prereq., JOUR 380 or consent of instr. Introduction to basic design principles, typography, color theory and usage, headline and caption writing. Discussion of the newest research on how readers use print and online publications. Students will design newsletter, brochure, newspaper, magazine and Web pages, plus other publications.

U 477 Rural News Network 1-6 cr. (R-6) Offered autumn and spring. Prereq., professional program standing and consent of instructor. Students will visit rural towns in Montana that have lost their newspapers or never had one and will create an online newspaper. Students write, photograph and record stories for use on the site. Students work with local citizens and co-author pieces. Students and faculty train townspeople to become citizen journalists to keep the news site on going.

UG 481 Senior Seminar 3 cr. Offered autumn. Prereq., senior standing in journalism or consent of instr. Ideas, individuals and movements shaping contemporary society and which constitute the background for today's news.

UG 488 Preparing for an Internship 1 cr. Offered autumn. Prereq., admission to the journalism professional program or the journalism graduate program. Acquaints students with internship requirements including application procedures, such as building a resume and learning what internships-local through international-are available.

UG 489 Opinion Writing 3 cr. Offered intermittently. Prereq., JOUR 331 or consent of instr. Practice in writing editorials, columns, op-ed articles, and reviews. Study of the role of editorial pages.

U 490 Supervised Internship 1-2 cr. (R-2) Offered every term. Prereq., consent of instr.; for print students JOUR 331; for photojournalism students JOUR 328. Practical experience working for newspapers, magazines or other approved businesses, agencies or organizations.

UG 494 Pollner Seminar 3 cr.(R-6) Offered autumn. Prereq., consent of instr. or print department chair. Seminar on a topic selected by the T. Anthony Pollner Distinguished Professor. Topics will range from journalism history, ethics, practices and performance to current issues in the news media.

UG 495 Special Topics 1-9 cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 501 Project/Thesis Seminar 2 cr. Offered spring. Introduction to appropriate research methods and presentation techniques for professional projects and theses in journalism.

G 505 Journalism and Society Seminar 3 cr. Offered autumn. Prereq., graduate standing. Discussion and research on current journalism issues. Study of traditional and online research methodology.

G 527 Color and Lighting Techniques 3 cr. Offered autumn and spring. Prereq., graduate standing and consent of instr. Technical aspects of photography, electronic printing, color techniques, lighting, filters. In-depth color photo essay.

G 551 Graduate Newscast Production 3 cr. Offered spring. Prereq., JOUR 560 or consent of instr. Intensive instruction and practice in reporting, writing, producing, directing and delivering television newscasts. Work on a special program for Montana PBS in tandem with students in R-TV 351, 361 and 551.

G 567 Studies in Press and Broadcast Law 3 cr. Offered spring. Prereq., graduate standing. Examination and discussion of state and federal court cases affecting the mass media, with emphasis on First Amendment issues.

G 570 Reporting 3 cr. Offered autumn. Prereq., graduate standing. Principles of news gathering through records, documents, meetings, and observation of events, combined with interviewing. Writing news and news feature accounts for broadcast and print media. Perspectives on reporting standards and practices.

G 580 News Editing 3 cr. Offered autumn. Prereq., JOUR 570 or consent of instr. Fundamentals of copy editing and story editing for the print news media. In addition, students perform deadline editing on actual news stories for publication.

G 585 Community News Service 1-3 cr. (R-3) Offered autumn and spring. Prereq., consent of instr. Students working under faculty supervision write articles of statewide interest for publication in a network of Montana newspapers.

G 594 Seminar 1-9 cr. (R-9) Offered intermittently.

G 595 Special Topics Variable cr. (R-8) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 597 Methods of Journalism Research 3 cr. Prereq., consent of the dean.

G 599 Professional Project Variable cr. (R-6) Offered every term. Planning, research and execution of a major project in print, photographic or broadcast journalism.

G 620 Graduate Honors: Covering Native American Issues 3 cr. Offered spring. Prereq., consent of instr. Researching, writing, photographing and/or editing in-depth special reports on issues that affect the Indians who reside within Montana's borders.

G 640 Montana Journalism Review 1-3 cr. (R-6) Offered spring. Prereq., consent of instr. Intensive laboratory experience in all phases of magazine publication, including writing, editing, layout, design, production and distribution of Montana Journalism Review, an annual publication of the School of Journalism.

G 650 Graduate Broadcast Newsroom-Editorial 3 cr. (R-6) Prereq., JOUR 550, 551 or consent of instr. Students direct, photograph and edit a daily Newsbrief report for Montana PBS, and a weekly UMNews program for commercial stations, in tandem with student in R-TV 460, R-TV 450 and 650.

G 670 Covering the Environment 3 cr. Offered intermittently. Prereq., JOUR 570 or consent of instr. Practical opportunities to research and report on a variety of public health and natural resource issues, combined with a critical examination of how news media cover these issues.

G 690 Supervised Internship 1-2 cr. (R-2) Offered every term. Prereq., JOUR 571. Practical experience working for newspapers, magazines, wire services or other approved businesses, agencies or organizations.

G 696 Advanced Problems Variable cr. (R-6) Offered every term. Prereq., consent of the dean. Independent study.

G 697 Research in Journalism Variable cr. (R-9) Offered every term. Prereq., consent of the dean.

G 699 Thesis Variable cr. (R-6) Offered every term. Research and writing of master's thesis.

Radio-Television (R-TV)

U 150 Introduction to Radio Production 3 cr. Offered autumn and spring. Prereq., JOUR 100 or consent of instr. Introduction to the fundamentals of audio and radio production, including announcing, use of microphones, recording equipment, editing techniques and programming.

U 151 Introduction to Television Production 3 cr. Offered autumn and spring. Prereq., JOUR 100 or consent of instr. Use of cameras, microphones, and lighting gear for field production. Use of mixer and videotape editors for post production.

U 280 Reporting for Broadcast 3 cr. Offered autumn and spring. Prereq., JOUR 100. Fundamentals of reporting and writing news for broadcast including use of digital audio recording and editing equipment.

U 295 Special Topics Variable cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time

offerings of current topics.

U 350 Television Directing and Production 3 cr. Prereq., RTV 151. Production and direction of studio and remote television programs.

U 351 Advanced Television Directing and Production 3 cr. Offered spring. Prereq., R-TV 350. Advanced production and direction techniques in both the studio and field. Work with students in R-TV 361 on special programs for Montana PBS.

U 360 Advanced Broadcast Reporting 3 cr. Offered autumn. Prereq., R-TV 280, R-TV 151. Radio and television reporting including writing, interviewing, news gathering and preparation of radio and television news stories.

U 361 Newscast Reporting and Producing 3 cr. Offered spring. Prereq., R-TV 360. Intensive instruction and practice in reporting, writing, producing and delivery of television newscasts. Work with students in R-TV 351 on special programs for Montana PBS.

U 370 KBGA Reporting 1 cr. (R-3) Offered spring. Students report, write and produce stories for KBGA, the student radio station, under supervision of KBGA News Director and a faculty member.

U 395 Special Topics Variable cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 396 Independent Study in Broadcasting Variable cr. (R-6) Offered every term. Prereq., consent of instr. and broadcast faculty. Independent study in broadcasting issues of interest.

UG 401 Broadcast Programming 3 cr. Offered autumn odd-numbered years. An examination of formats, distribution systems, ratings, programming strategies and the business aspects of programming in the broadcasting and cable television industries.

UG 403 Sports and Media 3 cr. Offered autumn even-numbered years. An examination of the historic marriage between the mass media and sports on both collegiate and professional levels.

UG 410 Legislative Reporting 1-6 cr. Offered spring semester during legislative years. Prereq., JOUR 430. Students produce daily radio news reports and newscasts from the Montana Legislature in Helena that are distributed to Montana radio and television stations for broadcast.

UG 420 Radio Deliberation Project 1-2 cr. (R-4) Offered every term. Prereq., consent of instr. Students will be responsible for producing The Footbridge Forum, a radio program airing on KBGA College Radio. Students learn the deliberative process, formulate program content, select guests, conduct research, promote the programs and are responsible for technical production of the shows.

UG 440 Television News Magazine Production 3 cr. Offered autumn. Prereq., R-TV 351 or 361 or consent of instr. Students produce, report, write, photograph and edit segments for a television news magazine-style program.

U 450 Broadcast Newsroom-Production 3 cr. Offered autumn. Prereq., R-TV 351 or consent of instr. Students direct, photograph and edit a daily Newsbrief report, and a weekly UMNews program for commercial stations, in tandem with students in R-TV 460, 650.

U 460 Broadcast Newsroom-Editorial 3 cr. (R-6) Offered autumn. Prereq., R-TV 361. Students report, write, produce and deliver a daily Newsbrief report, and a weekly UMNews program for commercial stations, in tandem with students in R-TV 450, 650.

UG 480 Documentary Film: Its History and Future 3 cr. Offered autumn. Students are introduced to the vast history of documentary film, discuss ways in which documentary films are made today, and create a proposal for an original documentary film.

UG 481 Documentary-Editorial 3 cr. Offered spring. Prereq., R-TV 460 or consent of instr. Students conceive, research, report and otherwise produce a one-hour television documentary for Montana PBS, in tandem with students in RTV 482.

UG 482 Documentary-Production 3 cr. (R-6) Offered spring. Prereq., R-TV 450 or consent of instr. Students conceive, research, photograph, edit and otherwise produce a one-hour television documentary for Montana PBS, in tandem with students of JOUR 481.

UG 485 Advanced Television News Producing 3 cr. Offered spring. Prereq., R-TV 460 or 461. Techniques and strategies of daily production of a full-length newscast.

U 489 Preparing for an Internship 1 cr. Offered autumn to students admitted to the professional program. Acquaints students with internship requirements, including application procedures, such as building a resume and learning what internships-local through international-are available.

UG 490 Broadcast Internship 1-4 cr. (R-4) Offered every term. Prereq., R-TV 351 or 361 and consent of instr. Required of all broadcast news and broadcast production students without requisite professional experience. Students perform the equivalent of six weeks' full-time work in a radio or television station or similar broadcast news or broadcast production enterprise. Internship hosts are approved by the faculty.

UG 494 Senior Seminar 3 cr. Offered autumn. Prereq., senior standing in broadcast news or broadcast production option or consent of instr.

Exploration of the current and historic broadcasting in American society, including current business, editorial, production and ethical issues in the industry. Each student completes a major research paper as part of the course.

G 550 Graduate Television Production and Direction 3 cr. Offered autumn. Prereq., consent of instr. Production and direction of studio and remote television programs. G 560 Graduate Advanced Broadcast Reporting 3 cr. Offered autumn. Prereq., R-TV 280 or JOUR 570 or consent of instr. Radio and television reporting including writing, interviewing, news gathering and preparation of radio and television news stories.

G 650 Graduate Broadcast Newsroom-Production 3 cr. Offered autumn. Students direct, photograph and edit a daily Newsbrief report, regular half-hour Montana Journal magazine programs for Montana PBS, and a weekly UMNews program for commercial stations, in tandem with students in R-TV 460 and 450.

G 681 Graduate Documentary 3 cr. Offered spring. Prereq., JOUR 650 or consent of instr. Students conceive, research, report, photograph and edit a one-hour documentary for Montana PBS in tandem with students in R-TV 481 and 482.

Faculty

Professors

Peggy Kuhr, M.A., Gonzaga University, 1993 (Dean)

Dennis L. Swibold, M.A., The University of Montana, 1991

Carol B. Van Valkenburg, M.A., The University of Montana, 1988 (Chair, Print Journalism)

Clemens P. Work, J.D., Golden Gate University School of Law, 1975

Associate Professors

Denise Dowling, M.A., Western Governor's University, 2003

Raymond Ekness, M.A., The University of Montana, 1995 (Chair, Radio-Television)

Keith Graham, M.A., University of Missouri, 1979

Henriette Lowisch, Graduate Diploma, Ludwig-Maximilians-Universitaet, Munich, 1991

Assistant Professor

Lee Banville, B.A., College of William and Mary, 1995

Raymond Fanning, M.S.T., Northwestern University, 1988; M.F.A., Brandeis University, 1981

Jeremy Lurgio, M.A., The University of Montana, 2001

Nadia White, M.S., Columbia University, 1992

Native American Professional in Residence and Reznet Project Director

Dennis McAuliffe, Jr., B.A., University of Maryland, 1976

Adjunct Professors

Printer Bowler

Jeff Hull

Courtney Lowery

William Marcus

Sally Mauk

Don Oliver

Pam Podger

John Saul

John Twiggs

Kagan Yochim

Gita Saedi Kiely

Emeritus Professors

Sharon Barrett, M.A., University of Wisconsin, 1967

Jerry E. Brown, Ph.D., Vanderbilt University, 1974

Nathaniel Blumberg, Ph.D., Oxford University, 1950

Charles E. Hood, Jr., Ph.D., Washington State University, 1980

William L. Knowles, B.A., San Jose State College, 1959

Gregory S. MacDonald, M.A., University of Michigan, 1973

Robert C. McGiffert, M.A., Ohio State University, 1965

School of Law

- Academic Year Calendar
- Required Curriculum
- Faculty

Irma S. Russell, Dean

Elaine Gagliardi, Associate Dean

The Law School is accredited by the American Bar Association and the Association of American Law Schools, and offers the degree of Juris Doctor (J.D.). Prerequisites for admission to the Law School are a baccalaureate degree and Law School Admission Test.

For detailed information concerning the Law School's admission criteria, application procedures, facilities, and official course descriptions, consult the Law School Catalog, which may be obtained by calling (406)243-6169 or visiting the website www.umt.edu/law.

The Law School's administrative regulations are contained in the Law School Student Handbook, which is on the website. The Law School conforms in most instances to the calendar established for the entire University. There are some differences, however, because the Law School operates on a different (and longer) semester system than the rest of the University.

Academic Year Calendar

http://www.umt.edu/law/students/Academic%20Calendar%202009-2010.pdf

Required Curriculum

First Year	Credits
500 Civil Procedure I	3
501 Civil Procedure II	2
502 Contracts I	3
503 Contracts II	2
504 Pretrial Advocacy I	2
505 Pretrial Advocacy II	1
506 Legal Research	2
508 Legal Analysis	1
509 Legal Writing I	3
510 Criminal Law & Proc I	2
511 Criminal Law & Proc II	3
512 Torts I	2

513 Torts II	3
Second Year	**Credits**
550 Property I	2
551 Property II	3
552 Federal Tax(may be taken third year)	3
554 Business Organizations	3
555 Professional Responsibility	3
556 Business Transactions	2
557 Trial Practice	2
558 Constitutional Law	4
560 Evidence	3
Electives (see below)	
Third Year	**Credits**
(minimum of 4 credits required)	
599 Clinical Training II	1-8
600 Clinical Training III	1-6
601 Clinical Training IV	1-6
Electives (see below)	

Elective Courses

(Elective offerings vary from year to year)

- Advanced Criminal Procedure (Law 690, 2 credits)
- Advanced Environmental Law (Law 649, 3 credits)
- Advanced Legal Research (Law 615, 2 credits)
- Advanced Legal Issues in Education (Law 686, 3 credits)
- Advanced Legislation (Law 652, 2 credits)
- Advanced Federal Indian Law (Law 617, 2 credits)
- Advanced Public Land and Resources Law (Law 619, 2 credits)
- Advanced Trial Advocacy (Law 685, 1 credit)
- Agricultural Law (Law 656, 2 credits)
- Alternative Dispute Resolution (Law 614, 3 credits)
- American Indian Natural Resources (Law 619, 2credits)
- Appellate Advocacy (Law 616, 3 credits)
- Bankruptcy (Law 621, 2 credits)
- Child Advocacy (Law 670, 2 credits)
- Client Counseling Team (Law 638, 2 credits)
- Conflict of Laws (Law 653, 2 credits)
- Consumer Transactions (Law 645, 3 credits)
- Copyright Law (Law 682, 3 credits)
- Cyber Law (Law 676, 2 credits)
- Disability Law (Law 668, 2 credits)
- Elder Law (Law 620, 3 credits)
- Employment Law (Law 622, 3 credits)
- Environmental Law (Law 650, 3 credits)
- Estate Planning (Law 659, 3 credits)
- Family Law (Law 669, 3 credits)
- Family Law Mediation (Law 672, 2 credits)
- Federal Courts (Law 671, 2 credits)
- Federal Indian Law (Law 648, 3 credits)
- First Amendment Seminar (Law 675, 2 credits)
- Gender and the Law (Law 625, 3 credits)
- Health Care Law (Law 637, 3 credits)
- Independent Study (Law 660/1, 1-2 credits)
- Insurance Law (Law 624, 3 credits)
- International Business & Trade (Law 629, 2 credits)
- Introduction to Environmental Law (Law 650, 3 credits)
- Land Use Planning (Law 687, 3 credits)
- Law & Literature (Law 607, 1 credit)
- Law & Technology (Law 693, 2 credits)
- Law Practice (Law 631, 1 credit)
- Law Reviews I, II, III, IV (Law 564/5, Law 602/3, 1-2 credits)
- Lawyers' Values (Law 630, 2 credits)

- Legal History (Law 626, 2 credits)
- Local Government (Law 646, 3 credits)
- Moot Courts (Law 666, 2 credits)
- Montana Constitutional Law (Law 618, 2 credits)
- Natural Resource Development (Law 633, 3 credits)
- Natural Resource Dispute Resolution (Law 613, 3 credits)
- Negotiations (Law 641, 2 credits)
- Negotiation Team (Law 642, 2 credits)
- Non-profit Organizations (Law 674, 2 credits)
- Patent Law (Law 627, 2 credits)
- Philosophy of Law (Law 664, 3 credits)
- Product Liability (Law 657, 2 credits)
- Public Interest Lawyering (Law 673, 3 credits)
- Public International Law (Law 634, 3 credits)
- Public Land and Resources Law (Law 654, 3 credits)
- Public Regulation of Business (Law 632, 3 credits)
- Real Estate Transactions (Law 658, 2 credits)
- Remedies (Law 628, 3 credits)
- Sales & Leases (Law 692, 3 credits)
- Secured Transactions (Law 636, 2 credits)
- Special Topics in Criminal Law (Law 667, 2 credits)
- Taxation of Business Organizations (Law 639, 4 credits)
- Taxation of Estates & Gifts (Law 655, 3 credits)
- Taxation of Property Transactions (Law 640, 2 credits)
- Trademark Law (Law 693, 2 credits)
- Tribal Courts/Tribal Law (Law 688, 3 credits)
- Tribal/State Relations (Law 694, 2 credits)
- UCC Articles 203 (Law 609, 3 credits)
- Water Law (Law 663, 2 credits)
- White Collar Crime (Law 644, 2 credits)
- Workers' Compensation (Law 662, 3 credits)

Faculty

Professors

- Bari R. Burke, J.D., University of California, Davis, 1979
- J. Martin Burke, LL.M., New York University, 1982
- Scott J. Burnham, LL.M., New York University, 1981
- William J. Corbett, LL.M., Harvard University, 1971
- Raymond Cross, J.D., Yale University, 1973
- William F. Crowley, LL.M., New York University, 1951 (Emeritus)
- E. Edwin Eck II, LL.M., Georgetown University (Dean)
- Larry M. Elison, S.J.D.,University of Michigan,1962 (Emeritus)
- Cynthia Ford, J.D., Cornell Law School, 1978
- Gregory S. Munro, J.D., University of Montana, 1975
- Robert G. Natelson, J.D., Cornell Law School, 1973
- David J. Patterson, LL.M., University of Michigan, 1966
- Fritz Snyder, J.D., Washburn School of Law, 1979 (Associate Dean)
- Robert E. Sullivan, J.D., Notre Dame, 1946 (Dean Emeritus)

Associate Professors

- Elaine Gagliardi, LL,M., New York University, 1990
- Stacey Gordon, J.D., University of Montana, 2000
- Jeffrey T. Renz, J.D., University of Montana, 1979

Assistant Professors

- Phillip Cousineau, MLS., University of Texas, 1993
- Eduardo Capulong, J.D. City University of New York Law School, 1991
- Larry Howell, J.D., M.A., The University of Montana, 1992
- Kristen Juras, J.D., University of Georgia, 1982
- Andrew King-Ries, J.D., Washington University, 1993
- Elizabeth Krunk, J.D., University of Michigan, 2001
- John W. McDonald, J.D., University of Montana, 1961
- Jeffrey T Renz, J.D.,University of Montana, 1979
- Maylinn Smith, J.D., University of Montana, 1987

- Margaret A. Tonon, J.D., University of Montana, 1974

Adjunct Faculty

- David Aronofsky, J.D., University of Texas, 1982
- Klaus Sitte, J.D., University of Montana, 1972

Maureen and Mike Mansfield Center

Terry M. Weidner, Director

The Maureen and Mike Mansfield Center was established in 1986 to pay tribute to Maureen and Mike Mansfield and to recognize their important contributions to U.S. Asian relations and public policy. The Center is an academic unit within The University of Montana and receives core funding from an endowment managed by the Maureen and Mike Mansfield Foundation. Mansfield Center faculty offer classroom instruction, conduct research, provide training for Asian and U.S. government personnel, and organize various types of conferences, all with a focus on East Asia. The Center faculty collaborate with the University's Asian Studies Program and several other campus units.

Courses

U for undergraduate credit only, UG= for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Mansfield Center (MANS)

U 195 Special Topics Variable cr.. (R-6) Offered intermittently. Prereq., consent of instr. Experimental offerings of new courses or one-time offerings of current topics.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 494 Mansfield Center Seminar Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study Variable cr. (R-6) Offered intermittently. Prereq., consent of instr.

G 595 Special Topics Variable cr. (R-12) Offered intermittently. Prereq., consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Faculty

Professors

- Terry M. Weidner, Ph.D., University of California, Davis, 1980 (Mansfield Professor of Modern Chinese Affairs)
- Philip West, Ph.D., Harvard University, 1971 (Mansfield Professor of Modern Asian Affairs)

Adjunct Professors

- Ambassador Mark Johnson, M.A., George Washington University, 1971 (Adjunct Mansfield Professor)
- Steven Levine, Ph.D., Harvard University, 1972 (Adjunct Mansfield Professor of Modern Asian Affairs)

The Maureen and Mike Mansfield Library

Bonnie J. Allen, Dean

The University of Montana libraries are teaching and research libraries that provide an array of information resources and services in support of the curricular and research programs of the University. These resources include traditional library collections and electronic access to a network of research databases, e-journal packages, electronic journal subscriptions, and a Web-based library catalog. Library services include in depth research and reference assistance, an extensive instruction program integrated into the university curriculum, and full-service computing and copying facilities. Extensive services for the distance education students and faculty are available to provide an equitable educational experience.

The Maureen and Mike Mansfield Library comprises the heart of UM's library system. Collections exceed 1.5 million bound volumes, including more than 50,000 electronic books, access to over 30,000 print and electronic journals, an expanding array of electronic databases,

nearly 100,000 media, a federal government depository collection and an archives and special collections. These collections are supplemented by an active interlibrary loan service through which the resources of other libraries are made available to students and faculty. The Mansfield Library is open seven days a week for 111 hours during the academic semester. Library resources in support of the Missoula College of Technology are located on the East Campus. Students and faculty at both campuses have access to all library resources and services.

Over 100 public workstations and wireless access throughout the building provide fast and stable Internet connectivity in support of electronic information resources. A state-of-the-art Student Learning Center underscores the goal of the library as a learning library in which students learn how to access and evaluate information in support of their advancing academic careers. Study carrels, group study rooms, and study tables on all floors of the library provide quiet study locations. Affiliated library collections of The University of Montana system are located in Butte at Montana Tech and at the College of Technology-Montana Tech, in Dillon at The Carson Library of The University of Montana-Western, and in Helena at The University of Montana-Helena.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Library (LIB)

U 195 Special Topics 1-6 cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study 1-6 cr. (R-6) Prereq., consent of instructor.

U 200 Research Strategies 1 cr. Offered every term. Introduces on-campus and distant students to academic library research methods and resources with a focus on remote access and services for distant students. Explores all steps of academic research including how to find information and use critical thinking to evaluate sources.

U 295 Special Topics 1-6 cr. (R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296 Independent Study 1-6 cr. (R-6) Prereq., consent of instructor.

U 395 Special Topics 1-9 cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study 1-9 cr. (R-9) Prereq., consent of instructor.

UG 495 Special Topics 1-12 cr. (R-12) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-9 cr. (R-9) Prereq., consent of instructor.

G 595 Special Topics 1-9 cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study 1-9 cr. (R-9) Prereq., consent of instructor.

Faculty

Professors

- Bonnie Allen, M.L.S., Indiana University, 1980 (Dean)
- Sue Samson, M.A., University of Missouri, 1977

Associate Professors

- Barry Brown, M.I.L.S., University of Michigan, 1989
- Kimberley M. Granath, M.L.S., University of Oklahoma, 1985
- K. Elaine Higgins, M.S.L.S., University of Southern California, 1971
- Coburn R. Johnson, M.A., University of Denver, 1972

Assistant Professors

- Jennie Burroughs, M.L.I.S., University of Illinois, 2004
- Julie Edwards, M.L.I.S., University of Illinois, 2005

- Jordan Goffin, M.L.S., Indiana University, 2003
- Samantha Hines, M.L.I.S., University of Illinois, 2003
- Steve McCann, M.L.I.S., University of Washington, 2003
- Donna McCrea, M.LS., University of Wisconsin-Milwaukee, 1999
- Charlie Potter, M.L.I.S., University of Oklahoma, 2006
- Tammy Ravas, M.L.S., State University of New York at Buffalo, 2001
- Kate Zoellner, M.L.I.S., University of Michigan, 2005

Librarian

- Steven Atkin, J.D., The University of Montana, 1994 (College of Technology)

Emeritus Professor

- Devon Chandler, Ed.D., University of Oregon, 1973
- Karen Driessen, M.A., University of Denver, 1967
- Richard T. Dunn, M.A.L.S., Rosary College, 1972
- William W. Elison, M.A., University of Denver, 1970
- Karen Hatcher, M.S., University of Wisconsin, 1964
- Douglas E. Mills, M.A., University of California, 1950
- Christopher Mullin, M.A., University of Washington, 1969
- Dennis Richards, M.L.S., Florida State University, 1963
- Bonnie Schuster, M.L.S., University of Minnesota, 1968

Department of Accounting and Finance

Terri L. Herron, Chair

The Department of Accounting and Finance prepares ethically aware decision-makers with effective analytical and qualitative business knowledge and skills become professionals in their respective fields, with a commitment to high quality teaching and a focus on professional practice and theory. The department offers the Master of Accountancy degree and two undergraduate majors within the Bachelor of Science in Business Administration degree: accounting and finance.

The Master of Accountancy program provides breadth and depth in accounting, taxation, and business to develop a high level understanding, skill and leadership capability for advancement in the accounting profession and other related business careers. This program has achieved national recognition due to the outstanding performance of graduates on the uniform CPA examinations. Graduates hold positions in some of the most prestigious accounting firms in the world.

Accounting Major

The undergraduate accounting program is committed to preparing students to apply accounting and business knowledge in organizations. Students develops competence in a broad range of accounting practices. The curriculum strives to foster critical thinking and problem-solving skills. Students are prepared to enter professional positions in accounting with business, nonprofit, or government organizations. The State of Montana requires 150 credit hours to become a licensed Certified Public Accountant (CPA). Students completing the requirements for the undergraduate accounting major listed below (120 credits) are required to obtain additional credit hours to become licensed as a CPA in Montana. Students can continue their education in the Master of Accountancy program and/or pursue a variety of other professional certifications. Information on the Master of Accountancy program can be found at http://www.mba-macct.umt.edu/MAcctDegree1.asp.

Basic Requirements for the Accounting Major

Required	Credits
ACTG 203 Accounting Lab	1
ACTG 305 (ACCT 311) Corporate Reporting I	3
ACTG 306 (ACCT 312) Corporate Reporting II	3
ACTG 321 (ACCT 310) Accounting Informations Systems I	3
ACTG 401 (ACCT 431) principles of Federal Taxation-Individuals	3
ACTG 410 (ACCT 421) Cost Management Accounting I	3
ACTG 411 (ACCT 441) Auditing I	3
ACTG 415 (ACCT 451) Government and Non-Profit Accounting I	3
Plus three (3) credits from the following:	
ACTG 307 (ACCT 313) Corporate Reporting II	3
ACTG 420 (ACCT 422) Cost Management Accounting II	3
ACTG 491 (ACCT 495) Special Topics	3

Note: Students should select, in consultation with their faculty advisor, the accounting courses from the above list that best fit their individual career goals. Many of these courses may be taught once a year–see advisor for the schedule each academic year.

Basic Accounting Prerequisites for the Master of Accountancy

Required: The following courses must be completed with a C or better:	Credits
ACTG 305 (ACCT 311) Corporate Reporting I*	3
ACTG 306 (ACCT 312) Corporate Reporting II	3
ACTG 307 (ACCT 313) Corporate Reporting III	3
ACTG 321 (ACCT 310) Accounting Information Systems I*	3
ACTG 401 (ACCT 431) Principles of Federal Taxation-Individuals	3
ACTG 410 (ACCT 421) Cost Management Accounting I	3
ACTG 411 (ACCT 441) Auditing I	3
ACTG 415 (ACCT 451) Governmental and Nonprofit Accounting I	3

*ACTG 203 (1cr) is a co-requisite for this course.

Finance Major

The finance curriculum is designed to equip students with a comprehensive foundation in financial management, financial markets and investments. Students will gain competence in effective decision-making, performing complex analyses, providing expert financial advice and utilizing current technology tools and data sources.

Basic Requirements for Finance Major

All students must complete a plan of study during the first semester of their junior year. The plan of study is available from a finance faculty advisor and must be completed and signed by the faculty advisor. Failure to implement and adhere to a program of study may delay graduation. Many of these courses may be taught once a year-see advisor for the schedule each academic year.

Required:	Credits
FIN 420 Investments	3
FIN 424 Financial Markets	3
FIN 429 Financial Management I Theory and Analysis	3
FIN 439 Financial Management II Analysis and Problems	3
FIN 450 Banking	3
M 162 (MATH 150) Applied Calculus (instead o fM 115 (MATH 117) in the lower core)	4
Plus one (1) of the following courses*:	
ACTG 305 (ACCT 311) Corporate Reporting I (coreq: ACTG 203, 1cr)	4
ACTG 410 (ACCT 421) Cost Management Accounting I	3
FIN 301 Financial Statement Analysis	3
ECNS 301 (ECON 311) Intermediate Microeconomics with Calculus	3
ECNS 302 (ECON 313) Intermediate Macroeconomics	3
ECNS 403 (ECON 460) Introduction to Econometrics	3

*Any substitution must be approved by the advisor and the department chair. Other finance courses may be offered that may be substituted when appropriate. In addition to the above required courses, finance students must take two (2) additional courses at the 300- or 400-level from a lis pf courses selected in consultation with their faculty advisor and incorporated into their program of study. Details are available from advisors.

School of Business Administration

- Special Degree Requirements
- Courses
- Faculty

Larry D. Gianchetta, Dean

Michael V. Harrington, Associate Dean

Homepage: www.business.umt.edu

The School of Business Administration, founded in 1918, is the largest professional school at the University. All programs are accredited by

AACSB International–The Association to Advance Collegiate Schools of Business.

Mission

The University of Montana's School of Business Administration is a collegial learning community dedicated to the teaching, exploration, and application of the knowledge and skills necessary to succeed in a competitive marketplace.

The goal of the School of Business Administration is to provide a broad foundation in organizational administration and exposure to the basic principles of various business disciplines. The complexity of contemporary society has brought an increasing need for responsible leadership. A professional business education combined with solid grounding in the liberal arts and sciences prepares men and women to meet difficult challenges and to participate in the molding of the future.

Students may pursue a program of studies leading to the B.S. in Business Administration, with a major in any of the following areas: accounting, finance, international business, management, management information systems, and marketing.

High School Preparation:

High school students who are planning to major in business administration at The University of Montana-Missoula should take their school's college preparatory curriculum. Additional courses to improve reading, writing, and computer skills will be beneficial. Students should take as much mathematics as possible including two years of algebra.

Credit/No Credit Option:

Students may take courses in the School of Business Administration on a credit/no credit basis as follows:

For Non Business Majors:
All 100, 200, 300 and 400 level business administration courses that are not identified as traditional letter graded only. Note that most business administration courses are offered for traditional letter grade only.

Business Majors:
Only elective courses may be taken on a credit/no credit basis. All courses required for the major and all general education courses must be taken for a traditional letter grade. For additional information see the General Education section of the catalog.

For business majors, exceptions to the letter-grade requirement in the major may be made by the instructor with the approval of the department chair unless the course is identified as traditional letter graded only.

Opportunity for further study at the graduate level is offered through programs leading to the degrees of Master of Business Administration, Master of Accountancy, joint J.D./M.B.A., joint M.B.A./D.P.T. and joint M.B.A./Pharm.D. The M.B.A. and M.Acct. programs are suited to all students regardless of undergraduate training. Further details may be obtained from the Graduate Studies bulletin or by specific inquiries directed to: Director of M.B.A. Program, School of Business Administration or Director of M. Acct. Program, School of Business Administration.

Foundation Program for Graduate Work in Business
The Master of Business Administration (M.B.A.) and Master of Accountancy (M.Acct.) at most universities are open to graduates of non-business undergraduate programs. Students in the arts and sciences or other professional schools who anticipate doing graduate work in business are encouraged to take as many of the foundation courses listed below as possible in their undergraduate programs. Completion of all of the foundation courses will reduce the time required for the M.B.A. or M.Acct at The University of Montana-Missoula by one year.

- ACTG 201 Principles of Financial Accounting
- ACTG 202 Principles of Managerial Accounting
- MIS 257 Business Law
- FIN 322 Business Finance
- MIS 270 Management Information Systems
- MIS 341 Operations Management
- MGMT 340S Management and Organizational Behavior
- MKTG 360 Marketing Principles
- ECNS 201S (ECON 111S) Principles of Microeconomics
- STAT 216 (MATH 241) Introduction to Statistics

For more information, check the UM School of Business Administration Graduate School website at http://www.mba-macct.umt.edu/default.asp

Special Degree Requirements

To earn the Bachelor of Science in Business Administration, students must complete the following:

1. **Lower Core** - Earn grades of C (2.0) in all of the following lower-core courses:

- WRIT 101 (ENEX 101) College Writing I
- M 115 (MATH 117) Probability and Linear Math or M 162 (MATH 150), Applied Calculus, for Finance majors
- ECNS 201S (ECON 111S) Principles of Microeconomics
- ECNS 202S (ECON 112S) Principles of Macroeconomics
- COMM 111A Introduction to Public Speaking
- CS 172 Computer Modeling
- STAT 216 (MATH 241) Introduction to Statistics
- ACTG 201 Principles of Financial Accounting
- ACTG 202 Principles of Managerial Accounting
- MIS 257 Business Law
- MIS 270 Management Information Systems

2. **Admission to the Major** - In the semester when students will have completed at least 60 cumulative credits and all requirements listed under number 1 above with grades of C (2.0) or better, students must apply for admission to one of the following business majors: accounting, finance, international business, management, management information systems, or marketing. (Students pursuing a major in international business must pair it with one of the other five business majors.) NOTE: In order to take 300 and 400 level courses in business, students must achieve junior standing in a business major. Junior standing in a business major is defined as admission to a business major after meeting the above requirements.
3. **Upper Core** - Students must earn a C- or better in each of the following courses prior to enrolling in a business capstone course (see number 5 below). Some of these courses are prerequisites to certain major courses (e.g., MKTG 360 is a prerequisite to marketing courses; FIN 322 is a prerequisite to 400-level finance courses, etc.).
   - FIN 322 Business Finance
   - MIS 341 Operations Management
   - MGMT 340S Management and Organizational Behavior
   - MKTG 360 Marketing Principles
4. **Major** - Earn a cumulative grade point average of at least 2.0 and earn grades no lower than C- in each course required for the major in accounting, finance, management information systems, management, marketing, or international business. (Students pursuing a major in international business should review the parenthetical note in number 2 above.) *See the requirements for each major listed below under Accounting and Finance Department, Management Information Systems Department, or Management and Marketing Department. Apply to one of the following majors before beginning junior-level coursework in business.*
5. **Capstone Course** - Earn a grade of C- or better in a business capstone course chosen from the following:
   - MGMT 445 Small Business Management and Strategic Planning
   - MGMT 446 Strategic Management
   - MIS 448 Management Game

   The capstone course is normally taken during the last semester of the student's senior year. All upper-core courses must be completed before students enroll in a capstone course.
6. **Minimum Credits in Business** - Earn at least a C (2.0 average and grades of no lower than C- in at least 51 credits taken in the School of Business Administration (and in Economics if the student chooses to count Economics courses in the School of Business Administration). At least 50% of the required 51 credits in business must be earned at the University of Montana-Missoula.
7. **Minimum Credits Outside of Business** - At least 60 credits (exclusive of health and human performance activity credits) must be taken in departments and schools other than the School of Business Administration. If Economics classes are counted in business, they may not be counted outside of business.
8. **Minimum Credits to Graduate** -Students are required to take a minimum of 120 semester credits to graduate from the University of Montana, 39 of which must be earned at the upper-division level.
9. **Grade Point Average (GPA)** - A minimum grade point average of 2.0 is required overall, in business, and in the business major.
10. **Upper-division Writing Requirement** - Earn a C- or better in the Upper-division Writing Expectation for the Major. This requirement is normally fulfilled with one of the three business capstone courses.
11. **Experiential Requirement** - A list of courses that meet this requirement is prepared annually by the UM School of Business Administration. The three capstone courses meet this requirement. Students who initially enrolled as freshmen at UM are required to complete three business-oriented experiential learning exposures (classes). Students who initially enrolled with more than 60 transfer credits must complete two experiential classes. Students who initially enrolled with more than 90 transfer credits must take one experiential class, normally a business capstone class. Experiential courses are offered in each of the business majors.
12. **Examination** - Pass the major field examination, administered in the semester students take the capstone course.

Suggested Course of Study

For all business majors:

First Year	A	S
MIS 100S Introduction to Business	3	-
COMM 111A Introduction to Public Speaking	-	3
CS 172 Computer Modeling	-	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3	-
ECNS 202S (ECON 112S) Principles of Macroeconomics	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
M 115 (MATH 117) Probability and Linear Math	3	-
OR for Finance majors, M 162 (MATH 150), Applied Calculus	4	-

Electives or General Education	3	6
	15-16	15
Second Year		
ACTG 201 (ACCT 201) Principles of Financial Accounting	3	-
ACTG 202 (ACCT 202) Principles of Managerial Accounting	-	3
STAT 216 (MATH 241) Introduction to Statistics	4	-
MIS 257 Business Law	-	3
MIS 270 Management Information Systems	-	3
Electives and General Education	8	6
	15	15

Individual programs may differ from the suggested course of study to better accomplish the needs of the particular student.

Teacher Preparation in Business and Information Technology Education

Students who want to be licensed to teach business and information technology education at the middle and high school level must complete a B.S. in Business Administration with a major in one of the following: accounting, finance, management, management information systems, or marketing. They also must complete the business and information technology education course work and the professional licensure program in the School of Education. See the Department of Curriculum & Instruction for information about admission to the teacher Education Program and completion of this licensure program.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Generally, courses at the 500 and 600 levels are open only to graduate students who are admitted to a business graduate program or who are graduate non-degree (500 level and select 600 level only, limited to 9 credits total, upon pre-approval of a graduate program director). Students must be admitted to a degree program in order to take the required course in either program.

Accounting (ACTG)

U 191 Special Topics Variable cr. (R-6)

U 199 Lower-Division Elective Variable cr.

U 201 Principles of Financial Accounting 3 cr. Offered every term. Coreq., M 115 (MATH 117) or M 162 (MATH 150) . Introduction to financial accounting concepts, including transactions analysis, financial statement analysis, and corporate financial reporting practices.

U 202 Principles of Managerial Accounting 3 cr. Offered every term. Prereq., ACTG 201 with a grade of C or better, M 115 (MATH 117) or M 162 (MATH 150) with a grade of C or better. Continuation of ACTG 201 with a focus on managerial accounting topics.

U 203 Accounting Lab 1 cr. Offered every term. Prereq., ACTG 201 (ACCT 201) with a grade of C or better. Applying accounting cycle concepts to comprehensive hands-on financial statement cases and/or a practice set and exploring career options.

U 298 Internship Variable cr. (R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 305 (ACCT 311) Corporate Reporting I 3 cr. Offered every term. Prereq., junior standing in Business, ACTG 201 (ACCT 201) and 202 (ACCT 202) with grades of C or better or consent of instr. Coreq., ACTG 203. Topics include concepts in financial accounting, assets and related income statement accounts.

U 306 (ACCT 312) Corporate Reporting II 3 cr. Offered every term. Prereq., junior standing in Business, ACTG 203, ACTG 305 (ACCT 311) with a grade of C or better, or consent of instr. Continuation of ACTG 305 (ACCT 311). Topics include concepts in financial accounting, coverage of the liability and equity side of the balance sheet, the cash flow statement, and several special financial accounting topics.

U 307 (ACCT 313) Corporate Reporting III 3 cr. Offered spring. Prereq., junior standing in Business; ACTG 305 (ACCT 311) with grades of C or better, or consent of instr. Application of accounting principles to partnerships, foreign currency transactions and translations, accounting for income taxes, post-retirement benefits, accounting changes and other accounting topics.

U 321 (ACCT 310) Accounting Information Systems I 3 cr. Offered autumn and spring. Prereq., Junior standing in Business. Coreq., ACTG 203. Provides thorough understanding of business processes, risks, and internal controls. Computer applications may be used to

demonstrate concepts.

U 391 (ACCT 395) Special Topics Variable cr. (R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 392 (ACCT 396) Independent Study Variable cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

U 394 Undergraduate Seminar Variable cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

U 399 upper -Division Elective Variable cr.

UG 401 (ACCT 431) Principle of Federal Taxation-Individuals 3 cr. Offered autumn. Prereq., Junior standing in Business or consent of instructor . Coreq., ACTG 306 (ACCT 312). The application of the federal income tax law to determine income, deductions and losses. Special topics include property transactions.

UG 410 (ACCT 421) Cost Management Accounting I 3 cr. Offered autumn. Prereq., senior standing in Business or consent of instr. The study of cost management for business and other organizations. Emphasis on how information about costs helps managers make better decisions.

UG 411 (ACCT 441) Auditing I 3 cr. Offered spring. Prereq., junior standing in Business, ACTG 321 (ACCT 310) and ACTG 306 (ACCT 312),or consent of instr. Introduction to auditing with emphasis on the independent audit of financial statements. Coverage includes professional standards, ethics, audit risk, evidence, internal controls, procedures, opinions, operational and compliance auditing.

UG 415 (ACCT 451) Government/Nonprofit Accounting I 3 cr. Offered spring. Prereq., junior standing in Business or consent of instr. Coreq., ACTG 306 (ACCT 312). Principles of accounting and financial reporting for governmental units and other non-profit organizations.

UG 420 (ACCT 422) Cost Management Accounting II 3 cr. Offered intermittently. Prereq., senior standing in Business and ACTG 410 (ACCT 421) or consent of instr. Advanced cost management with emphasis on how financial and non-financial information helps managers make better decisions in a wide variety of business and not-for-profit organizations. Current readings in cost management and related topics.

U 432 Income Tax Practicum 1 cr. Offered spring. Prereq., junior standing in Business. Service course that provides free tax preparation to low income taxpayers and students, in conjunction with the IRS. Students apply their knowledge of tax law to the preparation and e-filing of income tax returns under the direction of a practicing CPA. Graded credit/no credit only.

U 461 Accounting Leadership 1-6 cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr. Leadership training for students holding positions of responsibility in professional accounting organizations to include conducting meetings, delegation, committees, motivating others, following through on assignments and evaluating performance.

UG 491 (ACCT 495) Special Topics Variable cr. (R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 492 (ACCT 496) Independent Study Variable cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of inst.

UG 494 Seminar Variable cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

U 498 Accounting Internship Variable cr. Offered every term. Prereq., junior standing in Business and consent of instr. Students are placed with private or governmental organizations to receive on-the-job training. Written reports are required. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 509 Financial Reporting and Control 3 cr. Offered spring. Prereq., admission to M.B.A. or M.Acct. programs. Reporting and using financial information of an enterprise, with a focus on internal and external decision-making. Topics include analysis and recording financial transactions, understanding how these events affect financial statements, and using quantitative tools for internal decision-making.

G 605 Administrative Controls 2 cr. Offered autumn. prereq., admission to the M.B.A. program. Not open to M.Acct. students. The application of accounting information to managerial and/or financial decision making.

G 611 Consolidated Financial Statements 2 cr. Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, Business core, accounting core, admission to M. Acct. program or consent of accounting graduate director. The equity method of accounting for investments, accounting for acquisitions, non-controlling interest, intercompany transfers, intercompany debt and other consolidation issues.

G 615 Accounting Theory 3 cr. Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, Business core, accounting core, and admission to M. Acct. program or consent of accounting graduate director. A critical analysis of the concepts underlying the development and application of financial accounting in the United States. Coverage of current accounting standards as well as other current topics in financial accounting.

G 631 Advanced Tax 3 cr. Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, ACTG 401 (ACCT 431), admission to M. Acct. program or consent of accounting graduate director. The application of the federal

income tax law to corporations and partnerships, and special problems associated with taxation of trusts, estates and gifts.

G 632 Advanced Tax Practicum 1 cr. Offered spring. Prereq., graduate student in business or consent of business graduate director and instr. Service course that provides free tax preparation to low income taxpayers and students, in conjunction with the IRS. Graduate students apply their knowledge of tax law to the preparation and e-filing of income tax returns under the direction of a practicing CPA, review the work of undergraduate preparers, and assist in the organization and training of undergraduate prepares. Grade option credit/no credit only.

G 641 Advanced Auditing 3 cr. Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, ACTG 411 (ACCT 441), graduate student in business or consent of accounting graduate director. Research cases in auditing and coverage of contemporary topics in auditing, typically including attestation standards, other reports and services, legal and ethical environment, and fraud detection.

G 643 Fraud Examination 3 cr. Offered intermittently. Prereq., graduate standing. A study of signs of fraud, internal controls, ethics in business, and fraud prevention. An examination of fraud cases and an introduction to fraud examination techniques. Intended for graduate students, without regard to specific major, who have an interest in fraud prevention and detection.

G 656 Accounting Information Systems Topics 1-3 cr. (R- 3) Offered intermittently. Prereq., graduate student in business. Selected topics addressing information systems issues as they relate to accounting. Selected topics may include systems auditing, expert systems, databases, specific accounting applications, report design, electronic transactions, and internal controls.

G 661 Accounting Law and Ethics 3 cr. Offered autumn or spring. Prereq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, Business core, admission to M. Acct. program or consent of accounting graduate director. Legal issues from the common law and appropriate statutes applicable to the public practice of accounting. The professional responsibilities and ethics of a practicing CPA.

G 675 Contemporary Accounting Problems 4 cr. Offered first summer session. Prereq. or coreq., cumulative GPA of 3.0 or better in all accounting fundamental courses taken to date, student must be in good academic standing, ACTG 611, 615, 631, 641, and 661. Integration of accounting theory and practice. Primarily for the student preparing to take the uniform CPA examination. Graded only credit/no credit.

G 694 Seminar 3 cr. (R-15) Offered intermittently. Prereq., graduate student in business or consent of business graduate director. Selected topics in accounting.

G 696 Independent Study Variable cr. (R-9) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Directed study of individual or small groups of students in topics not available in scheduled classes.

G 698 Internship Variable cr. (R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Placements with private or governmental organizations for practical training. Written reports required.

G 699 Thesis Variable cr. (R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director. Grade option credit/no credit only.

Business Administration (BADM)

U 100S Introduction to Business 3 cr. Offered every term. Nature of business enterprise; role of business in society; problems confronting business management; career opportunities in business. Open to non-business majors and business majors of freshman or sophomore standing only. Business majors are advised to register for the course their freshman year. Credit not allowed for both MIS 100S, IS 100S, BADM 100S and BUS 103S.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study Variable cr. (R-6) Offered intermittently.

U 257 Business Law 3 cr. Offered every term. An analysis of the legal and ethical implications of domestic and international commercial transactions. Credit not allowed for both BADM 257, BUS 135T, IS 257, MIS 257.

U 295 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

Finance (FIN)

U 228 Personal Financial Planning and Investment 3 cr. Offered intermittently. Concepts, strategies and techniques in analyzing financial situations and investment opportunities from the individual's perspective.

U 298 Internship Variable cr. (R-3) Offered every term. Extended classroom experience which provides practical application of classroom

learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

UG 301 Analysis of Financial Statements 3 cr. Offered intermittently. Prereq., junior standing in Business. Analysis of balance sheets, income and cash flow statements and statements of owners' equity in terms of structure, strategy and performance of the company being analyzed. Emphasis is on the use rather than preparation of financial statements.

U 321 Real Estate Fundamentals 3 cr. Offered intermittently. Prereq., junior standing in Business and FIN 322, or consent of instr. Introduction to the principles and practices of real estate. Includes the study of real estate law, financing, valuation, brokerage and land use.

U 322 Business Finance 3 cr. Offered every term. Prereq., junior standing in Business. The methodology and practice of business financial decisions.

U 394 Undergraduate Seminar Variable cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study Variable cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

UG 410 $50,000 Portfolio 3 cr. Offered autumn. Prereq., junior standing in Business, grade of C or better in FIN 322, and consent of department chair. Under the guidance of a broker, students manage a diversified investment portfolio for a semester. Students analyze and discuss investment opportunities and implement their decisions.

UG 420 Investments 3 cr. Offered autumn. Prereq., junior standing in Business, grade of C or better in FIN 322 or consent of instr. Principles, practices and methodology in investment analysis and portfolio management.

UG 424 Financial Markets 3 cr. Offered spring. Prereq., junior standing in Business, grade of C or better in FIN 322, or consent of instr. Operations and analysis of the national and international money and capital markets, and financial institutions.

UG 429 Financial Management I: Theory and Analysis 3 cr. Offered spring. Prereq., junior standing in Business, grade of C or better in FIN 322 or consent of instr. Understanding the practice of business investment and working capital decisions. Computer models and cases used to demonstrate the management process.

UG 439 Financial Management II: Analysis and Problems 3 cr. Offered autumn. Prereq., junior standing in Business, grade of C or better in FIN 322 or consent of instr. Raising capital, capital structure issues and debt and equity markets. UG 450 Banking 3 cr. Offered autumn or spring. Prereq., junior standing in Business, grade of C or better in FIN 322, or consent of instr. The financial management of banking institutions including financial analysis, interest rate risk and loan portfolio management. Students manage a bank within a simulated bank community.

UG 450 Banking 3 cr. Offered autumn or spring. Prereq., junior standing in Business, grade of C or better in FIN 322, or consent of instr. The financial management of banking institutions including financial analysis, interest rate risk and loan portfolio management. Students manage a bank within a simulated bank community.

UG 473 Multinational Financial Management and Accounting 3 cr. Offered autumn or spring. Prereq., junior standing in Business, grade of C or better in FIN 322, or consent of instr. Students are strongly encouraged to complete MGMT 368 prior to FIN 473. Financial skills required of corporate executives in international business. Topics may include differences in global accounting practices and the resulting effects on multinational corporations.

UG 494 Seminar Variable cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

UG 495 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., junior standing in Business and consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study Variable cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

U 498 Finance Internship Variable cr. Offered every term. Prereq., junior standing in Business and consent of instr. Students are placed with private or governmental organizations to receive on-the-job training. Written reports are required. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 522 Principles of Financial Analysis 3 cr. Offered summer. Prereq., admission to M.B.A. or M.Acct. program or graduate standing with consent of graduate business program director; grade of B or better in ACTG 509. Introduction to principles of microeconomics and financial management and the application of these principles to business decisions. Topics include supply and demand, market demand, theory of the firm, theories of competition, financial analysis, time value of money, theories of risk and return, stock and bond valuation and capital budgeting.

G 681 Financial Management 2 cr. Offered spring. Prereq., admission to the M.B.A. and ACTG 605 or admission to the M.Acct.

programs. Advanced theory and analysis in corporate financial management.

G 694 Seminar Variable cr. (R-15) Offered intermittently. Prereq., graduate student in business or consent of business graduate director. Selected topics in finance.

Management Information Systems (MIS)

U 100S Introduction to Business 3 cr. Same as BADM 100S. Offered every term. Nature of business enterprise; role of business in society; problems confronting business management; career opportunities in business. Open to non-business majors and business majors of freshman or sophomore standing only. Business majors are advised to register for the course their freshman year. Credit not allowed for both IS 100S, BADM 100S and BUS 103S.

U 195 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study 1-3 cr. (R-3) Offered every term. Prereq., consent of instr.

U 257 Business Law 3 cr. Offered every term. An analysis of the legal and ethical implications of domestic and international commercial transactions. Credit not allowed for both BUS 135T, IS 257, MIS 257.

U 270 Management Information Systems 3 cr. Offered every term. Prereq., CS 172. Introduces the development, use, and management of computer-based information systems.

U 296 Independent Study 1-3 cr. (R-3) Offered every term. Prereq., consent of instr.

U 298 Internship 1-3 cr. (R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 341 Operations Management 3 cr. Offered every term. Prereq., junior standing in Business. A survey of the processes that organizations, public or private, use to produce goods and services. Includes management science topics.

UG 370 Database Management Systems 3 cr. Offered autumn and spring. Prereq., junior standing in Business. Information systems design and implementation within a database management system environment. Topics include data models, structured and object design, relational, hierarchical, network and object-oriented models.

U 371 Business Application Development 3 cr. Offered autumn and spring. Prereq., junior standing in Business. Provides an understanding of algorithm development, programming, computer concepts and the design and application of data and file structures.

U 372 Telecommunications Management 3 cr. Offered spring. Prereq., junior standing in Business. Provides in-depth knowledge of data communications and networking requirements including telecommunications technologies, hardware and software. Emphasis on the analysis and design of networking applications in business.

UG 373 Business Systems Analysis and Design 3 cr. Offered autumn. Prereq., junior standing in Business. Provides an understanding of the systems development and modification process including requirements determination, logical design, physical design, test planning, implementation planning and performance evaluation.

U 394 Undergraduate Seminar Variable cr. (R-3) Offered intermittently. Prereq., junior standing in Business and consent of instr.

U 395 Special Topics 1-9 cr. (R-9) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study 1-6 cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

UG 448 Management Game 3 cr. Offered intermittently. Prereq., senior standing in Business, all business core, or consent of instr. Simulation of a large business organization in which students make executive-level decisions in the areas of production, marketing, finance, human resources and organization.

UG 453 Manufacturing Planning and Control Systems 3 cr. Offered intermittently. Prereq., MIS 341, junior standing in Business, or consent of instr. Principles and techniques of production scheduling and inventory control. Systems for setting strategic and tactical objectives, accomplishing detailed material and capacity plans, and establishing and executing shop floor priorities.

UG 471 Fundamentals of Network Management 3 cr. Offered intermittently. Prereq., junior standing in Business and MIS 372. Current topics will focus on the design, installation, configuration, and operation of local area networks. Includes a hands-on lab to demonstrate the concepts.

UG 472 Advanced Network Management 3 cr. Offered intermittently. Prereq., junior standing in Business, MIS 372, and MIS 471. Focuses on network security, directory services, and network infrastructure. Includes a hands-on lab to demonstrate the concepts.

UG 474 Quality Management Systems 3 cr. Offered intermittently. Prereq., junior standing in Business. Focus on the primary objectives of world class organizations, i.e., teamwork, customer focus and continuous improvement. TQM, JIT, and SPC are discussed in detail.

UG 475 Advanced Technology Support 3 cr. Offered intermittently. Prereq., junior standing in Business and consent of instr. Project oriented class covering varying aspects of technical support in a business environment. Topics may include hardware and software support, helpdesk operations, operating systems, AS400 operations, and local and wide area networking.

UG 476 Project Management 3 cr. Offered every term Prereq., junior standing in Business and MIS 370, 371 and 373. Emphasis on project planning, team selection models, and project management techniques. A software package is used to demonstrate how projects are planned, managed, monitored, and controlled.

UG 477 Multimedia Development for Business 3 cr. Offered intermittently. Prereq., junior standing in Business and consent of instr. Focus on high-tech multimedia tools to develop marketing and promotional materials for a business or organization.

UG 478 Electronic Commerce 3 cr. Offered intermittently. Prereq., junior standing in Business. Focuses on the capabilities of the Internet to support and enable commerce. Provides a managerial perspective on topics including effective web site design, emerging technologies, business models, infrastructure architectures, and security.

U 491 Information Systems Practicum 3 cr. Offered every term. Prereq., junior standing in Business and consent of instr. Practical hands-on experience with area organizations. Provides application of classroom learning.

UG 494 Seminar 1-6 cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

UG 495 Special Topics 1-9 cr. (R-9) Offered autumn and spring. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-6 cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

U 498 Information Systems Internship 1-6 cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 541 Systems and Operations 3 cr. Offered spring. prereq., admission to M.B.A. or M.Acct. program or graduate standing with consent of graduate business program director; grade of B or better in MKTG 560. Design and use of information systems to meet the tactical and strategic needs of an enterprise, particularly within the operations function. Topics include systems analysis, data and process modeling, database designs, manufacturing planning and control, forecasting, and quality management.

G 571 Enterprise Modeling 2 cr. Offered autumn. Prereq., graduate standing. Explores knowledge management systems, data warehouses, data mining, ERP, SANS, and data distribution. Focuses on management; does not require a technical background.

G 572 IT Strategy and Leadership 2 cr. Offered autumn. Prereq., graduate standing. Explores how alignment of IT infrastructure and capabilities can achieve competitive advantage with an industry. Includes the role of IT management in leading change, managing decisions and integrating information systems across the organization. Focuses on management; does not require a technical background.

G 573 Business Processes and Security 2 cr. Offered summer. Prereq., graduate standing. Analyzes business processes and the security challenges created from the emergence of new technology. Includes the effect of legal, regulatory and security technology on policy development. Focuses on management; does not require a technical background.

G 574 Management of Information Systems 2 cr. Offered autumn. Prereq., admission to the M.B.A. or M.Acct. program and MGMT 604 or IS 571 and 572. The tactical/operational responsibilities and roles of the CIO. Includes governance issues, supporting the learning organization, managing the technologies, and managing the development of systems. Focuses on management; does not require a technical background.

G 575 Fundamentals of Consulting 2 cr. Offered spring. Prereq., graduate standing. The technical , interpersonal, and consulting skills necessary to effectively work with clients. Focuses on management; does not require a technical background.

G 650 Quantitative Analysis 2 cr. Offered spring. Prereq., admission to the M.B.A. or M.Acct. programs. Quantitative methods supporting managerial decision-making. Theory and logic underlying such methods as linear programming and simulation. Solution of complex problems and practice of interpersonal skills in team projects.

Management (MGMT)

U 101 Introduction to the Entertainment Business 3 cr. Offered autumn and spring. Open to non-business majors. Designed to provide basic distinctions and concepts necessary for understanding various business aspects that underpin the business of entertainment as well as

most other businesses, regardless of context.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study Variable cr. (R-3) Offered every term. Prereq., consent of instr.

U 295 Special Topics 1-6 cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 296 Independent Study Variable cr. (R-3) Offered every term. Prereq., consent of instr.

U 298 Internship Variable cr. (R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 320E Business Ethics 3 cr. Offered autumn and spring. Prereq., junior standing in Business. Business organizations and their relationship to the external environment and various stakeholders. Focuses on responsibilities to society and their impact on decision making, with particular emphasis on business ethics and values.

U 340S Management and Organizational Behavior 3 cr. Offered every term. Prereq., junior standing in Business. An intensive examination of the fundamentals of management and organization supported by the application of behavioral science principles to the management of people in organizations.

UG 344 Human Resource Management 3 cr. Offered every term. Prereq., junior standing in Business, MGMT 340S; PSYX 100S (PSYC 100S) recommended. Examines the personnel function in business organizations, with emphasis on staffing, equal opportunity employment, job design, training and development, performance appraisal, compensation, and labor-management relations. Includes case analyses and experiential exercises.

UG 348 Entrepreneurship 3 cr. Offered autumn and spring. Prereq., junior standing in Business, FIN 322, MGMT 340S, MKTG 360. Focuses on starting and managing a growing business. Topics include recognizing business opportunities, setting strategy for the firm, raising capital, marketing new products, and organizing a management team. Students write a business plan for themselves or for a local entrepreneur.

UG 368 International Business 3 cr. Offered every term. Prereq., junior standing in Business. Analysis of business in diverse parts of the globe. Examines the impact of socio-economic, political, legal, educational, and cultural factors on management.

U 394 Undergraduate Seminar Variable cr. (R-3) Offered intermittently. Prereq., junior standing in Business and consent of instr.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study Variable cr. (R-6) Offered every term. Prereq. junior standing in Business and consent of instr.

UG 401 Event Management 3 cr. Offered fall. Prereq., junior standing and consent of instructor; open to non-business majors. Students are introduced to skills that are necessary for managing entertainment events. Topics include: market research; artist research; negotiating events; producing live events; and working with community and non-profit organizations. Students will develop and participate in several live events throughout the semester.

UG 402 Principles of Entertainment Management I 3cr. Offered spring. Prereq., junior standing and consent of instructor; open to non-business majors. Students are introduced to the fundamental aspects of the entertainment business. Topics include: artist development and management; productions; promotions; and venue management and marketing. Students will produce an artist development plan.

UG 403 Principles of Entertainment Management II 3 cr. Offered spring. Prereq., junior standing, MGMT 402, and consent of instructor; open to non-business majors. Students build on the concepts learned in MGMT 402. Topics include: tour development and marketing; agency relations and responsibilities; and new forms of entertainment media and distribution. Students will produce an event management plan.

UG 420 Leadership and Motivation 3 cr. Offered spring. Prereq., junior standing in Business and MGMT 340S. Study of fundamental concepts, theories, and models of leadership and motivation. Selected topics include: trait and behavioral theories of leadership, charismatic and transformational leadership, power and influence, emotions and justice perceptions in motivation, expectancy and equity theories.

UG 430 Business Negotiations 3 cr. Offered intermittently. Prereq., junior standing in Business. Theories and processes of negotiation in various business settings. Theories and concepts of negotiation presented through illustrative case studies proven to increase the value of negotiated deals. Students become cognizant of their instinctive negotiation styles and build on their accumulative knowledge progressing to sophisticated skills such as multiparty negotiation, mediation and arbitration.

UG 444 Management Communications 3 cr. Offered autumn and spring. Prereq., junior standing in Business. Focuses on internal and external business communications. Selected topics include: developing communications strategies, designing and conducting communications audits, selecting appropriate message vehicles, orchestrating presentations, and management press relations.

UG 445 Small Business Management and Strategic Planning 3 cr. Offered autumn and spring. Prereq., senior standing in Business, all business core. Application of the concepts of strategic management to small businesses. Integrates the functional areas of management, marketing, finance and accounting. Students work with local businesses in a consulting role and are required to write a consulting report. Credit not allowed for both MGMT 445 and 446.

UG 446 Strategic Management 3 cr. Offered every term. Prereq., senior standing in Business, all business core. Integration of the functional areas of management, marketing, finance and accounting. Heavy case orientation, class discussions. Industry and competitor analysis and strategy formulation. Credit not allowed for both MGMT 446 and 445.

UG 449 Business Plan Implementation 3 cr. Offered intermittently. Prereq., senior standing in Business; MGMT 348 or an MBA seminar in entrepreneurship. Development and implementation of a business plan through the complete sequence of steps required for financing and actual startup of a business enterprise.

UG 457 Entrepreneurship for Non-Business Students 3 cr. Offered intermittently. Prereq., junior standing; open to non-business majors only. Focuses on starting and managing a growing business. Topics include recognizing business opportunities, setting strategy for the firm, raising capital, marketing new products, and organizing a management team. Students write a business plan for starting a business of their choice.

UG 458 Advanced Entrepreneurship Seminar 3 cr. Prereq., junior standing, MGMT 457 for non-business majors, MGMT 348 or concurrent enrollment in MGMT 348 for Business majors. Extends previous course work in entrepreneurship with focus on managing and marketing a growing business, legal and technology issues for entrepreneurs, and financing new ventures. Course utilizes local and regional experts in the field of entrepreneurship to deliver course content under the supervision of UM instructor. Students refine their existing business plan and participate in business plan competition or write case analyses.

UG 465 World Trade and Commerce 3 cr. Offered every term. Prereq., junior standing in Business and consent of instr. A practical hands-on approach to understanding the complexities and intricacies of successfully working in the new global marketplace. Classes are supported by work assignments at the Montana World Trade Center.

UG 480 Cross-Cultural Management 3 cr. Offered autumn. Prereq., junior standing in Business. Study of issues related to cultural diversity within the work force and the problems inherent in the management of a firm's activities on an international scale.

UG 485 Seminar in Contemporary International Issues 3 cr. Offered spring. Prereq., junior standing in Business, MGMT 368; recommended prereq., FIN 473, MGMT 480. Focus on the application, synthesis and integration of business concepts in the international business community.

UG 494 Seminar Variable cr. R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

UG 495 Special Topics Variable cr. (R-9) Offered autumn and spring. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study Variable cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

U 498 Management Internship Variable cr. Offered every term. Prereq., junior standing in Business and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 540 Management and the Legal System 3 cr. Offered autumn. Prereq., admission to the M.B.A. or M.Acct. programs. Basic management principles, exploration of concepts such as strategic planning, goal-setting and giving feedback, leadership, motivation, and reward systems. Law as it relates to doing business in the global environment; ethical dimensions of business decision-making.

G 595 Special Topics 1-9 cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 640 Organizational Behavior 2 cr. Offered autumn. Prereq., admission to the M.B.A. or M.Acct. programs. Professionally oriented strategic overview of intrapersonal, interpersonal, and leadership skills for employees, management, and organizational designers. Topics include diversity, communication, motivation, groups/teams, culture and structure.

G 665 Strategic Management Seminar 2 cr. Offered spring. prereq., admission to the M.B.A. or M.Acct. program and ACTG 605, MIS 574, MGMT 604, MGMT 640 and MKTG 660. Analysis of the firm within its industry and the structure of the industry; competitive positioning and competitor analysis; decision-making under conditions of uncertainty; developing a competitive advantage in international markets.

G 685 International Business 2 cr. Offered spring. Prereq., admission to the M.B.A. or M.Acct. programs. Review and analysis of

international trade theories and institutions, the role of the multinational enterprise (MNE) in global trade and how the MNEs operate in a global setting.

Marketing (MKTG)

U 195 Special Topics 1-6 cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study 1-3 cr. (R-3) Offered every term. Prereq., consent of instr.

U 296 Independent Study 1-3 cr. (R-3) Offered every term. Prereq., consent of instr.

U 298 Internship 1-3 cr. (R-3) Offered every term. Extended classroom experience which provides practical application of classroom learning during placements within the business community. The student must complete a learning agreement with a faculty member, relating the placement opportunity to his or her field of study. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 360 Marketing Principles 3 cr. Offered every term. Prereq., junior standing in Business. The marketing environment product, price, distribution, and promotion strategies including government regulation and marketing ethics.

UG 362 Consumer Behavior 3 cr. Offered autumn and spring. Prereq., junior standing in Business and MKTG 360; PSYX 100S (PSYC 100S) and 230S (PSYC 240S) recommended. A behavioral analysis of consumer decision making and of the factors influencing consumer decisions, i.e., those decisions directly involved with the obtaining of economic goods and services.

UG 363 Marketing Communications 3 cr. Offered autumn and spring. Prereq., junior standing in Business, MKTG 360. An integrated course in promotion strategy. Topics include advertising message design, media selection, promotions, public relations, personal selling, and other selected topics.

UG 366 Marketing Research 3 cr. Offered autumn and spring. Prereq., junior standing in Business, MKTG 360. Emphasis on data acquisition and analysis for improved decision making in marketing. Topics include problem definition; secondary data; primary data via observation, interrogation and experimentation; data analysis; written and oral reports. May include field project.

U 369 Advertising Competition 3 cr. (R-6) Offered intermittently. Prereq., junior standing in Business, MKTG 360. An experiential course in the strategy, research, and execution of an integrated marketing communications plan. Students' work culminates in the American Association of Advertising's National Student Advertising Competition.

U 394 Undergraduate Seminar 1-3 cr. (R-3) Offered intermittently. Prereq., junior standing in Business and consent of instr.

U 395 Special Topics 1-9 cr. (R-9) Offered intermittently. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study 1-6 cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

UG 411 Services and Relationship Marketing 3 cr. Offered intermittently. Prereq., junior standing in Business and MKTG 360. Service marketing integrates marketing concepts and techniques for organizations whose core product is service; topics include quality service delivery, customer attraction and retention, and relationship marketing. Focus is on service fields such as financial, healthcare, and communication services.

UG 412 Nonprofit Marketing 3 cr. Offered intermittently. Prereq., junior standing in Business and MKTG 360. Integration of core concepts of marketing into philanthropic and other nonprofit organizations. Includes strategies for large-scale enterprises such as unions, educational and religious institutions to small organizations that provide local support such as cultural services, human and environmental services. Student work with nonprofit organizations creating marketing communications plans in an experiential learning environment.

U 413 Sports Marketing 3 cr. Offered intermittently. prereq., junior standing in Business, MKTG 360. Examines the marketing of sports products and non-sports products using sports as a platform. Topics include the use of traditional marketing strategies as well as the use of sponsorship strategies including endorsements, venue naming rights, and licensing.

UG 460 Marketing of High-Technology Products and Innovations 3 cr. Offered autumn. Prereq., MKTG 360; marketing major or consent of instr. Exploration of concepts and practices related to marketing in fast-paced environment; draws from a range and diversity of industries and contexts including the Internet.

UG 461 Marketing Management 3 cr. Offered autumn and spring. Prereq., senior standing in Business; MKTG 360, 362, 363, 366. Case analysis in marketing management.

UG 494 Seminar 1-6 cr. (R-6) Offered intermittently. Prereq., junior standing in Business and consent of instr.

UG 495 Special Topics 1-9 cr. (R-9) Offered autumn and spring. Prereq., junior standing in Business or consent of instr. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-6 cr. (R-6) Offered every term. Prereq., junior standing in Business and consent of instr.

U 498 Marketing Internship 1-6 cr. Offered every term. Prereq., junior standing and consent of instr. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 560 Marketing and Applied Business Statistics 3 cr. Offered autumn. Prereq., admission to the M.B.A. or M.Acct. programs or graduate standing with consent of graduate business program director. Introduction to marketing principles to create long-term competitive advantage for an organization. Topics include environmental analysis, marketing planning, segmentation analysis, target marketing, and planning for product, price, promotion and distribution. Business statistic covered including cross-tabs, z-statistics, and the central limit theorem, analysis of variance, regression and correlation analysis.; statistics in context of marketing research and marketing problems.

G 660 Marketing Management 2 cr. Offered autumn. Prereq., admission to the M.B.A. or M.Acct. programs. Marketing decisions faced by managers in a variety of business settings including large corporations, small businesses and not-for-profit organizations.

Master of Business Administration (MBA)

G 601 Career and Leadership Skills Seminar 1 cr. Offered autumn during orientation week. Prereq., admission to the M.B.A. or M.Acct. programs. Provides an intensive orientation and introduction to behavioral skills required to excel in the M.B.A. program and one's business career; structured to create a sense of community among students and faculty and set expectations for future class involvement. Graded only credit/no credit.

G 603 Integrated Project 1 cr. Offered spring. Prereq., admission to the M.B.A. or M.Acct. program and MGMT 665. provides the opportunity to craft strategy, create business models, and integrate tools from previous courses to establish a sustainable competitive advantage in management simulation experience.

G 645 Interpersonal Perspective Seminar Variable cr. (R- 12) Offered every term. Prereq., admission to the M.B.A. or M.Acct. program. Selected topics covering leadership theory and practice, ethics in the workplace, and managerial processes such as motivation, communication, conflict resolution, negotiations, team building, critical thinking, goal setting, and building workforce commitment.

G 655 Technology Perspective Seminar Variable cr. (R-12) Offered every term. Prereq., admission to the M.B.A. or M.Acct. programs. Contemporary issues in information technology with emphasis on how technology is used in business organizations. Topics vary each term and may include electronic commerce on the Internet, decision support technology, electronic media support, advanced spreadsheet applications, accounting applications and quality control systems.

G 694 Seminar Variable cr. (R-15) Offered every term. Prereq., graduate student in business or consent of business graduate director. Selected topics in business.

G 696 Independent Study Variable cr. (R-9) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Directed study of individual or small groups of students in topics not available in scheduled classes.

G 698 Internship Variable cr. (R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director and consent of instr. Placements with private or governmental organizations for practical training in business. Written reports required. Grade option credit/no credit only.

G 699 Thesis Variable cr. (R-6) Offered every term. Prereq., graduate student in business or consent of business graduate director.

Faculty

Professors

- Aaron W. Andreason, Ph.D., Brigham Young University,1975
- Teresa K. Beed, Ph.D., University of Colorado, 1981; C.P.A., Montana, 1973 (Director, M.Acct. Program)
- Gerald E. Evans, Ph.D., Claremont Graduate School, 1985
- Jerry L. Furniss, J.D., University of Idaho, 1980
- Larry D. Gianchetta, Ph.D., Texas A & M, 1974 (Dean)
- Terri L. Herron, Ph.D., University of Texas at Arlington, 1996; C.P.A. Texas, 1987; C.I.S.A., 2000 (Chair, Department of Accounting and Finance)
- Timothy A. Manuel, Ph.D., University of South Carolina, 1988
- Jakki J. Mohr, Ph.D., University of Wisconsin-Madison, 1989
- Jack K. Morton, J.D., The University of Montana, 1971
- Roy W. Regel, Ph.D., University of Colorado, 1985; C.P.A., Colorado, 1973; C.M.A., 1992
- Barbara P. Reider, Ph.D., Kent State University, 1991; C.P.A., Washington, 1992; C.M.A., 1992; C.I.A., 1996; C.F.M., 1998; C.G.F.M., 2002
- Nader H. Shooshtari, Ph.D., Arizona State University, 1983
- Lee N. Tangedahl, Ph.D., University of Colorado, 1976
- Klaus Uhlenbruck, Ph.D., University of Colorado, 1999 (Chair, Department of Management and Marketing)

Associate Professors

- Patrick M. Barkey, Ph.D., University of Michigan, 1986 (Director, Bureau of Business and Economic Research)
- Carol L. Bruneau, Ph.D., University of Arizona, 1997
- Barbara Chaney, Ph.D., University of Georgia, 1997; C.P.A., Illinois, 1983
- Shawn F. Clouse, Ed.D., University of Montana, 2001
- Bruce Costa, Ph.D., Florida State University, 2000
- Anthony J. Crawford, Ph.D., Pennsylvania State University, 1993
- Scott C. Douglas, Ph.D., Florida State University, 2000
- Bambi M. Douma, Ph..D., University of Arizona, 2003 (Director, MBA Program)
- David R. Firth, Ph.D., University of California, Los Angeles, 2003
- Keith J. Jakob, Ph.D., University of Utah, 2000
- Belva L. Jones, Ph.D., Oklahoma State University, 1976 (Chair, Department of Management Information Systems)
- Fengru Li, Ph.D., University of Washington, 1996
- Clayton A. Looney, Ph.D., Washington State University, 2003
- Kenton D. Switft, Ph.D., University of Wisconsin-Madison, 1991; C.P.A., Montana, 1992

Assistant Professors

- Michael R. Braun, Ph.D.., University of Massachusetts, Amherst 2006
- Michael V. Harrington, J.D., The University of Montana, 1990 (Associate Dean)
- Joshua Herbold, Ph.D., University of Illinois, Champaign-Urbana, 2005; C.P.A., Illinois, 1995
- Cameron D. Lawrence, Ph.D., London School of Economics, 2005
- Ronald F. Premuroso, Ph.D., Florida Atlantic University, 2008; C.P.A. Florida, 1976
- Simona Stan, Ph.D., University of Missouri-Columbia, 2001

Emeritus Professors

- Bernard J. Bowlen, Ph.D., Iowa State University, 1954 (Maelstrom Air Force Base)
- Michael R. Brown, J.D., The University of Montana, 1969; C.P.A., Montana, 1963
- Bruce P. Budge, Ph.D., University of Minnesota, 1968; C.P.A., Idaho, 1973
- Mary Ellen Campbell, M.A., University of Illinois, 1969
- Gary L. Cleveland, Ph.D., University of Minnesota, 1986
- Robert J. Connole, Ph.D., University of Iowa, 1968
- Richard T. Dailey, Ph.D., Pennsylvania State University, 1968
- Maureen J. Fleming, Ph.D., Southern Illinois University, 1969
- Robert W. Hollmann, Ph.D., University of Washington, 1973
- Jack J. Kempner, Ph.D., Ohio State University, 1956; C.P.A., Montana, 1957
- Clyde W. Neu, Ph.D., University of Minnesota, 1973
- Paul E. Polzin, Ph.D., Michigan State University, 1968 (Director Emeritus, Bureau of Business and Economic Research)
- Thomas J. Steele, Ph.D., Pennsylvania State University, 1974
- Norman E. Taylor, Ph.D., University of Minnesota, 1955
- Joseph A. Weber, Ph.D., University of Minnesota, 1983; C.P.A., Montana, 1975
- Richard P. Withycombe, Ph.D., University of Oregon, 1972

Department of Management Information Systems

Belva L. Jones, Chair

The Department of Management Information Systems offers a major in Major Information Systems within the Bachelor of Science in Business Administration.

Management Information Systems Major

The management information systems curriculum prepares students to manage an organization's information resources. The major focuses on:
1) analyzing and managing the flows of information within and across the organization's business processes;
2) effectively managing the acquisition and utilization of information technology; and
3) using both information and information technology to enhance the organization's strategic advantage.

The knowledge and skills developed in the curriculum lead to careers in consulting, programming, systems analysis and design, database administration, e-commerce, telecommunications, network administration, and project management.

Basic Requirements for Information Systems Major

Required:	Credits
MIS 370 Database Management Systems	3

MIS 371 Business Applications Development	3
MIS 372 Telecommunications Management	3
MIS 373 Systems Analysis and Design	3
MIS 476 Project Management	3
MIS 498 Information Systems Internship or MIS 491 Information Systems Practicum	3
Choose two courses (6 credits) from the following:	
MIS 471 Fundamentals of Network Management	
MIS 472 Advanced Network Management	
MIS 474 Quality Management Systems	
MIS 475 Advanced Technology Support	
MIS 477 Multimedia Development for Business	
MIS 478 Electronic Commerce	
MIS 479 Introduction to Consulting	
MIS 495 Special Topics(up to 6 credits)	
MIS 496 Independent Study (up to 6 credits)	
MKTG 460 Marketing of High-Technology Products and Innovations	
ACTG 321 (ACCT 310) Accounting Information Systems I	
Upper-division computer science (up to 6 credits)	
C&I 341 Information Management and Design	
C&I 444 Advanced Technology and Supervision	
CS 181 Electronic Publishing on the World Wide Web	
M 361 (MATH 381) Discrete Optimization	
M 362 (MATH 382) Linear Optimization	

NOTE: Students completing their major with lower-division classes still must earn a total of 39 upper-division credits to fulfill University requirements.

Department of Management and Marketing

Klaus Uhlenbruck, Chair

The Department of Management and Marketing offers three majors within the Bachelor of Science in Business Administration: International Business, Management, and Marketing.

International Business Major

The international business major provides students with the opportunity to focus on the managerial, economic, cultural, political and social dimensions that will prepare them for functioning in a global business community.

Basic Requirements for International Business Major

Required	Credits
MGMT 368 International Business	3
MGMT 480 Cross-Cultural Management	3
FIN 473 Multinational Financial Management and Accounting	3
And one of the following:	
MGMT 465 World Trade and Commerce	3
MGMT 485 Seminar in Contemporary International Issues	3

Plus the completion of all of the requirements for at least one other functional major area within the School of Business Administration (Accounting, Finance, Information Systems, Management, or Marketing).

Plus 6 credits, approved by the business school's international faculty advisor, and selected from internationally-focused courses, an international exchange, an international internship, or a study abroad program. Students should consider an area/cultural focus, such as Japan, China, Western Europe, Central Europe, Eastern Europe.

Plus four semesters or the equivalent (as determined by the Department of Modern and Classical Languages and Literatures) of any one foreign language is required. It is recommended that students complete the foreign language by the end of their junior year.

Management Major

The management major is designed to provide students with the interpretative, analytical, and integrative skills required in managerial positions in a variety of business and nonprofit organizations.

Basic Requirements for Management Major

Required	Credits
MGMT 344 Human Resource Management	3
MGMT 348 Entrepreneurship	3
MGMT 368 International Business	3
MGMT 420 Leadership and Motivation	3
MGMT 444 Management Communication	3
Plus three (3) courses from the following:	
MGMT 401 Event Management	3
MGMT 402 Principle of Entertainment Management I	3
MGMT 403 Principle of Entertainment Management II	3
MGMT 430 Business Negotiations	3
MGMT 320E Business Ethics	3
MGMT 449 Business Plan Implementation	3
MGMT 458 Advanced Entrepreneurship Seminar	3
MGMT 465 World Trade and Commerce	3
MGMT 480 Cross-Cultural Management	3
MGMT 485 Seminar in Contemporary International Issues	3
MGMT 495 Special Topics	3
MGMT 498 Management Internship	3 only
Courses recommended outside of Business:	
PSYX 360S (PSYC 350S) Social Psychology*	3
ECNS 312 (ECON 323) Labor Economics*	3
ECNS 324 (ECON 324) Industrial Relations*	3

*Check course descriptions for prerequisites.

Marketing Major

The marketing major provides students with knowledge and skills required in the process of marketing products, services, or ideas. The contemporary role of marketing in society is treated from various perspectives, including functional and institutional analysis, along with the application of decision making tools.

Basic Requirements for Marketing Major

Required	Credits
MGMT 368 International Business	3
MKTG 362** Consumer Behavior	3
MKTG 363** Marketing Communication	3
MKTG 366** Marketing Research	3
MKTG 461 Marketing Management	3
Nine (9) credits from the following:	
MKTG 369 Advertising Competition	3-6
MKTG 410 Marketing Channels	3
MKTG 411 Services and Relationship Marketing	3
MKTG 412 Nonprofit Marketing	3
MKTG 460 Marketing of High-Technology Products and Innovations	3
MKTG 495 Special Topics	3
MKTG 498 Marketing Internship	3 only
MGMT 444 Management Communication	3
Courses recommended outside of Business:	
PSYX 360S (PSYC 350S) Social Psychology*	3
RECM 483 Commercial Recreation, Marketing and Tourism*	3
MAR 111A Fundamentals of Media Arts Production	3
CS 181 Electronic Publishing on the World Wide Web	3

*Please check course descriptions for prerequisites.

**MKTG 362, 363, and 366 are prerequisites for MKTG 461.

Suggested Course of Study

For all business majors:

First Year	A	S
MIS 100S Introduction to Business	3	-
COMM 111A Introduction to Public Speaking	-	3
CS 172 Computer Modeling	-	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3	-
ECNS 202S (ECON 112S) Principles of Macroeconomics	-	3
WRIT 101 (ENEX 101) Composition	3	-
M 115 (MATH 117) Probability and Linear Math	3	-
OR for Finance majors, M 162 (MATH 150), Applied Calculus	4	-
Electives or General Education	3	6
	15-16	15
Second Year	**A**	**S**
ACTG 201 (ACCT 201) Principles of Financial Accounting	3	-
ACTG 202 (ACCT 202) Principles of Managerial Accounting	-	3
STAT 216 (MATH 241) Introduction Statistics	4	-
MIS 257 Business Law	-	3
MIS 270 Management Information Systems	-	3
Electives and General Education	8	6
	15	15

Individual programs may differ from the suggested course of study to better accomplish the needs of the particular student.

Department of Communicative Science and Disorders

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Al Yonovitz, Chair

Graduates of the Undergraduate Program in Communicative Sciences and Disorders are equipped to pursue graduate study in speech-language pathology, audiology, various education specialties, business, and health care as well as such fields as developmental and cognitive psychology.

Both speech-language pathology and audiology require graduate-level degrees for professional practice. Students who graduate with a Bachelor of Arts degree and prefer not to enter a graduate program often pursue careers in fields that include human services, education, and business.

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Requirements for a Bachelor of Arts with a major in Communicative Sciences and Disorders

To graduate with a degree in Communicative Sciences and Disorders, the student must complete 42 total CSD credits with 30 of those credits in courses numbered 300 or above. Students must also successfully complete all out of department required courses (see below). The Upper division Writing Expectation must be met by successfully completing CSD 430 and 440.

Required courses within Department (42 crs.):

- CSD U 110 - The Field of CSD.....3
- CSD U 210 - Speech and Language Development.....3
- CSD U 221 - Fundamentals of Acoustics: Applications in Speech, Hearing & Language.....3

- CSD U 222 - Introduction to Audiology.....3
- CSD U 310 - The Clinical Process.....3
- CSD U 320 - Phonological Development and Phonetics.....3
- CSD U 330 - Anatomy and Physiology of the Speech and Hearing Mechanisms.....3
- CSD U 340 - Foundations of Speech Disorders.....3
- CSD U 360 - Language Disorders.....3
- CSD U 411 - Neuroanatomy and Physiology for Communication.....3
- CSD U 420 - Speech Science.....3
- CSD U 430 - Senior Capstone I.....3
- CSD U 440 - Senior Capstone II.....3
- CSD U 450- Aural Rehabilitation.....3

Out of Department required courses (19-20 crs.)

- BIOL 100N or 110N - The Science of Life or Principles of Biology.....3-4
- COMM 173 - Language Culture and Society.....3
- STAT 216 (MATH 241) - Introduction to Statistics.....3
- PSYX 100S (PSYC 100S) - Introduction to Psychology.....4
- PSYX 120 (PSYC 120) - Research Methods I.....3
- PSYX 230S (PSYC 240S) - Developmental Psychology.....3

Elective courses within Department:

- CSD U 350 - Introduction to Clinical Audiology.....3
- CSD U 370 - Issues in Hearing Loss.....3
- CSD UG 480 - Multicultural Issues in Speech, Language and Hearing.....3
- CSD U 490 - Undergraduate Clinical Practicum.....3
- CSD U 495 - Special Topics.....3
- CSD U 497 - Independent Research.....3

Elective courses out of Department:

- LING 270S - Introduction to Linguistics.....3

Suggested Course of Study

First Year	**A**	**S**
CSD 110 The Field of CSD	3	-
PSYX 100S (PSYC 100S) Introduction to Psychology	-	4
M 115 (MATH 117) Probability and Linear Math	-	3
WRIT 101 (ENEX 101) College Writing I	3	-
COMM 173 Language, Culture and Society	-	3
BIOL 100N The Science of Life	3	-
General Education/Electives	6	6
Total Credits	**15**	**16**
Second Year		
CSD 210 Speech & Language Development	3	-
CSD 221N Foundations of Acoustics	3	-
CSD 222 Introduction to Audiology	-	3
CSD 330 Anat & Phys Speech Mech	-	3
PSYX 230S (PSYC 240S) Developmental Psychology	3	-
PSYX 120 Research Methods I	-	3
General Education/Electives	6	6
Total Credits	**15**	**15**
Third Year		
CSD 310 Clinical Process	-	3
M 216 (MATH 241) Introduction to Statistics	4	-
CSD 320 Phono Devel & Phonetics	3	-
CSD 340 Foundations Speech Disorders	-	3
CSD 360 Foundations of Language Disorders	-	3
General Education/Electives (Students must complete 9 total upper-division credits outside of the CSD major)	9	6
Total Credits	**16**	**15**

Fourth Year		
CSD 411 Neuroanatomy & Physiology for Comm	3	-
CSD 430 Senior Capstone I	3	-
CSD 420 Speech Science	-	3
CSD 440 Senior Capstone II	-	3
CSD 480 Multicultural Issues (recommended for graduate studies)	3	-
CSD 450 Aural Rehabilitation	-	3
Electives (Students must complete 9 total upper-division credits outside of the CSD major)	6	6
Total Credits	**15**	**15**

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Communicative Sciences and Disorders (CSD)

U 110 The Field of Communicative Sciences and Disorders 3 cr. Introduction to the scientific study of human communication and its disorders and to the professions of Speech-Language Pathology and Audiology. Overview of biological systems of speech, language, and hearing and the nature and treatment of communication disorders.

U 210 Speech and Language Development 3 cr. Topics include typical speech and language development, phonology, semantic, morphological, syntax, and pragmatics, along with individual differences, second language acquisition and literacy.

U 221N Fundamentals of Acoustics: Applications in Speech, Hearing and Language 3 cr. Provides students with a basic and working knowledge of acoustics and the physics of sound. Provides the basis for measurement and description of speech stimuli. Direct application to Speech Hearing and Language intervention as well as application into communicative sciences.

U 222 Introduction to Audiology 3 cr. Introduction to principles of acoustics as a basis for understanding hearing assessment. Development of ability to interpret audiograms as well as the results from a hearing evaluation. Includes pure tone and speech audiometry, acoustic immittance and reflex testing. Hearing screening procedures are also included.

U 310 The Clinical Process 3 cr. Underlying principles of clinical methods and practice including the observation of human behavior and clinical processes, assessment of communication differences, and clinical management of these differences, delays and disorders, behavior, interviewing/counseling, lesson planning and writing skills.

U 320 Phonological Development and Phonetics 3 cr. Exploration of the sounds and sound structure of American English and some of its dialects. Introduction to the theory and practice of phonetic and phonological analysis and trained in the transcription of speech into the International Phonetic Alphabet.

U 330 Anatomy and Physiology of the Speech and Hearing Mechanisms 3 cr. Prereq., CSD 210. Introduction to anatomy and physiology of the speech and hearing mechanisms including the anatomical orientation and embryological development, the breathing mechanism, structures of phonation, articulators, audition and the nervous system.

U 340 Foundations of Speech Disorders 3 cr. Nature of various speech disorders and basic understanding of principles underlying assessment and treatment of these disorders.

U 350 Introduction to Clinical Audiology 3 cr. Theoretical background of clinical audiology, application of tests, and clinical assessments (observations and testing).

U 360 Language Disorders 3 cr. Identification, assessment, and intervention for a variety of childhood and adult language disorders. Other topics include secondary conditions, potential developmental, psychosocial and educational concerns, multicultural considerations, and family roles.

U 370 Issues n Hearing Loss 3 cr. Reviews the basic principles of hearing and hearing loss. Explores the principles of basic audiologic rehabilitation, amplification technology and cochlear implants. Includes psychosocial aspects of hearing loss, counseling, communication modalities and deaf culture.

U 411 Neuroanatomy and Physiology for Communication 3 cr. Prereq., CSD 330 and BIOL 100N or 110N. Focused study on the anatomy of the nervous system and how the nervous system supports behaviors inherent to communication. Students will be introduced to anatomical terms, structures, and functions. Clinical implications will be discussed as well.

U 420 Speech Science 3 cr. Physiologic, neurologic, and acoustic aspects of human communication, theoretical framework for speech science, and principles of acoustics applied to speech pathology.

U 430 Senior Capstone I 3 cr. Part one of a two course sequence where the student completes an independent project. Students will prepare a literature review, and ethics application, and a proposal in preparation for a major research project of their design.

U 440 Senior Capstone II 3 cr. Prereq., CSD 430. Part two of a two course sequence where the student completes an independent research project. Students research and write about a topic of their choice and present their findings at the end of the semester.

U 450 Aural Rehabilitation 3 cr. Fundamental skills in speech reading and various types of hearing aids, and the tools necessary to assess and implement auditory training. Both children and adults are included.

UG 480 Multicultural Issues in Speech, Language and Hearing 3 cr. Topics include: dynamics of community and culture; strategies to communicate with people from a variety of backgrounds; learning English as a second language; and phonological and linguistic analysis of differences between Standard English speakers and culturally diverse populations. International differences in service delivery.

U 490 Undergraduate Clinical Practicum 1-3 credits (per semester) Prereq., CSD 310, lower division CSD courses, and consent of CSD Clinical Director. A maximum of 5 credits of clinical practicum may count toward graduation. Allows the advanced student an opportunity to pursue independent or small group clinical practicum. Students will be directly supervised by a certified speech and language pathologist or audiologist.

U 495 Special Topics 3 cr. Offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 497 Independent Research 3 cr. Offered autumn and spring. Prereq., consent of instructor.

Faculty

Associate Professors:

- Al Yonovitz, Ph.D. CCC-A, MaudSA (University of Connecticut, 1973 (Chair)

Associate/Assistant Professors

- Lucy Hart Paulson, Ed.D., CCC-SLP (The University of Montana. 2004)
- Amy Glaspey, Ph.D., CCC-SLP (The University of Washington, 2006)
- Jodi Klein, MS, CCC-SLP (Ph.D. pending, The University of North Dakota)
- Ginger C. Collins, MS, CCC-SLP (Ph.D. pending, Louisiana State University)

Clinical Faculty

- Christine Merriman, M.A., CCC-SLP (The University of Montana, 1979)
- Rose Mary Johnson, M.S., CCC-SLP (West Virginia University, 1980)

Counselor Education

- Courses
- Faculty

Rita Sommers-Flanagan, Chair

The Counselor Education program educates students for employment in school (K-12 and higher education) and community mental health and human service settings. Counselors are systems, family and individual consultants, practitioners and coordinators who assist in problem solving, decision-making skills, personal growth and development, and individual, family school, and/or career issues. Counselors receive training in the eight core areas identified by the American Counseling Association Council for Accreditation of Counseling and Related Educational Programs: human growth and development, social and cultural foundations, the helping relationship, group theories and methods, career and lifestyle development, client assessment and evaluation, research and program evaluation, and professional orientation. Student may focus on School Counseling (M.A.) or Agency (Mental Health) Counseling (M.A.). Each option requires additional specialty courses and comprehensive written and oral examinations focused on the student's career track. The more advanced graduate degrees (Ed.S. and Ed.D.) develop depth, supervisory, and leadership skills in these areas.

Graduate Programs: The M.A., Ed.S., and Ed.D. are offered in Counselor Education. Information regarding specific requirements and program options is available from the School of Education. For more information, please refer to The University of Montana Graduate Programs and Admissions Catalog. Graduate programs are accredited by NCATE and CACREP.

Admission to Counseling: Applicants for this program should contact the Department for more specific admissions information. Requirements include GRE verbal and quantitative less than 5 years old; official transcripts from all undergraduate and graduate institutions attended; three current letters of recommendation; and a letter of application stating academic and professional background, purpose in obtaining the degree, and thoughts about eventual employment and career direction. Deadline is February 1. Admission is competitive. Meeting graduate school minimum grade average and GRE requirements will not necessarily insure acceptance.

Certification Requirements: The Counselor Education, M.A., School Counseling option, leads to licensure at the Class IV level.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Counselor Education (COUN)

UG 475 Forgiveness and Reconciliation 3 cr. Offered spring. Survey of the theory and practice of healing fractured relationships at the individual and community levels, treating historical and personal issues from philosophical, psychological and religious perspectives drawn from several diverse cultures.

U 485 Counseling Theories in Context 3 cr. Offered fall. Prereq., PSYX 100S (PSYC 100S). Same as PSYX 442 (PSYC 485) and SW 485. Introduction to the primary theories that constitute the intellectual foundation for common counseling and psychotherapy techniques, with a special focus on gender, interpersonal influence strategies, and diversity issues.

UG 495 Special Topics 1-9 cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 511 Theories and Techniques of Counseling 3 cr. Offered autumn. Examination of historic and current theories of counseling. Overview of techniques associated with each theory. Basic introduction to ethical concerns with each theory.

G 512 Counseling Fundamentals 3 cr. Offered spring. Prereq., COUN 511. Overview of approaches to counseling, including common factors. Includes meta-theoretical considerations and guided dyadic practice.

G 520 Group Counseling and Guidance 3 cr. Offered autumn. Prereq., COUN 511. Theories, approaches, and methods for group counseling and guidance.

G 530 Applied Counseling Skills 2 cr. Offered autumn and spring. Prereq., COUN 511, 512 and consent of instr. Review and application of counseling theories and techniques to client issues. Intensive supervision including ethics, professional practice and diagnostic considerations. Lecture and class presentation with a focus on professional counseling development.

G 540 Individual Appraisal 3 cr. Offered spring. Prereq., C&I 517 or consent of instr. Overview of appraisal techniques utilized in counseling, including interviewing, observation, and psychological/educational testing. The processes of selection, administration, scoring, interpretation, and reporting information from appraisal techniques are examined in relation to practical, legal, and ethical considerations.

G 550 Introduction to Family Counseling 3 cr. Offered spring. Prereq., admission to Counselor Education program or consent of instr. An introduction to the major theories, techniques, and diagnostic tools of family counseling. Course includes a family systems emphasis.

G 560 Lifespan Developmental Counseling 3 cr. Offered spring. Overview of counseling from the framework of lifespan developmental theory. Normal and abnormal development in the environmental context of family, school, society and culture emphasized.

G 565 School Counseling, Program Development and Supervision 3 cr. Offered spring. Prereq., graduate standing or consent of instr. Examination of counseling techniques and approaches relevant to prevention and remediation of behavioral, social, emotional and academic problems for students P-12. Overview of school counseling program development and administration.

G 566 Counseling Children and Adolescents 3 cr. Offered every spring.. Prereq., COUN 511, 512, 565 or consent of instr. Review and application of counseling concerns and approaches with children and adolescents in school and related educational settings, including classroom and psychoeducational strategies.

G 570 Career Counseling Theory and Techniques 3 cr. Offered spring. Examination of theories of career choice and development; information sources for career counseling; techniques and approaches of career counseling with clients at different stages of career and life development and from diverse populations.

G 575 Multicultural Counseling 3 cr. Offered autumn. Prereq., graduate standing or consent of instr. An introduction to the field of multicultural counseling. Issues and practical considerations in counseling five population groups; definition of terms and concepts.

G 580 Chemical Dependency Counseling 2 cr. Offered autumn. Prereq., admission to Counselor Education program or consent of instr. Understanding chemical dependency and its treatment. Development of school/community programs for prevention and remediation. Counseling techniques and methods. Understanding the addictive process.

G 585 Counseling Methods: School and Agency 1-9 cr. Offered every term. Prereq., COUN 511, 512. Supervised counseling methods and theories as applied in mental health agencies and schools. Review of the principles of counseling as these apply to various settings and client issues.

G 589 Comprehensive Project 2 cr. Offered autumn and spring. Integration of professional experience and academic research in a

comprehensive paper or applied project. Students may elect to have an oral examination covering the eight CACREP core areas of counseling.

G 594 Seminar Variable cr. (R-9) Offered intermittently. Prereq., consent of instr. Group analysis of problems in specific areas of professional counseling.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6) Offered intermittently. Prereq., consent of instr.

G 597 Research Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

G 610 Professional Ethics and Orientation 3 cr. Offered autumn. Prereq., COUN 530 or consent of instr. The public and institutional roles and responsibilities of counseling professionals including ethical and legal responsibilities.

G 615 Diagnosis and Treatment Planning in Counseling 3 cr. Offered autumn. Prereq., COUN 512. Overview of diagnosis, treatment planning and case documentation in counseling.

G 625 Introduction to Mental Health Systems 3 cr. Prereq., acceptance into Counselor Education program mental health track. Essential knowledge for professional identity, understanding of public policy, and community assessment procedures. Includes brief lectures, guest speakers, discussion, and student presentations.

G 633 Supervision and Consultation in Counseling: Advanced Practicum 2-4 cr. (R-4) Offered spring. Prereq., COUN 530. Approaches and techniques for supervision and consultation in counseling. Supervised experience with first year counselor education graduate students.

G 685 Advanced Counseling Methods: School and Agency 2-9 cr. (R-9) Offered every term. Prereq., COUN 585. Supervised advanced counseling methods and approaches as applied to mental health agencies and schools.

G 699 Thesis/Professional Paper 2-10 cr. (R-10) Offered intermittently. Prereq., EDLD 620 or 625.

Faculty

- Catherine Jenni, Ph.D., Saybrook Institute, 1990
- Rita Sommers-Flanagan, Ph.D., The University of Montana, 1986 (Chair)

Associate Professors

- John Sommers-Flanagan, Ph.D., The University of Montana, 1986

IYFD Faculty and Adjunct Professors

- Lynne Sandford Koester, Ph.D., The University of Wisconsin, 1976 (Director IYFD)
- Otto Koester, M.A., The University of Wisconsin, 1974
- Nancy Seldin, Ed.D., The University of Montana, 1992, MPH, 1976
- Mike Frost, M.A.
- Gary Hawk, Ed.D.
- Sally Woodruff, M.Div.

Department of Curriculum and Instruction

- Elementary Education Requirements
- Secondary Licensure Requirements
- Courses
- Faculty

Ann N. Garfinkle, Chair

The Department of Curriculum and Instruction offers the Bachelor of Arts in Education degree and teaching licensure in elementary education. As well, it offers teaching licensure at the secondary level for students who are earning or already have completed the baccalaureate degree in one of the following state-approved content endorsement areas: Art, Biology, Business and Information Technology Education, Chemistry, Drama, Earth Science, Economics, English, English as a Second Language, French, General Science Broadfield Major, Geography, German, Government, Health and Human Performance, History, Latin, Mathematics, Music, Physics, Psychology, Russian, Comprehensive Social Science, Sociology, and Spanish. (See specific requirements for each in the following pages.) At the graduate level, the department offers the masters and doctoral degrees in Curriculum and Instruction. Programs across all degree levels are organized to foster the development of learning communities and incorporate three basic themes: integration of content knowledge and

experience; collaboration among participants; and inclusiveness, caring, and respect for the individual. The Web address for the Department of Curriculum and Instruction is http://www.soe.umt.edu/currinst/default.html

Graduate Programs

The department offers the Master of Education (M.Ed.) in curriculum and instruction. Students select from one of the following options: curriculum studies, elementary education, library-media services, literacy education, secondary education and special education. Students may also earn the masters degree in combination with requirements for initial teacher licensure at the elementary and secondary levels. This option is further explained below. The department offers as well the Doctor of Education (Ed.D.) in curriculum and instruction. Information about these graduate programs is available from the department office, UM Graduate Programs and Admissions Catalog, and online: www.soe.umt.edu/currinst/graduate.html.

Teacher Preparation

Elementary Education

Individuals preparing to teach in elementary school (license for grades K-8) complete a major in elementary education. Prior to their admission to the Teacher Education Program, usually at the end of the sophomore year, students are pre-education majors and are advised by the pre-education advisor in the College of Education and Human Services. Upon admission to the program, students become elementary education majors and are advised by faculty within the Department of Curriculum and Instruction.

Secondary licensure

Students preparing to teach at the middle or high school levels (license for grades 5-12) will declare a major in the subject area(s) they wish to teach, e.g., English, mathematics, or any other of the state-approved major content endorsement areas listed above. They are advised within their major department(s) and, upon admission to the Teacher Education Program, they also are advised within the Department of Curriculum and Instruction regarding the requirements necessary to earn secondary licensure. All secondary licensure students seek admission to the Teacher Education Program, usually at the end of the sophomore year, and complete course work required for licensure in Curriculum and Instruction and in their major content area(s).

Applicants for Montana teaching licensure must: (1) satisfy all degree and licensure requirements as outlined below; and (2) be at least 18 years of age. Information about the Teacher Education Program is available in the department office and online at: http://www.soe.umt.edu/

Masters Degree and Initial Licensure

Individuals who have completed a degree may elect to apply to the department's Graduate Program and combine the masters degree in curriculum and instruction (curriculum studies option) with licensure to teach. At the secondary licensure level, the combined program may be completed in a summer-autumn-spring-summer sequence provided the student previously has completed most of the content courses listed on the following pages by subject area. At the elementary licensure level, the program typically takes two academic years.

Assessment at Admission to the Undergraduate Teacher Education Program

Individuals seeking licensure to teach must apply for admission to the professional Teacher Education Program. Admission is limited to approximately 125 elementary and 125 secondary candidates per year. Deadlines for application are September 15 and February 15. Individuals are eligible for consideration for admission if they have:

- been admitted to The University of Montana;
- completed at least 30 semester credits;
- earned a minimum cumulative GPA (including all transfer credits) of 2.75;
- demonstrated evidence of writing ability as in an application essay
- documented appropriate experience in working with children or youth;
- secured supportive recommendations from two faculty members; and
- presented results of a national finger print based background check.

The Teacher Education Admission Application packet includes a policy and procedures handbook and is available from the UC Bookstore or can be downloaded from the website: http://www.soe.umt.edu/currinst/default.html.

Once admitted, licensure candidates must maintain a minimum GPA of 2.75 each semester to continue in the program. Candidates who interrupt their studies for more than two years are placed on inactive status and must request to resume their studies.

Candidates seeking a K-12 endorsement in library-media, literacy, or special education must have full admission to the Teacher Education Program or be a licensed teacher before applying to one of these specialized programs.

Degree-holding individuals are invited to submit transcripts for review to determine how previous course work applies. They may earn a second baccalaureate degree and/or a teaching license, or they may combine elementary or secondary licensure with a masters degree. They should enroll with the Admissions Office as "post-baccalaureate" unless pursuing a graduate degree.

Admission Policy for Minority Students and Students with Disabilities

The Teacher Education Program is committed to providing opportunities for teacher preparation for members of groups that historically have been disadvantaged and subject to discrimination. The criteria for admission are the same for students with disabilities and for members of racial, ethnic and other minorities, as for other students; however, students who do not meet one or more of the criteria for admission are encouraged to describe in their applications any special circumstances, experiences, skills and/or special talents that may compensate for unmet criteria. The physical, social, economic, and cultural circumstances that may have influenced a student's ability to achieve minimum eligibility for admission will be considered. A special effort will be made to determine the student's abilities and potential to overcome disadvantage or discrimination and become a successful beginning teacher. Upon entry to the program, the candidate will be assigned to a faculty mentor. The candidate and mentor will design a course of study appropriate for the candidate's progression toward the degree and/or licensure.

Assessment at Application for Student Teaching

Candidates begin planning for student teaching two semesters prior to placement. Candidates are eligible to student teach if they have:

- full admission into the Teacher Education Program;
- a grade of C- or better in all required licensure courses;
- a minimum cumulative GPA of 2.75 (and 2.75 in each field of licensure);
- a passing score on the Writing Proficiency Assessment;
- results of a current national finger print based background check (candidates with misdemeanors or felonies may be subject to further review by the Field Experience Committee);
- a completed application to student teach and the consent of the Director of Field Experiences;
- for elementary education majors, the Professional Methods Block, a minimum of 9 credits in the selected area of concentration, a minimum of 9 credits from the following: ART 314, DAN 327, DRAM 327, HHP 339, and MUS 335; and approval by advisor;
- for secondary licensure candidates, all methods courses, two thirds of content course work, and approval by departments in the major/minor content area.

Consult the Teacher Education Policy Handbook for application deadlines and procedures. The Student Teaching Application is available in the UC Bookstore and on the School of Education web page www.soe.umt.edu/formspage.html. Internships and practica in library-media, reading, and special education do not substitute for the student teaching semester required for licensure in a subject field.

Assessment at Program Completion:

As active participants in this learning community, candidates are expected to assume roles as both learners and teachers in course work and clinical performance. Through personal disposition, classroom performance, and professional action, candidates who complete the teacher preparation program at The University of Montana will be able to:

- demonstrate knowledge of the disciplines and subject matter related to curriculum;
- design and organize learning environments to accommodate learners;
- design interdisciplinary and discrete subject area instruction to achieve curriculum goals;
- use appropriate technologies and resources to enhance instruction and student performance;
- select and design appropriate, authentic means of assessing student learning and progress;
- implement instructional and behavioral management strategies to promote a safe and positive learning environment;
- engage students in learning activities that promote critical and creative thinking;
- communicate clearly, accurately and professionally to diverse audiences;
- reflect on professional practices and demonstrate commitment to fulfilling responsibilities.

Indian Education for All

It is Montana's constitutional intent that the state's education system will recognize the distinct and unique cultural heritage of American Indians and will be committed in its education goals to the preservation of their cultural heritage. The intent of the legislature as expressed in MCA20-1-501, Indian Education for All, is that every Montanan, whether Indian non-Indian, be encouraged to learn about the distinct and unique heritage of American Indians in a culturally responsive manner. It is also intended that educational personnel provide means by which school personnel will gain an understanding for the American Indian people.

Candidates preparing for teaching licensure in all endorsement areas are required to complete a minimum of one course in Native American Studies. Candidates also may choose ANTH 323X, Indians of Montana, to meet this requirement. Throughout their programs of study candidates must demonstrate a) ability to integrate into their content areas knowledge of the history, cultural heritage, and contemporary status of American Indians and tribes in Montana; b) knowledge of how students within different populations, including Montana American Indians, differ in their approaches to learning; and c) ability to create instructional opportunities that are adapted to diverse learners, including situations where concentrated generational poverty has affected student academic achievement.

Elementary Education Degree and Licensure Requirements (Grades K-8)

To qualify for the Montana elementary teaching license, candidates must earn a baccalaureate degree from the University or other approved institution of higher education. The degree in elementary education requires a minimum of 128 credits as specified below. Candidates must complete all specific requirements listed below with a grade of "C-" or better. None of these courses may be taken as credit/no credit except where that is the only grading option.

Elementary education majors meet the upper-division writing expectation by successfully completing C&I 318. Majors must pass the Writing Proficiency Assessment prior to enrolling in C&I 318.

Elementary education candidates must complete a 12-credit minimum area of concentration, selected from one of the following six categories: (1) English/language arts, including reading/literary analysis; (2) fine arts; (3) health and human performance; (4) mathematics; (5) science; and (6) social science.

Candidates interested in preparing to teach K-3 are encouraged to take C&I 330 Early Childhood Education. Those interested in teaching 4-8 are encouraged to take PSYX 230S (PSYC 240S), Child and Adolescent Development.

See the Teacher Education Policy Handbook for additional information regarding the elementary education program, including options and requirements for completing the area of concentration.

Curriculum for Elementary Education

First and Second Years	**Credits**
WRIT 101 (ENEX 101) College Writing I	3
SCI 225N, 226N General Science	10
HHP 233 Health Issues of Children and Adolescents	3
PSYX 100S (PSYC 100S) Introduction to Psychology	4
PSCI 210S (PSC 100S) Introduction to American Government	3
HSTA 255 (HIST 269) Montana History	3
GPHY 121S (GEOG 101S) Introduction to Human Geography OR GPHY 141S (GEOG 103S) World Regional Geography	3
M 135-136 (MATH 130-131) Math for K-8 Teachers I & II	9
SCI 350 Environmental Perspectives	2
Selected history course (HSTA 101 or 102 (HIST 151 or 152) recommended)	3-4
Selected literature course	3-4
Native American Studies course	3
Current Standard First Aid and CPR certificates OR HHP 288/289	0-3
Area of concentration	12
"l" Literature Writing course	3
Third and Fourth Years	
*Block I:	
C&I 200 Exploring Teaching Through Field Experiences	1
C&I 303 Educational Psychology and Measurements	3
C&I 306 Instructional Media and Computer Applications	3
C&I 410 Exceptionality and Classroom Management	3
**Block II:	
C&I 300 Field Experience/Elem Language Arts	1
C&I 316 Children's Literature and Critical Reading	3
C&I 318 Teaching Language Arts K-8	3
**Block III:	
C&I 400 or 401 Elem Methods Field Experience: Grades K-3 or 4-8	1
C&I 402 Teaching Mathematics K-8	3
C&I 403 Teaching Social Studies K-8	3
C&I 404 Teaching Science K-8	3
C&I 405 Teaching Reading K-8	3
ART 314A Elementary School Art	3
DAN 327 Dance in Elementary Education	2
DRAM 327 Drama in Elementary Education	2
HHP 339 Instructional Strategies in Elementary Health and Physical Education	3
MUS 335 Music Education in the Elementary School	3
C&I 407E Ethics and Policy Issues	3
C&I 481 Student Teaching: Elementary	14
C&I 494 Professional Portfolio	1
Electives and General Education	0-3

*Candidates are encouraged to enroll concurrently in the courses listed in Block I.

**Candidates are required to enroll concurrently in the courses listed in Block II. Students are required to enroll concurrently in the same section of all courses in Block III.

Candidates may add other courses as necessary to complete a full semester course load. This blocked format allows for integration of curriculum, modeling of cooperative learning and collaborative teaching, and corresponding developmental field experiences.

Secondary Teaching Licensure Requirements (Grades 5-12)

To qualify for the Montana secondary teaching license, individuals must earn a baccalaureate degree from the University of Montana or other approved institution of higher education in the content area(s) they plan to teach at the middle and/or high school level. They also must complete the corresponding requirements for the teaching major/minor (see below). If the chosen major does not qualify as a single-field endorsement, individuals also must complete requirements for a teaching minor. All requirements listed below must be completed with a grade of C- or better. None of these courses may be taken credit/no credit except where that is the only grading option.

Candidates should seek advising from both the degree-granting departments and the Department of Curriculum and Instruction. Candidates are encouraged to complete licensure in more than one teaching field, even if the chosen field qualifies as a single-field endorsement.

See the Teacher Education Policy handbook for additional information regarding the secondary licensure program.

Curriculum for Secondary Licensure

First and Second Years	Credits
WRIT 101 (ENEX 101) College Writing I	3
PSYX 100S (PSYC 100S) Introduction to Psychology	4
HHP 233 Health Issues of Children and Adolescents	3
Current Standard First Aid and CPR certificates or HHP 288/289	0-3
Native American Studies course	3
Electives, General Education and/or Courses in Major and/or Minor Teaching Field(s)	Variable
Third and Fourth Years	
*Block I:	
C&I 200 Exploring Teaching through Field Experiences	1
C&I 303 Educational Psychology and Measurements	3
C&I 306 Instructional Media and Computer Applications	3
C&I 410 Exceptionality and Classroom Management	3
Block II:	
C&I 301 or 302 Professional Field Experience: Grades K-8 or 9-12 (coreq with content area methods course)	1
C&I 427 Literacy Strategies in Content Areas	3
Teaching field(s) methods course(s)	Variable
C&I 407E Ethics and Policy Issues	3
C&I 482 Student Teaching: Secondary	14
C&I 494 Professional Portfolio	1

* Candidates are encouraged to enroll concurrently in the courses listed as "blocked" in each of two professional semesters. They add other courses as desired or necessary to complete a full semester course load. This blocked format allows for integration of curriculum, modeling of cooperative learning and collaborative teaching, and corresponding developmental field experiences.

Licensure in Library Media: The library media program is designed to prepare library media specialists for K 12 settings. This on-line program is combined with that of UM-Western. To be eligible for library media licensure, candidates must meet the teacher licensure requirements as well as complete a minimum of 27 credits in the following required courses: C&I 316, 470, 479, 480, 483, 484, 485,488, and LIB 461 offered through UM-Western. Equivalent courses from UM-Western for C&I 316, 470, 479, and 485 may substitute for C&I courses. C&I graduate courses also may substitute for 316, 470 and 479.

Licensure in Reading: The reading program is designed to enhance the diagnostic and instructional skills of K 12 classroom teachers and remedial reading teachers. Upon completion, candidates may apply for the State of Montana K-12 reading endorsment. The program follows the philosophy of the International Reading Association. The undergraduate reading minor requires the following courses: C&I 316, 470, 318, 405, 427, 433, 435, and 437.

Licensure in Special Education: The Special Education program prepares teachers to work with children who are at-risk and children with disabilities in inclusive settings. To be eligible for a K 12-non categorical endorsement in the State of Montana, candidates accepted into the program must complete the following courses: C&I 420 or elective, 433, 453, 457, 459, 463, 469. Candidates complete C&I 410 or equivalent prior to beginning the endorsement or in the first semester. The last semester consists of student teaching which may be completed with student teaching in general education.

Requirements for Non-Teaching Minors

Library Media

To complete a non-teaching minor in library media, the individual must complete the following courses:

	Credits
C&I 316 Children's Literature and Critical Reading	3
C&I 470 Young Adult Literature	3
C&I 479 Reference Resources	3
C&I 480 Collection Development	3
C&I 483 Library Media Technical Processes	3
C&I 484 Administration and Assessment of Library-Media Programs	3
C&I 485 Library-Media Practicum	3
C&I 488 Libraries and Technology	3
LIB 461 Information Literacy	3
Total	27

Administrative Systems Management

To earn a non teaching minor in administrative systems management the individual must complete the following courses:

	Credits
ACTG 201 (ACCT 201) Financial Accounting	3
BADM 257 Business Law	3
C&I 287 Business Communications	3
C&I 341 Information Systems and Design	3
C&I 444 Advanced Technology and Supervision	3
CS 172 Introduction to Computer Modeling	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3
M 115 (MATH 117) Probability and Linear Math	3
MGMT 340S Management and Organizational Behavior	3
Total Credits	27

Course Requirements for Major and Minor Teaching Fields

Individuals who wish to qualify for the Montana secondary teaching license must, according to the regulations of the State Office of Public Instruction which were in effect when this catalog was printed, complete requirements for a major teaching field (30 or more credits, depending on the field) and a minor teaching field (20 or more credits, depending on the field) in areas commonly taught in high schools. In the event that the Montana Office of Public Instruction changes the program standards of major and minor teaching fields, the University reserves the right to modify the requirements listed for them.

Art

Grades K-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of Art, a student must complete the requirements for a Bachelor of Arts with a major in Art with an Art Education option (see the Department of Art section in this catalog and below). Individuals holding a baccalaureate degree must meet those requirements by completing the courses or demonstrate course equivalency.

	Maj.
ART 101A Visual Language: Drawing	3
ART 102A Visual Language: 2-D Design	3
ART 103A Visual Language: 3-D Design	3
ART 150H-151H Art of Western Civilization	6
ART 203 Introduction to Art Criticism	3
ART 215 Photography I	3
ART 223 Drawing I	3
ART 229 Ceramics I	3
ART 231, 232, 233, 234 Printmaking (choose one)	3
ART 235 Sculpture I	3

ART 240 Painting I	3
ART 323 Drawing II	3
ART 407-408 Teaching K-12 Art (coreq C&I 301 or 302)	6
DAN 427 Teaching Creative Movement	3
ART upper-division studio courses	9
ART upper-division art history courses	6
ART upper-division art criticism	3
Total Credits	66

Biology

Grades 5-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of Biology a student must complete the requirements for the B.A. with a major in Biology, option in Biological Education (see the Biology section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For endorsements in the minor teaching field of Biology, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
BIOL 108N-109N Diversity of Life	5	5
BIOL 110N Principles of Biology	4	4
BIOL 221 Cell and Molecular Biology	4	4
BIOL 223 Genetics and Evolution	4	4
BIOL 301 Developmental Biology or BIOL 345 Principles of Physiology	3	-
BIOL 340-341 Ecology and Laboratory	5	5
BIOL 444-445 Plant Physiology and Laboratory	4	-
MICB 300-301 General Microbiology and Laboratory	5	5
C&I 426 Teaching Science in Middle and Secondary Schools (coreq C&I 301 or 302)	3	3
M 162 (MATH 150) Applied Calculus or M 171 (MATH 152) Calculus I	4	4
STAT 216 (MATH 241) Introduction to Statistics	4	4
CHMY 121N, 123N, 124N (CHEM 151N-152N, 154N) General and Inorganic and Organic and Biological Chemistry and Laboratory (major only)	8	6
CHMY 485 Laboratory Safety	1	1
PHYS 111N-113N Fundamentals of Physics I/Lab	5	-
GEO 301 Environmental Geology	2-3	2-3
Total Credits	61-62	47-48

A biology major qualifies as a single-field endorsement. Although not required, it is recommended that students complete a second teaching major or minor.

Business and Information Technology Education

Grades 5-12. Qualifies as a single-field endorsement.

For licensure in the major teaching field of Business and Information Technology Education, a student must complete the requirements for a B.S. in Business Administration with a major in Information Systems (see below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For licensure in the minor teaching field of business and information technology education, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
ACTG 201 (ACCT 201) Financial Accounting	3	3
ACTG 202 (ACCT 202) Managerial Accounting	3	-
BADM 257 Business Law	3	3
C&I 287 Business Communications	3	3
C&I 341 Information Management & Design	3	3
C&I 429 Teaching Business Subjects (coreq C&I 301 & 302	4	4

C&I 444 Advanced Technology and Supervision	3	3
COMM 111A Introduction to Public Speaking	3	-
CS 172 Introduction to Computer Modeling	3	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3	3
ECNS 202 (ECONS 112S) Principles of Macroeconomics	3	-
FIN 322 Business Finance	3	-
MIS 270 Management Information Systems	3	-
MIS 341 Operations Management	3	-M
MIS 370 Database Management Systems	3	-
MIS 371 Business Applications Development	3	-
MIS 372 Telecommunications Management	3	-
MIS 373 Systems Analysis and Design	3	-
MIS 476 Project Management	3	-
M 115 (MATH 117) Probability and Linear Math	3	3
STAT 216 (MATH 241) Introduction to Statistics	4	-
MGMT 340S Management and Organizational Behavior	3	-
MGMT 445 Small Business Administration or MGMT 446 Strategic Management or IS 448 Management Game	3	-
MKTG 360 Marketing Principles	3	3
Total Credits	74	31

Business and Information Technology Education qualifies as a single-field endorsement. Although not required, it is recommended that students complete a second teaching major or minor.

Chemistry

Grades 5-12. Qualifies as a single-field endorsement.

For an endorsement in the major teaching field of Chemistry, a student must complete the requirements for the B.A. with a major in Chemistry, with appropriate electives, and with the addition of CHMY 485 (CHEM 485). A student also must complete STAT 216 (MATH 241), BIOL 380, C&I 426 and SCI 350 (see the Department of Chemistry section of this catalog and below). The foreign language requirement is waived by the Department of Chemistry for students using the B.A. degree for teacher licensure. Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For endorsement in the minor teaching field of Chemistry, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj.	**Min.**
CHMY 101N Chemistry for the Consumer	-	3
CHMY 141N & 143N (CHEM 161N-162N) College Chemistry and Laboratory	10	10
CHMY 221-222-223 Organic Chemistry and Laboratory	-	8
CHMY 221, 222, 223, 225 (CHEM 264) (or 224 in place of 225 (CHEM 264)) Organic Chemistry and Laboratory	10	-
CHMY 302E (CHEM 334) Chemistry Literature and Scientific Writing	3	-
CHMY 360 (CHEM 370) Applied Physical Chemistry or CHMY 373 (CHEM 371) Phys Chem-Kntcs & Thrmdynmcs	-	3-4
CHMY 373-371 (CHEM 371-372) Phys Chem-Qntm Chm & Spctrscpy & Phys Chem-Kntcs & Thrmdynmcs	8	-
CMHY 311 (CHEM 341) Analytical Chem-Quant Analysis	4	4
CHMY 421 (CHEM 342) Advanced Instrument Analysis	4	-
CHMY 401-403 (CHEM 452-453) Advanced Inorganic Chemistry & Descriptive Inorganic Chem	6	-
CHMY 485 Laboratory Safety	1	1
CHMY 494 Seminar/Workshop	1	-
BIOC 380 Fundamentals of Biochemistry	4	4
CS 172 Computer Modeling	3	3
M 171, 172, AND 273 (MATH 152, 153, and 251) Calculus I, II, and III	12	-
M 171 (MATH 152) Calculus I	-	4
STAT 216 (MATH 241) Introduction to Statistics	4	4
PHYS 211N-213-212N-214N Fundamentals of Physics with Calculus I & II & Labs	10	-
PHYS 111N-113N-112N-114N Fundamentals of Physics I & II & Labs	-	10
SCI 350 Environmental Perspectives	2	2
C&I 426 Teaching Science in Middle & Secondary Schools (coreq C&I 301 or 302)	3	3
Total Credits	85	59

A chemistry major qualifies as a single-field endorsement.

Although not required, it is recommended that students complete a second teaching major or minor.

Drama

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Drama, a student must complete the requirements for the B.A. with a major in Drama, Education Endorsement Preparation specialization(see the School of Theatre & Dance section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

	Maj.
DAN 327 Dance in Elementary Education	2
DRAM 103 Introduction to Theatre Design	3
DRAM 106A Theatre Production I: Running Crew	1
DRAM 107A Theatre Production I: Construction Crew	3
DRAM 108 Introduction to House Management	1
DRAM 202 Stagecraft I	3
DRAM 203 Stagecraft II	3
DRAM 210 Voice and Speech I	2
DRAM 214-215 Acting I, II	6
DRAM 220L Dramatic Literature I (Script Analysis)	3
DRAM 244 Stage Makeup	2
DRAM 320H-321H Theatre History I, II	6
DRAM 327 Drama in Elementary Education	2
DRAM 371 Stage Management I	2
DRAM 379 Introduction to Directing	3
DRAM 402 Methods of Teaching Theatre	2
Senior Project	
Total Credits	44

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or teaching minor) should be in a field in high demand.

Earth Science

Grades 5-12. Major only. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Earth Science, a student must complete the requirements for the B.S. with a major in Geosciences, Earth Science Education option (see the Department of Geosciences section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

	Maj.
GEO 101N-102N (GEOS 100N-101N) Intro to Physical Geology & Lab	4
GEO 105N Oceanography	2
GEO 231 Geosciences Field Methods (GEOS 230)	3
GEO 226 Rocks, Minerals & Resources	4
GEO 301 Environmental Geology	3
GEO 310 Invertebrate Paleontology	3
GEO 315 (GEOS 330) Structural Geology	3
GEO-any course numbered 100 or above	3
GEO-Courses numbered 300 or above	12
ERTH 303N Weather and Climate (GEOG 322N Meteorology)	3
ASTR 131N-132N Elementary Astronomy	6
M 151 (MATH 121) Precalculus	4
STAT 341 (MATH 341) Introduction to Probability and Statistics	3
CS 172 Introduction to Computer Modeling or equivalent	3
C&I 426 Teaching Science in Middle and Secondary Schools (coreq. C&I 301 OR 302)	3
BIOL 121N-122N Introductory Ecology and Laboratory or CHMY 121N-123N (CHEM 151N-152N)Intro to General Chemistry &	4-10

Intro to Organic & Biochem or Phys 111N-113N-112N-114N Fundamentals of Physics I & II /Lab	
CHMY 485 Laboratory Safety	1
Total Credits	63-69

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or teaching minor) should be in a field in high demand.

Economics

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Economics, a student must complete the requirements for the B.A. with a major in Economics (see the Department of Economics section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Economics, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
ECNS 201S-202S (ECON 111S-112S) Principles of Micro- and Macroeconomics	6	6
ECNS 320 (ECON 304) Public Finance: Expenditures	3	3
ECNS 301 (ECON 311) Intermediate Microeconomics with Calculus	3	3
ECNS 302 (ECON 313) Intermediate Macroeconomics	3	3
ECNS 313 (ECON 317) Money and Banking	3	3
ECNS 312 (ECON 323) Labor Economics	3	3
ECNS 403 (ECON 460) Introduction to Econometrics	3	-
Economics electives	6	-
ECNS 494-499 (ECON 487-489) Senior Thesis sequence	6	-
C&I 428 Teaching Social Studies in Middle and Secondary Schools (coreq. C&I 301 or 302)	3	3
M 115 (MATH 117), 162 (MATH 150) or 171-172 (MATH 152-153) Probability, Linear Math, Applied Calculus OR Calculus I, II	7-8	-
STAT 216 (MATH 241) Introduction to Statistics	4	-
Total Credits	51	24

The demand for teaching in this field is limited. The second endorsement (either teaching major or teaching minor) should be in a field in high demand.

English

Grades 5-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of English, a student must complete the requirements for the B.A. with a major in English, English Teaching option (see the Department of English section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of English, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalent.

	Maj	Min.
LIT 220L (ENLT 217L) Brit Lit: Med to Renaissance or LIT 221L (ENLT 218L) Brit Lit: Enlightenment to Rom	3	3
Choose 2: LIT 222L (ENLT 219) Brit Lit: Victoriam to Contemp, LIT 210L (ENLT 224L) American Lit I, LIT 211L (ENLT 225L) Americal Lit II	6	6
LIT 300 (ENLT 301) Literary Criticism	3	3
LIT 327 (ENLT 320) Shakespeare	3	3
One course in poetry chosen from LIT 120L (ENLT 121L), LIT 201 or ENCR 211A	3	-
One 300-level LIT course with an American literature focus	3	3
One 300-level ENLT course with a diversity focus	3	3
ENLI 465 Structure and History of English for Teachers	3	3
ENT 439 Studies in Young Adult Literature	3	3
ENT 440 Teaching Writing	3	3

ENT 441 Teaching Reading and Literature	3	3
ENT 442 Teaching Oral Language and Media Literacy (coreq. C&I 301 or 302 with either ENT 440, 441, or 442)	3	3
English Electives	6	-
Total Credits	45	36

An English major qualifies for a single-field endorsement.

Although not required, it is recommended that students complete a second teaching major or minor.

English as a Second Language*

Grades K-12. Minor only.

For an endorsement in the minor teaching field of English as a Second Language, a student must complete the courses in the minor teaching field as listed in the Linguistics section of this catalog and listed below or demonstrate course equivalency.

	Min.
LING 470 Introduction to Linguistic Analysis	3
LING 471 Phonology and Morphology	3
LING 472 Syntax and Semantics	3
LING 477 Bilingualism or 478 Second Language Acquisition	3
At least two courses from the following:	
LING 466 Pedagogical Grammar	
LING 473S Language and Culture	
LING 475 Linguistics Field Methods	
LING 476 Child Language Acquisition	
LING 489 Languages of the World	6
LING 480 Teaching English as a Foreign Language (coreq. C&I 301 or 302)	3
LING 491 ESL Senior Seminar	3
Total Credits	24

*Students must have the equivalent of two years of a foreign language. Non-native speakers of English must take an English competency examination administered by the chair of the Linguistics Program. Courses required for the teaching minor cannot be taken on a credit/no credit basis.

French*

Grades K-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of French, a student must complete the requirements for the B.A. with a major in French including FREN 401and MCLG 410 (see the Department of Modern and Classical Languages and Literatures section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of French, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	**Min.**
FRCH 101-102 (FREN 101-102) Elementary French	10	10
FRCH 201-202 (FREN 201-202) Intermediate French	8	8
FRCH 301 (FREN 301) Oral and Written Expression	3	3
FRCH 350 (FREN 302) French Civilization and Culture	3	3
FRCH 311-313 (FREN 311-313) Survey of French Literature	9	-
FRCH 400 (FREN 401) Applied Linguistics	3	3
FRCH 421 (FREN 408) Advanced Composition and Conversation	3	-
FRCH (FREN) literature at the 400-level	6	-
FRCH (FREN) upper-division electives	3	-
HSTR - one course from 306, 307, 315, 317, 312, 352, 353 (HIST 306, 307, 310, 311H, 312H, 314, 315)	3	-
LING 270 Introduction to Linguistics	3	3
MCLG 410 Methods of Teaching Foreign Languages (prereq. to student teaching; coreq. C&I 301 or 302)	3	3
Total Credits	57	33

*The Department of Modern and Classical Languages and Literatures requires a recommendation of the student's language proficiency and an overall minimum grade point average of 3.00 in upper-division course work in both the teaching major and minor as a prerequisite to student teaching. Study in a French language country, provided either through UM's Study Abroad Program or an experience considered to be equivalent also is required.

A French major qualifies as a single-field endorsement. Although not required, it is recommended that students complete a second teaching major or minor.

General Science Broadfield Major

Grades 5-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major field of General Science, a student must complete the requirements for the B.A. with a major in Biology, Ecology option (see the Biology section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

ASTR 131N, 134N Elementary Astronomy and Laboratory	4
BIOL 108N-109N Diversity of Life and Laboratory	5
BIOL 110N Principles of Biology	4
BIOL 221 Cell and Molecular Biology	4
BIOL 223 Genetics and Evolution	4
BIOL 340-341 Ecology and Laboratory	5
CHMY 141N-143N (CHEM 161N-162N) College Chemistry I & II and Laboratory	10
CHMY 123N (CHEM 152N) Intro to Organic and Biological Chemistry	3
CHMY 485 Laboratory Safety	1
GEO 101N-102N (GEOS 100N-101N) Intro to Physical Geology and Laboratory	3
GEO 301 Environmental Geology	3
M 162 (MATH 150) Applied Calculus or M 171 (MATH 152) Calculus I	4
STAT 216 (MATH 241) Introduction to Statistics	4
PHYS 111N-113N-112N-114N Fundamentals of Physics I & II & Labs or 211N-212N-213N-214N Fundamentals of Physics with Calculus I & II & Labs	10
C&I 426 Teaching Science in Middle and Secondary Schools (coreq. C&I 301 or 302)	3
Total Credits	67

Geography

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Geography, a student must complete the requirements for the B.A. degree with a major in Geography (an option is not required; see the Department of Geography section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Geography, a student must complete the courses for the minor teaching field listed below or demonstrate course equivalency.

	Maj	**Min.**
GPHY 121S (GEOG 101S) Human Geography	3	3
GPHY 111N (GEOG 102) Introduction to Physical Geography	3	3
GPHY 112 (GEOG 105) Intro to Phys Geography Laboratory	1	1
GPHY 141S (GEOG 103S) Geography of World Regions or GPHY 241S (GEOG 201S) Montana or another regional course	3	3
GPHY 385 Field Techniques or GPHY 497 (GEOG 471) Workshop in Teaching Geography	2-3	-
GPHY 381/382 (GEOG 387/389) Principles of Digital Cartography and Laboratory	4	-
(minor may choose GPHY 385 or GPHY 381/382 (GEOG 387/389)	-	2-4
Three upper-division systematic geography courses one each from the fields of physical geography, human-environmental interaction, and geography and society (two for minor)	9	6
C&I 428 Teaching of Social Studies in Middle and Secondary School (coreq. C&I 301 or 302)	3	3
Electives	7-8	-
Total Credits	36	21-23

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or teaching minor) should be a field in high demand.

German*

Grades K-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of German, a student must complete the requirements for the B.A. with a major in German including MCLG 410 (see the Department of Modern and Classical Languages and Literatures section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of German, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
GRMN 101-102 (GERM 101-102) Elementary German	10	10
GRMN 201-202 (GERM 201-202) Intermediate German	8	8
GRMN 301-302 (GERM 301-302) Oral and Written Expression I and II	6	6
GRMN 311 and 312 and 318 (GERM 311-313) Intro to German Literature	6	-
GRMN 400 (GERM 403) Applied Linguistics	3	3
GRMN (GERM) literature at 400-level	6	-
Two courses from the following: GRMN 351H, 352H, 350, 361L, 362H (303H, 304H, 355, 361L or 362H)	6	-
GRMN 351H, 352H, 350, 361L, or 362H (GERM 303H, 304H, 355, 361L or 362H)	-	3
LING 270S Introduction to Linguistics	3	3
MCLG 410 Methods of Teaching Foreign Languages (prereq. to student teaching; coreq. C&I 301 or 302)	3	3
Total Credits	51	36

*The Department of Modern and Classical Languages and Literatures requires a recommendation of the student's language proficiency and an overall minimum grade point average of 3.00 in upper-division course work in both the teaching major and minor as a prerequisite to student teaching. Study in a German language country, provided either through UM's Study Abroad Program or an experience considered to be equivalent also is required.

A German major qualifies as a single-field endorsement. Although not required, it is recommended that students complete a second teaching major or minor.

Government

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Government, a student must complete the requirements for the B.A. degree with a major in Political Science (see the Department of Political Science section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Government, a student must complete the courses for a minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
PSCI 210S (PSC 100S) Introduction to American Government	3	3
PSCI 220S (PSC 120S) Introduction to Comparative Government	3	3
PSCI 230X(PSC 130E) International Relations	3	3
PSCI 250E (PSC 150E) Political Theory	3	3
PSCI (PSC) one 300-400 level course in four of the five fields:		
1) American Government		
2) Public Administration		
3) Political Theory		
4) Comparative Government		
5) International Relations	12	-
PSCI (PSC) one 300-400 level course in three of the five fields:		
1)American Government		
2) Public Administration		
3) Political Theory		
4) Comparative Government		
5) International Relations	-	9

PSCI (PSC) electives in upper- division political science	12	-
C&I 428 Teaching Social Studies in Middle and Secondary Schools (coreq. C&I 301 or 302)	3	3
Total Credits	39	24

The teaching major must include 21 upper-division political science credits. The teaching minor must include 9 upper-division political science credits.

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or a teaching minor) should be in a field in high demand.

Health and Human Performance

Grades K-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of Health and Human Performance, a student must complete the requirements for a B.S. in Health and Human Performance with an option in Health Enhancement (see the Department of Health and Human Performance section of this catalog and below). Individuals holding a baccalaureate degree must meet those requirements by completing the courses listed below or demonstrate course equivalency.

Students seeking an endorsement in Health and Human Performance must earn a minimum grade of C- in all required courses, including prerequisites. All HHP majors must be certified in First Aid/Emergency Care and CPR (see First Aid and CPR Exit Certifications within the Department of Health and Human Performance section of this catalog) upon entry into student teaching.

	Maj.
HHP 181 Foundations of Health and Human Performance	3
HHP 184 Personal Health and Wellness	3
HHP 224-225 Professional Activities	4
HHP 226 Physical Conditioning/Weight Training	2
HHP 233 Health Issues of Children and Adolescents	3
HHP 236 Nutrition	3
HHP 288-289 First Aid/Emergency Care and Laboratory	0-3
HHP 301 Instructional Strategies in Secondary Health and Physical Education (coreq. C&I 301 or 302	3
HHP339 Instructional Strategies in Elementary Health and Physical Education (coreq. C&I 301 or 302)	3
HHP 361 Assessment in Physical and Health Education	3
HHP 368-369 Applied Anatomy and Kinesiology and Laboratory	4
HHP 377 Physiology of Exercise (prereq. SCN 201N-202N)	3
HHP 378 Physiology of Exercise Laboratory	1
HHP 384 Motor Learning	3
HHP 450 Analytical and Communication Techniques	3
HHP 465 Management in Health and Human Performance Professions	3
HHP 466 Strategies in K-12 Health Education	3
HHP 475E Legal and Ethical Issues in the Health and Exercise Profession	3
BIOL 106N Elementary Medical Microbiology	3
BIOL 121N Introductory Ecology or SCI 350 Environmental Perspectives	2-3
CHEM 151N General & Inorganic Chemistry	3
COMM 111A Introduction to Public Speaking	3
CS 171 Communicating Via Computers	3
STAT 216 (MATH 241) Introduction to Statistics	4
PSYX 230S (PSYC 240S) Developmental Psychology	3
SCN 201N-202N Anatomy and Physiology I and II	8
Total Credits	76-80

A Health and Human Performance major qualifies as a single-field endorsement. Although not required, it is recommended that students complete a second teaching major or minor.

History

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of History, a student must complete the requirements for the B.A.with a major in History (see the Department of History section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements

by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of History a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
HSTR 101H or 102H Western Civilization (HIST 104H or 105H)	4	4
HSTA 101H-102H American History I & II (HIST 151H-152H)	4	8
HSTA 255 (HIST 269) Montana History	3	3
HSTR 300 (HIST 300) The Historians' Craft	3	3
HSTR (HIST) electives in Asian, Islamic, African, and Latin American	9	6
Upper-division courses in American history	6	3
Upper-division courses in European history	6	3
History electives upper-division courses in history	6	-
C&I 428 Teaching Social Studies in Middle and Secondary Schools (coreq C&I 301 or 302)	3	3
Total Credits	44	33

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or a teaching minor) should be in a field in high demand.

Latin*

Grades K-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Latin, a student must complete the requirements for the B.A. with a major in Classics, Latin option, as well as MCLG 410 (see Department of Modern and Classical Languages and Literatures section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Latin, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	Min.
LATN 101-102 (LAT 101-102) Elementary Latin or equivalent	10	10
LATN 201-202 (LAT 211-212) Intermediate Latin	7	7
LATN 311 (LAT 300) Major Latin Authors	15	6
LATN 402 (LAT 402) Advanced Prose Composition	3	3
MCLG 155L Survey Greek & Roman Literature	3	-
MCLG 160L Classical Mythology	3	-
MCLG 251L The Epic or MCLG 252L Tragedy	3	-
MCLG 361H Roman, Early Christian, and Byzantine Art	3	-
Nine credits from: MCLG 301, 302, 320, 360H, 362; PHIL 251H, 461, 463; RELS 311, 312	9	-
MCLG 410 Methods of Teaching Foreign Languages (prereq. to student teaching; coreq C&I 301 or 302)	3	3
HSTR 304H (HIST 303H) Ancient Rome	3	-
Total Credits	47	29

*The Department of Modern and Classical Languages and Literatures requires a recommendation of the student's language proficiency and an overall minimum grade point average of 3.00 for upper-division course work in both the teaching major and minor as a prerequisite to student teaching.

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or minor) should be in a field in high demand.

Library Media

Grades K-12. Minor Only.

	Min.
C&I 316 Children's Literature and Critical Reading	3
C&I 470 Young Adult Literature and Critical Reading	3
C&I 479 Reference Resources	3

C&I 480 Collection Development	3
C&I 483 Library Media Technical Processes	3
C&I 484 Administration and Assessment of Library Media Program	3
C&I 485 Library Media Practicum	3
C&I 488 Libraries and Technology	3
LIB 461 Information Literary	3
Total Credits	27

A Library Media Practicum is separate from student teaching. It includes 90 hours of field work in a library and 10 hours of seminar. Equivalent courses from UM-Western may substitute for C&I 316, 470, 479, and 485. C&I graduate courses also may substitute for 316, 470, and 479.

Mathematics

Grades 5-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of Mathematics, a student must complete the requirements for the B.A. degree with a major in Mathematics with a Mathematics Education option (see Department of Mathematical Sciences section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Mathematics, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj	**Min.**
M 171-172 (MATH 152-153) Calculus I, II	8	8
M 221 (MATH 221) Linear Algebra	4	4
M 301 (MATH 301) Mathematics with Technology for Teachers	3	3
M 307 (MATH 305) Introduction to Abstract Mathematics	3	3
M 326 (MATH 326) Elementary Number Theory	3	3
STAT 341 (MATH 341) Introduction to Probability & Statistics	3	3
M 406 (MATH 406) History of Mathematics	3	-
M 431 (MATH 421) Abstract Algebra	4	-
M 439 (MATH 431) Euclidean & Non-Euclidean Geometry	3	3
M 273 (MATH 251) or additional 300-400-level course	3-4	-
C&I 430 Teaching Math in Middle and Secondary Schools (coreq. C&I 301 or 302)	4	4
Total Credits	41-42	31

A math major qualifies as a single-field endorsement if a student also completes 12 science credits. Although not required, a second teaching major or minor is recommended.

Music

Grades K-12. Qualifies as a single-field endorsement.

For an endorsement in the extended major teaching field of Music, a student must complete the requirements for a Bachelor of Music Education degree (see the Music section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

	Maj.
MUS 100A Performance Study	2
MUS 151-251-351 Principal Performance	5
MUS 107A/307A-108A/308A-104A/304A-110A/310A -150A/350 Ensembles	7
MUS 111-112 Theory I, II	4
MUS 115A-116A Piano in Class I, II	2
MUS 117A Voice in Class	1
MUS 124-131 Strings, Woodwinds, Brass, Percussion Class	8
MUS 135L Introduction to Music Literature	3
MUS 137-138 Aural Perception I, II	4
MUS 211-212 Theory III, IV	4
MUS 215-216 Intermediate Piano in Class I, II	2

MUS 219 Piano Proficiency Assessment	0
MUS 220 Upper-Division Required Performance	0
MUS 237-238 Aural Perception III, IV	4
MUS 302 Instrumental Conducting	2
MUS 303 Choral Conducting	2
MUS 305 Instrumental Methods and Materials	2
MUS 306 Choral Methods and Materials	2
MUS 322-323 General Music Methods and Materials I, II (coreq. C&I 301 or 302) MUS 324H-325H History of Music I, II	6
MUS 388 Concert Attendance	0
MUS 428 Orchestration	2
MUS upper-division electives	3-4
Total Credits	71-72

Music students should refer to the Department of Music section of this catalog for requirements concerning upper-division music course work.

Physics

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Physics, a student must complete the requirements for the B.A. with a major in Physics (see the Department of Physics and Astronomy section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Physics, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj.	**Min.**
PHYS 111N-113N-112N-114N Fundamentals of Physics I & II & Labs or 211N-212N-213N-214N Fundamentals of Physics with Calculus I & II & Labs	10	10
PHYS 301 Mathematical Methods for Physical Scientists	3	-
PHYS 325 Optics	3	3
PHYS 330 Methods of Communicating Physics	3	3
PHYS 341 Fundamentals of Modern Physics	3	3
PHYS 371 Classical Mechanics	3	3
PHYS 414 Electromagnetism I	3	-
PHYS 461 Quantum Mechanics I	3	-
Electives-courses in physics	3	-
ASTR 131N-132N Elementary Astronomy	6	3
M 171-172 (MATH 152-153) Calculus I and II	8	8
STAT 216 (MATH 241) introduction to Statistics or STAT 341 (MATH 341) Introduction to Probability and Statistics	3-4	3-4
M 273 (MATH 251) Multivariate Calculus	4	4
M 311 (MATH 311) Ordinary Differential Equations	3	3
CS 101 Intro to Programming or CS 131 Fundamentals of Computer Science I or CS 201 Programming Languages	3	3
C&I 426 Teaching Science in Middle and Secondary Schools	3	-
CHMY 121N (CHEM 151N) Intro to General Chemistry	3	3
CHMY 485 Laboratory Safety	1	1
BIOL 110N Principles of Biology or BIOL 108N Diversity of Life or BIOL 120N General Botany or BIOL 121N Introductory Ecology	3	3
GEO 101N-102N (GEOS 100N-101N) Intro to Physical Geology & Laboratory	3	-
GEO 301 Environ Geology or EVST 101 Environ Sci or SCI 350 Environ Perspect	2-3	-
Total Credits	76-78	53-54

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or a teaching minor) should be in a field in high demand.

Psychology

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Psychology, a student must complete the requirements for the B.A. degree with a major in Psychology, General option (see the Department of Psychology section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Psychology, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj.	Min.
PSYX 100S (PSYC 100S) Introduction to Psychology	4	4
PSYX 120 (PSYC 120)Introduction to Psychological Research	3	3
PSYX 222 (PSYC 220) Psychological Statistics	3	-
At least two of the following for the major:		
PSYX 270S (PSYC 260S) Fundamental Psychology of Learning		
PYSX 280S (PSYC 265S)Fund of Memory & Cognition		
PSYX 250N (PSYC 270N) Fundamentals of Biological Psychology	6	-
At least four of the following for the major:		
PSYX 230S (PSYC 240S) Child and Adolescent Psychology		
PSYX 233 (PSYC 245) Fund of Psychology of Aging		
PSYX 340S (PSYC 330S) Abnormal Psychology		
PSYX 360S (PSYC 350S) Social Psychology		
PSYX 385S (PSYC 351S) Psychology of Personality	12	-
At least one of the following for the minor:		
PSYX 230S (PSYC 240S) Child and Adolescent Psychology		
PSYX 360S (PSYC 350S) Social Psychology		
PSYX 385S (PSYC 351S) Psychology of Personality	-	3
At least one of the following for the major:		
M 115 (MATH 117) Probability, Linear Mathematics		
M 162 (MATH 150) Applied Calculus		
M 171 (Math 152) Calculus I	3-4	-
At least one of the following for the minor:		
PSYX 378S (PSYC 335S) Introduction to Clinical Psychology		
PSYX 340S (PSYC 330S) Abnormal Psychology		
PSYX 345 (PSYC 336) Child and Adolescent Psychological Disorders		
PSYX 376 (PSYC 337) Principles of Cognitive Behavior Modification	-	3
Four other psychology courses (at least three of which must be at the 200-level or higher), not to include PSYX 292, 392, 398, 494, or 499 (PSYC 296, 396, 398, 398, 493 or 499)	12	-
Two of the following for the minor:		
PSYX 270S (PSYC 260S) Fundamental Psychology of Learning		
PSYX 233 (PSYC 245) Fund of Psychology of Aging		
PSYX 250N (PSYC 270N) Fundamentals of Biological Psychology		
PSYX 356 (PSYC 371) Fundamentals of Human Neuropsychology		
PSYX 352 (PSYC 372) Intermediate Behavioral Biology	-	6
Additional PSYX elective credits for the minor	-	3
C&I 428 Teaching Social Studies in Middle Schools (coreq. C&I 301 or 302)	3	3
Total Credits	46-47	25-26

At least six of the 22 PSYX credits for the minor must be at the 300-level or above.

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or a teaching minor) should be in a field in high demand.

Reading

Grades K-12. Minor only.

	Min.

C&I 316 Children's Literature and Critical Reading	3
C&I 470 Young Adult Literature and Critical Reading	3
C&I 318 Teaching Language P-8	3
C&I 405 Teaching Reading K-8	3
C&I 427 Literacy Strategies in Content Areas	3
C&I 433 Basic Diagnosis and Correction of Reading and Writing	3
C&I 435 Organizing Classroom Reading and Writing Programs	3
C&I 437 Application of Literacy Models	6
Total Credits	27

Russian*

Grades K-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Russian, a student must complete the requirements for the B.A. with a major in Russian including Russ 301 302 and MCLG 410 (see the Department of Modern and Classical Languages and Literatures section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Russian, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj.	**Min.**
RUSS 101-102 Elementary Russian	10	10
RUSS 201-202 Intermediate Russian	8	8
RUSS 301 Oral and Written Expression	3	3
RUSS 302 Russian Culture and Civilization	3	3
RUSS 311L-313L (RUSS 305L-307L) Introduction to Russian Literature (minors take 312L (306L))	9	3
RUSS upper-division electives	9	-
MCLG 410 Methods of Teaching Foreign Languages (prereq. to student teaching; coreq. C&I 301 or 302)	3	3
HSTR (HIST) one course in Russian history	3	-
Total Credits	45	30

*The Department of Modern and Classical Languages and Literatures requires a recommendation of the student's language proficiency and an overall minimum grade point average of 3.00 in upper-division course work in both the teaching major and minor as a prerequisite to student teaching.

The demand for teaching in the field is limited. The required second endorsement (either a teaching major or a teaching minor) should be in a field in high demand.

Comprehensive Social Science

Grades 5-12. Qualifies as a single-field endorsement.

Students who want to be licensed to teach history, government, and one additional social science at the middle and high school level must complete the B.A. degree requirements for the combined academic major in history and political science, shown below. Individuals holding a baccalaureate degree must show evidence of completing the courses listed below or demonstrate course equivalency.

	Maj.
HSTR 101H OR HSTR 102H Western Civilization (HIST 104H or 105H)	4
HSTA 101H-102H American History I & II (HIST 151H-152H)	8
HSTA 255 (HIST 269) Montana History	3
HSTR 300 (HIST 300) The Historians' Craft	3
HSTR (HIST) elective in Asian, Islamic, African, or Latin American	3
HSTA (HIST) upper-division American history	3
HSTR (HIST) upper-division European history	3
HSTR or HSTA (HIST) upper-division elective	3
PSCI 210S (PSC 100S) Intro to American Government	3
PSCI 220S (PSC 120S) Intro to Comparative Government	3
PSCI 230X (PSC 130E) Intro to International Relations	3
PSCI 250E (PSC 150E) Intro to Political Theory	3

PSCI (PSC) upper-division American government and politics	9
PSCI (PSC) Upper-division comparative government and/or international relations	9
Credits in one of the following fields: economics, geography, psychology, or sociology	12
C&I 428 Teaching Social Studies in Middle and Secondary Schools (coreq. C&I 301 or 302)	3
Total Credits	75

Sociology

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Sociology, a student must complete the requirements for the B.A. with a major in Sociology (see the Department of Sociology section of this catalog and below.). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For an endorsement in the minor teaching field of Sociology, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj.	**Min.**
*CS 171 Communicating via Computers or CS 172 Introduction to Computer Modeling or a higher-level CS course	3	3
SOCI 101S (SOC 110S) Introduction to Sociology	3	3
SOCI 318 (SOC 201) Sociological Research Methods	3	3
SOCI 202 (SOC 202) Social Statistics	3	-
SOCI 220S (SOC 220S) Race, Gender and Class	3	3
SOCI 211S (SOC 230S) Criminology or 330S Juvenile Delinquency	-	3
SOCI 455 (SOC 455) Classical Social Theory	3	3
Two of the following:		
SOCI 270 (SOC 270) Introduction to Rural and Environmental Change		
SOCI 332 (SOC 300) Sociology of the Family		
SOCI 306 (SOC 306S) Sociology of Work		
SOCI 345 (SOC 320) Sociology of Organizations		
SOCI 325 (SOC 325) Social Stratification		
SOCI 355 (SOC 355S) Population Problems		
SOCI 485 (SOC 485) Political Sociology	6	-
Sociology electives	9	6
C&I 428 Teaching Social Studies in Middle and Secondary Schools (coreq. C&I 301 or 302)	3	3
*Total Credits	36	27

*Computer class does not count toward 36 credit minimum in sociology for the teaching major or 27 credit minimum in sociology for the teaching minor.

The demand for teaching in this field is limited. The required second endorsement (either a teaching major or teaching minor) should be in a field in high demand.

Spanish*

Grades K-12. Qualifies for single-field endorsement.

For endorsement in the extended major teaching field of Spanish, a student must complete the requirements for the B.A. with a major in Spanish including SPAN 301, 302, 405, 408 and MCLG 410 (see the Department of Modern and Classical Languages and Literatures section of this catalog and below). Individuals holding a baccalaureate degree must meet these requirements by completing the courses listed below or demonstrate course equivalency.

For endorsement in the minor teaching field of Spanish, a student must complete the courses in the minor teaching field listed below or demonstrate course equivalency.

	Maj.	**Min.**
SPNS 101-102 (SPAN 101-102) Elementary Spanish	10	10
SPNS 201-202 (SPAN 201-202) Intermediate Spanish	8	8
SPNS 301 (SPAN 301) Written Expression in Cultural Contexts	3	3
SPNS 305 (SPAN 302) Spanish Phonetics	3	3
SPNS 326LX331X (SPAN 311L/312L) Introduction to Contemporary Spanish Literature (minors take one)	6	3

SPNS 400 (SPAN 405) Spanish: Applied Linguistics	3	3
SPNS 408 (SPAN 408) Advanced Composition and Conversation	3	-
SPNS (SPAN) two literature courses at 400-level	6	-
LING 270S Introduction to Linguistics or LING 470	3	3
MCLG 315 Major Hispanic Authors	3	-
MCLG 410 Methods of Teaching Foreign Languages (prereq. to student teaching; coreq. C&I 301 or 302)	3	3
Total Credits	51	36

*The Department of Modern and Classical Languages and Literatures requires a recommendation of the student's language proficiency and an overall minimum grade point average of 3.00 in upper division course work in both the teaching major and minor as a prerequisite to student teaching. Study in a Spanish language country, provided either through UM's Study Abroad Program or an experience considered to be equivalent, also is required.

A Spanish major qualifies as a single-field endorsement. Although not required, it is recommended that students complete a second teaching major or minor.

Special Education

Grades P-12. Minor only.

	Min.
C&I 420 Assessment & Curriculum In Early Childhood Special Education OR elective*	2-3
C&I 433 Basic Diagnosis and Correction of Reading and Writing (coreq. C&I 318 or 427)	3
C&I 453 Introduction to Special Education Law & Policy	3
C&I 457 Assessment and Instruction for Exceptional Learners	5
C&I 459 Consulting/Resource Teacher (prereq. C&I 453)	3
C&I 463 Advanced Classroom Management for Exceptional Learners/Practicum (prereq. C&I 453)	3
C&I 469 Student Teaching: Special Education	10
Total Credits	29-30

*Required course for early childhood education; counts as elective credit. Other elective courses must be approved by a special education advisor.

Courses

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Curriculum and Instruction (C&I)

U 160 Learning Strategies for Higher Education 2 cr. Offered every term. Instruction and application of college study skills including lecture note taking, time management, reading textbooks, test taking, and critical thinking. Elective credit only.

U 200 Exploring Teaching through Field Experiences 1 cr. Offered autumn and spring. Prereq., admission to Teacher Education Program or GPA of 2.75 and consent of Field Experiences Director. Guided introductory field experience for students committed to teaching as a profession. Connects field experience to content of co-requisite theory classes. Seminars include professional development portfolio, developmental level of students, diversity, learning/teaching strategies, motivation, classroom management, and assessment of learning.

U 287 Business Communications 3 cr. Offered every term. Prereq., WRIT 101 (ENEX 101) College Writing I. Emphasis on consistent and logical approaches to solving communication problems and creating successful communication products.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Offerings of visiting professors, new courses, or current topics.

U 296 Independent Study Variable cr. (R-6) Offered every term. Prereq., consent of advisor and instr.

U 298 Internship Variable cr. (R-6) Offered intermittently. Prereq., consent of advisor, instructor, and director of field experiences. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 300 Field Experience/Elementary Language Arts 1 cr. (R-4) Offered autumn and spring. Prereq., C&I 200 coreq., C&I 316 and 318. Arranged field experience with 10 hours in a PK setting and 20 hours in either a K-6 or a K-8 school setting.

U 301 Professional Field Experience: Grades K-8 1 cr. (R-4) Offered autumn and spring. Prereq., C&I 200; coreq., a secondary methods course. Arranged field experience in an elementary or middle school classroom, grades 4-8. For secondary licensure candidates whose C&I

200 experience was in a high school classroom.

U 302 Professional Field Experience: Grades 9-12 1 cr. (R-4) Offered autumn and spring. Prereq., C&I 200; coreq., a secondary methods course. Arranged field experience in a high school classroom. For secondary licensure candidates whose C&I 200 experience was in a middle school setting.

U 303 Educational Psychology and Measurements 3 cr. Offered every term. Prereq., admission to Teacher Education program; prereq. or coreq., C&I 200. Analysis of fundamental psychological concepts underlying classroom teaching and management, learning and evaluation including educational measurement. Emphasis on cognition, developmental, and motivational aspects of learning.

U 306 Instructional Media and Computer Applications 3 cr. Offered every term. Prereq., admission to the Teacher Education Program and general computer literacy skills; prereq. or coreq., C&I 200. Integration and use of computer and other technologies in education.

UG 316 Children's Literature and Critical Reading 3 cr. Offered autumn and spring. Prereq , C&I 303; coreq., C&I 300 and 318. Genre survey, including cross-cultural literature, that focuses on responding to children's literature through reading, writing, listening, speaking, and activities that emphasize selecting literature, teaching critical thinking, and integrating literature into the elementary curriculum.

U 318 Teaching Language Arts K-8 3 cr. Offered autumn and spring. Prereq., C&I 303; coreq., C&I 300, C&I 316. Language development and primary and secondary language acquisition and emergent literacy; theory and application of teaching listening, speaking, writing and viewing in a PK-8 setting.

UG 330 Early Childhood Education 3 cr. Offered spring odd-numbered years. Theory and techniques of teaching in pre-school and primary levels of education. Observation and participation in pre-school programs. Recommended for kindergarten and primary teachers.

U 341 Information Management and Design 3 cr. Offered spring. Prereq., CS 172. Emphasis on the development and maintenance of a file management system, application of effective design concepts in the creation of professional print and digital images and documents, and the creation of digital videos for use in education and/or business.

UG 355 Child in the Family 3 cr. Offered spring even-numbered years. Prereq., PSYC 100S. Physical, social, emotional and intellectual development, learning theories and child rearing practices related to children 0-6 years of age.

UG 367 Pre-School Practicum Laboratory 3 cr. Offered autumn and spring. Practicum experiences including observational assessment of children, study of the planning process, team teaching of a one-week unit plan, and planning and directing parent/teacher conferences. Students will complete selected readings and assignments on child development, early childhood ecological arrangements, and classroom management. Weekly seminars include early childhood pedagogy, adapted and regular physical education. Must attend mandatory meeting at 12:00 or 4:00 p.m. on first day of the semester.

U 393 Omnibus Variable cr. (R-9) Offered intermittently. Independent work under the University omnibus option. See index.

U 394 Seminar Variable cr. (R-9) Offered intermittently. Group analysis of problems in specific areas of education.

U 395 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 396 Independent Study Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

UG 400 Elementary Methods K-3 Field Experience 1 cr. (R-2) Offered autumn and spring. Coreq., C&I 402, 403, 404, and 405. Arranged field experience in an elementary classroom, kindergarten through third grade, completed with the Elementary Professional Methods Block. Students register for C&I 400 if their previous assignment was in grade 4 or above classroom.

UG 401 Elementary Methods Grades 4-8 Field Experience 1 cr. (R-2) Offered autumn and spring. Coreq., C&I 402, 403, 404 and 405. Arranged field experience in an elementary or middle school classroom, grades 4-8, completed with Elementary Professional Methods Block. Students register for C&I 401 if their previous assignment was in grades K-3.

UG 402 Teaching Mathematics K-8 3 cr. Offered autumn and spring. Prereq., C&I 300, 306, 316, 318, 410, M 135 and 136 (Math 130 and 131),and general education/content/speciality classes. Coreq., C&I 400/401, 403, 404 and 405. Methods for teaching elementary school mathematics through a child-centered laboratory approach focusing on the use of manipulatives, models, problem solving, and technology. Emphasis on multiple assessment strategies to determine student progress and methods to evaluate elementary mathematics programs.

UG 403 Teaching Social Studies K-8 3 cr. Offered autumn and spring. Prereq., C&I 300, 306, 316, 318, 410, PSCI 210S (PSC 100) HSTA 255, (HIST 269) and selected history course, GPHY 121S or 141S (GEOG 101 or 103) and all general education/content/speciality classes. Coreq., 400/401, 402, 404 and 405. Emphasis on developing, teaching, and assessing social studies teaching/learning opportunities that incorporate literature, primary sources, and other developmentally appropriate activities. Overarching themes address diversity, integration across the curriculum, and understanding state and national curriculum standards.

UG 404 Teaching Science K-8 3 cr. Offered autumn and spring. Prereq., C&I 300, 306, 316, 318, 410; SCI 225N, 226N, 350 and all general education/content/speciality classes. Coreq., C&I 400/401, 402, 403 and 405. Emphasis on developing, teaching, and assessing

science teaching/learning opportunities that are inquiry-based, developmentally appropriate, integrated across the curriculum, and aligned with state and national curriculum standards.

UG 405 Teaching Reading K-8 3 cr. Offered autumn and spring. Prereq., C&I 300, 306, 316, 318, 410, selected literature course, and all general education/content/specialty classes. Coreq., C&I 400/401, 402, 403 and 404. Preparation for teaching reading in a P-8 setting to children from a variety of backgrounds and wide range of academic abilities. Emphasis on integrating the strands of a quality reading program at each grade level, becoming familiar with literacy materials, applying best practices in reading assessment, and developing student enthusiasm for reading.

UG 407E Ethics and Policy Issues 3 cr. Offered every term. Prereq., admission to Teacher Education Program and C&I 200. Practical application of ethical principles of the teaching profession. Analysis of the American public school and major policy issues from historical, legal, political, social as well as ethical perspectives.

UG 410 Exceptionality and Classroom Management 3 cr. Offered every term. Prereq., admission to Teacher Education Program. Prereq. or coreq., C&I 200. Focus on classroom management and the characteristics and instructional adaptations for exceptional students in the regular classroom. Addresses the Individuals with Disabilities Education Act and subsequent reauthorizations, presents practices for working with students who are at-risk and students with disabilities in inclusive settings, and includes technological considerations.

UG 420 Curriculum and Methods in Early Childhood Special Education 3 cr. Offered autumn even-numbered years. Principles in selecting and adapting early childhood curriculum materials for young children with disabilities; development, implementation and evaluation of individualized education programs; and appropriate teaching strategies for the early childhood special education classroom. Includes 45 practicum hours in campus-based CO-TEACH Preschool.

UG 421 Issues in Early Intervention 3 cr. Offered autumn odd-numbered years. Issues involved when serving young children with disabilities; family and child advocacy; least restrictive placements in early childhood settings; transitions concerning families, special education service providers and receiving schools; ;case management in rural communities; transdisciplinary teaming process; and preschool individualized education programs. Includes practicum hours in campus-based CO-TEACH preschool.

UG 426 Teaching Science in the Middle and Secondary School 3 cr. Offered autumn. Prereq., C&I 303, a science teaching major or minor. Methods and materials to teach science in grades 5-12. Techniques of evaluation.

UG 427 Literacy Strategies in Content Areas 3 cr. Offered autumn and spring. Prereq., C&I 303. Theories, models, instructional approaches for using literacy for learning in content fields. Emphasis on research, instructional practice, classroom assessment, multicultural and discipline integration.

UG 428 Teaching Social Studies in the Middle and Secondary School 3 cr. Offered autumn. Prereq., C&I 303. Foundations and purpose of the middle and secondary social studies curriculum. Elements of lesson design, including instructional methods, materials and assessment.

UG 429 Teaching Business Subjects 4 cr. Offered autumn. Prereq., C&I 303, business teaching experience. Methods of unit and lesson planning methods of instruction and presentation including learning theory computer applications student assessment micro teaching test design and evaluation of business courses and students.

UG 430 Teaching Mathematics in the Middle and Secondary School 4 cr. Offered autumn. Prereq., C&I 200 and C&I 303, and at least two-thirds of the teaching major or minor in mathematics. Methods for teaching mathematics in grades 5-12 focusing on presentation of mathematics concepts and procedures through models, problem solving, and technology. Development of instructional strategies and classroom organizational models, discourse in the classroom, and multiple means for assessing student progress.

UG 433 Basic Diagnosis and Correction of Reading and Writing 3 cr. Offered autumn and spring. Prereq., C&I 318 or 427 for education students. Based on the analytic process, emphasis on assessing, identifying, and devising instructional strategies to meet students' reading/writing strengths and needs.

UG 435 Organizing Classroom Reading and Writing Programs 3 cr. Offered spring. Prereq., C&I 318 or 427. Emphasis on developing and supervising the school-wide literacy program and relating literacy research to educational practice to plan, implement, and assess a high quality reading/writing program.

UG 437 Application of Literacy Models 6 cr. Offered summer intermittently. Prereq., C&I 433 or C&I 533. Provides classroom teaching experience under direct supervision. Candidates teach reading and writing and apply knowledge of assessing and correcting reading and writing difficulties in grades K-12.

UG 444 Advanced Technology and Supervision 3 cr. Offered spring. Planning, supervision, utilization, and evaluation of advanced technology in vocational business and information technology education.

UG 452 Measurement and Observation 3 cr. Offered autumn and even summers. Focus on a variety of assessment procedures for students who qualify for Special Education services. A variety of assessments and assessment techniques will be taught, with a stron emphasis on the use of ecologically valid assessment tools. Specific measurement skills will be taught including observation skills. Field experience is required.

UG 453 Introduction to Special Education Law and Policy 3 cr. 3 cr. Offered autumn and even-numbered summers. Historic and current perspectives on laws, policies and practices of the special education and related fields. Coverage of all aspects of the special education process including collaborative practices.

UG 455 Workshop Variable cr. (R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

UG 458 Effective Academic Intervention 3 cr. Offered autumn and even summers. Evidence-based assessment and instruction techniques in all basic academic areas. Particular focus on general outcome and curriculum-based measures and the alignment of these assessments to interventions. A field experience is required.

UG 463 Advanced Positive Behavioral Supports 3 cr. 3 cr. Offered spring and odd-numbered summers. In-depth study of the principles and procedures for managing problem behaviors with an emphasis on prevention and classroom management. A field experience is required.

UG 469 Student Teaching in Special Education Variable cr. (R-10) Offered autumn and spring. Prereq., completion of all courses in the special education minor and consent of instr. and Director of Field Experiences. Supervised field experience in special education.

UG 470 Young Adult Literature and Critical Reading 3 cr. Offered intermittently. Genre surveys; extensive reading, and analyzing of literature, authors and media addressed to students ages 12-18. Emphasizes effective teaching strategies for using high quality literature with middle school and secondary students. Not a substitute for C&I 316.

UG 479 Reference Resources 3 cr. Offered intermittently. Evaluation, selection, and use of basic reference resources. Teaching of media skills, information negotiation, search strategies, database use, and information services.

UG 480 Collection Development 3 cr. Offered autumn. Focus on building and maintaining a foundation print and non-print media collection; devising a selection policy; demonstrating media use in support of the curriculum; and compiling annotated bibliographies.

U 481 Student Teaching: P-8 Elementary Variable cr. (R-14) Offered autumn and spring. Prereq., passing score on Writing Proficiency Assessment; the Professional Methods Block, a minimum of 9 credits in the selected area of concentration, a minimum of 9 credits from the following: ART 314A, DAN 327, DRAM 327, HHP 339, and MUS 335; approval by advisor, and consent of Director of Field Experiences and Student Teaching. Coreq., C&I 494.

U 482 Student Teaching: Secondary Variable cr. (R-14) Offered autumn and spring. Prereq., passing score on Writing Proficiency Assessment and consent of Director of Field Experiences and Student Teaching. Coreq., C&I 494

UG 483 Library-Media Technical Processes 3 cr. Offered spring. Coreq., C&I 488. Focus on the technical processing and organization of print and non-print materials utilizing descriptive cataloging, application of AACR2 and the Dewey Decimal System, Library of Congress subject headings, and MARC21 records.

UG 484 Administration and Assessment of the Library-Media Program 3 cr .Offered spring. Administrative and management procedures; assessment in terms of state, regional, and national guidelines for library-media programs and services.

UG 485 Authentic Assessment in Library Media 3 cr. Offered summer. Prereq., 19 credits in library Media and consent of instr. Supervised field experience in selected phases of library media center operations, including assessment.

UG 486 Statistical Procedures in Education 3 cr. Offered autumn of even years. Prereq., M 115 (MATH 117) or equiv. or consent of instr. Same as HHP 486. Concepts and procedures characterizing both descriptive and inferential statistics. Awareness of common statistical errors.

UG 488 Libraries and Technology 3 cr. Offered spring.. Coreq., C&I 483. Uses of digital technologies in all aspects of library media center operations, including cataloging and circulation, collection development, reference services and administration.

U 493 Omnibus Variable cr. (R-9) Offered intermittently. Independent work under the University omnibus option. See index.

UG 494 Seminar Variable cr. (R-9) Offered every semester for portfolio credit. Prereq., consent of instr. Offered intermittently for group analysis of problems in specific areas of education.

UG 495 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 496 Independent Study Variable cr. (R-6) Offered every semester. Prereq., consent of instr.

U 498 Internship Variable cr. Offered intermittently. Prereq., consent of chair. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

G 501 Curriculum Design, Implementation, and Evaluation 3 cr. Offered spring even-numbered years; offered summer. Underlying

principles of design, factors affecting implementation, and evaluation and assessment of K-12 curricula at the student and program levels.

G 502 Philosophy of Education 3 cr. Offered spring and summer odd-numbered years. Same as EDLD 502. Major philosophical schools of thought and leading proponents of each. Concepts of society, the educative process, and the role of education.

G 504 History of American Education 3 cr. Offered spring and summer odd-numbered years. Same as EDLD 504. Exploration of the ideas, individuals, and events that have influenced the curriculum, pedagogy, and operation of the American public school, from colonial America to the present time.

G 506 Comparative Education 3 cr. Offered spring even-numbered years. How the American educational system compares with those in selected other countries.

G 508 Sociology of Education 3 cr. Offered autumn even-numbered years. Modern public education as it affects and is affected by religious, economic, and political systems and other social institutions.

G 510 Advanced Educational Psychology 3 cr. Offered autumn odd-numbered years and summer even-numbered years. The exploration of theoretical and empirical issues in psychology (e.g., learning theory and intelligence).

G 514 Education Across Cultures 3 cr. Offered autumn and spring odd-numbered years; offered every summer. Educational foundations of the study of diversity in American schools.

G 515 Computer and Other Technological Applications in Education 3 cr. Offered summer; offered spring even-numbered years. Prereq., a basic computer course or demonstrated computer literacy. Computer systems and other hardware utilizing various software applications by administrators, counselors, librarians, teachers, and students.

G 518 Inclusion and Collaboration 3 cr. Offered autumn even-numbered years; offered summer. Legal and ethical issues involved in the responsible inclusion of all individuals with disabilities through multi-disciplinary and collaborative efforts.

G 519 Authentic Assessment 3 cr. Offered online spring odd-numbered years. Focus on assessment practices in K-12 classrooms including a wide variety of assessments that meet curricular objectives as well as nationally required standardized exams to meet NCLB mandates.

G 520 Educational Research 3 cr. Offered every term. Same as EDLD/HHP 520. An understanding of basic quantitative and qualitative research methodology and terminology, particularly as they are used in studies presented in the professional literature.

G 521 Foundations in Environmental Education 3 cr. Offered autumn. Prereq., graduate standing in environmental studies. Same as EVST 521. Problem-solving approach to environmental education; problem identification, research and design and implementation of an educational approach to selected environmental issues.

G 522 Applied Research Methods 3 cr. Prereq., C&I 520. Assists students in acquiring the skills and knowledge required to be competent producers of research related to the field of special education. Students are expected to be prepared to review research methods and conduct a research project.

G 523 Advance Methods in Early Childhood Special Education 3 cr. Offered spring and odd summers. Focuses on the relationship between assessment and individualized educational planning young children who qualify for Special Education services. A variety of assessments and assessment techniques will be taught, with a strong empahais on the use of ecologically valid assessment tools. Emphasis on instructional techniques for young children will be covered with particular attention to the DEC recommended practices. A field experience is required.

G 524 Family and Diversity Issues for Exceptional Learners 3 cr. An overview of different approaches, current issues, and problems involved in working with and supporting families including families from diverse backgrounds. Emphasis is placed on how a child with disabilities affects and is affected by parents, siblings, the extended family, and the community. Strategies for effective communication for the purpose of information sharing and collaborative planning with families are provided.

G 525 Teaching Environmental Science 1-3 cr. (R-6) Offered spring even-numbered years. Prereq., consent of instr. Same as EVST 525. Identification and examination of potential solutions to environmental problems and their impact on society. Major emphasis on teaching methods as they apply to environmental science.

G 526 Transition and Community Supports 3 cr. Focus on issues and strategies for preparing adolescents and young adults with disabilities for the transition from school to future careers. These issues are discussed within the context of more global efforts to create school-to-career programs in school settings for all students.

G 527 Advanced Literacy Strategies in Content Areas 3 cr. Offered autumn; offered summer even-numbered years. Prereq., teaching experience. Advanced theories, models, instructional approaches for using reading/writing for learning in content fields. Emphasis on research, instructional practice, classroom assessment.

G 530 Socio-Cultural Foundations of Literacy 3 cr. Offered summer odd-numbered years. Survey of history and research related to literacy practices in schools/communities. Theories, models, politics of literacy in K-12/Adult education.

G 533 Advanced Diagnosis and Correction of Reading and Writing 3 cr. Offered summer even-numbered years. Based on the case study approach, emphasis on diagnosing and devising instructional strategies for students with reading/writing strengths and needs.

G 540 Supervision and Teaching Language Arts 3 cr. Offered summer even-numbered years. Prereq., teaching experience. Advanced theories and instructional approaches for teaching and assessing the facets of communication within an integrated elementary curriculum.

G 541 Supervision and Teaching of Children's Literature and Critical Reading 3 cr. Offered summer even-numbered years. Prereq., undergraduate course in children's literature. Literature-based study involving extensive critical reading and integrated curricular use of high quality nonfiction and classical, contemporary, and multi-cultural fiction, addressed to grades 1 through 8.

G 542 Supervision and Teaching of Mathematics 3 cr. Offered spring even-numbered years and summer odd-numbered years. Curriculum trends, instructional materials, research and supervisory techniques relevant to a modern school mathematics program.

G 543 Supervision and Teaching of Reading 3 cr. Offered summer odd-numbered years. Survey of theory and research related to developing and supervising reading instruction programs.

G 544 Supervision and Teaching of Science 3 cr. Offered intermittently. Prereq., Sci 225, 226 or equiv., teaching experience. Designing curricula based on the structure of knowledge, and analyzing existing science programs.

G 545 Social Studies Education 3 cr. Offered summer even-numbered years. Historical trends and curriculum issues related to social studies instruction. Emphasis on current research concerning social studies curriculum design, instructional practices, and use of resources.

G 546 Supervision and Teaching of Young Adult Literature and Critical Reading 3 cr. Offered intermittently. Extensive reading among classical, contemporary, and multicultural literature including novels, poetry, short stories, and drama; selection of high quality works, evaluation, and curricular utilization in grades 8 through 12.

G 548 Supervision and Teaching in Environmental Education 3 cr. Offered spring. Prereq., EVST 521 or C&I 521. Design, selection, and evaluation of materials for the teaching of environmental education.

G 552 Models of Professional Development in Mathematics and Science 3 cr. Offered spring even years on-line. Exploration of various models of professional development and the development of implementation plans for workshops and in-service professional development in science and mathematics.

G 553 Information Searching, Retrieval and the Curriculum 3 cr. Offered summer even-numbered years.. Search strategy, informed selection, and curricular utilization of general and subject reference and information sources; integration of research and media skills into the K-12 curriculum.

G 555 Workshop Variable cr. (R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

G 556 Advanced Methods in Low Incidence Disabilities 3 cr. Offered spring and odd summers. focus on research-based methods of instruction for students with low incidence disabilities in basic communication, mobility, sensory, and social skills, as well as academic skills (especially literacy and general education curricular access). An introduction to augmentative and alternative communication and life quality today and in the future. An introduction to augmentative and alternative communication (AAC) and assistive technology (AT) is also addressed. A field experience is required.

G 557 Advanced Application of Literacy Models 6 cr. Offered intermittently in summer. Prereq., C&I 433 or 533. Based on readers' literacy strengths and needs, practitioners diagnose, devise, and implement instructional strategies for students in grades K-12.

G 560 School-wide Assessment and Instruction: Response to Intervention 3 cr. Prereq., C&I 458. Offered spring and odd summers. Review of evidence-based assessment and instruction techniques in all basic academic areas. Advanced application of general outcome and curriculum-based measures and alignment of these assessments to interventions. Preparation in service as a leader for the implementation fo school-wide prevention models. A practicum is required.

G 570 Instructional Technology Foundations 3 cr. Offered autumn even-numbered years. Same as EDLD 570. General introduction to the field, theory, and profession of instructional technology. Definition of instructional technology; history of the field.

G 571 Planning, Preparing, and Assessing Educational Technology Media 3 cr. Offered spring odd-numbered years. Same as EDLD 571. Principles and practices of instructional design for integration of educational technology. Emphasis on role of technology in contemporary teaching/learning/assessing theory and practice, including learning styles and multiple intelligences.

G 580 Distance Learning Theory and Implementation 3 cr. Offered summer odd-numbered years. Same as EDLD 580. Introduction to distance learning models and exploration of satellite and computer-mediated course development, implementation, and evaluation.

G 581 Planning and Management for Technology in Education 3 cr. Offered autumn odd-numbered years. Same as EDLD 581. Creating, implementing, maintaining, and evaluating technology plans for educational institutions, including budgets, facilities, and hardware planning.

G 582 Educational Technology: Trends and Issues 3 cr. Offered spring even-numbered years. Same as EDLD 582. Exploration of trends and issues in the use of educational technology in a variety of settings.

G 583 Strategic Planning for Technology 3 cr. Offered every term even-numbered years. Same as EDLD 583. Leadership and strategic planning processes for technology integration within schools.

G 584 Authentic Application in Instructional Design for Technology 3 cr. Offered summer even-numbered years. Same as EDLD 584. Development of practical competencies in such components of instructional technology as development, production, materials evaluation, and project management and implementation.

G 585 Unit Course in Business and Information Technology Education Variable cr. (R-6) Offered summer odd-numbered years. Each unit course will carry a special title designating topic covered that is related to improvement of instruction.

G 590 Supervised Internship 1-9 cr. (R-9) Offered autumn and spring.

G 594 Seminar Variable cr. (R-9) Offered autumn and spring. Prereq., consent of instr.

G 595 Special Topics Variable cr. (R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6) Offered autumn and spring. Prereq., consent of instr.

G 597 Research Variable cr. (R-9) Offered every term. Prereq., consent of instr.

G 598 Internship Variable cr. (R-9) Offered every term. Prereq., consent of instr. Supervised field experience.

G 618 Educational Statistics 3 cr. Offered spring. Prereq., C&I 486 or equiv., or consent of instr. Same as EDLD 618. Advanced statistical methods and use of the mainframe computer and microcomputer for data analysis. Use of a recognized statistical package (e.g., SPPS-X) for research applications.

G 620 Qualitative Research 3 cr. Offered autumn. Prereq., C&I 520 or 618, or equiv. Same as EDLD 620. In-depth review of descriptive, experimental, historiographic, ethnographic, and other qualitative research methods, designs, and approaches. Includes the development of a research proposal.

G 625 Quantitative Research 3 cr. Offered spring. Prereq., C&I 520 and 486 or equiv. and coreq., C&I 618. Same as EDLD 625. Principles and techniques of quantitative research in educational settings. Students prepare a draft of a research proposal and experience an abbreviated dissertation proposal defense.

G 630 Special Topics in Literacy 1-3 cr. (R-3) Offered every term. Prereq., consent of instr. Should be taken in conjunction with or immediately prior to comprehensive examinations. In-depth coverage of selected topics in reading and writing related to current literacy issues and practices.

G 652 Issues in Curriculum and Instruction 3 cr. Offered autumn odd-numbered years. Prereq., C&I 501 or consent of instr. Curricular and instructional decision making and process, innovation and change, trends and reforms. Controversial issues in education and society related to K-12 curriculum and motivation.

G 694 Advanced Seminar in Curriculum and Instruction Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

G 697 Advanced Research in Curriculum and Instruction Variable cr. (R-9) Offered intermittently. Prereq., consent of instr.

G 699 Thesis/Dissertation Variable cr. (R-10) Offered every term.

Faculty

Professors

- Rhea Ashmore, Ed.D., The University of Montana, 1981
- Lisa M. Blank, Ph.D., Indiana University, 1997
- Georgia A. Cobbs, Ph.D., The Ohio State University, 1995
- Janice LaBonty, Ph.D., University of Nebraska, 1987
- Jean A. Luckowski, Ed.D., Oklahoma State University, 1983
- Marian J. McKenna, Ph.D., University of Colorado, 1987
- Richard van den Pol, Ph.D., Western Michigan University, 1981

Associate Professors

- Trent L. Atkins, Ph.D., University of Oregon, 2003

- Sarah M. Brewer. Ed.D., University of Central Florida, 1995
- Fletcher Brown, Ph.D., Miami University, 1994
- David R. Erickson, Ph.D., The Ohio State University, 1994
- Ann N. Garfinkle, Ph.D., University of Washington, 1999 (chair)
- Martin G. Horeisi, Ph.D. Idaho State University, 1999
- Darrell W. Stolle, Ed.D., University of Montana, 1998
- Sandra R. Williams, Ed.D., The University of Montana, 2000

Assistant Professors

- Morgen Alwell, Ph.D., Colorado State University, 2004
- Matthew Schertz, Ed.D., Montclair State University, 2004

Research Faculty

- Nancy Arnold, Ph.D., University of Northern Colorado, 1995
- Theodore Maloney, M.A., Goddard College, 1978
- Gail McGregor, Ed.D., The Johns Hopkins University, 1984
- Sarah Mulligan, M.Ed., University of Washington, 1981
- Susan Toth, M.A., University of Iowa, 1974
- R. Timm Vogelsberg, Ph.D., University of Illinois, 1979

Emeritus Professor

- Carolyn J. Lott, Ed.D., The University of Montana, 1985

College of Education and Human Sciences

Roberta D. Evans, Dean
Sharon Dinkel Uhlig, Associate Dean

The College of Education and Human Sciences is comprised of five academic departments–Communicative Sciences and Disorders, Counselor Education, Curriculum and Instruction, Educational Leadership, and Health and Human Performance. It is also the home for the Institute for Educational Research and Service (IERS). Its mission is as follows:

The College of Education and Human Sciences shapes professional practices that contribute to the development of human potential. We are individuals in a community of lifelong learners, guided by respect for knowledge, human dignity, and ethical behavior. We work together producing and disseminating knowledge to advance the physical, emotional, and intellectual health of a diverse society.

The College of Education and Human Sciences coordinates The University of Montana Professional Education Unit, a unit comprised of initial teacher preparation at the elementary and secondary levels, and the advanced preparation of teachers, certified speech-language pathologists, educational leaders, school counselors, and school psychologists. The Communicative Sciences and Disorders Department prepares first professionals at the master's level in speech-language pathology. The Departments of Curriculum and Instruction, Educational Leadership and Counseling Education prepare professionals for careers in education with bachelor, master's, Education Specialist and Doctor of Education programs while the School Psychology Program, housed in the Psychology Department in the College of Arts and Sciences, prepares students for careers in education with its master's, education specialist, and doctoral degrees. These programs are organized to foster the development of learning communities and incorporate three basic themes: integration of knowledge and experience; cooperation among participants; and inclusiveness, caring, and respect for others. The Professional Education Unit at The University of Montana is accredited by the National Council for Accreditation of Teacher Education (NCATE), http://www.ncate.org**.**

The Communicative Sciences and Disorders, Counselor Education, and Health and Human Performance Departments all prepare professionals for careers in human service professions. Via its bachelor's degree in Communicative Disorders, the Communicative Sciences and Disorders Department prepares graduates qualified to work as clinical aides in speech-language pathology or audiology. Through its master's program in Speech-Language Pathology, the department will produce first professional students qualified to work as speech-language pathologists in schools and clinical settings. Students pursuing the Master of Arts in Counselor Education are prepared to work in a variety of community/agency settings. Upon completion of the program, graduates are prepared to sit for the Licensed Practical Counselor or Licensed Practical Clinical Counselor examination. Via its Bachelor and Master of Science degrees, the Department of Health and Human Performance prepares students in the areas of applied health science, athletic training, exercise science, exercise and performance psychology (on moratorium), health enhancement, and health promotion. The Athletic Training Program is accredited by the Commission on Accreditation of Athletic Training Education.

Central to its research and outreach efforts with P/K-12 schools, the College of Education and Human Sciences' Institute for Educational Research and Service (IERS) designs, evaluates, and disseminates programs that support the well-being of students and communities. Since 1957, IERS has collaborated with numerous local, state, national, and federal organizations to provide effective, data-driven research models that enhance the social development and academic achievement of all learners. Externally sponsored teaching, research, and service activities are central to IERS. In addition, the College of Education and Human Sciences supports a Preschool Laboratories, Preschool Program, Health and Human Performance Laboratory and Technology Resource Center. These centers offer

enhanced opportunities for student involvement and learning.

Specific program options within the College of Education and Human Sciences are described below and in the various departmental sections of this catalog. The Web address for the college is http://www.coehs.umt.edu

Department of Educational Leadership

John Lundt, Chairman, Educational Leadership

The **Educational Leadership** knowledge base emphasizes the realities of the workplace, blending practical tasks with the conceptual models of effective leadership. The model uses leadership assessment and problem-based learning throughout nine curricular strands: change/future, leadership, research community, communication, assessment/program evaluation, management, diversity, curriculum, and professionalism/socialization. Students at both degree levels experience integrated coursework, performance-based assessment, and exit interviews on completion of the degree programs.

Programs: The M.Ed., Ed.S., State Licensure, and Ed.D. are offered in education administration and supervision. Information regarding specific requirements and program options is available from the School of Education. For more information, please refer to The University of Montana Graduate Programs and Admissions Catalog. Graduate programs are accredited by NCATE and CACREP.

Admission to Educational Leadership: The Program Admissions Committee has established policies and standards for admission which include the GRE (verbal and quantitative); three letters of recommendation (one from an immediate supervisor); official transcripts for all undergraduate and graduate coursework; qualifying examination; and interviews (doctoral). Contact the Department for details.

Certification Requirements: Education Leadership degree programs lead to certification at the Class III level.

Courses (Check master schedule for availability of all courses)

U = for undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Educational Leadership (EDLD)

U 295 Special Topics in Educational Leadership 3 cr. Offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

UG 495 Special Topics Variable cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 502 Philosophy of Education 3 cr. Same as C&I 502. Major philosophical schools of thought and leading proponents of each. Concepts of society, the educative process, and the role of education.

G 504 History of American Education 3 cr. Same as C&I 504. Exploration of the ideas, individuals, and events that have influenced the curriculum, pedagogy, and operation of the American public school, from colonial America to the present time.

G 512 Educational Futures 3 cr. Predicting and projecting the near and more distant future of education. The changing place and nature of education and leadership in tomorrow's society.

G 519 Measurement and Analysis of Educational Data 3 cr. Prereq., graduate standing. Explanation and practice in measurement and statistical analysis of educational data. Preparation in measurement and statistical analysis for educational research.

G 520 Educational Research 3 cr. Same as C&I and HHP 520. An understanding of basic quantitative and qualitative research methodology and terminology, particularly as they are used in studies presented in the professional literature.

G 540 Higher Education Finance 3 cr. Overview of how colleges and universities make financial and budgetary decisions; current trends in state and federal policy related to finance; contemporary problems in finance of education.

G 542 The College Student 3 cr. Survey of today's college student including discussion of demographics, student development theories, learning theories, and contemporary issues on college campuses related to college students.

G 544 The College Curriculum 3 cr. Historical and contemporary development of college and university curriculum. Includes overview of pedagogical strategies, assessment, evaluation, and curricular change.

G 546 Federal and State Higher Education Policy 3 cr. Overview of policies at the local, state, and national levels that affect the conduct of higher education; current trends in higher education policy; changes in educational policy; how policies affect different institutional types.

G 550 Foundations of Educational Leadership 3 cr. Basic functions of K-12 administration and supervision and how contemporary

views have evolved; models of leadership style and practice compared; responsibilities and relationships of school boards and chief school officers.

G 551 Foundations of Curriculum Leadership 3 cr. The history and theoretical bases of current K-12 curriculum and instructional leadership.

G 552 The Supervision and Evaluation of Public School Educators 3 cr. Conflicting views and models of supervision; supervision in relation to administration and evaluation. Development of instruments for the formative and summative evaluation of teaching and their use in simulated cases.

G 554 School Law 3 cr. Key Montana and national legislation regarding public education. Landmark cases of the U.S. Supreme Court and other federal, regional, and state courts as they affect the operation of public schools and the rights of school board members, administrators, teachers, students, and parents.

G 556 The Finance of Public Education 3 cr. Revenue sources for K-12 public schools; proper expenditures; Montana's foundation program and related legislation; major court cases and how they have affected ways of funding schools; developing effective school and district budgets.

G 559 School Public Relations for the Principal 3 cr. Investigation of the appropriate leadership and management roles of the modern school principal as they relate to public relations. Understanding of political theory as it relates to developing and maintaining relationships with internal and external publics.

G 567 K-12 Leadership 3 cr. Examination of the roles responsibilities, and relationships of educators relative to management and leadership considerations at all levels of the educational organization (elementary, middle, secondary, and central office).

G 568 K-12 Curriculum 3 cr. Major aspects of curriculum related to the duties and responsibilities of school administrators. Issues related to the development, review and evaluation o curriculum. Exploration of issues related to selected instructional models and practices; school improvement.

G 570 Instructional Technology Foundations 3 cr. Same as C&I 570. General introduction to the field, theory, and profession of instructional technology. Definition of instructional technology; history of the field.

G 571 Planning, Preparing, and Assessing Educational Technology Media 3 cr. Same as C&I 571. Principles and practices of instructional design for integration of educational technology. Emphasis on role of technology in contemporary teaching/learning/assessing theory and practice, including learning styles and multiple intelligences.

G 580 Distance Learning Theory and Implementation 3 cr. Same as C&I 580. Introduction to distance learning models and exploration of satellite and computer-mediated course development, implementation, and evaluation.

G 581 Planning and Management for Technology in Education 3 cr. Same as C&I 581. Creating, implementing, maintaining, and evaluating technology plans for educational institutions, including budgets, facilities, and hardware planning.

G 582 Educational Technology: Trends and Issues 3 cr. Same as C&I 582. Exploration of trends and issues in the use of educational technology in a variety of settings.

G 583 Strategic Planning for Technology 3 cr. Same as C&I 583. Leadership and strategic planning processes for technology integration within schools.

G 584 Authentic Application in Instructional Design for Technology 3 cr. Same as C&I 584. Development of practical competencies in such components of instructional technology as development, production, materials evaluation, and project management and implementation.

G 585 Fieldwork in Educational Administration and Supervision 2-3 cr. Fieldwork at the school level (when the student is not completing an internship), with the cooperation of the principal and under the guidance of a University of Montana professor.

G 594 Seminar Variable cr. (R-9) Group analysis of problems in specific areas of education.

G 595 Special Topics Variable cr. (R-9) Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-9) Consent of instructor.

G 597 Research Variable cr. (R-10) Consent of instructor.

G 598 Internship Variable cr. (R-10) Consent of instructor.

G 599 Professional Paper Variable cr. (R-9) Consent of instructor.

G 618 Educational Statistics 3 cr. Same as C&I 618. Advanced statistical methods and use of the mainframe computer and microcomputer for data analysis. Use of a recognized statistical package for research applications.

G 620 Qualitative Research 3 cr. Same as C&I 620. In-depth review of qualitative research methods, designs, and approaches. The development of a research proposal.

G 625 Quantitative Research 3 cr. Same as C&I 625. Principles and technique of quantitative research in educational settings. Students prepare a draft of a research proposal and experience an abbreviated dissertation proposal defense.

G 653 School Personnel Administration 3 cr. Administration of classified and certificated school employees; personnel-related laws, functions, and decisions; unions, bargaining contracts, grievances, etc.

G 656 The Economics of Public Education 3 cr. School finance from a national perspective; alternative budgeting and school-revenue models; equity considerations.

G 657 Facilities Planning and Other School Business Functions 3 cr. Working with architects, school personnel, and others on educationally and financially sound plans for new and remodeled facilities; the school business official's responsibilities regarding buildings and grounds, maintenance and custodial services, transportation, food services, and the administration of classified personnel.

G 658 School Public Relations–Superintendents 3 cr. Enhancing site- and district-level internal and external relations; conducting needs assessments, inservice workshops, and funding campaigns; improving administrators' writing, listening, and speaking skills; composing press releases and newsletters; working with the media.

G 660 Adult and Continuing Education 3 cr. Adult learning theory and the special needs and motivations of adult learners in postsecondary institutions; principles and practices of administering postsecondary continuing education programs.

G 662 History of Higher Education 3 cr. Survey of the historical roots of higher education from world and comparative perspectives; examination of the historic and contemporary missions, organizational structures, governance, and administration of various types of postsecondary and higher education institutions in America and abroad.

G 664 The Community College 3 cr. The organization and administration of American postsecondary education in two-year collegiate institutions; current trends in governance, finance, curriculum, faculty and students.

G 667 The American College Professor 3 cr. Investigation of the prevailing curriculum and instruction in American undergraduate and graduate education and consideration of reform reports.

G 668 College and University Administration 3 cr. Administration of college and university programs, departments, and schools; the roles of program director or coordinator, department chairperson, dean, vice president, provost, president, chancellor, and commissioner.

G 674 Internship in College Teaching 1 cr. Provides an opportunity for guided and supervised teaching at the college level and assistance to the aspiring college teacher in meeting the needs of a diverse student population; assistance provided in methods of teaching at the college level, theories of learning, use of technology, and evaluation and assessment techniques.

G 676 Internship in Higher Education Administration 1-3 cr. (R-6) Supervised and guided work in an administrative unit/department at the college/university level.

G 694 Advanced Seminar: Educational Administration and Supervision Variable cr.(R-9)

G 697 Advanced Research in Educational Administration and Supervision Variable cr. (R-9)

G 699 Professional Seminar/Dissertation Variable cr. (R-12)

Faculty

Professors

- Roberta D. Evans, Ed.D., The University of Nevada, Reno, 1988
- John C. Lundt, Ed.D., The University of Montana, 1988
- Donald L. Robson, Ph.D., Emeritus Michigan State University, 1976
- L. Dean Sorenson, Ph.D., Emeritus Washington State University, 1984

Associate Professors

- William P. McCaw, Ed.D., The University of Montana, 1999

Assistant Professors

- John Matt Ed.D., The University of Montana, 1999
- Francee O'Reilly Ed.D, Adjunct, The University of Montana, 2002

Department of Health and Human Performance

- Special Degree Requirements
- Suggested Course of Study
- Courses
- Faculty

Scott Richter, Chair

Within the liberal arts tradition of The University of Montana and the mission of the College of Education and Human Sciences, the Department of Health and Human Performance (HHP) engages in professional education, scholarly activity, and meaningful public service. The department emphasizes all dimensions of health and human movement to enhance the longevity and quality of life. The undergraduate curriculum in health and human performance at The University of Montana prepares graduates to be competent entry-level professionals in health and human performance-related occupations or candidates for advanced study in related disciplines. Development of the following is considered essential in achieving these outcomes:

1. A knowledge of the scope of the profession,
2. Basic and professional skills germane to effective practice as a health and human performance professional or successful pursuit of advanced studies,
3. Higher order thinking skills which increase the students' involvement in their own learning and promote a lifelong quest for knowledge,
4. Knowledge of the multiple dimensions of health, and possession of health promotion skills applicable in a variety of settings,
5. An understanding of the role played by health and human performance professionals, a sense of responsibility, personal attributes, and professional behaviors requisite for effective functioning within that role,
6. Application of skills acquired in laboratory classes to community testing.

HHP majors choose from one of the following options in the undergraduate curriculum: Exercise Science; Applied Health Science; and Health Enhancement. Students complete requirements for one or more of the options consistent with their professional aspirations.

Athletic Training is a major in the Health and Human Performance Department. The goal of the Athletic Training major is to prepare competent entry-level athletic trainers for employment in educational and clinical settings or post-graduate study. The Athletic Training curriculum is designed to help students develop proficiency in the acute care of injuries/illnesses, risk management and injury prevention, psychosocial intervention and referral, therapeutic exercise, pharmacology, pathology of injuries/illnesses, health care administration, general medical conditions and disabilities, assessment and evaluation/diagnosis, professional development and responsibilities, and nutritional aspects. Successful graduates should possess the knowledge and skills to qualify for the Board of Certification Examination.

The Exercise Science option is designed to provide students with an in-depth science background. and prepares students for post-baccalaureate study in exercise physiology and related health sciences. Successful graduates of this option should possess the knowledge and skills to qualify for the ACSM Exercise Specialist Certification.

The Applied Health Science option prepares students for professional certification and employment in two areas–exercise and fitness and/or community health education. Successful graduates of this option should possess the knowledge and skills to qualify for:

1. American College of Sports Medicine Health/Fitness Instructor’s Certification;
2. National Strength and Conditioning Association Certified Strength and Conditioning Specialist certification, or equivalent; and/or
3. Certification as a Health Education Specialist. Students should be prepared to assess health needs, plan, implement and evaluate health promotion activities in a variety of settings.

The Health Enhancement option prepares students to use a variety of educational strategies designed to facilitate the adoption of healthy behaviors in k-12 students. Upon acceptance into the School of Education and successful completion of the course requirements students will be eligible for a Montana K-12 teaching license. See admission Policies below.

The graduate curriculum in Health and Human Performance at The University of Montana prepares post-graduates to become effective health and human performance professionals or competitive candidates for advanced study in related disciplines through a comprehensive program of study and guided research. Development of the following is considered essential in achieving a graduate degree:

1. Oral and written communication skills,
2. An understanding of current research literature in one's chosen specialization and to promote independent pursuit of learning beyond the confines of curricular requirements,
3. Appropriate technological skills,
4. Ability to design, conduct, and report research in a scholarly fashion,
5. Personal characteristics, sense of responsibility, and professional behaviors requisite for effective functioning as an advanced health and human performance professional.

Graduate options include Exercise Science, Health Promotion, and Health and Human Performance. For more information regarding the department's graduate program, refer to either The University of Montana Graduate Programs and Admissions catalog (http://www.umt.edu/grad/programs/default.htm) or The College of Education and Human Sciences Graduate website (www.soe.umt.edy/hhp/hhp_mater/default.shtm).

The HHP department also provides a large activity program (HHP classes numbered 100-179) which includes instruction in a wide variety of individual, team, recreational, and fitness activities. Goals of this program include helping students:

1. Develop and maintain long-term health-related fitness,
2. Develop motor performance skills that facilitate regular and continuous participation in physical activity, and
3. Develop the adult "inner athlete" who continually strives to reach optimal potential through involvement in challenging endeavors.

Any University of Montana student may elect to apply up to four credits from HHP 100-179 toward a baccalaureate degree. For descriptions of the activity classes offered, refer to the website at http://www.soe.umt.edu/hhp/ and select Health & Human Performance Activity Classes (H2PAC).

Special Degree Requirements

Refer to graduation requirements listed previously in the catalog. See index.

Students must fulfill the requirements listed below. All HHP majors must earn a minimum grade of a C- in all required courses, including prerequisites, except for special cases of higher requirements in Athletic Training and Health Enhancement noted below. In-department and out-of-department courses specifically listed in this catalog as requirements for Health and Human Performance majors must be taken for a traditional letter grade.

Athletic training students must earn a grade of C (2.00) in all required courses, including prerequisite courses. Courses specifically listed in the catalog, as requirements for the athletic training major (Athletic Training Education Program) must be taken for a traditional letter grade. This includes in-department and out-of-department courses. Students in the athletic training program who receive less than C (2.00) on any required courses will be placed on program suspension and may not be allowed to continue any sequential courses until they retake the course and receive at least a C. If a student receives less than a C (2.00) after repeating a course, the student may be dismissed from the program.

The University of Montana symbolic systems requirement is met by completing one of the following statistics courses and any pre-requisite courses: STAT 216 (MATH 241) Introduction to Statistics or PSYX 222 (PSYC 220) Psychological Statistics or SOCI 202 (SOC 202) Social Statistics or WBIO 240 Intro to Biostatistics or HHP/C&I 486. All options must meet this requirement.

Admission Policies for Health Enhancement Option

The Health Enhancement option is designed for individuals who wish to teach in K-12 school systems. Application for admission to the School of Education must be made (refer to http://www.soe.umt.edu/hhp). Applications are accepted twice a year; however, the number of students admitted into the program is limited. Application is made no sooner than after the completion of 30 hours of course work. A cumulative GPA of 2.75 is necessary for application.

To successfully complete the program in Health Enhancement, a student must receive a grade of C (2.00) or above in every course in the following areas: teaching major, professional education courses, a drug abuse course, PSYX 100S (PSYC 100), WRIT 101 (ENEX 101), and C&I 427. (These courses must be taken as a traditional letter grade).

Admission Policies for the Athletic Training Major

Athletic Training Education Program (ATEP)

The University of Montana offers a Bachelor of Science in Athletic Training. The Athletic Training Education Program (ATEP) is the only undergraduate curriculum in the State of Montana accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The ATEP is a demanding curriculum which requires dedication and commitment. Upon completion there are a variety of professional career opportunities.

Following are the requirements for application, admission, and retention of the Athletic Training Education Program (ATEP). Academic advisors are available to assist students with this interesting and challenging professional program.

Admission. Students who desire admission into the ATEP must submit a formal application to the curriculum director. Prior to applying, students must complete all pre-professional requirements (3 semesters), see (http://www.soe.umt.edu/hhp/athletic_training/) for details. The application deadline is October 1. The application packet is available from the HHP department or the ATEP office with the approval of the ATEP director.

Each application for admission to the professional ATEP is reviewed by a Selection Committee consisting of the ATEP curriculum director, the clinical director, clinical instructors, and other professionals. Formal notification of admission to the professional ATEP is sent to each candidate prior to the preregistration period for spring semester.

Some candidates may not be admitted to the professional ATEP due to the limited number of clinical openings or lacking other specific qualifications/requirements.

Interview Requirements. The following selection criteria must be met to be considered for an interview:

1. Obtain a minimum overall GPA of 2.75. All pre-professional ATEP course requirements must have no grade lower than "C".
2. Submission of a written "Statement of Purpose" attached to the application form. Applicants must address the following:
    - reason for applying to this professional concentration
    - perception of the profession
    - future expectations upon completion of the professional ATEP
    - past experience in athletic training
    - any other areas or comments considered appropriate
3. Submission of three professional letters of recommendation.
4. Completion of 70 hours of clinical observation in athletic training and Level 1 modules and clinical proficiencies. See the Pre-ATEP Policy & Procedure Manual. (http://www.soe.umt.edu/hhp/athletic_training/) or contact the Program Director for this information.
5. Completion of blood-borne pathogen requirements. See website http://www.soe.umt.edu/hhp/athletic_training/.
6. Completion of the prerequisite courses (see above website or contact the curriculum director prior to application to the Professional ATEP).
7. Meet established technical standards and pass a pre-program physical examination by the team physician (please contact the program director).
8. Completion of a successful Criminal Background Check (see Curriculum Director for details).

Note: Transfer students will be required to complete all the pre-professional requirements and also submit an application as required in the admissions policies.

Professional ATEP.
The ATEP is divided into a pre-professional program lasting approximately three semesters (1.5 years) and a professional program during the final five semesters (2.5 years). The professional program requires 5 semesters of clinical education and sequential courses; therefore, students usually enter the program during spring semester after application and acceptance into the professional program.

Upon admission into the professional program, the following requirements must be met:

1. Become a student member of the National Athletic Trainers' Association, Inc.
2. Liability insurance provided by the University of Montana for all ATEP professional students.
3. Accumulate a minimum of 1,000 hours of clinical practicum within a two year period. No more than one-half (500) of this minimum (1,000) can be credited per academic year; the hours must be equally distributed each semester (250 per semester).
4. Demonstrate progressive improvement as an athletic training student throughout the didactic and clinical educational process, per CAATE guidelines and The University of Montana-Missoula's ATEP requirements.
5. Complete the required proper sequence (see four year plan).
6. Send for a Board of Certification (BOC) examination application.
7. Maintain current appropriate First Responder and CPR cards (see the HHP First Aid Requirements http://www.umt.edu/catalog/hhp.htm).
8. Maintain a 2.75 overall GPA and receive no lower than a "C" in any professional course.
9. Complete a Hepatitis B immunization before initiating clinical education.
10. Meet established technical standards and pass a preprogram physical examination by the team physician.

General Program Requirements

First Aid and CPR Exit Certifications

All Health and Human Performance students are required to have the appropriate certification in first aid/emergency care and CPR at graduation. The following certifications will meet this competency:

Any one of the following current first aid/emergency care certifications:

- American Academy of Orthopedic Surgeons (AAOS)
- National Safety Council Level - First Responder
- Wilderness First Responder
- First Responder - American Heart Association

Plus one of the following CPR certifications:

- American Heart Association (Health Care Provider)
- American Red Cross (Professional Rescuer)

Or Certification as an Emergency Medical Technician

Health and Human Performance students may use available elective credits to take HHP 288/289, First Responder and CPR, to meet this

competency, or they may elect to fulfill the competency through one of the department approved agencies. Academic credit for HHP 288/289 **will not** be awarded for certifications earned at off-campus approved agencies other than the Health and Human Performance Department at The University of Montana.

Upper-division Writing Expectation

The HHP Department offers three upper-division writing courses to fulfill the General Education writing requirements; HHP 450W, HHP 472 and HHP 301. Exercise Science and Applied Health Science students are required to complete HHP 450W (Analytical and Communication Techniques), Athletic Training students are required to complete HHP 372W (Rehabilitation of Athletic Injuries) and Health Enhancement Students are required to complete HHP 301 (Instructional Strategies in Secondary Physical Education.

Options Undergraduate students must complete requirements for a minimum of one of the options listed below. The typical student may take more than four years to complete these requirements, especially in the Athletic Training major and the Health Enhancement option.

Athletic Training Major (required courses). Within Department (70-71 cr.): 181, 184, 226, 240, 241, 242, First Aid/CPR competency, 288-289 or appropriate course, 334, 340, 341, 342, 343, 344, 345, 366, 367, 368, 369, 372, 373, 377, 378, 384, 401, 402, 411, 412, 446, 465, 475E, 478, 479, 485, 2 crs. of electives exclusive of 100-179. (Students may take HHP 288 to meet the First Aid/CPR competency; please see catalog or advisor for the other options to meet the competency). Out of Department (32 cr.): WRIT 101 (ENEX 101); COMM 111A; CHMY 121N, 123N (CHEM 151N, 152N); BIOL 106N, SCN 201N, 202N or BIOL 312-313; PSYX 100S (PSYC 100S); WRIT 222 (FOR 220); PHAR 110N; one of the following statistics courses: STAT 216 (MATH 241) Psychological Statistics, SOCI 202 (SOC 202) Social Statistics, WBIO 240 (Intro to Biostatistics) or C&I/HHP 486. Complete HHP 472 (Rehabilitation of Athletic Injuries) for Upper Division Writing requirement.

Exercise Science Option (required courses). Within Department (45-48 cr.): 181, 184, 226, 236N, 288-289 or competency, 368, 369, 377, 378, 384, 446, 450, 475E, 483, 482 or 484, 499. Upper division electives: (6 crs. including at least 3 HHP crs): Courses appropriate to your study focus in agreement with your advisor. Out of Department (51-52 crs.): COMM 111A; CHMY 121N, 123N, 124N (CHEM 151N, 152N, 154N); SCN 201N, 202N or BIOL 312, 313; WRIT 222 (FOR 220); M 122 or M 151 (MATH 112 or 121); PHYS 111N/113N; PSYX 100S (PSYC 100S); one of the following statistics courses: STAT 216 (MATH 241), PSYX 222 (PSYC 220), SOCI 202 (SOC 202), WBIO 240 or C&I/HHP 486; 11 crs. of electives from biology, biochemistry, mathematics, physics, psychology upon consent of advisor. Complete HHP 450 Analytical and Communication Techniques for the Upper Division Writing requirement.

Applied Health Science Option (required courses). Within Department (35-38 crs.): 181, 184, 226, 236N, 288-289 or appropriate certification, 330, 377, 378, 450, 465, 475E, 483, 484, 4 crs. of 498. Out of Department (31-35 crs.): COMM 111A; CHMY 121N (CHEM 151N); BIOL 106N; BIOL 121N or SCI 350; SCI 201N- 202N or BIOL 312, BIOL 313 ; M 115 (MATH 117); WRIT 222 (FOR 220); PSYX 100S (PSYC 100S); CS 171; one of the following statistics courses: STAT 216 (MATH 241), PSYX 222 (PSYC 220), SOCI 202 (SOC 202), WBIO 240, or C&I/HHP 486. In addition, students must complete an additional 24 credits, including at least 18 from the list below. The remaining 6 credits can be obtained from courses not on the list with the prior approval of advisor. HHP 368, 369, 370, 371, 384, 415, 425, 446, 482, 485, 486; ACTG 201 (ACCT 201); ANTH 388, 444; BIOL 265N; CHMY 123N (CHEM 152N); EVST 225; MKTG 360; PSYX 270S, 352 (PSYC 260S, 372W); SW 423, 455S (note: at least 16 of the 24 credits must be at the 300 level or higher and students may not count more than 60 HHP credits toward graduation). Complete HHP 450 Analytical and Communication Techniques for the Upper Division Writing requirement.

Health Enhancement Option (required courses). Within Department (51-54 crs.): 181, 184, 224, 225, 226, 233, 236N, 240, 241, 288-289 or appropriate certification, 301, 339, 361, 368, 369, 377, 378, 384, 450, 465, 466, 475E. Out of Department (71-73 crs.): COMM 111A; CHMY 121N (CHEM 151N), SCN 201N-202N; ;BIOL 106N; BIOL 121N or SC 350; M 115 (MATH 117) PSYX 100S (PSYC 100S), PSYX 230S (PSYC 240S); C&I 200, 301 or 302, 303, 306, 407E, 410, 427, 481, 482, 494; STAT 216 (MATH 241), PSYX 222 (PSYC 220), SOCI 202 (SOC 202), WBIO 240; NAS requirement. Complete HHP 301 (Instructional Strategies in Secondary Physical Education) for Upper Division Writing requirement.

Suggested Course of Study

Pre-Professional Athletic Training Major:

First Year	A	S
WRIT 101 (ENEX 101) College Writing I	3	-
CHMY 121N (CHEM 151N) Into to General Chemistry	3	-
HHP 226 Basic Exercise Prescription	3	-
HHP 181 Foundations of Health and Human Performance	3	-
HHP 184 Personal Health and Wellness	3	-
COMM 111A Introduction to Public Speaking	-	3
CHMY 123N (CHEM 152N) Introduction to Organic and Biochemistry	-	3
M 115 (MATH 117) Probability and Linear Math	-	3
BIOL 106N Elementary Medical Microbiology	-	3
General Education Requirements	-	3
Total	15	15

Second Year-1st Semester		
SCN 201N Anatomy and Physiology I	4	-
WRIT 222 (FOR 220) Technical Writing	2	-
PSYX 100S (PSYC 100S) Introduction to Psychology	4	-
HHP 240 Prevention and Care of Athletic Injuries	2	-
HHP 241 Prevention and Care of Athletic Injuries Laboratory	1	-
General Education	3	-
Total	16	-

Suggested course of Study

Professional Athletic Training Major:

Second Year-2nd Semester	A	S
SCN 202N Anatomy and Physiology II	-	4
HHP 242 Clinical Observation in AT	-	1
PHAR 110N Use and Abuse of Drugs	-	3
General Education	-	6
Total	-	14
Third Year		
HHP 334 Techniques in AT	1	-
HHP 340 Practicum in Athletic Training I	3	-
HHP 366 Measurement and Modalities	2	-
HHP 367 Measurement and Modalities Laboratory	1	-
HHP 368 Applied Anatomy and Kinesiology	3	-
HHP 369 Applied Anatomy and Kinesiology Laboratory	1	-
HHP 342 Advanced Techniques of Athletic Training	2	-
HHP 343 Advanced Techniques of Athletic Training Laboratory	1	-
HHP 341 Practicum in Athletic Training II	-	3
HHP 344 Assessment of LEXT	-	2
HHP 345 Assessment of LEXT Lab	-	1
HHP 465 Mgmt in HHP Professions	-	3
HHP 372 Rehabilitation of Athletic Injury	-	2
HHP 373 Rehabilitation of Athletic Injury Lab	-	1
HHP 384 Motor Control and Learning	-	3
Total	14	15
Fourth Year		
HHP 377 Physiology of Exercise	3	-
HHP 378 Physiology of Exercise Laboratory	1	-
HHP 401 Evaluation of Athletic Injuries	2	-
HHP 402 Evaluation of Athletic Injuries Laboratory	1	-
HHP 411 Advanced Practicum in Athletic Training I	3	-
HHP 446 Nutrition for Sport	3	-
HHP 485 Theories Health Behavior Counseling	3	-
HHP 412 Advanced Pract. In Athletic Training II	-	3
HHP 475E Legal & Ethical Issues in Health and Exercise Professions	-	3
HHP 478 Athletic Training Admin & Policy	-	2
HHP 479 Sports Medicine	-	2
General Education	-	3
Electives	-	2
Total	16	15

Other suggested courses: HHP 288-289 First Responder/Emergency Care and CPR- 3 cr., or competency. Statistics Course to meet symbolic systems requirement - 4cr.

Exercise Science Option

First Year	A	S
COMM 111A Introduction to Public Speaking	3	-
WRIT 101 (ENEX 101) College Writing I	3	-
HHP 181 Foundations of Health and Human Performance	3	-
HHP 184 Personal Health and Wellness	3	-
PSYX 100S (PSYC 100S) Introduction to Psychology	4	-
CHMY 121N (CHEM 151N) Into to General Chemistry	-	3
HHP 226 Basic Exercise Prescription	-	3
M 122 (MATH 112) or 151 (MATH 121) College Trigonometry or Pre-calculus	-	3-4
General Educations Requirements	-	6
Total	16	15-16
Second Year		
SCN 201N/BIOL 312 Anatomy and Physiology I	4	-
WRIT 222 Technical Writing	2	-
HHP 236 Nutrition	3	-
Elective - Lower division Science or Math	3	-
General Education Requirements	3	-
SCN 202N/BIOL 313 Anatomy and Physiology II	-	4
STAT 216 Statistics (or other as on page one)	-	4
Elective Lower division Science or Math	-	3
General Education Requirements	-	3
Total	15	14
Third Year		
CHMY 123N Organic and Biological Chemistry	3	-
CHMY 124N Organic and Biological Chemistry Lab	2	-
HHP 446 Nutrition for Sport	3	-
HHP 368 Applied Anatomy and Kinesiology	3	-
HHP 369 Applied Anatomy and Kinesiology Lab	1	-
Electives	3	-
HHP 377 Physiology of Exercise	-	3
HHP 378 Physiology of Exercise Lab	-	1
PHYS 111N General Physics I	-	5
Upper division Science or HHP	-	3
Electives	-	3
Total	15	15
Fourth Year		
HHP 384 Motor Control and Learning	3	-
HHP 450 Analytical and Communications Techniques	3	-
HHP 483 Exercise, Disease and Aging	3	-
HHP 482 or 484 ECG Assessment or Exercise, Disease and Aging Lab	1	-
HHP 499 Senior Project	3	-
Lower or Upper division Science or Math	3	-
HHP 288 First Responder/CPR		2
HHP 289 First Responder/CPR Lab	-	1
HHP 475E Legal and Ethical Issues in Health and Exercise Professions	-	2
Upper division Science or HHP Electives	-	3
Lower or Upper division Science or Math Electives	-	3
General Electives	-	3
Total	16	15

Applied Health Science Option:

First Year	A	S
COMM 111A Introduction to Public Speaking	3	-
WRIT 101 (ENEX 101) College Writing I	3	-
PSYX 100S (PSYC 100S) Introduction to Psychology	4	-

HHP 181 Foundations of HHP	3	-
HHP 184 Personal Health and Wellness	3	-
CHMY 121N (CHEM 151N) Intro to General Chemistry	-	3
HHP 226 Basic Exercise Prescription	-	3
M 115 (MATH 117) Probability and Linear Math	-	3
BIOL 106N Elementary Medical Microbiology	-	3
General Education	-	3
Total	16	15
Second Year		
SCN 201N Anatomy and Physiology I	4	-
CAPP 171 Communicating Via Computers	3	-
WRIT 222 (FOR 220) Technical Writing	2	-
HHP 236N Nutrition	3	-
Elective Core Courses (STAT 216 Suggested)	3	-
SCN 202N Anatomy and Physiology II	-	4
General Education Requirements	-	9
Total	15	16
Third Year		
HHP 465 Leading Health and Performance Organizations	3	-
HHP 377 Physiology of Exercise	3	-
HHP 378 Physiology of Exercise Laboratory	1	-
HHP 450 Analytical & Communications Techniques	3	-
Elective Core Courses	3	-
General Education Requirements	3	3
Elective Core Courses	-	6
HHP 330 Overview of Health Education and Health Promotion	-	3
HHP 475E Legal and Ethical Issues in Exercise Professions	-	3
Total	16	15
Fourth Year		
BIOL 121 or SCN 350	2-3	-
HHP 483 Exercise, Disease and Aging	3	-
HHP 484 Exercise, Disease and Aging Laboratory	1	-
HHP 288 1st Aid/Emergency Care and CPR	(2)	-
HHP 289 1st Aid/Emergency Care and CPR Laboratory	(1)	-
Electives (if HHP 288/289 competency is met)	(3)	-
Elective Core Courses	6	-
HHP 498 Internship	-	4
General Education Requirements	-	3
Elective Core Courses	-	7
Total	15-16	14

Health Enhancement Option:

First Year	**A**	**S**
WRIT 101 (ENEX 101) College Writing I	3	-
HHP 181 Foundations of HHP	3	-
M 115 (MATH 117) Probability and Linear Math	3	-
PSYX 100S (PYSC 100S) Intro to Psychology	4	-
HHP 224 Professional Activities-Outdoor Rec	2	-
CHMY 121N General and Inorganic Chemistry	-	3
BIOL 121 or SCI 350 Environmental Science	-	2 or 3
COMM 111A Intro to Public Speaking	-	3
BIOL 106 Elementary Medical Microbiology	-	3
HHP 184 Personal Health and Wellness	-	3
HHP 225 Professional Activities - Individual/Teal/Dual	-	2
General Education	-	2

Total	15	18-19
Second Year		
HHP 226 Basic Exercise Prescription	3	-
HHP 233 Health Issues/Child & Adolescent	3	-
SCN 201N Anatomy and Physiology I	4	-
HHP 361 Assessment in PE and Health	3	-
General Education Requirements	3	-
C&I 200 exploring Teaching/Field Experience	-	2
C&I 301 or 302 Field Experience - Mid-level or Secondary	-	1
NAS - See special requirement	-	3
PSYX 230S Developmental Psychology	-	3
SCN 202N Anatomy and Physiology	-	4
General Education Requirements	-	3
Total	18	16
Third Year		
C&I 427 Literacy Strategies in Content Area	3	-
HHP 236N Nutrition	3	-
HHP 339 Strategies in Elementary Physical Education	3	-
HHP 377 Physiology of Exercise	3	-
HHP 378 Physiology of Exercise Lab	1	-
HHP 475E Legal and Ethical Issues in Health and Exercise Professions	3	-
STAT 216 (MATH 241) Statistics	4	-
HHP 240-2421 Prevention and Care Athletic Injuries	-	3
C&I 306 Inst Media/Computer Apps	-	3
HHP 301 Strategies Secondary School Physical Education	-	3
HHP 384 Motor Control and Learning	-	3
HHP 368 Applied Anatomy and Kinesiology	-	3
HHP 369 Applied Anatomy and Kinesiology Lab	-	1
HHP 466 Strategies in K-12 Health Education	-	3
Total	20	19
Fourth Year		
C&I 303 Education Psychology and Measurement	3	-
C&I 407E Ethics and Policy Issues	3	-
C&I 410 Exceptionality/Classroom Management	3	-
HHP 288 1st Aid/Emergency Care and CPR	2	-
HHP 289 1st Aid/Emergency Care and CPR Lab	1	-
HHP 465 Leading HHP Organizations	3	-
C&I 494 Professional Portfolio	-	1
C&I 481 Student Teaching Primary	-	7
C&I 482 Student Teaching Secondary	-	7
Total	15	18

Courses

U = undergraduate credit only, UG = for undergraduate or graduate credit, G = for graduate credit. R after the credit indicates the course may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Health and Human Performance (HHP)

U 100-179 Health and Human Performance Activity Classes 1 cr. Offered every term. Students may include up to but not more than 4 credits earned in HHP 100-179 activity courses in the total number of credits required for graduation. Students graded Credit/No Credit based on participation and a strict attendance policy. For a complete list of all classes offered go to the HHP Activity Program website at http://www.soe.umt.edu/hhp/h2pac/default.htm

U 181 Foundations of Health and Human Performance 3 cr. Offered autumn and spring. An overview of the foundational principles comprising the field of HHP with special emphasis on the historical and philosophical foundation, and the evolution of the unity of mind/body concept. Includes an overview of program options, analysis of future directions, and career choices.

U 184 Personal Health and Wellness 3 cr. Offered autumn and spring. Focus on health principles and their relevance in contemporary

society, the evaluation and application of scientific advances to hypothetical lifestyles, and on contemporary problems in life.

U 189 Basic First Aid and CPR 1 cr. Offered spring. Instruction will cover CPR, use of an automated external defibrillator (AED) and relief of foreign-body airway obstruction (FBAO). The First Aid component will cover general principles as well as medical, injury and environmental emergencies. Students will receive AHA Heartsaver CPR and First Aid certification. This class does not meet First Aid requirements for HHP majors.

U 195 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 200-223 Professional Activities for Majors and Minors 1 cr. Offered intermittently. All students required to meet proficiency entrance standards set by instructor. (200) Swim Skills/Aquatic Fitness, (209) Soccer, (215) Tennis, (223) Special Activities.

U 224 Professional Activities: Outdoor Recreation 2 cr. Offered autumn. The instruction of basic skills for selected outdoor and recreational type activities. Technical procedures, drills, and approaches to the teaching. Demonstration and instruction skills developed. HHP majors only. Active participation required.

U 225 Professional Activities: Traditional Individual/Dual/Team Sports 2 cr. Offered spring. The instruction of basic skills for selected individual, dual, and team sports and activities Technical procedures, drills, and approaches to the teaching. Demonstration and instruction skills developed. HHP majors only. Active participation required.

U 226 Theory and Practice of Basic Exercise Prescription for Aerobic and Resistance Training 3 cr. Offered every term. Theory, principles, and practice of exercise prescription for aerobic and resistance exercise programs for health, fitness and performance. Students must register for the lecture and a linked lab.

U 233 Health Issues of Children and Adolescents 3 cr. Offered every term. Overview of current health issues affecting children and adolescents. Focus is on educational and preventive measures that can be implemented by teachers and schools through comprehensive school health education programs.

U 236N Nutrition 3 cr. Offered autumn and spring. The principles of science as applied to current concepts and controversies in the field of human nutrition.

U 238 Lifeguarding New Method 2 cr. Offered autumn and spring. Prereq., Swim II or equiv. skills. Skill development needed for the safe participation in various aquatic activities including the ability of self-recovered rescue of others. Provides the necessary knowledge and skills to serve as a pool lifeguard.

U 240 Prevention and Care of Athletic Injuries Lecture 2 cr. Offered autumn. Coreq., HHP 241. Development of knowledge of prevention, assessment, treatment, rehabilitation, emergency care of athletic injuries.

U 241 Prevention and Care of Athletic Injuries Laboratory 1 cr. Coreq., HHP 240. Offered autumn. Development of practical skills in prevention, assessment, treatment, rehabilitation, and emergency care of athletic injuries.

U 242 Clinical Orientation in Athletic Training 1 cr. Offered spring. Prereq. or coreq., HHP 240, 241. Orientation to clinical education in the university, high school, clinic, and non-traditional athletic training settings.

U 249 Wilderness First Responder 2 cr. Offered intermittently. Instruction in the prevention, recognition, and treatment of backcountry illness and injury. Successful students receive an Aerie Wilderness First Responder certification and an American Heart Association Heartsaver CPR certification. This course meets HHP department First Aid requirement but does not meet the CPR requirement.

U 250 Ski Instructor's Preparation 2 cr. Offered spring. Prereq., consent of instr. Open to all students with advanced to expert skiing skills. Techniques of teaching skiing including: skill concepts and contemporary skiing movements; teaching cycle; movement analysis; personal skiing improvement. Prepares student for certification with (PSIA) Professional Ski Instructors of America.

U251 Snowboard Instructor Preparation 2 cr. Offered spring. Prereq., consent of instr. Open to students with advanced to expert riding skills. Techniques of teaching snowboarding including: skill concepts and contemporary snowboarding movements; teaching cycle; movement analysis; personal riding improvement. Prepares student for certification with (ASSI) American Association of Snowboard Instructors.

U 270 Principles of Optimal Performance 2 cr. Offered autumn and spring. Prereq., consent of instr. Introduction of optimal performance techniques and strategies for enhancing skills in goal-setting, imagery, confidence, teamwork, concentration, self-esteem, managing adversity, motivation, and leadership, and general life skills.

U 288 First Responder, Emergency Care and CPR Lecture 2 cr. Offered every term. Coreq., HHP 289. Development of knowledge of emergency care and CPR/AED techniques. In conjunction with HHP 289 provides certifications by the American Academy of Orthopedic Surgeons and the American Heart Association upon successful completion.

U 289 First Responder, Emergency Care and CPR Laboratory 1 cr. Offered every term. Coreq., HHP 288. Development of knowledge of emergency care and CPR/AED techniques. In conjunction with HHP 288 provides certification by the American Academy of Orthopedic

Surgeons and the American Heart Association upon successful completion.

U 295 Special Topics Variable cr. (R-6) Offered intermittently. Offerings of visiting professors, new courses, or current topics.

U 296 Independent Study Variable cr. (R-6) Offered every term. Prereq., consent of advisor and instr.

U 301 Instructional Strategies in Secondary School Physical Education 3 cr. Offered spring. Coreq., C&I 301 or 302. Application of educational theory in planning, analyzing, and presenting learning experiences to typical and atypical populations in secondary school physical education for students in grades 7-12. Active participation required.

UG 317 Coaching Clinic 1-2 cr. (R-4) Offered intermittently. Covers a variety of activities to include coaching theories, competitive coaching strategies, training methods and techniques. Covers requirements for the bronze level of the American Sport Education Program (ASEP).

U 330 Overview of Health Education and Health Promotion 3 cr. Offered spring. Prereq., HHP 181. History, philosophy, and theory related to health education and health promotion. Includes the application of health promotion strategies to wellness programs and community health programs.

U 331 Wilderness Emergency Technician 3 cr. Offered intermittently. EMT-Basic curriculum with significantly more detail concerning care for patients in remote settings. Students must be 18 year old and never been convicted of a felony to qualify for certification. This course meets HHP department First Aid and CPR graduation requirements.

U 334 Athletic Training Techniques 1 cr. Prereq., HHP 242. Integration into athletic training practice emphasizing risk management, emergency procedures, acute care and athlete care in the preseason.

U 337 Aquatic Certifications 1-2 cr. (R-4) Offered spring. Prereq., HHP 238 or equivalent certifications. Offered on a rotating basis. Training for Water Safety Instructor, Lifeguard Training Instructor, or Adapted Aquatics Instructor. Red Cross Instructor's Certificate awarded upon successful completion of requirements.

U 339 Instructional Strategies in Elementary Physical Education 3 cr. Offered every term. Prereq., HHP 184 or 233 and junior standing; coreq., C&I 301or 302. Application of educational theory in planning, analyzing, and presenting learning experiences to typical and atypical populations in elementary school physical education for children in grades K-6. Active participation required.

U 340 Practicum in Athletic Training I 3 cr. Offered autumn. Prereq., admission into the athletic training education program. Introduction to basic clinical experience working in a CAATE approved setting.

U 341 Practicum in Athletic Training II 3 cr. Offered spring. Prereq., HHP 340. Basic clinical experience working in a CAATE approved setting.

U 342 Assessment of the Lower Extremities 2 cr. Offered autumn. Prereq., HHP 242, 334. The study and practice of techniques used when assessing athletic injuries to the lower extremities and lumbar spine.

U 343 Assessment of the Lower Extremities Lab 1 cr. Offered autumn. Prereq., HHP 242, 334. The practice of techniques used when assessing athletic injuries to the lower extremities and lumbar spine.

U 344 Assessment of the Upper Extremities 2 cr. Offered spring. Prereq., HHP 342, 343. Coreq., HHP 345. The study and practice of techniques used when assessing athletic injuries to the upper extremities, head and cervical spine.

U 345 Assessment of the Upper Extremities Lab 1 cr. Offered spring. Prereq., HHP 342, 343. Coreq., HHP 344. The practice of techniques used when assessing athletic injuries to the upper extremities, head and cervical spine.

UG 361 Assessment in Physical and Health Education 3 cr. Offered autumn. Prereq., math course numbered above 100 and CS 171. Orientation to testing and measuring, the administrative use of tests, elementary statistical techniques and procedures.

U 366 Therapeutic Modalities 2 cr. Offered autumn. Coreq., HHP 342, 343, 367, 368, 369 or consent of instr. Physiology, indications, contraindications, and the application of therapeutic modalities for athletic injuries.

U 367 Therapeutic Modalities Laboratory 1 cr. Offered autumn. Coreq., HHP 342, 343, 366, 368, 369 or consent of instr. Physiology, indications, contraindications, and the application of therapeutic modalities for athletic injuries.

U 368 Applied Anatomy and Kinesiology 3 cr. Offered autumn. Prereq., SCN 201N, 202N or equiv.; coreq., HHP 369. Anatomy and kinesiology of the neuromusculoskeletal system and body cavities in relation to movement and function.

U 369 Applied Anatomy and Kinesiology Laboratory 1 cr. Offered autumn. Prereq., SCN 201N, 202N or equiv.; coreq., HHP 368. Anatomy and kinesiology of the neuromusculoskeletal system and body cavities in relation to movement and function.

U 370 Peer Health Education 3 cr. Offered spring. Introduction to peer health education strategies and techniques. Instruction in the areas

of wellness, drug and alcohol abuse prevention, and sexual assault prevention. Students develop and implement a peer health program focused on prevention of major health problems among college students.

U 371 Peer Health Education Practicum 1-3 cr. (R-6) Offered autumn and spring. Prereq., HHP 370. Practical experience in planning, coordinating, and implementing health education activities for the campus community. Students address topics related to wellness, drug and alcohol prevention, or sexual assault awareness.

U 372 Rehabilitation of Athletic Injuries 2 cr. Offered spring. Prereq., WRIT 222 (FOR 220) or equiv., HHP 366, 367, 368, 369. Theories and application methods of comprehensive therapeutic rehabilitation programs for athletic injuries. Substantial reading and writing component.

U 373 Rehabilitation of Athletic Injuries Laboratory 1 cr. Offered spring. Prereq., HHP 366, 367, 368, 369; coreq., HHP 372W. Laboratory sessions examining principles of biomechanics and their application to athletic injury. Utilization of various practical applications of rehabilitation techniques and equipment used for reconditioning of incapacitating athletic injury.

UG 377 Physiology of Exercise 3 cr. Offered every term. Prereq., BIOL 313 or SCN 202N, HHP 226; coreq., HHP 378. Investigation of the physiological changes and the significance of these changes as they occur during physical work, activity and exercise. Focus on basic energy, musculosketal, nervous, cardiovascular and respiratory systems as they relate to aerobic and anaerobic exercise. Emphasis will be placed on the response of these systems to both acute exercise, and the adaptations to chronic exercise. Credit not allowed toward graduate degree in the exercise science option in Health and Human Performance.

UG 378 Physiology of Exercise Laboratory 1 cr. Offered autumn and spring. Prereq., BIOL 313 or SCN 202N; coreq., HHP 377. Laboratory session examining the physiological effect of the physical work, activity and exercise on the functions of the human body. Credit not allowed toward graduate degree in the exercise science option in Health and Human Performance.

U 384 Motor Control and Learning 3 cr. Offered autumn and spring. Application of research in motor learning with emphasis on developmental and psychological factors related to motor skill acquisition and autonomous motor performance.

U 395 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 401 Assessment of the Thorax and Medical Conditions in the Athlete 2 cr. Offered autumn. Prereq., HHP 344, 345 or consent of instr.; coreq., HHP 402. Recognition and assessment techniques of thorax, abdomen and general medical conditions in sports.

U 402 Assessment of the Thorax and Medical Conditions in the Athlete Lab 1 cr. Offered autumn. Prereq., HHP 344, 345, or consent of instr; coreq., HHP 401. Laboratory sessions to develop recognition and assessment techniques of thorax, abdomen and general medical conditions in sports.

UG 411 Advanced Practicum in Athletic Training I 3 cr. Offered autumn. Prereq., HHP 341. Advanced clinical experience in CAATE approved setting. Each student manages injuries of a specific sport and performs administrative duties.

UG 412 Advanced Practicum in Athletic Training II 3 cr. Offered spring. Prereq., HHP 411. Advanced clinical experience in CAATE approved setting. Each student manages injuries of a specific sport and performs administrative duties.

UG 415 Health and the Mind/Body/Spirit Relationship 3 cr. 3 cr. Offered spring even-numbered years. Prereq., Junior standing. Overview of how the mind/body/spirit relationship affects health. Examination of current research exploring how thoughts, emotions, attitudes, and beliefs influence and mediate health outcome. Exploration of the theoretical applications of mind/body/spirit in health and healing used in contemporary society.

UG 425 Relaxation and Self Enhancement 3 cr. Offered autumn and spring. Prereq., junior status. The study of psychosomatic and somatopsychic techniques for relaxation and self-enhancing strategies.

UG 430 Health Aspects of Aging 3 cr. Offered spring. Same as HS and SW 430. Overview of the health aspects of aging in the United States including biological theories of aging, normal physiological changes associated with aging systems, common pathological problems associated with aging, cultural and ethnic differences in the health of elders, health promotion and healthy aging, and the health care continuum of care for older persons.

UG 440 Instructor First Aid and CPR 1 cr. Offered summer. Prereq., HHP 288, 289 or equiv. Provides knowledge and certification to teach the skills of CPR for victims of all ages, use of automated external defibrillator (AED), relief of foreign body airway obstruction (FBAO) and first aid procedures. Upon successful completion of this course students will receive certifications to teach American Heart Association and American Academy of Orthopedic Surgeons and CPR courses at all levels.

UG 446 Nutrition for Sport 3 cr. Offered autumn and spring. Prereq., HHP 377and junior standing. Nutritional parameters of athletic performance including intervention planning, energy production, the energy nutrients, vitamins and minerals, principles of balanced diets, timing and composition of intakes, hydration, weight management strategies, and nutritional needs for special situations.

U 448 Teaching Anatomy and Physiology 2 cr. (R-4) Offered every term. Prereq., student must have received at least a "B" in Human Anatomy and Physiology and consent of instructor. Students assist in preparation and grading of demonstrations and laboratory

assignments, and provide laboratory instruction of undergraduate students enrolled in SCN 201/202. Students are given advanced instruction in principles of human anatomy and physiology.

U 449 Teaching Health and Human Performance 2cr (R-4) Offered every term. Prereq., consent of instructor. Students assist in the preparation and grading of demonstrations and laboratory assignments, and laboratory instruction of undergraduate students enrolled in HHP laboratory courses. Students are given advanced instruction in principles of the HHP course.

UG 450 Analytical and Communication Techniques 3 cr. Offered every term. Prereq., WRIT 101 (ENEX 101) or equiv. Analysis and communicative critique of literature, cinema, and other forms of popular media with "sport is life in miniature" as a predominant theme. Substantial reading, speaking and writing component. Emphasis on maintaining or improving communication skills.

UG 455 Workshop Variable cr. (R-6) Offered intermittently. Special courses experimental in nature dealing with a relatively narrow, specialized topic of particular current interest. Credit not allowed toward a graduate degree.

UG 465 Leading Health and Human Performance Organizations 3 cr. Offered every term. Prereq., HHP 181 and junior standing. Leadership, management, organizational structure assertiveness, conflict management, public relations, decision-making, budget management, and a broad overview of human resource management, all as they relate to health and human performance settings.

UG 466 Strategies in K-12 Health Education 3 cr. Offered autumn even-numbered years. Prereq., admission to the teacher education program. Focus on developing and implementing strategies to teach K-12 health education.

UG 470 Foundations in Sport and Exercise Psychology 3 cr. Offered autumn. Prereq., upper-division or graduate status. Introduction to professional practices, ethics, and employment opportunities in applied sport psychology. Additional course content is focused on individual and team motivation, team cohesion and leadership, youth sport applications, and health and wellness applications.

UG 475E Legal and Ethical Issues in the Health and Exercise Professions 3 cr. Offered autumn and spring. Prereq., upper-division or graduate status. Legal and ethical bases for litigation in the health and exercise professions, with emphasis on tort, contract, and civil rights issues.

U 478 Athletic Training Organization and Administration 2 cr. Offered spring. Prereq., HHP 465. Exploration of the aspects of athletic training organization and administration. Topics include program management, personnel management, insurance, risk management, ethics, organization of pre-participation physical examinations, leadership styles, budget planning, equipment/inventory management and athletic training facility design.

UG 479 Sports Medicine 2 cr. Offered spring. Prereq., HHP 377 and HHP 368. The etiology and management of sports related injuries/illnesses. Includes: therapeutic use of drugs, pre-participation screening techniques, ergogenic aids, the aging athlete, the sports medicine team concept and current medical treatment of sports injuries.

UG 482 Electrocardiogram Assessment 1 cr. Offered autumn. Prereq. HHP 377,378. Laboratory sessions combined with class sessions to understand electrocardiology and the assessment of electrocardiograms, both at rest and during exercise.

UG 483 Exercise, Disease and Aging 3 cr. Offered autumn and spring. Prereq., HHP 337, 378; Coreq. HHP 484. Focus on guidelines for exercise testing and prescription for individuals with chronic disease including heart disease, diabetes, hypertension, arthritis, osteoporosis, elderly and pulmonary disease. Class requires 25 assigned hours of service learning. Covers material necessary for ACSM clinical certification exam when combined with HHP 226, 377, 378, 482 and 484.

UG 484 Exercise, Disease and Aging Laboratory 1 cr. Offered autumn and spring.. Prereq., HHP 377, 378. Coreq., HHP 483. Laboratory sessions focus on practical exercise testing and prescription for individuals with chronic disease including coronary heart disease, diabetes, hypertension, arthritis, osteoporosis, elderly and pulmonary disease; basic ECG testing and analysis. Covers material necessary for ACSM clinical certification exam when combined with HHP 226, 377, 378, 482 and 483.

UG 485 Theories of Health Behavior and Counseling 3 cr. Offered autumn. Exploration of the helping role as it relates to health behavior, health assessment, problem-solving and referral skills. Application of theories to facilitation of healthy behavior changes.

UG 486 Statistical Procedures in Education 3 cr. Offered autumn even-numbered years.. Prereq., M 115 (MATH 117) or equiv. or consent of instr. Same as C&I 486. Concepts and procedures characterizing both descriptive and inferential statistics. Awareness of common statistical errors.

U 493 Omnibus 1-3 cr. (R-6) Offered every term. Prereq., consent of instr. Independent work under the University omnibus option. See index.

UG 494 Seminar 1-3 cr. (R-6) Prereq., consent of instr. Offered intermittently.

UG 495 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 496 Independent Study 1-3 cr. (R-6) Offered every term. Prereq., consent of instr.

U 497 Research 1-3 cr. (R-6) Offered every term. Prereq., consent of instr.

U 498 Internship 1-4 cr. (R-4) Offered every term. Prereq., minimum junior standing. Supervised field experiences with private businesses, public agencies, or institutions. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 499 Senior Project 3 cr. Offered autumn. Prereq., HHP senior standing. Theory and practical experience in research design, data collection, results analysis and report writing. Students will generally assist with ongoing research as well as attend formal classroom presentations and discussions. Students with a well developed research idea may be allowed to undertake independent research in addition to the formal classroom sessions.

G 520 Educational Research 3 cr. Offered every term. Same as C&I and EDLD 520. An understanding of basic quantitative and qualitative research methodology and terminology, particularly as they are used in studies presented in the professional literature.

G 522 Cognitive-Behavioral Interventions in Performance Psychology 3 cr. Offered intermittently. Prereq., HHP 470 or equiv. Focus is on cognitive-behavioral interventions specific to enhancing human performance in a variety of individual and group settings. Strategies introduced based on research from health psychology, sport psychology, exercise psychology, clinical and counseling psychology

G 523 Case Studies in Performance Psychology 2 cr. Offered intermittently. Prereq., consent of instr. Cognitive-behavioral performance psychology interventions in actual and hypothetical case study applications. Successful and unsuccessful approaches from sport psychology and sport counseling are reviewed as cases in progress; alternative outcomes discussed.

G 524 Ethics and Human Performance 3 cr. Offered spring, even numbered years. A critical examination of ethical issues as they relate to physical education, sport, fitness, and other areas of human performance.

G 529 Advanced Physiology of Exercise I 3 cr. Offered autumn odd-numbered years. Prereq., HHP 377, 378 or equiv. Advanced study of the effect of work, activity and exercise on human biochemistry, metabolism, endocrinology and muscle function.

G 530 Advanced Physiology of Exercise II 3 cr. Offered autumn even-numbered years. Prereq., HHP 377, 378 or equiv. Advanced study of system physiology (circulatory, respiratory and renal function) and environmental factors applied to physical work, activity and exercise

G 531 Laboratory Procedures in Exercise Science 2 cr. Offered spring. Introduction to common laboratory tools associated with clinical and health assessment techniques, research measures, and data collection.

G 540 Health Promotion Strategies 3 cr. Offered autumn even-numbered years. Exploration of the role of the health professional in the development and implementation of educational, organizational, economic, and/or environmental strategies that promote individual and community health.

G 541 Program Development in the Health Professions 3 cr. Offered spring odd-numbered years. Overview of the issues, approaches, and techniques professionals utilize in the planning and development of health education and health promotion programs.

G 545 Advanced Nutrition and Chronic Disease 2 cr. Offered spring odd-numbered years. Instruction will investigate the relationship between nutrition and selected chronic diseases with special emphasis on understanding the research methodology and dissemination of study outcomes reported in the literature for nutrient-disease interactions.

G 594 Seminar 1-3 cr. (R-6) Offered spring. Prereq., consent of instr.

G 595 Special Topics Variable cr. (R-6) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

G 596 Independent Study Variable cr. (R-6) Offered every term. Prereq., consent of instr.

G 597 Research Variable cr. (R-6) Offered every term. Prereq., HHP 486, 520.

G 598 Internship Variable cr. (R-4) Offered every term. Prereq., HHP 520, consent of instr. Supervised field work in public and private agencies and institutions. Must demonstrate competency in First Aid/Emergency Care and CPR.

G 599 Professional Paper Variable cr. (R-3) Offered every term. Prereq., HHP 486, 520.

G 699 Thesis Variable cr. (R-6) Offered every term.

Faculty

Professors

- Gene Burns, Ed.D., The University of Montana, 1988
- Laura Dybdal, Ph.D., University of New Mexico, 1996
- Steven Gaskill, Ph.D., University of Minnesota, 1998

- Arthur W. Miller, Ph.D., University of New Mexico, 1981
- Brent Ruby, Ph.D., University of New Mexico, 1994
- K. Ann Sondag, Ph.D., Southern Illinois, Carbondale, 1988
- Thomas R. Whiddon, Ed.D., The University of Montana, 1975 (Chair)
- Sharon Dinkel Uhlig, Ed.D., University of Utah, 1982

Associate Professors

- Blakely Brown, Ph.D., R.D., University of Minnesota, 2000
- Charles Dumke, Ph.D., University of Wisconsin, 2000
- Scott Richter, Ed.M., Oregon State University, 1982 (Chair, Program Director, Athletic Training)

Assistant Professors

- Dennis T. Murphy, M.S., University of Arizona, 1976 (Head Athletic Trainer)
- Charles Palmer, ED.D., University of Montana, 2002
- Valerie Rich, Ph.D., ATC, CSCS, University of South Florida, 2006

Instructors

- Adrienne M. Corti, M.S., The University of Montana, 1989
- Stephanie Domitrovich, M.S., The University of Montana
- Linda Green, B.S., Florida State University, 1976
- Karla Judge, M.S., ATC, Idaho State University 1991
- Ellen Parchen, B.S., West Chester University, 1994
- J. C. Weida, M.S., ATC, The University of Montana, 1995

Emeritus Professors

- Kathleen Miller, Ph.D., University of Iowa, 1971
- Gary Nygaard, EdD., University of Oregon, 1971
- Brian J. Sharkey, Ph.D., University of Maryland, 1965

Emeritus Associate Professors

- George Cross, M.S., Indiana University, 1956
- Mavis M. Lorenz, M.S., University of Washington, Seattle, 1954

Office for Student Success

The Office for Student Success embodies The University's commitment to students' academic success. Its programs, offices, and resources form a comprehensive academic support network that assists students as they find their ideal path and pursue a degree.

The Office for Student Success programs can guide a student through his or her academic transition to college, helping to clarify career goals and explore majors, and provide tutoring so students can meet the challenges of college study.

Undergraduate Advising Center

The Undergraduate Advising Center provides advising for Undeclared students, as well as freshmen Business, Pre-Psychology, Pre-Communication Studies and Pre-Nursing students. Professional and peer assistants provide important information and counseling about scheduling classes, selecting a major, taking advantage of opportunities on and off campus, dealing with academic problems, and finding essential academic and social support services. In addition, the programs listed below are offered, primarily for entering students.

Four Bear Four-Year Graduation Plan

Four Bear (the 4-year graduation plan) is designed for students committed to eight consecutive semesters of full-time study at The University of Montana. It gives the student registration priority beginning his or her first registration period after signing the Four Bear contract and pays incidental and mandatory fees past the planned graduation time provided the student has met all conditions. If a student is not meeting the conditions as set forth in the Four Bear contract, he or she is dropped from the program, but no other penalties are incurred. [Pharmacy is an exclusion to the four-year plan; students are given five or six years to complete this degree.] Most department sections in the catalog include a suggested four-year course of study to complete a major. Four-Bear students must meet with their advisors in order to customize a plan to fit individual circumstances and academic goals. Additional information is available from the Four-Bear Coordinator, Lommasson 269.

Courses

U=for undergraduate credit only, UG=for undergraduate or graduate credit, G=for graduate credit. R after the credit indicates the courses

may be repeated for credit to the maximum indicated after the R. Credits beyond this maximum do not count toward a degree.

Undergraduate Advising Center (UNC)

U 101 Freshman Seminar I 2cr. Offered autumn. Introduction to academic life: readings in current social and ethical topics, extensive practice in listening and composition skills, applied research skills, individual and group presentations, and individual academic advising.

U 102 Freshman Seminar II 2 cr. Offered spring. Development of critical reading, writing, and speaking skills, best academic practices, other college survival issues. Intended for at-risk students who exhibit high academic potential.

U 180 Freshman Interest Group Seminar 1 cr. Offered autumn. Coreq., enrollment in a Freshman Interest Group. Discussion section for Freshman Interest Group in which the theme of the FIG is articulated in interdisciplinary terms.

U 194 Seminar Variable cr. (R-6) Offered autumn. U 195 Special topics 1-6 cr. (R-6) Offered autumn and spring. Restricted to freshmen. Topics variable. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

U 196 Independent Study 1-2 cr. (R-2) Offered intermittently. U 198 Internship Variable cr. (R-6) Offered intermittently. Prereq., consent of director. Extended classroom experience which provides practical application of classroom learning during placements off campus. Prior approval must be obtained from the faculty supervisor and the Internship Services office. A maximum of 6 credits of Internship (198, 298, 398, 498) may count toward graduation.

U 270 Critical Writing II 2 cr. Offered autumn and spring. Planning and composition of written documents for academic and professional purposes; writing thesis statements, developing supporting arguments, crafting cohesive paragraphs, and choosing appropriate language.

U 380 FIG Leader Training Seminar 2 cr. Offered spring. Prereq., consent of director of FIG program. Training seminar for seminar leaders in the Freshman Interest Group program.

These videos were produced by Chisel Industries for the University of Montana. To view the videos, make sure that you have enabled javascript in your web browser. Adobe Flash Player 9 is also required. You may download it here.

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Please click the Fees or Financial Aid links to the left for detailed information.

Fees

General

The student expense information provided in this catalog is based upon the rates for the 2009-10 academic year. Current information may be obtained by contacting Business Services, Lommasson Center, The University of Montana-Missoula, Missoula, Montana 59812. The phone number is 406-243-2223 or visit our website at http://www.umt.edu/bussrvcs/. The Board of Regents reserves the right to adjust fees at any time.

Students are encouraged to have funds on deposit in a Missoula bank for fees, board, room and other necessary expenses and be able to write a check for the exact amount during registration periods. Foreign and Canadian checks are not accepted. Canadian money is discounted. Credit card payment is accepted using VISA, and Mastercard. A student's registration is not complete until fee payment/finalization has been processed.

Fee Schedule

The fee schedules shown are for the 2009-10 academic year. Students with WUE residency, graduate students, law students, unsubsidized residents, post baccalaureate and summer students will find different fee schedules applied. Contact Business Services of visit www.umt.edu/bussrves/ for more information. These fees may change without notice.

Students enrolled for 6 credits or fewer have the option of paying an additional amount to cover the ASUM activity fee, campus recreation fee, health service, and athletic fee.

Permission is required by the undergraduate student's faculty advisor to register for more than 21 credits. Audited courses are assessed the same fees as courses taken for credit.

See complete fee tables at http://umt.edu/bussrvcs/studentacctserv.htm

Fee Schedule Explanation

ASUM Fees

Activity Fee* -Supports the operations of the Associated Student of the University of Montana (ASUM) and its committees to enhance student camus life. Thsi fee entitles students to use ASUM services (legal services, day care, tutoring services, etc.), provides supprot to ASUM activities, allows studetns to vote in student government elections, and receive reduced rates to programming events.

Kaimin Fee - This fee supports the publishing of the campus student newspaper.

Radio Fee - This fee supports the student radio station on campus.

Recycle Fee - This fee supports the stuent recycling program on campus.

Athletic Fee* - This fee entiltes students access to athletic events and also supports althletics facilities and operations.

Campus Recreation Fee* - This fee is used to maintain and operate the recreation supports facilities and programs of the Campus Recreation Department. It allows students to use the Campus Recreation facility and, at certian times, the Grizzley Pool at no charge.

Equipment Fee - This fee is for the purchase, lease, and maintenance of equipment which provide a primary benefit to educational programs, including the library.

Facilities Fees

Building Fee - Thsi fee services long-term deby for the acquisition, construction, and renovation of University buildings. Non-Resident students pay an additional amount which represents the portion covered by the Sate of Montana for resident students.

Academic Facilities Fee - Theis fee is used to remodel and renovate classrooms and laboratories in instructional facilites.

Health Service Fee - This is used to support the Curry Health Center (CHC) and provides student programs and medical, dental, counseling and health enhancement services during the academic year to all students. Students enrolled for six or fewer credits may receive services on a fee-for-service basis (in some CHC departments) or may choose to pay the full thealth service fee to obtain full-time student benefits.

Registration Fee *(non-refundable)* - This fee is applied to cover the costs associated with registering a student.

Technology Fees

Computer Fee - This fee is used to purchas and/or lease computer equipment, software, maintenance or related items which will benefit institutional programs.

Technology Fee - Thsi fee supports the University technology infrastructure that includes acquisition, renewal, licensing, maintenance, and operations of the campus technology core and distributed systems, building level hub, switching and wiring, and the distributed email/media systems.

Transportation Fee* - This fee supports and promodes transportation options for the University community. Revenue from this fee assists with the costs associated with alternative transportation needs for faculty, students and staff that include park and ride, shuttle bus, off campus parking, etc.

UC Fees

Operation Fee - Thsi fee supports the daily operations and maintenance of the University Center

Renovation Fee - This fee services the long-term debt related to the University Center renovation.

** Indicates that for an additonal fee, students taking 6 or less credits or College of Technology students may obtain the same full benefits and services as a full time student.*

Other Course Fees

The Board of Regents may approve additional fees at any time. Fees frequently are assessed for selected courses in subjects such as: Accounting Technology, Art, Biology, Biochemistry, Building Maintenance Engineering, Business, Chemistry, Computer Technology, Culinary Arts, Curriculum and Instruction, Dance, Diesel Equipment Technology, Drama, Educational Leadership, Electronics Technology, Forestry, Geology, Health and Human Performance, Heavy Equipment Operation, Journalism, Legal Studies, Mathematics, Metals Processes, Microbiology, Military Science, Music, Nursing, Pharmacy, Physical Therapy, Resource Conservation, Respiratory Therapy, Science, Secretarial Technology, Small Engines, Surgical Technology, Truck, Welding, and Wildlife Biology. This listing may not be all-inclusive and does not preclude a specific fee from being assessed. Special fees are assessed for extended field trips in various departments. An Educational Service Fee is charged for the off-campus M.B.A. and M.P.A. programs.

A fee is charged for cooperative education internships.
Purchase of supplies, equipment, or tools may be required by certain programs.

Law School Fees

The proposed 2009-10 School of Law fees for 15 credits are approximately $2903 for autumn and $2883 for spring for an in-state student and $8601 for autumn and $8581 for spring for an out-of-state student. The Health Service fee is included. Health Insurance coverage is available to students for an additional charge.

Law Special Fees

All persons who apply for admission to the School of Law must pay an acceptance fee of $300.00 ($150.00 is refundable if written notice is received by the due date if student does not want to attend) which is applied toward payment of fees upon entering and attending the School of Law in the semester for which application was made.

In addition to the above fees, Law School students must pay an additional $145.00 per credit per semester. The amount is applied to instructional costs.

All law students are assessed a $26.00 law activity fee for autumn and a $6.00 law activity fee for spring.

Continuing Education and Summer Programs

Fees, room and board costs for Summer Programs and fees for registration in Continuing Education are contained in separate publications. These publications can be obtained by contacting Continuing Education and Summer Programs, The University of Montana-Missoula, Missoula, MT 59812 or by visiting our website at www.umt.edu/ce.

Refund for Withdrawal from the University

If a student decides to withdraw from classes, the student should contact The University of Montana Registrar's Office in Griz Central, located in the Lommasson Center, and complete a withdrawal form to begin the official withdrawal process. This procedure will enable The University of Montana to prorate the fees assessed based upon the official date of withdrawal. Students must be attending classes to remain eligible for Federal Financial Aid. If a student drops courses, stops attending classes or withdraws from The University of Montana, The University and/or the student may be required to return federal funds awarded to the student. **It is very important for students receiving Federal financial aid to contact Business Services prior to withdrawing.** If a student officially withdraws during the first fifteen days of class, the tuition and fees will be re-assessed for the semester based upon the official date of withdrawal.

** Students who desire to continue the Blue Cross Health Insurance must contact the Curry Health Center prior to withdrawal. Otherwise the insurance premiums will automatically be refunded and coverage will be lost.

A student's official withdrawal date is determined by:

- the date the student began the institution's withdrawal process or officially notified the institution of intent to withdraw; or
- the midpoint of the period for a student who leaves without notifying the institution; or
- the last date of attendance by the student at a documented academically related activity.

Students who withdraw from The University will receive pro-rated assessment of tuition and fees according to the following schedule.

	Before classes begin	1st Week	2nd Week	3rd Week	4th week or Later
Registration	none	none	none	none	none
Tuition/Fees	100%	90%	75%	50%	none
Radio/Trans Fee	100%	90%	75%	50%	none
Activity Fee	100%	90%	75%	50%	none
Athletic Fee	100%	90%	75%	50%	none
Kaimin/ Recycling	100%	90%	75%	50%	none
Campus Rec.	100%	90%	75%	50%	none
Health Services	100%	90%	75%	50%	none
Blue Cross Ins. **	100%	100%	100%	100%	none
Other Fees	varies	varies	varies	varies	varies

Charges for room and board will be re-assessed on a pro-rated bases. During the final two weeks of the semester, room charges will not be re-assessed. Student who do not formally and completely withdraw are not eligible for a refund. The University of Montana will reassess the tuition and fees for students using the Deferred Payment Plan if the student officially withdraws during the first fifteen days of a semester. However, the student may still owe a balance to the University.

Return of Title IV Funds (Federal Financial Aid)

The University of Montana Refund Policy exists for calculating the refund of institutional charges. The federal "Return of Title IV Funds" formula dictates the amount of Federal Title IV aid that must be returned to the federal government by the University and the student. The federal formula is applicable to a student receiving Title IV Funds if that student withdraws on or before the 60% point of time in the semester. The student may also receive a refund of some institutional charges through The University of Montana's refund policy.

The federal formula requires a return of Title IV aid if the student received federal financial assistance in the form of a Pell Grant, ACG Grant, SMART Grant, Supplemental Educational Opportunity Grant, Federal Perkins Loan, Federal Stafford Loan, or a PLUS loan and withdrew on or before completing 60% of the semester. The percentage of Title IV aid to be returned is equal to the number of calendar days remaining in the semester (effective on the official withdrawal date) divided by the number of calendar days in the semester (scheduled academic breaks of five consecutive days or more are excluded). After all Title IV aid return requirements have been satisfied, remaining credit balances will first be applied to satisfy outstanding University tuition, fees, and institutional charges. Any remaining credit balances will then be refunded to the student.

Once you have completed more than 60% of the semester, you have earned all (100%) of your assistance. If you withdraw from The University of Montana before completing 60% of the semester, you may have to repay any unearned financial aid funds that were already disbursed to you. Please contact staff in The University's Business Services Department, located in Griz Central, if you have any questions about refunds or the calculation of refund amounts.

Distribution Priority for Return of Title IV Funds

1. Unsubsidized Federal Stafford Loan
2. Subsidized Federal Stafford Loan
3. Federal Perkins Loan
4. Federal Graduate PLUS Loan
5. Federal Parent PLUS Loan
6. Federal Pell Grant Program
7. ACG Grant Program
8. SMART Grant Program
9. Federal SEOG Program
10. Other Title IV Aid
11. Other Federal, State, Private, or Institutional Aid
12. The Student

Hardship Withdrawal Policy

Hardship withdrawals may be granted to students who experience a catastrophic unanticipated condition or event after the fifteenth class day of a semester if the condition prevents the student from completing academic course work. If medical, this must be documented by a health care provider and verified by the Curry Health Center. A medical hardship withdrawal will only be granted in cases of extreme hardship resulting from a serious or life threatening medical condition. In order for a student to receive a hardship withdrawal from The University of Montana, the student must contact the Registrar's Office (non-medical) or the Curry Health Center (if medical) to start the hardship withdrawal process. Upon approval of a hardship withdrawal, the Registrar will enter the appropriate withdrawal information on

the student's academic record. A student receiving a hardship withdrawal will be eligible for a tuition waiver equal to the currently paid amount for the first semester of re-enrollment after a hardship withdrawal has been approved, for up to two (2) years, if the student meets the following criteria:

1. Is a degree seeking student, and
2. Is either a resident or non-resident student, and
3. Is a continuing student, and
4. Is maintaining satisfactory progress based upon The University of Montana's scholastic regulations.

Business Services will calculate the tuition waiver amount for all approved hardship withdrawals and will notify the Financial Aid Office of the tuition waiver amount. Upon re-enrollment, the Financial Aid Office will establish a tuition waiver for the eligible student's tuition equal to the pre-determined amount.

Students withdrawing during the first fifteen class days of a semester for medical reasons should contact the Curry Health Center in order to maintain the health insurance coverage. Otherwise, the medical insurance premiums will be automatically refunded and coverage will be lost.

The hardship withdrawal process is not the appropriate venue to resolve or petition academic matters. Such concerns must be addressed in the student's respective department, school, or college. In addition, the hardship withdrawal process is not an alternative means to drop classes after the normal drop date, to remove unwanted grades, or preclude resulting academic/financial aid actions (warning, probation, suspension, etc.)

Other Costs and Policies

Late Registration

A student who does not complete registration, including payment of fees or finalizing via Cyberbear.umt.edu, during the scheduled registration period (see current Schedule of Classes) is assessed a late registration fee of $40.00. After the fifteenth class day, a petition is required to register and, if approved, an additional $80.00 will be assessed.

Returned Checks

A charge of $15.00 will be assessed on checks (paper or electronic) returned from the bank. Any check tendered in payment of registration fees and not honored by the bank upon which it is drawn may result in cancellation of a student's registration. The student will be assessed the late registration fee of $80.00 maximum in addition to the $15.00 service charge.

Fee Policy on Drop/Adds

Students must pay for all courses for which they are enrolled at registration. However, within the first fifteen class days, they may drop or add courses. The courses for which students are enrolled on the fifteenth class day will determine any fee adjustments (see fee schedule) or financial aid adjustments. Beginning the sixteenth class day, courses dropped will not result in a reduction of fees but courses added will increase credit hour enrollment and may result in an additional charge. Payment is due at the time courses are added.

Drop/Add Processing Fee

A $10.00 processing fee will be charged for each course that is added or dropped after the fifteenth instructional day. See the summer class schedule for summer session deadlines.

Deferred Payment Plan

The Montana University System Board of Regents has authorized a Deferred Payment Plan for students who are unable to pay their bill at the time of finalization for the current term. Students' whose accounts are in good standing, have completed a FASFA form for the current year, and are not able to secure other reasonable lines of credit through private financial institutions will be eligible. The plan provides for the payment of at least one third of the total fees along with a $30.00 administrative charge at the time of registration, payment of one third approximately 30 days after registration and payment of the full balance approximately 60 days after registration. Registration, tuition, Health Service, Activity, Kaimin, Recycling, Academic Facilities, Computer, Equipment, Athletic, Campus Recreation, Radio, University Center and Building Fees, and Residence Halls and Dining Service charges less any Financial Aid may be deferred. The signing and adherence to the terms and conditions of a promissory note will be required and no fees may be deferred by any person who owes the University any fees, fines, loans or other charges or who has previously deferred fees and failed to make timely payments. A $15.00 fee will be assessed each time a payment is late. This plan is not available for the summer session.

Monthly Bill Statements

Monthly bill statements will be mailed to the student's current mailing address displayed in Cyberbear. In addition, an electronic notification will be e-mailed to their official University of Montana e-mail account (http://grizmail.umt.edu). It is the student's responsibility to check their mail and official University of Montana e-mail account for these statements and notices. Payments for billed amounts are due by the due date indicated on the statements and electronic message. Failure to make timely payments will result in an interest charge assessed on balances not paid in full by the following monthly billing. Payments can be made (1) online in Cyberbear; (2) at the cashiers station located in Griz Central (2nd floor Lommasson Center); or by mailing payments to Student Accounts, Business Services,

The University of Montana, 32 Campus Drive #2304, Missoula, MT 59812-2304.

Non Payment

A student who owes regular fees and charges including room and board or has an overdue debt owed to the University for any fees, fines, or other charges will not be able to register, secure any transcript or record, or access any University facilities or services until the full amount due has been paid or satisfactorily resolved with Business Services. Interest may be charged at the rate of 10% on the balance due from the day after the due date until the full amount has been paid and any attorney's fees or other costs or charges necessary for the collection of the amount owed may be added to the balance due.

Determination of In-State Fee Status

The Montana University System classifies all students as either in-state or out-of-state. This classification affects admission decisions and fee determinations. The basic rules for making the classification are found in Board of Regents' Policy. It is each student's responsibility to secure and review a copy of the policy. Failure to be aware of the rules will not be cause for granting any exceptions to them. A copy of the policy is available from the Admissions Office or the Registrar's Office. It is important to bear in mind that each residency determination is based on the unique set of facts found in each individual's case. Students participating in the Western Undergraduate Exchange or the National Student Exchange programs are not eligible to gain residency. If you have questions concerning your particular case, be sure to contact the unit to which you are applying for admission or at which you are already enrolled. Generally, the Admissions Office or the Registrar's Office will be able to assist you.

With certain exceptions, in order to be eligible for in-state status, a person must meet a 12-month durational residency test. You will have to demonstrate a bona fide intent to become a Montana resident. The 12-month period does not start until some act indicative of an intent to establish residency is taken. Mere presence in Montana, enrollment at a unit or rental agreements will not serve to start this period. Sufficient acts to start the period are registration to vote, obtaining a Montana driver's license, registration of a motor vehicle in Montana, purchase of a home in Montana or filing of a resident Montana tax return. The 12-months must be completed by the 15th instructional day to qualify for that term.

Your actions during the 12 month waiting period will be used to determine whether you are in the state as a bona fide resident or merely for educational purposes. The decision on your residency will not generally depend on just one factor. The following are the things you need to do that will support a claim of bona fide residency.

1. Register to vote if you are a voter
2. License a vehicle if you operate one in Montana
3. Obtain a driver’s license if you drive
4. Be physically present in Montana, not out of the state of Montana, for more than a total of 30 days
5. **Can Not** be claimed as a tax exemption by residents of another state or file taxes as a resident of another state
6. Provide at least 51% of your own financial support (this means you will need to document to us that you have contributed approximately $6000 towards your support during the twelve month waiting period)
7. File a Montana resident income tax return (this is important for all who claim residency in Montana, regardless of the amount of earnings)
8. Only register for six (6) credits or less per semester (including summer school) during the twelve month waiting period. Registering for more than 6 credits creates a strong presumption that you are here for educational purposes, and may disqualify you from achieving in-state status.

Be certain to secure the Board of Regents residency Policy and questionnaire from the Registrar’s Office in the Lommasson Center 201 or at the Registration Counter in Griz Central . At the end of your twelve month waiting period you must complete the residency questionnaire and attach copies of your driver’s license, vehicle registration, voter’s registration and proof of your earnings for the twelve months and return it to the Registrar’s Office for review. This documentation can be submitted to the Registrar’s Office up to 30 days in advance of the petitioners start date and not later then the 15h instructional day of the semester for which the status is sought. When a student petitions or meets the requirements after the 15th instructional day, a change in classification, if granted, will not be retroactive and will become effective for the next term. Reclassification is not automatic and will not occur unless the individual so petitions. It is the student’s responsibility to meet any filing deadlines that are imposed by the appropriate unit of the System. All students should check with the appropriate office to determine the time limits for filing. The appeal process is given in the Regents' policy.

Costs of On-Campus Services

Housing and Dining Services

Students living in University residence halls are required to contract for a meal plan with Dining Services. Room and board rates are the same for in-state and out of-state students. Occupants may select any meal plan to obtain the number of meals preferred and choose from a variety of room options.

Students who are approved to move out of the residence halls and terminate their meal plan contract will receive a prorated refund based upon the days remaining in the semester less the cancellation fee.

Residence Halls

Rates subject to change

2008-09 room rates in University residence halls are:
Autumn/Spring Semesters per semester

	Per Semester
Double Room	$1,404.00
Single Room	1,607.50
Double as Single	1,703.50
Pantzer Suite	2,001.50
Miller Suite	1,847.50

Rates include $6.00 per semester social fee.

Early arrival prior to opening day costs an additional $16.00 per day.

Lewis and Clark Village

Rent is $384.00 per month per person regardless of which size apartment you are assigned to. Each resident will be responsible for their own rent payment. Residents may choose to pay either by the semester or by the month. Rent includes a furnished apartment with all utilities paid including cable TV. You must make your own arrangements for telephone service.

Dining Services

Dining Services meal plan prices 2008-2009 academic year.

*The prices below are subject to approval by the Board of Regents and may change.

Meal Plan	Autumn/Spring Semester
All Campus	$1,650.00
Lommasson Plus	$1,450.00

Students living in residence halls are required to contract for one of the two meal plans. All meal plans are available to off-campus students, faculty and staff.

University Villages

Rates subject to change

University Villages housing is available. An application together with $20 processing fee should be submitted to University Village Office, Elkhorn Court, Missoula, MT 59801. A $250 deposit will be required when apartment is assigned.

Housing Apartment Rates (monthly)

	Craighead and Sisson	Elliot	Toole
	(All Utilities paid)	(Tenant pays Heat & Elec.)	(Tenant pays Heat & Elec.)
Studio	$552.00	$311.00	$432.00
1-Bedroom	492.00	371.00	517.00
2-Bedroom	629.00	460.00	624.00
3-Bedroom	707.00	212.00	707.00
4-Bedroom	745.00		

Note: These rates are monthly and effective July 1, 2007 through June 30, 2008. All rates include cable TV, water, garbage, and sewer. Tenants are responsible for telephone service and utilities.

Vehicle Registration Fee

All vehicles parking on campus must display current campus vehicle registration between the hours of 7:00 a.m. and 5:00 p.m. Monday through Friday year round. Students, staff or faculty may purchase window or hanger decals for $175 a year. Students have the option of purchasing semester decals for $87.50. Reserved parking is available on a first come, first serve basis for $525 a year. Car pools of three or more commuting drivers may register for $10 per person for the year.

Motorcycles are issued decals at $34 per year. Day passes, all day parking for $3.00, may be purchased from the Office of Public Safety or the University Center and are valid in all "A" decal required lots only. Hourly pay parking is available for $.75 per hour. The above prices are subject to change pending approval by the Board of Regents.

Partial refunds on decal are available only until the last day of semester late registration. No refunds will be given on motorcycle, car pool

or half semester registrations.

If a vehicle is sold, transferred or destroyed, the parking decal must be removed and returned to the Office of Public Safety for replacement. There is a $10 replacement fee for all decals lost, stolen or not returned.

Other Campus Services

On campus there are other services provided such as the swimming pool, laundry facilities, locker rental, a full service bookstore, prescription pharmacy, testing programs, etc. The rates charged for these services are too varied to present in this publication. If more information is required concerning these services, contact the department providing the service.

Veterans' Benefits for Education Assistance Under Public Law 95-202 and Public Law 815

For Veteran information visit http://www.umt.edu/veterans.

Financial Aid

Financial aid services are available from two campus locations depending upon status of admission. Students admitted to the College of Technology (COT) should apply at the South Avenue location. All other students, including graduate students, should use the Enrollment Services-Financial Aid Station located on the second floor of the Lommasson Center Building in Griz Central. Additional information may be obtained by accessing the Enrollment Services-Financial Aid website at http://www.umt.edu/finaid.

COT students only:

Enrollment Services-Financial Aid Office
909 South Avenue West
Missoula, MT 59801
(406) 243-7886
http://www.cte.umt.edu/departments/enrollment_services/enrollment.htm

All other students:

Enrollment Services-Financial Aid
Lommasson Center - Griz Central
Missoula, MT 59812-1254
http://www.umt.edu/finaid/

Both offices are fully accessible. Notice: Any policy is subject to change without advance notice if required by federal or state law, Board of Regents, or Enrollment Services-Financial Aid Office.

Acceptance to UM

Students must be accepted for admission (or readmission) to the University in a degree seeking program before financial aid requests are considered. Students accepted into non-degree categories are not eligible for any financial aid.

Presidential Leadership Scholarships

This award is open to incoming freshmen who have demonstrated high academic achievements, leadership and promise for success through their high school experiences. The award is renewable for four years based on meeting eligibility requirements. Further information is available beginning October 1st. The application is available from Enrollment
Services-Admissions, the Davidson Honors College, and high school counselors in Montana. The application is also available on-line at http://www.umt.edu. The application deadline is December 31.

Campus-Wide Scholarships

The University offers a campus-wide scholarship program. Students should apply each year as most scholarships are awarded on an annual basis. Students holding a renewable scholarship must complete a renewable application rather than the general application.

Requests for applications for continuing UM students, beginning October 1st, may be directed to the Enrollment Services-Financial Aid Office. The application is also located on line at http://www.umt.edu. The filing deadline is February 1. Students are notified in March.

New, incoming students who have applied for admission to UM by December 31 will be considered for any scholarships that may be applicable. Notification will be done in March.

The Western Undergraduate Exchange (WUE) scholarship may be available for applicants from participating states. Application for a WUE scholarship is accomplished by applying for admissions to UM. Contact Enrollment Services-Admissions for further information.

Departmental Scholarships

Many departments, including the College of Technology, offer scholarships based on skill or academic potential. Students should contact their major departments for deadlines and more information.

Financial Aid Application

All students who wish to receive any federal funds, including federal parent loans, need based or most non-need based assistance, must file the Free Application for Federal Student Aid (FAFSA). Applicants are strongly encouraged to use the federal web site at www.fasfa.ed.gov. Students whose FAFSA's are received and processed by the Department of Education by March 1, and who complete all other documentation requirements are given priority for limited funds. It is recommended that the student apply by February 15th. Those who complete requirements later are considered only for federal loan programs and federal Pell Grants.

Determination of Eligibility

Eligibility for need-based financial aid is determined by subtracting the Expected Family Contribution (as determined from filing the FAFSA), scholarships, and other educational assistance from private or public agencies from the Cost of Attendance.

Financial Aid Package

Packages of need-based aid can include a combination of grants, loans and work-study. A student using the FAFSA automatically applies for all possibilities with one application. The types of aid offered will include federal subsidized and unsubsidized student loans for graduate or undergraduate students and federal Pell Grants for undergraduates if qualified. For those who file the FAFSA early and complete all requirements for additional documentation promptly, additional campus aid will be considered. This aid includes federal and state grants for undergraduate students. Federal Perkins loans and either federal or state work study will be considered for all early filers for both degree-seeking undergraduates and graduate students.

Non-need based aid, in the form of unsubsidized federal loans, for students and parents of dependent students will be considered for those families who file the FAFSA and request these loans.

Distribution of Aid

All financial aid is awarded by the Enrollment Services-Financial Aid Office and distributed through Business Services, usually by crediting aid to the student's account. Aid is released after a student has accepted the award offer, but not before the first day of classes each semester. Loans maybe cancelled under certain conditions if the student no longer desires the debt. Students who are offered work study must obtain employment and complete additional paperwork at the Enrollment Services-Financial Aid Office. Students who work are paid by-weekly based on the timecard submitted by the student and the supervisor.

Additional Requirements for Loans

in order to meet federal requirements, any student who receives a federal student loan at The University of Montana must complete an entrance interview requirement and sign a promissary note before a loan will be disbursed. Instructions for entrance and exit counseling and the promissary notes are available on the Enrollment Services-Financial Aid page of the website for The University of Montana-Missoula, at http://www.umt.edu/finaid.

Study Abroad and Financial Aid

Students who desire to study abroad and who enroll in courses that are approved by The University of Montana should contact the Enrollment Services-Financial Aid Office. Instructions will be provided for using financial aid with this type of study.

Other Requirements and Guidelines for Retaining Financial Aid

Financial aid for full-time is based on maintaining a minimum of twelve (12) credits each term for undergraduates and nine (9) credits for graduate students.

Students enrolled for less than full-time may receive financial aid. Most grants will be pro-rated based on credit load. Loans are not pro-rated but require a minimum six credits.

Students enrolling for fewer than six credits are not considered for financial aid with two exceptions; (1) undergraduates who are seeking their first degree may be eligible for a reduced federal Pell Grant, and (2) tuition waivers may be available for those who qualify.

Employment

The Enrollment Services-Financial Aid Office coordinates subsidized federal and state work study programs. Open positions are posted on the electronic job board located at http://www.umt.edu/studentjobs.

Non-work study student employment positions are also posted electronically.

Satisfactory Progress

Any student receiving financial aid is required to make satisfactory academic progress in a program leading to a degree.

The minimum requirements are to maintain a cumulative grade point average of 2.00 and complete a minimum of 70% of all courses attempted. Complete information is available in the Enrollment Services-Financial Aid Office or at the website.

Short Term Loans

Limited short term loan money may be available to registered students who are eligible and submit complete applications.

Reduced Fees

The Montana Board of Regents has authorized the waiver of tuition for certain categories of students. Applications for any of the tuition waivers listed must be made in writing to the Enrollment Services-Financial Aid Office. The request must be made prior to the start of the semester in which the student expects the waiver.

Minimum academic standards are necessary to receive tuition waivers. Other requirements and limitations may apply. Contact the Enrollment Services-Financial Aid Office for application forms or more information.

Montana Veterans Tuition Waiver

- bonafide resident of the State of Montana for fee purposes
- Honorable Discharge
- at one time qualified for veterans benefits under Title 38 of the U.S. Code, but are no longer eligible
- served during a time of war as determined by the Attorney General (World War II, 12-7-41 to 9-2-45; Korean War, 6-22-50 to 1-31-55; Vietnam War, 1-1-64 to 5-7-75; or post-Vietnam world conflicts under certain conditions. Contact the Enrollment Services-Financial Aid Office for further information.)

Indian Student Tuition Waivers

- resident of the State of Montana for one year immediately prior to enrollment at The University of Montana-Missoula
- documentation proving at least one-quarter degree blood
- meet admissions guidelines of the University
- must have financial need as determined by the Enrollment Services-Financial Aid Office
- meet satisfactory academic progress according to the standards of the Enrollment Services-Financial Aid Office

Senior Citizens Tuition Waiver

- permanent resident of the State of Montana
- 65 years of age or older

University of Montana Employees

- instate resident
- employed at least three-quarter time on the date of registration and for the entire semester
- must be after probationary employment period
- approval from department head & Human Resources every semester

Montana University System Honors Scholarship

- awarded by Board of Regents to top graduating seniors in Montana
- student must submit form received from the Regents to The University of Montana Enrollment Services-Financial Aid Office for activation of this waiver.

Other

There are several other tuition waivers including war orphans, MUS employees' families, surviving dependents of a Montana National Guard Member, and surviving spouse or children of any Montana firefighter or peace officer killed in the line of duty. Contact the Enrollment Services-Financial Aid Office for details.

Department of Military Science

All students are afforded the opportunity to apply for two, three and four year scholarships provided by Army ROTC. The scholarships pay for all mandatory tuition and fees, a monthly stipend and $450.00 per semester for books. The monthly stipend for scholarship students is $300.00 in the freshman year; $350.00 in the sophomore year; $450.00 in the junior year and $500.00 in the senior year.

Additional financial assistance opportunities are provided to students that are interested in joining the U.S. Army Reserve or the Montana

State National Guard. These programs are referred to as the Simultaneous Membership Program, since the student is involved in the National Guard or Reserves at the same time they are involved in ROTC. These programs have financial benefits that range from $15,000 for a two year program to $50,000 for a four year program. These benefits are very complex and are best understood by stopping in to visit with the Military Science Enrollment Officer.

Students have the opportunity to enroll in both the basic and advance courses offered by the Department of Military Science in the College of Arts and Sciences. The Basic Course is simply the Freshman and sophomore level courses offered by Army ROTC Instructors and no financial benefits are received for enrolling unless the student is on a scholarship. The Advanced Course refers to our junior and senior level courses. All advanced course students are contracted and receive financial benefits. We welcome student involvement in Land Navigation and Drill and Conditioning courses but no benefits are provided for enrollment in these classes.

Organizations

Alumni Association

The University of Montana Alumni Association, established in 1901 by Eloise Knowles, represents over 85,000 graduates, former students and friends across the world. The mission of the Association, with offices in Brantly Hall, is to "identify and serve the needs of this University, its alumni, students and friends." The Alumni Association sponsors and helps coordinate Homecoming, Charter Day, Distinguished Alumni Awards, Senior Recognition Day, Scholarships, Internships and Commencement Reunions. The Association also co-sponsors with Career Services the Ask-An-Alum program, which connects alumni with currently enrolled students who are exploring career options. Visit their website at www.grizalum.com for more information.

Student Government

By paying the student activity fee, a student becomes a member of the Associated Students of The University of Montana (ASUM). ASUM is governed by officers elected at large - president, vice president and business manager - and a 20-member Senate. Together they have full authority over the ASUM general fund, which consists of the yearly activity fee collections and a total annual cash flow in excess of 3.5 million dollars. The sole power to determine the allocation of the student budget resides with ASUM, pursuant to a 1970 Board of Regents policy. After the ASUM president presents the annual executive budget recommendation, the Senate determines the final allocations. The business manager and the Budget and Finance Committee, along with the ASUM accountant and office manager, then assume full responsibility for the disbursement of student money.

ASUM budgets money to its agencies - ASUM Administration, ASUM Child Care, UM Productions, ASUM Off-Campus Renter Center and ASUM Legal Services - as well as to a wide variety of special interest groups. It also co-sponsors the UM Advocates. For the special interest groups, ASUM designates special funds available for emergency expenses. Information about these groups may be obtained by visiting http://www.umt.edu/asum/.

ASUM Child Care provides several child care facilities for activity fee- paying students.

UM Productions is the largest student programming agency on campus. They provide the University and Missoula communities with a wide variety of entertainment and activities, specializing in pop concerts and other special events.

ASUM hires professional lawyers for Legal Services. Legal services are available to all activity fee-paying students for a minimal one-time fee plus office and court costs. Services include everything from tenant-landlord disputes to major legal needs of students, not including major felonies.

Also ASUM-affiliated are KBGA, a student-run alternative radio station; the ASUM Office of Transportation, which encourages and provides alternative transportation; and the Montana Kaimin, the student newspaper.

Student appointments to full-voting membership on ASUM and University committees are made by the ASUM vice-president. Such committees virtually govern many aspects of the University, including curriculum, campus development, scholarships and loans. Ad hoc committees may be appointed at any time by the ASUM president or vice-president.

ASUM has three semi-autonomous standing committees which share in student governance. Publications Board oversees all ASUM group publications. The UC Board is charged with policy making for and administration of the University Center. The Student Political Action Committee oversees student interests in political affairs, both on and off campus, and organizes volunteers for various activities. It also assists the ASUM president in advising the full-time lobbyist hired by ASUM for state legislative sessions.

Special Interest Groups

Students have organized over 150 different special interest groups. Information about them can be obtained by visiting our website at http://www.umt.edu/asum/ and clicking on Student Group Listing.

Fraternities and Sororities

The Greek Community of The University of Montana provides a comprehensive educational, social, and living experience for members through the promotion of friendship, leadership, personal development, academics, and services to the University and the Missoula community. The Greek members donate their time and support to over 50 recognized philanthropies. Additionally, they involve themselves

in a wide variety of campus leadership organizations, such as Residence Life Staff, PRO's, ASUM Senate, Advocates, Peer Advising, and Mortar Board.

The Greek system has five (5) national fraternities (Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Kappa Sigma and Sigma Phi Epsilon) and four national sororities (Alpha Phi, Delta Gamma, Kappa Alpha Theta and Kappa Kappa Gamma). Information about Greeks can be obtained in the Office of Greek Life (UC 209B) or by visiting http://life.umt.edu/greeklife/ or calling 243-2005.

Community Services

Bureau of Business and Economic Research

The Bureau of Business and Economic Research has been providing information about Montana's state and local economies for over 50 years and is proud to be the most comprehensive economic analysis center in the state.

House on the campus of The University of Montana-Missoula, the Bureau is the research and public service branch of the School of Business Administration. On an ongoing basis, the Bureau:

- analyzes local, state, and national economies
- provides annual income, employment and population forecasts
- conducts extensive research on forest products, manufacturing, health care and Montana Kids Count
- designs and conducts comprehensive survey research at its on-site call center
- presents annual economic outlook seminars in cities throughout Montana
- publishes the award-winning Montana Business Quarterly

Montana Cooperative Wildlife Research Unit

The Unit investigates basic and applied problems in wildlife ecology and management. Graduate students majoring in Wildlife Biology or Biological Sciences, conduct much of the research supported through the Unit by USGS-Biological Resources Division, Montana Fish, Wildlife and Parks, and numerous other agencies and groups.

Montana Campus Compact

The University of Montana is a member in good standing of The Montana Campus Compact. MTCC is a statewide coalition of college presidents and chancellors committed to renewing the public purposes of higher education by promoting campus-community collaborations and civic engagement activities. Since 1993, these campus leaders have represented two-and four-year, public, private, religiously affiliated, community, and tribal colleges across Montana. MTCC supports and encourages activities such as volunteering, community service, and service-learning through its programs, which include:

- Campus Corps
- Service-Learning Workshops and Faculty Development
- MTCC VISTA Project
- Community Partners Program
- Raise Your Voice Campaign
- MTCC Community Service Scholarship
- Montana Athletes in Service Award
- Jimmy and Rosalynn Carter Partnership Award for Campus- Community Collaboration

For more information regarding MTCC member benefits and services, please contact the MTCC headquarters office at (406) 243-5177 or online at www.mtcompact.org. For MTCC services at UM, please contact the Office for Civic Engagement at (406) 243-5531 or see their listing under The Office For Civic Engagement.

The Office for Civic Engagement

The Office for Civic Engagement (OCE) is honored to serve as The University of Montana's primary agent of community activism and civic responsibility. It is our mission to challenge and improve lives with an ethic of service and community investment. We accomplish this by building partnerships that strengthen both the university community and a variety of nonprofit interests; empowering individuals and organizations to enhance capacity for strategic growth, program exposure, skill development and collaborations; and, enhancing professional, academic, and personal experiences through volunteerism and service learning. The OCE is a unit of the Davidson Honors College and operates as an affiliate of the statewide Montana Campus Compact (MTCC) organization (see separate listing). The OCE is located in the Davidson Honors College, room 015, (406) 243-5531 or http://www.dhc.umt.ecu/oce.

OCE Programs:

- Student Volunteer Programs - Throughout the school year, OCE coordinates several community service programs for students to get actively involved in the community including America Reads America Counts, Alternative Breaks, Adopt-A-Family and more.
- AmeriCorps & AmeriCorps* VISTA - The OCE provides students with the opportunity to engage in national service while attending the University.
- Nonprofit Administration Programs - The OCE facilitates the Minor in Nonprofit Administration and the American Humanics

national certificate program in nonprofit administration. Both are degree enhancement programs designed to assist students to achieve skills and abilities in preparation for careers in the nonprofit sector. The OCE also coordinates the Online Program in Nonprofit Administration, a series of short courses designed for busy professionals who want to hone their skills in specific areas such as grant writing, financial management and fund raising.

- Service Learning - Service learning is an innovative method of teaching and learning in which students, faculty and community partners work together to enhance student learning by applying academic knowledge in a community-based setting. The OCE works with faculty and departments to create meaningful service learning partnerships with community organizations and attain service learning designation status for their courses.

American Humanics

The University of Montana is an affiliate of the national American Humanics, Inc. The American Humanics program at UM is designed to be a degree enhancement certification program that complements a student's major. The program provides students with academic and extra-curricular opportunities to gain skills and abilities in preparation for professional careers in the nonprofit sector. All American Humanics students acquire knowledge and skills in general nonprofit management, fund-raising principles and practices, board committee development, program planning, and grant writing. The Office for Civic Engagement operates the American Humanics program in addition to the minor in non-profit administration. For more information contact (406) 243-5159 or browse the website at www.dhc.umt.edu/oce/humanics.html

Services

Select any of the links to the left to learn about the various areas listed.

Facilities

Information Technology

Information Technology (IT) is a campus service organization that provides computing and communication resources in support of the instructional, research, administrative, and public service activities of The University of Montana. IT maintains and operates complex information systems to support the University's administrative activities and offers a variety of technology support services to assist the University in using the resources and services that IT is responsible for providing. The IT organization consists of the following areas: Campus Computing, Network, Directory and Telecommunication Services, Enterprise Information Systems, and Technology Support Services.

IT Technology Support Services serves as the user interface for the IT organization and includes: IT Central, the designated initial point of contact for all user issues; five general access student computer labs; numerous free, non-credit short courses for faculty, staff, and students; multimedia classroom support and audio visual equipment rentals; and support of The University of Montana's public web presence.

Additional information about IT services and facilities may be obtained at the IT website: http://www.umt.edu/it or by contacting IT Central at 243-HELP (x4357).

Montana Forest and Conservation Experiment Station

The Montana Forest and Conservation Experiment Station was established by the Montana Legislature in 1937 as a non-profit organization devoted to scientific investigation of natural resource problems. The station serves as the research unit of The University of Montana School of Forestry with the dean functioning as station director. The station seeks, through its research and publications, to enhance public understanding of forestry and conservation and contribute to responsible management of our nation's natural resources.

The Shafizadeh Rocky Mountain Center for Wood and Carbohydrate Chemistry

The Center is a research facility in the Department of Chemistry and Biochemistry specializing in development of new chemical products from carbohydrates (monosaccharides to polysaccharide) found in grains and wood. Targeted applications include consumer products and environmentally-safe industrial products such as biodegradable synthetic polymers, pharmaceutical components, and materials for industrial processing.

Stella Duncan Memorial Research Institute

The Institute was created initially by a bequest from an alumna of the University; the funds were designated originally for research on the cause and treatment of bronchial asthma. Asthma is intimately associated with immune response, which is currently under analysis in our laboratory (three publications). Our basic research in this area has lead to a deeper understanding of the mechanisms underlying mutagenesis essential to the immune response, which could open new avenues in the field, including treatments that counteract or modify hypersensitive responses in people with allergic asthma.

Institute for Tourism and Recreation Research

The Institute was created by the Montana University System Board of Regents in June 1987 to conduct the travel research authorized by the

1987 Legislature. The Institute is the research arm for Montana's travel and recreation industry; its mission is to conduct research that will strengthen the travel component of the state's economy.

Wilderness Institute

The Institute seeks to encourage and support teaching, research and outreach programs focusing on wilderness. The Institute administers the Wilderness and Civilization program of interdisciplinary undergraduate education, a program leading to the Wilderness Studies minor (see the School of Forestry).

Student Rights

Public Safety Report and Alcohol and Drug Guidelines

The health and safety of students, faculty, staff, and visitors are of paramount concern to The University of Montana. Each year the University publishes an annual report outlining on-campus security and safety information and crime statistics. The report provides important information for security awareness and crime prevention programs, emergency procedures and reporting crimes, plus law enforcement and safety services on campus.

Additionally, the booklet contains the University's policy on sexual assault and information about support services for victims of sexual assault. The booklet also includes information about the University's drug and alcohol policy, programs and support services for substance abuse, and risk management guidelines for University-related events.

The booklet is available by writing or calling the Office of Public Safety (406) 342-6131 or the Office of the Vice President for Student Affairs (406) 243-5225, The University of Montana, Missoula, Missoula, MT 59812. The information can also be accessed on the web at:

www.umt.edu/studentaffairs/ and www.umt.edu/pulicsafety/campact.htm.

Student Complaint Procedures

Under the terms of the Collective Bargaining Agreement between The University of Montana University Faculty Association and The Montana University System, there is a formal procedure for students who have a complaint against a faculty member or an administrator. Information about this procedure is available at http://www.umt.edu/provost/facultyinfo/docs/CBA2005-09.pdf on page 113 under 21.000. The ASUM Student Resolution Officer is available to answer questions about procedures and to assist with the process. Time restrictions are important, so student should review procedures immediately if they feel they may have a complaint. The Resolution Officer receives voice mail at 243-5431 or email at asum.resolutionoff@mso.umt.edu.

Family Educational Rights and Privacy Act of 1974, as amended (Buckley Amendment)

Consistent with the provisions of the Family Educational Rights and Privacy Act of 1974 (FERPA) and University policy, every person who is or has been a student at this University, and the parents of students under 18 who are not taking postsecondary courses, have the following rights:

1. Upon completion of the appropriate request form and submission thereof to the person responsible for the custody and maintenance of the records, a student has the right to inspect and review within 45 days from the date of initial request that portion of any official record which directly relates to the requesting student and to have a copy thereof upon payment of the cost of the copy. An "official record" is any record intended to be used for "school use" or to be available to parties outside the school or school system, specifically including but not necessarily limited to identifying data, academic work completed, level of achievement (grades, standardized achievement test scores), attendance data, scores on standardized intelligence, aptitude, and psychological tests, interest inventory results, health data, family background information, teacher or counselor ratings and observations, and verified reports of serious or recurrent behavior patterns.

   The right of inspection and review shall not extend to psychiatric, medical, or counseling records which are intended for personal diagnostic or treatment purposes only. Neither does the right extend retroactively to items of record previously obtained with assurances that confidentiality would be maintained.

   With regard to such confidential items, the student has the option of either waiving the right of inspection and review and having those items retained as a part of the record, or of requesting that such confidential items be removed from the student's record and returned to the source or destroyed.

2. The right to a hearing before the Student Court to delete any portion of any record which is inaccurate, misleading or inappropriate. Discrepancies should first be brought to the attention of those responsible for maintaining the records so they may have an opportunity to cure any defects. To the extent defects are not cured, upon request a hearing may be initiated by a written request from the student delivered to the Office of the Vice President for Student Affairs. The matter before the Student Court will be the question of the accuracy or appropriateness of the record itself and will not be extended to questions of the judgment of those who contributed to the record. The court will consider (1) whether the record accurately reflects matters intended to be contained here. (2) whether the record is misleading because in its present form it would lead a reasonable person to an incorrect conclusion, or (3) whether matters within the record are inappropriate because the record does not usually or should not reasonably contain such matters as those in

question. Upon appropriate determination of the court, any such matters may be ordered deleted from the record.

3. The right to have education records or personally identifiable information from education records kept confidential and not released to third parties without the written consent of the student, except for release to the following:
    a. University personnel for legitimate purposes and to the extend required in the ordinary course of the performance of their duties.
    b. Authorized representatives of (a) the Comptroller General of the United States, (b) the Secretary, (c) an administrative head of an education agency, or (d) state educational authorities having access to student or other records which may be necessary in connection with the audit and evaluation of federally supported education programs, or in connection with the enforcement of the federal legal requirements which relate to such programs. Provided, that, except when collection of personally identifiable data is specifically authorized by federal law any data collected by such officials with respect to individual students shall not include information (including Social Security numbers) which would permit the personal identification of such students and their parents after the data so obtained has been collected.
    c. In compliance with judicial order or any lawfully issued subpoena upon condition that the student is notified of compliance.
    d. In connection with a student's application for or receipt of financial aid.
    e. The University of Montana may forward educational records to other institutions for students intending to transfer.
4. The right to refuse to permit the designation of any or all categories of personally identifiable information as "directory information" which is not subject to the above restrictions. **The University of Montana has defined the following as directory information: student's name, addresses including e-mail, telephone number, dates of attendance, full time/part time status, date of graduation and degree received, school or college, majors, class, and academic awards or honors.**

    Any student wishing to exercise this right must inform the University Registrar in writing within two weeks after the start of classes of any personally identifiable information which is not to be designated as directory information with respect to that student in that academic year.

5. The right to have available for inspection by the student a written form signed by any representative of the Comptroller General of the United States, the Secretary, or any administrative head of an education agency who requested and was granted access to the records which states the legitimate educational or other interest that each such person had in requesting access to that particular record.
6. The right to have personal student records transferred to third parties only on condition that such parties will not permit any other party to have access to such information without the written consent of the student. All student records transferred to third parties shall have printed or stamped thereon: "No other person may have access to this information without written consent of the student."

Students may file a complaint with the U.S. Department of Education concerning alleged failures by The University of Montana-Missoula to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue SW, Washington, DC 20202-4605.

Equal Opportunity

The University of Montana is committed to a program of equal opportunity for education, employment and participation in University activities without regard to race, color, sex, age, religious creed, political ideas, marital or family status, physical or mental disability, national origin or ancestry, or sexual orientation.

Statement Of Law

Equal opportunity laws and orders applicable to The University of Montana include, but are not limited to, Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Rehabilitation Act of 1973, Vietnam Era Veterans Readjustment Act of 1974, Executive Order 11246, Civil Rights Restoration Act of 1988, Montana Fair Practices Act of 1974, The Americans with Disabilities Act, and the Montana Nondiscrimination by State and Local Government Act of 1975.

It is illegal in the State of Montana to discriminate against anyone because of race, religion, color, political ideas, age, marital status, sex, mental or physical disability, national origin or ancestry in employment, training, public accommodations, financing, education and government services. With the exception of marital status, this also applies to housing.

Discrimination Grievance Procedure

The University of Montana has established a discrimination grievance procedure for employees, students, and applicants for employment or admission who claim to have been unlawfully discriminated against because of any University regulation, policy, practice or the official action of any University employee.

The University is prohibited from retaliating against an individual who has made charges, testified, assisted or participated in any way in any proceeding, investigation or hearing in regard to the violations or alleged violations of laws or orders requiring equal educational and/or employment opportunity.

Persons believing they have been discriminated against should contact:

Lucy France, Director, Equal Opportunity/Affirmative Action
University Hall 020, The University of Montana
(406) 243-5710

OR

Montana Human Rights Division
PO Box 1728
Helena, MT 59624-1728
(406) 449-2884

Complaints must be filed within 60 days of the alleged discrimination if filing with the University Discrimination Grievance Officer and within 180 days if filing with the Montana Human Rights.

Student Services

Housing and Dining Services

Residence Halls Community

The University of Montana-Missoula residence halls' community is very much a part of the total University and Missoula communities. The campus is a center for educational, cultural, and social activities. Residing in residence halls places the student at the center of these activities. Our mission is creating an atmosphere that is safe, provides for individual growth, and promotes academic exploration and learning. The University houses nearly 2300 students in nine residence halls on campus. The residence halls staff are resource people. Sharing ideas, observations or questions with them will benefit residents. Resident Assistants offer help when students experience problems with University life. The residence hall room rate includes a furnished room with all utilities, use of laundry facilities, internet access and cable TV.

The University of Montana-Missoula requires all freshmen and students who have earned fewer than 30 semester credits to reside in the University's residence halls. Students are required to continue residence hall living until the student earns 30 semester credits. Any student who moves into the residence halls at the beginning of the semester is required to reside in the residence hall for the entire semester. (However, students must be enrolled for at least seven credits to be eligible to live in a residence hall.) Exceptions to residence hall living are made for students who reside with their parents and for students who are married or are single parents. Other exceptions are made under special circumstances on an individual basis. Any student requesting an exception to the residency requirements must submit a request in writing, accompanied by supporting documentation, to the Director of Residence Life. Students are not released from the residency requirements until the student receives an official notification from the Director of Residence Life. Students who have earned 30 semester credits or more are not subject to the residency requirements but are encouraged to live on campus. All students living in the residence halls are required to contract for one of the on-campus meal plans.

Rooms in residence halls are provided in order of application. Freshman students required to live in Residence Halls who submit their residence hall application and $220.00, which is a $20 non-refundable processing fee and a $200 prepayment, by the priority Admission deadline of March 1, will be guaranteed permanent housing assignments. Application forms and information may be obtained on the Residence Life Office website at www.umt.edu/reslife.

A number of rooms have been designed to accommodate students with disabilities. Application for these rooms is made to the Residence Life Office. The Director of Residence Life or the Office of Disability Services for Students, (406) 243-2243, should be contacted to ensure the necessary accommodations are provided or visit our website at www.umt.edu/reslife.

Lewis and Clark Village

(Upperclass and Graduate Housing)

Lewis and Clark is a No-Smoking apartment facility designated for single students at The University of Montana without dependents who will have accumulated at least 60 credit hours by the time they move into the apartments. The apartments are located off campus just south of Dornblaser Stadium on South Higgins Avenue. They are within easy walking or biking distance from the University and are adjacent to Park n' Ride which provides free and easy transportation to the UM campus. The apartments are furnished with all utilities paid including cable TV and internet access.

Prospective tenants may submit applications together with a requested roommate(s). If a tenant does not have a roommate preference, the Residence Life Office will assign roommates based on like gender. As space allows we will attempt to take into consideration other preference such as age, smoking, alcohol consumption, and length of agreement.

How To Apply for Lewis and Clark Village

Applications are available on the website at www.umt.edu/reslife, by calling in a request to the Residence Life Office at 406-243-2611, or sending an email message to housing@mso.umt.edu. Your application must be accompanied by $320.00, ($20.00 which is a non-refundable processing fee and a damage deposit of $300.00).

A complete set of policies, photos and site map are available on the website atwww.umt.edu/reslife.

Dining Services

Winner of 22 international dining awards and home to nationally renowned chefs, University Dining Services (UDS) is dedicated to bringing you a variety of delicious, well-balanced meals at reasonable prices. An extensive selection of dining options at venues that include: the Food Zoo, the Cascade Country Store, La Peak, University Center Food Court, Biz Buzz, and Think Tank. All University Dining Services locations accept cash, checks, Visa/Mastercard, UMoney and appropriate meal plans.

The Food Zoo, located in the Lommasson Center, is our all-you-care-to-eat buffet style restaurant which features an ever-changing choice of entrees, homemade soups, an extensive salad bar, daily pastas and gourmet pizzas, fresh fruits, Bear Claw Bakery desserts, cooked-to-order specials, and vegetarian and vegan options.

The Cascade Country Store, located at the west end of the Lommasson Center, boasts a bright, food-court style atmosphere with pizzas, Mexican food, grilled favorites and a fresh deli. Soups, salads, Bear Claw Bakery specialties, a wide variety of grocery items, organic products, and health and beauty aids are just some of the options available. The expansive outside deck is a popular stop for many students.

For a peak experience you'll never forget...stop by La Peak, located in the Lommasson Center. La Peak features Craven's gourmet coffee and espresso drinks, fresh crepes, breakfast sandwiches and Bear Claw Bakery goodies. The lodge-like atmosphere makes La Peak a great place to socialize with friends.

The UC Food Court, located on the second floor of the University Center, features a contemporary, open atmosphere, and exceptional cuisine. Food choices include Pizza Hut, Garden City Greens, Soups N Such , Mark Pi's, Wing Street, Doc's Sandwiches and the award winning Casa Nina.

Biz Buzz, located on the lower level of the Gallagher Business Building can help you jump start your day with a fresh cup of Craven's coffee, espresso, or chai tea. They also serve fresh baked goodies, bagels, sandwiches, soups and salads.

The Think Tank, located above the Urey Lecture Hall, offers Liquid Planet gourmet coffee, espresso, Chai tea, Italian soda, ice-cold beverages, and grab and go items like sandwiches, soups, salads, and snacks. Whether you need that morning boost or a lunch on the go, the Think Tank has you covered.

Meal Plans

All students living in a residence hall must purchase a meal plan. UM Dining Services offers two meal plans designed for on-campus students: the All Campus and the Lommasson Plus. Each plan provides a weekly meal fund balance from which meal purchases are deducted.

The All Campus Meal Plan provides campus-wide dining flexibility and is accepted at all Dining Services locations. The Lommasson Plus Meal Plan is accepted at the Lommasson Center restaurants. (The Food Zoo, Cascade Country Store, La Peak, and Jus' Chill'n located in the Campus Receration Center).

A student may convert their meal plan from ALL Campus to the Lommasson Plus Meal Plan only once during the first two weeks of the semester. Upgrades, from the Lommasson Plus Meal Plan to the All Campus Meal Plan, are accepted throughout the semester.

The Commuter Meal Plan is designed for student's living off the main campus who want the conveinence of pre-purchased campus dining. Open an account with the initial buy of $20. Commuter Meal Plan funds maybe used at any UDS and Jus Chill'n locations on the main campus and the College of Technology snack bars. There is a $20 minimum for all additional deposits. The Communter Meal Plan comes with a 10% premium on every dollar deposited.

For detailed information on meal plans and other special dining services, please contact University Dining Services at (406)243-6325 or visit our web site at www.umt.edu/uds.

University Village

The University has 566 apartments for married students, single students with dependents, and students with disabilities who have a live-in care attendant. All apartments are within walking distance of the campus. Units range from studio to four-bedroom apartments.

Eligibility for University Village requires at least one adult member of the household be enrolled for a minimum of seven (7) credits two of the three semesters per year. The student must be registered for at least seven (7) credits the first semester of occupancy. Priority is given to students who are married or otherwise have a legal dependent relationship with another adult; single parents with at least one (1) legal dependent living in the apartment; and single students with disabilities who require a live-in care attendant. Single students may be assigned apartments if other priority applicants do not occupy all available units.

Students residing in University Village must demonstrate satisfactory progress toward an educational degree by earning a minimum sixteen (16) credits per calendar year. After the initial year of residency, satisfactory progress is based upon credits earned during the preceding calendar year. In addition, a student or family with one or more members working toward an educational degree will have priority occupancy for a maximum of six (6) calendar years. Any exception from the above residency policies requires a written request for exception submitted to the University Village Office. The request is not approved until written consent is received from the University Village Office.

Housing is assigned according to the date of application and notification is given approximately twenty (20) days before housing becomes

available. All applications must be updated every six (6) months in order for applicants to remain on the assignment list. A $250.00 deposit must be submitted when an apartment is assigned. The deposit is refundable when the rental agreement is terminated provided the apartment rental fees are current and no damage or cleaning fees are assessed. The deposit is forfeited if the student cancels after accepting the assigned apartment.

Due to the demand for University Village housing, the University Village Housing Office should be contacted early to make reservations and obtain detailed information including an application or visit our website at www.umt.edu/reslife. Applications must be accompanied by a $20.00 processing fee.

Personal Property

The University of Montana-Missoula is not responsible, by state law, for damage to, or theft of, the personal property of students on campus (for example: damage to clothing or a stereo due to fire, smoke or water). Students are encouraged to adequately insure their personal property and to protect their property by locking their room/apartment and car and taking other simple precautions to prevent theft and damage.

Career Services

The Office of Career Services assists students in developing viable career objectives and the plans necessary to achieve those goals. Assistance is also provided to students and UM alumni who wish to modify their career goals and improve their employment options. Career Services provides a wide array of services designed to facilitate the transition from education to employment, including: career counseling and assessments; workshops on such topics as resume writing, interviewing and job search strategies; videotaped mock interviews; on-campus interviews with employers; credential files services for teachers; alumni referral network program, an on-line job vacancy service, and student employment.

Career Services maintains an extensive on-line library of current resources on general and specific career options, resume, interviewing and job search reference materials and employment resources from companies, school districts and government entities.

A variety of career fairs are hosted each year for the purpose of bringing students and employers together to discuss volunteer, internship, part-time and full-time employment opportunities. The Big Sky Career and the Health Professions Fair are held in the Fall semester. The Educators' Career Fair is open to teaching, administrative and school counseling professionals and is held in the spring semester.

All UM students are eligible to establish a free Griz eRecruiting account which allows students to post their resumes on the web for viewing by and referral to employers, participate in the on-campus recruiting program and view current job vacancies in the online jobs database.

For additional information, contact the Office of Career Services at 154 Lommasson Center, call (406) 243-2022, e-mail: careers@mso.umt.edu or visit our web site at:www.umt.edu/career.

Student Employment

Student Employment provides the opportunity for students and employers to connect. Student Employment offers an online job posting system for employers and an online job search and application process for students. This makes it possible to post jobs for on-campus, off-campus, work-study, non work-study, and volunteer employment. Student Employment works closely with Financial Aid and Student Payroll to assure students are being hired and paid within the established guidelines. Student Employment hosts a free Student Job Fair during the rist week of classes every fall. We also coordinate National Student Employment Week and the Student Employee of the year (SEOTY) Award.

For additional information, contact the office of Student Employment at 154 Lommasson Center, call (406) 243-5627, email studentjobs@mso.umt.edu or visitwww.umt.edu/studentjobs.

Testing Services

The Office of Testing Services coordinates the administration of educational and professional licensing and certification tests. Examples of tests available through Testing Services include: ACT, GRE, GMAT, MCAT, TOEFL and IT certifications, including Adobe, Cisco, Macromedia, PTCB, Novell, Sun Microsystems, etc. Additionally, Testing Services provides proctoring for faculty and online educational testing.

For additional information, contact Testing Services at 154 Lommasson Center, call (406) 243-6257, email: testingservices@umontana.edu or visit:www.umt.edu/career/testingservices.

Internship Services

Internships are available to students in most disciplines offered at The University of Montana-Missoula. Internships allow a student to work in a field related to his or her academic and career goals while utilizing skills learned in the classroom. Internships are offered locally, state-wide, nationally and internationally in a variety of agencies including government, non-profits, and business. Information, applications and other forms are available at Internship Services, Lommasson Center 154; (406) 243-2815; fax (406)243-5866; or visit the website at: www.umt.edu/internships.

Disability Services for Students

Students with disabilities can expect access at The University of Montana-Missoula. Wherever possible, the University exceeds mere compliance with the civil rights laws of Section 504 of the Rehabilitation Act, the Americans with Disabilities Act, and the Montana Human Rights Act. The University's programs are readily accessible to and usable by people with disabilities. The campus assures Program access is delivered to the maximum extent feasible and in the most integrated manner possible. Disability Services for Students, a student affairs office, leads the University's program access efforts for students. Disability Services provides and coordinates reasonable accommodations and advocates for an accessible and hospitable learning environment. We encourage self-determination and self-reliance by students with disabilities. Examples of services include priority registration, physical accessibility arrangements, academic adjustments, auxiliary aids (readers, scribes, sign language interpreters, etc.), alternative testing, conversion of print textbooks to e-text, assistive technology assistance, and other reasonable accommodations. To achieve equal access, Disability Services vigorously pursues the removal of informational, physical, and attitudinal barriers to all University programs. "Expect Access, "the Disability Services handbook for students, and a campus accessibility map are available athttp://www.umt.edu/disability/. Students with disabilities should plan ahead and get in touch with Disability Services prior to arriving on campus. For additional information, contact Disability Services' Director Jim Marks, Lommasson Center 154 or (406) 243-2243 (Voice/Text) or jim.marks@umontana.edu. Please visit the Disability Services homepage to find details on our services at www.umt.edu/disability/.

Foreign Student and Scholar Services

The office of Foreign Student and Scholar Services (FSSS) assumes responsibility for the general welfare of foreign students at The University of Montana from admission to gradation and practical training. It provides direct support services, consultation, and liaison. The office assists in the reception and orientation of foreign students and helps with their integration into the University and community. It interprets immigration regulations and laws and assists students in maintaining legal status and obtaining benefits related to their visa status. Staff members provide advising for academic and personal concerns, cultural adjustment, financial problems, and other concerns that arise.

The staff works with the International Student Association and other student groups, as well as the Missoula International Friendship Program to sponsor cultural activities, a speaker's bureau, a community hospitality program for students, leadership opportunities for students, and the annual International Culture and Food Festival. FSSS coordinates the UM Global Partner Program, a campus peer-mentioning program. It offers educational fields trips; winter and summer break activities, as well as direct and on-going orientation and educational programs on relevant topics. FSSS manages the campus' International House, an activity center for inter-cultural events. Foreign Student and Scholar Services works closely with other service and advising offices on campus to optimize those services and their visibility to foreign students.

Foreign Student and Scholar Services prepares certificates or petitions for the Exchange visitor J-1 visa and advises foreign scholars who need to change or extend their visa status, travel temporarily out of the United States or bring dependents to this country. Finally, the office serves as liaison to federal agencies dealing with foreign student and scholar concerns, such as the US Citizenship and Immigration Service, Department of Labor, Department of State, Internal Revenue Service and Social Security Administration. For more information visit our website at: www.umt.edu/fsss/ or contact us at fsss@umontana.edu.

Office of International Programs

The Office of International Programs administers all campus-wide student, faculty, and staff exchange programs with international institutions and serves as the information and referral center for UM Faculty Directed Study Abroad programs. A wide variety of short and long term overseas study opportunities are available to UM students. The University of Montana-Missoula has direct student exchange agreements with universities in Australia, Canada, Chile, China, Denmark, Finland, Japan, Korea, Mexico, Morocco, New Zealand, Taiwan, Thailand and the United Kingdom. The office also administers the International Student Exchange Program (ISEP) which provides students with the opportunity to study at one of over 130 universities in 35 countries. Information is available regarding other study abroad programs and financial resources, including the Fulbright program. For additional information, contact the office of International Programs, International Center, call (406) 243-2288, e-mailgoabroad@mso.umt.edu, or visit their website at www.umt.edu/oip.

English Language Institute

UM offers two distinct types of academic second language English instruction: EASL courses that are described in the Linguistics Program for matriculated students and intensive (20 hours a week), academic English courses that are taught in the English Language Institute (ELI) for non-matriculated students (http://www.umt.edu/eli). ELI's curriculum addresses the needs of international students whose TOEFL scores are below 500/173 (undergraduates) or 525/196 (graduates) and who want to raise their English proficiency in order to gain admission to a university or college where English is the language of instruction. Additionally, the ELI offers specially designed short-term programs for groups with specific requests.

The Center for Ethics

The Center for Ethics (formerly known as the Practical Ethics Center) was created in 1996 to promote high quality teaching, research and service in applied and professional ethics. The Center for Ethics is charged with conducting responsible moral discourse concerning both societal ethics (e.g., the values that inform health, economic growth, education, and conservation policies) and the ethical practices of a wide range of professionals (e.g., public administrators, business managers, health workers, teachers). The Center's functions include ethics inquiry and education (to be achieved through courses, public lectures and conferences, professional development workshops, and a resource center) and funded research. For more information, call (406) 243-5744, emailethics@mso.umt.edu or visit the website at www.umt.edu/ethics.

Curry Health Center

243-2122

Curry Health Center provides affordable, accessible, high quality, student-centered health services to University of Montana students to enhance student learning, promote personal health and development and teach important life skills.

Curry Health Center is YOUR campus based health care center, with services designed to meet the needs of college students and the campus community.

General Information

Services in the Medical Clinic, Health Enhancement and the Student Assault Resource Center are available to all students. Services in the Counseling Center and the Dental Clinic are available only to students who pay the Curry Health Fee.

We recognize the busy nature of student schedules and seek to provide accessibility for both urgent needs and more routine care via appointments or drop-ins. We are happy to coordinate care with providers "back home" or assist with referral to community resources for problems beyond the scope of CHC.

Medical Services - 406-243-4330

Curry Health Center provides both primary health care services as well as urgent care services to the University of Montana student population.

Our primary care services include:

- Routine annual exams
- Sports physicals
- Health screens
- STD screens
- Women's Health
    - PAP smears
    - Birth control
    - Colposcopy
    - Depo-Provera injections
- Travel planning
- Immunizations
- Allergy shot administration
- Management of depression and anxiety
- Acne management
- Insomnia
- Mole checks/mole removals

Our urgent care services include:

- Care for minor illness/conditions such as:
    - Colds
    - Flu
    - Strep throat
    - Mono
    - Gastroenteritis
    - Urinary tract infections
    - Upper respiratory infections
    - Mild to moderate asthma exacerbations
    - Migraine headache
    - Sinus infection
- Care for minor injuries such as:
    - Simple lacerations that require stitches
    - Splinting or casting of simple fractures
    - Sprains/strains of muscles and joints
    - Mild concussion
    - Wound infections

If you have questions, or wish to schedule an appointment, contact us at 243-4330.

Counseling and Psychological Services - 243-4711

Counseling and Psychological Services (CAPS) provides rapid access and brief therapy for UM students. CAPS also serves the urgent care

needs of students in crisis and facilitates off-campus referral when necessary. All services are confidential. Counseling covers the broad range of personal, academic, relational and social concerns of students. Counseling may help a student solve a personal problem, cope with the transition to university life, enhance family relationships, or improve academic performance. Most services are covered by the Curry Health Fee payment. There are additional charges for some services including psychological evaluations for prolonged counseling and psychotherapy.

Self Over Substance (S.O.S.) - 243-2290

S.O.S. educates and motivates students to address high-risk behaviors associated with heavy alcohol or other drug use. Services include individual and group counseling, education/intervention programs, and assessment/referral to treatment resources. Some services have modest fees.

Dental - 243-5445

Dental care is provided to students who have paid the Curry Health Fee. The Dental Clinic's primary focus is on urgent and preventative care. While urgent care is given priority, routine dental care is also provided. Charges for dental services are set at a substantially lower rate than the private sector.

Services Provided

1. Emergency dental care.
2. Fillings, root canals, simple extractions, crown and bridge procedures (as time permits).
3. Teeth cleaning, periodontal scaling, and oral hygiene instructions.
4. Routine exams and X-rays (‘checkups') on a limited basis-one per year.
5. Night guards for TMJ disorders and protection from grinding.

Referrals to specialists or other dentists are provided for students whose dental needs are beyond the scope/capabilities of the clinic, e.g., oral surgery, complex root canals, orthodontics, dentures, etc. Charges incurred at private offices are the student's responsibility.

The Student Insurance plan does **not** cover dental charges.

Health Enhancement - 243-2809

The Health Enhancement Department of Curry Health Center provides health education and wellness services to students to help them stay safe. and healthy, now and in the future. Health Enhancement is also the home of the nationally recognized peer education program Peers Reaching Out (PROs). PROs provide programming on health issues that affect students like healthy sexuality, safer sex, contraception, alcohol poisoning, safe partying, nutrition, and stress management. The CARE program, which provides free condoms through representatives that live in the dorms and Greek houses, is also part of Health Enhancement. Call us if you would like to be a PRO or a CARE Representative.

Services include: free quit smoking and quit spit tobacco kits, free condoms and safer sex supplies, nutrition information, stress management assistance, and wellness counseling.

Student Assault Recovery Services - 24-Hour Crisis - 243-6559 Office - 243-5244

Student Assault Resource Center (SARC) offers confidential support and advocacy services to victims of rape, sexual assault, child sexual abuse, relationship violence, sexual harassment, and stalking. Services are also available for friends, partners, and relatives of victims. SARC offers a **24-hour crisis line, 243-6559** and a walk-in Resource Center when the University is in session. Trained student Advocates are available 24 hours a day to provide information and advocacy. Other services offered by SARC include support groups, workshops, and training as well as an extensive resource library. There is no charge for SARC services. Professional counseling is available by referral to campus or community resources. SARC is located in the basement of the Curry Health Center. Enter through the east entrance (corner of Maurice St. and Eddy Ave). SARC walk-in hours are 10:00 a.m. to 5:00 p.m., Monday through Friday, when the University is in session.

Health Services Pharmacy - 243-5171

The Health Services Pharmacy, located in the Curry Health Center building, offers students a complete prescription service and accepts many 3rd party insurance plans at very reasonable rates. The pharmacy is operated by the School of Pharmacy in cooperation with Curry Health Center and is used for training pharmacy students under the supervision of registered pharmacists.

Medical Insurance Billing- 243-2844

Because of your privacy rights and concerns, Curry Health Center will not automatically bill your insurance plan for services received at CHC. If you would like to file an insurance claim for services received at Curry Health Center, you must request this through the Student Insurance Office located in CHC. CHC will assist you in filing insurance claims so that your insurance company will reimburse you directly. Because your insurance company reimburses you directly, you are responsible for paying charges incurred at CHC, not your insurance company.

CHC is not a Medicare/Medicaid provider, nor do we accept direct payments from insurance companies.

Clinical Psychology Center

The Clinical Psychology Center (CPC) is a training clinic for doctoral students in Clinical Psychology and School Psychology, operated by the Department of Psychology. The CPC offers a wide range of psychological services to the Missoula community (both students and non-students), including: individual, couples, child, family and group psychotherapy and psychological testing and evaluation. Services are confidential, and all clients are charged on a sliding fee schedule based on household income and number of dependents. The CPC is located at 1444 Mansfield Avenue, on campus. To make a request for services, call: (406) 243-2367.

Physical Therapy Clinic

The UM Sports and Orthopedic Physical Therapy Clinic is open to all UM students, faculty and staff for the evaluation and treatment of problems related to injuries, surgeries and pain that limit or affect activities. The Physical Therapy Clinic Office is located in room 129 of the Skaggs Building, across from the Urey Underground Lecture Hall. The clinic is staffed by licensed physical therapists who are board certified in sports medicine, orthopedics and manual therapy. The clinic is a valuable component of the professional physical therapy program.

The clinic is open Monday through Friday from 10:00 - 5:00 pm. The clinic is not supported through the Student Health Service Fee. Blue Cross and other insurance typically cover physical therapy services minus any deductible or co-payment responsibilities. To make an appointment or for questions please call 243-4006 or visit online at http://www.health.umt.edu/PTClinic.

University Center

As the University's Student Union, the University Center (UC) is the community center for the campus. One of the most aesthetically pleasing buildings on campus, the most popular gathering place in the UC is the atrium featuring a large tropical garden. With an average of up to 10,000 visitors per day in the academic year, the UC provides an assortment of services and conveniences to members of the campus community. Services include: a post office/UPS/FedEx customer counter, box office/information desk, hair/nails/tanning/massage salon, credit union, ATM's, movie theater, copy center, bookstore, cellular phone vendor, web site design, game room, meeting rooms in addition to dining and conference facilities. The UC offers an extensive variety of cultural, educational, social and recreational activities that complement the academic experience. Students may participate in such dynamic programs as the Office of Greek Life, Special Events, Art Fair, Art Gallery, Art Exhibits, UC Theater, MultiCultural Alliance, Game Room, and the Center for Leadership Development. Visit us online at www.umt.edu/uc.

Sports and Recreation

Organized sports and recreational activities are an important part of academic and leisure life at the University.

Intercollegiate Athletics

The University of Montana-Missoula is a Division I member of the National Collegiate Athletic Association, and the nine-member Big Sky Conference. The athletic program consists of 14 varsity teams. The men's program includes competition in basketball, cross country, football (Football Championship Subdivision), indoor and outdoor track, and tennis. The women's program offers competition in basketball, cross country, tennis, indoor and outdoor track, volleyball, golf, and soccer. The teams go by the nicknames Griz and Lady Griz. Athletic scholarships are offered in all sports.

Campus Recreation

The Campus Recreation Department offers a wide variety of services to the students, faculty and staff of The University of Montana. A comprehensive intramural sports program provides opportunities for men's, women's and co-recreational team competition and individual events. An outstanding Fitness Program offers yoga, pilates, strength training and other sports specific conditioning.

Recreational facilities include gymnasiums, weight rooms, and indoor running track, handball and racquetball courts, multipurpose fitness studios, tennis courts, indoor swimming pool, indoor climbing wall, and a golf course. Sports equipment such as balls, bats, gloves, etc. can be checked out for free and other equipment such as volleyball, nets, badminton sets, and horseshoes require a cash deposit.

The Outdoor Program offers services to students, faculty, staff and the general public, supplying information, training, and education about outdoor pursuits and sports. Classes are offered on a non-credit basis for activity credits through the Health and Human Performance Department. The Outdoor Program also organizes outdoor trips and hosts hight adventure and educational films and lectures.

University Golf Course

The University of Montana-Missoula has a picturesque nine/eighteen hole golf course open to students, faculty, and staff, as well as the general public. It is located approximately one-half mile south of the main campus.

The course has a clubhouse restaurant, driving range, putting and chipping green. The pro shop is well-stocked and club and cart rentals are available. Private lessons are offered by appointment with an assortment of rate structures.

Grizzly Pool

The University of Montana Grizzly Pool is a 7-lane, 25-yard indoor pool. Present programs include: fitness swims, recreational swims,

classes for all ages (infant to adult), life guarding and WSI classes, pool rentals, Swim Shop, and competitive skills lessons.

Bachelor Degree Admission – Entering Freshmen

Academic Eligibility

The University continues to raise the academic standards required for full admission to Baccalaureate programs, and the process will continue in future years. Effective for the 2008-09 academic year and thereafter, both in-state and out-of-state high school graduate will be offered full admissions if they meet the following requirements:

1. Graduation from a state accredited high school.
2. Successful completion of the College Preparatory program (all courses are subject to Office of Public Instruction guidelines):
    - Four years of English.
    - Three years of math, including Algebra I, Geometry and Algebra II (or the sequential content equivalent of these courses). Students are encouraged to take a math course in their senior year.
    - Three years of social studies, including one year global studies (i.e., world history or world geography), one year American history and one year of additional course work (i.e., government, psychology, economics).
    - Two years of laboratory science. One year must be earth science, biology, chemistry, or physics; the other year can be one of those sciences or another approved college prep laboratory science.
    - Two years chosen from the following: foreign language (preferably two years), computer science, visual and performing arts, or vocational education units.
3. Cumulative high school grade point average (GPA), on a 0-4 scale, and composite on the enhanced ACT (or combined verbal/math on SAT) must fall in the gray region of grid #1 shown in Figure 1.
4. Effective Fall 2008, students must meet a minimum math score of:
    - 18 on the ACT or
    - 440 on the SAT or
    - A score of 3 or above on the AP Calculus AB or BC Subject Exams. In lieu of the above requirement, student can complete a Rigorous High School Core that includes four years of math with grades of C or higher.
5. Effective Fall 2008, students must meet a minimum Writing Proficiency score of:
    - 17 on the Combined English/Writing section of the Optional Writing Test or a 6 on the Writing Subscore of the ACT; or
    - 420 on the Writing Section of the SAT or a 6 on the Essay the SAT; or
    - 3 on the Montana University System Writing Assessment; or
    - 3 on the AP English Language or English Literature Examination; or
    - 4 on the International Baccalaureate Language A1 Exam or
    - 50 on the CLEP Subject Exam in Composition.

Information on admission requirements for home-schooled students or students who graduate from a non-accredited high school can be found at http://admissions.umt.edu/alternatehs.

Provisional Acceptance

Students who fail to meet the admissions requirements may be admitted on a provisional basis if the Admissions Committee determines that a student could be successful by taking advantage of the academic support services that are available. Students will be granted full admission, after completing twenty-four credits with a grade point average of at least 2.0 Students are expected to complete the twenty-four credits within two semesters but must complete them within three semesters. In cases where academic preparation falls well below the admission standards listed above, applicants will be directed to the College of Technology were courses can be taken to strengthen their preparation for success at The University of Montana.

Special Circumstances

The following categories of students may receive special consideration with regard to admission standards:

1. Non-traditional freshmen (those students who do not enter college for a period of at least three years from the date of high school graduation or from the date they would have graduated from high school if they have a GED).
    - Admission status of high school graduates with transcripts and ACT/SAT scores will be determined using the grid below.
    - Admission status of GED non-traditional applicants with ACT/SAT scores will be determined using the grid below. In lieu of a GPA, the GED score rescaled from 4000 to 4.0 (maximum) will replace the GPA axis.
    - Applicants without both transcripts and ACT/SAT scores, or applicants without both GED transcript and ACT/SAT scores will be admitted provisionally.
2. GED freshmen (those students who pass the GED and enter college within three years of the date they would have graduated from high school). Admission status of GED freshman will be determined using the grid below. In lieu of a GPA, the GED score rescaled from 4000 to 4.0 (maximum) will replace GPA axis.
3. Summer only students are exempt from standards 2, 3 and 4 above.
    - All traditional freshman or GED freshman applicants must take the ACT or SAT. Some departments reserve the right to set higher admission standards for their undergraduate programs. Applicants to these programs who meet general University requirements for admission to the undergraduate degree status will be admitted to the appropriate pre-major program by Enrollment Services-Admissions. Application to the undergraduate major program is an additional, separate process

administered by the department and arranged for by the student seeking acceptance. These admission requirements are subject to change.
- Questions concerning admission requirements may be directed to Enrollment Services-Admissions, (406) 243-6266 or 1-800-462-8636.

Future trends in Admission Eligibility at UM

Grid detailing admissions standards at the U of M

In future years, the academic criteria for full admission to Baccalaureate programs at The University will continue to rise. Students who fail to meet these stricter admission standards may be admitted on a provisional basis if the Admissions Committee determines that a student could be successful by taking advantage of the academic support services that are available. Other applicants will be directed to the College of Technology where courses can be taken to strengthen their preparation for success at The University.

How to Apply

Applications for admission are available from Enrollment Services-Admissions by request. In addition, applications are sent to all Montana high schools, community colleges and select out-of-state schools. Applications are also available on the University website.

An application for admission is complete when Enrollment Services-Admissions receives the credentials described below.

1. Application form. Applications must be complete and signed.
2. . $30 application fee or $36 application fee when applying online. This non refundable fee is payable once at the undergraduate level provided payment is followed by enrollment. Record of payment will remain on file for one year for students who do not enroll. Applications are not processed prior to payment of this fee. The University of Montana-Missoula waives the application fee for students who have attended an affiliate campus: Montana Tech and the Division of Technology, Helena College of Technology, and Western Montana College.
3. Test scores. Official ACT or SAT results should be sent directly from the testing company or may be posted on the high school transcript.
4. High School Student Self-Report form. This form is part of the standard application form and is the basis for the initial admission decision.
5. Final high school transcript with graduation date. Information provided on the self-report form will be verified from this transcript.
6. Medical History Record. All students are required to submit a completed Pre-Registration Immunization Form to the Curry Health Center two weeks prior to registration. It is important that the immunization record be complete, accurate and validated by a health official.

When to Apply

March 1 is the application priority processing date for autumn semester. The application priority processing date for spring is November 15. Applications postmarked or completed after the processing priority date will be processed on a space available basis. Students are encouraged to apply early as some programs may fill early. A student must be admitted to The University of Montana-Missoula prior to attending an orientation program. Orientation information is sent to accepted students prior to each semester.