

- resubmit TOEFL, IELTS or MELAB scores before they apply to the program;
- Agree to modifications in the program of study if requested, upon review of the application.

**Important note for non-US licensed foreign applicants:** Granting of the DPT degree awarded by the University of Montana is considered a post-professional academic degree. Granting of the tDPT degree upon successful completion of the tDPT curriculum by the University of Montana **does not convey a license to practice, nor eligibility to take the licensure exam** in the United States, which is required by law to practice in the United States. To better understand regulations to practice in the United States, visit the Federation of State Boards of Physical Therapy (<http://www.fsbpt.org>).

#### 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 2.5 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 2.5 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.)
- PT 657 Professionalism: The Doctoring Profession (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; semesters 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 Management of Patients with Integumentary Disorders (2 cr.)
- PT 664 Wellness and Health Promotion (2 cr.)

**Semester Seven****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.

PT 657 Professionalism: The Doctoring Profession might be taken in the 2<sup>nd</sup> or 3<sup>rd</sup> semester depending on enrollment date.

**Courses**

R- before the course description 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) - Course Descriptions**

503, 510, 516, 519, 520, 525, 526, 527, 529, 530, 536, 560, 561, 562, 563, 565, 567, 568, 569, 570, 572, 573, 576, 577, 578, 582, 587, 588, 589, 594, 595, 626, 627, 628, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 671, 672, 676, 679, 680, 690, 691, 692, 694, 699

**Faculty****Professors**

Jennifer Bell, Sc.D., Texas Tech University Health Sciences Center, 2013; M.P.T., University of Texas Southwestern Medical Center, 2006

Reed Humphrey, Ph.D., University of Pittsburgh, 1986; P.T., Virginia Commonwealth University, 1994 (Chair)

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

Charles Leonard, Ph.D., Medical College of Pennsylvania, 1985; P.T., Duke University, 1978

**Associate Professor**

James J. Laskin, Ph.D., University of Alberta, 2001; P.T., University of Saskatchewan, 1987

**Assistant Professors**

Anthony Kinney, D.P.T., Washington University, 2008; MBA Duke University, 2008; New York Medical College, MSPT, 2002

David L. Levison, M.H.S., Indianapolis Krannert School of Physical Therapy, 1996; P.T., University of Montana, 1986

Ryan Mizner, Ph.D., University of Delaware, 2005; P.T., University of Delaware, 2000

Alex Santos, Ph.D., Pennsylvania State University, 2008; P.T., State University of Londrina (BR), 1998

**Nora Staael Evert Physical Therapy & Rehabilitation Clinics****UM Sports & Orthopedics, Neurology & the New Directions Wellness Center**

Director: Susan Ostertag, D.P.T., Arizona School of Health Sciences, 2007, B.S., P.T., University of Montana, 1993

Brenda Mahlum, D.P.T., Rocky Mountain University of Health Professions, 2006; P.T., University of North Carolina, 1984

Mary Coar, D.P.T. The University of Montana, 2011; B.S., P.T., CSU-Northridge, 1993

Jaclyn Carson, D.P.T., The University of Montana, 2010, B.S. The University of Montana, 2005

Molly Blair, B.S., University of Montana, 2002

## Pre-Medical Sciences

**Mark A. Pershouse (Director and Associate Professor)**

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, osteopathic medicine, chiropractic medicine, dentistry, naturopathic medicine, optometry, physician assistant studies, podiatry and veterinary medicine.

Pre-Medical Sciences is not a major at the University of Montana. 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 communication 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 and from the Pre-Medical Sciences website (<http://umt.edu/premed>). Because many majors within the sciences, social sciences and humanities can provide strong preparation for medical school, the Pre-Medical Sciences Advising Program gives students the opportunity to interact with advisors from diverse disciplines 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.

Admission to a professional school is very competitive. Students must maintain a high 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 third year of study.

Besides academic accomplishments and admission exam scores, acceptance by a professional school is also dependent upon letters of recommendation, volunteer experience, job shadowing, 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 a solid background in literature and social science.

## School of Public and Community Health Sciences

- . Special Degree Requirements
- . Courses

## Faculty

### Craig Molgaard, Professor and Chair

Accredited by the Council on Education for Public Health (CEPH) in 2012, the School of Public and Community Health Sciences is a multi-disciplinary program that offers the Master of Public Health (M.P.H.) degree and a graduate Certificate of Public Health (C.P.H.). The program is designed to prepare public health practitioners who will use global insight to improve the health of the people of Montana and other rural areas. Predominantly on-line, web-based instruction allows both traditional students and working professionals to pursue a degree or certificate.

### 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 or PUBH 511 History and Theory of 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 511 History and Theory of Epidemiology
- . PUBH 512 Neuroepidemiology
- . PUBH 515 Public Health Genetics
- . PUBH 521 Leadership in Public Health
- . PUBH 525 Native American Public Health
- . 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

#### Public Health (PUBH) - Course Descriptions

R- before the course description 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.

510, 511, 512, 515, 520, 521, 525, 530, 535, 540, 550, 560, 570, 580, 591, 593, 595, 596, 597, 599

## Faculty

**Public Health Core Faculty**

Annjeanette Belcourt-Dittloff, Ph.D., The University of Montana, 2006 (Pharmacy Practice and School of Public and Community Health Sciences)

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)

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)

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)

Tony Ward, Ph.D., The University of Montana, 2001 (Biomedical and Pharmaceutical Sciences and School of Public and Community Health Sciences)

**MPH Program Faculty****Professors**

Jean T. Carter, Ph.D., The University of Arizona, 1997; Pharm.D., The University of Arizona, 1993 (Pharmacy Practice)

Janet L. Finn, Ph.D., University of Michigan, 1995 (Social Work and Anthropology)

Peter Koehn, Ph.D., University of Colorado, 1973 (Political Science)

Willard O. Granath, Ph.D., Wake Forest University, 1982 (Biological Sciences)

Jan LaBonty, Ph.D., University of Nebraska, 1987; M.Ed., Northern Montana College, 1983 (Curriculum and Instruction)

Kimber Haddix McKay, Ph.D., University of California at Davis, 1998 (Anthropology)

Gilbert Quintero, Ph.D., University of Arizona, 1998 (Anthropology)

Robin Saha, Ph.D., University of Michigan, 2002 (Environmental Studies)

Tom Seekins, Ph.D. University of Kansas, 1983 (Department of Psychology and the Rural Institute)

K. Ann Sondag, Ph.D., Southern Illinois, Carbondale, 1988 (Health and Human Performance)

Kay Unger, Ph.D., Johns Hopkins University, 1974 ( Department of Economics)

**Associate 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)

Elizabeth Putnam, Ph.D., University of Texas-Houston, 1989 (Biomedical and Pharmaceutical Sciences)

**Assistant Professors**

Ranjan Shrestha, Ph.D., Ohio State University, 2007 (Department of Economics)

**Adjunct Faculty**

Kathryn Fox, M.P.H., University of Montana, 2013, J.D. Indiana University School of Law, 2006

Julie Stevens, M.P.H., University of Montana, 2012

**Research Associate Professors**

Ann Cook, Ph.D., The University of Montana, 2001 (Research, Psychology)

Kathleen Humphries, Ph.D., The University of California at Davis, 1995 (Rural Institute)

Meg Ann Traci, Ph.D., The University of Montana, 2000 (Rural Institute)

Lawrence L. White, M.H.A., St. Louis University, 1970 (Western Montana Area Health Education Center and 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)

Marcia Ciol, Ph.D., University of Washington – Seattle, 1991; M.S. University of Washington – Seattle, 1987; M.S. Universidade Estadual de Campinas – Brazil, 1982; (Research Associate Professor, University of Washington – Seattle, Department of Rehabilitation Medicine)

Leslie Deck, M.P.A., The University of Montana, 2009; C.H.E.S., National Commission for Health Education Credentialing, 2004 (Program Coordinator, Tobacco Use Prevention, Flathead City-County Health Department, Health Promotion Specialist, Summit Medical Fitness Center)

John Felton, M.P.H., The University of Montana, 2010, M.B.A., University of Cincinnati, (Executive Vice President - Operations, RiverStone Health, Billings)

Lawrence Edward Frisch, 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 (Professor and Chair, Wichita State University, Department of Public Health Sciences) 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)

Billie Jo Kipp, Ph.D., University of Montana, 2005; M.A., University of Montana, 2000; (President, Blackfeet Community College)

Cindi Laukes, M.A., University of Iowa, 1990 (Clinical Research Director, Montana Neuroscience Institute, Clinical Research Manager, Montana Cancer Institute)

Joanne Oreskovich, Ph.D., University of Minnesota, 2001 (Director/Epidemiologist, Behavioral Risk Factor Surveillance System, Montana D.P.H.H.S.)

Lolem Ngong, M.P.H., University of Kansas School of Medicine-Wichita, 2001 (PEPFAR Country Coordinator for the Democratic Republic of Congo, USAID)

Greg Oliver, M.S., The University of Montana, 1989 (Director Health Promotion Division, Missoula City-County Health Department)

Angelia Paschal, Ph.D., Kent State University, 2003; M.Ed., University of Mississippi, 1992 (Associate Professor, University of Alabama at Tuscaloosa, Department of Health Science, University of Kansas School of Medicine-Wichita, Department of Preventive Medicine and Public Health)

Tom G. Schwann, Ph.D., University of California at Berkeley, 1983 (Chief and Senior Investigator, Laboratory of Zoonotic Pathogens, Rocky Mountain Laboratories, National Institute of Allergies and Infectious Diseases, National Institutes of Health.)

## 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, 135 S. LaSalle Street, Suite 4100, Chicago IL 60603-4810, telephone (312) 664-3575, (800) 533-3606; FAX (312) 664-4652; <http://www.acpe-accredit.org/>

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, pharmaceuticals, pharmacology, social and 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 administered 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 or residencies 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](http://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 three 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, students 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](http://www.health.umt.edu)). Applications must be post marked by February 15th 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.

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 (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.

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 (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.

- 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.
- 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

- 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.
- Only those students who have completed the first year of the professional pharmacy curriculum may begin their internship.
- 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.
- Many courses and programs currently offered by the School of Pharmacy are approved and applicable toward fulfilling the internship requirement.
- 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.

<b>Pre-Pharmacy First Year</b>	<b>A/S</b>	<b>Total Cr</b>
CHMY 141N, 143N (CHEM 161N, 162N) College Chemistry I, II	5/5	10
M 162 (MATH 150) Applied Calculus (prereq. M 151 (MATH 121) or appropriate placement score)	4	4
BIOH 112 (BIOL 112) Intro to Human Form and Function I	3/3	6
BIOH 113 (BIOL 113) Intro to Human Form and Function II		
WRIT 101 (ENEX 101) English Composition	3	3
<b>Pre-Pharmacy Second Year</b>		
BIOB 260 (BIOL 221) Cell/Molecular Bio	A/S	Total Cr
	4	4
CHMY 221, 222 (CHEM 221, 22) Organic Chemistry I, Organic Chemistry I Lab	3/2	5
CHMY 223 (CHEM 223) Organic Chemistry II	3	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3	3
PHSX 205N/206N (PHYS 111N-113N) Fundamental of Physics I & Lab	4,1	5
STAT 216 (MATH 241) Statistics (other acceptable courses for the Statistics requirement include PSYX 222 or SOCI 202)	4	4
<b>Either Year, any semester- Required</b>		
	<b>A/S</b>	<b>Total Cr</b>
PSYX 100S (PSYC 100S) or SOCI 101S (SOC 110S) Intro to Psychology or Sociology	4 or 3	3 or 3
THTR 120A (DRAM 111A) Introduction to Acting I or COMM 111A Public Speaking	3	3
<b>Either year, any semester - Recommended courses to fulfill UM General Education requirements</b>		
	<b>A/S</b>	<b>Total Cr</b>
ANTY 103H (ANTH 101H) Anthropology & the Human Experience or NASX 105H (NAS 100H) Intro to Native American Studies	3	3
LIT 110L (ENLT 120) Intro to Lit or LIT 120L (ENLT 121) Poetry	3	3

\* \*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.

<b>First Professional Year</b>		<b>A</b>	<b>S</b>
PHAR 381 (BMED 395) Pharmaceutical Biochemistry	4	-	
PHAR 328 (BMED 328) Antimicrobial Agents	-	3	
PHAR 331 (BMED 331) Pharmaceutics	-	4	
PHAR 341, 342 (BMED 341, 342) Physiological Systems I, II	4	4	
PHAR 361-362 (BMED 361-362) Pharmaceutical Sciences Lab	1	1	
BIOM 400 (MICB 302) Medical Microbiology	3	-	
PHAR 300 (PHAR 309) Introduction to Pharmacy Practice	3	-	
PHAR 310 Pharmacy Practice II	-	2	
PHAR 363 Pharmaceutical Care Lab I	-	1	
PHAR 371-372 Integrated Studies	1	1	
Total	16	16	
<b>Second Professional Year Autumn/Spring Intersession:</b>			
PHAR 480 Community Pharmacy Introductory Experience	-	3	
		<b>A</b>	<b>S</b>
PHAR 421 (BMED 421, 422) Medicinal Chemistry I, II	3	3	
PHAR 432 (BMED 432) Clinical Pharmacokinetics	3	-	
PHAR 443, 444 (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	
<b>Third Professional Year Autumn/Spring Intersession:</b>			
PHAR 481 Hospital Pharmacy Introductory Experience	-	3	
		<b>A</b>	<b>S</b>
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	
<b>Fourth Professional Year</b>			
		<b>A</b>	<b>S</b>
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

R- before the course description 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) - Course Descriptions

195, 300, 310, 320, 324, 363, 390, 391, 395, 412, 415, 451, 452, 460, 463, 471, 472, 480, 481, 490, 491, 505, 506, 513, 514E, 516, 550, 553, 554, 556, 557, 558, 560, 563, 571, 572, 573, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 593, 594, 595, 596, 597, 599, 603, 604

### Faculty

#### Professors

Douglas R. Allington, Pharm.D., University of South Carolina, 1988

Donna G. Beall, Pharm.D., University of Florida, 1984

Jean T. Carter, Ph.D., University of Arizona, 1997

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

Vincent J. Colucci, Pharm.D., Idaho State University, 1995

Kendra Procacci, Pharm.D., University of Wyoming, 2004

#### Assistant Professors

Annjeanette E. Belcourt-Dittloff, Ph.D., University of Montana, 2006

Katy Hale, Pharm.D., University of Washington, 2004

Kerry J. Haney, Pharm.D., The University of Montana, 2011

**Instructor**

Lisa Venuti, Pharm.D., The University of Montana, 2003

**Department of Biomedical and Pharmaceutical Sciences**

**Richard 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, Toxicology and Medical Chemistry; and the Ph.D. in Neuroscience, Biomedical Sciences, Toxicology, and Medical Chemistry. 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**

R- before the course description 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 (PHAR) - Course Descriptions**

110N, 145N, 191, 324, 328, 331, 341, 342, 347, 361, 362, 371, 372, 381, 390, 391, 401, 421, 422, 430, 432, 443, 444, 445, 495, 497

**Biomedical and Pharmaceutical Sciences (BMED) - Course Descriptions**

545, 581, 582, 583, 593, 594, 595, 596, 597, 599, 600, 605, 607, 609, 610, 613, 614, 615, 620, 621, 622, 623, 625, 626, 627, 630, 632, 635, 637, 641, 642, 643, 644, 645, 646, 647, 657, 661, 662, 667, 697, 699

**Faculty**

**Professors**

Howard D. Beall, Ph.D., University of Florida, 1991

Richard J. Bridges, Ph.D., Cornell University Medical College, 1987 (Chair)

Fernando Cardozo-Pelaez, Ph.D., University of Southern Florida, 1996

J. Douglas Coffin, Ph.D., State University of New York Health Sciences Center at Syracuse, 1989

John Gerdes, Ph.D., University of California, Riverside, 1982

Vernon R. Grund, Ph.D., University of Minnesota, 1974 (Associate Dean Planning and Development)

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**

Lilian Calderon-Garciduenas, M.D., Ph.D., University of North Carolina, 2001

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

Anthony Ward, Ph.D., The University of Montana, 2001

Erica L. Woodahl, Ph.D., University of Washington, 2004

#### Assistant Professors

J. Josh Lawrence, Ph.D., University of Wisconsin-Madison, 1999

Yoon Hee Cho, Ph.D., Seoul National University, 2006

#### Lecturer

David S. Freeman, Ph.D., University of Washington, 1974

#### Research Professor

Andrea Stierle, Ph.D., Montana State University, 1988

Donald Stierle, Ph.D., University of California-Riverside, 1978

David J. Poulsen, Ph.D., University of Delaware, 1995

#### Research Associate Professors

Dianne L. DeCamp, Ph.D., University of Delaware, 1988

Philippe Diaz, Ph.D., University Paul Cezanne, 1997

#### Research Assistant Professors

Celine Beamer, Ph.D., University of Montana, 2002

Michael Braden, Ph.D., Purdue University, 2007

Zeina Jaffar, Ph.D., University of College London, 1991

Christopher T. Migliaccio, Ph.D., University of California-Davis, 2000

Sarjubhai A. Patel, Ph.D., University of Montana, 2000

Thomas Rau, Ph.D., University of Montana, 2007

#### 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.

Forty credits in social work courses are required for the bachelor degree. The following courses must be successfully completed: SW 100, 200, 300, 310, 350, 360, 400, 410, 487, 488, and 10 credits in SW 495 over two semesters.

Requirements for the bachelor 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 or 201S or 202S (ECON 100S, 111S, 112S) ; PSCI 210S (PSC 100S); SOCI 101S (SOC 110S); PSYX 100S, 230S, 233 (PSYC 100S, 240S, 245); BIOB 101N (BIOL 100N) or PSYX 250N (PSYC 270N); ANTY 122S (ANTH 180S) or SOCI 220S (SOC 220S) or GPHY 121S (GEOG 101S). No fewer than five 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 2.75 grade point average for all college course work. To ensure 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 495 section 01 and 02, Field Work Practicum, 5 credits each semester). Refer to the SW 495 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 300 and 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.

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 Student Handbook, available from the school or on web page <http://socialwork.health.umt.edu/content/student-handbook>

Majors in social work are assigned a faculty advisor who they are required to meet with 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.html](http://www.health.umt.edu/sw/default.html)]. The Master of Social Work requirements are detailed in The University of Montana Graduate online Catalog [[www.umt.edu/grad/](http://www.umt.edu/grad/)].

### Suggested Course of Study

	First Year	A	S
PSCI 210S (PSC 100S) Introduction to American Government		-	3
PSYX 100S (PSYC 100S) Introduction to Psychology		4	-
SOCI 101S (SOC 110S) Introduction of Sociology		-	3
SW 100 Introduction to Social Welfare		3	-
General Education		9	9
Total		16	15
	Second Year	A	S
SW 200 Introduction to Social Work Practice		4	-
BIOB 101N (BIOL 100N) Discover Biology		-	3
ECNS 101S or 201S or 202S (ECON 100S, 111S, 112S) Economic Way of Thinking		3	-
PSYX 230S (PSYC 240S) Developmental Psychology		-	3
PSYX 233 (PSYC 245) Fund of Psychology of Aging		-	3

ANTY 122S (ANTH 180S) Race and Minorities or SOCI 220S (SOC 220S) Race, Gender & Class or GPHY 121S (GEOG 101S) Human Geography	3	-
General Education	6	6
Total	16	15
<b>Third Year</b>		
SW 300 Human Behavior and Social Environment	3	-
SW 310 Social Welfare Policy and Services	-	4
SW 350, 360 Social Work Intervention Methods I, II	3	3
Electives	6	9
Total	14	16
<b>Fourth Year</b>		
SW 400 Social Work Research	3	-
SW 410 Social Work Ethics	-	3
SW 487, SW 488 Advanced Practice I, II	2	2
SW 495 Practicum I & II	5	5
Electives	5	5
Total	15	15

### 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

#### Social Work (S W) - Course Descriptions

R- before the course description 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.

100, 195, 198, 200, 295, 300, 310, 323, 324, 350, 360, 395, 398, 400, 410E, 420S, 423, 430, 434, 440, 450, 455S, 460, 465, 470, 475, 485, 487, 488, 489, 494, 495, 496, 500, 505, 510, 511, 515, 520, 521, 525, 530, 531, 535, 545, 550, 551, 552, 553, 554, 555, 576, 577, 578, 579, 586, 587, 588, 589, 593, 594, 595, 596, 597

### Faculty

#### Professors

Cynthia Garthwait, M.S.S.W., University of Wisconsin, Madison, 1974

Janet Finn, Ph.D., University of Michigan, 1995

#### Associate Professors

Jim Caringi, Ph.D., University of New York, 2007

Timothy Conley, Ph.D., Boston College, 2001

Mary-Ann Sontag Bowman, Ph.D., University of California Berkeley, 1993

Ryan Tolleson Knee, Ph.D., University of Denver, 1999 (Chair)

#### Instructor

Bart Klika, M.S.W., University of Chicago, 2008



**Adjunct Assistant Professors**

Tondy Baumgartner, M.S.W., Walla Walla College, 1998

Kerrie Ghenie, M.S.W., Walla Walla College, 2000

Charlie Wellenstein, M.S.W., Eastern Washington University, 1991

**Emeritus Professors**

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

## Department of Communicative Science and Disorders

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

**Lucy Hart Paulson, Chair**

The Bachelor of Arts Degree in Communicative Sciences and Disorders prepares students for graduate study in speech-language pathology, audiology, various education specialties, business, and health care as well as such fields as developmental and cognitive psychology. The Master of Science degree provides students with the foundational knowledge and clinical skills in the field of speech language pathology to work in medical and educational settings with clients across the life span.

**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 BA degree in Communicative Sciences and Disorders, the student must successfully complete 1) 42 total CSD credits (with 30 of those credits in courses numbered 300 or above); 2) complete all out of department required courses (see below); 3) the University of Montana general education requirements (GER) and 4) 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 cr.
- . CSD U 210 - Speech and Language Development 3 cr.
- . CSD U 221N - Fundamentals of Acoustics: Applications in Speech, Hearing & Language 3 cr.
- . CSD U 222 - Introduction to Audiology 3 cr.
- . CSD U 320 - Phonological Development and Phonetics 3 cr.
- . BIOH U 330 (CSD 330) - Anatomy and Physiology of the Speech and Hearing Mechanisms 3 cr.
- . CSD U 340 - Speech Disorders 3 cr.
- . CSD U 360 - Language Disorders 3 cr.
- . CSD U 405 - Clinical Process 3 cr.
- . CSD U 411 - Neuroanatomy and Physiology for Communication 3 cr.
- . CSD U 420 - Speech Science 3 cr.
- . CSD U 430 - Senior Capstone I 3 cr.
- . CSD U 440 - Senior Capstone II 3 cr.
- . CSD UG 450 - Introduction to Aural Rehabilitation 3 cr.

**Out of Department required courses (19-20 crs.)**

- . Biological Science i.e. BIOB 101N (BIOL 100N) Discovery Biology or BIOB 160N (BIOL 110N) Principles of Living Systems 3-4 cr.
- . Physical Science (i.e. ASTR 131N - Elementary Astronomy I, CHMY 121N & 122 (CHEM 151N & 153) - Introduction to General Chemistry and Lab, GEO 101N (GEOS 100N) Introduction to Physical Geology 3-4 cr.
- . LING 270S - Introduction to Linguistics 3 cr.
- . STAT 216 (MATH 241) - Introduction to Statistics or PSYX 222 (PSYC 220) - Psychological Statistics or SOCI 202 (SOC 202) - Social

Statistics 3 cr.

PSYX 100S (PSYC100S) - Introduction to Psychology 4 cr.

PSYX 120 (PSYC 120) - Research Methods I 3 cr.

PSYX 230S (PSYC 240S) - Developmental Psychology or PSYX 233 (PSYC 245) Fundamentals of Psychology of Aging 3 cr.

**Elective courses within Department:**

CSD U 131 - American Sign Language I 3 cr.

CSD U 132 - American Sign Language II 3 cr.

CSD UG 480 - Multicultural Issues in Speech, Language and Hearing 3 cr.

CSD U 491 (CSD 495) - Special Topics 3 cr.

CSD U 495 (CSD 490) - Practicum 3 cr.

CSD U 498 (CSD 497) - Independent Research 3 cr.

**Suggested Course of Study**

	<b>First Year</b>	<b>A S</b>
CSD 110 The Field of CSD		3 -
PSYX 100S (PSYC100S) Introduction to Psychology		- 4
M 115 (MATH 117) Probability and Linear Math		- 3
WRIT 101 (ENEX 101) College Writing I		3 -
LING 270 Introduction to Linguistics		- 3
BIOB 101N (BIOL 100N) Discovery Biology or BIOB 160N (BIOL 110N) Principles of Living Systems		3 -
General Education/Electives		6 6
<b>Total Credits</b>		<b>15 16</b>
	<b>Second Year</b>	
BIOH 330 (CSD 330) Anat & Phys Speech Mech		3 -
CSD 210 Speech & Language Development		3 -
CSD 221N Foundations of Acoustics		- 3
CSD 222 Introduction to Audiology		3 -
PSYX 230S (PSYC 240S) Developmental Psychology or PSCX 233 (PSYC 245) Fundamentals of Psychology of Aging		3 -
PSYX 120 (PSYC 120) Research Methods I		- 3
General Education/Electives		3 9
<b>Total Credits</b>		<b>15 15</b>
	<b>Third Year</b>	
STAT 216 (MATH 241) Introduction to Statistics or PSYX 222 (PSYC 220) Psychological Statistics or SOCI 202 (SOC 202) Social Statistics		4 -
CSD 320 Phonological Development & Phonetics		3 -
CSD 340 Speech Disorders		- 3
CSD 360 Language Disorders		- 3
General Education/Electives (Students must complete 9 total upper-division credits outside of the CSD major)		9 9
<b>Total Credits</b>		<b>16 15</b>
	<b>Fourth Year</b>	
CSD 405 The Clinical Process		- 3
CSD 411 Neuroanatomy & Physiology for Communication		- 3
CSD 420 Speech Science		- 3
CSD 430 Senior Capstone I		3 -
CSD 440 Senior Capstone II		- 3
CSD 450 Introduction to Aural Rehabilitation		- 3
CSD 480 Multicultural Issues in Speech Language and Hearing		3 -
Electives (Students must complete 9 total upper-division elective credits)		9 -
<b>Total Credits</b>		<b>15 15</b>

**Courses**

R- before the course description 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) - Course Descriptions**

110, 131, 132, 210, 221N, 222, 320, 340, 350, 360, 370, 405, 411, 420, 430, 440, 450, 470, 480, 491, 495, 498, 520, 525, 526, 530, 540, 545, 550, 560, 563, 565, 566, 570, 575, 600, 610, 640, 675, 691, 696, 698, 699

**Faculty**

**Academic and Clinical Faculty**

Ginger C. Collins, Ph.D., CCC-SLP (Louisiana State University, 2011)

Amy Glaspey, Ph.D., CCC-SLP (The University of Washington, 2006)

Lucy Hart Paulson, Ed.D., CCC-SLP (The University of Montana, 2004) (Chair)

Anne Kennedy, M.S., CCC-SLP (University of Iowa, 1998)

Christine Merriman, M.A., CCC-SLP (The University of Montana, 1979) (Clinical Director)

Catherine Off, Ph.D., CCC-SLP (University of Washington, 2008)

Jennifer Schoffer Closson, M.S., CCC-SLP (Minot State University, 1999)

Laurie Slovarg, M.S., CCC-SLP (Arizona State University, 2000)

Yonovitz, AI, Ph.D., CCC-A. MAudSA (CCP) (University of Connecticut, 1973)

## 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 practitioners, consultants, 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. We offer a School Counseling M.A., a Mental Health Counseling M.A., and an Interdisciplinary 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.

The Department of Counselor Education is also the academic home for an interdisciplinary masters degree in Intercultural Youth and Family Development. Students in this program are prepared for humanitarian and advocacy work, focusing specifically on youth and family development across cultures. Requirements include one year of campus-based course work and an approved internship of at least two semesters duration working with youth and family concerns. IYFD is a Peace Corps Master's International program, and the expectation therefore is that students will complete the Internship requirement by serving as U.S. Peace Corps Volunteers abroad. For further information and course listings, click on the IYFD link:

<http://coehs.umt.edu/departments/counseld/IYFD/default.php>

**Graduate Programs:**The M.A., Ed.S., and Ed.D. are offered in Counselor Education. An interdisciplinary M.A. is offered in Intercultural Youth and Family Development. Information regarding specific requirements and program options is available from the Phyllis J. Washington College of Education and Human Sciences. 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

**Counselor Education (COUN) - Course Descriptions**

242, 395, 475, 485, 495, 510, 511, 512, 520, 530, 540, 550, 560, 565, 566, 570, 575, 580, 585, 589, 594, 595, 596, 597, 610, 615, 625, 633, 685, 699

R- before the course description 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.

### Faculty

**Professors**

Catherine Jenni, Ph.D., Saybrook Institute, 1990

Rita Sommers-Flanagan, Ph.D., The University of Montana, 1989 (Chair)

John Sommers-Flanagan, Ph.D., The University of Montana, 1986

**Assistant Professor**

Kirsten W. Murray, Ph.D., Idaho State University, 2007

Lindsey Nichols, Ph.D.

**Adjunct Professors**

Kim Brown Cambell, Ed.D., The University of Montana, 2012

Renee Schoening, Ed.D., The University of Montana, 2005

Mike Frost, M.A., The University of Montana, 2013

Gary Hawk, M. Div.

Sidney Shaw, M.A.

**Department of Curriculum and Instruction**

- . Elementary Education Requirements
- . Secondary Licensure Requirements
- . Courses
- . Faculty

**Georgia Cobbs, Chair**

The Department of Curriculum and Instruction offers the Bachelor of Arts degree in elementary education and teaching licensure in elementary education. The department also offers teaching licensure at both the secondary and K-12 levels for students who are earning or have already completed the baccalaureate degree (teaching major or teaching minor) in one of the following state-approved content areas: Art, Biology, Business and Information Technology Education, Chemistry, Earth Science, Economics, English, English as a Second Language, French, General Science Broadfield Major, Geography, German, Government, Health and Human Performance, History, Latin, Library Media, Mathematics, Music, Physics, Psychology, Reading, Russian, Social Studies Broadfield, Sociology, Spanish, Special Education, and Theatre. (See specific requirements for each in the following pages.) At the graduate level, the department offers master and doctoral degrees in Curriculum and Instruction. Programs across all degree levels are organized to foster the development of learning communities and incorporate three essential themes: integration of ideas; cooperative endeavors; and respect for diversity and individual worth. The Web address for the Department of Curriculum and Instruction is <http://coehs.umt.edu/departments/currinst/default.php>.

**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, library media services, literacy education, and special education. Students may earn the master's degree in combination with requirements for initial teacher licensure at the elementary and secondary levels. This option is further explained below. The department also offers 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:<http://coehs.umt.edu/departments/currinst/masterofed/default.php>.

**Teacher Preparation****Elementary Education**

Individuals preparing to teach in elementary schools (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 in the College of Education and Human Sciences. All pre-education and elementary education majors are advised by fulltime advisors 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 previously. 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.coehs.umt.edu/>

#### Master's Degree and Initial Licensure

Individuals who have completed a degree may elect to apply to the department's Graduate Program and combine the master's 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.

#### Technology in Education

Grades K-12. Area of Permissive Special Competency only. This minor leads to an area of permissive special competency in technology in education for those attaining or holding a Montana teaching license. It does not qualify as a teaching endorsement in Montana.

- . C&I 515 Computer & Other Technological Apps in Education 3 cr.
- . C&I 570 Instruction Technology Foundations 3 cr.
- . C&I 571 Planning, Preparing and Assessing Educ Tech Media 3 cr.
- . C&I 580 Distance Learning Theory and Implementation 3 cr.
- . C&I 581 Planning & Mgmt for Tech in Education 3 cr.
- . C&I 582 Educational Technology: Trends and Issues 3 cr.
- . C&I 584 Authentic App in Instructional Design for Tech 3 cr.
- . Total 21 cr.

Equivalent courses from MSU-Bozeman, MSU-Billings and MSU-Northern may substitute for C&I 515, 570, 571, 580, 581, 582 and 584. Please consult an advisor for approved courses.

#### 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;
- . completed an English composition course (WRIT 101) with a grade of C- or better in each;
- . 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;
- . presented results of a national fingerprint-based background check; and
- . demonstrated appropriate professional behaviors and dispositions associated with success in the profession in a small group interview process.

The Teacher Education Program Admission Application packet includes a policy and procedures handbook and can be downloaded from the website: <http://coehs.umt.edu/departments/currinst/forms.php>.

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 apply for readmission to both the University and the Teacher Education Program.

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 master's 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 fingerprint-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, student should be enrolled in the Professional Methods Block, and have completed all coursework in all previous levels.
- . 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 on the Field Experiences website at <http://coehs.umt.edu/tes/fieldexp/default.php>.

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 Education Program at the University of Montana will be able to:

- . demonstrate knowledge of the disciplines and subject matter related to curriculum;
- . 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;
- . design and organize learning environments to accommodate learners;
- . communicate clearly, accurately and professionally with students and their families, colleagues, and community members;
- . reflect on professional practices and demonstrate commitment to fairness and the ability of all to learn.

### 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 or 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 ANTY 323X (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 120 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 EDUC 397 (C&I 318). Majors must pass the Writing Proficiency Assessment prior to enrolling in EDUC 397 (C&I 318).

\*Courses for each Level are co-requisites; they must be taken concurrently.

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.

### Curriculum for Elementary Education

#### First and Second Years Credits

WRIT 101 (ENEX 101) College Writing I	3
SCI 225N, 226N General Science; Physical and Chemical, Earth and Life	10
HEE 233 (HHP 233) Health Issues of Children and Adolescents	3
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
ARTZ 302A (ART 314A) Elementary School Art	3
THTR 239 Creative Drama/Dance K-8	2
HEE 302 (HHP 339) Instructional Strategies in Elementary Health and Physical Education	3
MUSE 397 (MUS 335) Methods: K-8 Music	3
Selected history course (HSTA 101 or 102 (HIST 151 or 152) recommended)	3-4
Selected literature course ("L" designated writing course)	3-4
Native American Studies course	3
EDU 331 (C&I 316) Literature and Literacy for Children	3
Current Standard First Aid and CPR certificates or HHP 288/289	0-3
Electives and General Education	4-6

#### Third and Fourth Years

\*Level 1: Learning & Instruction:

EDU 222 Educational Psychology and Child Development	3
EDU 338 Academic Interventions	3
EDU 395 Clinical Experience: Learning & Instruction	1
EDU 397 Methods: Teaching and Assessing K-4 Early Numeracy	3
EDU 397 Methods: Teaching and Assessing PK-3 Early Reading	3

\*Level 2: Critical Thinking & Problem Solving:

EDU 395 Clinical Experience L2: Critical Thinking & Problem Solving	1
EDU 346 Exceptionalities	3
EDU 397 Methods: Teaching & Assessing PK-8 Language Arts	3
SCI 350 Environmental Perspectives	2
EDU 407 Ethics and Policy Issues	3
EDU 370 Integrating Technology into Education	3

\*Level 3: Pedagogy and Content Knowledge

EDU 495 Clinical Experience L3: Pedagogy and Content Knowledge	1
EDU 340 Classroom Management	3
EDU 497 Methods: Teaching & Assessing 5-8 Mathematics	3
EDU 497 Methods: Teaching & Assessing K-8 Social Studies	3
EDU 497 Methods: Teaching & Assessing K-8 Science	3
EDU 497 Methods: Teaching & Assessing 4-8 Reading	3

\*Level 4: Student Teaching

EDU 495 Student Teaching	14
EDU 491 Seminar: Reflective Practice and Applied Research	1

### 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 must also 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 another teaching major or 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

<b>First and Second Years</b>	<b>Credits</b>
WRIT 101 (ENEX 101) College Writing I	3
HEE 233 (HHP 233) Health Issues of Children and Adolescents	3
Current Standard First Aid and CPR certificates	0
Native American Studies course	3
Electives, General Education and/or Courses in Major and/or Minor Teaching Field(s)	Variable
<b>Third and Fourth Years</b>	
EDU 202 (C&I 200) Early Field Experience	1
EDU 221 (C&I 303) Educational Psychology and Measurements	3
EDU 345 (C&I 410) Exceptionality and Classroom Management	3
EDU 370 Integrating Technology into Education	3
EDU 395 (C&I 301 or 302) Field Experience: Grades 5-8 or 9-12 (coreq with content area methods course)	1
Teaching field(s) methods course(s)	Variable
EDU 407E (C&I 407E) Ethics and Policy Issues	3
EDU 481 Content Area Literacy	3
EDU 495 (C&I 482) Student Teaching: 5-12	14
EDU 494 (C&I 494) Professional Portfolio	1

**Licensure in Library Media:** The library media program is designed to prepare library media specialists for K-12 settings. This online 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 25-27 credits in the following required courses: EDU 331, 432 (C&I 316, 470), LIBM 463, 464, 465, 466, 468, 491 and LIBM 461 offered through UM-Western. C&I graduate courses may substitute for EDU 331, 432, and LIBM 464.

**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 endorsement. The program follows the philosophy of the International Reading Association. The undergraduate reading minor requires the following courses: EDU 331, 432, 397, 497, 481, 438, 441, 456 (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, EDU 438 (C&I 433), C&I 453, 457, 459, 463, 469. Candidates complete EDU 345 (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:

	<b>Credits</b>
EDU 331 (C&I 316) Lit & Literacy for Children	3
EDU 432 (C&I 470) Lit & Literacy for Young Adults	3
LIBM 464 (C&I 479) Reference Resources	3
LIBM 463 (C&I 480) Library Collection Development	3
LIBM 465 (C&I 483) Library Media Technical Processes	3
LIBM 468 (C&I 484) Administration and Assessment of Library Media Programs	3
LIBM 495 (C&I 485) Library Media Practicum	3
LIBM 466 (C&I 488) Libraries and Technology	3
LIBM 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:

	<b>Credits</b>
ACTG 201 (ACCT 201) Financial Accounting	3
BGEN 235 (BADM 257) Business Law	3
C&I 287 Business Communications	3
C&I 341 Information Systems and Design	3



EDU 472 (C&I 444) Advanced Technology and Supervision	3
CSCI 172 (CS 172) Introduction to Computer Modeling	3
ECNS 201S (ECON 111S) Principles of Microeconomics	3
M 115 (MATH 117) Probability and Linear Math	3
BMGT 340S (MGMT 340S) Management and Organizational Behavior	3
Total Credits	27

#### Course Requirements for Major and Minor Teaching Fields

In accordance with Administrative Rules of the Montana Office of Public Instruction which were in effect when this catalog was printed, individuals seeking secondary licensure must complete requirements for a single-field teaching major (40 or more credits depending on the field) or a teaching major (30 or more credits depending on the field) and a teaching minor (20 or more credits depending on the field). In the event that the Montana Office of Public Instruction changes program standards for major or minor teaching fields, the University reserves the right to modify the requirements listed.

#### 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 School 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.
ARTZ 105A (ART 101A) Visual Language: Drawing	3
ARTZ 106A (ART 102A) Visual Language: 2-D Fndtns	3
ARTZ 108A (ART 103A) Visual Language: 3-D Fndtns	3
ARTH 200H-201H (ART 150H-151H) Art of World Civilization I, II	6
ARTH 250L (ART 203L) Introduction to Art Criticism	3
ARTZ 284A (ART 215) Photography I - Techs and Processes	3
ARTZ 211A (ART 223) Drawing I	3
ARTZ 231A (ART 229A) Ceramics I	3
ARTZ 271A (ART 233A) Printmaking I	3
ARTZ 251A (ART 235) Sculpture I	3
ARTZ 221A (ART 240A) Painting I	3
ARTZ 402-403 (ART 407-408) Teaching Art K-12 I, II (coreq EDU 395 (C&I 301 or 302))	6
DANC 497 (DAN 427) Methods: Teaching Movement in Schools	3
ARTZ upper-division studio courses	12
ARTH upper-division art history courses	6
ARTH 350 Contemporary Art and 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.
BIOB 170N-171N (BIOL 108N-109N) Principles Biological Diversity & Lab	5	5
BIOB 160N (BIOL 110N) Principles of Living Systems	4	4
BIOB 260 (BIOL 221) Cellular and Molecular Biology	4	4
BIOB 272 (BIOL 223) Genetics and Evolution	4	4
BIOB 301 (BIOL 301) Developmental Biology or BIOL 435 Comparative Animal Physiology	3	-
BIOE 370-371 (BIOL 340-341) General Ecology and Laboratory	5	-
BIOO 433/434 (BIOL 444-445) Plant Physiology and Laboratory	4	-
BIOM 360-361 (MICB 300-301) General Microbiology and Laboratory	5	5
EDU 497 (C&I 426) Methods: 5-12 Science (coreq (EDU 395 (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 (CHEM 485) Laboratory Safety	1	1
PHSX 205N-206N (PHYS 111N-113N) College Physics I/Lab	5	-