

2010-2011 Course Catalog

The University Of Montana

Department of Curriculum and Instruction

- [Elementary Education Requirements](#)
- [Secondary Licensure Requirements](#)
- [Courses](#)
- [Faculty](#)

Trent Atkins, 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, 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, Spanish, and Theatre. (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.coehs.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.coehs.umt.edu/currinst/master/default.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 Sciences. 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 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/>

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 fingerprint-based background check.

The Teacher Education Program 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.coehs.umt.edu/formspage.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 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 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 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, 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, DANC 346 (DAN 327), THTR 339 (DRAM 327), HHP 339, and MUSE 397 (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 Field Experiences website at <http://www.coehs.umt.edu/fieldexp/stuteaching/default.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 Education 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 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 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
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
"I" 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
SCI 350 Environmental Perspectives	2
ART 314A Elementary School Art	3
DANC 346 (DAN 327) Methods: Dance in K-8	2
THTR 339 (DRAM 327) Drama in Elementary Education	2
HHP 339 Instructional Strategies in Elementary Health and Physical Education	3
MUSE 397 (MUS 335) Methods: K-8 Music	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 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

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 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 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 endorsement. 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

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.

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 233 Printmaking I	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
DANC 497 (DAN 427) Methods: Teaching Movement in Schools	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.

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 275 (BIOL 223) General Genetics	4	4
BIOB 301 (BIOL 301) Developmental Biology or BIOL 345 Principles of Physiology	3	-
BIOE 370-371 (BIOL 340-341) General Ecology and Laboratory	5	5
BIOO 433 (BIOL 444-445) Plant Physiology	3	-
BIOM 360-361 (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 (CHEM 485) Laboratory Safety	1	1
PHSX 205N-206N (PHYS 111N-113N) College Physics I/Lab	5	-
GEO 301 (GEOS 301) Environmental Geology	3	3
Total Credits	62	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 one of the following: accounting, finance, management, management information systems, or marketing. They also must complete the business and information technology education coursework. The course list below illustrates the management information systems option. 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)	3		3	
Financial Accounting				
ACTG 202 (ACCT 202)	3		-	
Managerial Accounting				
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		-	
CSCI 172 (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	-
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 (CHEM 101) Chemistry for the Consumer	-	3
CHMY 141N & 143N (CHEM 161N-162N) College Chemistry and Laboratory	10	10
CHMY 221-222-223 (CHEM 221-222-223) Organic Chemistry and Laboratory	-	8
CHMY 221, 222, 223, 225 (CHEM 221, 222, 223, 264) (or 224 in place of 225 (CHEM 264)) Organic Chemistry and Lab	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 & Spctrscopy & 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 (CHEM 485) Laboratory Safety	1	1
CHMY 494 (CHEM 494) Seminar/Workshop	1	-
BCH 380 (BIOC 380) Biochemistry	4	4

CSCI 172 (CS 172) Intro to 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
PHSX 215N-216N-217N-218N (PHYS 211N-213-212N-214N) Fundamentals of Physics with Calculus I & II & Labs	10	-
PHSX 205N-206N-207N-208N (PHYS 111N-113N-112N-114N) College 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	59-60

A chemistry major qualifies as a single-field endorsement.

Although not required, it is recommended that students complete a second teaching major or minor.

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 (GEOS 105N) Oceanography	2
GEO 231 (GEOS 230) Geosciences Field Methods	3

GEO 226 (GEOS 226) Rocks, Minerals & Resources	4
GEO 301 (GEOS 301) Environmental Geology	3
GEO 310 (GEOS 310) Invertebrate Paleontology	3
GEO 315 (GEOS 330) Structural Geology	3
GEO (GEOS) - any course numbered 100 or above	3
GEO (GEOS) - 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
CSCI 172 (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
BIOE 172N (BIOL 121N-122N) Introductory Ecology or CHMY 121N-123N (CHEM 151N-152N) Intro to General Chemistry & Intro to Organic & Biochem or PHSX 205N-206N-207N-208N (Phys 111N-113N-112N-114N) College Physics I & II /Lab	4-10
CHMY 485 (CHEM 485) Laboratory Safety	1
Total Credits	64-67

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 301 (ECON 311) Intermediate Microeconomics with Calculus	3	3
ECNS 302 (ECON 313) Intermediate Macroeconomics	3	3
ECNS 403 (ECON 460) Introduction to Econometrics	4	-
Economics electives 300-level or above	14	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	50-51	21

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: Victorian to Contemp, LIT 210L (ENLT 224L) American Lit I, LIT 211L (ENLT 225L) American 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 (ENLT) course with an American literature focus	3	3
One 300-level LIT (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 FRCH 400 (FREN 401) 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 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		-
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
BIOB 170N-171N (BIOL 108N-109N) Principles Biological Diversity and Laboratory	5
BIOB 160N (BIOL 110N) Principles of Living Systems	4
BIOE 260 (BIOL 221) Cellular and Molecular Biology	4
BIOB 275 (BIOL 223) General Genetics	4
BIOE 370-371 (BIOL 340-341) General 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 (CHEM 485) Laboratory Safety	1
GEO 101N-102N (GEOS 100N-101N) Intro to Physical Geology and Laboratory	3
GEO 301 (GEOS 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
PHSX 205N-206N-207N-208N (PHYS 111N-113N-112N-114N) College Physics I & II & Labs or PHSX 215N-216N-217N-218N (PHYS 211N-213-212N-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 Physical Geography	1	1
GPHY 141S (GEOG 103S) Geography of World Regions or another regional course	3	3
GPHY 385 (GEOG 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	3	3

and Secondary School
(coreq. C&I 301 or 302)

Electives (minimum of 36 geography credits is required)	10-12	-
Total Credits	39-40	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.

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 Basic Exercise Prescription	2
HHP 233 Health Issues of Children and Adolescents	3
HHP 236 Nutrition	3
HHP 240-241 Prevention and Care of Athletic Injuries and Lab	3

HHP 288-289 First Aid/Emergency Care 0-3 and Laboratory	
HHP 301 Instructional Strategies in Secondary Physical Education (coreq. C&I 301 or 302)	3
HHP339 Instructional Strategies in Elementary Physical Education (coreq. C&I 301 or 302)	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 Control and Learning	3
HHP 465 Leading HHP Organizations	3
HHP 466 Strategies in K-12 Health Education	3
HHP 475E Legal and Ethical Issues in the Health and Exercise Profession	3
BIOM 250N (BIOL 106N) Microbiology for Health Sciences	3
BIOE 172N (BIOL 121N) Introductory Ecology or SCI 350 Environmental Perspectives	2-3
CHMY 121N (CHEM 151N) Intro to General Chemistry	3
COMM 111A Introduction to Public Speaking	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	73-76

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 (HIST 104H or 105H) Western Civilization	4	4
HSTA 101H-102H (HIST 151H-152H) American History I & II	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.
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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; PHL 261Y, 465, 466 (PHIL 251H, 461, 463); RLST 312 (RELS 312)RELS ??311	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	62	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 Literacy	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 429 (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.

MUSI 102A (MUS 100A) Performance Study	2
MUSI 195-295-395 (MUS 151-251-351) Applied Study I, II, III	5
MUSI 112A/312-108A/308-155A/355- 122A/123A, 162A, 267A, 322, 323, 362, 467, MUST 227, 467 (MUS 107A/307A- 108A/308A-104A/304A-110A/310A -150A/350) Ensembles	7
MUSI 105-106 (MUS 111-112) Theory I, 4 II	4
MUSI 135A-136A (MUS 115A-116A) Keyboard Skills I, II	2
MUSE 123 (MUS 117A) Techniques: Voice	1
MUSE 120-127 (MUS 124-131) Techniques: String Inst in Class I, Techniques: Flute & Single Reed	8

MUSI 202L (MUS 135L) Introduction to Music Literature	3
MUSI 140-141 (MUS 137-138) Aural Perception I, II	4
MUSI 205-206 (MUS 211-212) Theory III, IV	4
MUSI 235-236 (MUS 215-216) Keyboard Skills III, IV	2
MUSI 296 (MUS 219) Piano Proficiency Assessment	0
MUSI 296 (MUS 220) Upper-Division Required Performance	0
MUSI 240-241 (MUS 237-238) Aural Perception III, IV	4
MUSI 335 (MUS 302) Instrumental Conducting	2
MUSI 336 (MUS 303) Choral Conducting	2
MUSE 497 (MUS 305) Methods: Instrumental & Lit	2
MUSE 497 (MUS 306) Methods: Choral & Lit	2
MUSI 301H-302H (MUS 324H-325H) History of Music I, II	6
MUSE 333-334 (MUS 322-323) General Music Methods and Materials I, II (coreq. C&I 301 or 302)	6
MUSI 388 (MUS 388) Concert Attendance	0
MUSI 440 (MUS 428) Orchestration	2
Music 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.

PHSX 205N-206N-207N-208N (PHYS 111N-113N-112N-114N) College of Physics I & II & Labs and PHSX 215N-216N-217N-218N (PHYS 211N-213-212N-214N) Fundamentals of Physics with Calculus I & II & Labs	10	10
PHSX 301 (PHYS 301) Intro Theoretical Physics	3	-
PHSX 327 (PHYS 325) Optics	3	3
PHSX 330 (PHYS 330) Communicating Physics	3	3
PHSX 343 (PHYS 341) Modern Physics	3	3
PHSX 320 (PHYS 375) Classical Mechanics	3	3
PHSX 423 (PHYS 414) Electricity & Magnetism I	3	-
PHSX 461 (PHYS 461) Quantum Mechanics I	3	-
PHSX 499 (PHYS 480) Senior Capstone Seminar	1	-
Electives-courses in physics	3	-
ASTR 131N-132N Elementary Astronomy (minors choose one)	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
CSCI 100 (CS 101) Intro to Programming or CSCI 135 (CS	3	3

131) Fundamentals of Computer Science I or CSCI 205 (CS 242) Programming Languages w/ C/C++		
C&I 426 Teaching Science in Middle and Secondary Schools	3	-
CHMY 121N (CHEM 151N) Intro to General Chemistry	3	3
CHMY 485 (CHEM 485) Laboratory Safety	1	1
BIOB 160N (BIOL 110N) Principles of Living Systems or BIOB 170N (BIOL 108N) Principles Biological Diversity or BIOC 105N (BIOL 120N) Introduction to Botany or BIOE 172N (BIOL 121N) Introductory Ecology	4/3	4/3
GEO 101N-102N (GEOS 100N-101N) Intro to Physical Geology & Laboratory	3	-
GEO 301 (GEOS 301) Environ Geology or EVST 101 Environ Sci or SCI 350 Environ Perspect	2-3	-
Total Credits	77-80	53-55

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) 4 Introduction to Psychology		4
PSYX 120 (PSYC 120) 3 Introduction to Psychological Research		3
PSYX 222 (PSYC 220) 3 Psychological Statistics		-
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) 6 Fundamentals of Biological Psychology		-
At least four of the following for the major: 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) 12 Psychology of Personality		-
At least one of the following for the minor: PSYX 230S (PSYC 240S) Developmental 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 280S (PSYC 265S) Fundamentals of Memory & Cognition		
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

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/MCLG 105HY Intro Russian Culture	3	-
RUSS 301 Oral and Written Expression I	3	3
RUSS 302 Oral and Written Expression II	3	3

RUSS - one of 308, 312L, 313L (minors must take RUSS 312L)		3
RUSS upper-division electives	15	-
RUSS 494 Seminar in Russian	3	-
MCLG 410 Methods of Teaching Foreign Languages (prereq. to student teaching; coreq. C&I 301 or 302)	3	3
Total Credits	51	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 (HIST 104H or 105H) Western Civilization	4
HSTA 101H-102H (HIST 151H-152H) American History I & II	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.
SOCI 101S (SOC 110S) Introduction to Sociology	3	3
SOCI 202 (SOC 202) Social Statistics	3	-
SOCI 318 (SOC 201) Sociological Research Methods	3	3
SOCI 455 (SOC 455) Classical Social Theory	3	3
Four of the following, two must be numbered 300 or above:	12	-
SOCI 211S (SOC 230S) Criminology or 330S Juvenile Delinquency		
SOCI 220S (SOC 220S) Race, Gender and Class		

SOCI 270 (SOC 270)		
Introduction to Rural and Environmental Change		
SOCI 275S (SOC 275S)		
Gender and Society		
SOCI 306 (SOC 306S)		
Sociology of Work		
SOCI 308 (SOC 308)		
Sociology of Education		
SOCI 325 (SOC 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 Rual Sociology		
SOCI 350 (SOC 340) The Community		
SOCI 355 (SOC 355S)		
Population & Society		
SOCI 382 (SOC 350S)		
Social Psychology & Social Structure		
SOCI 470 Environmental Sociology		
SOCI 485 (SOC 485)		
Political Sociology		
Sociology electives	9	12
(minors must take at least six credits numbered 300 or above)		
C&I 428 Teaching Social Studies in Middle and Secondary Schools (coreq. C&I 301 or 302)	3	3
Total Credits	36	24

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 SPNS 301, 305, 400, 408 (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.

Theatre

Grades 5-12. Does not qualify as a single field endorsement.

For an endorsement in the major teaching field of Theatre, a student must complete the requirements for the B.A. with a major in Theatre, 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.

DANC 346 (DAN 327) Methods: Dance in K-8	2
THTR 102A (DRAM 103A) Introduction to Theatre Design	3
THTR 103 (DRAM 108) Introduction to House Management	1

THTR 106A (DRAM 106A) Theatre Production I: Running Crew	1
THTR 107A (DRAM 107A) Theatre Production I: Construction Crew	3
THTR 202 (DRAM 202) Stagecraft I	3
THTR 203 (DRAM 203) Stagecraft II	3
THTR 210 (DRAM 210) Voice and Speech I	2
THTR 220-221 (DRAM 214-215) Acting I, II	6
THTR 235L (DRAM 220L) Dramatic Literature I	3
THTR 249 (DRAM 244) Stage Makeup	2
THTR 330H-331H (DRAM 320H-321H) Theatre History I, II	6
THTR 339 (DRAM 327) Drama in Elementary Education	2
THTR 370 (DRAM 371) Stage Management I	2
THTR 375 (DRAM 379) Directing I	3
THTR 439 (DRAM 402) Methods of Teaching Theatre	2
THTR 499 (DRAM 499) Senior Project	1
Total Credits	45

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.

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., CSCI 172 (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., PSYX 100S (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/specialty 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 strong 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. 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 457 Assessment and Instruction for Exceptional Learners 5 cr. Offered autumn and even-numbered summers. Prereq. or coreq., C&I 453, admission to special education program. Understanding and using assessment information for educational decision making. Instructional models and strategies used in teaching students with learning and behavior problems. Includes field experience.

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. 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, DANC 346 (DAN 327), THTR 339 (DRAM 327), HHP 339, and MUSE 397 (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 emphasis 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 589 Professional Project 3 cr. Offered summers. Culminating course in online master's program. Students demonstrate connections across content areas through a mini-thesis, research-based product that is shared with other professionals through a publication and/or presentation at a conference or workshop.

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., SPSS-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
Darrell W. Stolle, Ed.D., University of Montana, 1998
Richard van den Pol, Ph.D., Western Michigan University, 1981

Associate Professors

Morgen Alwell, Ph.D., Colorado State University, 2004
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. Horejsi, Ph.D., Idaho State University, 1999
Matthew Schertz, Ed.D., Montclair State University, 2004
Sandra R. Williams, Ed.D., The University of Montana, 2000

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