

**Note:** Science sequence must be approved by advisor as appropriate to individual student's goals. Different science sequences may be approved by the advisor.

6-10 Total Credits Required

### Biology

**Rule:** May complete the following courses

BIOE 172N	Introductory Ecology	3
BIOO 105N	Introduction to Botany	3
Total Hours		6

Minimum Required Grade: C-

### Chemistry

**Rule:** May complete the following courses

CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3
Total Hours		6

Minimum Required Grade: C-

### College Chemistry

**Rule:** May complete the following courses

CHMY 141N	College Chemistry I	4
CHMY 143N	College Chemistry II	4
Total Hours		8

Minimum Required Grade: C-

### College Physics

**Rule:** May complete the following courses

PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Laboratory	1
PHSX 207N	College Physics II	4
PHSX 208N	College Physics II Laboratory	1
Total Hours		10

Minimum Required Grade: C-

### Physics with Calculus

**Rule:** May complete the following courses

PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

### Statistics Courses

**Rule:** Must complete 1 of the following subcategories

**Note:** GenEd credits do not count towards degree credits.

**Note:** Students take a statistics course; M 115 and STAT 216, OR just one of M 162, M 171, or STAT 451. M 171 is recommended.

3-7 Total Credits Required

### Math Fundamentals

**Rule:** May complete all of the following courses

M 115	Probability and Linear Mathematics	3
STAT 216	Introduction to Statistics	4
Total Hours		7

Minimum Required Grade: C-

### Advanced Math

**Rule:** May complete 1 of the following courses

**Note:** M 171 is recommended.

Select one of the following:		3-4
M 162	Applied Calculus	
M 171	Calculus I (recommended)	
STAT 451	Statistical Methods I	
Total Hours		3-4

Minimum Required Grade: C-

## Geography Minor

### Minor - Geography (Minor)

#### College Humanities & Sciences

Degree Specific Credits: 19

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

## Summary

Introduction to Geography	7
Regional Core	3
Geographic Methods	3
Upper Division Systematic Geography	6
Total Hours	19

### Introduction to Geography

**Rule:** Must complete all of the following courses

GPHY 111N	Intro to Physical Geography	3
GPHY 112N	Intro to Phys Geography Lab	1
GPHY 121S	Human Geography	3
Total Hours		7

Minimum Required Grade: C-

## Regional Core

Select at least one of the following: 3

GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	
GPHY 245X	The Middle East	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 444	High Asia	

Total Hours 3

Minimum Required Grade: C-

## Geographic Methods

**Rule:** Must complete 1 of the following courses

GPHY 284	Intro to GIS and Cartography	3
or GPHY 385	Field Techniques	

Total Hours 3

Minimum Required Grade: C-

## Upper Division Systematic Geography

**Rule:** Must complete at least 1 course from 2 subcategories:

- 'Physical Geography',
- 'Geography and Society', and
- 'Human-Environment Interaction'

6 Total Credits Required

### Physical Geography

Select one of the following: 3

ERTH 303N	Weather and Climate	
GPHY 311N	Biogeography	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
GPHY 438	Mountain Field Study	
GPHY 525	Advanced Physical Geography	

Total Hours 3

Minimum Required Grade: C-

### Geography and Society

Select one of the following: 3

GPHY 323S	Economic Geography of Rural Areas	
GPHY 421	Sustainable Cities	
GPHY 434	Food and Famine	

Total Hours 3

Minimum Required Grade: C-

## Human Environment Interaction

Select one of the following: 3

GPHY 335	Water Policy	
GPHY 338	Mountains and Society	
GPHY 432	Human Role Environmental Change	
GPHY 433	Cultural Ecology	

Total Hours 3

Minimum Required Grade: C-

## Teaching Geography Track

A teaching minor is an academic minor which may contain different course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete a teaching major in a content area plus the teacher preparation program through the Department of Curriculum and Instruction. Additional teaching areas can be added through completion of either a teaching major or a teaching minor in that content area.

- Secondary Education Licensure Program (<http://www.coehs.umd.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (p. 101)

The term 'minor' for this teaching option refers to courses that need to be completed. To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a minor form for graduation or the minor section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

### Teaching Licensure Requirements

**Note:** Individuals completing a teaching minor must also complete a teaching major in another content area. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Curriculum & Instruction (p. 95) in the College of Education and Human Sciences for more information. A minor GPA of 2.75 is required to be eligible for student teaching.

**Note:** Individuals completing a teaching minor must also complete a teaching major in another content area. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Curriculum & Instruction (p. 95) in the College of Education and Human Sciences for more information. A minor GPA of 2.75 is required to be eligible for student teaching.

### Teaching Methods Course

**Rule:** Complete the following course.

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

EDU 497	Teaching and Assessing	4
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Total Hours 4

Minimum Required Grade: C-

## Mountain Studies Minor

Mountain Studies is an interdisciplinary field of study focusing on the physical and human dimensions of mountain environments. Coursework in the minor emphasizes physical geography and mountain-society interactions, including a critical analysis of the processes of change and influence shaping local and regional mountain environments today. The minor in Mountain Studies takes advantage of existing faculty expertise and an array of courses to provide students with a science-based curriculum and global perspective. Students pursuing the minor in mountain studies will develop knowledge and skills appropriate for graduate study and for working with government and non-government agencies and groups.

### Minor - Mountain Studies (Minor)

#### College Humanities & Sciences

Degree Specific Credits: 18

Required Cumulative GPA: 2.5

#### Catalog Year: 2017-2018

**Note:** In addition to completing the requirements for a major in any discipline, students electing the minor in Mountain Studies must have a GPA of 3.0 in the major and complete a minimum of 18 additional credits in this minor.

### Summary

Upper Division Core	6
Region-Specific Mountain Studies	6
General Mountain Studies	6
<b>Total Hours</b>	<b>18</b>

#### Upper Division Core

**Rule:** Must complete all of the following courses

GPHY 314	Global Mountain Environments	3
GPHY 338	Mountains and Society	3
<b>Total Hours</b>		<b>6</b>

Minimum Required Grade: C-

#### Region-Specific Mountain Studies

**Note:** Two sections of NRSM 391 may be taken to fulfill this requirements, each for 3 credits:

1. Community and Conservation in the Northern Rockies
2. Ecological Restoration in Greater Yellowstone

Select 6 credits from the following: 6

BIOE 342	Field Ecology	
BIOE 416	Alpine Ecology	
BIOO 101N	Survey MT Wildlife & Habitats	
BIOO 335	Rocky Mountain Flora	
GPHY 144	Glacier National Park in Winter	
GPHY 344	Crown of the Continent	

GPHY 391	Special Topics	
GPHY 438	Mountain Field Study	
GPHY 444	High Asia	
NRSM 352	Mountain Environment and Development	
NRSM 391	Special Topics (may take two sections for 6 credits)	
PTRM 353	Tourism, Livelihoods and Sustainability in Mountains	
PTRM 418	Winter Wilderness Field Studies	
<b>Total Hours</b>		<b>6</b>

Minimum Required Grade: C-

### General Mountain Studies

**Note:** One section of NRSM 311 fulfills this requirement: Conservation Biology in the Northern Rockies

Select 6 credits from the following: 6

BIOE 451	Landscape Ecology	
ERTH 303N	Weather and Climate	
FORS 330	Forest Ecology	
GEO 391	Special Topics	
GEO 433	Global Tectonics	
GEO 488	Snow, Ice and Climate	
GPHY 311N	Biogeography	
NASX 351	Traditional Eco Knowledge	
NRSM 311	Field Stds ecol/Human Commun	
NRSM 385	Watershed Hydrology	
PTRM 482	Wilderness & Protctd Area Mgt	
<b>Total Hours</b>		<b>6</b>

Minimum Required Grade: C-

### Physical Geography

In addition to satisfying the general requirements for a B.S. degree in geography, a student pursuing the option in physical geography must complete additional requirements, including EARTH 303N and GPHY 317 though substitutions which broaden the student's curriculum may be approved by their advisor. Also, students must complete an additional appropriate math course above the 150 level to complement the one used to fulfill their symbolic systems requirements (the second semester of Calculus is recommended), and the two-course sequence in science used to fulfill the B.S. requirement MUST be one of the following:

CHMY 121N & CHMY 123	Introduction to General Chemistry and Introduction to Organic and Biochemistry	6
CHMY 141N & CHMY 143N	College Chemistry I and College Chemistry II	8
PHSX 205N & PHSX 207N	College Physics I and College Physics II	8
PHSX 215N & PHSX 217N	Fund of Physics w/Calc I and Fund of Physics w/Calc II	8
BIOO 105N	Introduction to Botany	3
BIOE 172N	Introductory Ecology	3

# Bachelor of Science - Geography; Physical Geography Concentration

## College Humanities & Sciences

Degree Specific Credits: 47

Required Cumulative GPA: 2.5

### Catalog Year: 2017-2018

**Note:** Depending on the courses selected the degree requirements vary from 47 to 56 credits.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

## Summary

Introduction to Geography	7
Regional Geography Course	3
Geographic Methods	6
Upper Division Systematic Geography	9
Physical Geography	
Geography and Society	
Human Environment Interaction	
Capstone	1
Upper Division Writing	3
Physical Geography Concentration Science Electives	6-10
Biology	
Chemistry	
College Chemistry	
College Physics	
Physics with Calculus	
Physical Geography Option Core	6-9
Advanced Math	3-4
General Ed Math Fundamentals	3-4
Total Hours	47-56

## Introduction to Geography

**Rule:** Must complete all of the following courses:

GPHY 111N	Intro to Physical Geography	3
GPHY 112N	Intro to Phys Geography Lab	1
GPHY 121S	Human Geography	3
Total Hours		7

Minimum Required Grade: C-

## Regional Geography Course

Select at least one of the following: 3		
GPHY 141S	Geography of World Regions	
GPHY 144	Glacier National Park in Winter	
GPHY 241	Montana	

GPHY 245X	The Middle East	
GPHY 342	North America	
GPHY 344	Crown of the Continent	
GPHY 347	Regional Geography (Multiple Regions)	
GPHY 348	Field Studies in Geography	
GPHY 444	High Asia	

Total Hours 3

Minimum Required Grade: C-

## Geographic Methods

**Rule:** Must complete all of the following courses

GPHY 284	Intro to GIS and Cartography	3
GPHY 385	Field Techniques	3
Total Hours		6

Minimum Required Grade: C-

## Upper Division Systematic Geography

**Rule:** Must complete the following subcategories of courses

Minimum Required Grade: C-

9 Total Credits Required

## Physical Geography

**Note:** These courses simultaneously count towards the Upper Division Systematic Geography-Physical Geography and the Physical Geography Concentration core (see below).

Select at least one of the following:		3
ERTH 303N	Weather and Climate	
GPHY 311N	Biogeography	
GPHY 314	Global Mountain Environments	
GPHY 317	Geomorphology	
GPHY 438	Mountain Field Study	
GPHY 525	Advanced Physical Geography	
Total Hours		3

Minimum Required Grade: C-

## Geography and Society

Select at least one of the following:		3
GPHY 323S	Economic Geography of Rural Areas	
GPHY 421	Sustainable Cities	
GPHY 434	Food and Famine	
Total Hours		3

Minimum Required Grade: C-

## Human Environment Interaction

Select at least one of the following:		3
GPHY 335	Water Policy	
GPHY 338	Mountains and Society	
GPHY 432	Human Role Environmental Change	

GPHY 433	Cultural Ecology	
Total Hours		3

Minimum Required Grade: C-

## Capstone

**Rule:** Seniors must complete the following course

**Note:** Seniors must enroll in GPHY 400 in fall, attend GPHY 500 in fall, and complete course requirements in spring.

GPHY 400	Geography Capstone	1
Total Hours		1

Minimum Required Grade: C-

## Upper Division Writing

**Rule:** Must complete 1 of the following courses

**Note:** GPHY 335 will also count toward the upper division core requirements. GPHY 499 will also count toward upper division elective credits.

Other science-based writing courses (e.g. GEO 320, GEO 499, BIOC 470, BIOC 475) may be approved by the advisor.

GPHY 335	Water Policy	3
or GPHY 499	senior thesis / capstone	
Total Hours		3

Minimum Required Grade: C-

## Physical Geography Option Science Electives

**Rule:** Must complete 1 of the following science categories

6-10 Total Credits Required

### Biology

**Rule:** May complete the following courses

BIOE 172N	Introductory Ecology	3
BIOC 105N	Introduction to Botany	3
Total Hours		6

Minimum Required Grade: C-

### Chemistry

**Rule:** May complete the following courses

CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3
Total Hours		6

Minimum Required Grade: C-

### College Chemistry

**Rule:** May complete the following courses

CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab	5
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CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab	5
Total Hours		10

Minimum Required Grade: C-

### College Physics

**Rule:** May complete the following courses

PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Laboratory	1
PHSX 207N	College Physics II	4
PHSX 208N	College Physics II Laboratory	1
Total Hours		10

Minimum Required Grade: C-

### Physics with Calculus

**Rule:** May complete the following courses

PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

## Physical Geography Concentration Core

**Rule:** Must complete all of the following courses

**Note:** One course can be used to satisfy the Upper Division Systematic Geography – Physical Geography. Substitutions which broaden the student's curriculum may be approved by their advisor.

ERTH 303N	Weather and Climate	3
GPHY 311N	Biogeography	3
GPHY 317	Geomorphology	3
Total Hours		9

Minimum Required Grade: C-

## Advanced Math

**Rule:** Must complete 1 additional math or statistics course in addition to the one chosen for Math Fundamentals. For instance, if M 171 has been taken, M 172 is recommended.

Minimum Required Grade: C-

3-4 Total Credits Required

## Statistics Course (Math Fundamentals)

**Note:** Gen Ed credits do not count towards degree credits.

Select one of the following:		3-4
M 162	Applied Calculus	
M 171	Calculus I	
M 172	Calculus II	

STAT 451 Statistical Methods I

Total Hours

3-4

Minimum Required Grade: C-

## Geosciences Department

James R. Staub, Chair

Human impact on Earth systems and reliance on Earth's resources will increase as human population and economic production grows. These impacts are creating "global grand challenges": complex, globally important problems that require an interdisciplinary approach. The most pressing grand challenges over the next decade will be resource scarcity/depletion (especially water and petroleum), adaption to and mitigation of climate change and natural hazards, and environmental stewardship of highly stressed physical and biological Earth systems. As University of Montana Geoscientists, we address these challenges in our research and teaching. We develop the knowledge to find and extract mineral and water resources, solve problems caused by using those resources and develop models of the past, present and future Earth. Faculty, staff, graduate students, and undergraduate students are helping Montana and the World develop a sustainable future.

### Our Vision:

We will build and teach a fundamental understanding of Earth processes to benefit humankind and sustain Earth systems.

### Our Goals:

1. Conduct geoscience research, including obtaining extramural funding to perform essential and transformative research.
2. Disseminate research findings by publishing in peer-reviewed journals and presenting at national and international scientific conferences.
3. Teach students how to learn from known sources of information and create new knowledge from their own research.
4. Engage all graduate students and selected undergraduates in research and publication.
5. Produce graduates competent in their disciplines who can perform well in field, laboratory and computational settings, and who are prepared to serve as high-quality professionals in geoscience and related fields.
6. Provide opportunities for students to work and learn in other countries through international research and learning opportunities.
7. Educate the general student population about the nature of science and basic scientific principles through the study of Earth and its natural systems.
8. Engage the public with important geoscience issues through outreach and community education.

## UM Geosciences in the National Context

With B.S., M.S. and Ph.D. degrees, UM Geosciences is one of 120 Ph.D. granting Geoscience departments in the United States. U.S. News & World Report ranks the UM Geosciences program with Universities like Florida State, Michigan Tech, University of Georgia, University of Pennsylvania, and University of South Carolina. We are ranked above schools like University of Idaho, University of Missouri, UNLV, and Notre Dame.

## Employment

Geoscientists completing our program are employed by private industry, federal, state, and local governmental agencies, environmental consulting firms, non-profit organizations, and by schools needing Earth Science teachers. Jobs in geosciences are available at the B.S., M.S. and Ph.D. levels. The M.S. degree is considered the main working professional degree. The Ph.D. degree is required for positions at universities and with organizations specializing in research. However, there are ample opportunities for geoscience employment with the B.S. degree. Our graduates have a wide range of educational and employment opportunities. Over the last decade, 95% of our graduate program alumni are employed in Geosciences:

- 13% work for government,
- 23% for industry,
- 31% for consultancies and
- 2% for non-governmental organizations,
- 10% are teaching, and
- 17% went on for a Ph.D.

UM Geosciences graduates have exceptional placement rates.

## Undergraduate Degree Requirements

We offer three Bachelor of Science degrees:

- Geosciences B.S.,
- International Field Geosciences Joint B.S. with University of Cork (Ireland), and
- International Field Geosciences Dual B.S. with Potsdam University (Germany).

We also offer an option in Earth Science Education.

The Upper-division Writing Expectation must be met for all degree options by successfully completing an upper-division writing course from the approved list in the Academic Policies and Procedures (p. 7) section of this catalog or by completing GEO 499.

## Undergraduate

- Geosciences B.S. (p. 248)
- Geosciences B.S., Earth Science Education Concentration (p. 246)
- International Field Geosciences Dual B.S. (p. 250)
- International Field Geosciences Joint B.S. (p. 252)

## Undergraduate Minors

- Geosciences (p. 250)

## Earth Science Education

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Teaching and Learning. Individuals must complete the teaching major/teaching track within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (p. 101)

## Bachelor of Science - Geosciences; Earth Science Education Option

### College Humanities & Sciences

Degree Specific Credits: 70

Required Cumulative GPA: 2.0

### Catalog Year: 2017-2018

**Note:** Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning (p. 95) in the College of Education and Human Sciences for more information. A major GPA of 2.75 is required to be eligible for student teaching. This major does not qualify as a single field endorsement. Individuals must complete a second teaching major or minor in another content area.

### General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

### Summary

Lower Division Core	17
Geosciences Core	
Environmental Geoscience Course	
Upper Division Geosciences	17
Physics	10
Chemistry	7
Math	8
Astronomy	3
Teaching Methods Course	4
Languages	4
Total Hours	70

### Lower Division Core

**Rule:** Must complete all of the following courses

Minimum Required Grade: C-

17 Total Credits Required

#### Geosciences Core

**Rule:** Must complete all of the following courses.

GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 211	Earth's History and Evolution	4
GEO 225	Earth Materials	4
Total Hours		12

Minimum Required Grade: C-

### Environmental Geoscience Course

**Rule:** Must complete one of the following.

GEO 105N	Oceanography	3
Total Hours		3

Minimum Required Grade: C-

### Upper Division Geosciences

Minimum Required Grade: C-

17 Total Credits Required

#### Required Upper Division Geoscience

**Rule:** Complete all of the following.

GEO 304E	Science and Society	3
GEO 311	Paleobiology	3
GEO 315	Structural Geology	4
GEO 318	Climate System Dynamics	4
Total Hours		14

Minimum Required Grade: C-

#### Elective Upper Division Geoscience

**Rule:** Complete one additional GEO course at the 300- or 400-level

**Note:** GEO 320 is recommended to complete the upper division writing requirement in Geosciences but students may also select from the university-approved list of upper division writing courses to fulfill this requirement.

### Physics

**Rule:** Must complete 1 of the following sequences

10 Total Credits Required

#### Physics

**Rule:** May complete the following sequence

PHSX 205N	College Physics I	4
PHSX 206N	College Physics I Laboratory	1
PHSX 207N	College Physics II	4
PHSX 208N	College Physics II Laboratory	1
Total Hours		10

Minimum Required Grade: C-

#### Physics with Calculus

**Rule:** May complete the following sequence

PHSX 215N	Fund of Physics w/Calc I	4
PHSX 216N	Physics Laboratory I w/Calc	1
PHSX 217N	Fund of Physics w/Calc II	4
PHSX 218N	Physics Laboratory II w/Calc	1
Total Hours		10

Minimum Required Grade: C-

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## Chemistry

**Rule:** Must complete the following courses

CHMY 121N	Introduction to General Chemistry	3
CHMY 123	Introduction to Organic and Biochemistry	3
CHMY 485	Laboratory Safety	1
Total Hours		7

Minimum Required Grade: C-

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## Math

**Rule:** Must complete one math and one statistics course

M 162	Applied Calculus	4
or M 171	Calculus I	
STAT 216	Introduction to Statistics	4
Total Hours		8

Minimum Required Grade: C-

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## Astronomy

**Rule:** Must complete the following course

ASTR 131N	Planetary Astronomy	3
Total Hours		3

Minimum Required Grade: C-

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## Teaching Methods Course

**Rule:** Must complete the following course.

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Science.

EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

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## Languages

**Rule:** Must complete 1 of the following courses

**Note:** Students graduating in Geosciences may substitute one of these courses in place of the Modern and Classical Language requirement.

M 162	Applied Calculus	4
or M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

## Geosciences B.S.

## Bachelor of Science - Geosciences

### College Humanities & Sciences

**Degree Specific Credits:** 62

**Required Cumulative GPA:** 2.0

### Catalog Year: 2017-2018

**Note:** This option is designed for students who seek post-graduate employment as a professional geoscientist or preparation for graduate study in geosciences.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umd.edu/academics/general-education-requirements>) of the catalog.

## Summary

Lower Division Core	8
Degree Electives	24
Cognate Sciences	30
Physics	
Chemistry	
Math	
Computer Science	
Upper Division Writing	3-10
Languages	4
<hr/>	
Total Hours	69-76

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## Lower Division Core

**Rule:** Must complete all of the courses in one of two options

**Note:** Completion of either option fulfills the Lower Division Core requirements.

### Option 1

GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 211	Earth's History and Evolution	4
Total Hours		8

Minimum Required Grade: C-

### Option 2

GEO 103N	Introduction to Environmental Geology	3
GEO 104N	Introduction to Environmental Geology Laboratory	1
GEO 211	Earth's History and Evolution	4
Total Hours		8

Minimum Required Grade: C-

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## Degree Electives

**Rule:** Must complete 24 credits from the following list of courses

Select 24 credits from the following:	24
GEO 225 Earth Materials	
GEO 305 Igneous & Metamorph Petrology	
GEO 309 Sedimentation/Stratigraphy	
GEO 311 Paleobiology	
GEO 315 Structural Geology	
GEO 318 Climate System Dynamics	
GEO 320 Global Water	
GEO 327 Geochemistry	
GEO 420 Hydrogeology	
GEO 421 Hydrology	
GEO 433 Global Tectonics	
GEO 443 Principles of Sedimentary Petrology	
GEO 460 Process Geomorphology	
GEO 482 Global Change	
GEO 488 Snow, Ice and Climate	
GEO 491 Special Topics	
Total Hours	24

Minimum Required Grade: C-

## Cognate Sciences

**Rule:** In addition to completing course work in Geosciences, a minimum of 30 credits in cognate science classes must be completed.

**Note:** More advanced courses in Chemistry, Computer Science, Math, and Physics may be used to meet the 30 credit minimum total in cognate sciences. BIOB 101N or above is also appropriate. Course substitutions for the 30 credit minimum in cognate sciences must be approved by a departmental advisor.

## Physics

**Rule:** Must complete 1 of the following sequences

Select one of the following sequences:	10
Option 1:	
PHSX 205N College Physics I	
PHSX 206N College Physics I Laboratory	
PHSX 207N College Physics II	
PHSX 208N College Physics II Laboratory	
Option 2 with Calculus:	
PHSX 215N Fund of Physics w/Calc I	
PHSX 216N Physics Laboratory I w/Calc	
PHSX 217N Fund of Physics w/Calc II	
PHSX 218N Physics Laboratory II w/Calc	

Minimum Required Grade: C-

## Chemistry

**Rule:** Must complete the following courses

CHMY 141N College Chemistry I	5
& CHMY 142N and College Chemistry I Lab	
CHMY 143N College Chemistry II	5
& CHMY 144N and College Chemistry II Lab	
Total Hours	10

Minimum Required Grade: C-

## Math

**Rule:** Must complete 1 of the following subcategories

7-8 Total Credits Required

Math Option 1	7
M 162 Applied Calculus	
M 263 Applied Differential Equations (Applied Differential Equations)	
Math Option 2	8
M 171 Calculus I	
M 172 Calculus II	

Minimum Required Grade: C-

## Computer Science

**Rule:** Must complete 1 course in Computer Science (Programming or Modeling)

**Note:** These courses are recommended to complete the Computer Science requirement. Credit may be received for only 1 of these 4 courses for the 30 credit minimum cognate science requirement.

Select one of the following:	3-4
CSCI 172 Intro to Computer Modeling	
CSCI 250 Computer Mdlng/Science Majors	
GPHY 284 Intro to GIS and Cartography	
STAT 216 Introduction to Statistics	
Total Hours	3-4

Minimum Required Grade: C-

## Upper Division Writing

**Rule:** Must complete 1 upper division writing course

**Note:** These courses are recommended to complete the upper division writing requirement in Geosciences but students may also select from the university-approved list of upper division writing courses to fulfill this requirement.

GEO 320 Global Water	3-10
or GEO 499 Senior Thesis /Capstone	
Total Hours	3-10

Minimum Required Grade: C-

## Languages

**Rule:** Must complete 1 of the following courses

**Note:** Students graduating in Geosciences may substitute one of these courses in place of the Modern and Classical Language requirement.

M 162	Applied Calculus	4
or M 171	Calculus I	
Total Hours		4

Minimum Required Grade: C-

## Geosciences Minor

### Minor - Geosciences (Minor)

#### College Humanities & Sciences

**Degree Specific Credits:** 18

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2017-2018

#### Summary

Lower Division Core Courses	8
Degree Electives	10
Total Hours	18

#### Lower Division Core Courses

**Rule:** Must complete all of the courses in one of two options

**Note:** Completion of either option fulfills the Lower Division Core requirement.

**Note:** Completion of all the courses in one option is recommended, but alternative sequences may be approved by a Geosciences advisor.

##### Option 1

GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 211	Earth's History and Evolution	4
Total Hours		8

Minimum Required Grade: C-

##### Option 2

GEO 103N	Introduction to Environmental Geology	3
GEO 104N	Introduction to Environmental Geology Laboratory	1
GEO 211	Earth's History and Evolution	4
Total Hours		8

Minimum Required Grade: C-

#### Degree Electives

**Rule:** Must complete an additional 10 credits in Geosciences courses numbered 200 and above

Minimum Required Grade: C-

10 Total Credits Required

## International Field Geosciences Dual Bachelor of Science - International Field Geos Dual

#### College Humanities & Sciences

**Degree Specific Credits:** 100

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2017-2018

**Note:** This degree is designed specifically for students who seek to combine a rigorous education in the Geosciences with a yearlong international Geosciences experience and an emphasis on field-based learning. It requires attending classes and living overseas. For students who satisfy all degree requirements, a B.S. degree in International Field Geosciences will be awarded by The University of Montana and a second B.S. degree in International Field Geosciences will be awarded by the Potsdam University. The degree requirements specified below pertain both to UM-based and Potsdam-based students seeking their UM diploma. Potsdam-based students are eligible to satisfy any of the following specific requirements through credits that are transferred from Potsdam and approved as equivalent by the UM Geosciences undergraduate advisors.

#### General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umd.edu/academics/general-education-requirements>) of the catalog.

#### Summary

Lower Division Core	12
Upper Division Core	8
Degree Electives	17
Physics	10
Chemistry	8-10
Math	7-8
Computer Science	3-4
Upper Division Writing	4
Languages	8
Overseas Coursework	27-30
Total Hours	104-111

#### Lower Division Core

**Rule:** Must complete all of the following courses

GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 211	Earth's History and Evolution	4
GEO 225	Earth Materials	4
Total Hours		12

Minimum Required Grade: C-

**Upper Division Core****Rule:** Must complete all of the following courses

GEO 315	Structural Geology	4
GEO 318	Climate System Dynamics	4
Total Hours		8

Minimum Required Grade: C-

**Degree Electives**

Select 17 credits from the following: 17

GEO 305	Igneous & Metamorph Petrology	
GEO 309	Sedimentation/Stratigraphy	
GEO 311	Paleobiology	
GEO 320	Global Water	
GEO 327	Geochemistry	
GEO 420	Hydrogeology	
GEO 433	Global Tectonics	
GEO 460	Process Geomorphology	
GEO 491	Special Topics	
Total Hours		17

Minimum Required Grade: C-

**Physics****Rule:** Must complete 1 of the following sequences

10 Total Credits Required

Select one of the following sequences: 10

Option 1:		
PHSX 205N	College Physics I	
PHSX 206N	College Physics I Laboratory	
PHSX 207N	College Physics II	
PHSX 208N	College Physics II Laboratory	
Option 2 with Calculus:		
PHSX 215N	Fund of Physics w/Calc I	
PHSX 216N	Physics Laboratory I w/Calc	
PHSX 217N	Fund of Physics w/Calc II	
PHSX 218N	Physics Laboratory II w/Calc	
Total Hours		10

Minimum Required Grade: C-

**Chemistry****Rule:** Must complete 1 of the following subcategories

8-10 Total Credits Required

Chemistry Option 1		8
CHMY 121N	Introduction to General Chemistry	

CHMY 123 Introduction to Organic and Biochemistry  
& CHMY 124 and Introduction to Organic and Biochemistry Lab

Chemistry Option 2		10
CHMY 141N	College Chemistry I	
& CHMY 142N	and College Chemistry I Lab	
CHMY 143N	College Chemistry II	
& CHMY 144N	and College Chemistry II Lab	

Minimum Required Grade: C-

**Math****Rule:** Must complete 1 of the following subcategories

7-8 Total Credits Required

Math Option 1		7
M 162	Applied Calculus	
M 263	Applied Differential Equations (Applied Differential Equations)	
Math Option 2		8
M 171	Calculus I	
M 172	Calculus II	

Minimum Required Grade: C-

**Computer Science**

Select one of the following: 3-4

CSCI 250	Computer Mdlng/Science Majors	
GPHY 284	Intro to GIS and Cartography	
STAT 216	Introduction to Statistics	
Total Hours		3-4

Minimum Required Grade: C-

**Upper Division Writing****Rule:** Must complete the following course

**Note:** This course is recommended to complete the upper division writing requirement in Geosciences but students may also select from the university-approved list of upper division writing courses to fulfill this requirement.

GEO 320	Global Water	4
Total Hours		4

Minimum Required Grade: C-

**Languages**

**Rule:** UM outgoing students must complete the following language sequence (the "test out provision" applies as administered by the Department of Modern and Classical Languages and Literatures).

GRMN 101	Elementary German I	4
GRMN 102	Elementary German II	4
Total Hours		8

Minimum Required Grade: C-

### Overseas Coursework

**Rule:** Must complete the following courses and field work at Potsdam University

**Note:** In addition to Geosciences coursework completed at UM students must complete the following:

- Selection of one field course run by Potsdam University listed below
  - BP 15 (Field Course - France)
  - BW01 (Field Course - Norway)
  - BW02 (field Course - Alps)
- Any 4 of the following courses offered by Potsdam University
  - Regional Geology
  - Paleoclimate @ Quaternary Geology
  - Analysis of Geologic Maps
  - Analytic Geochemistry
  - Natural Hazards
  - Tectonophysics & Rheology
  - Seismology
  - Seismics
  - Geoelectrics
  - Sedimentary Systems & Stratigraphic Geomorphology
  - Tectonics and Geodynamics
- 2 additional cognate science courses to be taken at Potsdam University

Minimum Required Grade: C-

27-30 Total Credits Required

## International Field Geosciences Joint Bachelor of Science - International Field Geos Joint

### College Humanities & Sciences

**Degree Specific Credits:** 108

**Required Cumulative GPA:** 2.0

### Catalog Year: 2017-2018

**Note:** This degree is designed specifically for students who seek to combine a rigorous education in the Geosciences with a yearlong international Geosciences experience and an emphasis on field-based learning. It requires attending classes and living overseas. Most of the course work completed during the year abroad will take place at University College Cork (UCC) in Ireland. For students who satisfy all degree requirements, a joint B.S. degree in International Field Geosciences will be awarded by The University of Montana and the University College Cork.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

### Summary

Lower Division Core	12
Upper Division Core	12
Degree Electives	15
Physics	10
Chemistry	8-10
Math	7-8
Computer Science	3-4
Upper Division Writing	4
Languages	8
German	
Irish	
Overseas Coursework	33-36
Total Hours	112-119

### Lower Division Core

**Rule:** Must complete all of the following courses

GEO 101N	Introduction to Physical Geology	3
GEO 102N	Introduction to Physical Geology Lab	1
GEO 211	Earth's History and Evolution	4
GEO 225	Earth Materials	4
Total Hours		12

Minimum Required Grade: C-

### Upper Division Core

**Rule:** Must complete all of the following subcategories

Minimum Required Grade: C-

12 Total Credits Required

#### Subcategory 1

**Rule:** Must complete all of the following courses

GEO 315	Structural Geology	4
GEO 318	Climate System Dynamics	4
Total Hours		8

Minimum Required Grade: C-

#### Subcategory 2

**Rule:** Must complete 1 of the following courses

GEO 309 or GEO 443	Sedimentation/Stratigraphy Principles of Sedimentary Petrology	4
Total Hours		4

Minimum Required Grade: C-

## Degree Electives

Select 15 credits from the following: 15

GEO 305	Igneous & Metamorph Petrology
GEO 309	Sedimentation/Stratigraphy
GEO 311	Paleobiology
GEO 320	Global Water
GEO 327	Geochemistry
GEO 420	Hydrogeology
GEO 433	Global Tectonics
GEO 443	Principles of Sedimentary Petrology
GEO 460	Process Geomorphology
GEO 491	Special Topics

Total Hours 15

Minimum Required Grade: C-

## Physics

10 Total Credits Required

Select one of the following sequences: 10

Option 1:

PHSX 205N	College Physics I
PHSX 206N	College Physics I Laboratory
PHSX 207N	College Physics II
PHSX 208N	College Physics II Laboratory

Option 2 with Calculus:

PHSX 215N	Fund of Physics w/Calc I
PHSX 216N	Physics Laboratory I w/Calc
PHSX 217N	Fund of Physics w/Calc II
PHSX 218N	Physics Laboratory II w/Calc

Total Hours 10

Minimum Required Grade: C-

## Chemistry

**Rule:** Must complete 1 of the following subcategories

8-10 Total Credits Required

Chemistry Option 1 8

CHMY 121N	Introduction to General Chemistry
CHMY 123 & CHMY 124	Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab

Chemistry Option 2 10

CHMY 141N & CHMY 142N	College Chemistry I and College Chemistry I Lab
CHMY 143N & CHMY 144N	College Chemistry II and College Chemistry II Lab

Minimum Required Grade: C-

## Math

**Rule:** Must complete 1 of the following subcategories

7-8 Total Credits Required

Math Option 1 7

M 162	Applied Calculus
M 263	Applied Differential Equations (Applied Differential Equations)

Math Option 2 8

M 171	Calculus I
M 172	Calculus II

Minimum Required Grade: C-

## Computer Science

Select one of the following: 3-4

CSCI 250	Computer Mdlng/Science Majors
GPHY 284	Intro to GIS and Cartography
STAT 216	Introduction to Statistics

Total Hours 3-4

Minimum Required Grade: C-

## Upper Division Writing

**Rule:** Must complete the following course

**Note:** This course is recommended to complete the upper division writing requirement in Geosciences but students may also select from the university-approved list of upper division writing courses to fulfill this requirement.

GEO 320 Global Water 4

Total Hours 4

Minimum Required Grade: C-

## Languages

**Rule:** Must complete 1 of the following subcategories (the "test out provision" applies as administered by the Department of Modern and Classical Languages and Literatures).

6-10 Total Credits Required

### German

**Rule:** May complete the following language sequence

GRMN 101 Elementary German I 4

GRMN 102 Elementary German II 4

Total Hours 8

Minimum Required Grade: C-

### Irish

**Rule:** May complete the following language sequence

IRSH 101	Elementary Irish	4
IRSH 102	Elementary Irish II	4
Total Hours		8

Minimum Required Grade: C-

## Overseas Coursework

**Rule:** Must complete the following courses and field work at University College of Cork and Potsdam University

**Note:** In addition to Geosciences coursework completed at UM students must complete the following:

- 1 formal field course module run by University College Cork, selected from
  - GL 2016 (Easter Field Course - Dingle Peninsula)
  - GL 3019 (Easter Field Course - Western Scotland)
  - ER 3002 (Easter Field Course - North Clare)
  - GL 4008 (Easter Field Course - Central Greece)
  - another equivalent-level field course run by UCC and approved apriori by their UCC and UM advisors
- While in residence at Cork, students must complete any 9 of the following courses in consultation with their UCC and UM advisors
  - Sed Processes and Petrology
  - Igneous and MM Petrology
  - Invertebrate Paleontology & Evolution
  - Plate Tectonics & Global Geophysics
  - Igneous Petrogenesis & Geochemistry
  - Metamorphism & Geochronology
  - Advanced Structural Geology
  - Sedimentary Environments
  - Stratigraphy & Geologic Maps
  - Environmental Geology
  - Terr Ecosystems Through Time
  - Micropaleontology & Palynology
  - Petroleum Geology & Basin Analysis
  - Applied Geophysics & Computer Applications
  - Advanced Igneous Petrology
  - Hydrogeology
- 1 formal upper-level Geosciences course at Potsdam University. Recommended are courses that focus on computer-based visualization or geoscience data using GIS or other visualization platforms

Minimum Required Grade: C-

33-36 Total Credits Required

# Global Humanities and Religions

**Ruth Vanita, Director**

The Global Humanities and Religions Program provides an education in the international and interdisciplinary humanities and in world religions. Students are able to develop their individual interests through electives, options and minors. The Program offers its majors options in:

- Global Humanities
- Religious Studies

The Program offers two minors:

- Global Humanities
- South & South-East Asian Studies (the area comprising the Indian subcontinent and the Vietnam-Thailand-Indonesia region). This is an interdisciplinary minor, taught across several departments.

Global Humanities and Religions majors choose courses from different departments, focusing on literary, philosophical and religious works from different parts of the globe, especially Europe, the US and Asia. Global Humanities and Religions offers innovative multidisciplinary courses that incorporate the tools of such disciplines as literary studies, history, philosophy, religious studies, gender studies and art history. We aim to help students develop the ability to read with comprehension, write correctly, form logical arguments based on evidence, and gain understanding of historical, literary, philosophical and religious contexts. These are skills prized by employers. Students who graduate from the program will be prepared to enter various fields in the private and public sectors, pursue further professional or academic training, and will be better prepared to function as citizens of the world.

Majors in Global Humanities and Religions may not take any course work presented for the major for CR/NCR. Upper-level students transferring into this program should have at least a C average in all credits attempted. The upper-division writing expectation must be met by successfully completing an upper-division writing course from the approved list in the General University Requirements section of this catalog.

## Undergraduate

- Global Humanities and Religions B.A. (p. 254)
- Global Humanities and Religions Minor (p. 257)
- Global Humanities and Religions B.A. Religious Studies Concentration (p. 257)

## Global Humanities and Religions B.A.

### Bachelor of Arts - Global Humanities and Religions; Global Humanities Concentration

#### College Humanities & Sciences

Degree Specific Credits: 42

Required Cumulative GPA: 2.0

#### Catalog Year: 2017-2018

**Note:** Advising closely with the Humanities Advisor and your assigned Global Humanities and Religions advisor is imperative. Substitutions can occur in this program of study but only when approved and documented by the Director.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

### Summary

General Humanities Lower Division Core	18-20
Humanities	
Literary Studies - European or American Literature	
Historical Studies - European or American History	
Asian Studies	
Religious Studies	
Humanities Upper Division Requirements	24
History	
Philosophy or Political Theory	
Women's and Gender Studies, Native American Studies, or African-American Studies	
Religious Studies	
Liberal Studies	
Senior Liberal Studies Capstone Seminar	
Modern and Classical Language Requirement	
Total Hours	42-44

### Global Humanities Lower Division Core

**Rule:** 21 credits

Minimum Required Grade: C-

21 Total Credits Required

#### Humanities

**Rule:** Take all three of the following courses. (6-8 credits).

**Note:** Prerequisite or co-requisite: WRIT 101 or equivalent.

These courses are recommended to be taken early in the curriculum as they are foundational. They can be taken in any order.

General Education fulfillment through the lower-division core: All three courses fulfill the "Literary and Artistic Studies" requirement; GH 151L and GH 152L also fulfill the "designated writing course" requirement and GH 161H fulfills the "Historical and Cultural Studies" requirement.

GH 151L	Introduction to Western Humanities Antiquity	3
GH 152L	Introduction to the Humanities Medieval to Modern	3
Total Hours		6

Minimum Required Grade: C-

#### Literary Studies - Any LIT or MCLL literature content course, or any lower-division course with an L designation

**Rule:** Take one approved course that is at least 3 credits.

Minimum Required Grade: C-

#### Historical Studies - Any course in the History department or any course with an H designation

**Note:** Please consult with an advisor in Liberal Studies on other course possibilities for this requirement.

Minimum Required Grade: C-

#### Asian Studies

Select 3 credits from the following:	3
ANTY 102H	Intro to South & S. East Asia
ANTY 141H	The Silk Road
CHIN 211H	Chinese Culture and Civiliz
GH 191	Special Topics
HSTR 240	East Asian Civilizations
HSTR 262H	Islamic Civil: Classical Age
JPNS 150H	Japanese Cult & Civiliz
GH 291	Special Topics
MCLG 191	Special Topics
MCLG 291	Special Topcis
SSEA 195	Special Topics
SSEA 202X	Introduction to India
SSEA 232H	Buddhism
SSEA 234X	Hindu Religious Traditions
SSEA 295	Special Topics
Total Hours	3

Minimum Required Grade: C-

#### Religious Studies

Select 3 credits from the following:	3
RLST 191	Special Topics
RLST 204H	Intro to the Hebrew Bible
RLST 205L	Introduction to New Testament
RLST 225L	Christianity
RLST 232H	Buddhism
RLST 234X	Hindu Religious Traditions
RLST 238X	Japanese Religions
RLST 281E	Comparative Ethics
RLST 291	Special Topics
Total Hours	3

Minimum Required Grade: C-

### Global Humanities Upper Division Requirements

**Rule:** 24 credits.

**Note:** Please work closely with the Humanities Advisor and your faculty advisor in selecting and planning coursework. Substitutions need to be approved by the Director.

Minimum Required Grade: C-

24 Total Credits Required

#### Six credits in History/Philosophy/Literature

Minimum Required Grade: C-

**Women's and Gender Studies, Native American Studies, or African-American Studies**

Select 3 credits from the following: 3

ANTY 427	Anthropology of Gender
ARTH 436	The History of Women in Art
CLAS 320	Women in Antiquity
GH 327L	Gender & Sexuality in Eng Fict
GH 328L	Gender Sexuality India
GH 329	Fathers and Daughters in Western Literary Traditions
GH 415	Same Sex Unions Literature
HSTA 342H	Afr Amer Hist to 1865
HSTA 343H	Afr Amer Hist Since 1865
HSTA 347	Voodoo, Muslim, Church: Black Religion
HSTA 370H	Wmn Amer Colonial to Civil War
HSTA 371H	Wmn Amer Civil War to Present
HSTA 385	Families & Children in America
HSTA 415	The Black Radical Tradition
HSTA 417	Prayer & Civil Rights
HSTA 471	Writing Women's Lives
LIT 378L	Gay and Lesbian Studies
NASX 303E	Ecol Persp in Nat Amer Trad
NASX 304E	Native American Beliefs/Philos
NASX 306X	Contemp Global Iss Indg People
NASX 340	Native American Lit
NASX 351	Traditional Eco Knowledge
NASX 352	Montana's Indians/Land
NASX 354X	Indians of MT since Rsrvtion Era
NASX 360	Native Amer and Cinema
NASX 391	Special Topics
NASX 394	Workshop/Seminar
NASX 405H	Gndr Iss in Native Amer Stdies
NASX 464	Hist Amer Indian Affrs to 1776
NASX 465	Hist Amer Indian Affrs 10 Cent
NASX 466	Hist of Indian Affrs from 1890
NASX 475	Tribal Sovereignty
NASX 488	Stds in Native Amer Autobio
NASX 491	Special Topics
NASX 492	Independent Study
NASX 494	Seminar/Workshop
NASX 499	Senior Capstone/Thesis
RLST 370	Mysticism
WGSS 390	Undergraduate Research
WGSS 391	Special Topics
WGSS 392	Independent Study
WGSS 463	WGS Capstone
WGSS 490	Undergraduate Research
WGSS 491	Special Topics
WGSS 492	Independent Study

Total Hours 3

Minimum Required Grade: C-

**Religious Studies**

Select 6 credits from the following: 6

GH 316E	Talking to God: Bhagavad Gita
HSTA 347	Voodoo, Muslim, Church: Black Religion
HSTA 417	Prayer & Civil Rights
NASX 304E	Native American Beliefs/Philos
RLST 300	Theory & Method Study of Relig
RLST 310	Topics in Biblical Studies
RLST 320	Anct Judaism & Early Christnty
RLST 335	Western Religious Thought I
RLST 336	Western Religious Thought II
RLST 353	Topics in South Asia Religions
RLST 354	Topics in East Asia Religions
RLST 366	Tibetan Civilization
RLST 368	Contemporary Buddhism in S/SEAsia
RLST 369	Contemplative Traditions of Asia
RLST 370	Mysticism
RLST 376	Contemporary Religious Thought
RLST 391	Special Topics
RLST 392	Independent Study
RLST 491	Special Topics
RLST 492	Independent Study

Total Hours 6

Minimum Required Grade: C-

**Global Humanities**

Select 6 credits from the following: 6

GH 326	Stories East and West
GH 327L	Gender & Sexuality in Eng Fict
GH 328L	Gender Sexuality India
GH 329	Fathers and Daughters in Western Literary Traditions
GH 351L	Exploring the Humanities
GH 390	Undergraduate Research
GH 391	Special Topics
GH 392	Independent Study
GH 490	Undergradate Research
GH 491	Special Topics
GH 492	Independent Study
GH 494	Seminar/Workshop

Total Hours 6

Minimum Required Grade: C-

**Senior Global Humanities Capstone Seminar**

Select one of the following: 3

GH 326	Stories East and West
GH 327L	Gender & Sexuality in Eng Fict
GH 329	Fathers and Daughters in Western Literary Traditions
GH 494	Seminar/Workshop

Total Hours 3



Minimum Required Grade: C-

## Global Humanities and Religions Minor

### Minor - Global Humanities and Religions

#### College Humanities & Sciences

Degree Specific Credits: 23

Required Cumulative GPA: 2.5

Catalog Year: 2017-2018

### Summary

Lower Division Core	11
Upper Division Electives I	6
Upper Division Electives II	6
<b>Total Hours</b>	<b>23</b>

#### Lower Division Core

Rule: Must complete all of the following courses:

GH 151L	Introduction to Western Humanities Antiquity	3
GH 152L	Introduction to the Humanities Medieval to Modern	3
GH 161H	Asian Humanities	3
<b>Total Hours</b>		<b>9</b>

Minimum Required Grade: C-

#### Upper Division Electives I

Select two of the following: 6

GH 326	Stories East and West	
GH 327L	Gender & Sexuality in Eng Fict	
GH 328L	Gender Sexuality India	
GH 329	Fathers and Daughters in Western Literary Traditions	
GH 316E	Talking to God: Bhagavad Gita	
<b>Total Hours</b>		<b>6</b>

Minimum Required Grade: C-

#### Upper Division Electives II

Select 6 credits from the following: 6

RLST 300	Theory & Method Study of Relig	
RLST 310	Topics in Biblical Studies	
RLST 320	Anct Judaism & Early Christnty	
RLST 335	Western Religious Thought I	
RLST 336	Western Religious Thought II	
RLST 353	Topics in South Asia Religions	
RLST 354	Topics in East Asia Religions	

RLST 366	Tibetan Civilization
RLST 368	Contemporary Buddhism in S/SEAsia
RLST 369	Contemplative Traditions of Asia
RLST 370	Mysticism
RLST 376	Contemporary Religious Thought
RLST 391	Special Topics
RLST 392	Independent Study
RLST 491	Special Topics
RLST 492	Independent Study

Total Hours 6

Minimum Required Grade: C-

## Religious Studies

### Religious Studies Concentration, Professor Paul Dietrich, Advisor

Religion has been taught as an academic discipline at the University of Montana since 1924. Located within the Global Humanities and Religions Program, the study of religion is pursued in the University in an interdisciplinary setting that offers opportunities for exploration and discovery in many areas of the humanities, art, and sciences. Our Religious Studies courses emphasize the scholarly analysis and interpretation of the history, literature, beliefs, myths, symbols, rituals, ethical and legal codes, and communities and institutions of the world's religious traditions.

We investigate how the world's religions address enduring human questions and influence responses to daily problems, and we explore how religious traditions shape lives and societies, from the emergence of the earliest civilizations to 21st-century global conflicts. Our students engage ideas about the good life and death, suffering and happiness, war and peace, revelation and salvation, God, mysticism, and religious experience. The curriculum is designed to provide students with a broad and deep understanding of religion as a field of human activity and inquiry. Students acquire the skills necessary to investigate specific religious traditions in historical depth and to understand the forms, expressions, and roles of religion in the world today.

## Bachelor of Arts - Global Humanities and Religions; Religious Studies Concentration

### College Humanities & Sciences

Degree Specific Credits: 39

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

### General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

### Summary

Religious Studies Lower-Division Requirements 20

Introduction to the Humanities

Introduction to Asian Humanities	
Near Eastern/Mediterranean courses	
South or East Asian Courses	
Religious Studies Upper-Division Requirements	24
Theory & Method in the Study of Religion	
Religious Studies Courses	
Liberal Studies Courses with Religious Studies content	
Modern and Classical Language Requirement	
Total Hours	44

## Religious Studies Lower-Division Requirements

**Rule:** 20 credits.

Minimum Required Grade: C-

15 Total Credits Required

### Introduction to Western Humanities

**Rule:** Take the following 2 courses.

**Note:** WRIT 101 is a pre-requisite or co-requisite. General Education fulfillment: GH 151L and GH 152L satisfy both the "designated writing course" and "Literary & Artistic Studies" requirements.

GH 151L	Introduction to Western Humanities Antiquity	3
GH 152L	Introduction to the Humanities Medieval to Modern	3
Total Hours		6

Minimum Required Grade: C-

### Introduction to Asian Humanities

**Rule:** Take the following course.

GH 161H	Asian Humanities	3
Total Hours		3

Minimum Required Grade: C-

### Near Eastern/Mediterranean Courses

Select one of the following:		3
RLST 204H	Intro to the Hebrew Bible	
RLST 205L	Introduction to New Testament	
RLST 225L	Christianity	
Total Hours		3

Minimum Required Grade: C-

### South or East Asian Courses

Select one of the following:		3
RLST 232H	Buddhism	
RLST 234X	Hindu Religious Traditions	
RLST 238X	Japanese Religions	
Total Hours		3

Minimum Required Grade: C-

## Religious Studies Upper-Division Requirements

**Rule:** 24 credits.

Minimum Required Grade: C-

24 Total Credits Required

### Theory & Method in the Study of Religion

**Rule:** Take the following course.

**Note:** Please see the GHR Director for possible course substitution approval.

RLST 300	Theory & Method Study of Relig	3
Total Hours		3

Minimum Required Grade: C-

### Religious Studies Courses

Select 7 from the following:		21
GH 326	Stories East and West	
GH 327L	Gender & Sexuality in Eng Fict	
GH 329	Fathers and Daughters in Western Literary Traditions	
GH 391	Special Topics	
GH 316E	Talking to God: Bhagavad Gita	
HSTA 347	Voodoo, Muslim, Church: Black Religion	
HSTA 417	Prayer & Civil Rights	
RLST 310	Topics in Biblical Studies	
RLST 320	Anct Judaism & Early Christnty	
RLST 335	Western Religious Thought I	
RLST 336	Western Religious Thought II	
RLST 353	Topics in South Asia Religions	
RLST 354	Topics in East Asia Religions	
RLST 366	Tibetan Civilization	
RLST 368	Contemporary Buddhism in S/SEAsia	
RLST 369	Contemplative Traditions of Asia	
RLST 370	Mysticism	
RLST 376	Contemporary Religious Thought	
RLST 391	Special Topics	
RLST 392	Independent Study	
RLST 491	Special Topics	
RLST 492	Independent Study	
Total Hours		21

Minimum Required Grade: C-

## History Department

**Robert H. Greene, Chair**

The History Department offers an exciting program of instruction for undergraduates in search of an education. The curriculum is designed to provide knowledge and understanding of the background and ramifications of present local, national, and world affairs. The program emphasizes historical analysis and critical thought rather than the memorization of facts. History majors are taught how to read critically, analyze thoughtfully, conduct research carefully, and write intelligently.

The department offers a wide variety of courses ranging in time, space, and theme. Courses span the full range of American history from the colonial period through the recent past. More specialized courses in local and regional history focus on Montana, the West, and the northern Rockies. Offerings in European and world history emphasize social, cultural, and intellectual history, French and German history, British history, Russian and Soviet history, Latin American history, Islamic civilization, East Asian history, and Central and Southwest Asian history. Topical courses explore issues of democracy, diplomacy, human rights, war and peace, terrorism, race and gender, religion, and environmental history.

History provides not only a basis for future employment but also, more importantly, furnishes knowledge and perspective for intelligent leadership in community affairs. Graduates are employed in federal, state, or local governments, with positions ranging from elected office to research analysts. Many teach history in middle schools and high schools while others pursue advanced degrees at the graduate level. Still others go on to attain professional degrees in law, journalism, and business.

The History Department at the University of Montana boasts professors with award-winning scholarship and active research agendas, which greatly enhances the education and training we provide to our students.

The Department offers the

- Bachelor of Arts,
- Bachelor of Arts for teaching,
- Master of Arts, and
- the Doctor of Philosophy degrees.

Our graduate students have found great success in a diverse range of occupations in public history, in education, and in academia.

## Undergraduate

- History B.A. (p. 259)
- History B.A., History Education Concentration (p. 260)
- History-Political Science B.A. (p. 264)

## Undergraduate Minor

- History (p. 263)

## History B.A.

### Bachelor of Arts - History

#### College Humanities & Sciences

Degree Specific Credits: 40

Required Cumulative GPA: 2.0

#### Catalog Year: 2017-2018

**Note:** A minimum of 40 credits in History are required, 21 of which must be upper division credits. A maximum of 60 credits in History are allowed. Penalties will apply for more than 60 credits.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.UMT.edu/academics/general-education-requirements>) of the catalog.

### Summary

Lower Division Core Courses	9
Methods	
Introductory History	
American History Electives	9
World History Electives	9
European History Electives	9
History Advanced Writing Courses	3
<b>Total Hours</b>	<b>39</b>

### Lower Division Core Courses

**Rule:** Must complete the following subcategories

Minimum Required Grade: C-

9 Total Credits Required

#### Methods

**Rule:** Must complete the following course

HSTR 200	Intro: Historical Methods	1
<b>Total Hours</b>		<b>1</b>

Minimum Required Grade: C-

#### Introductory History

**Note:** Must select either the regular or honors version of a course to apply to the requirement.

AP Policy: Those students scoring a "5" on either the American History or European History AP exam are excused from the above requirement. These students earn credit toward graduation but do not earn credit toward the history degree.

Select two of the following:	8
HSTA 101H	American History I
HSTA 102H	American History II
HSTA 103H	Honors American History I
HSTA 104H	Honors American History II
HSTR 101H	Western Civilization I
HSTR 102H	Western Civilization II
HSTR 103H	Honors Western Civilization I
HSTR 104H	Honors Western Civilization II
<b>Total Hours</b>	<b>8</b>

Minimum Required Grade: C-

### American History Electives

Select at least 9 credits from the following:	9
HSTA 191	Special Topics
HSTA 255	Montana History

HSTA 262	Abolitionism
HSTA 291	Special Topics
HSTA 315	Early American Republic
HSTA 316	American Civil War Era
HSTA 320	Birth of Modern US
HSTA 321	America in Crisis
HSTA 322	U.S. History: WWII to Present
HSTA 323	U.S. in the 1950s
HSTA 324	U.S. in the 1960s
HSTA 333	American Military History
HSTA 335	Movie America
HSTA 342H	Afr Amer Hist to 1865
HSTA 343H	Afr Amer Hist Since 1865
HSTA 347	Voodoo, Muslim, Church: Black Religion
HSTA 361	The American South
HSTA 370H	Wmn Amer Colonial to Civil War
HSTA 371H	Wmn Amer Civil War to Present
HSTA 377	Alcohol in American History
HSTA 380	American Constitutional History
HSTA 382H	History of American Law
HSTA 385	Families & Children in America
HSTA 391	Special Topics
HSTA 415	The Black Radical Tradition
HSTA 417	Prayer & Civil Rights
HSTA 461	Research in Montana History
HSTA 471	Writing Women's Lives
HSTA 491	Special topics
HSTA 494	Seminar
HSTR 364	Environmental History
HSTR 369	20th Cent Amer West
NASX 354X	Indians of MT since Rsrvtm Era
Total Hours	9

Minimum Required Grade: C-

## World History Electives

Select at least 9 credits from the following:		9
HSTR 146H	The Silk Road	
HSTR 191	Special Topics	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 240	East Asian Civilizations	
HSTR 241H	Central Asian Cult & Civ	
HSTR 262H	Islamic Civil: Classical Age	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 291	Special Topics	
HSTR 334	Latin America: Reform & Revolution	
HSTR 345H	Modern China	
HSTR 391	Special Topics	
HSTR 392	Independent Study	
HSTR 435	Lat Am Human Rgts & Memory	
HSTR 437	US-Latin America Relations	

HSTR 491	Special Topics
HSTR 492	Independent Study
Total Hours	9
Minimum Required Grade: C	

## European History Electives

Select at least 9 credits from the following:		9
HSTR 312	Age of Absolut 1648-1789	
HSTR 320	Europ Social & Intellect Hist	
HSTR 323	Europ Social & Intellect Hist	
HSTR 348	Britain 1485-1688	
HSTR 349	Britain from Rev - Reform 1688	
HSTR 352	France Revol 1789-1848	
HSTR 353	Modern France	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 361	Germ:Augsburg-Bismarck	
HSTR 363	Eastern Europe	
HSTR 377	European Internal Relat	
HSTR 391	Special Topics	
HSTR 392	Independent Study	
HSTR 418	Britain 1500 - 1800	
HSTR 491	Special Topics	
HSTR 492	Independent Study	
Total Hours	9	

Minimum Required Grade: C-

## History

Select one of the following:		3
HSTA 461	Research in Montana History	
HSTA 471	Writing Women's Lives	
HSTR 400	Historical Research Seminar	
HSTR 418	Britain 1500 - 1800	
HSTR 437	US-Latin America Relations	
Total Hours	3	

## History Education

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Curriculum and Instruction. Individuals must complete the teaching major/teaching track within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (p. 101)

Students may earn a teaching major in history by completing the requirements for the BA in history, to include the following:

- HSTA 101H or HSTA 102H;
- HSTR 101H or HSTR 102H;
- HSTR 200;
- HSTA 255;
- 9 credits in world history;
- 6 upper-division credits in American history;
- 6 upper-division credits in European history;
- 6 additional credits upper-division history electives;
- one HSTA/HSTR 400-level approved writing course; and
- EDU 497 .

All requirements for the history major apply. Students with a teaching major in history must also complete a teaching major or minor in a second field. For the history teaching major, students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. Students may also earn a teaching minor in history. See the Department of Teaching and Learning (p. 95) for more information.

## Bachelor of Arts - History; History Education Option

### College Humanities & Sciences

Degree Specific Credits: 46

Required Cumulative GPA: 2.0

### Catalog Year: 2017-2018

**Note:** A maximum of 60 credits in History are allowed. Penalties will apply for more than 60 credits. Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. See the Department of Teaching and Learning (p. 95) in the College of Education and Human Sciences for more information. A major GPA of 2.75 is required to be eligible for student teaching. Students who choose to complete a teaching major in history must also complete a teaching major or minor in a second field.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

## Summary

Lower Division Core Courses	12
American History Introductory Course	
European History Introductory Course	
Montana History	
Historical Methods Course	
American History Upper Division Electives	6

World History Electives	9
European Upper Division History Electives	6
Upper Division History Electives	6
Teaching Methods Requirement	4
History Upper Division Writing Requirement	3
Total Hours	46

### Lower Division Core Courses

**Rule:** Must complete the following subcategories

Minimum Required Grade: C-

12 Total Credits Required

#### American History Introductory Course

**Rule:** Must complete 1 of the following courses

**Note:** AP Policy: Those students scoring a "5" on the American History AP exam can be excused from the survey course requirement. Another American history course must then be taken in place of the survey course. Please consult with the Humanities Advisor with questions.

HSTA 101H	American History I	4
or HSTA 102H	American History II	
Total Hours		4

Minimum Required Grade: C-

#### European History Introductory Course

**Rule:** Must complete 1 of the following courses

**Note:** AP Policy: Those students scoring a "5" on the European History AP exam can be excused from the survey course requirement. Another European history course must then be taken in place of the survey course. Please consult with the Humanities Advisor with questions.

HSTR 101H	Western Civilization I	4
or HSTR 102H	Western Civilization II	
Total Hours		4

Minimum Required Grade: C-

#### Montana History

**Rule:** Complete the following course.

HSTA 255	Montana History	3
Total Hours		3

Minimum Required Grade: C-

#### Historical Methods Course

**Rule:** Complete the following course.

HSTR 200	Intro: Historical Methods	1
Total Hours		1

Minimum Required Grade: C-

## American History Upper Division Electives

Select at least 6 credits from the following: 6

HSTA 315	Early American Republic
HSTA 316	American Civil War Era
HSTA 320	Birth of Modern US
HSTA 321	America in Crisis
HSTA 322	U.S. History: WWII to Present
HSTA 323	U.S. in the 1950s
HSTA 324	U.S. in the 1960s
HSTA 333	American Military History
HSTA 335	Movie America
HSTA 342H	Afr Amer Hist to 1865
HSTA 343H	Afr Amer Hist Since 1865
HSTA 347	Voodoo, Muslim, Church: Black Religion
HSTA 361	The American South
HSTA 370H	Wmn Amer Colonial to Civil War
HSTA 371H	Wmn Amer Civil War to Present
HSTA 377	Alcohol in American History
HSTA 380	American Constitutional History
HSTA 382H	History of American Law
HSTA 385	Families & Children in America
HSTA 391	Special Topics
HSTA 491	Special topics
HSTA 494	Seminar
HSTR 364	Environmental History
HSTR 369	20th Cent Amer West

Total Hours 6

Minimum Required Grade: C-

## World History Electives

Select at least 9 credits from the following: 9

HSTR 146H	The Silk Road
HSTR 191	Special Topics
HSTR 230H	Colonial Latin America
HSTR 231H	Modern Latin America
HSTR 240	East Asian Civilizations
HSTR 241H	Central Asian Cult & Civ
HSTR 262H	Islamic Civil: Classical Age
HSTR 264H	Islamic Civ: Modrn Era
HSTR 272E	Terrorism:Viol Mod Wrld
HSTR 291	Special Topics
HSTR 334	Latin America: Reform & Revolution
HSTR 345H	Modern China
HSTR 391	Special Topics
HSTR 392	Independent Study
HSTR 435	Lat Am Human Rgts & Memory
HSTR 437	US-Latin America Relations
HSTR 491	Special Topics
HSTR 492	Independent Study

Total Hours 9

Minimum Required Grade: C-

## European Upper Division History Electives

Select at least 6 credits from the following: 6

HSTR 302H	Ancient Greece
HSTR 312	Age of Absolut 1648-1789
HSTR 320	Europ Social & Intellect Hist
HSTR 323	Europ Social & Intellect Hist
HSTR 348	Britain 1485-1688
HSTR 349	Britain from Rev - Reform 1688
HSTR 352	France Revol 1789-1848
HSTR 353	Modern France
HSTR 354	Italy: 1300-1800
HSTR 355	Italy: 1800-Present
HSTR 357	Russia to 1881
HSTR 358	Russia Since 1881
HSTR 361	Germ:Augsburg-Bismarck
HSTR 363	Eastern Europe
HSTR 377	European Internal Relat
HSTR 391	Special Topics
HSTR 491	Special Topics

Total Hours 6

Minimum Required Grade: C-

## Upper Division History Electives

**Rule:** Complete two additional upper division history courses

**Note:** Courses can be selected from HSTA or HSTR 300-level and above.

Minimum Required Grade: C-

6 Total Credits Required

## Teaching Methods Requirement

**Rule:** Complete the following course.

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## History Upper Division Writing Requirement

Select one of the following: 3

HSTA 461	Research in Montana History
HSTA 471	Writing Women's Lives
HSTR 400	Historical Research Seminar
HSTR 418	Britain 1500 - 1800
HSTR 437	US-Latin America Relations

Total Hours 3

Minimum Required Grade: C-

# History Minor

## Minor - History (Minor)

### College Humanities & Sciences

Degree Specific Credits: 26

Required Cumulative GPA: 2.0

### Catalog Year: 2017-2018

**Note:** A minimum of 26 credits in History are required of which

- 6 credits must be in American (AM) History,
- 6 must be in European (EU) History, and
- 6 in World (WRLD) History (Asian, Islamic, African, Latin American or international).

History minors must complete at least 9 upper-division credits.

## Summary

Introductory History Courses	8
American History Electives	6
World History Electives	6
European History Electives	6
<b>Total Hours</b>	<b>26</b>

## Introductory History Courses

**Note:** Student must select either the regular or honors version of a course to apply to the requirement.

These courses count toward the American, World, and European electives.

AP Policy: Those students scoring a "5" on either the American History or European History AP exam are excused from the above requirement. These students earn credit toward graduation but do not earn credit toward the history degree.

Select two of the following: 8

HSTA 101H	American History I
HSTA 102H	American History II
HSTA 103H	Honors American History I
HSTA 104H	Honors American History II
HSTR 101H	Western Civilization I
HSTR 102H	Western Civilization II
HSTR 103H	Honors Western Civilization I
HSTR 104H	Honors Western Civilization II
<b>Total Hours</b>	<b>8</b>

Minimum Required Grade: C-

## American History Electives

Select 6 credits from the following: 6

HSTA 191	Special Topics
HSTA 255	Montana History
HSTA 262	Abolitionism
HSTA 291	Special Topics
HSTA 315	Early American Republic
HSTA 316	American Civil War Era
HSTA 320	Birth of Modern US
HSTA 321	America in Crisis
HSTA 322	U.S. History: WWII to Present
HSTA 323	U.S. in the 1950s
HSTA 324	U.S. in the 1960s
HSTA 333	American Military History
HSTA 335	Movie America
HSTA 342H	Afr Amer Hist to 1865
HSTA 343H	Afr Amer Hist Since 1865
HSTA 347	Voodoo, Muslim, Church: Black Religion
HSTA 361	The American South
HSTA 370H	Wmn Amer Colonial to Civil War
HSTA 371H	Wmn Amer Civil War to Present
HSTA 377	Alcohol in American History
HSTA 380	American Constitutional History
HSTA 382H	History of American Law
HSTA 385	Families & Children in America
HSTA 391	Special Topics
HSTA 491	Special topics
HSTA 494	Seminar
HSTR 364	Environmental History
HSTR 369	20th Cent Amer West
NASX 354X	Indians of MT since Rsrvtm Era
<b>Total Hours</b>	<b>6</b>

Minimum Required Grade: C-

## World History Electives

Select 6 credits from the following: 6

HSTR 146H	The Silk Road
HSTR 191	Special Topics
HSTR 230H	Colonial Latin America
HSTR 231H	Modern Latin America
HSTR 240	East Asian Civilizations
HSTR 241H	Central Asian Cult & Civ
HSTR 262H	Islamic Civil: Classical Age
HSTR 272E	Terrorism:Viol Mod Wrld
HSTR 291	Special Topics
HSTR 334	Latin America: Reform & Revolution
HSTR 391	Special Topics
HSTR 392	Independent Study
HSTR 435	Lat Am Human Rgts & Memory
HSTR 491	Special Topics

HSTR 492	Independent Study	
Total Hours		6

Minimum Required Grade: C

## European History Electives

Select 6 credits from the following:		6
HSTR 312	Age of Absolut 1648-1789	
HSTR 320	Europ Social & Intellect Hist	
HSTR 323	Europ Social & Intellect Hist	
HSTR 348	Britain 1485-1688	
HSTR 349	Britain from Rev - Reform 1688	
HSTR 352	France Revol 1789-1848	
HSTR 353	Modern France	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 361	Germ:Augsburg-Bismarck	
HSTR 363	Eastern Europe	
HSTR 377	European Internal Relat	
HSTR 391	Special Topics	
HSTR 392	Independent Study	
HSTR 491	Special Topics	
HSTR 492	Independent Study	
Total Hours		6

Minimum Required Grade: C-

## Teaching History Track

A teaching minor is an academic minor which may contain different course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete a teaching major in a content area plus the teacher preparation program through the Department of Curriculum and Instruction. Additional teaching areas can be added through completion of either a teaching major or a teaching minor in that content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (p. 101)

The term 'minor' for this teaching option refers to courses that need to be completed. To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a minor form for graduation or the minor section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

## Teaching Methods Requirement

**Rule:** Complete the following course.

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

# History-Political Science

## History-Political Science

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Teaching and Learning. Individuals must complete the teaching major/teaching track within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements ([http://archive.umt.edu/catalog/16\\_17/colleges-schools-programs/education-and-human-sciences/teaching-and-learning/lic-secondary-licensure/default.php](http://archive.umt.edu/catalog/16_17/colleges-schools-programs/education-and-human-sciences/teaching-and-learning/lic-secondary-licensure/default.php))

This major is intended solely for students who want to be licensed to teach history, government, and one additional social science at the middle and high school levels. Requirements for the combined history/political science major are as follows: **in history**, a minimum of 31 credits, including: HSTR 101 or 102, HSTA 101 and 102, HSTR 200, HSTA 255, one elective course in world history, three upper-division elective courses to include at least one American and one European course, and one HSTA/HSTR 400-level approved writing course; **in political science**, a minimum of 30 credits, including: PSCI 210, 220, 230, 250, three upper-division elective courses in American government or public law, and three upper-division elective courses in comparative or international relations; **in one additional social science**, a minimum of 9 elective credits in economics or geography or psychology or sociology; and EDU 497 (C&I 428). Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. Students are eligible for a teaching license in social studies broadfield. See the Department of Curriculum & Instruction for more information.

To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publication and are used for advising purposes only. You do not fill out a major change for a track.

# Bachelor of Arts - History-Political Science

## College Humanities & Sciences

Degree Specific Credits: 74



Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

Summary

Lower Division Core Courses	28
Core Courses	
American History Introductory Courses	
Western History Introductory Courses	
Upper Division History Elective	3
American History Elective	3
World History Elective	3
European History Elective	3
American Government/Public Law Electives	9
Comparative/International Relations Electives	9
Additional Electives	9
Economics	
Geography	
Psychology	
Sociology	
Education Methods	4
Upper Division Writing Requirement	3
<b>Total Hours</b>	<b>74</b>

Lower Division Core Courses

Rule: Must complete the following subcategories

28 Total Credits Required

Core Courses

Rule: Must complete all of the following courses:

HSTA 255	Montana History	3
HSTR 200	Intro: Historical Methods	1
PSCI 210S	Intro to American Government	3
PSCI 220S	Intro to Comparative Govt	3
PSCI 230X	Intro to International Rel	3
PSCI 250E	Intro to Political Theory	3
<b>Total Hours</b>		<b>16</b>

Minimum Required Grade: C-

American History Introductory Courses

Note: Student must select either the regular or honors version of a course to apply to the requirement.

Select two of the following:	8
HSTA 101H	American History I
HSTA 102H	American History II
HSTA 103H	Honors American History I

HSTA 104H	Honors American History II
<b>Total Hours</b>	<b>8</b>

Minimum Required Grade: C-

Western History Introductory Courses

Note: Student must select either the regular or honors version of a course to apply to the requirement.

Select one of the following:	4
HSTR 101H	Western Civilization I
HSTR 102H	Western Civilization II
HSTR 103H	Honors Western Civilization I
HSTR 104H	Honors Western Civilization II
<b>Total Hours</b>	<b>4</b>

Minimum Required Grade: C-

Upper Division History Elective

Rule: Must complete at least 3 credits of upper division HSTA or HSTR electives.

Minimum Required Grade: C-

American History Elective

Note: Students are expected to take 3 additional Upper Division History credits beyond those specified and may be selected from this category.

Note: HSTR 391, HSTR 392, HSTR 491, HSTR 492 and HSTA 391 and HSTA 491 may apply to this requirement depending on the course content.

Select at least 3 credits from the following:	3
HSTA 315	Early American Republic
HSTA 316	American Civil War Era
HSTA 320	Birth of Modern US
HSTA 321	America in Crisis
HSTA 322	U.S. History: WWII to Present
HSTA 323	U.S. in the 1950s
HSTA 324	U.S. in the 1960s
HSTA 333	American Military History
HSTA 335	Movie America
HSTA 342H	Afr Amer Hist to 1865
HSTA 343H	Afr Amer Hist Since 1865
HSTA 347	Voodoo, Muslim, Church: Black Religion
HSTA 361	The American South
HSTA 370H	Wmn Amer Colonial to Civil War
HSTA 371H	Wmn Amer Civil War to Present
HSTA 377	Alcohol in American History
HSTA 380	American Constitutional History
HSTA 382H	History of American Law
HSTA 385	Families & Children in America
HSTA 494	Seminar
HSTR 364	Environmental History
HSTR 369	20th Cent Amer West

NASX 354X	Indians of MT since Rsrvtm Era	
Total Hours		3

Minimum Required Grade: C-

## World History Elective

**Note:** Students are expected to take 3 additional Upper Division History credits beyond those specified and may be selected from this category.

**Note:** HSTR 391, HSTR 392, HSTR 491, HSTR 492 and HSTA 391 and HSTA 491 may apply to this requirement depending on the course content.

Select at least 3 credits from the following:		3
HSTR 146H	The Silk Road	
HSTR 230H	Colonial Latin America	
HSTR 231H	Modern Latin America	
HSTR 240	East Asian Civilizations	
HSTR 241H	Central Asian Cult & Civ	
HSTR 262H	Islamic Civil: Classical Age	
HSTR 264H	Islamic Civ: Modrn Era	
HSTR 272E	Terrorism:Viol Mod Wrld	
HSTR 334	Latin America: Reform & Revolution	
HSTR 345H	Modern China	
HSTR 435	Lat Am Human Rgts & Memory	
Total Hours		3

Minimum Required Grade: C-

## European History Elective

**Note:** Students are expected to take 3 additional Upper Division History credits beyond those specified and may be selected from this category.

**Note:** HSTR 391, HSTR 492, HSTR 491, may apply to this requirement depending on the course content.

Select at least 3 credits from the following:		3
HSTR 312	Age of Absolut 1648-1789	
HSTR 320	Europ Social & Intellect Hist	
HSTR 323	Europ Social & Intellect Hist	
HSTR 348	Britain 1485-1688	
HSTR 349	Britain from Rev - Reform 1688	
HSTR 352	France Revol 1789-1848	
HSTR 353	Modern France	
HSTR 354	Italy: 1300-1800	
HSTR 355	Italy: 1800-Present	
HSTR 357	Russia to 1881	
HSTR 358	Russia Since 1881	
HSTR 361	Germ:Augsburg-Bismarck	
HSTR 363	Eastern Europe	
HSTR 377	European Internal Relat	
Total Hours		3

Minimum Required Grade: C-

## American Government/Public Law Electives

Select 9 credits from the following:		9
PSCI 340	Exp Offering: American Govt	
PSCI 341	Political Parties and Election	
PSCI 342	Media, Public Opinion, Polling	
PSCI 344	State and Local Government	
PSCI 345	American Political System	
PSCI 348	US Multicultural Politics	
PSCI 352	American Political Thought	
PSCI 365	Pub Policy Issues and Analysis	
PSCI 370	Courts and Judicial Politics	
PSCI 433	International Law & Org	
PSCI 440	Exp Offering: American Govt	
PSCI 443	Politics of Social Movements	
PSCI 444	Am Political Participation	
PSCI 445	Political Psychology	
PSCI 461	Administrative Law	
PSCI 462	Human Resource Management	
PSCI 468	Public Policy Cycle and the Climate	
PSCI 471	American Constitutional Law	
PSCI 474	Civil Rights Seminar	

Total Hours 9

Minimum Required Grade: C-

## Comparative/International Relations Electives

Select 9 credits from the following:		9
PSCI 311	Rev & Reform Modern China	
PSCI 320	Exp Offering: Comp Politics	
PSCI 322	Politics of Europe	
PSCI 324	Climate Policies: China & U.S.	
PSCI 325	Politics of Latin America	
PSCI 326	Politics of Africa	
PSCI 327	Politics of Mexico	
PSCI 328	Politics of China	
PSCI 330	Exp Offering: Intrnt Relations	
PSCI 332	Global Environmental Pol.	
PSCI 334	International Security	
PSCI 335	American Foreign Policy	
PSCI 336	European Union	
PSCI 337	Model United Nations	
PSCI 381	State Formation	
PSCI 420	Exp Offering: Comp Politics	
PSCI 430	Exp Offering: Intrnt Relations	
PSCI 431	Politics of Global Migration	
PSCI 433	International Law & Org	
PSCI 456	Chinese Polit & Soc Thought	
PSCI 463	Development Administration	
PSCI 481	Origins of Democracy and Authoritarianism	
PSCI 482	Politics of the World Economy	

Total Hours 9

Minimum Required Grade: C-

## Additional Electives

### Economics

**Note:** ECNS 191, ECNS 391, ECNS 392, ECNS 491, and ECNS 492 may apply to this requirement depending on the course content.

Select 9 credits from the following: 9

ECNS 101S	Economic Way of Thinking
ECNS 201S	Principles of Microeconomics
ECNS 202S	Principles of Macroeconomics
ECNS 217X	Issues in Economic Development
ECNS 301	Intermediate Micro with Calc
ECNS 302	Intermediate Macroeconomics
ECNS 310	Intro Health Economics
ECNS 312	Labor Economics
ECNS 313	Money and Banking
ECNS 320	Public Finance
ECNS 403	Introduction to Econometrics
ECNS 405	Game Theory
ECNS 406	Industrial Organization
ECNS 431	International Trade
ECNS 433	Economics of the Environment
ECNS 445	Int Env Econ & Clim Change
ECNS 450	Adv. Topics in Economic Dev.
ECNS 488	Res Meth & Thesis Design

Total Hours 9

Minimum Required Grade: C-

### Geography

**Note:** GPHY 391, GPHY 491, and GPHY 492 may apply to this requirement depending on the course content.

Select 9 credits from the following: 9

GPHY 111N	Intro to Physical Geography
GPHY 112N	Intro to Phys Geography Lab
GPHY 121S	Human Geography
GPHY 141S	Geography of World Regions
GPHY 144	Glacier National Park in Winter
GPHY 241	Montana
GPHY 245X	The Middle East
GPHY 284	Intro to GIS and Cartography
GPHY 291	Special Topics
GPHY 314	Global Mountain Environments
GPHY 317	Geomorphology
GPHY 323S	Economic Geography of Rural Areas
GPHY 335	Water Policy
GPHY 338	Mountains and Society
GPHY 342	North America
GPHY 344	Crown of the Continent
GPHY 347	Regional Geography (Multiple Regions)
GPHY 348	Field Studies in Geography
GPHY 378	Preceptorship in Geography

GPHY 385	Field Techniques
GPHY 421	Sustainable Cities
GPHY 432	Human Role Environmental Change
GPHY 433	Cultural Ecology
GPHY 434	Food and Famine
GPHY 438	Mountain Field Study
GPHY 444	High Asia
GPHY 465	Planning Principles & Processes
GPHY 466	Environmental Planning
GPHY 468	Community & Regional Analysis
GPHY 469	Planning & Analysis Laboratory
GPHY 481	Advanced Cartographic Design
GPHY 482	Spatial Analysis & GIS
GPHY 485	Internet GIS
GPHY 486	Transport, Planning & GIS
GPHY 487	Remote Sensing/Raster GIS
GPHY 488	Applications of GIS
GPHY 489	Cartography/GIS Laboratory
GPHY 497	Workshop in Teaching Geography

Total Hours 9

Minimum Required Grade: C-

### Psychology

**Note:** PSYX 191, PSYX 192, PSYX 290, PSYX 291, PSYX 292, PSYX 390, PSYX 391, PSYX 392, and PSYX 491 may apply to this requirement depending on the course content.

Select 9 credits from the following: 9

PSYX 100S	Intro to Psychology
PSYX 105	Careers in Psychology
PSYX 120	Research Methods I
PSYX 161S	Fund of Organizational Psych
PSYX 222	Psychological Statistics
PSYX 230	Developmental Psychology
PSYX 233	Fund of Psychology of Aging
PSYX 238	Adolescent Psychology
PSYX 240	Fund of Abnormal Psychology
PSYX 250N	Fund of Biological Psychology
PSYX 270	Fund Psychology of Learning
PSYX 280	Fund of Memory and Cognition
PSYX 320	Research Methods III
PSYX 340	Abnormal Psychology
PSYX 345	Child & Adolescent Psych Dis
PSYX 348	Psychology of Family Violence
PSYX 352	Comparative Psychology
PSYX 356	Human Neuropsychology
PSYX 360	Social Psychology
PSYX 362	Multicultural Psychology
PSYX 376	Prin Cognit Behav Mod
PSYX 377	Personalized Student Instr
PSYX 378	Intro to Clinical Psych
PSYX 385	Psychology of Personality
PSYX 400	History & System in Psychology

PSYX 442	Counseling Theories in Context	
Total Hours		9

Minimum Required Grade: C-

### Sociology

**Note:** SOCI 191, SOCI 291, SOCI 391, SOCI 491, and SOCI 492 may apply to this requirement depending on the course content.

Select 9 credits from the following: 9

SOCI 101S	Introduction to Sociology
SOCI 130S	Soc of Alternative Religions
SOCI 202	Social Statistics
SOCI 211S	Introduction to Criminology
SOCI 212S	Social Issues Southeast Asia
SOCI 220S	Race, Gender & Class
SOCI 221	Criminal Justice System
SOCI 270	Intro Development Sociology
SOCI 275S	Gender and Society
SOCI 306	Sociology of Work
SOCI 312	Criminal Adjudication
SOCI 318	Sociological Research Methods
SOCI 325	Social Stratification
SOCI 330	Juvenile Delinquency
SOCI 332	Sociology of the Family
SOCI 335	Juvenile Justice System
SOCI 345	Sociology of Organizations
SOCI 346	Rural Sociology
SOCI 350	The Community
SOCI 355	Population and Society
SOCI 362	Sociology of Law Enforcement
SOCI 382	Soc Psych and Social Structure
SOCI 386	Preceptorship in Sociology
SOCI 423	Sociology of Corrections
SOCI 435	Law and Society
SOCI 438	Seminar in Crime & Deviance
SOCI 441	Capstone: Inequal and Soc Just
SOCI 442	ISJ Service Learning
SOCI 443	Sociology of Poverty
SOCI 455	Classical Sociological Theory
SOCI 460	Capstone: Rural and Env Change
SOCI 470	Environmental Sociology
SOCI 471	Gender and Global Development
SOCI 485	Political Sociology

Total Hours 9

Minimum Required Grade: C-

### Upper Division Writing Requirement

Select one of the following: 3

HSTA 461	Research in Montana History
HSTA 471	Writing Women's Lives
HSTR 400	Historical Research Seminar

HSTR 418	Britain 1500 - 1800	
HSTR 437	US-Latin America Relations	
Total Hours		3

### Teaching Social Studies Track

Individuals interested in teaching in K-12 schools must complete a degree in the content area they want to teach plus the teacher preparation program through the Department of Curriculum and Instruction. Individuals must complete the teaching major/teaching track within that degree program, which may contain different course requirements than the academic major since the sequence of courses is designed to meet state standards. Upon completion of the degree program with the teaching track and the secondary licensure program, one will be eligible for a standard Montana teaching license in this content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (p. 101)

This major is intended solely for students who want to be licensed to teach history, government, and one additional social science at the middle and high school levels. Requirements for the combined history/political science major are as follows:

- **in history**, a minimum of 31 credits, including:
  - HSTR 101H or HSTR 102H,
  - HSTA 101H and HSTA 102H, HSTR 200, HSTA 255,
  - one elective course in world history,
  - three upper-division elective courses to include at least one American and one European course, and
  - one HSTA/HSTR 400-level approved writing course;
- **in political science**, a minimum of 30 credits, including:
  - PSCI 210S, PSCI 220S, PSCI 230X, PSCI 250E,
  - three upper-division elective courses in American government or public law, and
  - three upper-division elective courses in comparative or international relations;
- **in one additional social science**, a minimum of 9 elective credits in economics or geography or psychology or sociology; and EDU 497 .

Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. Students are eligible for a teaching license in social studies broadfield. See the Department of Curriculum & Instruction (p. 95) for more information.

To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publication and are used for advising purposes only. You do not fill out a major change for a track.

**Note:** Students must be formally admitted to the Teacher Education Program and complete all of the professional education licensure requirements. Students who complete the history/political science

combined major are eligible for a teaching license in social studies broadfield. See the Department of Teaching and Learning (p. 95) in the College of Education and Human Sciences for more information. A major GPA of 2.75 is required to be eligible for student teaching.

### Education Methods

**Rule:** Complete the following course.

**Note:** The EDU 497 course number is used for multiple courses. Students should register for EDU 497 Methods: 5-12 Social Studies.

EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

## Mathematical Sciences Department

### Emily Stone, Chair

Mathematics is studied both as a tool and for its own sake. Its usefulness in the sciences - physical, biological, social, behavioral, and environmental - and in decision-making processes is so established that it is an indispensable part of many curricula.

Mathematics is chosen as a major area of study by individuals who find it challenging, fascinating, and beautiful. It is also appreciated by many who seek primarily to use mathematics as a tool.

A career in mathematics, except for teaching at the secondary level, generally requires a graduate degree as preparation. Careers include teaching, research, and the application of mathematics to diverse problems in institutions of higher learning, business, industry, and government.

The Bachelor of Arts, Master of Arts, and Doctor of Philosophy degrees are offered as well as a Bachelor of Science in Mathematical Sciences-Computer Science.

**High School Preparation:** For studying mathematics at the University level, it is recommended that the high school course work consist of four years of college-preparatory mathematics, including geometry, trigonometry, and college algebra or precalculus. A course in calculus or statistics is helpful, but not necessary. It is unusual to complete an undergraduate degree in mathematics in four years without the necessary background to take M 171 during the freshman year (preferably during the first semester at the university).

## Undergraduate

- Mathematics B.A. (p. 277)
- Mathematics B.A., Applied Mathematics Concentration (p. 270)
- Mathematics B.A., Combinatorics and Optimization Concentration (p. 272)
- Mathematics B.A., Mathematics Education Concentration (p. 278)
- Mathematics B.A., Pure Mathematics Concentration (p. 280)
- Mathematics B.A., Statistics Concentration (p. 281)
- Mathematical Sciences-Computer Sciences B.S. (p. 274)

## Undergraduate Minors

- Mathematics (p. 269)

## Mathematics Minor

A handout with detailed advice for Math minors, including suggested curricula, is available on the Math Department's home page.

## Minor - Mathematics

### College Humanities & Sciences

**Degree Specific Credits:** 23

**Required Cumulative GPA:** 2.0

**Catalog Year:** 2017-2018

## Summary

Calculus Requirement for a Minor in Mathematics

Elective Courses for a Minor in Mathematics	23
Total Hours	23

### Calculus Requirement for a Minor in Mathematics

**Note:** M 172 or M 182 are recommended since they are prerequisites for many upper-division mathematics courses.

Select one of the following:	4
M 162 Applied Calculus	
M 172 Calculus II (recommended)	
M 182 Honors Calculus II (recommended)	
Total Hours	4

Minimum Required Grade: C-

### Elective Courses for a Minor in Mathematics

**Rule:** Take 23 credits in M or STAT courses offered at UM-Missoula. M courses must be numbered M 115 or higher (excluding M 118). Courses must include at least three 3- or 4-credit courses at the 300 level or above (of which at least two must be taken at UM-Missoula).

#### Note:

1. The required Calculus course (M 162, M 172, or M 182) counts toward the 23 credits, as well as its prerequisite courses at the 100-level (e.g., M 171 or M 121).
2. Notice to Transfer Students: Mathematical Sciences courses that are not equivalent to courses taught at UM-Missoula can often be counted toward a Minor in Mathematics. This is determined on an individual basis; please contact the Department of Mathematical Sciences for details.

Minimum Required Grade: C-

23 Total Credits Required

### Mathematics Education Track

A teaching minor is an academic minor which may contain different course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete a teaching major in a content area plus the teacher preparation program through the Department of

Curriculum and Instruction. Additional teaching areas can be added through completion of either a teaching major or a teaching minor in that content area.

- Secondary Education Licensure Program (<http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (p. 101)

The term 'minor' for this teaching option refers to courses that need to be completed. To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a minor form for graduation or the minor section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

## Summary

Mathematical Science Courses	27
Mathematics Teaching Methods Course	4
<b>Total Hours</b>	<b>31</b>

### Mathematical Sciences Courses

**Rule:** Take all of the following courses.

M 171	Calculus I	4
or M 181	Honors Calculus I	
M 182	Honors Calculus II	4
or M 182	Honors Calculus II	
M 221	Introduction to Linear Algebra	4
M 301	Mathematics Technology for Teachers	3
M 307	Introduction to Abstract Mathematics	3
M 326	Number Theory	3
M 439	Euclidean and Non-Euclidean Geometry	3
STAT 341	Introduction to Probability and Statistics	3
or STAT 451	Statistical Methods I	
<b>Total Hours</b>		<b>27</b>

Minimum Required Grade: C-

### Mathematics Teaching Methods Course

**Rule:** Take the following course.

**Note:** The course number EDU 497 covers many different teaching method courses. The section of EDU 497 entitled "Methods: 5 - 12 Mathematics" is required for the Teaching Minor in Mathematics Education.

EDU 497	Teaching and Assessing	4
<b>Total Hours</b>		<b>4</b>

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For licensure to teach mathematics, a student must also gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure (see the College of Education and Human Sciences (p. 83)).

## Applied Mathematics

This degree concentration differs from the BA in Mathematics without a concentration only in the Concentration Requirements.

## Bachelor of Arts - Mathematics; Applied Mathematics Concentration

### College Humanities & Sciences

**Degree Specific Credits:** 67

**Required Cumulative GPA:** 2.0

### Catalog Year: 2017-2018

**Note:** The degree specific credits are much lower for double-majors and for students completing an additional minor (in another subject):

- 42 credits for students completing a second major, and
- 46 credits for students completing a minor.

## General Education Requirements

Information regarding these requirements can be found in the General Education Section (<http://catalog.umt.edu/academics/general-education-requirements>) of the catalog.

## Summary

Mathematics Core Courses	23
Upper-Division Mathematics Requirement	23
Upper-Division Elective Courses	
Upper-Division Elective Computer Labs	
Science Requirement	18
Advanced College Writing Requirement (usually fulfilled with courses that count towards the Upper-Division Mathematics Requirement)	
Foreign Language/Computer Science Requirement	3
Requirements for the Applied Mathematics Concentration (usually fulfilled with courses that count towards the Upper-Division Mathematics Requirement)	
<b>Total Hours</b>	<b>67</b>

### Mathematics Core Courses

**Rule:** Take all of the following courses.

M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	Calculus II	4
or M 182	Honors Calculus II	
M 210	Introduction to Mathematical Software	3
M 221	Introduction to Linear Algebra	4
M 273	Multivariable Calculus	4
M 300	Undergraduate Mathematics Seminar	1
M 307	Introduction to Abstract Mathematics	3
<b>Total Hours</b>		<b>23</b>

Minimum Required Grade: C-