INTERNATIONAL FIELD GEO SCIENCES 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 Sedimentation/Stratigraphy 4
or GEO 443 Principles of Sedimentary Petrology 4
Total Hours 4
Minimum Required Grade: C-

Degree Electives
Select 15 credits from the following:

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:

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
**Chemistry**

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

8-10 Total Credits Required

**Chemistry Option 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHMY 121N</td>
<td>Introduction to General Chemistry</td>
</tr>
<tr>
<td>CHMY 123 &amp; CHMY 124</td>
<td>Introduction to Organic and Biochemistry and Introduction to Organic and Biochemistry Lab</td>
</tr>
</tbody>
</table>

Minimum Required Grade: C-

**Chemistry Option 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHMY 141N &amp; CHMY 142N</td>
<td>College Chemistry I and College Chemistry I Lab</td>
</tr>
<tr>
<td>CHMY 143N &amp; CHMY 144N</td>
<td>College Chemistry II and College Chemistry II Lab</td>
</tr>
</tbody>
</table>

Minimum Required Grade: C-

**Math**

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

7-8 Total Credits Required

**Math Option 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 162</td>
<td>Applied Calculus</td>
</tr>
<tr>
<td>M 263</td>
<td>Applied Differential Equations (Applied Differential Equations)</td>
</tr>
</tbody>
</table>

Minimum Required Grade: C-

**Math Option 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 171</td>
<td>Calculus I</td>
</tr>
<tr>
<td>M 172</td>
<td>Calculus II</td>
</tr>
</tbody>
</table>

Minimum Required Grade: C-

**Computer Science**

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 250</td>
<td>Computer Mdlng/Science Majors</td>
</tr>
<tr>
<td>GPHY 284</td>
<td>Intro to GIS and Cartography</td>
</tr>
<tr>
<td>STAT 216</td>
<td>Introduction to Statistics</td>
</tr>
</tbody>
</table>

Total Hours: 3-4

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRMN 101</td>
<td>Elementary German I</td>
</tr>
<tr>
<td>GRMN 102</td>
<td>Elementary German II</td>
</tr>
</tbody>
</table>

Total Hours: 8

Minimum Required Grade: C-

**Irish**

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRSH 101</td>
<td>Elementary Irish</td>
</tr>
<tr>
<td>IRSH 102</td>
<td>Elementary Irish II</td>
</tr>
</tbody>
</table>

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. 1 formal field course module run by University College Cork, selected from
   a. GL 2016 (Easter Field Course - Dingle Peninsula)
   b. GL 3019 (Easter Field Course - Western Scotland)
   c. ER 3002 (Easter Field Course - North Clare)
   d. GL 4008 (Easter Field Course - Central Greece)
   e. another equivalent-level field course run by UCC and approved a priori by their UCC and UM advisors

2. While in residence at Cork, students must complete any 9 of the following courses in consultation with their UCC and UM advisors
   a. Sed Processes and Petrology
   b. Igneous and MM Petrology
   c. Invertebrate Paleontology & Evolution
   d. Plate Tectonics & Global Geophysics
   e. Igneous Petrogenesis & Geochemistry
   f. Metamorphism & Geochronology
   g. Advanced Structural Geology
   h. Sedimentary Environments
   i. Stratigraphy & Geologic Maps
   j. Environmental Geology
k. Terr Ecosystems Through Time
l. Micropaleontology & Palynology
m. Petroleum Geology & Basin Analysis
n. Applied Geophysics & Computer Applications
o. Advanced Igneous Petrology
p. Hydrogeology

3. 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