

# INTERNATIONAL FIELD GEOSCIENCES JOINT B.S.

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.

## Bachelor of Science - International Field Geosciences Joint

### 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

| Code                 | Title | Hours          |
|----------------------|-------|----------------|
| Lower-Division Core  |       | 8              |
| Upper-Division Core  |       | 16             |
| Degree Electives     |       | 15             |
| Physics              |       | 10             |
| Chemistry            |       | 8-10           |
| Mathematics          |       | 7-8            |
| Computer Science     |       | 3-4            |
| Language Requirement |       | 8              |
| German               |       |                |
| Irish                |       |                |
| Overseas Coursework  |       | 33-36          |
| <b>Total Hours</b>   |       | <b>108-115</b> |

Degree Specific Credits: 108-115

Required Cumulative GPA: 2.0

### Lower-Division Core

| Code  | Title                                | Hours    |
|---|--------------------------------------|----------|
| <b>Complete all of the following courses:</b> |                                      |          |
| GEO 101N                                      | Introduction to Physical Geology     | 3        |
| GEO 102N                                      | Introduction to Physical Geology Lab | 1        |
| GEO 201                                       | Geologic Evolution of North America  | 4        |
| <b>Total Hours</b>                            |                                      | <b>8</b> |

Minimum Required Grade: C-

### Upper-Division Core

**Rule:** Complete all of the following subcategories. 12 total credits required.

### Subcategory 1

| Code  | Title                             | Hours     |
|---|-----------------------------------|-----------|
| <b>Complete all of the following courses:</b> |                                   |           |
| GEO 302                                       | Mineralogy and Optical Mineralogy | 4         |
| GEO 315                                       | Structural Geology                | 4         |
| GEO 318                                       | Earth's Changing Climate          | 3         |
| <b>Total Hours</b>                            |                                   | <b>11</b> |

Minimum Required Grade: C-

### Subcategory 2

| Code  | Title                               | Hours    |
|---|-------------------------------------|----------|
| <b>Complete one of the following courses:</b> |                                     |          |
| GEO 309                                       | Sedimentation/Stratigraphy          | 4        |
| GEO 443                                       | Principles of Sedimentary Petrology | 4        |
| <b>Total Hours</b>                            |                                     | <b>4</b> |

Minimum Required Grade: C-

### Degree Electives

| Code   | Title                               | Hours     |
|--|-------------------------------------|-----------|
| <b>Complete 15 credits of the following courses:</b> |                                     |           |
| GEO 305  | Igneous & Metamorph Petrology       | 4         |
| GEO 309  | Sedimentation/Stratigraphy          | 4         |
| GEO 320  | Global Water                        | 4         |
| GEO 327  | Geochemistry                        | 4         |
| GEO 420  | Hydrogeology                        | 4         |
| GEO 433  | Global Tectonics                    | 4         |
| GEO 443  | Principles of Sedimentary Petrology | 4         |
| GEO 460  | Process Geomorphology               | 4         |
| GEO 491  | Special Topics                      | 4         |
| <b>Total Hours</b>                                   |                                     | <b>15</b> |

Minimum Required Grade: C-

### Physics

| Code  | Title  | Hours     |
|---|--|-----------|
| <b>Complete one of the following Physics sequences:</b> |  |           |
| <b>Algebra- and Trigonometry-based Physics:</b>         |  |           |
| PHSX 205N & PHSX 206N                                   | College Physics I and College Physics I Laboratory                               | 10        |
| PHSX 207N & PHSX 208N                                   | College Physics II and College Physics II Laboratory                             | 10        |
| <b>Calculus-based Physics:</b>                          |  |           |
| PHSX 215N & PHSX 216N                                   | Fundamentals of Physics with Calculus I and Physics Laboratory I with Calculus   | 10        |
| PHSX 217N & PHSX 218N                                   | Fundamentals of Physics with Calculus II and Physics Laboratory II with Calculus | 10        |
| <b>Total Hours</b>                                      |  | <b>10</b> |

Minimum Required Grade: C-

## Chemistry

| Code  | Title                             | Hours      |
|---|-----------------------------------|------------|
| <b>Complete one of the following courses:</b> |                                   | <b>4-5</b> |
| CHMY 121N                                     | Introduction to General Chemistry |            |
| CHMY 141N                                     | College Chemistry I               |            |
| & CHMY 142N                                   | and College Chemistry I Lab       |            |
| <b>Total Hours</b>                            |                                   | <b>4-5</b> |

Minimum Required Grade: C-

## Mathematics

| Code  | Title       | Hours    |
|---|-------------|----------|
| <b>Complete all of the following courses:</b> |             |          |
| M 171   | Calculus I  | 4        |
| M 172   | Calculus II | 4        |
| <b>Total Hours</b>                            |             | <b>8</b> |

Minimum Required Grade: C-

## Computer Science

| Code  | Title                        | Hours      |
|---|------------------------------|------------|
| <b>Complete one of the following courses:</b> |                              | <b>3-4</b> |
| GPHY 284                                      | Intro to GIS and Cartography |            |
| STAT 216                                      | Introduction to Statistics   |            |
| <b>Total Hours</b>                            |                              | <b>3-4</b> |

Minimum Required Grade: C-

## Language Requirement

**Note:** The "test out provision" applies as administered by the Department of Modern and Classical Languages and Literature.

| Code   | Title                | Hours    |
|--|----------------------|----------|
| <b>Complete one of the following language sequences:</b> |                      | <b>8</b> |
| <b>German</b>  |                      |          |
| GRMN 101   | Elementary German I  |          |
| GRMN 102   | Elementary German II |          |
| <b>Irish</b>   |                      |          |
| IRSH 101   | Elementary Irish     |          |
| IRSH 102   | Elementary Irish II  |          |
| <b>Total Hours</b>                                       |                      | <b>8</b> |

Minimum Required Grade: C-

## Overseas Coursework

| Code   | Title                                    | Hours        |
|--|--|--------------|
| <b>In addition to Geosciences coursework completed at UM, complete the following courses and field work at University College of Cork and the University of Potsdam:</b> |  | <b>33-36</b> |
| <b>Complete 1 of the following formal field course modules run by University College Cork:</b>   |  |              |
| 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, complete any 9 of the following courses in consultation with 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

**Complete 1 formal upper-level Geosciences course at the University of Potsdam. Recommended are courses that focus on computer-based visualization or geoscience data using GIS or other visualization platforms.**

**Total Hours** **33-36**

Minimum Required Grade: C-