Bachelor of Science in Applied Geophysics

2019-2020

Year 1

Fall
MA 1160/1161 CALCULUS I
(F, S, Su)
PH 1100 PHYSICS LAB I
1 CR (EDIT)
CH 1150 UNIV CHEMISTRY I
(3 CR EDITS)
CH 1151 CHEMISTRY LAB I
0.5 UNIT
GE 1100 UNDERSTANDING THE EARTH
3 CR EDITS

Spring
MA 2160 CALCULUS II
(F, S, Su)
PH 2100 UNIV PHYSICS II
1 CR EDIT
CH 1200 PHYSICS LAB II
1 CR
GE 2000 INTRO TO MINERALOGY
3 CR EDITS

13 CREDITS

Year 2

Fall
MA 2200 30 ELEM LINEAR ALGEBRA
2 CR EDITS
PH 2100 UNIV PHYSICS II-MECH
3 CR EDITS
GE 2000 INTRO TO MINERALOGY
3 CR EDITS

Spring
MA 3020 ELEM DIFFERENTIAL EQUATIONS
3 CR EDITS
PH 2200 INTRO TO PETROLOGY
3 CR EDITS
GE 3050 STRUCTURAL GEOLOGY
4 CR EDITS

14 CREDITS

Year 3

Fall
MA 3120 MULTIVARIABLE CALCULUS w/ TECH
4 CR EDITS
MA 4610 INTRO PARTIAL DIFF EQ
3 CR EDITS

Spring
PH 2400 UNIV PHYSICS IV
3 CR EDITS
MA 2720 STATISTICAL METHODS
4 CR EDITS

16 CREDITS

Year 4

Fall
GE 3250 COMP GEOSCIENCES
3 CR EDITS
MA 2720 STATISTICAL METHODS
4 CR EDITS

Spring
PH 2300 UNIV PHYSICS III
FLUIDS/ THERMO
2 CR EDITS
MA 3520 ELEM DIFFERENTIAL EQUATIONS
2 CR EDITS

14 CREDITS

This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.
### Advanced Geophysics Electives

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Offered</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE 4250 Fundamentals of Remote Sensing</td>
<td>Spring</td>
<td>PH 2200, MA 2160</td>
</tr>
<tr>
<td>GE 4500 Plate Tectonics and Global Geophysics</td>
<td>Fall</td>
<td>GE 2000, PH 2200, MA 3160</td>
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<tr>
<td>GE 4530 Planetary Geology and Geophysics</td>
<td>Fall</td>
<td>GE 2000, PH 2200, MA 2160</td>
</tr>
<tr>
<td>GE 4560 Earthquake Seismology</td>
<td>Fall</td>
<td>GE 3050, PH 2100, MA 3160</td>
</tr>
<tr>
<td>GE 4600 Reflection Seismology</td>
<td>Spring</td>
<td>GE 3040</td>
</tr>
<tr>
<td>GE 4610 Formation Eval. &amp; Petroleum Engineering</td>
<td>Fall</td>
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</tr>
<tr>
<td>GE 4933 Special Topics in Geophysics*</td>
<td>On Demand</td>
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</tr>
<tr>
<td>GE 4962 Ind. Geophysics Research Project**</td>
<td>On Demand</td>
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</tbody>
</table>

* **GE 4610 Restrictions:** Permission of instructor required

**GE 4962 Restrictions:** Permission of instructor required; May not be enrolled in one of the following Classes: Freshman, Sophomore

Note: With approval of Advisor and Department Chair, exceptions may be granted for Advanced Geophysics Elective requirements.

### BS Applied Geophysics Curriculum Overview (131 Total Credits)

- General Education, Free & Physical Education Electives
- Chemistry
- Physics & Geophysics Fundamentals
- Calculus, Statistics, & Economic Analysis
- Physical Geology, Mineralogy, Petrology, Historical, Structure & Depositional Systems
- Computational Geosciences, & Geology Electives
- Field Geology & Geophysics
- Advanced Geophysics Electives

### General Education Requirements

(http://www.mtu.edu/registrar/pdfs/core-and-hass-list-17-18-v2.pdf)

I. Core Courses (6 Credits)

- UN 1015
- UN 1025*

* Or one semester of a 3000 level or higher modern language.

II. Sophomore Core Courses (6 Credits)

- Creative and Critical Thinking (HU/FA)
- Social Responsibility and Ethical Reasoning (SS)

III. Hass Course Requirements (12 Credits)

(http://www.mtu.edu/registrar/pdfs/core-and-hass-list-17-18-v2.pdf)

- 6 credits 3000- or 4000-level
- 3 credits required from each of these 3 lists: Communication and Composition, Humanities and Fine Arts (HU/FA), and Social and Behavioral Sciences (EC/PSY/SS)
- No more than 3 credits on the Restricted HASS List

A. 6 credits 3000- or 4000-level:

1. ____________________  
2. ____________________

B. 6 credits at any level:

1. ____________________  
2. ____________________

IV. Co-curricular activities (3 units)

The co-curricular requirement consists of three semester units of physical education activities. These units are required for graduation, but are not included in the overall degree-credit requirement.

Note: Most physical education activities will last for 7 ½ weeks or ½ semester. A student would need six of these ½-semester units to fulfill the 3-semester unit co-curricular requirement.

PE __________  
PE __________  
PE __________