A 2.7 cumulative GPA in the Earth Science major is required for admission to the College of Education

<table>
<thead>
<tr>
<th>Year One</th>
<th>Year Two</th>
<th>Year Three</th>
<th>Year Four</th>
<th>Year Five</th>
</tr>
</thead>
</table>
| 4  
GEO 211 Mineralogy  
Prerequisites: GEO 111 and CHM 115 | 4  
GEO 319 Teaching Earth Science in Secondary Education  
Prerequisites: Earth Science major or minor, teacher certification candidate, and 18 credits of Earth Science | 4  
NRM 140 The Climatic Factor | 1  
GEO 485 Geology Seminar  
Prerequisites: Geology or Earth Science major or minor | 5  
Teacher Assisting  
ED 310 Organizing and Managing Classroom Environments  
EDR 321 Content Area Literacy  
EDT 370 Technology in Education  
Must be taken with or after EDI 311 but before EDI 431 | 5  
Student Teaching  
EDI 431 Student Teaching: Secondary  
EDI 432 Student Teaching: Secondary Content  
EDI 438 The Context of Educational Issues  
Must be taken with or after EDI 431 |
| 3  
CHM 115 Principles of Chemistry I  
Prerequisites: High school chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 201 | 3  
PSY 301 Child Development  
Prerequisite: PSY 101 | 3  
A 2.7 cumulative GPA in the Earth Science major is required for admission to the College of Education. | 4  
Minor Course  
Gen Ed | 3  
Minor Course  
Gen Ed |
| 3  
GEO 111 Exploring the Earth | 3  
Minor Course  
Gen Ed | 3  
Minor Course  
Gen Ed | 4  
Minor Course  
Gen Ed |
| 3  
MTH 122 College Algebra  
Prerequisite: MTH 110 or assignment through math placement exam  
Gen Ed or WRT 098 Writing with a Purpose | 3  
Minor Course  
Gen Ed | Total | Total |
| 3/4  
GEO 175 Research tools for Geosciences  
Prerequisites: GEO 111 and GEO 112 (can be taken concurrently). Gen Ed | Total | Total |
| 4  
WRT 150 Strategies in Writing  
GEO 112 Earth History  
Prerequisite: A course in physical or general geology | Total | Total |
| 4  
MTH 123 Trigonometry | Total | Total |
| 3  
Minor Course  
Gen Ed | Total | Total |
| 15 | Total | 15 |
| 14 | Total | 15 |
| 16* | Total | 15 |
| 13 | Total | 15 |
| 17 | Total | 13 |

* The block tuition rate is 12-15 credits. You will pay additional tuition for any credits over 15.

1 Students who self-place into WRT 098 should take this course in the fall semester and then take WRT 150 in the winter semester of their first year. Students who self-place into WRT 150 should normally take this course in the winter semester of their first year. Students will not need to take WRT 150 if they have earned credit for the course through AP/Dual Enrollment. A grade of C or better is required in WRT 150 in order to satisfy the WRT 150 requirement at GVSU.

2 Students must complete a total of two courses with an SWS attribute.

3 EDS 379 may be taken prior to the Teacher Assisting Semester but must be completed prior to Student Teaching. Permit required (COE – 616-331-6650).
For students with the Advanced Waiver/Override for Mathematics based on ACT scores, it is **STRONGLY RECOMMENDED** that proficiency in MTH 123 – Trigonometry – be demonstrated by either taking the MTH 123 course or by achieving a passing score on the GVSU math placement test **PRIOR** to taking PHY 220 and 221.

**Students with an ACT Science Subscore below 22 tend to be more successful if they only take one science course during the Fall semester of Year 1. CHM 109 is recommended prior to CHM 115 if chemistry was not taken in high school or if the ACT science subscore is below 22. However, CHM 109 does NOT count toward the Earth Science major.**

Earth Science students only have the option of a Bachelor of Science degree. The BS degree requirements are incorporated into the major requirements and include GEO 211, GEO 212, and MTH 123.

### Declaring the Earth Science and Education Major with Teachable Minor:

1. Log into myBanner from the GVSU homepage
2. Once logged in select “Student”, “Student Records”, and then, “Change Major”
3. Click on the “Change Major 1/Program” box
4. Click on the down arrow in the box next to “New Major 1/Program,” from here scroll down and choose “Earth Science-BS Secondary Education”
5. Click “Submit” and then “Change to New Program”
6. Return to the Change Major Screen and select “Add or Change Second Major”
7. Click on the down arrow in the box next to “New Major 2,” from here, scroll down and choose “Education” from the list and then click “Submit” and “Add Second Major”
8. Return to Change Major Screen and select “Add a Minor” or “Add or Delete Minor”, scroll to and select chosen minor and then click “Submit” and “Add Minor” (see below for minor options)

#### Teachable Majors and Teachable Minors for Secondary Education

<table>
<thead>
<tr>
<th>Teachable Majors</th>
<th>Teachable Minors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Music (K-12)</td>
</tr>
<tr>
<td>Earth/Space Science</td>
<td>Physical Education (K-12)</td>
</tr>
<tr>
<td>English</td>
<td>Physics</td>
</tr>
<tr>
<td>French</td>
<td>Social Studies</td>
</tr>
<tr>
<td>German</td>
<td>Spanish</td>
</tr>
<tr>
<td>History</td>
<td>Visual Arts (K-12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Biology-Teaching</th>
<th>History-Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry-Teaching</td>
<td>Mathematics-Secondary Education</td>
</tr>
<tr>
<td>Computer Science-Teaching</td>
<td>Physical Education-Teaching</td>
</tr>
<tr>
<td>Earth/Space Science-Teaching</td>
<td>Physics-Teaching</td>
</tr>
<tr>
<td>Economics-Teaching</td>
<td>Political Science-Teaching</td>
</tr>
<tr>
<td>English-Teaching</td>
<td>Psychology-Teaching</td>
</tr>
<tr>
<td>French-Teaching</td>
<td>School Health Education</td>
</tr>
<tr>
<td>Geography-Teaching</td>
<td>Spanish-Teaching</td>
</tr>
<tr>
<td>German-Teaching</td>
<td></td>
</tr>
</tbody>
</table>

#### General Education Overlap

<table>
<thead>
<tr>
<th>General Education Categories fulfilled by the Earth Science Major for Secondary Education:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Science with Lab: GEO 111</td>
</tr>
<tr>
<td>Mathematical Sciences: MTH 122</td>
</tr>
</tbody>
</table>

#### Second Major in Education

**Education Major Prerequisites (9 credits)**

- EDF 315 Diverse Perspectives on Education (3)
- EDI 337 Introduction to Learning and Assessment (3)
- PSY 301 Child Development (3) Prerequisite: PSY 101

**Teacher Assisting (14 - 17 credits)**

- EDI 331 Teacher Assisting-Secondary (5)
- EDF 310 Organizing and Managing Classroom Environments (3)
- EDR 321 Content Area Literacy (3)
- EDT 370 Technology in Education (3)

Must be taken with or after EDI 331 but before EDI 431

- EDS 379 Universal Design for Learning: Secondary (3)**

**Starting Fall 2013, EDS 379 may be taken prior to the Teacher Assisting Semester. Please consult with your College of Education Advisor to determine an appropriate time to take this course.**

**Student Teaching (13 credits)**

- EDI 431 Student Teaching, Secondary (8)
- EDI 432 Student Teaching, Secondary Content (2)
- EDF 485 The Context of Educational Issues (3)

Must be taken with or after EDI 431

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5 Students with an ACT Science Subscore below 22 tend to be more successful if they only take one science course during the Fall semester of Year 1. CHM 109 is recommended prior to CHM 115 if chemistry was not taken in high school or if the ACT science subscore is below 22. However, CHM 109 does NOT count toward the Earth Science major.