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

**Year One**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 115 Principles of Chemistry I</td>
<td>4</td>
<td>Prerequisites: High school chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 201</td>
</tr>
<tr>
<td>GEO 111 Exploring the Earth</td>
<td>4</td>
<td>Prerequisite: MTH 122 or assignment through math placement exam</td>
</tr>
<tr>
<td>MTH 122 College Algebra</td>
<td>3</td>
<td>Prerequisites: MTH 110 or assignment through math placement exam</td>
</tr>
<tr>
<td>Gen Ed or WRT 098 Writing with a Purpose</td>
<td>3/4</td>
<td>Prerequisites: GEO 111 and GEO 112 (can be taken concurrently).</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14/15</td>
<td>Total 15</td>
</tr>
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</table>

**Spring/Summer**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GEO 211 Mineralogy</td>
<td>4</td>
<td>Prerequisites: GEO 111 and CHM 115</td>
</tr>
<tr>
<td>PHY 220 General Physics I</td>
<td>4</td>
<td>Prerequisites: MTH 122 and MTH 123</td>
</tr>
<tr>
<td>PSY 101 Introductory Psychology</td>
<td>3</td>
<td>Prerequisite: PSY 101</td>
</tr>
<tr>
<td>EDF 315 Diverse Perspectives for Education</td>
<td>3</td>
<td>Minor Course</td>
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<td><strong>Total</strong></td>
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**Year Two**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>EDI 337 Introduction to Learning and Assessment</td>
<td>3</td>
<td>Minor Course</td>
</tr>
<tr>
<td>Gen Ed</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Gen Ed</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
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**Year Three**

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<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>GEO 485 Geology Seminar</td>
<td>1</td>
<td>Prerequisites: Geology or Earth Science major or minor</td>
</tr>
<tr>
<td>NRM 140 The Climatic Factor</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Issue</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
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**Year Four**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>GEO 485 SWS Geology Seminar</td>
<td>3</td>
<td>2E GEO 485 SWS Geology Seminar</td>
</tr>
<tr>
<td>Issue</td>
<td>3</td>
<td>3EDS 379 Universal Design for Learning; Secondary</td>
</tr>
<tr>
<td>Minor Course</td>
<td>3</td>
<td>3Sophomore Standing, EDF 315, and EDI 337. B- or better required.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>Total 14</td>
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</table>

**Year Five**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDI 331 Methods and Strategies of Secondary Teaching</td>
<td>5</td>
<td>Teacher Assisting</td>
</tr>
<tr>
<td>EDF 310 Organizing and Managing Classroom Environments</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EDR 321 Content Area Literacy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>EDT 370 Technology in Education</td>
<td>3</td>
<td>Must be taken with or after EDI 331 but before EDI 431</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14</td>
<td>Total 13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDI 431 Student Teaching: Secondary</td>
<td>8</td>
<td>Student Teaching</td>
</tr>
<tr>
<td>EDI 432 Student Teaching: Secondary</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>EDF 485 The Context of Educational Issues</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

* 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).

4 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.

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 180 is recommended prior to CHM 115 if the ACT science subscore is below 23, but high school chemistry was taken. Students who have not had high school chemistry should take CHM 109 (not CHM 180) prior to CHM 115. However, CHM 180 and CHM 109 do 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.” The system will automatically declare your 2nd major in “Education” and give you the option to declare a minor. Choose an appropriate minor from the list and then click “Change to New Program”

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>
<tr>
<td>Latin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biology-Teaching</td>
</tr>
<tr>
<td></td>
<td>Chemistry-Teaching</td>
</tr>
<tr>
<td></td>
<td>Computer Science-Teaching</td>
</tr>
<tr>
<td></td>
<td>Earth/Space Science-Teaching</td>
</tr>
<tr>
<td></td>
<td>Economics-Teaching</td>
</tr>
<tr>
<td></td>
<td>English-Teaching</td>
</tr>
<tr>
<td></td>
<td>French-Teaching</td>
</tr>
<tr>
<td></td>
<td>Geography-Teaching</td>
</tr>
<tr>
<td></td>
<td>German-Teaching</td>
</tr>
<tr>
<td></td>
<td>History-Teaching</td>
</tr>
<tr>
<td></td>
<td>Mathematics-Secondary Education</td>
</tr>
<tr>
<td></td>
<td>Physics-Teaching</td>
</tr>
<tr>
<td></td>
<td>Political Science-Teaching</td>
</tr>
<tr>
<td></td>
<td>Psychology-Teaching</td>
</tr>
<tr>
<td></td>
<td>School Health Education</td>
</tr>
<tr>
<td></td>
<td>Spanish-Secondary Teaching</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>
<tr>
<td>Social and Behavioral Sciences: PSY 101</td>
</tr>
<tr>
<td>U.S. Diversity: EDF 315</td>
</tr>
</tbody>
</table>

Second Major in Education

Education Major Prerequisites (9 credits)

A 2.7 cumulative GPA in the Education Major Prerequisites is required with no grade lower than a C

— 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)**

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
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.