

**EARTH SCIENCE-BS-SECONDARY EDUCATION** (EDUCATION MAJOR & TEACHABLE MINOR REQUIRED)THIS IS A **GENERAL** CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.**A 2.7 cumulative GPA in the Earth Science major is required for admission to the College of Education**

Year One			
<sup>5</sup> CHM 115 Principles of Chemistry I Prerequisites: High school chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 201	4	<sup>1</sup> WRT 150 Strategies in Writing GEO 112 Earth History Prerequisite: A course in physical or general geology	4 4
<sup>5</sup> GEO 111 Exploring the Earth	4	MTH 123 Trigonometry	3
MTH 122 College Algebra Prerequisite: MTH 110 or assignment through math placement exam	3	Prerequisites: MTH 122 (can be taken concurrently) or assignment through math placement exam	
Gen Ed or WRT 098 Writing with a Purpose <sup>1</sup>	3/4	GEO 175 Research tools for Geosciences Prerequisites: GEO 111 and GEO 112 (can be taken concurrently). Gen Ed	1 3
<i>Total</i>	<i>14/15</i>	<i>Total</i>	<i>15</i>
Spring/Summer			
Gen Ed	3		
Year Two			
GEO 211 Mineralogy Prerequisites: GEO 111 and CHM 115	4	GEO 212 Petrology Prerequisites: GEO 112, GEO 211, and CHM 115	4
<sup>4</sup> PHY 220 General Physics I Prerequisites: MTH 122 and MTH 123	5	<sup>4</sup> PHY 221 General Physics II Prerequisites: PHY 220	5
PSY 101 Introductory Psychology	3	PSY 301 Child Development	3
EDF 315 Diverse Perspectives for Education	3	Prerequisite: PSY 101 Minor Course	3 3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>15</i>
Year Three			
EDI 337 Introduction to Learning and Assessment	3	GEO 430 Oceanography Prerequisite: GEO 112	3
Gen Ed	3	GEO 320 Geomorphology (Capstone)	4
Gen Ed	3	Prerequisites: GEO 112	
Minor Course	3	Issue	3
Minor Course	3	Gen Ed	3
		Minor Course	3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>16*</i>
Year Four			
GEO 485 Geology Seminar Prerequisites: Geology or Earth Science major or minor	1	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	4	PHY 105 Descriptive Astronomy	3
Issue	3	<sup>2</sup> GEO 485 SWS Geology Seminar	1
Minor Course	3	<sup>3</sup> EDS 379 Universal Design for Learning: Secondary Sophomore Standing, EDF 315, and EDI 337. B- or better required.	3
Minor Course	3	Minor Course	3
<i>Total</i>	<i>14</i>	<i>Total</i>	<i>14</i>
Year Five			
<b>Teacher Assisting</b>		<b>Student Teaching</b>	
EDI 331 Methods and Strategies of Secondary Teaching	5	EDI 431 Student Teaching: Secondary	8
EDF 310 Organizing and Managing Classroom Environments	3	EDI 432 Student Teaching: Secondary Content	2
EDR 321 Content Area Literacy	3	EDF 485 The Context of Educational Issues	3
EDT 370 Technology in Education Must be taken with or after EDI 331 but before EDI 431	3	Must be taken with or after EDI 431	
<i>Total</i>	<i>14</i>	<i>Total</i>	<i>13</i>

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

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly.

Academic Advisor: Nick Woodward, [woodwani@gvsu.edu](mailto:woodwani@gvsu.edu)

The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585.

Online at: <http://www.gvsu.edu/clasadvising>

<sup>1</sup> 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.

<sup>2</sup> Students must complete a total of two courses with an SWS attribute

<sup>3</sup> 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).

<sup>4</sup> 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.

<sup>5</sup> **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 2<sup>nd</sup> 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

Teachable Majors		Teachable Minors	
Biology	Mathematics	Biology-Teaching	History-Teaching
Chemistry	Music (K-12)	Chemistry-Teaching	Mathematics-Secondary Education
Earth/Space Science	Physical Education (K-12)	Computer Science-Teaching	Physical Education-Teaching
English	Physics	Earth/Space Science-Teaching	Physics-Teaching
French	Social Studies	Economics-Teaching	Political Science-Teaching
German	Spanish	English-Teaching	Psychology-Teaching
History	Visual Arts (K-12)	French-Teaching	School Health Education
Latin		Geography-Teaching	Spanish-Secondary Teaching
		German-Teaching	

### General Education Overlap

General Education Categories fulfilled by the Earth Science Major for Secondary Education:	
Physical Science with Lab: GEO 111	Social and Behavioral Sciences: PSY 101
Mathematical Sciences: MTH 122	U.S. Diversity: EDF 315

### 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)	— PSY 301 Child Development (3)
— EDI 337 Introduction to Learning and Assessment (3)	Prerequisite: PSY 101
Teacher Assisting (14 - 17 credits)	Student Teaching (13 credits)
— EDI 331 Teacher Assisting-Secondary (5)	— EDI 431 Student Teaching, Secondary (8)
— EDF 310 Organizing and Managing Classroom Environments (3)	— EDI 432 Student Teaching, Secondary Content (2)
— EDR 321 Content Area Literacy (3)	— EDF 485 The Context of Educational Issues (3)
— EDT 370 Technology in Education (3)	Must be taken with or after EDI 431
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.	