

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 apprenticeship and internship semesters.

Year One			
⁵ CHM 115 Principles of Chemistry I Prerequisites: High school chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 201	4	¹ WRT 150 Strategies in Writing or WRT 130 Strategies in Writing Stretch II GEO 112 Earth History Prerequisite: A course in physical or general geology	4/3/4
⁵ GEO 111 Exploring the Earth MTH 122 College Algebra Prerequisite: MTH 110 or assignment through math placement exam Gen Ed or WRT 120 Strategies in Writing Stretch I ¹	4 3 3/4	MTH 123 Trigonometry Prerequisites: MTH 122 (can be taken concurrently) or assignment through math placement exam GEO 175 Research tools for Geosciences Prerequisites: GEO 111 and GEO 112 (can be taken concurrently). Gen Ed	3 1 3
<i>Total</i>	<i>14/15</i>	<i>Total</i>	<i>15</i>
Spring/Summer			
Gen Ed	3		
Year Two			
GEO 214 Solid Earth Materials and Systems or GEO 220 Earth Surface Materials and Systems Prerequisites: GEO 111 and CHM 115; GEO 112 and 175 may be taken concurrently	4	GEO 214 Solid Earth Materials and Systems or GEO 220 Earth Surface Materials and Systems Prerequisites: GEO 111 and CHM 115; GEO 112 and 175 may be taken concurrently	4
⁴ PHY 220 General Physics I Prerequisites: MTH 122 and MTH 123 PSY 101 Introductory Psychology EDF 315 Diverse Perspectives for Education	5 3 3	⁵ PHY 221 General Physics II Prerequisites: PHY 220 PSY 301 Child Development Prerequisite: PSY 101 Minor Course	5 3 3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>15</i>
Year Three			
EDI 339 Assessment in Secondary Schools GEO 430 Oceanography Prerequisite: GEO 112 Gen Ed Minor Course Minor Course	3 3 3 3 3	GEO 320 Geomorphology Prerequisites: GEO 112 Gen Ed Gen ED Minor Course	4 3 3 3
<i>Total</i>	<i>15</i>	<i>Total</i>	<i>13</i>
Year Four			
² GEO 486 Geology Seminar Prerequisites: GEO 175, GEO 214, GEO 220, at least Junior standing GEO 203 Weather and Climate Issue Minor Course Minor Course	1 3 3 3 3	SCI 450 Earth Science and Biology in Secondary Education Prerequisites: BIO 120 & 121 and GEO 111 & 112. PHY 105 Descriptive Astronomy ² GEO 485 SWS Geology Seminar Prerequisite: GEO 175, GEO 214, GEO 220, at least Junior standing in the Earth science Major. ⁴ Permit required. ³ EDS 379 Universal Design for Learning: Secondary Minor Course	4 3 1 3 3
<i>Total</i>	<i>13</i>	<i>Total</i>	<i>14</i>
Year Five			
Student Apprenticeship: EDI 331 Methods and Strategies of Secondary Teaching EDF 310 Organizing and Managing Classroom Environments EDR 321 Content Area Literacy EDT 476 Technology in Education Must be taken with or after EDI 331 but before EDI 431	5 3 3 3	Student Internship: EDI 431 Student Teaching: Secondary EDI 432 Student Teaching: Secondary Content EDF 495 The Context of Educational Issues Must be taken with or after EDI 431	8 2 3
<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.

¹ Students who self-place into WRT120 should take this course in the fall semester and then take WRT 130 in the winter semester of the first year. Students who self-place into WRT 150 should take this course in either semester of the first year. A grade of C or higher is required to fulfill these requirements. Students will not need to take WRT 150 (or 120 & 130) if they have earned credit for the course through AP/Dual Enrollment. A grade of C or better is required.

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

³ EDS 379 may be taken prior to the Apprenticeship Semester but must be completed prior to the Internship Semester. Permit required (Education – 616-

331-6650). Prerequisites for EDS 379: Sophomore Standing, EDF 315, and EDI 339. B- or better required.

⁴Permit required – students must secure a mentor and define a research question before enrolling in the course.

⁵ 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.

⁶*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 chemistry was not taken in high school or if the ACT science subscore is below 22. However, CHM 180 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 214, GEO 220, 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

Teachable Majors		Teachable Minors	
Biology	Latin	Applied Linguistics - ESL	German-Teaching
Chemistry	Mathematics	Biology-Teaching	History-Teaching
Earth/Space Science	Music (K-12)	Chemistry-Teaching	Mathematics-Secondary Education
English	Health & Physical Education (K-12)	Earth/Space Science-Teaching	Physics-Teaching
French	Physics	Economics-Teaching	Political Science-Teaching
German	Social Studies	English-Teaching	Psychology-Teaching
History	Spanish	French-Teaching	Spanish-Secondary Teaching
Integrated Science	Visual Arts (K-12)	Geography-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
Issues: EDT 476	

Second Major in Education

Education Major Prerequisites (9 credits)

— EDF 315 Diverse Perspectives on Education (3)	— PSY 301 Child Development (3)
— EDI 339 Assessment in Secondary Schools (3)	Prerequisite: PSY 101
Teacher Apprenticeship (14 - 17 credits)	Student Internship (13 credits)
— EDI 331 Teacher Assisting-Secondary (5)	— EDI 431 Student Teaching, Secondary (8)
— EDI 310 Organizing and Managing Classroom Environments (3)	— EDI 432 Student Teaching, Secondary Content (2)
— EDR 321 Content Area Literacy (3)	— EDF 495 The Context of Educational Issues (3) Must be taken with or after EDI 431
— EDT 476 Technology in Education (3)	
Must be taken with or after EDI 331 but before EDI 431	
— EDS 379 Universal Design for Learning: Secondary (3)**	
** 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.	

It is imperative to meet with your faculty advisor and an advisor in the CLAS Academic Advising Center regularly. The CLAS Academic Advising Center is located in C-1-140 MAK, 616-331-8585. Online at: <http://www.gvsu.edu/clasadvising>