## **GEOLOGY-BS**

THIS IS A GENERAL CURRICULUM GUIDE AND IS NOT APPLICABLE TO EVERY STUDENT. IT IS IMPORTANT TO MEET WITH YOUR ADVISOR.

Prerequisites: High school chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 125 or MTH 125 or MTH 120 or assignment through math placement exam    Prerequisite: MTH 110 or assignment through math placement exam	Year One						
Prerequisites: High school chemistry, MTH 110 or MTH 122 or MTH 125 or MTH 201	CHM 115 Principles of Chemistry I	5	CHM 116 Principles of Chemistry II	5			
WRT 150 Strategies of Writing   4   GEO 112 Earth History   Frerequisite: A course in physical or general geology   MTH 123 Trigonometry   3   A   Prerequisite: MTH 110 or assignment through math placement exam   GEO 175 Research Tools for Geosciences   1   Prerequisites: MTH 121 (can be taken concurrently) or assignment through math placement exam   GEO 175 Research Tools for Geosciences   1   Prerequisites: GEO 111 and GEO 112 (can be taken concurrently).   Gen Ed   GEO 175 Research Tools for Geosciences   1   Prerequisites: GEO 111 and GEO 112 (can be taken concurrently).   Gen Ed   GEO 212 Petrology   A   GEO 212 Petrology   Prerequisites: GEO 111 and CHM 115   Prerequisites: GEO 111 and CHM 115   Prerequisites: GEO 111 and CHM 115   Prerequisites: GEO 112, GEO 211, and CHM 115   Prerequisites: GEO 112, GEO 211, and CHM 115   Prerequisites: GEO 112 GEO 213, and CHM 115   Prerequisites: GEO 212 and MTH 123   GEO 313 Structural Geology   A   GEO 312 Sedimentation-Stratigraphy   A   Prerequisites: GEO 212 and MTH 123   GEO 310 Geomorphology   A   GEO 312 Sedimentation-Stratigraphy   Prerequisite: GEO 211   GEO 212 and MTH 123   GEO 320 Geomorphology   A   Prerequisite: GEO 211   GEO 485 Geology Seminar   Total  16*   Total  15*	Prerequisites: High school chemistry, MTH 110 or MTH 122 or						
A							
MTH 122 College Algebra   3	WRT 150 Strategies of Writing	4	•	4			
Prerequisite: MTH 110 or assignment through math placement exam	GEO 111 Exploring the Earth	4					
Placement exam   GEO 175 Research Tools for Geosciences   1   1   1   1   1   1   1   1   1	MTH 122 College Algebra	3	j ,				
Prerequisites: GEO 111 and GEO 112 (can be taken concurrently). Gen Ed							
Concurrently -   Gen Ed   3   3			GEO 175 Research Tools for Geosciences	1			
Gen Ed   3   70tal   16*   70tal							
Total   16*   Year Two   Total   16*   GEO 212 Petrology   Prerequisites: GEO 111 and CHM 115   Prerequisites: GEO 111 and CHM 115   Prerequisites: GEO 112, GEO 211, and CHM 115   Prerequisites: GEO 112, GEO 211, and CHM 115   MTH/CIS/STA Elective Course   3-4   MTH/CIS/STA Elective Course   3-4   Geology Elective Course   3-5   Geology Elective							
Year Two   GEO 211 Mineralogy			Gen Ed				
GEO 211 Mineralogy	Total	16*	Total	16*			
Prerequisites: GEO 111 and CHM 115	Year Two						
AMTH/CIS/STA Elective Course     3-4 <sup>1</sup> MTH/CIS/STA Elective Course <sup>2</sup> Geology Elective Course		4	<u> </u>	4			
2-4   2   2   2   2   3   3   3   3   3   3							
Gen Ed         3         Gen Ed         3           Gen Ed         3         Gen Ed         3           Total         15-17*         Total         14-15           Year Three           GEO 311 Structural Geology         4         GEO 312 Sedimentation-Stratigraphy         4           Prerequisites: GEO 212 and MTH 123         Prerequisite: GEO 112         GEO 320 Geomorphology         4         Prerequisite: GEO 112         Gen Ed         3           Prerequisite: GEO 211         Gen Ed         3         3         3         3         4         3         3         4         3         3         4         3         3         4         3         3         4         3         4         3         3         4         3         3         4         3         3         4         3         4         3         4         3         4         3         4         3         3         4         3         4         3         4         3         4         3         4         3         4         3         4         3         4         4         3         4         4         3         4         3		3-4		3-4			
See   Ed   3   3   15-17*   Total   14-15		2-4	<sup>2</sup> Geology Elective Course	2-4			
Total   15-17*   Total   14-15	Gen Ed	3	Gen Ed	3			
Year ThreeGEO 311 Structural Geology Prerequisites: GEO 212 and MTH 123 GEO 320 Geomorphology Prerequisite: GEO 211 3PHY Sequence Course Gen Ed 3 3PHY Sequence Course Gen Ed 3 3 4 Frerequisite: GEO 211 3PHY Sequence Course Gen Ed 3 3 4 5 5 6 6 7 7 7 8 8 9 	Gen Ed	3					
GEO 311 Structural Geology Prerequisites: GEO 212 and MTH 123 GEO 320 Geomorphology Prerequisite: GEO 211 GEO 485 Sequence Course GEO 485 Geology Seminar Prerequisite: Geology or Earth Science major or minor GEO 485 Geology Elective Course GEO 485 SWS Geology Seminar Prerequisite: GEO 311 GEO 495: Global Tectonics (Capstone) Prerequisite: GEO 311 GEO 485 SWS Geology Seminar Prerequisite: GEO 311 GEO 485 SWS Geology Seminar GEO 485 SWS Geology Seminar GEO 485 SWS Geology Seminar GEO 485 SWS Geology Elective Course GEO 485 SWS Geology Elective Course GEO 485 SWS Geology Elective Course GEO 485 SWS Geology Seminar GEO 485 SWS Geology Elective Course GEO 485 SWS Geology Elective Course GEO 485 Geology Elective Course GEO 485 SWS Geology Elective Co	Total			14-15			
Prerequisites: GEO 212 and MTH 123 GEO 320 Geomorphology Prerequisite: GEO 211 GEO 320 Geomorphology Prerequisite: GEO 211 GEO 320 Geomorphology Prerequisite: GEO 211 GEO GED GEO Ed Susue/Theme Susu		1		1			
GEO 320 Geomorphology Prerequisite: GEO 211 Gen Ed	~ · · · · · · · · · · · · · · · · · · ·	4	_ · · ·	4			
Prerequisite: GEO 211 3 3 HY Sequence Course Gen Ed 5 Issue/Theme 3 3 4 5 Issue/Theme 3 5 Issue/Theme 3 6 Issue/Theme 3 6 Issue/Theme 3 7 Total 7 Total 7 Total 7 GEO 485 Geology Seminar Prerequisite: Geology or Earth Science major or minor Prerequisite: Geology or Earth Science major or minor Geology Elective Course 3-5 GEO 485 SWS Geology Seminar Prerequisite: GEO 311 5 GEO 485 SWS Geology Seminar 1 6 Geology Elective Course 3-5 Geology Elective Course	· ·						
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Gen Ed 3  Total 16*  Year Four  GEO 485 Geology Seminar Prerequisite: Geology or Earth Science major or minor Geology Elective Course  4Elective Issue/Theme Gen Ed  3  Gen Ed  3  Gen Ed  3  Frerequisite: Geology Seminar 1  GEO 495: Global Tectonics (Capstone) Prerequisite: GEO 311  FogEO 485 SWS Geology Seminar 1  Geology Elective Course 3-5  Geology Elective Course 3-5  Gen Ed 3  Gen Ed 3  Flective 4  Flective 4  Flective 5  Flective 5  Flective 6  Flective 6  Flective 7  Flective Flect		_					
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Year Four  GEO 485 Geology Seminar Prerequisite: Geology or Earth Science major or minor Geology Elective Course  4Elective Geology Elective Course 3-5 Geology Elective Course	Gen Ed						
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Geology Elective Course  3-5 GEO 485 SWS Geology Seminar 1 2Geology Elective Course 3-5 Issue/Theme 3 Gen Ed 3 Gen Ed 3 4Elective 3 4Elective 3		1		3			
4Elective32Geology Elective Course3-5Issue/Theme3Gen Ed3Gen Ed34Elective34Elective3		_	l = '				
Issue/Theme         3         Gen Ed         3           Gen Ed         3         Elective         3           4 Elective         3         3				1			
Gen Ed         3 <sup>4</sup> Elective          3 <sup>4</sup> Elective         3		_		3-5			
<sup>4</sup> Elective 3	•	_		3			
	Gen Ed	3		3			
Total 13-15 Total 15-17*			<sup>4</sup> Elective	3			
	Total	13-15	Total	15-17*			

<sup>\*\*</sup>Geology Majors MUST participate in an approved Summer Field Camp in Geology (taught by another college) for 5-8 credits

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

<sup>&</sup>lt;sup>1</sup> Geology majors must complete two math, computer science, OR statistics courses. The options are listed on the back of this guide.

<sup>&</sup>lt;sup>2</sup> Geology majors must complete 6-8 credits of 300-400 level geology elective courses. *Students are strongly encouraged to consult faculty advisors to help with selecting electives.* Geology Theme or Issues courses at the 300-level cannot count towards the Geology major.

<sup>&</sup>lt;sup>3</sup> Geology majors must complete a two semester sequence of physics courses. These options are listed on the back of this guide.

<sup>&</sup>lt;sup>4</sup> Elective refers to any course to help you earn the required 120 credits to graduate.

<sup>&</sup>lt;sup>5</sup> Students must complete a total of two courses with an SWS attribute.

## **Declaring the Geology Major:**

- 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"
- 5. From here scroll down and find "Geology-BS"
- 6. Click "Submit" and then click "Change to New Program"

## **General Education Overlap**

General Education Categories fulfilled by the Geology-BS Major:		
Mathematical Sciences: MTH 122	Physical Science with a Lab: GEO 111	

## **Sequence Courses**

Mathematics/Computer Science/Statistics Elective Courses				
Choose one sequence and complete both courses from that sequence				
Mathematics	Computer Science	Statistics		
MTH 201 Calculus I (4) Prerequisites: (MTH 122 and 123) or placement into MTH 201 via the calculus readiness test MTH 202 Calculus II (4) Prerequisite: MTH 201	CIS 150 Introduction to Computing (3) CIS 162 Computer Science I (4) Prerequisite: MTH 110	STA 215 Introductory Applied Statistics (3) Prerequisite: MTH 110 or equivalent STA 216 Intermediate Applied Statistics (3) Prerequisite: STA 215 or STA 312		

Physics Sequence				
Choose ONE of the two course PHY sequences				
PHY 220 General Physics I (5)	PHY 230 Principles of Physics I (5)			
Prerequisites: MTH 122 and MTH 123	Prerequisite: MTH 201 (MTH 202 is recommended as a corequisite)			
PHY 221 General Physics II (5)	PHY 231 Principles of Physics II (5)			
Prerequisite: PHY 220	Prerequisites: PHY 230 and MTH 202			
For students with the Advanced Waiver/Override for Mathematics based on ACT scores, it is <b>STRONGLY RECOMMENDED</b> 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 <b>PRIOR</b> to taking PHY 220 and 221.				