

# GEOLOGY ENGINEERING GEOLOGY

## REQUIREMENTS

**CORE CURRICULUM** The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at [marshall.edu/gened](http://marshall.edu/gened).

### CORE 1: CRITICAL THINKING

CODE	COURSE NAME		HRS	GRADE
FYS 100	First Year Seminar	●	3	_____
MTH 229	Critical Thinking Course	●◆	5	_____
_____	Critical Thinking Course	●	3	_____
<b>Additional University Requirements</b>				
_____	Writing Intensive		3	_____
_____	Writing Intensive		3	_____
_____	Multicultural or International		3	_____
GLY 491	Capstone		2	_____

### CORE 2:

CODE	COURSE NAME		HRS	GRADE
ENG 101	Beginning Composition	●	3	_____
ENG 201	Advanced Composition	●	3	_____
🌿 CMM 103	Fund Speech-Communication	●	3	_____
MTH 229	Calculus I (CT)	●◆	5	_____
_____	Core II Humanities	●	3	_____
_____	Core II Social Science	●	3	_____
_____	Core II Fine Arts	●	3	_____
🌿 GLY 200/210L	The Dynamic Earth / Lab	●◆	4	_____

### MAJOR-SPECIFIC

All Biological Science majors are required to take the following courses:

CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
🌿 GLY 200	The Dynamic Earth	●◆	3	_____	GLY 451	Principles Geomorphology	◆	4	_____
🌿 GLY 210L	Earth Materials Lab	●◆	1	_____	ENGR 216	Mech of Deformable Bodies	◆	3	_____
GLY 201	The Earth Through Time	◆	3	_____	GLY 455	Hydrogeology	◆	3	_____
GLY 211L	Earth Through Time Lab	◆	1	_____	ENGR 213	Statics	◆	3	_____
MTH 230	Calculus II	◆	4	_____	🌿 PHY 211	University Physics I	◆	4	_____
🌿 CHM 211	Principles of Chemistry I	◆	3	_____	🌿 PHY 202	General Physics I Lab	◆	1	_____
CHM 217	Principles of Chemistry Lab I	◆	2	_____	GLY 491	Capstone	◆	2	_____
🌿 GLY 212	Geologic Field Methods	◆	3	_____	🌿 GLY 456	Environmental Geology	◆	4	_____
🌿 GLY 325	Statigraphy & Sediment	◆	4	_____	GLY 457	Engineering Geology	◆	4	_____
🌿 GLY 314	Mineralogy	◆	4	_____	GLY 420	Principles of Geochemistry	◆	3	_____
🌿 GLY 313	Structural Geology	◆	4	_____	GLY 455L	Hydrology Lab	◆	1	_____
GLY 320L	Lab Techniques in Geology	◆	2	_____	PHY 204	General Physics II Lab	◆	1	_____
GLY 330	Tectonics (or GLY 426)	◆	3	_____	PHY 213	University Physics II	◆	4	_____
ENG 354	Scientific & Tech Writing	◆	3	_____	ENGR 111	Engineering Computations	◆	3	_____
					CE 322	Geotechnical Engineering	◆	4	_____

### MAJOR INFORMATION

- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the College of Science literature requirement as well as the Core II writing intensive requirement.
- Course offerings and course attributes are subject to change semesters. Please consult each semesters schedule of courses for availability and attributes.
- Math is based on an ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate mathematics and science courses.
- The capstone experience (GLY 491) is an individualized research project or internship experience requiring a written report and an oral presentation. The capstone requirement may be met alternatively by attending geology summer field camp or by completing the capstone seminar offered each spring.

● General Education Requirement  
 ■ College Requirement  
 ◆ Major Requirement  
 ● Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss importance of this course in your plan of study.

# GEOLOGY ENGINEERING GEOLOGY

Programs of study offered by the Department of Geology are designed for individuals seeking a career as an earth scientist. The greatest numbers of geologists are employed by natural resource industries. These include metallic and nonmetallic mining companies as well as petroleum, natural gas, and coal companies. This area of specialization has its own specific curriculum and has been added to meet the increasing demand for geoscientists who are trained in the acquisition, interpretation, and use of earth materials (rock, soil, ground water) for the solution of engineering problems. The program provides geologists with specific training that will enable them to effectively interact with, and support, engineers. Its curriculum involves a heavy emphasis on math, physics, and engineering.

YEAR ONE	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	GLY 200	The Dynamic Earth	◆	3	GLY 201	The Earth Through Time	◆	3
	GLY 210L	Earth Materials Lab	◆	1	GLY211L	Earth Through Time Lab	◆	1
	ENG 101	Composition I	●	3	MTH 230	Calculus II	◆	4
	MTH 229	Calculus I (CT)	●◆	5	_____	Core II Fine Arts	●	3
	ENGR 111	Engineering Computations	◆	3	FYS 100	First Year Seminar	●	3
	UNI 100	Freshman First Class		1				
	<b>TOTAL HOURS</b>			<b>16</b>	<b>TOTAL HOURS</b>			<b>14</b>

Summer Term (optional):

YEAR TWO	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	CHM 211	Principles of Chemistry I	◆	3	GLY 330	Tectonics (or GLY 426)	◆	3
	CHM 217	Principles of Chemistry I Lab	◆	2	GLY 313	Structural Geology	◆	4
	GLY 212	Geologic Field Methods	◆	3	ENG 354	Scientific & Tech Writing	◆	3
	GLY 325	Stratigraphy & Sediment	◆	4	_____	Multicultural/International	●	3
	ENG 201	Advanced Composition	●	3	_____	Writing Intensive	●	3
	<b>TOTAL HOURS</b>			<b>15</b>	<b>TOTAL HOURS</b>			<b>16</b>

Summer Term (optional):

YEAR THREE	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	GLY 314	Mineralogy	◆	4	GLY 456	Environmental Geology	◆	4
	GLY 451	Principles of Geomorphology	◆	4	ENGR 213	Statics	◆	3
	_____	Core II Social Science (CT)	●	3	CMM 103	Fund Speech-Communcations	●	3
	_____	Writing Intensive	●	3	_____	Core II Humanities	●	3
	<b>TOTAL HOURS</b>			<b>14</b>	GLY 420	Principles of Geochemistry	◆	3
	<b>TOTAL HOURS</b>			<b>14</b>	<b>TOTAL HOURS</b>			<b>16</b>

Summer Term (optional):

YEAR FOUR	FALL SEMESTER				SPRING SEMESTER			
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
	ENGR 216	Mech of Deformable Bodies	◆	3	PHY 213	University Physics II	◆	4
	PHY 202	General Physics I Lab	◆	1	PHY 204	General Physics II Lab	◆	1
	PHY 211	University Physics I	◆	4	GLY 455	Hydrogeology	◆	3
	GLY 491	Capstone	◆	2	GLY 455L	Hydrogeology Lab	◆	1
	GLY 320L	Lab Techniques in GLY	◆	2	CE 322	Geotechnical Engineering	◆	4
	GLY 457	Engineering Geology	◆	4				
	<b>TOTAL HOURS</b>			<b>16</b>	<b>TOTAL HOURS</b>			<b>13</b>

Summer Term (optional):

● General Education Requirement  
 ■ College Requirement  
 ◆ Major Requirement  
 ● Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss importance of this course in your plan of study.