



























# ENGINEERING GEOLOGY, EMPHASIS









 - General Education Course

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

## Major

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 <https://www.marshall.edu/gened/>.


Code	Title	Credit Hours
<b>Core Curriculum</b>		
<i>Core 1: Critical Thinking</i>		
FYS 100	First Yr Sem Critical Thinking	3
MTH 229 	Calculus/Analytic Geom I (CT)	5
	Critical Thinking Course	3
<i>Core 2</i>		
ENG 101 	Beginning Composition	3
ENG 201 	Advanced Composition	3
CMM 103  	Fund Speech-Communication	3
MTH 229 	Calculus/Analytic Geom I (CT)	5
	Core II Humanities	3
	Core II Social Science	3
	Core II Fine Arts	3
GLY 200   & GLY 210L 	The Dynamic Earth and Earth Materials Lab	4
<i>Additional University Requirements</i>		
	Writing Intensive	3
	Writing Intensive	3
	Multicultural or International	3
GLY 491 	Capstone Experience	2-4
<b>Major-Specific</b>		
GLY 200  	The Dynamic Earth	3
GLY 210L  	Earth Materials Lab	1
GLY 201 	The Earth Through Time	3
GLY 211L 	Earth Through Time Lab	1
MTH 230 	Calculus/Analytic Geom II	4
CHM 211  	Principles of Chemistry I	3
CHM 217 	Principles of Chem Lab I	2
GLY 212 	Geologic Field Methods	3
GLY 325 	Stratigraphy & Sediment	4
GLY 314 	Mineralogy	4
GLY 313 	Structural Geology	4
GLY 320L	Geology Lab Techniques	2
GLY 330	Tectonics	3
or GLY 426	Geophysics	
ENG 354	Scientific & Tech Writing	3

ENGR 111	Engineering Computations	3
ENGR 213	Statics	3
ENGR 216	Mech of Deformable Bodies	3
CE 322	Geotechnical Engineering	4
GLY 451	Principles Geomorphology	4
GLY 455	Hydrogeology	3
PHY 211  	University Physics I	4
PHY 202  	General Physics I Laboratory	1
PHY 213 	University Physics II	4
PHY 204 	General Physics 2 Laboratory	1
GLY 456 	Environmental Geology	4
GLY 457	Engineering Geology	4
GLY 420	Principles of Geochemistry	3
GLY 455L	Hydrogeology Laboratory	1
GLY 491 	Capstone Experience	2-4

## 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 Capstone Experience) 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 (GLY 492 Capstone Experience).

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## Four Year Plan

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.

Course	Title	Credit Hours
<b>First Year</b>		
<b>First Semester</b>		
GLY 200  	The Dynamic Earth	3
GLY 210L  	Earth Materials Lab	1
ENG 101 	Beginning Composition	3
MTH 229 	Calculus/Analytic Geom I (CT)	5
ENGR 111	Engineering Computations	3
UNI 100	Freshman First Class	1
<b>Credit Hours</b>		<b>16</b>
<b>Second Semester</b>		
GLY 201 	The Earth Through Time	3
GLY 211L 	Earth Through Time Lab	1
MTH 230 	Calculus/Analytic Geom II	4
Core II Fine Arts		3
FYS 100	First Yr Sem Critical Thinking	3
<b>Credit Hours</b>		<b>14</b>
<b>Second Year</b>		
<b>First Semester</b>		
CHM 211  	Principles of Chemistry I	3
CHM 217 	Principles of Chem Lab I	2
GLY 212 	Geologic Field Methods	3
GLY 325 	Stratigraphy & Sediment	4
ENG 201 	Advanced Composition	3
<b>Credit Hours</b>		<b>15</b>
<b>Second Semester</b>		
GLY 330 or GLY 426	Tectonics or Geophysics	3
GLY 313 	Structural Geology	4
ENG 354	Scientific & Tech Writing	3
	Multicultural/International	3
	Writing Intensive	3
<b>Credit Hours</b>		<b>16</b>
<b>Third Year</b>		
<b>First Semester</b>		
GLY 314 	Mineralogy	4
GLY 451	Principles Geomorphology	4
	Core II Social Science	3
	Writing Intensive	3
<b>Credit Hours</b>		<b>14</b>
<b>Second Semester</b>		
GLY 456 	Environmental Geology	4
ENGR 213	Statics	3
CMM 103  	Fund Speech-Communication	3
	Core II Humanities	3
GLY 420	Principles of Geochemistry	3
<b>Credit Hours</b>		<b>16</b>
<b>Fourth Year</b>		
<b>First Semester</b>		
ENGR 216	Mech of Deformable Bodies	3
PHY 202  	General Physics I Laboratory	1
PHY 211  	University Physics I	4
GLY 491 	Capstone Experience	2
GLY 320L	Geology Lab Techniques	2
GLY 457	Engineering Geology	4
<b>Credit Hours</b>		<b>16</b>
<b>Second Semester</b>		
PHY 213 	University Physics II	4
PHY 204 	General Physics 2 Laboratory	1
GLY 455	Hydrogeology	3
GLY 455L	Hydrogeology Laboratory	1
	CT Designated Course	3
	Free Elective	1
<b>Credit Hours</b>		<b>13</b>
<b>Total Credit Hours</b>		<b>120</b>