

GEOLOGY ENVIRONMENTAL GEOSCIENCE

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.

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 | _____ |
| Additional University Requirements | | | |
| _____ | 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 | _____ |
| CHM 211/217 | Principles of Chemistry I / Lab | ● ♦ 5 | _____ |

MAJOR-SPECIFIC

All Geology majors with an area of emphasis in Environmental Geoscience are required to take the following courses:

| CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
|------------|----------------------------|-----|-------|-----------|-------------------------------|-------|-------|
| 🌿 GLY 200 | The Dynamic Earth | ♦ 3 | _____ | MTH 229 | Calculus I (CT) | ● ♦ 5 | _____ |
| 🌿 GLY 210L | Earth Materials Lab | ♦ 1 | _____ | 🌿 CHM 211 | Principles of Chemistry I | ● ♦ 3 | _____ |
| GLY 201 | The Earth Through Time | ♦ 3 | _____ | CHM 217 | Principles of Chemistry Lab I | ● ♦ 2 | _____ |
| GLY 211L | Earth Through Time Lab | ♦ 1 | _____ | 🌿 PHY 201 | College Physics I | ♦ 3 | _____ |
| 🌿 GLY 212 | Geologic Field Methods | ♦ 3 | _____ | 🌿 PHY 202 | General Physics I Lab | ♦ 1 | _____ |
| 🌿 GLY 313 | Structural Geology | ♦ 4 | _____ | PS 410 | Remote Sensing | ♦ 4 | _____ |
| 🌿 GLY 314 | Mineralogy | ♦ 4 | _____ | ENG 354 | Scientific & Tech Writing | ♦ 3 | _____ |
| GLY 320L | Lab Techniques in Geology | ♦ 2 | _____ | GEO 222 | Global Environmental Issues | ♦ 3 | _____ |
| 🌿 GLY 325 | Stratigraphy & Sediment | ♦ 4 | _____ | GEO 429 | Location Analysis and GIS | ♦ 4 | _____ |
| GLY 420 | Principles of Geochemistry | ♦ 4 | _____ | _____ | Free Elective | 3 | _____ |
| GLY 423 | Sedimentary Petrology | ♦ 4 | _____ | _____ | Free Elective | 3 | _____ |
| GLY 426 | Geophysics | ♦ 3 | _____ | _____ | Free Elective | 2 | _____ |
| GLY 455 | Hydrogeology | ♦ 3 | _____ | _____ | Free Elective | 1 | _____ |
| GLY 455L | Hydrogeology Lab | ♦ 1 | _____ | | | | |
| GLY 456 | Environmental Geology | ♦ 4 | _____ | | | | |
| GLY 457 | Engineering Geology | ♦ 4 | _____ | | | | |
| GLY 491 | Capstone | ♦ 2 | _____ | | | | |

● Area of Emphasis

♦ Major Requirement

■ College Requirement

● General Education Requirement

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.
- See faculty or advisor for a list of recommended electives.

GEOLOGY ENVIRONMENTAL GEOSCIENCE

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 emphasis utilizes an interdisciplinary curriculum, which will prepare graduates for careers involving the application of geologic concepts to the solution of environmental problems.

| 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 | GLY 211L | Earth Through Time Lab | ◆ | 1 |
| | ENG 101 | Beginning Composition | ● | 3 | _____ | CT Designated Course | ● | 3 |
| | FYS 100 | First Year Sem Crit Thinking | ● | 3 | _____ | Core II Fine Arts | ● | 3 |
| | MTH 229 | Calculus I (CT) | ● | 5 | _____ | Multicultural/International | ● | 3 |
| | UNI 100 | Freshman First Class | | 1 | _____ | Free Elective | ● | 1 |
| | TOTAL HOURS | | | 16 | TOTAL HOURS | | | 14 |

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 | ENG 354 | Scientific & Tech Writing | ◆ | 3 |
| | CHM 217 | Principles of Chemistry I Lab | ◆ | 2 | GLY 313 | Structural Geology | ◆ | 4 |
| | GLY 212 | Geologic Field Methods | ◆ | 3 | PS 410 | Remote Sensing | ◆ | 4 |
| | GLY 325 | Stratigraphy & Sediment | ◆ | 4 | _____ | Writing Intensive | ● | 3 |
| | ENG 201 | Advanced Composition | ● | 3 | _____ | Free Elective | | 3 |
| | TOTAL HOURS | | | 15 | TOTAL HOURS | | | 17 |

Summer Term (optional):

| YEAR THREE | FALL SEMESTER | | | | SPRING SEMESTER | | | |
|------------|--------------------|---------------------------|-----|-----------|--------------------|----------------------------|-----|-----------|
| | CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
| | GLY 320L | Lab Techniques in Geology | ◆ | 2 | GLY 420 | Principles of Geochemistry | ◆ | 3 |
| | GLY 314 | Mineralogy | ◆ | 4 | GLY 456 | Environmental Geology | ◆ | 4 |
| | PHY 201 | College Physics I | ◆ | 3 | GLY 426 | Geophysics | ◆ | 3 |
| | PHY 202 | General Physics I Lab | ◆ | 1 | _____ | Core II: Social Science | ● | 3 |
| | GLY 423 | Sedimentary Petrology | ◆ | 4 | | | | |
| | _____ | Core II: Social Science | ● | 3 | | | | |
| | TOTAL HOURS | | | 17 | TOTAL HOURS | | | 13 |

Summer Term (optional):

| YEAR FOUR | FALL SEMESTER | | | | SPRING SEMESTER | | | |
|-----------|--------------------|---------------------|-----|-----------|--------------------|-----------------------------|-----|-----------|
| | CODE | COURSE NAME | HRS | GRADE | CODE | COURSE NAME | HRS | GRADE |
| | GLY 491 | Capstone | ◆ | 2 | GEO 429 | Location Analysis and GIS | ◆ | 4 |
| | GLY 457 | Engineering Geology | ◆ | 4 | _____ | Writing Intensive | ● | 3 |
| | _____ | Core II: Humanities | ● | 3 | GEO 222 | Global Environmental Issues | ◆ | 3 |
| | _____ | Free Elective | | 3 | GLY 455 | Hydrogeology | ◆ | 3 |
| | _____ | Free Elective | | 2 | GLY 455L | Hydrogeology Lab | ◆ | 1 |
| | TOTAL HOURS | | | 14 | TOTAL HOURS | | | 14 |

Summer Term (optional):

◆ Area of Emphasis

◆ Major Requirement

■ College Requirement

● General Education Requirement

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