

GEOLOGY, BSG

Geology often draws students with interests in the outdoors, travel, concern for environmental and energy issues and those pursuing careers in geosciences-related industries. Geology applies chemistry, physics, mathematics and sometimes biology to understanding earth processes, so students take a broad array of ancillary science classes. Additionally, majors train in the specialized laboratory and field skills required by professional geologists.

Admission into the Major

Students are expected to formally declare a major no later than the fourth semester of full-time enrollment (or at 61 semester hours for transfer students). Students can declare a major by completing the Change of Major/Minor Application online under the Student tab of myBama.

Special Opportunities

The Department supports two student chapters of professional organizations, the American Institute of Professional Geologists and the American Association of Petroleum Geologists, both of which offer frequent career-development opportunities. The Department also hosts the Geology Club and a chapter of Sigma Gamma Epsilon, the national honor society for Earth Sciences, in which students participate in educational, social, and community service activities, often including field trips. All undergraduates are strongly encouraged to conduct laboratory and field research under the direction of faculty and earn course credit through internships working with professional geoscientists.

Students earning the bachelor of science in geology degree (BSG) must complete all University, College and departmental degree requirements. These include the general education requirements, the following major requirements, and other sufficient credits to total 128 applicable semester hours.

| Code and Title | Hours |
|---|-------|
| Major Courses | |
| GEO 101 The Dynamic Earth | 4 |
| Pick one of the 4 following 100-level courses (any one course shown below in this section): | 4 |
| GEO 102 The Earth Through Time | |
| GEO 103 Introduction to Oceanography | |
| GEO 104 Hazardous Earth | |
| GEO 105 Sustainable Earth | |
| GEO 201 Foundations of Earth Science | 4 |
| GEO 210 Mineralogy | 4 |
| GEO 314 Ign. & Meta. Petrology | 4 |
| GEO 365 Structural Geology | 3 |
| GEO 367 Sedimentology/Stratigraphy | 4 |
| GEO 495 Field Geology | 6 |
| GEO electives | 18 |
| Credit Hours Subtotal: | 51 |

If a student elects to have a concentration, then GEO electives are dictated by that focus. Otherwise, they can pick their own electives and forego a concentration. At least 12 of the elective credits must be upper division (300- or 400-level).

Ancillary Courses

Grades in ancillary courses are not computed into the major GPA. This major requires successful completion of the following courses outside the major:

| | | |
|------------------------------|------------------------------|--------|
| MATH 125 or | Calculus I | 4 |
| MATH 145 | Honors Calculus I | |
| CH 101 or | General Chemistry | 4 |
| CH 117 | Honors General Chemistry | |
| PH 101 or | General Physics I | 4 |
| PH 105 or | General Physics W/Calc I | |
| PH 125 | Honors Gen Ph W/Calculus | |
| Select one of the following: | | 3 or 4 |
| MATH 126 | Calculus II | |
| or | | |
| MATH 145 | Honors Calculus II | |
| or | | |
| GEO 450 | Geostatistics | |
| or | | |
| ST 260 | Statistical Data Analysis | |
| CH 102 or | General Chemistry | |
| CH 118 | Honors General Chemistry | |
| or | | |
| GEO 470 | Introduction to Geochemistry | |
| PH 102 or | General Physics II | |
| PH 106 | General Physics W/Calc II | |
| or | | |
| PH 126 | Honors Gen Ph W/Calculus II | |
| or | | |
| GEO 369 | Introduction Geophysics | |

Total Hours 66-67

Grade Point Average

A 2.0 grade point average in the major is required for completion of the degree. Please see the Grades and Grade Points section of this catalog for an explanation on grade point average calculations. All GEO courses must be passed with a minimum grade of C-.

Upper-level Residency

A minimum of 12 hours of 300- or 400-level courses in the major must be earned on this campus.

Required Minor

The major in geology for the BSG degree does not require a minor.

Additional Major Requirements

Students are responsible for ensuring that they have met all University, College, major and minor requirements. However, each student must meet with an adviser in the major department for academic planning and to be approved for registration each semester. College advisers are also available for additional assistance with minor, College and University requirements.

Prerequisites

Prerequisites for all GEO courses must be passed with a minimum grade of C-.

Geologists have broad career options. Common fields of employment include environmental assessment and remediation, water resources, geotechnical consulting, energy, earth materials, hazard assessments, academic research, and education. Some examples of employers would be environmental and geotechnical firms, energy and mining companies, public utilities, building material suppliers, and state and federal government.

Types of Jobs Accepted

Majors graduate to become geochemists, hydrogeologists, geophysicists, petroleum geologists, resource exploration geologists, hazard assessors, environmental regulators, geotechnical engineers, environmental lawyers, and consultants. Some graduates become Licensed Public Geologists.

Jobs of Experienced Alumni

Alumni hold an impressive array of jobs as leaders of national and international energy corporations, environmental and geotechnical firms, and mining and materials production companies. Several majors became entrepreneurs and founded companies focused on geotechnical consulting, energy exploration, environmental remediation, and other key industries. Others conduct research at universities, national laboratories, museums, state and U.S. Geological Survey offices, and other government agencies including NASA, the Department of Energy, the Department of the Interior, and the Environmental Protection Agency to name a few.

Learn more about opportunities in this field at the Career Center