

Geology (BS)

Degree Requirements

Majors in Arts and Sciences may be completed with a minimum of 120 semester hours unless designated otherwise. At least 30 hours of course work, which represents 25% of the required 120 hours, must be at the upper division level in order to fulfill the University's residency requirement. At least 15 of the 30 upper-division hours must be in the major or concentration area. An overall grade-point-average (GPA) of 2.0 is required for graduation. In addition, a minimum GPA of 2.0 is required in the student's major or concentration area.

Students should complete a minimum of 44 semester hours in Geology. GY 111 and GY 112 are prerequisites for most upper level geology courses. The core requirements for a degree in Geology are listed below:

Geology Major Requirements (44 hrs)		Credit Hours
Core requirements for a geology major		44-46
GY 111 & 111L	4 hrs	
GY 112 & 112L	4 hrs	
GY 301	3 hrs	
GY 302	4 hrs	
GY 303	4 hrs	
GY 304	3 hrs	
GY 306	3 hrs	
GY 401	3 hrs	
GY 403	4 hrs	
GY 480	6 hrs	
GY Elective	1 3/4 hrs	
GY Elective	2 3/4 hrs	
Additional requirements from other disciplines		
MA 125		
MA 126		
CH 131		
CH 132		
A minimum of 8 hours of Physics (algebra/trigonometry-based; PH 114 and PH 115, or calculus-based; PH 201 and PH 202).		
Students can elect to substitute GY 305 for PH 115/PH 202; however, those intending to pursue graduate study are encouraged to complete a full year of calculus and physics at the University of South Alabama.		

A Geology major may seek a traditional minor. A Certificate in Geographic Information Science (GIS) can be obtained simultaneously with a B.S. in Geology if the student elects to minor in Geography or GIT. Contact the Department of Earth Sciences for information concerning the GIS certification program; other possible options for minors, Geology elective courses, and Department Honors opportunities in Geology. An overall GPA 2.0 is required for the major.

General Education Requirements For Geology Majors

Areas I, II, and IV of the General Education Requirements for Geology are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

Department Information

Department of Earth Sciences website
<http://southalabama.edu/colleges/artsandsci/earthsci/>

The Department of Earth Sciences includes the disciplines of Geography, Geology, and Meteorology, and it offers a B.S. degree as well as a minor in each of these three majors. Students can also earn a GIS Certificate and/or a minor in Geographic Information Technology (GIT) Geography, which is both a natural and a social science, studies the location, spatial distribution, and spatial interaction of Earth's natural and human environments. Courses and research in the program encompass the broad subfields of Human Geography (for example, tourism, health, and social justice), Physical Geography (like climatology, natural hazards, and environmental geography), Regional Geography (International Economics and Relations), and Geographic Techniques, including Geographic Information Science and Technology (GIS/GIT) and Remote Sensing. Upon completing their degree, geography students are employed in government, industry, and nonprofits in multiple kinds of work environments (includes field, lab, computer, office and work).

Geology is an interdisciplinary physical science pertaining to the study of the Earth. Courses and research within the department address the chemical and physical properties of minerals, rocks, soils, sediments, and water; the processes that shape the Earth's surface; the stratigraphic, paleobiological, and geochemical records of Earth history; and the processes associated with deformation in the Earth's crust and mantle. Together an understanding is obtained of present-day, historical, and long-term feedbacks between global systems, as well as the origin and occurrence of our natural resources.

Meteorology is the study of atmospheric phenomena and the processes that cause weather. The science of meteorology is firmly rooted in basic physical laws governing mass, momentum, and energy. Many weather processes are simulated by complex computer models; however, accurate weather analysis and forecasting often requires meteorologists to identify and conceptualize weather patterns often missed by automated techniques.

The programs of the Department of Earth Sciences are designed to give the non-major a background in Earth and atmospheric science and the human impact on the landscape as part of a general education. Students pursuing a degree in Geography, Geology, or Meteorology must also have a minor in another discipline.

The Department of Earth Sciences offers a departmental honors program that allows exceptional students to pursue independent research. Students work with a faculty committee to choose an Earth Sciences research project (Geography, Geology, Meteorology), develop a prospectus, and complete a senior thesis. Students completing this program graduate with departmental honors.

Requirements for successful completion of an honors degree in Geography, Geology, or Meteorology include a GPA of at least 3.50 at graduation and completion of ES 492 (Honors Earth Sciences Seminar), ES 497 (Senior Thesis Prospectus), and six hours of ES 499 (Senior Honors Thesis). These classes are in addition to those required for the major in Geography, Geology, or Meteorology. All honors courses are listed under the prefix ES. Students interested in Earth Sciences honors must apply for the program by their junior year. Complete requirements are available on the departmental web page.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students who must enroll in the fall semester following entry. Students must demonstrate technology proficiency by passing the designated class in their major. GEO 331 for Geography majors, GY 301 for Geology majors, or MET 455 for Meteorology majors.

Graduate Studies

Although the Department of Earth Sciences has no graduate degree program, courses, including Geographic Information Technology (GIT), are offered at the graduate level for students enrolled in Biology, Public Administration, Marine Sciences and Environmental Toxicology, and others who need such course work. Contact the Department for more information.