

GENERAL GEOLOGY | BS

A Geology degree provides an understanding of issues associated with the physical earth and skills which are in demand in today's job market. The Geology graduate will have a detailed understanding of climate change, sustainability of the Earth's resources, and the close interplay between human activity and the environment.

About this Program

- **College:** Liberal Arts and Sciences (<https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/>)
- **Degrees:** Bachelor of Arts | Bachelor of Science
- **BA | Specializations:** Environmental Geosciences (https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BA01/) | General Geology (https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BA02/)
- **BS | Specializations:** Environmental Geosciences (https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BS02/) | General Geology (p. 1) | Geophysics (https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BS01/)
- **Credits for Degree:** 120
- **More Info**

To graduate with this major, students must complete all university, college, and major requirements.

Department Information

The Department of Geological Sciences aims to provide a comprehensive understanding of Earth and Planetary sciences along with their formative and evolutionary processes. Geological Sciences trains students to excel in the geoscience workforce and create sustainable solutions to societal needs.

Website (<http://geology.ufl.edu/>)

CONTACT

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Map (<http://campusmap.ufl.edu/#/index/0100>)

Curriculum

- Combination Degrees
- Geological Sciences Certificate
- Geology
- Geology Minor
- Geology UF Online

Techniques such as environmental assessment, geological hazard assessment, field-based techniques, and geographic information systems (GIS) are used to evaluate the impact of humans on the physical earth and hydrologic environment. The practical and flexible curriculum, small class sizes, computer-based learning, strong faculty, and coursework in several areas of General Education make this major appealing to students who want skills linked to employment or preparation for entry to professional schools (e.g., law, medicine, business).

Geology majors learn about the Earth's physical environment including climate, non-renewable geological resources, renewable geological resources, geological hazards and remediation as well as basic skills required by geologists. These skills and the geological perspective open doors to employment in government agencies and private firms that deal with water management, mining and petroleum exploration, climate change, the environment, and education.

Note that some required courses include a field component, but alternatives to off-campus field work are available and special needs or concerns may be accommodated by speaking with a Geology advisor.

Bachelor of Science | General Geology

This degree is designed for students planning to take the professional geology (PG) licensure exam or to continue to graduate study in Geology. It emphasizes a core understanding of petrology, structural geology, field methodology and paleontology, and it requires significant introductory coursework in calculus, general chemistry, and physics.

requirements for the major

The General Geology BS requires 39-40 credits of geology coursework and 15-17 credits of related coursework for a total of 54-57 credits.

Students must earn minimum grades of C for coursework to count toward the major. A minimum of 15 credits of required geology courses must be UF credit.

Required Major Coursework

Code	Title	Credits
<i>General Introductory course (select one):</i>		3-4
GLY 2010C	Physical Geology	
GLY 2030C	Environmental and Engineering Geology	
Any 1000-2000 level GLY, OCE or ESC course		
<i>Historical geology course (select one):</i>		4
GLY 2100C	Historical Geology	
GLY 3105C	Evolution of Earth and Life	
<i>General Geology BS Major Core Coursework: 18 credits</i>		
GLY 3200C	Principles of Mineralogy	4
GLY 4310C	Igneous and Metamorphic Petrology	4
GLY 4400C	Structural Geology and Tectonics	4
GLY 4552C	Sedimentary Geology	4
GLY 4750L	Geological Field Methods	2
<i>General Geology BS Major Elective Coursework: 10 credits</i>		
Additional geology courses at the 3000 level or higher ¹		
Geology BS Capstone Course: 4 credits		
GLY 4790	Geology Summer Field Camp	4
Total Credits		29-30

¹ Excluding GLY 3105C

Required Related Coursework | 15-17 credits

Code	Title	Credits
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry Laboratory	4
MAC 2311	Analytic Geometry and Calculus 1	4
Select one semester of physics and laboratory:		4-5
PHY 2004 & 2004L	Applied Physics 1 and Laboratory for Physics 2004	
PHY 2048 & 2048L	Physics with Calculus 1 and Laboratory for PHY 2048	
PHY 2053 & 2053L	Physics 1 and Laboratory for PHY 2053	
Select remaining coursework from these approved math/science electives:		3-4
CGS 2531	Problem Solving Using Computer Software	
CHM 2046	General Chemistry 2	
CHM 2046L	General Chemistry 2 Laboratory	
PHY 2005	Applied Physics 2	
PHY 2005L	Applied Physics 2 Lab	
PHY 2049	Physics with Calculus 2	
PHY 2049L	Laboratory for PHY 2049	
PHY 2054	Physics 2	
PHY 2054L	Laboratory for PHY 2054	
MAC 2312	Analytic Geometry and Calculus 2	
MAC 2313	Analytic Geometry and Calculus 3	
STA 2023	Introduction to Statistics 1	
Other science credits at the 2000 level and above approved by the department		
Total Credits		15-17

Specific courses selected from among the alternatives listed above will depend upon the student's primary interest.

Students interested in graduate school are urged to take a year of chemistry, calculus and physics. Students should contact a departmental advisor as early as possible.

Critical Tracking

For degree requirements outside of the major, refer to *CLAS Degree Requirements: Structure of a CLAS Degree* (<https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/#degreerequirementstext>).

Critical Tracking records each student's progress in courses that are required for progress toward each major. Please note the critical-tracking requirements below on a per-semester basis.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (<https://cpm.flvc.org/advance-search/>) may be used for transfer students.

Semester 1

- 2.0 UF GPA required

Semester 2

- 2.0 UF GPA required

Semester 3

- Complete one general introductory course (GLY 2010C Physical Geology, GLY 2030C Environmental and Engineering Geology, or any 1000-2000 level GLY, OCE, or ESC course).
GLY 2010C is recommended as it is a prerequisite for many upper-level courses.
- 2.0 UF GPA required

Semester 4

- Complete historical geology course (GLY 2100C or GLY 3105C) or GLY 3000-level geology course.
- Complete one required related course (CHM 2045/CHM 2045L, MAC 2311, or PHY 2004/PHY 2048/PHY 2053 and associated lab)
- 2.5 Critical Tracking GPA
- 2.0 UF GPA required

Semester 5

- Complete one 3000-level geology course (or historical geology course if not taken in semester 4)
- Complete one additional required related course (CHM 2045/CHM 2045L, MAC 2311, or PHY 2004/PHY 2048/PHY 2053 and associated lab)
- 2.5 Critical Tracking GPA
- 2.0 UF GPA required

Semester 6

- Complete GLY 4310C or GLY 4400C
- 2.0 UF GPA required

Semester 7

- Complete GLY 4750L and GLY 4552C
- 2.0 UF GPA required

Semester 8

- Complete any remaining GLY required courses, required related courses, and electives as well as GLY 4790 (Capstone)

Model Semester Plan

Students are expected to complete the Writing, Civic Literacy, summer enrollment, and Quest requirements while in the process of taking the courses below. Students are also expected to complete the General Education International (GE-N) requirements concurrently with another General Education requirement (typically, GE-C, H, or S) as part of the CLAS Basic Distribution requirements. One of the two general education mathematics courses must be a pure math course.

College of Liberal Arts and Sciences allows students additional flexibility in its Distribution Requirements. Students may count a maximum of 6 credits TOTAL from the CLAS Distribution course lists towards Humanities, Social and Behavioral Sciences, or Biological and Physical Sciences, with no more than 3 credits of Humanities, 3 credits of Social and Behavioral Sciences, or 6 credits of Biological or Physical Sciences.

The full list of major-specific requirements for this major can be found on the Overview tab. College of Liberal Arts and Sciences degree requirements can be found on the college's degree requirements page (<https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/#degreerequirementstext>).

MAC 2312, MAC 2313, PHY 2049, PHY 2049L, PHY 2054, and PHY 2054L may count towards 3000 level or above electives outside of the major if taken.

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

Course	Title	Credits
Semester One		
MAC 2311	Analytic Geometry and Calculus 1 (Critical Tracking ; State Core Gen Ed Mathematics)	4
Quest 1 (Gen Ed Humanities, if needed)		3
State Core Gen Ed Composition (https://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing Requirement		3
CLAS Foreign Language Proficiency Requirement ¹		5
Credits		15
Semester Two		
CHM 2045 & 2045L	General Chemistry 1 and General Chemistry Laboratory (Critical Tracking ; State Core Gen Ed Physical Sciences)	4
Select one Physics and laboratory sequence:		4-5
PHY 2004 & 2004L	Applied Physics 1 and Laboratory for Physics 2004 (Gen Ed Physical Sciences)	
PHY 2048 & 2048L	Physics with Calculus 1 and Laboratory for PHY 2048 (Gen Ed Physical Sciences)	
PHY 2053 & 2053L	Physics 1 and Laboratory for PHY 2053 (Gen Ed Physical Sciences)	
State Core Gen Ed Social and Behavioral Sciences (https://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
CLAS Foreign Language Proficiency Requirement ¹		5
Credits		16-17
Semester Three		
Quest 2 (Gen Ed Social and Behavioral Sciences, if needed)		3
Select one:		3-4
GLY 2010C	Physical Geology (Critical Tracking ; Gen Ed Physical Sciences)	
Introductory GLY course (Critical Tracking)		
Approved math/science elective		3-4
Elective (3000 level or above, not in major)		3
Elective		2
Credits		14-16
Semester Four		
Select one:		4
GLY 2100C	Historical Geology (Critical Tracking)	
GLY 3105C	Evolution of Earth and Life (Critical Tracking)	
Gen Ed Biological Sciences		3
State Core Gen Ed Humanities (https://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
Gen Ed Mathematics (or elective if taken in semester two)		3
Gen Ed Social and Behavioral Sciences		3
Credits		16
Semester Five		
GLY 3200C	Principles of Mineralogy (Critical Tracking)	4
GLY 4750L	Geological Field Methods	2
Elective		3
Gen Ed Humanities		3
Credits		12
Semester Six		
GLY 4310C	Igneous and Metamorphic Petrology (Critical Tracking)	4
GLY 4400C	Structural Geology and Tectonics (Critical Tracking)	4
Gen Ed Biological Sciences		3

GLY 4790 A A A A A A A
Capstone

Assessment Types

- Six weeks of practical field exercises and mapping, including observation and data collection in New Mexico and the western USA
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