BACHELOR OF ARTS

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 (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/)
- **Degrees:** Bachelor of Arts (p. 1) | B.A.: Environmental Geosciences (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BA01/) | Bachelor of Science (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BS/)
- **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. We train students to excel in the geoscience workforce and create sustainable solutions to societal needs.
Website (http://geology.ufl.edu/)

CONTACT

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P.O. Box 112120
241 WILLIAMSON HALL
GAINESVILLE FL 32611-2120
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.

Coursework for the Major

The geology major has three different specializations: the Bachelor of Arts, the Bachelor of Arts in environmental geosciences (a joint program with the Department of Geography), and the Bachelor of Science. Students who are uncertain which program best suits them should consult the Department of Geology's undergraduate coordinator for information and guidance on curriculum planning.

Bachelor of Arts

This degree is the most flexible degree, and best suited for students interested in careers in education or environmental policy making. The degree also allows students flexibility to pursue advanced degrees in environmental law or environmental medicine.

Bachelor of Arts | Environmental Geosciences

Co-offered by the Department of Geography, this specialization is designed for students interested in land and water aspects of the environment. It can be tailored to focus on water and mineral exploration and management, geological hazards, environmental planning, resource sustainability, or earth science education.

Bachelor of Science

This degree is designed for students planning to take the professional geology (PG) licensure exam and/or to continue on 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.

Relevant Minors and/or Certificates

UFTeach Program

There is a severe shortage of qualified secondary science teachers in Florida and nationwide. Students interested in becoming part of this high-demand profession should see the undergraduate coordinator about the UFTeach program. UFTeach students can complete the UFTeach minor in science teaching along with their B.A. or B.S in geology and have the coursework and preparation for professional teacher certification in Florida when they graduate.
More Info (http://education.ufl.edu/uf-teach/)

Research

Students in geology who wish to graduate with high or highest honors will be required to conduct an independent research project under the direction of a faculty member. Students are also afforded the opportunity to conduct research within the department's laboratories regardless of their honors status.

Bachelor of Arts

The geology B.A. requires a minimum of 32 credits of coursework in the major. At least 23 credits must be GLY-prefixed courses at the 3000 level or above, excluding GLY 3105C. Students must earn a minimum grade of C for coursework to count toward the major.

Required Coursework

Code	Title	Credits
Introductory Coursework		
Select one general introductory course:		3-4
GLY 2010C	Physical Geology	
GLY 2030C	Environmental and Engineering Geology	
Any 1000-2000-level GLY, OCE or ESC course		

Select one historical geology courses:		4
GLY 3105C	Evolution of Earth and Life	
GLY 2100C	Historical Geology	
Core Coursework		
GLY 3202C	Earth Materials	3-4
or GLY 3200C	Principles of Mineralogy	
Additional Geology courses at the 3000 level or higher [1]		17
1000-4000 level Geology course		2-4
Capstone Course		
GLY 4155C	Geology of Florida	3
Total Credits		32-36

[1] Excluding GLY 3105C; minimum 17 credits.

Critical Tracking

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.

For degree requirements outside of the major, refer to CLAS Degree Requirements: Structure of a CLAS Degree.

Equivalent critical-tracking courses as determined by the State of Florida Common Course Prerequisites (http://www.flvc.org/cpp/displayRecord.jsp?cip=400601&track=1/2) 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 Education Mathematics course
- Complete 1 of 3 critical-tracking courses with a 2.5 critical-tracking GPA. Choose one from a general introductory course (GLY 2010C, GLY 2030C, or any 1000-2000 level GLY, OCE or ESC course), a historical geology course (GLY 3105C or GLY 2100C), or a 3000-level geology course.

  GLY 2010C or GLY 2030C is recommended as one of these is prerequisite to many upper-level courses.
- 2.0 UF GPA required

Semester 4

- Complete one additional critical-tracking course with a 2.5 critical-tracking GPA
- 2.0 UF GPA required

Semester 5

- Complete all tracking courses with a 2.5 critical-tracking GPA; one general introductory course (GLY 2010C, GLY 2030C, or any 1000-2000 level GLY, OCE, or ESC course), one historical geology course (GLY 3105C or GLY 2100C), and one 3000-level geology course.
- 2.0 UF GPA required

Semester 6

- Complete 1 GLY elective 3000 level or above (3-4 credits)
- 2.0 UF GPA required

Semester 7

- Complete 2 additional GLY electives 3000 level and above (6-8 credits)
- 2.0 UF GPA required

Semester 8

- Complete any remaining GLY electives 3000 level and above
- Complete GLY 4155C (Capstone) Geology of Florida
- 2.0 UF GPA required

Model Semester Plan

Students are expected to complete the writing requirement while in the process of taking the courses below. Students are also expected to complete the general education international (GE-N) and diversity (GE-D) requirements concurrently with another general education requirement (typically GE-C, H, or S). One of the two general education mathematics courses must be a pure math course.

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		
Quest 1 (Gen Ed Humanities)		3
State Core Gen Ed Composition (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing Requirement		3
State Core Gen Ed Mathematics (**Critical Tracking**)		3-4
Foreign language		4-5
Select one elective		3
	Credits	16-18
Semester Two		
Select one:		3-4
GLY 2010C	Physical Geology (**Critical Tracking**; Gen Ed Physical Sciences)	
ESC 1000	Introduction to Earth Science (**Critical Tracking**; Gen Ed Physical Sciences)	
GLY 1000	Exploring the Geological Sciences (**Critical Tracking**; Gen Ed Physical Sciences)	
OCE 1001	Introduction to Oceanography (**Critical Tracking**; Gen Ed Physical Sciences)	
State Core Gen Ed Biological Sciences (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
State Core Gen Ed Social and Behavioral Sciences (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
Foreign language		3-5
	Credits	12-15
Semester Three		
Select one:		4

GLY 2100C	Historical Geology (**Critical Tracking**; Gen Ed Physical Sciences)	
GLY 3105C	Evolution of Earth and Life (**Critical Tracking**; Gen Ed Physical Sciences)	
Electives		6
Elective or foreign language if 4-3-3 option		3
Gen Ed Social and Behavioral Sciences		3
	Credits	16
Semester Four		
GLY 3202C	Earth Materials (**Critical Tracking**)	3
Gen Ed Biological Sciences		3
State Core Gen Ed Humanities (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)		3
Gen Ed Mathematics [1]		3-4
Gen Ed Social and Behavioral Sciences		3
	Credits	15-16
Semester Five		
Gen Ed Composition		3
Electives (3000 level or above, not in major)		6
Geology elective (**Critical Tracking**; 3000 level or above)		4
Gen Ed Humanities		3
	Credits	16
Semester Six		
Geology electives (3000 level or above)		8
Electives (3000 level or above, not in major)		6
	Credits	14
Semester Seven		
Geology electives (3000 level or above)		7
Electives		9
	Credits	16
Semester Eight		
GLY 4155C	Geology of Florida (**Critical Tracking**)	3
Geology elective		2
Electives (3000 level or above, not in major)		6
Electives		4
	Credits	15
	Total Credits	120

[1] Pure math if STA 2023 taken for state core in semester one.

Electives to reach the 120-credit total will vary depending on whether students select minimum or maximum credit course options.

Academic Learning Compact

Bachelor of Arts

The Bachelor of Arts in geology provides knowledge of the basic concepts related to earth materials and processes, and how to collect and organize geological data in the field. Through laboratory and field-based exercises, students will learn how to interpret geologic maps and cross sections, and to understand the application of the scientific method to solve these problems in teams and individually.

Before Graduating Students Must

- Pass GLY 4155C Geology of Florida according to the department grading rubric.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes (SLOs)

Content

1. Identify, describe and define the basic concepts related to earth materials and processes.
2. Collect data in the field.
3. Organize geologic, temporal and spatial data.

Critical Thinking

4. Interpret geologic maps and cross sections.
5. Interpret results using the scientific method.

Communication

6. Produce a clearly and effectively written synthesis of data collected in the field.
7. Work in teams to solve geologic problems and to present the results of such collaboration effectively.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6	SLO 7
GLY 2010C	I	I	I	I	I	I	I
GLY 2100C	R	R	R	R	I		R
GLY 3202C	R	R			R		R
GLY 3603	R	R			R	R	
GLY 4155C Capstone	A	A	A	A	A	A	A

Assessment Types

- Lab assignments
- Projects
- Exams

Bachelor of Science

The Bachelor of Science in geology provides knowledge of the basic concepts, theories, observational findings related to earth materials and processes, minerals and rocks, geologic time, stratigraphy and landforms. Through laboratory and field-based exercises, students will learn how to analyze data in the published literature, synthesize analog and digital datasets to produce geological maps, and understand the application of the scientific method to solve geological problems in teams and individually.

Before Graduating Students Must

- Pass GLY 4790 Summer Field Camp according to the department grading rubric.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes (SLOs)

Content

1. Identify, describe and define the basic concepts related to earth materials and processes.
2. Identify and describe minerals and rocks.
3. Define geologic time, stratigraphy and landforms.

Critical Thinking

4. Analyze data in the published literature.
5. Synthesize analog and digital datasets to produce geologic maps.
6. Apply the scientific method to the analysis of published and self-generated data.

Communication

7. Use computers for the presentation of geologic maps and data.
8. Solve geologic problems in teams and present the result of such collaboration effectively.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3	SLO 4	SLO 5	SLO 6	SLO 7	SLO 8
GLY 2010	C	I	I	I		I		I
GLY 2100	R	R	R	R	I	R	I	R
GLY 3200	C	R	R	R		R		R
GLY 4310	R	R	R	R	R	R	R	R
GLY 4790 Capstone	A	A	A	A	A	A	A	A

Assessment Types

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