

# 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) | Bachelor of Science ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY\\_BA\\_BS/GLY\\_BS/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BS/))
- **Specializations:** Environmental Geosciences (BA) ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY\\_BA\\_BS/GLY\\_BA01/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BA01/)) | Environmental Geosciences (BS) ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY\\_BA\\_BS/GLY\\_BS02/](http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BS02/)) | Geophysics (BS) ([http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY\\_BA\\_BS/GLY\\_BS01/](http://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

Email ([info@geology.ufl.edu](mailto:info@geology.ufl.edu)) | 352.392.2231

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.

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.

## Coursework for the Major

The Geology major has five different options: the Bachelor of Arts, the Bachelor of Arts in Environmental Geosciences (a joint program with the Department of Geography), the Bachelor of Science in Geology, the Bachelor of Science in Geophysics, and the Bachelor of Science in Environmental Sciences. 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.

## Degrees and Specializations

### Bachelor of Arts

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 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 | 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.

### Bachelor of Science | Geophysics

This specialization is designed for students planning to take the professional geology (PG) licensure exam or to continue to graduate study in Geophysics or related fields. It emphasizes a core understanding of earth materials, structural geology, field methodology, quantitative and computational methods, and it requires significant coursework in mathematics, computational methods, general chemistry, and physics.

### Bachelor of Science | Environmental Geosciences

This specialization is designed for students planning to take the professional geology (PG) licensure exam or to continue to graduate study in Environmental Geology/Hydrogeology. It emphasizes a core understanding of earth materials, structural geology, field methodology, geobiology, geochemistry, and it requires significant introductory coursework in calculus, general chemistry, and biology.

## Relevant Minors and 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 BA or BS 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 BA 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
<b>Introductory Coursework</b>		
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	
<b>Core Coursework</b>		
GLY 3202C	Earth Materials	3-4
or GLY 3200C	Principles of Mineralogy	
Additional Geology courses at the 3000 level or higher <sup>1</sup>		17
1000-4000 level Geology course		2-4
<b>Capstone Course</b>		

GLY 4155C	Geology of Florida	3
<b>Total Credits</b>		<b>32-36</b>

<sup>1</sup> 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 (<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 Education Mathematics course
- Complete 1 of 3 critical-tracking courses with a 2.5 critical-tracking GPA. Select 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, 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>).

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
<b>Semester One</b>		
Quest 1		3
State Core Gen Ed Composition ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> ); Writing Requirement		3
State Core Gen Ed Mathematics ( <b>Critical Tracking</b> )		3
CLAS Foreign Language Proficiency Requirement <sup>1</sup>		4-5
Gen Ed Physical Sciences		3
<b>Credits</b>		<b>16-17</b>
<b>Semester Two</b>		
Select one:		3-4
GLY 2010C	Physical Geology ( <b>Critical Tracking</b> ; Gen Ed Physical Sciences, Natural Science Laboratory) <sup>2</sup>	
ESC 1000	Introduction to Earth Sciences ( <b>Critical Tracking</b> ; Gen Ed Physical Sciences)	
GLY 1000	Exploring the Geological Sciences ( <b>Critical Tracking</b> )	
OCE 1001	Introduction to Oceanography ( <b>Critical Tracking</b> ; Gen Ed Physical Sciences)	
State Core Gen Ed Biological Sciences ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )		3
State Core Gen Ed Social and Behavioral Sciences ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )		3
CLAS Foreign Language Proficiency Requirement <sup>1</sup>		3-5
<b>Credits</b>		<b>12-15</b>
<b>Semester Three</b>		
Select one:		4
GLY 2100C	Historical Geology ( <b>Critical Tracking</b> )	
GLY 3105C	Evolution of Earth and Life ( <b>Critical Tracking</b> )	
Quest 2		3
Gen Ed Humanities		3
Gen Ed Social and Behavioral Sciences		3
Elective (or CLAS Foreign Language Proficiency Requirement if 4-3-3 option) <sup>1</sup>		3
<b>Credits</b>		<b>16</b>
<b>Semester Four</b>		
GLY 3202C	Earth Materials ( <b>Critical Tracking</b> )	3
Gen Ed Biological Sciences		3
State Core Gen Ed Humanities ( <a href="http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext">http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext</a> )		3
Gen Ed Mathematics		3
Gen Ed Social and Behavioral Sciences		3
<b>Credits</b>		<b>15</b>
<b>Semester Five</b>		
Geology elective ( <b>Critical Tracking</b> ; 3000 level or above)		4
Gen Ed Composition; Writing Requirement		3
Gen Ed Humanities		3
Electives (3000 level or above, not in major)		6
<b>Credits</b>		<b>16</b>
<b>Semester Six</b>		
Geology electives ( <b>Critical Tracking</b> ; 3000 level or above)		6
Electives (3000 level or above, not in major)		6
Elective		2
<b>Credits</b>		<b>14</b>

**Semester Seven**

Geology electives ( <b>Critical Tracking</b> ; 3000 level or above)	7
Electives	9
<b>Credits</b>	<b>16</b>

**Semester Eight**

GLY 4155C	Geology of Florida ( <b>Critical Tracking</b> )	3
Geology elective		2
Electives (3000 level or above, not in major)		6
Elective (or Gen Ed Physical Science, if not taken in semester two)		3
Elective (or Natural Science Laboratory, if not taken in semester two) <sup>2</sup>		1
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>120</b>

<sup>1</sup> CLAS Foreign Language Proficiency Requirement (<https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/#degree requirementstext>)

<sup>2</sup> Degree Requirements (<https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/#degree requirementstext>)

**Academic Learning Compact**

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 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**

1. Interpret geologic maps and cross sections.
2. Interpret results using the scientific method.

**Communication**

1. Produce a clearly and effectively written synthesis of data collected in the field.
2. 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	A	A	A	A	A	A	A
Capstone							

**Assessment Types**

- Lab assignments
- Projects
- Exams