

GEOLOGY

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 (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/GLY_BA_BS/GLY_BA/) | Bachelor of Science (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/)
- **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.

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.

Degrees and Specializations

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 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 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.

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 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 A A A A A A A
 Capstone

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 2010C	I	I	I	I		I		I
GLY 2100C	R	R	R	R	I	R	I	R
GLY 3200C	R	R	R	R		R		R
GLY 4310C	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