Geology UF Online

# **GEOLOGY UF ONLINE**

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/)

Degree: Bachelor of ArtsCredits for Degree: 120Contact: 1.855.99GATOR

· 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) | 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.

The Bachelor of Arts in geology is 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.

## 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.

# **Coursework for the Major**

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 |
|--|---------------------------------------|---------|
| 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 course:  |                                       | 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 | 17                                    |         |
| 1000-4000 level Geology course         |                                       | 2-4     |
| Capstone Course                        |                                       |         |
| GLY 4155C                              | Geology of Florida                    | 3       |
| Total Credits                          |                                       | 32-36   |

<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)
- · 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       |  |
|  | /catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext); Writing   | 3       |  |
| Requirement  |   |         |  |
| State Core Gen Ed Mathematics (Critic                    | al Tracking)  | 3-4     |  |
| Foreign language   |   | 4-5     |  |
| Select one elective                                      |   | 3       |  |
| Our and a True   | Credits   | 16-18   |  |
| Semester Two   |   | 0.4     |  |
| Select one:  | Disciple (Citical Tradition Con Ed Disciple Control   | 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)  | 0       |  |
| _  | (http://catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)   | 3       |  |
|  | al Sciences (http://catalog.ufl.edu/UGRD/academic-programs/general-education/   | 3       |  |
| #genedcoursestext)                                       |   | 0.5     |  |
| Foreign language   | O. Pr   | 3-5     |  |
| Semester Three   | Credits   | 12-15   |  |
|  | Caianasa  | 2       |  |
| Quest 2 (Gen Ed Social and Behavioral                    | Sciences)   | 3       |  |
| Select one:<br>GLY 2100C                                 | Historical Coolegy (Critical Treaking: Can Ed Dhysical Coloness)  | 4       |  |
| GLY 2100C<br>GLY 3105C                                   | Historical Geology (Critical Tracking; Gen Ed Physical Sciences)  Evolution of Earth and Life (Critical Tracking; Gen Ed Physical Sciences) |         |  |
|  | · · · · · · · · · · · · · · · · · · ·   | 2       |  |
| Elective or foreign language if 4-3-3 op:                | LIOII   | 3       |  |
| Electives  | Credits   | 16      |  |
| Compostor Form   | Credits   | 10      |  |
| Semester Four<br>GLY 3202C                               | Forth Matariala (Critical Tradition)  | 2       |  |
|  | Earth Materials (Critical Tracking)   | 3       |  |
| Gen Ed Biological Sciences                               | catalog.ufl.edu/UGRD/academic-programs/general-education/#genedcoursestext)   | 3       |  |
| Gen Ed Mathematics 1                                     | catalog.un.edu/OGnD/academic-programs/general-education/#genedcodisestext/  | 3-4     |  |
| Gen Ed Social and Behavioral Sciences                    |   | 3-4     |  |
| Geri Eu Social and Benavioral Sciences                   | Credits   | 15-16   |  |
| Semester Five  | Cieuto  | 15-10   |  |
| Gen Ed Composition                                       |   | 3       |  |
| Electives (3000 level or above, not in m                 | raior)  | 6       |  |
| Geology elective (Critical Tracking; 3000 level or above |   |         |  |
| Geology elective (Critical Tracking; 300                 | ou level of above   | 4       |  |

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| Gen Ed Humanities  Credits  Semester Six  Geology electives (3000 level or above)  Electives (3000 level or above, not in major)  Credits | 3<br>16<br>8<br>6<br>14 |
|---|-------------------------|
| Semester Six Geology electives (3000 level or above) Electives (3000 level or above, not in major) Credits                                | 8                       |
| Geology electives (3000 level or above) Electives (3000 level or above, not in major) Credits   | 6                       |
| Electives (3000 level or above, not in major)  Credits  | 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                     |

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**

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   | SL0 1 | SL0 2 | SL0 3 | SL0 4 | SLO 5 | SLO 6 | SL0 7 |
|-----------|-------|-------|-------|-------|-------|-------|-------|
| GLY 2010C | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| GLY 2100C | R     | R     | R     | R     | 1     |       | R     |
| GLY 3202C | R     | R     |       |       | R     |       | R     |
| GLY 3603  | R     | R     |       |       | R     | R     |       |

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GLY 4155C Α Α Α Α A A Α Capstone

# Assessment Types · Lab assignments

- Projects
- Exams