Bachelor of Arts Degree in Geology

1000-level Geology Courses (3 courses; 7 credit hours):
GEOL1001C: Geology and Paleontology (fall)
GEOL1002C: Earth Surface Process and Environmental Issues (spring)
GEOL1003L: Physical Geology Laboratory (spring)

*Other introductory courses may be used to fulfill this requirement upon approval.*

2000-level Geology Courses (5 courses; 13 credit hours):
GEOL2005C: Geomorphology (fall)
GEOL2008C: Mineralogy (fall)
GEOL2004C: Sedimentology, Stratigraphy & Earth History (spring)
GEOL2012: The Earth System (spring)
GEOL2100: Careers in the Geosciences (fall; online)

3000-level Geology Courses (choose 3 courses; 9 credit hours):
The student must choose three from the following:
GEOL3000C: Paleontology & Geobiology (fall)
GEOL3002: Geochemistry (fall)
GEOL3003C: Petrology (spring)
GEOL3004C: Structural Geology (spring)
GEOL3005C: Fundamentals of Groundwater (fall)
GEOL3006: Climate Change Through Time (spring)

*The student is expected to finish 2000-level courses before starting 3000-level courses, unless permission has been granted by the Academic Director to take 2000-level and 3000-level courses concurrently.*

4000-level Geology Courses (3 courses; 9 credit hours): The student is required to take at least one 4000-level lecture- or lecture/lab-based course. For the remaining two 4000-level courses, the student may choose lecture, lecture/lab, seminar, discussion, or field-based courses. The student may also take one 3000-level course toward this requirement.

Examples of 4000-level courses offered:
GEOL4001C: Paleontology I, Invertebrate
GEOL4004: Glacial Geology
GEOL4007: Marine Paleoenvironments & Paleoecology
GEOL4012C: Modeling Landscapes
GEOL4018C: Stratigraphy and Facies Models
GEOL4019: Quaternary Seminar
GEOL4023: Ocean Margins/Bahamas Field Trip
GEOL4024: Groundwater Modeling
GEOL4028: Stable Isotope Biogeochemistry
GEOL4029: Stable Isotope Ecology
GEOL4033C: Earth History Field Trip
GEOL4036: Holocene Environmental & Cultural History
GEOL4037: Earth’s Early Biosphere

Credit hours in major = 50-54
Credit hours in general education/college requirements = 43-45
Elective hours = 21-27
Total = 120
Full time program duration = 4 years
GEOL4038: Analytical methods & Scripting R
GEOL4040: Taphonomy
GEOL4044: Basin Dynamics
GEOL4048C: Zooarchaeology
GEOL4049C: Raman Spectroscopy for the Geosciences
GEOL4050C: Teaching Geosciences
GEOL4051C: Applied Geophysics
GEOL4053C-GEOL4054C: Optical Mineralogy – Thin Section Petrography (presented as two half-semester courses)
GEOL4056C: Ecology and Palaeoecology of the Canary Islands

View the full course listings at https://www.artsci.uc.edu/departments/geology/courses.html

Capstone Requirement (minimum 3 credit hours):
The student may participate in a 3-6 credit hour field camp or one departmental upper-level field course (GEOL4023, GEOL4033C). A field camp must be approved by the Undergraduate Director. A student may substitute an internship, faculty-advised research project, or other field or lab experience for partial or full Capstone fulfillment upon approval by the Undergraduate Director.

Chemistry/Biology/Physics requirement (9-10 credit hours). Must achieve at least a C- in each course. This requirement is to be completed by the end of the second year in the major, or by the time 18 hours of geology courses have been acquired:
CHEM1040, 1040L: General Chemistry I & lab (required)
and
CHEM1041, 1041L: General Chemistry II & lab or
BIOL1081, 1081L: Biology I & lab: Molecules, Cells, and the Foundation of Life or
PHYS1051, 1051L: General Physics I & lab (Algebra-based) or
PHYS2001, 2001L: College Physics I & lab (Calculus-based)

These chemistry and physics courses have specific math course or placement test prerequisites.

Quantitative Reasoning requirement (6-8 credit hours). Must achieve at least a C- in each course. This requirement is to be completed by the end of the second year in the major, or by the time 18 hours of geology courses have been acquired:
MATH1044: Applied Calculus I or MATH1061: Calculus I
and
MATH1045: Applied Calculus II or MATH1062: Calculus II or STAT1034: Elementary Statistics I

The MATH courses have specific math course or placement test prerequisites.
Basic curricular progression showing the order for taking courses and their required prerequisites.

<table>
<thead>
<tr>
<th>Term</th>
<th>1000-level (Foundations + 1 additional)</th>
<th>2000-level (all required)</th>
<th>3000-level (choose at least 3 courses)</th>
<th>4000-level (choose at least 3 courses*)</th>
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| Fall | GEOL1001C Geology and Paleontology | GEOL2008C Mineralogy  
 Requires completion of the introductory requirement. | GEOL3000C Paleontology and Geobiology  
 Requires 2004C | Choose three 4000-level courses |
|      |                                      | GEOL2005C Geomorphology  
 Requires completion of the introductory requirement. | GEOL3002 Geochemistry  
 Requires CHEM1040 |  |
|      |                                      | GEOL2100 Careers in the Geosciences | GEOL3005C Hydrogeology  
 Requires 2005C and MATH1044 or 1061 |  |
|      | GEOL1002C Earth Surface Processes and Environmental Issues and GEOL1003L Physical Geology Laboratory | GEOL2004C Sedimentary Geology and Earth History  
 Requires completion of the introductory requirement. | GEOL3003C Petrology  
 Requires 2008C and CHEM1040 |  |
|      |                                      | GEOL2012 The Earth System  
 Requires completion of the introductory requirement. | GEOL3004C Structural Geology |  |
|      |                                      | *CHEM and MATH/STAT completed by the end of this semester* | GEOL3006 Climate Through Time  
 Requires 2012 |  |
|      |                                      | *PHYS/BIOL completed by the end of this semester* |  |  |

*Some 4000-level courses may have 3000-level courses as prerequisites.

Be sure to check with your College advisor to discuss College-specific degree requirements.