Bachelor of Arts Degree in Geology

1000-level Geology Courses (courses; 7 credit hours):
If the student joins the program fall semester, the requirement is completed over two semesters. The following courses should be taken:
GEOL1001C: Geology and Paleontology (3 credits; fall) and GEOL1003L: Physical Geology Laboratory (1 credit; fall) and GEOL1002C: Earth Surface Processes and Environmental Issues (3 credits; spring)

If the student joins the program spring semester, the requirement is completed in one semester. The following courses should be taken:
GEOL1002C: Earth Surface Processes and Environmental Issues (3 credits; spring) and GEOL1004: Historical Geology (3 credits; spring) and GEOL1004L: Historical Geology Laboratory (1 credit; spring)

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

2000-level Geology Courses (4 courses; 12 credit hours):
GEOL2005C: Geomorphology (fall)
GEOL2008C: Mineralogy (fall)
GEOL2004C: Sedimentology, Stratigraphy & Earth History (spring)
GEOL2012: The Earth System (spring)

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: Hydrogeology (starting 17FS or 18FS)
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 one course from the list below. The remaining two courses will serve as electives and include additional 4000-level lecture courses, including field trips (GEOL4021C, GEOL4022C, GEOL4023, GEOL4033C), seminars, workshops, curatorial courses, one additional 3000-level course, or Introduction to GIS, GEOG5171C.
GEOL4001: Paleontology I (Invertebrate) (even spring)
GEOL4002: Paleontology II (Vertebrate) (odd spring)
GEOL4003: Sedimentology (every spring)
GEOL4004: Glacial Geology (odd spring)
GEOL4005: Biodiversity Through Geologic Time (occasional)
GEOL4007: Marine Paleoenvironments & Paleoecology (1/2 semester; odd spring)
GEOL4010C: Igneous Processes and Petrogenesis (occasional)
GEOL4011C: Quaternary Geology (even spring)
GEOL4012C: Modeling Landscapes (every spring)
GEOL4013: Organic Geochemistry (even fall)
GEOL4014: Quantitative Approaches to Paleobiology and Paleoecology (occasional)
GEOL4018C: Stratigraphy and Facies Models (1/2 semester; odd spring)
GEOL4024: Geohydrology and Introduction to Ground-Water Modeling (occasional)
GEOL4025C: Thermodynamics (occasional)
GEOL4028: Stable Isotope Biogeochemistry (odd fall)
GEOL4034C: Thermochronometric Methods (odd fall)
GEOL4036: Holocene Environmental & Cultural History (odd spring)
GEOL4037: Earth’s Early Biosphere (odd spring)
GEOL4038: Analytical methods & Scripting R (odd fall)
GEOL4042: Regional Geology and Tectonics (even fall)
GEOL4044: Basin Dynamics (TBD)
GEOL4048C: Zooarchaeology (odd fall)
GEOL4050: Teaching Geosciences (TBD)
GEOL4055: Plate Tectonics (odd fall)

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 (GEOL4021C, GEOL4022C, GEOL4023, GEOL4033C). A field camp must be approved by the Undergraduate Director. Under special circumstances a student may substitute an internship, faculty-advised research project, or other arrangements for partial or full Capstone fulfillment upon approval by the Capstone Advisory Committee.

Chemistry/Biology/Physics requirement (9-10 credit hours). Must achieve at least a C- in each course. This requirement is to 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.

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<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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<tbody>
<tr>
<td>Fall</td>
<td>Foundations of the Geosciences (GEOL1099C) + 1 additional 1000-level GEOL course (can be taken in any order or concurrently in one semester)</td>
<td>Mineralogy (GEOL 2008C) Requires GEOL1099C</td>
<td>Paleontology and Geobiology (GEOL3000C) Requires 2004C and 2012</td>
<td>Geochemistry (GEOL3002C) Requires CHEM, 2008C, and 2012</td>
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<td>Geomorphology (GEOL2005C) Requires GEOL1099C</td>
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*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.