# GEOLOGY & ENVIRONMENTAL GEOSCIENCES

**PROPOSED CORE COURSE SCHEDULE (subject to change)**

Required core courses listed are for **GEOL** majors.

Courses are 4 credits/6 contact-hour, lecture + lab format, unless noted.

<table>
<thead>
<tr>
<th>FALL 2022</th>
<th>SPRING 2023</th>
</tr>
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<tbody>
<tr>
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<td>250: Introduction to Geochemistry <em>(or CHEM 112</em>)</td>
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<td>272: Stratigraphy and Sedimentation</td>
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<tr>
<td>352: Structural Geology</td>
<td>291: Water Resources (tentative)</td>
</tr>
<tr>
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<td>333: Paleobiology</td>
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**SUMMER FIELD STUDIES COURSES (B.S.)**

|--------------------------------------------------------|--------------------------------------------------------|------------------------------------------------|-----------------------------------------|

Core courses for **GEOL** are in blue.

* New Course

^See Chemistry Department for course schedule
Program of Study Guidelines
122 total credit hours for the degree
Full time schedule: 15+ credits per semester

Geology B.S.

Step 1
- □ GEOL 103 (Environmental Geology)
- □ MATH 120 (Calc. I)*
- □ GEOL 105 (Earth History)
- □ CHEM 111
- □ BIOL 101/111 or PHYS 101/111

Step 2
- □ GEOL 250^ or CHEM 112
- □ GEOL 256** (Min./Pet.)
- □ GEOL 272^ (Strat./Sed.)
- □ GEOL 256** (Min./Pet.)
- □ GEOL 291 (Water Resour.)
- □ GEOL 333^ (Paleobiology)
- □ GEOL 352** (Structural Geology)
- □ BIOL 102/112 or PHYS 102/112
- □ MATH 220 (Calc. II) or MATH 250 (Statistics)

Step 3
- □ GEOL 303, 491, 499 (Independent Study, Senior Thesis, or Bachelor’s Essay)
- □ GEOL 492 (Senior Seminar)
- □ GEOL Elective
- □ GEOL Elective
- □ Field Studies course (Summer)

*Geology B.S. majors should take MATH 110 (if needed) (formerly MATH 101) and then MATH 111 (Pre-Calc) to prepare for MATH 120.

**Usually Fall only  ^Usually Spring only

Contact the Department for more information:
callahant@cofc.edu or whitekl@cofc.edu
Program of Study Guidelines

122 total credit hours for the degree

Full time schedule: 15+ credits per semester

Geology B.S.

Required Courses:
- GEOL 103 Environmental Geology (3)
- GEOL 103L Environmental Geology Laboratory (1)
- GEOL 105 Earth History (3)
- GEOL 105L Earth History Laboratory (1)
- GEOL 256 Mineralogy and Petrology (4)
- GEOL 272 Stratigraphy and Sedimentation (4)
- GEOL 291 Water Resources (4)
- GEOL 333 Paleobiology (4)
- GEOL 352 Structural Geology (4)
- GEOL 360 (4) OR GEOL 364 (4) OR GEOL 365 (4) OR GEOL 366 (4) [All are Field Studies]
- GEOL 492 Senior Seminar (1)

Complete 9 or more Credit Hours of:
(at least 6 of these credit hours must be at the 250-level with a maximum of 3 credit hours from GEOL 260 and GEOL 260L or GEOL 460L):
- GEOL 200 The Age of Dinosaurs (3)
- GEOL 206 Planetary Geology (3)
- GEOL 213 Natural Hazards (3)
- GEOL 235 Geology and Civilization (3)
- GEOL 239 Introduction to Seafloor Mapping (2)
- GEOL 240 Special Topics in Geology (1-4)
- GEOL 253 Earth Systems Science (4)
- GEOL 257 Marine Geology (4)
- GEOL 260 NASA Space Mission Design (2)
- GEOL 260L NASA Lab (1) OR GEOL 460L NASA Leadership Lab (1)
- GEOL 275 Geomorphology (4)
- GEOL 303 Independent Study in Geology (1-3)
- GEOL 312 Environmental Field Methods (3)
- GEOL 313 Critical Zone Science (3)
- GEOL 314 Introduction to Remote Sensing (4)
- GEOL 320 Earth Resources (3)
- GEOL 339 Seafloor Research (3)
- GEOL 357 Oceanographic Research-the Transect Program (4)
- GEOL 360 Field Studies (4)
- GEOL 364 Field Studies: Environmental Geology and Water Resources in the Developing World (4)
- GEOL 365 Field Studies: Geology and Environmental Geosciences in Africa (4)
- GEOL 366 Field Studies: Geology and Paleontology (4)
- GEOL 395 Special Topics in Geology (1-4)
- GEOL 402 Geospatial Science (4)
- GEOL 411 Tectonics (3)
- GEOL 412 Crustal Geophysics (3)
- GEOL 416 Paleogeology (4)
- GEOL 430 Sedimentary Petrology (4)
Program of Study Guidelines
122 total credit hours for the degree
Full time schedule: 15+ credits per semester

Geology B.S.

GEOL 434 Geology of the Carolinas (3)
GEOL 438 Hydrogeology (4)
GEOL 440 Igneous & Metamorphic Petrology (4)
GEOL 441 Pollution in the Environment (4)
GEOL 444 Quantitative Hydrogeology (3)
GEOL 449 Geographical Information Systems (4)
GEOL 469 Advanced GIS - Environmental and Hazards Modeling (4)
GEOL 495 Special Topics (1-4)
GEOL 499A Bachelor's Essay (3)
GEOL 499B Bachelor's Essay (3)
Program of Study Guidelines  
122 total credit hours for the degree  
Full time schedule: 15+ credits per semester

Geology B.A.

**Step 1**
- □ GEOL 103 (Environmental Geology)
- □ MATH 111 (Pre-Calculus)*
- □ GEOL 105 (Earth History)
- □ CHEM 111
- □ BIOL 101/111 or PHYS 101/111

**Step 2**
- □ MATH 250 (Statistics)
- □ GEOL 250^ or CHEM 112
- □ GEOL 256** (Mineral/Petroleum)
- □ GEOL 272^ (Stratigraphy/Sedimentology)
- □ GEOL 291 (Water Resources)
- □ GEOL 333^ (Paleobiology)
- □ GEOL 352** (Structural Geology)
- □ BIOL 102/112 or PHYS 102/112

**Step 3**
- □ GEOL 303, 491, 499 (Independent Study, Senior Thesis, or Bachelor's Essay)
- □ GEOL 492 (Senior Seminar)
- □ GEOL Elective
- □ GEOL Elective

*Geology B.A. majors should take MATH 110 (if needed) (formerly MATH 101) to prepare for MATH 111.

**Usually Fall only  ^Usually Spring only

Contact the Department for more information: callahant@cofc.edu or whitekl@cofc.edu
Required Courses:
- GEOL 103 Environmental Geology (3)
- GEOL 103L Environmental Geology Laboratory (1)
- GEOL 105 Earth History (3)
- GEOL 105L Earth History Laboratory (1)
- GEOL 256 Mineralogy and Petrology (4)
- GEOL 272 Stratigraphy and Sedimentation (4)
- GEOL 291 Water Resources (4)
- GEOL 333 Paleobiology (4)
- GEOL 352 Structural Geology (4)
- GEOL 492 Senior Seminar (1)
[Note: one of the GEOL 360, 364, 365, 366 Field Studies courses are NOT required for the B.A. degree]

Complete 7 Credit Hours of
(at least 6 of these credit hours must be at the 250-level with a maximum of 3 credit hours from GEOL 260 and GEOL 260L or GEOL 460L):
- GEOL 200 The Age of Dinosaurs (3)
- GEOL 206 Planetary Geology (3)
- GEOL 213 Natural Hazards (3)
- GEOL 235 Geology and Civilization (3)
- GEOL 239 Introduction to Seafloor Mapping (2)
- GEOL 240 Special Topics in Geology (1-4)
- GEOL 253 Earth Systems Science (4)
- GEOL 257 Marine Geology (4)
- GEOL 260 NASA Space Mission Design (2)
  OR GEOL 460L NASA Leadership Lab (1)
- GEOL 275 Geomorphology (4)
- GEOL 303 Independent Study in Geology (1-3)
- GEOL 312 Environmental Field Methods (3)
- GEOL 313 Critical Zone Science (3)
- GEOL 314 Introduction to Remote Sensing (4)
- GEOL 320 Earth Resources (3)
- GEOL 339 Seafloor Research (3)
- GEOL 357 Oceanographic Research-the Transect Program (4)
- GEOL 360 Field Studies (4)
- GEOL 364 Field Studies: Environmental Geology and Water Resources in the Developing World (4)
- GEOL 365 Field Studies: Geology and Environmental Geosciences in Africa (4)
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Program of Study Guidelines  
122 total credit hours for the degree

Full time schedule: 15+ credits per semester

Geology B.A.

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GEOL 469 Advanced GIS – Environmental and Hazards Modeling (4)  
GEOL 495 Special Topics (1-4)  
GEOL 499A Bachelor’s Essay (3)  
GEOL 499B Bachelor’s Essay (3)
Program of Study Guidelines  
rev. February 2022

122 total credit hours for the degree
Full time schedule: 15+ credits per semester

**University requirements:**

<table>
<thead>
<tr>
<th>Humanities</th>
<th>First Year Experience</th>
<th>English</th>
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<tbody>
<tr>
<td></td>
<td>FYE or Hons BGS</td>
<td>English 110 OR a combination of approved courses (101*, 102*, 215); Exemption is possible</td>
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- 12 credits from approved Humanities courses with no more than 6 from the same discipline

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<tr>
<th>Foreign Language</th>
<th>History</th>
<th>Social Science</th>
</tr>
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<tbody>
<tr>
<td>Completion of 202 or its equivalent; Exemption is possible</td>
<td>Pre-modern History</td>
<td>Social Science 1</td>
</tr>
<tr>
<td></td>
<td>Modern era History</td>
<td>Social Science 2</td>
</tr>
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**Course number, semester**

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*English 101 and 102 are not offered by College of Charleston but continue to be available through approved credit [Advanced Placement (AP, International Baccalaureate (IB), or Transfer (TR)].