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

**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>SPRING 2023</th>
<th>FALL 2023</th>
</tr>
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<tbody>
<tr>
<td>250: Introduction to Geochemistry <em>(or CHEM 112^)</em></td>
<td>256: Mineralogy/Petrology</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 272^ (Strat./Sed.)
- □ 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
rev. September 2022
122 total credit hours for the degree
Full time schedule: 15+ credits per semester

Geology B.S.

Course Descriptions

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 266 Virtual Expedition in Paleontology (2)
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)
Program of Study Guidelines
122 total credit hours for the degree

Full time schedule: 15+ credits per semester

Geology B.S.

GEOL 411 Tectonics (3)
GEOL 412 Crustal Geophysics (3)
GEOL 416 Paleocoeology (4)
GEOL 430 Sedimentary Petrology (4)
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)
122 total credit hours for the degree

Full time schedule: 15+ credits per semester

**Geology B.A.**

*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](mailto:callahant@cofc.edu) or [whitekl@cofc.edu](mailto:whitekl@cofc.edu)
Program of Study Guidelines

122 total credit hours for the degree

Full time schedule: 15+ credits per semester

Geology B.A.

Course Descriptions

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)
- GEOL 260L NASA Lab (1) OR GEOL 460L NASA Leadership Lab (1)
- GEOL 266 Virtual Expedition in Paleontology (2)
- 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)
Program of Study Guidelines
122 total credit hours for the degree
Full time schedule: 15+ credits per semester

Geology B.A.

GEOL 411 Tectonics (3)
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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  

**University requirements:**

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

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<tr>
<th>Foreign Language</th>
<th>History</th>
<th>Social Science</th>
</tr>
</thead>
<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>Modem era History</td>
<td></td>
<td>Social Science 2</td>
</tr>
</tbody>
</table>

**Course number, semester**

First Year Experience: ____________

Foreign Language: ____________ ____________ ____________ ____________

Humanities: ____________ ____________ ____________ ____________

Social Sciences: ____________ ____________

English*: ____________ ____________

History: ____________ ____________

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