GEOLOGY, MINOR

College of Letters & Science

The minor in Geology offers students a chance to emphasize in one of four areas: General Geology, Engineering Geology, Geochemistry, or Paleobiology.

Students majoring in Geology may elect to complete a minor in Geophysics, Environmental Geology, or Oceanography. They may not complete a minor in Geology.

Students majoring in Marine & Coastal Science may elect to complete a minor in Geology, Geophysics, or Environmental Geology. They may not complete a minor in Oceanography.

The minor is sponsored by the Department of Earth & Planetary Sciences (https://catalog.ucdavis.edu/departments-programs-degrees/earth-planetary-sciences/).

Advising

Visit the staff major advisor (https://eps.ucdavis.edu/students/undergrad/advising/) for help navigating minor requirements, policies, prerequisites, and course offerings. Visit the faculty major advisors (https://eps.ucdavis.edu/students/undergrad/advising/) for additional advice on courses, careers, and graduate school. Faculty Advisors: Same as Geology Major Faculty Advisors (https://catalog.ucdavis.edu/departments-programs-degrees/earth-planetary-sciences/geology-bs/); except Paleobiology emphasis: R. Motani, G. Vermeij.

Work with your major advisor and college advisors to fit a minor into your overall academic plan.

Declare your minor using the OASIS Minor Declaration form (https://students.ucdavis.edu/forms/instructions/minordeclaration.aspx?sv=true), due the quarter before graduation.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>Choose one of four emphases:</td>
<td>19-24</td>
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<tr>
<td>General Geology Emphasis (p. 1)</td>
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<td>Engineering Geology Emphasis (p. 1)</td>
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<td>Geochemistry Emphasis (p. 1)</td>
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<td>Paleobiology Emphasis (p. 1)</td>
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### General Geology Emphasis

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<tbody>
<tr>
<td>GEL 001</td>
<td>The Earth</td>
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<tr>
<td>or GEL 050</td>
<td>Physical Geology</td>
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<tr>
<td>GEL 050L</td>
<td>Physical Geology Laboratory</td>
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<tr>
<td>GEL 101</td>
<td>Structural Geology</td>
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<tr>
<td>GEL 107</td>
<td>Earth History: Paleobiology</td>
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<tr>
<td>GEL 108</td>
<td>Earth History: Paleoclimates</td>
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<tr>
<td>GEL 109</td>
<td>Earth History: Sediments &amp; Strata</td>
<td>3</td>
</tr>
<tr>
<td>GEL/ESP 116N</td>
<td>Oceanography</td>
<td>3</td>
</tr>
<tr>
<td>or GEL 134</td>
<td>Environmental Geology &amp; Land Use Planning</td>
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### Engineering Geology Emphasis

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<tr>
<td>GEL 050 &amp; 050L</td>
<td>Physical Geology and Physical Geology Laboratory</td>
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<tr>
<td>ECI 171 &amp; 171L</td>
<td>Soil Mechanics and Soil Mechanics Laboratory</td>
<td>5</td>
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<tr>
<td>Choose three:</td>
<td>9-14</td>
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<tr>
<td>GEL 134</td>
<td>Environmental Geology &amp; Land Use Planning</td>
<td></td>
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<tr>
<td>GEL 161</td>
<td>Geophysical Field Methods</td>
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<td>GEL 162</td>
<td>Geophysics of the Solid Earth</td>
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<tr>
<td>HYD 103N/EB S 103</td>
<td>Fluid Mechanics Fundamentals</td>
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<tr>
<td>HYD/EBS 144</td>
<td>Groundwater Hydrology</td>
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<td>HYD 146/GEL 156</td>
<td>Hydrogeology &amp; Contaminant Transport</td>
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<td>SSC 118</td>
<td>Soils in Land Use &amp; the Environment</td>
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<tr>
<td>SSC 120</td>
<td>Soil Genesis, Morphology, &amp; Classification</td>
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<td>19-24</td>
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### Geochemistry Emphasis

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<tbody>
<tr>
<td>GEL 060</td>
<td>Earth Materials: Introduction</td>
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<tr>
<td>GEL 146</td>
<td>Radiogenic Isotope Geochemistry &amp; Cosmochemistry</td>
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<tr>
<td>or GEL 148</td>
<td>Stable Isotopes &amp; Geochemical Tracers</td>
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<tr>
<td>CHE 110A</td>
<td>Physical Chemistry: Introduction to Quantum Mechanics</td>
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<tr>
<td>CHE 110B</td>
<td>Physical Chemistry: Properties of Atoms &amp; Molecules 1</td>
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<td>Choose two electives:</td>
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<td>CHE 110C</td>
<td>Physical Chemistry: Thermodynamics, Equilibria &amp; Kinetics</td>
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<td>GEL 108</td>
<td>Earth History: Paleoclimates</td>
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<tr>
<td>GEL 146</td>
<td>Radiogenic Isotope Geochemistry &amp; Cosmochemistry</td>
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<tr>
<td>GEL 148</td>
<td>Stable Isotopes &amp; Geochemical Tracers</td>
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<td>HYD 134</td>
<td>Aqueous Geochemistry</td>
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<td>SSC 102</td>
<td>Environmental Soil Chemistry</td>
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<td>Total Units</td>
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1 Chemistry majors may substitute one of the elective courses for Chemistry CHE 110B.

### Paleobiology Emphasis

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>GEL 107</td>
<td>Earth History: Paleobiology</td>
<td>3</td>
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<tr>
<td>GEL 107L</td>
<td>Earth History: Paleobiology Laboratory</td>
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<tr>
<td>GEL 108</td>
<td>Earth History: Paleoclimates</td>
<td>3</td>
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<tr>
<td>GEL 141</td>
<td>Evolutionary History of Vertebrates</td>
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<tr>
<td>or GEL 144</td>
<td>Historical Ecology</td>
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<td>Choose at least 9 additional units:</td>
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<tr>
<td>ANT 151</td>
<td>Primate Evolution</td>
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<td>ANT 152</td>
<td>Human Evolution</td>
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<td>Course</td>
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<tr>
<td>EVE 100</td>
<td>Introduction to Evolution</td>
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<td>EVE 101</td>
<td>Introduction to Ecology</td>
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<tr>
<td>EVE 102</td>
<td>Population &amp; Quantitative Genetics</td>
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<tr>
<td>EVE 105</td>
<td>Phylogenetic Analysis of Vertebrate Structure</td>
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<tr>
<td>EVE 112</td>
<td>Biology of Invertebrates</td>
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<td>EVE 112L</td>
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<td>EVE 140</td>
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<td>EVE 149</td>
<td>Evolution of Ecological Systems</td>
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<td>GEL 109</td>
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<tr>
<td>GEL/ESP 150C</td>
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**Total Units** | 20