OCEAN AND ESTUARINE SCIENCE MINOR

Banner Code: OES

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This minor is designed for students interested in oceans and coastlines. The fundamental courses include topics in oceanography, physical oceanography, coastal morphology and process, marine geology, chemical oceanography, and marine ecology.

Admissions & Policies

Policies

Eight credits of coursework must be unique to the minor.

For policies governing all minors, see AP.5.3.4 Minors.

Requirements

Minor Requirements

Total credits: 18-22

Students should refer to the Admissions & Policies tab for specific policies related to this program.

Students must successfully complete the following coursework with a minimum GPA of 2.00.

Core Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 309</td>
<td>Introduction to Oceanography</td>
<td>3</td>
</tr>
</tbody>
</table>

Select two courses from the following: 6-7

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIM 412</td>
<td>Physical Oceanography</td>
<td></td>
</tr>
<tr>
<td>GEOL 363</td>
<td>Coastal Morphology and Processes</td>
<td></td>
</tr>
<tr>
<td>or EVPP 363</td>
<td>Coastal Morphology and Processes</td>
<td></td>
</tr>
<tr>
<td>GEOL 364</td>
<td>Marine Geology</td>
<td></td>
</tr>
<tr>
<td>GEOL 458</td>
<td>Chemical Oceanography</td>
<td></td>
</tr>
<tr>
<td>or CHEM 458</td>
<td>Chemical Oceanography</td>
<td></td>
</tr>
<tr>
<td>BIOL 449</td>
<td>Marine Ecology</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 9-10

Additional Courses

Select 9-12 credits from the following: 1

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLIM 101</td>
<td>Global Warming: Weather, Climate, and Society (Mason Core)</td>
<td></td>
</tr>
<tr>
<td>CLIM 412</td>
<td>Physical Oceanography</td>
<td></td>
</tr>
<tr>
<td>GEOL 304</td>
<td>Sedimentary Geology</td>
<td></td>
</tr>
</tbody>
</table>

GEOL 308  Igneous and Metamorphic Petrology
GEOL 312  Invertebrate Paleontology
GEOL 363  Coastal Morphology and Processes
or EVPP 363 | Coastal Morphology and Processes | |
GEOL 364  Marine Geology
GEOL 458  Chemical Oceanography
or CHEM 458 | Chemical Oceanography   | |
BIOL 440  Field Biology (up to 4 credits of only marine or estuarine-oriented field courses)
BIOL 449  Marine Ecology
BIOL 450  Marine Conservation
or EVPP 421 | Marine Conservation | |
BIOL 454  Marine Mammal Biology and Conservation
& BIOL 455  and Marine Mammal Biology and Conservation Field Course 2
or EVPP 419 & EVPP 420  Marine Mammal Biology and Conservation
EVPP 350  Freshwater Ecosystems
EVPP 536  The Diversity of Fishes
EVPP 581  Estuarine and Coastal Ecology
& EVPP 582  and Estuarine and Coastal Ecology Laboratory 2
INTS 495  Field-Based Work (up to 4 credits of only marine or estuarine-oriented field courses)

Total Credits: 9-12

1 Courses taken to satisfy the core requirements above cannot be repeated to count towards the additional courses requirement.
2 If chosen, students must take both the lecture and lab for a total of 4 credits.

Notes

RECR 161 Scuba Diving: Basic is strongly recommended, but is not required.