MINOR IN ENVIRONMENTAL ENGINEERING

In order to permit undergraduate students in any engineering major to take advantage of CSU's environmental expertise, the Department of Civil and Environmental Engineering offers a minor in Environmental Engineering. The minor is designed to broaden the academic background of undergraduate engineering students seeking a career in environmental fields, and to provide fundamentals required to pursue a graduate degree in environmental engineering or related fields.

Requirements

Effective Fall 2020

Students must satisfactorily complete the total credits required for the minor. Minors and interdisciplinary minors require 12 or more upper-division (300- to 400-level) credits.

Additional coursework may be required due to prerequisites.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select 9 credits from the following:</td>
<td>9</td>
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<tr>
<td>CIVE 330</td>
<td>Ecological Engineering</td>
<td></td>
</tr>
<tr>
<td>CIVE 438</td>
<td>Fundamentals of Environmental Engr (^1)</td>
<td></td>
</tr>
<tr>
<td>CIVE 440</td>
<td>Nonpoint Source Pollution</td>
<td></td>
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<tr>
<td>CIVE 442</td>
<td>Air Quality Engineering</td>
<td></td>
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<td></td>
<td>Elective Courses</td>
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<tr>
<td></td>
<td>Select 12 credits from the following, of which at least 3 credits must be upper-division:</td>
<td>12</td>
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<tr>
<td>ATS 350</td>
<td>Introduction to Weather and Climate</td>
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<tr>
<td>ATS 351</td>
<td>Introduction to Weather and Climate Lab</td>
<td></td>
</tr>
<tr>
<td>BC 351</td>
<td>Principles of Biochemistry</td>
<td></td>
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<tr>
<td>BZ 471</td>
<td>Stream Biology and Ecology</td>
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<tr>
<td>BZ 472</td>
<td>Stream Biology and Ecology Laboratory</td>
<td></td>
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<tr>
<td>CHEM 245</td>
<td>Fundamentals of Organic Chemistry</td>
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<tr>
<td>CHEM 246</td>
<td>Fundamentals of Organic Chemistry Laboratory</td>
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<tr>
<td>CHEM 341</td>
<td>Modern Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 345</td>
<td>Organic Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CIVE 330</td>
<td>Ecological Engineering (^2)</td>
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</tr>
<tr>
<td>CIVE 413</td>
<td>Environmental River Mechanics</td>
<td></td>
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<tr>
<td>CIVE 423</td>
<td>Groundwater Engineering</td>
<td></td>
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<tr>
<td>CIVE 437</td>
<td>Wastewater Treatment Facility Design</td>
<td></td>
</tr>
<tr>
<td>CIVE 440</td>
<td>Nonpoint Source Pollution (^2)</td>
<td></td>
</tr>
<tr>
<td>CIVE 442</td>
<td>Air Quality Engineering (^2)</td>
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</tr>
<tr>
<td>CIVE 455</td>
<td>Applications in Geotechnical Engineering</td>
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<tr>
<td>ERHS 446</td>
<td>Environmental Toxicology</td>
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<tr>
<td>LIFE 102</td>
<td>Attributes of Living Systems (GT-SC1)</td>
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<tr>
<td>LIFE 320</td>
<td>Ecology</td>
<td></td>
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<tr>
<td>MECH 463</td>
<td>Building Energy Systems</td>
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<tr>
<td>MIP 300</td>
<td>General Microbiology</td>
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<tr>
<td>MIP 432/ESS 432</td>
<td>Microbial Ecology</td>
<td></td>
</tr>
</tbody>
</table>

Program Total Credits: 21

\(1\) Students in the Civil Engineering major cannot use CIVE 438 for credit in the minor.

\(2\) May be allowed if not taken as a required course.