SUSTAINABLE WATER INTERDISCIPLINARY MINOR

Office in Johnson Hall, Room 119
watercenter.colostate.edu (http://watercenter.colostate.edu)

Coordinated by the CSU Water Center in partnership with the School of Global Environmental Sustainability.

Water is a complex, interdisciplinary topic that is critical to our economic, societal, and environmental well-being. Issues surrounding water supply, water quality, and ecological relationships have become increasingly important in Colorado, the American West, and internationally as water demands increase. The complexity of these issues and competition among various water users demands that students interested in pursuing careers in water gain a broad introduction to the issues while specializing in a particular discipline.

Colorado State University has developed considerable water resources expertise in many academic fields over the past century. The Sustainable Water Interdisciplinary Minor (SWIM) requires 21 credits and a minimum of 12 upper-division (300-400-level) courses which allow undergraduates to take advantage of this expertise and broaden their backgrounds regarding water resources in order to prepare for employment or graduate-level work.

Effective Fall 2016

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.

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>AREC 240/ ECON 240</td>
<td>Issues in Environmental Economics (GT-SS1)</td>
<td>9</td>
</tr>
<tr>
<td>AREC 342</td>
<td>Water Law, Policy, and Institutions</td>
<td></td>
</tr>
<tr>
<td>GR 304/ WR 304</td>
<td>Sustainable Watersheds</td>
<td></td>
</tr>
</tbody>
</table>

**FOUNDATIONS OF WATER**

Select a minimum of 6 credits from the following Foundation course groups:

Select no more than one course from the following:

- BZ 104 Basic Concepts of Plant Life (GT-SC2)
- BZ 110 Principles of Animal Biology (GT-SC2)
- BZ 120 Principles of Plant Biology (GT-SC1)
- FW 204 Introduction to Fishery Biology
- LIFE 103 Biology of Organisms-Animals and Plants

Select no more than one course from the following:

- CHEM 103 Chemistry in Context (GT-SC2)
- CHEM 107 Fundamentals of Chemistry (GT-SC2)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 113</td>
<td>General Chemistry II</td>
<td></td>
</tr>
</tbody>
</table>

Select no more than one course from the following:

- ESS 210/ GR 210 Physical Geography
- GR 100 Introduction to Geography (GT-SS2)

Select no more than one course from the following:

- ESS 211 Foundations in Ecosystem Science
- ESS 311 Ecosystem Ecology
- LAND 220/ LIFE 220 Fundamentals of Ecology (GT-SC2)
- LIFE 320 Ecology

Select no more than one course from the following:

- GEOL 120 Exploring Earth: Physical Geology (GT-SC2)
- GEOL 122 The Blue Planet: Geology of Our Environment (GT-SC2)
- GEOL 124 Geology of Natural Resources (GT-SC2)
- GEOL 150 Physical Geology for Scientists and Engineers

Select no more than one course from the following:

- PH 110 Descriptive Physics (GT-SC2)
- PH 121 General Physics I (GT-SC1)
- PH 141 Physics for Scientists and Engineers I (GT-SC1)

**CONTEXTS OF WATER**

Select a minimum of 6 credits from the following Context courses:

- AGRI 270/ IE 270 World Interdependence-Population and Food (GT-SS3)
- AREC 341 Environmental Economics
- CON 476 Sustainable Practice-Design and Construction ^2
- E 339 Literature of the Earth
- GES 101 Foundations of Environmental Sustainability
- JTC 461 Writing About Science, Health, and Environment
- NR 320 Natural Resources History and Policy
- PHIL 320 Ethics of Sustainability
- PHIL 345 Environmental Ethics
- POLS 361 U.S. Environmental Politics and Policy
- SOC 323 Sociology of Environmental Governance
- SOC 461 Water, Society, and Environment

**Sociological-Economic Context**

- AGRI 270/ IE 270 World Interdependence-Population and Food (GT-SS3)
- AREC 341 Environmental Economics

**Ecological-Biological Context**

- BZ 321 Aquatic Vascular Plants
- BZ 415 Marine Biology
- BZ 471 Stream Biology and Ecology
- BZ 474 Limnology
- ERHS 320 Environmental Health - Water and Food Safety
- FW 300 Biology and Diversity of Fishes
- FW 400 Conservation of Fish in Aquatic Ecosystems
## Sustainable Water Interdisciplinary Minor

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HORT 368/</td>
<td>Landscape Irrigation and Water Conservation</td>
<td>3</td>
</tr>
<tr>
<td>LAND 368</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>ATS 150</td>
<td>Science of Global Climate Change</td>
<td>3</td>
</tr>
<tr>
<td>CIVE 322</td>
<td>Basic Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>CIVE 330</td>
<td>Ecological Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CIVE 413</td>
<td>Environmental River Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>CIVE 423</td>
<td>Groundwater Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CIVE 440</td>
<td>Nonpoint Source Pollution</td>
<td>3</td>
</tr>
<tr>
<td>GEOL 452</td>
<td>Hydrogeology</td>
<td>3</td>
</tr>
<tr>
<td>SOCR 370</td>
<td>Irrigation Principles</td>
<td>3</td>
</tr>
<tr>
<td>SOCR 371</td>
<td>Irrigation of Field Crops</td>
<td>3</td>
</tr>
<tr>
<td>WR 406</td>
<td>Seasonal Snow Environments</td>
<td>3</td>
</tr>
<tr>
<td>WR 416</td>
<td>Land Use Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>WR 418</td>
<td>Land Use and Water Quality</td>
<td>3</td>
</tr>
<tr>
<td>WR 474</td>
<td>Snow Hydrology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Program Total Credits:** 21

1. No more than 4 credits per subject code may be counted toward the Contexts of Water requirement.
2. Enrollment in CON 476 is limited to Construction Management majors only.