Office in Engineering Building, Room E102
watercenter.colostate.edu (http://watercenter.colostate.edu)

Coordinated by the Colorado 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.

CSU 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 background in water resources to prepare for employment or graduate-level work.

Effective Spring 2021

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

Additional coursework may be required due to prerequisites.

### Core Courses (9 credits)

<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>3</td>
</tr>
<tr>
<td>AREC 342</td>
<td>Water Law, Policy, and Institutions</td>
<td>3</td>
</tr>
<tr>
<td>GES 120</td>
<td>Water Sustainability in the Western US</td>
<td>3</td>
</tr>
</tbody>
</table>

### Foundations of Water (3 credits)

Select a minimum of 3 credits from the following Foundation course groups:

- **Sociological-Economic Context**
  - AGRI 270/IE 270 World Interdependence-Population and Food (GT-SS3)
  - AREC 341 Environmental Economics
  - CON 476 Sustainable Practice-Design and Construction
  - 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 Soc. of Environmental Cooperation & Conflict
  - SOC 461 Water, Society, and Environment

- **Biological and Physical Context**
  - ATS 150 Science of Global Climate Change
  - BZ 415 Marine Biology
  - BZ 471 Stream Biology and Ecology
  - BZ 474/ESS 474 Limnology
  - CIVE 322 Basic Hydrology
  - CIVE 330 Ecological Engineering
  - CIVE 413 Environmental River Mechanics
  - CIVE 423 Groundwater Engineering
  - CIVE 440 Nonpoint Source Pollution
  - ERHS 320 Environmental Health–Water Quality
  - FW 300 Biology and Diversity of Fishes
  - FW 400 Conservation of Fish in Aquatic Ecosystems
  - GEOL 452 Hydrogeology
  - HORT 368/LAND 368 Landscape Irrigation and Water Conservation

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 (GT-SC1)

Select no more than one course from the following:

- CHEM 103 Chemistry in Context (GT-SC2)
- CHEM 107 Fundamentals of Chemistry (GT-SC2)
- CHEM 113 General Chemistry II

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 311 Ecosystem Ecology
- LAND 220/220 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 Physics of Everyday Phenomena (GT-SC2)
- PH 121 General Physics I (GT-SC1)
- PH 141 Physics for Scientists and Engineers I (GT-SC1)

### Contexts of Water (9 credits)

Select a minimum of 9 credits from the following courses. At least 3 credits must be taken in each Context category.

- **Sociological-Economic Context**
  - AGRI 270/IE 270 World Interdependence-Population and Food (GT-SS3)
  - AREC 341 Environmental Economics
  - CON 476 Sustainable Practice-Design and Construction
  - 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
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  - SOC 323 Soc. of Environmental Cooperation & Conflict
  - SOC 461 Water, Society, and Environment

- **Biological and Physical Context**
  - ATS 150 Science of Global Climate Change
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  - GEOL 452 Hydrogeology
  - HORT 368/LAND 368 Landscape Irrigation and Water Conservation

Select no more than one course from the following:

- CHEM 103 Chemistry in Context (GT-SC2)
- CHEM 107 Fundamentals of Chemistry (GT-SC2)
- CHEM 113 General Chemistry II

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 311 Ecosystem Ecology
- LAND 220/220 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 Physics of Everyday Phenomena (GT-SC2)
- PH 121 General Physics I (GT-SC1)
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<td>Irrigation Principles</td>
</tr>
<tr>
<td>SOCR 371</td>
<td>Irrigation of Field Crops</td>
</tr>
<tr>
<td>WR 204/GR 204</td>
<td>Sustainable Watersheds (GT-SC2)</td>
</tr>
<tr>
<td>WR 406</td>
<td>Seasonal Snow Environments</td>
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<tr>
<td>WR 416</td>
<td>Land Use Hydrology</td>
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<tr>
<td>WR 418</td>
<td>Land Use and Water Quality</td>
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<tr>
<td>WR 474</td>
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**Program Total Credits:** 21

1 Enrollment in CON 476 is limited to Construction Management majors only.