Questions regarding water use and management abound in all parts of the world. This option's balanced coursework in water science and water policy prepares Environmental Sciences students to contribute to answering questions vital to communities in wide-ranging local and global settings.

Students considering this option first must take Introduction to Water Science and Policy (GEO 335) which also fulfills the Environmental Sciences core requirement in the Hydrosphere category. The option itself has a core requirement for which students select at least one of the following courses: Hydrogeology (GEO 487), Watershed Processes (FE 430) or Forest Watershed Management (FE 434); with permission from the instructor, students may be able to take the civil engineering course, Hydrology (CE 412). The remaining coursework includes at least two classes from the category Sciences, and another two from the category Resources & Policy; an additional selection of electives completes the 27-credit option.

Environmental Sciences students choosing this option prepare for employment in water resource management positions as well as research. Municipal water districts, plus county and state water management bureaus seek employees with backgrounds provided by this specialization. At the federal level, the Bureau of Land Management, U.S. Forest Service, U.S. Dept. of Agriculture, and U.S. Army Corps of Engineers need workers with skills provided by this specialization. River and land trusts, plus a variety of non-profit organizations also seek skills covered by this option. The Environmental Sciences BS with a Water Resources option provides a science base for domestic and international work related to water. This is not an engineering degree but provides a broad background that includes both water science and policy.

Students in the Environmental Water Resources option find internships and undergraduate research projects that involve stream sampling and monitoring in Oregon and in other areas. They also have worked in water treatment facilities, such as the filtration plant for municipal water in Grants Pass, Oregon and water quality inspection and regulation with the Water Resources Control Board in Sacramento, California.
The Environmental Water Resources option provides a solid science base for domestic and international work related to water. The option requires a minimum of 27 credits from the three categories below.

**Classes used to fulfill requirements in the specialization cannot double count with ENSC Core. All courses must be taken for a letter grade, no S/U grades. Students must earn at least a C- in upper division (300 or higher) major/option courses.**

### BACKGROUND COURSE: Meets an ENSC core requirement.

**On Campus**  
**Ecampus**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO/SOIL 335</td>
<td>Introduction to Water Science and Policy (3)</td>
<td>[S]</td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL WATER RESOURCES CORE: Choose a minimum of one course, additional courses count in the Sciences category.

**On Campus**  
**Ecampus**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE 412</td>
<td>Hydrology (4)</td>
<td></td>
</tr>
</tbody>
</table>
| FE 430 | Watershed Processes (4) | [+]
| or FE 434 | Forest Watershed Management (4) | [+]
| GEO 487 | Hydrogeology | + |

### SCIENCES: Choose a minimum of two courses.

**On Campus**  
**Ecampus**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BEE 458</td>
<td>Nonpoint Source Pollution Assessment and Control (3)</td>
<td></td>
</tr>
<tr>
<td>CE 311</td>
<td>Fluid Mechanics (4)</td>
<td></td>
</tr>
</tbody>
</table>
| CE 313 | Hydraulic Engineering (4) | [+]
| CE 417 | Hydraulic Engineering Design (4) | [+]
| FW 456 | Limnology (5) | [+]
| FW 479 | Wetlands and Riparian Ecology (3) | [+]
| GEO 322 | Surfaces Processes (4) | [+]
| GEO 323 | Climatology (4) | [+WIC]
| GEO 432 | Applied Geomorphology (3) | [+]
| GEO 483 | Snow Hydrology (3) | [+]

### RESOURCES AND POLICY: Choose a minimum of two courses.

**On Campus**  
**Ecampus**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
</table>
| AEC 351 | Natural Resource Economics and Policy (3) | [+G]
| AEC/ECON 352 | Environmental Economics and Policy (3) | [+G]
| ENVE 456 | Sustainable Water Resources Development (3) | |
| FW 431 | Dynamics of Marine Biological Resources (4) | [+]
| GEO 420 | Resilience-Based Natural Resource Management (3) | [+]
| GEO 424 | International Water Resources Management (3) | [+]
| GEO 425 | Water Resources Management in the United States (3) | [+]
| GEO 451 | Environmental Site Planning (3) | |
| OC 333 | Oceans, Coasts, and People (3) | [+]
| RNG 355 | Desert Watershed Management (3) | |
| RNG 455 | Riparian Ecology and Management (3) | [+]

**Total Credits**  
27 (Background course not included)