Program Information

The Environmental Studies Program at CWU was established over 30 years ago to provide an interdisciplinary approach to the study of environmental issues. The Environmental Studies Program is administered through the College of the Sciences and has options for both a major (BS) and minor. The program core features team-taught courses including General Education courses that are taught by faculty from multiple disciplines.

Environmental Studies Major

The major in Environmental Studies provides students with an understanding of the natural science of environmental issues as well as the social, political, and economic factors that contribute to policy and planning decisions. Through this major, students will gain the necessary professional and technical skills for entry into successful environmental careers or for graduate studies in environmental fields. The major offers 7 specialization options in Environmental Biology, Environmental Chemistry, Environmental Geology, Environmental Geography, Air and Water Quality, Environmental Policy, and Environmental Leadership.

Requirements for a double major with B.S. in Environmental Studies

The following double major combinations will have the Environmental Studies Specialization course requirements waived for the B.S. degree in Environmental Studies. All Environmental Studies Foundation and Core course requirements must be completed. Required courses for the first degree major may not be used to fulfill upper division Environmental Studies elective requirements (7-10 credits).
**B.S. Public Policy.** The interdisciplinary major in Public Policy (B.S.) may be combined with the Environmental Studies specialization in Environmental Policy by completing the specific course requirements for both majors. Students who combine majors in public policy and environmental studies with a specialization in environmental policy will receive a Bachelors of Science degree in public policy and a Bachelors of Science degree in Environmental Studies. As some public policy requirements and electives count toward both degrees or majors, the actual amount of additional coursework needed to fulfill the requirements of the second degree or major may be as low as 19 credits.

**Foundational courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>BIOL 101/101 Lab or BIOL 181/181 Lab or BIOL 200</td>
<td>5</td>
</tr>
<tr>
<td>CHEM 101/101 Lab or CHEM 111/111 Lab or CHEM 181/181 Lab</td>
<td>5</td>
</tr>
<tr>
<td>GEOG 101 or GEOG 107 or GEOL 101 or GEOL 102 or GEOL 108</td>
<td>5</td>
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<tr>
<td>ANTH 130 or GEOG 108</td>
<td>5</td>
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<tr>
<td>ECON 101 or ECON 201</td>
<td>5</td>
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**Subtotal Foundational Credits: 25**

**Core courses**

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>ENST 201 Earth as an Ecosystem</td>
<td>5</td>
</tr>
<tr>
<td>or ENST 202 Ecosystems, Resources, Populations, and Culture</td>
<td>5</td>
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<tr>
<td>ENST 210 The Global Environment from a Local Perspective</td>
<td>5</td>
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<tr>
<td>ENST 303 Environmental Management</td>
<td>5</td>
</tr>
<tr>
<td>ENST 304 Environmental Methods and Analysis</td>
<td>5</td>
</tr>
<tr>
<td>ENST 455 Environmental Literature</td>
<td>3</td>
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<tr>
<td>ENST 444 Environmental Policy Formulation</td>
<td>4</td>
</tr>
<tr>
<td>ENST 495 or other 495 Senior Research</td>
<td>3-5</td>
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<tr>
<td>or ENST 490 Cooperative Education</td>
<td>5</td>
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<tr>
<td>or UNIV 309 Service Learning</td>
<td>5</td>
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<tr>
<td>or Study Abroad</td>
<td>5</td>
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Upper level electives

Select two of the following, these courses cannot be used to fulfill specialization requirements:

- ANTH/GEOG 440 Ecology and Culture
- ANTH 398 Anthropological Perspectives on the Environment
- ANTH/GEOG 498 Native American Resource Issues
- BIOL 302 Human Ecology
- BIOL 362 Biomes of the Pacific Northwest
ECON 462 Economics of Energy, Resources, and Environment
GEOG 303 Introductory GIS
ENST 310 Energy and Society
GEOG/IET 442 Alternative Energy Resources and Technology
GEOG 350 Resources, Population, and Conservation
GEOG 448 Resource and Environmental Analysis
GEOL 302 Oceans and Atmosphere
GEOL 380 Environmental Geology and Natural Hazards
CMGT 452 LEED in Sustainable Construction
HIST 454 American Environmental History
PHIL 306 Environmental Ethics

Subtotal Core Credits: 37-42

Select one of the following specializations:

**Environmental Biology specialization 33-34 credits**
BIOL 181/181 Lab and CHEM 181/181 Lab are required as foundational courses for this specialization.
BIOL 182/182 Lab Biology 2 (5)
BIOL 183 Biology 3 (5)
CHEM 182 and CHEM 183 and LABS General Chemistry (10)
BIOL 213 Quantitative Methods in Biology (4)
BIOL 360 General Ecology (5)
Choose 1 field course from: (4-5)
   - BIOL 362 Biomes of the Pacific Northwest
   - or BIOL 377 and LAB Regional Natural History
   - or BIOL 462 Wildlife and Fisheries Ecology
   - or BIOL 463 Limnology
   - or BIOL 464 Terrestrial Plant Ecology
   - or BIOL 466 Conservation Biology
   - or BIOL 467 Biological Field Methods

**Environmental Chemistry specialization 30 credits**
CHEM 181/181 Lab is required as a foundational course for this specialization.
CHEM 182/182 Lab and CHEM 183/183 Lab General Chemistry (10)
CHEM 332 Quantitative Analysis (5)
CHEM 345 Environmental Chemistry (5)
MATH 154 Precalculus II (5)
Select one from: (5)
   - GEOL 425 Environmental Geochemistry
   - or BIOL 220 Introductory Cellular Biology
   - or CHEM 452 Instrumental Analysis

**Environmental Geology specialization 32-34 credits**
GEOL 101 or GEOL 102 or GEOL 108 is required as a foundational course for this specialization.
GEOL 101 Lab Intro to Physical Geology Lab (1)
GEOL 200 Earth Evolution and Global Change (5)
GEOL 302 Oceans and Atmosphere (4)
GEOL 380 Environmental Geology and Natural Hazards (4)
GEOL 386 Geomorphology (5)
GEOL 445 Hydrogeology (5)
MATH 154 Precalculus II (5)
Choose 1 field course from: (3-5)
    GEOL 210 Introduction to Geological Field Methods
    or GEOL 377 and LAB Regional Natural History
    or GEOL 410 Snow Sciences: The Physics of Avalanches

Environmental Geography Specialization 28-29 credits
GEOG 107 is required as a foundational course for this specialization.

Choose three of the following physical geography courses:
GEOG 361 Soils (5)
GEOG 382 Hydrology (5)
GEOG 386 Geomorphology (5)
GEOG 388 Climatology (5)
GEOG 389 Ecosystems Geography (5)
GEOG 453 Wetlands Analysis (5)

Choose two of the following techniques courses:
GEOG 303/403 Introduction to GIS (5)
GEOG 409 Quantitative Methods in Geography (5)
GEOG 410 Airphoto Interpretation (4)
GEOG 430 Remote Sensing (5)

Choose one of the following courses:
    GEOG 450 Geography of Arid Lands,
    or GEOG 451 Mountain Environments,
    or GEOG 452 Coastal Environments,
    or GEOG 479 Geography of the West (4)

Water and Air Quality Specialization 35 credits
BIOL 181/181 Lab and CHEM 181/181 Lab are required as foundational courses for this specialization.
MATH 154 Precalculus II (5)
CHEM 182/182 Lab and CHEM 183/183 Lab General Chemistry (10)
CHEM 345 Environmental Chemistry (5)
BIOL 220 Introductory Cellular Biology (5)
BIOL 322 Introductory Microbiology (5)
GEOL 425 Environmental Geochemistry (5)
Environmental Policy Specialization  36-40 credits
ECON 201 is required as a foundation course

Required courses:
ENST 460 Environmental Law (5)
POSC 320 Public Administration (5)
POSC 325 Introduction to Public Policy (3)
POSC 429 Research Seminar in Public Policy (3)
ECON 462 Economics of Energy, Resources, and Environment (5)
GEOG 445 Natural Resource Policy (4)

Select one of the following research tools courses:
BUS 221 Introductory Business Statistics (5)
MATH 311 Statistical Concepts and Methods (5)
PSY 362 Introductory Statistics (4)
SOC 364 Data Analysis in Sociology (5)

Select two of the following courses:
GEOG 303 Introductory GIS (5)
GEOG 305 Introduction to Land Use Planning (5)
GEOG 373 Water Resources (4)
POSC 318 Political Parties and Interest Groups (5)
SOC 338 Political Sociology (3)
GEOG 346 Political Geography (4)
GEOG 442 Alternative Energy Resources and Technology (5)
GEOG 443 Energy Policy (5)
GEOG 448 Resource and Environmental Analysis (5)
GEOG 481 Urban Geography (5)
GEOL 380 - Environmental Geology and Natural Hazards (4)
HIST 454 - American Environmental History (5)
PHIL 306 - Environmental Ethics (5)
SOC 380 - Social Ecology (5)
GEOG/ANTH 440 - Ecology and Culture (4)

Environmental Leadership Specialization  35 credits
ENST 330  Environmental Leadership and Advocacy (5) is required

Choose  30 credits from the following list of courses:
COMM 251 Group Communication (4)
COMM 255 Emerging Leaders (2)
COMM 365 Organizational Communication (4)**
RT 302 Leadership Theory and Practice (3)
UNIV 308 Civic Engagement Theory and Application (4)
UNIV 309 Civic Engagement (2)
POSC 318 Political Parties and Interest Groups (5)
POSC 320 Public Administration (5)
MGT 386 Principles of Organizational Behavior (5)
SOC 362 Social Movements (5) or SOC 370 Social Change (5)
SOC 380 Social Ecology (5) or SOC 375 Sociology of Conflict (5)

** has prerequisite of COM 207

Total credits: 91-102 credits
Environmental Studies Courses

ENST 298. Special Topics (1-6).

ENST 201. Earth as an Ecosystem (5). Introduction to the concept of our planet as a finite environment with certain properties essential for life. The dynamic nature of the earth physical, chemical, geological and biological processes and their interrelated systems aspects furnishes the thrust of this treatment.

ENST 202. Ecosystems, Resources, Population, and Culture (5). The physical and cultural dimensions of environmental problems with particular emphasis given to the interaction between ecosystems, basic resources, population dynamics, and culture.

ENST 210. Global Environment from a Local Perspective (4). Students will collect, analyze, and synthesize original field data in natural and behavioral science on environmental issues relevant to global and local communities. Prerequisite, ENST 201 or ENST 202 or permission of instructor.

ENST 303. Environmental Management (5). Development of attitudes and perceptions of our environment. Examination of the economic, political and legal mechanisms and philosophical perspectives useful in managing the environment. Prerequisite, ENST 201 or ENST 202 or permission of instructor.

ENST 304. Environmental Methods and Analysis (5). Introduction to qualitative and quantitative methods in the social and natural sciences with emphasis on practical application to a variety of examples in the environment. Prerequisite, ENST 201 or ENST 202 or permission of instructor.

ENST 310. Energy and Society (5). Through classroom and field experience, students will examine society's use of, and dependence upon, energy. Students will become more discerning citizens, able to take part in local, national and global energy discussions.

ENST 330. Environmental Leadership and Advocacy (5). Examines environmental groups, leadership models, and methods of environmental advocacy.

ENST 398. Special Topics (1-6).

ENST 444. Environmental Policy Formulation (4). Students will work together in interdisciplinary teams to formulate and justify policy measures they think appropriate to meet some environmental problem investigated. Prerequisite, ENST 201 or 202 and ENST 303 or permission of instructor.

ENST 455. Environmental Literature (3). Survey of literary works that thematically explore
human relationships with place and environment. Sampling of various themes and genres, with a focus on Pacific Northwest.

**ENST 460.** Environmental Law (5). Introduction to the content of U.S. environmental law and the principal legal approaches to deal with environmental problems including common-law, statutory, regulatory, and economic-incentive systems.

**ENST 490.** Cooperative Education (1-12). An individualized contracted field experience with business, industry, government, or social service agencies. This contractual arrangement involves a student learning plan, cooperating employer supervision, and faculty coordination. Prior approval required. May be repeated. Grade will be S or U.

**ENST 491.** Workshop (1-6).

**ENST 496.** Individual Study (1-6). Prerequisite, permission of instructor.

**ENST 498.** Special Topics (1-6).

**ENST 499.** Seminar (1-5).