**ENVIRONMENTAL SCIENCE (B.S.ENV.S.)**

Required course work includes the university requirements (see regulation J-3 (https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees/)), the general requirements for the B.S. degree, and:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 114</td>
<td>Organisms and Environments</td>
<td>4</td>
</tr>
<tr>
<td>COMM 101</td>
<td>Fundamentals of Oral Communication (OR one 2-3 semester of a foreign language course)</td>
<td></td>
</tr>
<tr>
<td>ENVS 101</td>
<td>Introduction to Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ENVS 102</td>
<td>Field Activities in Environmental Sciences</td>
<td>1</td>
</tr>
<tr>
<td>ENVS 225</td>
<td>International Environmental Issues Seminar</td>
<td>3</td>
</tr>
<tr>
<td>ENVS 400</td>
<td>Seminar</td>
<td>1-16</td>
</tr>
<tr>
<td>ENVS 497</td>
<td>Senior Research</td>
<td>2-4</td>
</tr>
<tr>
<td>ENGL 316</td>
<td>Environmental Writing</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 452</td>
<td>Environmental Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>STAT 251</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one sequence from the following:

- GEOG 100 & 100L
  - Physical Geography
  - and Physical Geography Lab
- GEOL 101 & 101L
  - Physical Geology
  - and Physical Geology Lab
- GEOL 111 & 111L
  - Physical Geology for Science Majors
  - and Physical Geology for Science Majors Lab
- SOIL 205 & SOIL 206
  - The Soil Ecosystem
  - and The Soil Ecosystem Lab

**Ecology - one course from the following:**

- BIOL 314
  - Ecology and Population Biology
- FOR/REM 221/WLF 220
  - Principles of Ecology
- GEOG 410
  - Biogeography
- NR 321
  - Ecology

**Environmental Policy and Regulations - select one course from the following:**

- AIST 314
  - Tribal Sovereignty and Federal Policy
- ENVS 479
  - Introduction to Environmental Regulations
- ENVS 577
  - Law, Ethics and the Environment
- IS 322
  - International Environmental Organizations
- NRS 311
  - Public Involvement in Natural Resource Management
- NRS/POLS 364
  - Politics of the Environment

**Human Dimensions - one course from the following:**

- AGEC 451
  - Applied Environmental and Natural Resource Economics
- AIST 344
  - Indigenous Ways of Knowing
- ANTH/SOC 465
  - Environmental Justice
- HIST 424
  - American Environmental History
- ECON 272
  - Foundations of Economic Analysis
- GEOG 345
  - Global Economic Geography
- NRS/FOR 235
  - Society and Natural Resources
- NRS 383
  - Natural Resource and Ecosystem Service Economics
- SOC 350
  - Food, Culture, and Society
- Water - one course from the following:
  - 3
  - ASM 315
    - Irrigation Systems and Water Management
  - BE 453
    - Northwest Climate and Water Resources Change
  - ENVS/SOIL 450
    - Environmental Hydrology
  - FISH 415
    - Limnology
  - FOR 462
    - Watershed Science and Management
  - GEOL 309
    - Ground Water Hydrology
- Sustainability and Integration - one course from the following:
  - 3
  - ENVS 415
    - Environmental Lifecycle Assessment
  - ENVS 428
    - Pollution Prevention
  - ENVS 484
    - History of Energy
  - ENVS 485
    - Energy Efficiency and Conservation
  - FS 436
    - Principles of Sustainability
  - GEOG 435
    - Climate Change Mitigation
  - ENVS 386
    - Managing Complex Environmental Systems
- REM 456
  - Integrated Rangeland Management
- Technical - three courses from the following:
  - 3-12
  - BIOL 115 & 115L
    - Cells and the Evolution of Life
  - BIOL 250
    - General Microbiology
  - BIOL 483
    - Mammalogy
  - BIOL 489
    - Herpetology
  - CHEM 253 & 254
    - Quantitative Analysis
    - and Quantitative Analysis: Lab
  - CHEM 275
    - Carbon Compounds
  - CHEM 277
    - Organic Chemistry I
  - ENVS 498
    - Internship
  - FOR/NRS 375
    - Introduction to Spatial Analysis for Natural Resource Management
  - or GEOG 385GIS Primer
  - FOR/NRS 472
    - Remote Sensing of the Environment
  - GEOG 301
    - Meteorology
  - GEOG 313
    - Global Climate Change
  - GEOG 401
    - Climatology
  - GEOG 483
    - Remote Sensing/GIS Integration
  - GEOL 361
    - Geology and the Environment
  - MATH 175
    - Calculus II
  - PHYS 111 & 111L
    - General Physics I
    - and General Physics I Lab
  - PHYS 112 & 112L
    - General Physics II
    - and General Physics II Lab
  - PHYS 211 & 211L
    - Engineering Physics I
    - and Laboratory Physics I
A. Biological Science Option

This option is suitable for students wishing to pursue technically oriented careers in environmental professions such as natural resource management, bioremediation, and environmental impact analysis.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 250</td>
<td>General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 112</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 112L</td>
<td>General Chemistry II Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>MATH 160</td>
<td>Survey of Calculus</td>
<td>4</td>
</tr>
</tbody>
</table>

Select 4 electives from at least two of the following areas: 20

- Plant Protection:
  - ENT 322 General and Applied Entomology
  - PLSC 338 Weed Control
  - PLSC 410 Invasive Plant Biology
  - PLP 415 Plant Pathology
  - SOIL 446 Soil Fertility

- Animal Ecology:
  - WLF 314 Ecology of Terrestrial Vertebrates
  - WLF 315 Techniques Laboratory
  - WLF 440 Conservation Biology
  - WLF 448 Fish and Wildlife Population Ecology

Aquatic Ecology (Take all three courses):
- FISH 314 Fish Ecology
- FISH 415 Limnology
- FISH 430 Riparian Ecology and Management

- Forest and Range Systems:
  - FOR 330 Terrestrial Ecosystem Ecology
  - FOR 426 Global Fire Ecology and Management
  - REM 411 Wildland Habitat Ecology and Assessment
  - REM 429 Landscape Ecology
  - REM 440 Restoration Ecology

Total Hours: 32

Courses to total 120 credits for this degree

1 Either WLF 440 or WLF 448 may be used as a depth elective.

B. Physical Science Option

This option is suitable for students wishing to pursue technical careers in environmental professions such as air, soil, and water pollution abatement, hazardous waste management, waste minimization, and ecological restoration.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 450</td>
<td>Environmental Hydrology</td>
<td>20</td>
</tr>
<tr>
<td>FOR 462</td>
<td>Watershed Science and Management</td>
<td></td>
</tr>
<tr>
<td>GEOL 309</td>
<td>Ground Water Hydrology</td>
<td></td>
</tr>
<tr>
<td>GEOL 410</td>
<td>Techniques of Groundwater Study</td>
<td></td>
</tr>
<tr>
<td>HYDR 412</td>
<td>Environmental Hydrogeology</td>
<td></td>
</tr>
<tr>
<td>LARC 495</td>
<td>GIS Applications in Land Planning 2</td>
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</tr>
<tr>
<td>CLIM 383</td>
<td>Biogeography</td>
<td></td>
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</tbody>
</table>

Start the following for Physical Science 2 Option only:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 428</td>
<td>Pollution Prevention</td>
<td></td>
</tr>
<tr>
<td>ENVS 429</td>
<td>Environmental Audit</td>
<td></td>
</tr>
<tr>
<td>GEOL 375</td>
<td>Geology of National Parks</td>
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</tr>
<tr>
<td>REM 407</td>
<td>GIS Application in Fire Ecology and Management</td>
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</tr>
<tr>
<td>REM 459</td>
<td>Rangeland Ecology</td>
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</tbody>
</table>

Select one of the following options: 20-62

- Physical Science (p. 2)
- Physical Science 2 (p. 3)
- Social Science (p. 3)
- Biophysical Science (p. 4)

Total Hours: 67-138
C. Physical Science 2 Option

This option is only available to students in Coeur d'Alene and Idaho Falls.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Select 4 electives from at least two of the following areas:</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Water:</td>
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<tr>
<td>CE 433</td>
<td>Water Quality Management</td>
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<tr>
<td>ENVS 450</td>
<td>Environmental Hydrology</td>
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<tr>
<td>FISH 540</td>
<td>Wetland Restoration</td>
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<tr>
<td>GEOL 309</td>
<td>Ground Water Hydrology</td>
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</tr>
<tr>
<td></td>
<td>Mathematics and Statistics:</td>
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<tr>
<td>MATH 175</td>
<td>Calculus II</td>
<td></td>
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<tr>
<td>MATH 275</td>
<td>Calculus III</td>
<td></td>
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<tr>
<td>MATH 310</td>
<td>Ordinary Differential Equations</td>
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<tr>
<td>STAT 431</td>
<td>Statistical Analysis</td>
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<tr>
<td></td>
<td>Management Tools (take three of the following):</td>
<td></td>
</tr>
<tr>
<td>ENVS 415</td>
<td>Environmental Lifecycle Assessment</td>
<td></td>
</tr>
<tr>
<td>ENVS 428</td>
<td>Pollution Prevention</td>
<td></td>
</tr>
<tr>
<td>GEOG 385</td>
<td>GIS Primer</td>
<td></td>
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<tr>
<td>GEOG 475</td>
<td>Intermediate GIS</td>
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<tr>
<td>GEOG 424</td>
<td>Hydrologic Applications of GIS and Remote Sensing</td>
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</tbody>
</table>

Total Hours: 20

Courses to total 120 credits for this degree

D. Social Science Option

This option is suitable for students wishing to pursue careers in environmental professions such as environmental regulation, land use planning, environmental administration, and as a pre-law program for environmental law.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 309</td>
<td>Rhetorical Style</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 202</td>
<td>Intro to Professional Writing</td>
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</tr>
<tr>
<td>or PHIL 201</td>
<td>Critical Thinking</td>
<td></td>
</tr>
<tr>
<td>SOC 309</td>
<td>Social Science Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>or NRS 310</td>
<td>Social Science Methods</td>
<td></td>
</tr>
<tr>
<td>MATH 143</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Select 5 depth electives from one of the following areas:</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Policy and Law:</td>
<td></td>
</tr>
<tr>
<td>ENVS 479</td>
<td>Introduction to Environmental Regulations</td>
<td></td>
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<tr>
<td>PHIL 470</td>
<td>Philosophy of Law</td>
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<tr>
<td>POLS 364</td>
<td>Politics of the Environment</td>
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<tr>
<td>POLS 467</td>
<td>Constitutional Law</td>
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<tr>
<td>POLS 468</td>
<td>Civil Liberties</td>
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<tr>
<td></td>
<td>Administration and Planning:</td>
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<tr>
<td>ACCT 482</td>
<td>Enterprise Accounting</td>
<td></td>
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<tr>
<td>COMM 410</td>
<td>Conflict Management</td>
<td></td>
</tr>
<tr>
<td>NRS 386</td>
<td>Managing Complex Environmental Systems</td>
<td></td>
</tr>
<tr>
<td>NRS 387</td>
<td>Environmental Communication Skills</td>
<td></td>
</tr>
<tr>
<td>FOR 484</td>
<td>Forest Policy and Administration</td>
<td></td>
</tr>
<tr>
<td>GEOG 330</td>
<td>Urban Geography</td>
<td></td>
</tr>
<tr>
<td>POLS 364</td>
<td>Politics of the Environment</td>
<td></td>
</tr>
<tr>
<td>POLS 451</td>
<td>Public Administration</td>
<td></td>
</tr>
</tbody>
</table>
POLS 454  Public Organization Theory
POLS 462  Natural Resource Policy
PSYC 416  Industrial/Organizational Psychology
Green Building and Community Design:
ARCH 151  Introduction to the Built Environment
ARCH 266  Materials and Methods
ARCH 463  Environmental Control Systems I
ARCH 464  Environmental Control Systems II
GEOG 435  Climate Change Mitigation
LARC 380  Water Conservation Technologies
LARC 480  The Resilient Landscape
Climate Change - Human Dimensions:
ENVS 479  Introduction to Environmental Regulations
ENVS 484  History of Energy
ENVS 485  Energy Efficiency and Conservation
GEOG 313  Global Climate Change
GEOG 411  Natural Hazards and Society
GEOG 435  Climate Change Mitigation
GEOG 455  Societal Resilience and Adaptation to Climate Change
NRS 383  Natural Resource and Ecosystem Service Economics

Total Hours 24

Courses to total 120 credits for this degree

E. Biophysical Science Option

This option is intended for students at a distance wishing to pursue technically oriented careers in environmental professions such as natural resource management, bioremediation, and environmental impact analysis. Students need to work closely with an academic advisor to plan the courses needed to fulfill degree requirements which are not available through distance delivery.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 250</td>
<td>General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>or PHYS 111</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>ENGL 317</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>MATH 170</td>
<td>Calculus I</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one of the following:

| GEOG 100 | Physical Geography                             | 4     |
| & 100L   | and Physical Geography Lab                    |       |
| GEOL 101 | Physical Geology                               |       |
| & 101L   | and Physical Geology Lab                      |       |

Select 48 credits of electives, including at least one course from each of the following areas (all are available online):

- Water and Soils:
  - BE 452  Environmental Water Quality
  - ENVS 450  Environmental Hydrology
  - SOIL 205  The Soil Ecosystem
  - SOIL 438  Pesticides in the Environment
  - SOIL 446  Soil Fertility

- Sustainability:
  - ENVS 428  Pollution Prevention
  - FCS 411  Global Nutrition

FS 409  Principles of Environmental Toxicology
FS 436  Principles of Sustainability
GEOG 313  Global Climate Change
INDT 415  Impact of Technology on Society

Energy:

ENVS 484  History of Energy
ENVS 485  Energy Efficiency and Conservation

Geographical Information Systems:

GEOG 385  GIS Primer
GEOG 424  Hydrologic Applications of GIS and Remote Sensing
REM 407  GIS Application in Fire Ecology and Management

Total Hours 62

Courses to total 120 credits for this degree.

Biological Science Option

1. Students will be able to apply environmental science principles within biological, physical, and social science breadth areas, with a specialization to apply knowledge of environmental mitigation in at least one area.
2. Students will be able to communicate environmental science principles and applications effectively through writing and oral presentations.

Social Science Option

1. Students will be able to demonstrate the knowledge of foundational principles in the field of Environmental Science.
2. Students will be able to demonstrate integrative research expertise that applies the scientific method for design, data collection, analysis, and reporting.
3. Students will be able to integrate technical expertise with socio-cultural and political dimensions of environmental problem-solving.