Bachelor of Science in Environmental Studies: Concentration in Natural Resource Management and Conservation - Quantitative Reasoning Category III/IV and Stretch English

120 Total Units Required
Minimum Number of Units in the Major: 65

Course | Title | Units |
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**First Semester**
ENG 104 | Writing the First Year: Finding Your Voice Stretch I ¹ | 3 |
ENVS 130 | Environmental Studies (Major Core, ES) | 3 |
GE Area B: Quantitative Reasoning (B4) ² ³ | 3 |
B4 Support Course ³ | 2-3 |
GE Area C | 3 |
Units | 14-15 |
**Second Semester**
BIOL 230 | Introductory Biology I (Major Core) | 5 |
Select One (Major Core): | 3-5 |
CHEM 115 | General Chemistry I: Essential Concepts of Chemistry | |
CHEM 180 | Chemistry for the Energy and the Environment (B1, B3, ES) | |
ENG 105 | Writing the First Year: Finding Your Voice Stretch II (A2) ¹ | 3 |
GE Area A | 3 |
Units | 14-16 |
**Third Semester**
BIOL 240 | Introductory Biology II (Major Core) | 5 |
GE Area A | 3 |
GE Area B: Life Science (B2) and Laboratory Science (B3) ⁴ | 3-4 |
GE Area E | 3 |
Units | 14-15 |
**Fourth Semester**
ENVS 224 | Research Methods for Environmental Studies (Major Core) | 4 |
Physical Environment - Select One (Major Elective): | 3 |
ERTH 230 | Environmental Geology (B1, B3, ES) | |
GEOG 101 | Our Physical Environment (Prerequisite for GEOG 657 and many upper-division GEOG courses, B1, ES) | |
GE Area C | 3 |
GE Area D - Take Two | 6 |
Units | 16 |
**Fifth Semester**
Ecology - Select One (Major Elective) ⁵ | 3-4 |
Biodiversity - Select One (Major Elective) ⁶ | 3-5 |
GE Area C | 3 |
GE Area D | 3 |
SF State Studies or University Elective | 2 |
Units | 14-17 |
**Sixth Semester**
BIOL 458 | Biometry | 4 |
BIOL 530 | Conservation Biology (Major Core) | 3 |
ENVS 450GW | Environmental Law and Policy - GWAR (Major Core) | 3 |
Sustainability and Social Justice - Select One (Major Elective) ⁷ | 3-4 |
Global/International - Select One (Major Elective): | 3-4 |
ENVS/I R 331 | Global Environmental Crisis (ES, GP, SJ) | |
ENVS 470 | Climate Politics and Policy (ES, GP) | |
GEOG/I R 428 | International Political Economy of Food and Hunger | |
Units | 16-18 |
**Seventh Semester**
Select One (Major Core): | 3 |
GEOG 603 | Introduction to Geographic Information Systems | |
GEOG/USP 652 | Environmental Impact Analysis | |
GEOG/USP 658 | Land-Use Planning | |
Resources - Select One (Major Elective) ⁸ | 3-4 |
GE Area UD-B: Upper-Division Physical and/or Life Sciences (Consider SF State Studies Course) | 3 |
GE Area UD-D: Upper-Division Social Sciences (Consider SF State Studies Course) | 3 |
SF State Studies or University Elective | 4 |
Units | 16-17 |
### Eighth Semester

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ENVS 680</td>
<td>Environmental Studies Internship (Major Core)</td>
<td>3</td>
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<tr>
<td>ENVS 690</td>
<td>Senior Seminar in Environmental Studies (Major Core)</td>
<td>3</td>
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<tr>
<td>GEOG/ENVS 657</td>
<td>Natural Resource Management: Biotic Resources (Major Core)</td>
<td>4</td>
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#### Resource Policy and Techniques - Select One (Major Elective)  
9 units

#### GE Area UD-C: Upper-Division Arts and/or Humanities (Consider SF State Studies Course)  
3 units

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<tr>
<th>Units</th>
<th>Total Units</th>
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<td>16-17</td>
<td>120-131</td>
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1. ENG 114 can only be taken if you complete Directed Self-Placement (DSP) and select ENG 114; if you choose ENG 104/ENG 105 through DSP you will satisfy A2 upon successful completion of ENG 105 in the second semester; multilingual students may be advised into alternative English courses.

2. To avoid taking additional units, it is recommended that you meet **SF State Studies** requirements (AERM, GP, ES, SJ) within your GE or major.

3. Depending on courses completed through Early Start, students in Pathway/Category III or IV may be required to enroll in a support course to complement their Quantitative Reasoning/B4 requirement. There are multiple course options for this pathway. Before enrolling in a B4 course, students should verify their MATH Pathway/Category in their [Student Center](#). Information regarding the courses that correspond with your MATH Pathway/Category can be found on the [Developmental Studies Office Website](#).

4. Consider taking a class combined with a laboratory or a separate lab to fulfill B3 if not already satisfied.

5. **Ecology - Select One:**
   - BIOL 482 Ecology (4 units)
   - BIOL 529GW Plant Ecology - GWAR (4 units)
   - BIOL 532 Restoration Ecology (3 units)
   - BIOL 534 Wetland Ecology (4 units)
   - BIOL 582 Biological Oceanography (4 units)
   - BIOL 585 Marine Ecology (3 units)

6. **Biodiversity - Select One:**
   - BIOL 470 Natural History of Vertebrates (4 units)
   - BIOL 475GW Herpetology - GWAR (3 units)
   - BIOL 478GW Ornithology - GWAR (4 units)
   - BIOL 504 Biology of the Fungi (4 units)
   - BIOL 514 Plant Taxonomy (5 units)
   - BIOL 570GW Biology of Fishes - GWAR (4 units)

   Or a second course chosen from the Ecology section

7. **Sustainability and Social Justice - Select One:**
   - ENVS 306/ECON 306 Economics and the Environment (3 units)
   - ENVS 570 Applied Local Sustainability (3 units) (ES)
   - PHIL 470 Environmental Ethics (3 units) (UD-C, ES, SJ)
   - USP 514 Sustainable Development in Cities (4 units) (ES, SJ)
   - USP 515/GEOG 667 Environmental Justice: Race, Poverty, and the Environment (4 units) (ES, GP, SJ)

8. **Resources - Select One:**
   - CHEM 380 Chemistry Behind Environmental Pollution (3 units) (UD-B, ES)
   - GEOG 317 Geography of Soils (4 units)
   - GEOG 427 Agriculture and Food Supply (4 units) (ES, GP)
   - GEOG 646 The Geography of Marine Resources (4 units)
   - GEOG 647 Geography of Water Resources (4 units)
   - GEOG 666 Geography of Garbage: Recycling and Waste Reduction (3 units) (ES)
   - RPT 640/ENVS 640 Recreational Use of National Parks and Protected Areas (3 units)

9. **Resource Policy and Techniques - Select One:**
   - ENVS 470 Climate Politics and Policy (3 units) (ES, GP)
   - ENVS 530 Environmental Leadership and Organizing (3 units)
   - ENVS 570 Applied Local Sustainability (3 units) (ES)
   - ENVS 306/ECON 306 Economics and the Environment (3 units)
   - GEOG 652/USP 652 Environmental Impact Analysis (4 units)
   - GEOG 658/USP 658 Land-Use Planning (4 units)