BACHELOR OF SCIENCE IN ENVIRONMENTAL STUDIES: CONCENTRATION IN NATURAL RESOURCE MANAGEMENT AND CONSERVATION - QUANTITATIVE REASONING CATEGORY I/II AND STRETCH ENGLISH

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

### Course Title Units

#### 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 A 2 3
GE Area B: Quantitative Reasoning (B4) 3 3
GE Area C 3
**Units** 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) 3 3
GE Area A 3
**Units** 15

#### Third Semester
BIOL 240 Introductory Biology II (Major Core) 5
GE Area B: Life Science (B2) and Laboratory Science (B3) 4 3-4
GE Area D 3
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
**Units** 14-15

#### Fifth Semester
Biol 458 Biometry (Major Core) 4
Ecology - Select One (Major Elective) 5 3-4
Biodiversity - Select One (Major Elective) 6 3-5
GE Area C 3
**Units** 15-18

#### Sixth Semester
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
GE Area UD-C: Upper-Division Arts and/or Humanities (Consider SF State Studies Course) 3
**Units** 15-17

#### 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
**Units** 15-17
Bachelor of Science in Environmental Studies: Concentration in Natural Resource Management and Conservation - Quantitative Reasoning Category I/II and Stretch English

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<thead>
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<th>SF State Studies or University Elective</th>
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<td>Total Units</td>
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**Eighth Semester**

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

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<th>SF State Studies or University Elective</th>
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<tr>
<td>Total Units</td>
<td>16-17</td>
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**Notes:**

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/GEOP 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)