Bachelor of Science in Environmental Studies: Concentration in Natural Resource Management and Conservation - Quantitative Reasoning Category I/II and ENG 114

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

Course | Title | Units
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**First Semester**
ENG 114 | Writing the First Year: Finding Your Voice (A2) | 3
ENVS 130 | Environmental Studies (Major Core, ES) | 3
GE Area A | 2 | 3
GE Area C | 3 | 3
GE Area B: Quantitative Reasoning (B4) | 3 | 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 | 3
CHEM 180 | Chemistry for the Energy and the Environment (B1, B3, ES) | 3
GE Area A | 3
GE Area E | 3

Units | 14-16

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

Units | 14-15

**Fourth Semester**
ENVS 224 | Research Methods for Environmental Studies (Major Core) | 4

Physical Environment - Select One (Major Elective): | 3

**Fifth Semester**
BIOL 458 | Biometry (Major Core) | 4
ECology - Select One (Major Elective) | 5 | 3-4
Biodiversity - Select One (Major Elective) | 6 | 3-5

SF State Studies or University Elective - Take Two | 5 | 5

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) | 3
ENVS 470 | Climate Politics and Policy (ES, GP) | 3
GEOR/I R 428 | International Political Economy of Food and Hunger | 3

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

Units | 15-17

**Seventh Semester**
Select One (Major Core): | 3

GEOR 603 | Introduction to Geographic Information Systems | 3
GEOR/USP 652 | Environmental Impact Analysis | 3
GEOR/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 | 3 | 3

Units | 15-16

**Eighth Semester**
ENVS 680 | Environmental Studies Internship (Major Core) | 3
Senior Seminar in Environmental Studies (Major Core) 3

GEOG/ENVS 657  
Natural Resource Management: Biotic Resources (Major Core) 4

Resource Policy and Techniques - Select One (Major Elective) 9
3-4

SF State Studies or University Elective 3

Total Units 120-130

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)