## Bachelor of Science in Environmental Science – ENVS Associate Degree for Transfer (ADT) Roadmap

This is a sample pathway for students who transfer to San Francisco State University in the current Bulletin year with an AS-T in Environmental Science. Twenty-four units in the major and all lower division GE requirements have been satisfied. Check with a major advisor about the most appropriate course sequence. Degree completion guaranteed in 60 units; see the Associate Degree for Transfer (ADT) section for more information (http://bulletin.sfsu.edu/undergraduate-admissions/transfer-students).

### Course Title | Units
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**First Semester**
CHEM 380 | Chemistry Behind Environmental Pollution 1 | 3
ENG 214 | Second Year Written Composition: English | 3
GEOG 102 | The Human Environment | 3
or University Elective if taken before transfer
GEOG 205 | Geographic Techniques | 3
or University Elective if taken before transfer
Environmental Management 2 | 3

### Units | 15

**Second Semester**
GEOG 500GW | Physical and Human Dimensions of Climate Change - GWAR | 3

### Environmental Management 2 | 3
Environmental Science 3 | 3
Analytical Methods 4 | 4
Upper-Division GE: UD-C or UD-D | 3

### Units | 16

**Third Semester**
GEOG 603 | Introduction to Geographic Information Systems | 3

### Environmental Management 2 | 3
Environmental Science 3 | 3
Analytical Methods 4 | 4
Upper-Division GE: UD-C or UD-D | 3

### Units | 16

### Fourth Semester
GEOG 690 | Senior Seminar in Geography and Environmental Science | 3

### Environmental Management 2 | 3
Environmental Management 3 | 3
University Elective | 1
If UD GE complete, take University Elective or consult with major advisor | 3

### Units | 13

**Total Units** | 60

1. CHEM 380 also fulfills GE: UD-B
2. Environmental Management Electives (12 units)
   - GEOG 421 Future Environments (3 units)
   - GEOG 427 Agriculture and Food Supply (4 units)
   - GEOG 642/ERTH 642 Watershed Assessment and Restoration (4 units)
   - GEOG 646 The Geography of Marine Resources (4 units)
   - GEOG 647 Geography of Water Resources (4 units)
   - GEOG 648 Management of National Parks and Protected Areas (4 units)
   - USP 652 Environmental Impact Analysis (4 units)
   - ENVS 657 Natural Resource Management: Biotic Resources (4 units)
   - GEOG 666 Geography of Garbage: Recycling and Waste Reduction (3 units)
3. Environmental Science Electives (12 units)
   - CHEM 380 Chemistry Behind Environmental Pollution (3 units)
   - GEOG 312 Geography of Landforms (4 units)
   - GEOG 313 Earth’s Climate System (4 units)
   - GEOG 314 Bioclimatology (4 units)
   - GEOG 316 Biogeography (4 units)
   - GEOG 317 Geography of Soils (4 units)
   - GEOG 342/ERTH 442 Surface Water Hydrology (4 units)
   - GEOG 644 Water Quality (3 units)
4. Analytical Methods Electives (12 units)
   - BIOL 458 Biometry (4 units)
   - GEOG 602 Field Methods in Physical Geography (4 units)
   - GEOG 610 Remote Sensing of the Environment I (4 units)
   - GEOG 611 Remote Sensing of the Environment II (4 units)
   - GEOG 620 Geographical Information Systems (4 units)
   - GEOG 621 Geographic Information Systems for Environmental Analysis (4 units)
   - GEOG 625 Programming for Geographic Information Science (4 units)
   - GEOG 629 Coastal and Marine Applications of GIS (3 units)

**To Do at SF State:**

Enough total units to reach 120 minimum for graduation; 40 units minimum at the upper division level; to include the following:

**University-wide requirements: 3-12 units**

- ENG 214 or equivalent A4 course (0-3 units) if not taken before transfer
- American Institutions (see next): US History, US Government, California State and Local Government
• Upper Division GE, areas B, C and D (9 units) – Select UD-C or UD-D courses that also satisfy US History, US Government, California State and Local Government if these requirements not met before transfer. Also, note that certain courses may double-count for major and UD GE.

• Students entering the major with the AS-T in ENVS are not required to fulfill SF State Studies requirements.

Environmental Science major: 41-47 units

• BIOL and PHYS requirements: CHEM 180, GEOG 101, GEOG 160, MATH 226 met before transfer

• Lower division requirements (6 units) if not taken before transfer: GEOG 102, GEOG 205

• Upper division requirements (41 units)

University electives: 1 or more units

Depends on course choices made at the community college, how transferred units are applied to the requirements above, and course choices at SF State - some courses may meet more than one requirement, e.g. in both UD GE and the major.