

# BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE: CONCENTRATION IN NATURAL RESOURCE MANAGEMENT AND CONSERVATION – BIOL 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 Biology. Up to 25 units in the major (BIOL 230, BIOL 240, CHEM 115 or CHEM 180, EARTH 112 or EARTH 230 or GEOG 101, ENVS 130 or GEOG 102, and GEOG 160) 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.

## To Do at SF State:

Enough total units to reach 120 minimum for graduation; 30 units minimum at the upper-division level; to include the following:

### University-Wide Requirements: 9-15 units

- American Institutions (0-6 units): US History, US Government, California State and Local Government if not taken before transfer. Courses required for the major or UD GE may double-count if approved for USH, USG, and/or CSLG.
- Upper-Division GE Areas 2UD/5UD, 3UD, and 4UD (9 units) – Courses required for the major may double-count if approved for UD GE.
- Students entering the major with the AS-T in BIOL are not required to fulfill SF State Studies requirements.

### Environmental Science Major: 43-55 units

- BIOL 230, BIOL 240, CHEM 115 or CHEM 180, EARTH 112 or EARTH 230 or GEOG 101, ENVS 130 or GEOG 102, and GEOG 160 met before transfer.
- Foundation (3 units): ENV 205
- Core (13-16 units)
- Capstone (3 units): ENV 690
- Topical Areas (24-33 units)

### University Electives: 2 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.

Course	Title	Units
<b>First Semester</b>		
ENV 205	Our Environment Through Data (Major Foundation)	3

ENV 500GW	Physical and Human Dimensions of Climate Change - GWAR (Major Core)	3
Ecology and Biodiversity <sup>1</sup>		3-5
Ecosystem Interactions <sup>2</sup>		3-4
US History ( <a href="https://bulletin.sfsu.edu/undergraduate-education/american-institutions/#USHaGR">https://bulletin.sfsu.edu/undergraduate-education/american-institutions/#USHaGR</a> )		3
or University Elective if met in transfer		
	<b>Units</b>	<b>15-18</b>
<b>Second Semester</b>		
ENVS 450	Environmental Law and Policy (Major Core)	3
GEOG 603	Introduction to Geographic Information Systems (Major Core)	3
Ecology and Biodiversity <sup>1</sup>		3-5
Environmental Management <sup>3</sup>		3-4
US and California Government ( <a href="https://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg">https://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg</a> )		3
or University Elective if met in transfer		
	<b>Units</b>	<b>15-18</b>
<b>Third Semester</b>		
ENVS 680	Environmental Studies Internship (Major Core)	1-3
Select One (Major Core):		3-4
BIOL 458	Biostatistics	
GEOG 604	Environmental Data Science	
Environmental Management <sup>3</sup>		3-4
Sustainability and Social Justice <sup>4</sup>		3-4
GE Area 5UD or 2UD: Upper-Division Sciences or Upper-Division Mathematical Concepts		3
University Elective		2
	<b>Units</b>	<b>15-20</b>
<b>Fourth Semester</b>		
ENVS 690	Senior Seminar in Environmental Studies (Major Capstone)	3
Environmental Management <sup>3</sup>		3-4
Tools and Techniques <sup>5</sup>		3-4
GE Area 3UD: Upper-Division Arts or Humanities		3
GE Area 4UD: Upper-Division Social and Behavioral Sciences		3
	<b>Units</b>	<b>15-17</b>
	<b>Total Units</b>	<b>60-73</b>

#### <sup>1</sup> Ecology and Biodiversity (6-9 units)

A full list of courses that can fulfill this requirement can be found in the Degree Requirements. (<https://bulletin.sfsu.edu/colleges/science-engineering/environment/bs-environmental-science-concentration-natural-resource-management-conservation/#degreerequirementstext>)

#### <sup>2</sup> Ecosystem Interactions (3-4 units)

A full list of courses that can fulfill this requirement can be found in the Degree Requirements. (<https://bulletin.sfsu.edu/colleges/science-engineering/environment/bs-environmental-science-concentration-natural-resource-management-conservation/#degreerequirementstext>)

<sup>3</sup> **Environmental Management (9-12 units)**

A full list of courses that can fulfill this requirement can be found in the Degree Requirements. (<https://bulletin.sfsu.edu/colleges/science-engineering/environment/bs-environmental-science-concentration-natural-resource-management-conservation/#degreerequirementstext>)

<sup>4</sup> **Sustainability and Social Justice (3-4 units)**

A full list of courses that can fulfill this requirement can be found in the Degree Requirements. (<https://bulletin.sfsu.edu/colleges/science-engineering/environment/bs-environmental-science-concentration-natural-resource-management-conservation/#degreerequirementstext>)

<sup>5</sup> **Tools and Techniques (3-4 units)**

A full list of courses that can fulfill this requirement can be found in the Degree Requirements. (<https://bulletin.sfsu.edu/colleges/science-engineering/environment/bs-environmental-science-concentration-natural-resource-management-conservation/#degreerequirementstext>)