

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE: CONCENTRATION IN NATURAL RESOURCE MANAGEMENT AND CONSERVATION ROADMAP

120 Total Units Required
Minimum Number of Units in the Major: 66

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual sequence of courses based on course availability. Please consult your Degree Planner (<https://registrar.sfsu.edu/degreeplanner>) and an advisor for further guidance.

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

Course	Title	Units
First Semester		
Select One (Major Core):		3
ENVS 130	Environmental Studies (ESCA)	
GEOG 102	The Human Environment (GE 4, ESCA, GP)	
GE Area 1A: English Composition ¹		3
GE Area 1: English Communication		3
GE Area 2: Mathematical Concepts and Quantitative Reasoning ²		3
GE Area 3: Arts and Humanities		3
Units		15
Second Semester		
BIOL 230	Introductory Biology I (Major Core)	5
Select One (Major Core):		3-4
CHEM 115	General Chemistry I	
CHEM 180	Chemistry for Energy and the Environment (ESCA)	
GE Area 1: English Communication		3
GE Area 3: Arts and Humanities		3
Units		14-15
Third Semester		
BIOL 240	Introductory Biology II (Major Core)	5
Physical Environment Elective		3-4
ERTH 112	Our Dynamic Earth Lecture and Lab (GE 5A, GE 5C, ESCA)	
ERTH 230	Environmental Geology (GE 5A, GE 5C, ESCA)	

GEOG 101	Our Physical Environment (GE 5A, ESCA)	
GE Area 4: Social and Behavioral Sciences ³		3
SF State Studies or University Elective		3
Units		14-15
Fourth Semester		
ENV 205	Our Environment Through Data (Major Core)	3
GEOG 160	Introduction to Environmental Science (Major Core, GE 5B, GE 5C, ESCA, GP)	4
Select One:		3
GE Area 4: Social and Behavioral Sciences (if ENVS 130 taken) ³		
SF State Studies or University Elective (if GEOG 102 taken)		
SF State Studies or University Elective - Take Two		6
Units		16
Fifth Semester		
ENV 500GW	Physical and Human Dimensions of Climate Change - GWAR (Major Core)	3
GEOG 603	Introduction to Geographic Information Systems (Major Core)	3
ENVS 680	Environmental Studies Internship (Major Core)	1
Ecology and Biodiversity ⁴		3-5
GE Area 6: Ethnic Studies (https://bulletin.sfsu.edu/undergraduate-education/general-education/areasix/)		3
US and California Government (https://bulletin.sfsu.edu/undergraduate-education/american-institutions/#usg)		3
Units		16-18
Sixth Semester		
ENVS 450	Environmental Law and Policy (Major Core)	3
Ecology and Biodiversity ⁴		3-5
Sustainability and Social Justice ⁵		3-4
Environmental Management ⁶		3-4
GE Area 3UD: Upper-Division Arts or Humanities		3
Units		15-19
Seventh Semester		
Environmental Management ⁶		3-4
Tools and Techniques ⁷		3-4
GE Area 4UD: Upper-Division Social and Behavioral Sciences		3
GE Area 5UD or 2UD: Upper-Division Sciences or Upper-Division Mathematical Concepts		3

SF State Studies or University Elective		4
	Units	16-18
Eighth Semester		
Select One (Major Core):		3-4
BIOL 458	Biostatistics	
GEOG 604	Environmental Data Science	
ENVS 690	Senior Seminar in Environmental Studies (Major Core)	3
Environmental Management ⁶		3-4
Ecosystem Interactions ⁸		3-4
SF State Studies or University Elective (if needed)		0-2
	Units	14-17
	Total Units	120-133

¹ Students should use their Pathway/Category (<https://gatorsmartstart.sfsu.edu/pathways>) to determine the appropriate GE 1A course option. For directions on how to view your Pathway/Category, visit [how to find your pathway \(https://gatorsmartstart.sfsu.edu/howtofindyourpathways\)](https://gatorsmartstart.sfsu.edu/howtofindyourpathways). Questions? Contact Gator Smart Start. (<https://gatorsmartstart.sfsu.edu/>)

² Students should use their Pathway/Category (<https://gatorsmartstart.sfsu.edu/pathways>) to determine the appropriate GE 2 course option. For directions on how to view your Pathway/Category, visit [how to find your pathway \(https://gatorsmartstart.sfsu.edu/howtofindyourpathways\)](https://gatorsmartstart.sfsu.edu/howtofindyourpathways). Questions? Contact Gator Smart Start. (<https://gatorsmartstart.sfsu.edu/>)

³ First-time freshmen must take one lower-division Area 4 course that meets US History (USH).

⁴ **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-studies-concentration-natural-resource-management-conservation/#degreerequirementstext>).

⁵ **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-studies-concentration-natural-resource-management-conservation/#degreerequirementstext>).

⁶ **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-studies-concentration-natural-resource-management-conservation/#degreerequirementstext>).

⁷ **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-studies-concentration-natural-resource-management-conservation/#degreerequirementstext>).

⁸ **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-studies-concentration-natural-resource-management-conservation/#degreerequirementstext>).