

# BACHELOR OF SCIENCE IN BIOLOGY: CONCENTRATION IN ECOLOGY, EVOLUTION, AND CONSERVATION BIOLOGY ROADMAP – QUANTITATIVE REASONING CATEGORY III/IV

120 Total Units Required

Minimum Number of Units in the Major: 58

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, ES, SJ) requirements within your GE or major.

Course	Title	Units
<b>First Semester</b>		
BIOL 230	Introductory Biology I (Major Lower-Division Core)	5
BIOL 231	Advising for Success as a Biology Major (Major Lower-Division Core)	1
MATH 197	Prelude to Calculus I (Prerequisite for MATH 226) <sup>1</sup>	3
GE Area 1A: English Composition <sup>2</sup>		3
GE Area 1: English Communication		3
<b>Units</b>		<b>15</b>
<b>Second Semester</b>		
BIOL 240	Introductory Biology II (Major Lower-Division Core) <sup>3</sup>	5
MATH 198	Prelude to Calculus II (Prerequisite for MATH 226, GE 2) <sup>1</sup>	3
GE Area 1: English Communication		3
GE Area 4: Social and Behavioral Sciences <sup>4</sup>		3
<b>Units</b>		<b>14</b>
<b>Third Semester</b>		
BIOL 482	Ecology (Major Upper-Division Core)	4
CHEM 115	General Chemistry I (Major Lower-Division Core)	4
MATH 226	Calculus I (Major Lower-Division Core, GE 2) <sup>1</sup>	4

GE Area 3: Arts and Humanities		3
<b>Units</b>		<b>15</b>
<b>Fourth Semester</b>		
BIOL 355	Genetics (Major Upper-Division Core) <sup>5</sup>	3
PHYS 111 & PHYS 112	General Physics I and General Physics I Laboratory (Major Lower-Division Core, GE 5A, GE 5C)	4
GE Area 3: Arts and Humanities		3
GE Area 4: Social and Behavioral Sciences <sup>4</sup>		3
SF State Studies or University Elective		3
<b>Units</b>		<b>16</b>
<b>Fifth Semester</b>		
BIOL 337	Evolution (Major Upper-Division Core)	3
BIOL 458	Biometry (Major Upper-Division Core)	4
Ecology and Evolution Elective (9 units total) <sup>6</sup>		3
SF State Studies or University Elective - Take Two		5
<b>Units</b>		<b>15</b>
<b>Sixth Semester</b>		
Ecology and Evolution Elective (9 units total) <sup>6</sup>		3
GWAR Option <sup>7</sup>		3-4
GE Area 6: Ethnic Studies ( <a href="https://bulletin.sfsu.edu/undergraduate-education/general-education/areasix/">https://bulletin.sfsu.edu/undergraduate-education/general-education/areasix/</a> )		3
GE Area 3UD: Upper-Division Arts or Humanities		3
U.S. 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
<b>Units</b>		<b>15-16</b>
<b>Seventh Semester</b>		
Ecology and Evolution Elective (9 units total) <sup>6</sup>		3
Physiology and Additional Electives (9 units total) <sup>8</sup>		3
GE Area 4UD: Upper-Division Social and Behavioral Sciences		3
SF State Studies or University Elective - Take Two		6
<b>Units</b>		<b>15</b>
<b>Eighth Semester</b>		
Physiology and Additional Electives (9 units total) - Take Two <sup>8</sup>		6
SF State Studies or University Elective – Take Three		9
<b>Units</b>		<b>15</b>
<b>Total Units</b>		<b>120-121</b>

<sup>1</sup> 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/>). Questions? Contact Gator Smart Start. (<https://gatorsmartstart.sfsu.edu/>)

<sup>2</sup> 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/>).

[gatorsmartstart.sfsu.edu/howtofindyourpathways/](https://gatorsmartstart.sfsu.edu/howtofindyourpathways/)). Questions?

Contact Gator Smart Start. (<https://gatorsmartstart.sfsu.edu/>)

- <sup>3</sup> GE Area 5B (Biological Science) is satisfied upon completion of BIOL 240.

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

- <sup>5</sup> Area 5UD (Upper-Division Science) is satisfied upon completion of BIOL 355.

- <sup>6</sup> **Ecology and Evolution Electives (9 units total)**

A full list of courses that can fulfill this requirement can be found in the Degree Requirements (<https://bulletin.sfsu.edu/colleges/science-engineering/biology/bs-biology-concentration-ecology-evolution-conservation-biology/#programrequirements>).

- <sup>7</sup> **GWAR Option (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/biology/bs-biology-concentration-ecology-evolution-conservation-biology/#programrequirements>).

- <sup>8</sup> **Physiology and Additional Electives (9 units total)**

A full list of courses that can fulfill this requirement can be found in the Degree Requirements (<https://bulletin.sfsu.edu/colleges/science-engineering/biology/bs-biology-concentration-ecology-evolution-conservation-biology/#programrequirements>).