

**San Francisco State University**  
**Degree Roadmap: Bulletin Year 2006 - 2007**

February 13, 2009

**BS Degree in Biology - Microbiology (671123)**

Minimum Number of Units in Major = 68

Bulletin URL: <http://www.sfsu.edu/~bulletin/noindex/0607/prngrams/biolnrv.htm#671123> Key to Course Abbreviations: <http://www.sfsu.edu/~admisrec/reg/crsabbrev.html>

**1st Semester Requirements**

Requirement	Recommended Courses	Units
Basic Information Competence		
Written English Proficiency	ENG 114	3
GE 1 Oral Communication	SPCH 150	3
GE 1 Quantitative Reasoning also satisfies Major Lower Division	MATH 226	4
Major Lower Division	CHEM 115	5
<b>Totals:</b>		<b>15</b>

Note: Review the Bulletin for GE II requirements in the following areas:  
 LLD-Lifelong Development; AERM-American Ethnic and Racial Minorities; L/F-Laboratory or Fieldwork

**2nd Semester Requirements**

Requirement	Recommended Courses	Units
GE 1 Critical Thinking		3
GE 2 Physical and Biological Sciences, Category A also satisfies Major Lower Division	PHYS 111	3
GE 2 Physical and Biological Sciences, Category B also satisfies Major Lower Division	BIOL 230	5
GE 2 Behavioral and Social Sciences		3
Major Lower Division	PHYS 112	1
<b>Totals:</b>		<b>15</b>

**3rd Semester Requirements**

Requirement	Recommended Courses	Units
GE 1 Written Communication also satisfies University Written English Proficiency	ENG 214	3
GE 2 Behavioral and Social Sciences		3
Major Lower Division	CHEM 215 & CHEM 216	5
Major Lower Division	BIOL 240	5
<b>Totals:</b>		<b>16</b>

**4th Semester Requirements**

Requirement	Recommended Courses	Units
US Government and California		3
GE 2 Physical and Biological Sciences, Category C		3
GE 2 Humanities and Creative Arts		3
Major Lower Division	PHYS 121 & PHYS 122	4
Major Upper Division	CHEM 333	3
<b>Totals:</b>		<b>16</b>

Note: Take JEPET after 48 units earned to satisfy Written English Proficiency.

**5th Semester Requirements**

Requirement	Recommended Courses	Units
US History		3
GE 2 Humanities and Creative Arts		3
GE 3		3
Major Upper Division	CHEM 335	3
Major Upper Division	BIOL 355	3
<b>Totals:</b>		<b>15</b>

**6th Semester Requirements**

Requirement	Recommended Courses	Units
University Elective or Written English Proficiency (if required)	ENG 414	3
GE 2 Behavioral and Social Sciences		3
Major Upper Division	BIOL 401 & BIOL 402	5
Major Upper Division (See Note 1)	CHEM 349 or CHEM 340	3
Major Upper Division Elective		3 to 5
<b>Totals:</b>		<b>17 to 19</b>

**7th Semester Requirements**

Requirement	Recommended Courses	Units
GE 2 Humanities and Creative Arts		3
GE 3		3
Major Lower Division (See Note 2)	MATH 124 or MATH 227 or MATH 228 or CSC 210 or BIOL 458	3 to 4
Major Upper Division Elective		3 to 5
University Elective		0 to 3
<b>Totals:</b>		<b>12 to 18</b>

**8th Semester Requirements**

Requirement	Recommended Courses	Units
GE 3		3
Major Upper Division	BIOL 442 & BIOL 443	5
Major Upper Division Elective		3 to 5
University Elective		0 to 3
<b>Totals:</b>		<b>11 to 16</b>

Note: Meet with a major advisor early to develop a customized course plan. A minimum of 40 upper division units must be completed for degree.

Note 1: If you are required to take CHEM 340 for graduate school, you will need to take CHEM 335 prior to enrolling in CHEM 340.

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Note 2: MATH 228 has an additional prerequisite - if you wish to take it, you will need to take MATH 227 prior to taking this course.

This roadmap is a recommendation only. It is designed so that no more than two majors science classes are taken in most semesters. Check the prerequisites of courses to see if you can take a course earlier if desired.

Department Website: <http://www.sfsu.edu/~biology/>