

## Advising Road Map

Major:	BS Biological Science
Concentration in:	Microbiology
Total Units to Degree:	120
Academic Year:	2016/2017

*Below is a sample program for an entering freshman who wishes to complete this degree in 4 years. Keep in mind that most majors extend their stay at San Jose State University to more than 4 years because they work or have other obligations that necessitate that they proceed more slowly through their coursework. This program presumes that the student has passed the English Placement Test and Entry Level Math Test, has gotten a C or better in high school chemistry, and has placed in Calculus 30 via the Math Placement Test. Students should consult a Biology advisor as soon as possible and, at a minimum, each year thereafter. Biology Majors fulfill the General Education Requirements for Areas B1, B2, B3, B4, R by courses in their major. Biology majors should not take GE courses in Area B.*

### Fall Semester- Year 1

Course or Requirement	Units
BIOL 30 (B2/B3)	4
CHEM 1A (B1/B3)	5
Oral Communication (GE Area A1)	3
English 1A (A2)	3
PE	1
Total Semester Units:	16

### Spring Semester- Year 1

Course or Requirement	Units
BIOL 31 (B2/B3)	4
CHEM 1B (B1/B3)	5
GE Area C1 or C2	3
Math 30 (B4)*	3
Total Semester Units:	15

### Fall Semester- Year 2

Course or Requirement	Units
BIOL 55 (B4)	3
CHEM 112A	3
PHYS 2A	4
GE Area E (Biol 54 recommended)	3
Critical Thinking and Writing (A3)	3
Total Semester Units:	16

### Spring Semester- Year 2

Course or Requirement	Units
CHEM 112B	3
MICR 101	4
PHYS 2B	4
Arts (GE Area C1)	3
Total Semester Units:	14

### Fall Semester- Year 3

Course or Requirement	Units
CHEM 113A	2
CHEM 135	4
Major Elective**	3
Amer Inst + GE: D2, US1, US2, US3 (Hist 15A, AFAM 2A, AAS 33A, MAS 10A)	3
Letters (GE Area C2)	3
Total Semester Units:	15

### Spring Semester- Year 3

Course or Requirement	Units
BIOL 107	3
MICR 127 (Partial Completion of Area R)	2
Major Core Laboratory***	4
Amer Inst + GE: D3, US1, US2, US3 (Hist 15B, AFAM 2B, AAS 33B, MAS 10B)	3
Human Behavior (D1)	3
Total Semester Units:	15

### Fall Semester- Year 4

Course or Requirement	Units
BIOL 100W (Z)	3
BIOL 115 (Partial Completion of Area R)	4
CHEM 120S	1
MICR 141	3
Major Core Laboratory***	3
Total Semester Units:	14

### Spring Semester- Year 4

Course or Requirement	Units
Major Elective**	8
Self and Society (GE Area S)	3
Global Understanding (GE Area V)	3
PE	1
Total Semester Units:	15

NOTES: \*MATH 60 (Calculus for Biological Sciences) or Math 30P (Calculus with Precalculus) can be substituted for MATH 30 (Calculus). **Students must take the Calculus Placement Exam prior to enrolling in calculus.** \*\*11 units of electives from major core lab courses

(below) or BIOL 116, BIOL 118, BIOL 121, BIOL 123, BIOL 124/125, BIOL 126, BIOL 134, BIOL 135A, BIOL 135L, BIOL 156, CHEM 055, MICR 122, MICR 123, MICR 140, MICR 142, MICR 166, MICR 170 (or other courses by prior advisor approval). \*\*\*≥7 units from major core laboratory courses: BIOL 107L, BIOL 116L, BIOL 180, MICR 122L, MICR 123L, MICR 127L, MICR 140L, MICR 141L, or MICR 142L.