

# MICROBIOLOGY, BS (CAL S)

## FOUR-YEAR PLAN

### FOUR-YEAR PLAN

This sample four-year plan is a tool to assist students and their advisors.

Students should use their DARS report, the degree planner, Guide requirements, and the course search & enroll tools to make their own four-year plan based on their placement scores, credit for transferred courses and approved examinations, and individual interests. Students must complete at least 120 total credits to be eligible for graduation.

Students planning to pursue graduate studies in a biological science are encouraged to take MATH 222, PHYSICS 201/ PHYSICS 202 or PHYSICS 207/PHYSICS 208, and BIOCHEM 507/BIOCHEM 508 (see footnote 7). Also recommended: CHEM 665 Biophysical Chemistry and MICROBIO/BIOCHEM/GENETICS 612 Prokaryotic Molecular Biology.

### SAMPLE MICROBIOLOGY FOUR-YEAR PLAN

#### Freshman

Fall	Credits Spring	Credits
General Chemistry <sup>1</sup>	4-5 Gen Chem or Electives <sup>1</sup>	5
Math <sup>2</sup>	3 Math <sup>2</sup>	3-5
COMM-A	3 Electives <sup>3</sup>	6
First-Year Seminar	1	
Elective <sup>3</sup>	3	
<b>14-15</b>		<b>14-16</b>

#### Sophomore

Fall	Credits Spring	Credits
CHEM 343	3 CHEM 344	2
Math <sup>2</sup>	3-5 CHEM 345	3
Intro Biology, Semester <sup>1</sup> <sup>4</sup>	5 Intro Biology, Semester <sup>2</sup> <sup>4</sup>	5
Elective <sup>3</sup>	3 Electives <sup>3</sup>	6
<b>14-16</b>		<b>16</b>

#### Junior

Fall	Credits Spring	Credits
General Physics, Semester <sup>1</sup> <sup>5</sup>	4-5 General Physics, Semester <sup>2</sup> <sup>5</sup>	4-5
MICROBIO 303	3 MICROBIO 470	3
MICROBIO 304	2 BIOCHEM 501 <sup>7</sup>	3
MICROBIO 305	1 Research <sup>6</sup>	1-4
Research <sup>6</sup>	1-4 Electives (for major or other) <sup>3</sup>	0-4
Electives (to reach 15 crs) <sup>3</sup>	0-4	
<b>11-19</b>		<b>11-19</b>

#### Senior

Fall	Credits Spring	Credits
MICROBIO 526	3 MICROBIO 450	3
MICROBIO 527	2 MICROBIO 551	2

Research <sup>6</sup>	1-4 Research <sup>6</sup>	1-4
Electives (for major or other) <sup>3</sup>	6-9 Electives (for major or other) <sup>3</sup>	7-10
<b>12-18</b>		<b>13-19</b>

#### Total Credits 105-138

- Choose 1 of 3 sequences: (CHEM 103/CHEM 104) or CHEM 109 or (CHEM 115/CHEM 116). Students who take CHEM 109 and plan to attend medical or other professional schools are advised to take one additional inorganic course (CHEM 311 or CHEM 327).
- Math course determined by placement scores. Microbiology majors must complete math through calculus (choose from MATH 171/MATH 217 or MATH 221), and statistics (choose from STAT 301, STAT 371, or STAT 240).
- Electives can be scheduled according to the student's preference. Consult your advisor and the requirements tab.
- The three choices are 1) ZOOLOGY/BIOLOGY/BOTANY 151 and ZOOLOGY/BIOLOGY/BOTANY 152; 2) ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY 102 and BOTANY/BIOLOGY 130; or 3) Biocore. Biocore is a 3 to 4 semester sequence. Students must complete the first three lectures and the first two labs. The Biocore courses are BIOCORE 381, BIOCORE 382, BIOCORE 383, BIOCORE 384, BIOCORE 485, BIOCORE 486, BIOCORE 587.
- Physics may be taken in year 1, 2, 3, or 4 depending on the student's schedule.
- Undergraduate research courses include MICROBIO 299, MICROBIO 699, MICROBIO 681, MICROBIO 682 (honors thesis), MICROBIO 691, MICROBIO 692 (thesis). Both semesters are required for thesis credit. Students are encouraged to take several semesters of research (internship opportunities, MICROBIO 399, are also encouraged).
- If BIOCHEM 507 General Biochemistry I and BIOCHEM 508 General Biochemistry II are taken, both semesters must be completed (with the recommendation of BIOCHEM 507 in fall semester of year 3 and BIOCHEM 508 in spring semester of year 3).