MICROBIOLOGY (BS)

Microbiology

Suggested Four-Year Flowcharts are planning guides and do not represent a required course sequence. Courses may be completed in a different order, provided requisite requirements are satisfied.

First Year		
Term 1		**Units**
BIO 1150	Life: History and Diversity (5B & 5C) [1]	4
MCRO 1100	Introduction to Microbiology Research	2
CHEM 1120	Fundamentals of Chemical Structure and Properties (5A) [1]	4
STAT 1110	Applied Statistical Concepts and Methods	3
General Education Requirement (1A)		3
	Units	**16**
Term 2		
BIO 1151	Life: Molecules and Cells	4
CHEM 1122	Fundamentals of Chemical Reactivity	4
MATH/DATA 1264	Calculus for Data Science I (2) [1]	4
General Education Requirement (1C)		3
	Units	**15**
Second Year		
Term 1		
MCRO 2224	General Microbiology I	4
CHEM 2240 or CHEM 2242	Organic Chemistry: Fundamentals and Applications or Organic Chemistry I	4-5
General Education Requirement (1B)		3
General Education Requirement		3
	Units	**14**
Term 2		
MCRO 2227	General Microbiology II	4
PHYS 1121	College Physics I	4
Approved Elective [3, 4, 5, 6, 7]		4
General Education Requirement		3
	Units	**15**
Third Year		
Term 1		
MCRO 3351	Microbial Genetics	3
MCRO 3352	Microbial Genetics Laboratory	2
CHEM 3350 or CHEM 3352	Biochemistry: Fundamentals and Applications (Upper-Division 2/5) [1, 8] or Biochemistry	4
Approved Elective [3, 4, 5, 6, 7]		4
General Education Requirement		3
	Units	**16**
Term 2		
Approved Elective [3, 4, 5, 6, 7]		4
Restricted Elective [2]		4
Restricted Elective [2]		4
General Education Requirement		3
	Units	**15**
Fourth Year		
Term 1		
Approved Elective [3, 4, 5, 6, 7]		3
Restricted Elective [2]		4
General Education Requirement		3
Free Elective [9]		3-4
	Units	**14**
Term 2		
BIO 4461 or BIO 4462 or BIO 4463	Senior Project - Research Proposal or Senior Project - Research Experience or Senior Project - Meta-analysis in Biology	2
Restricted Elective [2]		3

General Education Requirement	3
General Education Requirement	3
Free Elective [9]	4
Units	**15**
Total Units	**120**

1. Required in Major or Support; also satisfied General Education (GE) requirement.
2. Excess units will be applied to Approved Electives
3. May be substituted with an advisor approved course.
4. Consultation with advisor is recommended prior to selecting electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
5. Students planning to attend graduate or professional schools are strongly advised to meet with their advisors to ensure they meet the prerequisites for entry into these programs. Additional classes in math and chemistry may be necessary.
6. Maximum of 6 units may be applied toward Approved Electives: BIO 2200, BIO 3300, BIO 4400, BIO 4450, BIO 4466, BIO 4485, BIO 4495, or MSCI 4401.
7. If BIO 4462 or BIO 4463 is used to meet the senior project requirement, it cannot also be counted as an Approved Elective.
8. CHEM 3352 is suggested for students who plan to pursue graduate school or a health professions career.
9. If a General Education (GE) course is used to satisfy a Major or Support requirement, additional units of Free Electives may be needed to complete the total units required for the degree.