

B.S. in BIOLOGICAL SCIENCES (AY 2025-2026)
CONCENTRATION IN MICROBIOLOGY & BIOMEDICAL LAB SCIENCES (75 units)
CORE REQUIREMENTS (39 units)

LOWER DIVISION BIOLOGY	UNITS	OFFERED	PREREQUISITES
BIOL 140A Principles of Cell & Molecular Biology	5	Fall & Spring	N/A
BIOL 140B Principles of Organismal Biology	5	Fall & Spring	BIOL 140A*
<i>subtotal</i>	10		
LOWER DIVISION PHYSICAL SCIENCE & MATH	UNITS	OFFERED	PREREQUISITES
CHEM 111 & 111L 112 General Chemistry I (lec & lab)	5	Fall & Spring	MATH 120(25) or 130
CHEM 112 & 112L General Chemistry II (lec & lab)	5	Fall & Spring	CHEM 111* & 111L*
MATH 130 Calculus I	4	Fall & Spring	MATH 120 or MATH 125
PHYS 125 Principles of Physics I	4	Fall & Spring	MATH 120 or MATH 125
PHYS 126 Principles of Physics II	4	Fall & Spring	PHYS 125
<i>subtotal</i>	22		
UPPER DIVISION BIOLOGY	UNITS	OFFERED	PREREQUISITES
BIOL 310 Genetic Analysis I	4	Fall & Spring	BIOL 140B*
BIOL 320 Evolutionary Biology	3	Fall & Spring	BIOL 310*
<i>subtotal</i>	7		

CONCENTRATION REQUIREMENTS (21 units)

BIOLOGY CONCENTRATION COURSES	UNITS	OFFERED	PREREQUISITES
BIOL 330 General Microbiology	5	Fall	BIOL 140B*
BIOL 430 Microbial Physiology & Metabolism	3	Spring	BIOL 330* [CHEM 340* or 441*]
<i>subtotal</i>	8		
PHYSICAL SCI CONCENTRATION COURSES	UNITS	OFFERED	PREREQUISITES
CHEM 331 & 332 Organic Chemistry I & II	10	Fall & Spring	CHEM 112* & 112L*; 331*
CHEM 340 Survey of Biochemistry†	3	Fall & Spring	CHEM 230* or 332*
<i>subtotal</i>	13		
*Note: Depending on their professional objective, a student may opt to take CHEM 441 & 442 (Biochemistry I & II) instead of CHEM 340. In that case, CHEM 441 would substitute for 3 units here and CHEM 442 could count as a 4-unit elective.			

ELECTIVES (15 units)

COURSES (Select 15 units from the list below)	UNITS	OFFERED	PREREQUISITES
BIOL 350 Ecology	4	Fall & Spring	BIOL 140B*, STATS 303
BIOL 431 Medical Microbiology†	5	Spring	BIOL 330*
BIOL 432 Microbe-Host Interactions	3	Fall	BIOL 140B*
BIOL 433 Microbial Ecology	3	Spring	BIOL 330*
BIOL 434 Molecular Microbiology	3	Spring	BIOL 330*
BIOL 440 Molecular Virology†	3	Fall	BIOL 310*
BIOL 441 Parasitology†	3	Fall	BIOL 310*
BIOL 443 Hematology†	4	Fall & Spring	BIOL 140B, CHEM 112
BIOL 445 Immunology†	3	Fall & Spring	BIOL 310*, CHEM 230* or 332*
BIOL 447 Zoonoses & Emerging Infect. Diseases	3	Intermittently	BIOL 330
BIOL 454 Biology of Fungi†	3	Fall (every other yr)	BIOL 140B*
CHEM 220 Quantitative Analysis†	4	Fall & Spring	CHEM 112*
STAT 303 Statistical Methods in Biology	3	Fall & Spring	completion of GE Area B4 or 2
<i>subtotal</i>	15		
Note: BIOL 490 Independent Study, BIOL 493 Directed Research in Biology, BIOL 498 Internship or a combination of 2 or more of these courses may be used for a maximum of 3 total units of elective credit.			

* Must pass this prerequisite course with a C- or better to move onto the next course.

**Capstone course for the Microbiology and Biomedical Sciences concentration

†Recommended for students interested in applying for CLS programs

• **Micro Concentration & GE Advisor:** Mr. Avel Perez or Dr. Kelley Gove (csstudentcenter@csueastbay.edu)

• **Micro Concentration Career & Course Sub Advisor:** Dr. Carol Lauzon (carol.lauzon@csueastbay.edu)

CONCENTRATION: Microbiology and Biomedical Lab Sciences

Graduation Semester: _____

Name (Last, First): _____

Net ID: _____

CORE REQUIREMENTS

Course	Grade	Semester & Year	Units	College/University Where Equivalent Course Was Taken	Equivalent Course Number	TES Verification
CHEM 111	_____	_____	5	_____	_____	_____
CHEM 111L	_____	_____	2	_____	_____	_____
CHEM 112	_____	_____	5	_____	_____	_____
CHEM 112L	_____	_____	2	_____	_____	_____
PHYS 125	_____	_____	4	_____	_____	_____
PHYS 126	_____	_____	4	_____	_____	_____
MATH 130	_____	_____	4	_____	_____	_____
BIOL 140A	_____	_____	5	_____	_____	_____
BIOL 140B	_____	_____	5	_____	_____	_____
BIOL 310	_____	_____	4	_____	_____	_____
BIOL 320	_____	_____	3	_____	_____	_____

CONCENTRATION REQUIREMENTS

Course	Grade	Semester & Year	Units	College/University Where Equivalent Course Was Taken	Equivalent Course Number	TES Verification
CHEM 331	_____	_____	5	_____	_____	_____
CHEM 332	_____	_____	5	_____	_____	_____
CHEM 340	_____	_____	3	_____	_____	_____
BIOL 330	_____	_____	5	_____	_____	_____
BIOL 430	_____	_____	3	_____	_____	_____

ELECTIVES *(At least 15 units from the courses below)*

Course	Grade	Semester & Year	Units	College/University Where Equivalent Course Was Taken	Equivalent Course Number	TES Verification
BIOL 350	_____	_____	4	_____	_____	_____
BIOL 431	_____	_____	5	_____	_____	_____
BIOL 432	_____	_____	3	_____	_____	_____
BIOL 433	_____	_____	3	_____	_____	_____
BIOL 434	_____	_____	3	_____	_____	_____
BIOL 440	_____	_____	3	_____	_____	_____
BIOL 441	_____	_____	3	_____	_____	_____
BIOL 443	_____	_____	4	_____	_____	_____
BIOL 445	_____	_____	3	_____	_____	_____
BIOL 447	_____	_____	3	_____	_____	_____
BIOL 454	_____	_____	3	_____	_____	_____
CHEM 220	_____	_____	4	_____	_____	_____
STAT 303	_____	_____	3	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

Total Units for Concentration (75 units): _____ Note: A C- or better required in all courses that serve as a prerequisite.