

2024-2025 Biotechnology B.A.

Lower Division Courses

All of the following lower division courses are required for the major.

Chemistry

•Previous or concurrent enrollment in MATH 2 or math placement of 200 or higher

CHEM 3A
(recommended)
General Chemistry
[F/W]

OR

•Chem 4 Prep ALEKS module. Math 3 or math placement 300 or higher.

CHEM 4A/L
Advanced General Chemistry
[NOTE: Not offered 24-25]

Introductory

BME 5
Introduction to Biotechnology
[F/W]

CSE 20^Q
Beginning Programming in Python
[F/W/Sp]

•CHEM 1A, CHEM 3A, or CHEM 4A
BIOL 20A
Cell and Molecular Biology
[F/W/Sp]

Biotechnology and Society

BME 80H
The Human Genome
[F]

OR

ECE 80B
Engineering Innovations for Medicine and Natural Sciences
[Sp]

OR

BME 18
Scientific Principles of Life
[F]

BME 80G
Bioethics in the 21st Century: Science, Business, and Society
[Sp]

Statistics

•Math placement score of 300 or higher or Math 3 or AM 3

STAT 7/L
(Strongly Preferred)
Statistical Methods for Biological Sciences
[F/W/Sp]

OR

STAT 5
Statistics
[F/W/Sp]

Upper Division Courses

Complete all of the following courses.

•BIOL 20A
BME 105
Genetics in the Genomics Era
[Sp]

•BME 105
BME 110
Computational Biology Tools
[F/W/Sp]

•BIOL 20A
BME 160 (6 units)^Q
Research Programming in the Life Sciences
[W/Sp]

^Q CSE 20 is waived for students who have already passed BME 160.

Electives

Three of the following courses must be taken. We recommend that two or more of the three are BME courses

BME 122H, BME 128*, BME 130, BME 132, BME 140, BME 177, BME 178*, ECE 104, FMST 124, FMST 133*, METX 100, SOCY 121, SOCY 123, SOCY 127P*

*Classes have additional prerequisites not covered by the major requirements

♦Students may petition to have one upper-division biology course count as an elective, but most such courses have prerequisites that are not required for the major.

1. _____
2. _____
3. _____

Disciplinary Communication (DC) Requirement

Complete the following course.

•ELWR and BIOL 20A
BME 185
Technical Writing for Biomolecular Engineers
[F/W/Sp]

Comprehensive Requirement

Complete the following course.

BME 175
Entrepreneurship in Biotechnology
[W]

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| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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| Fall _____ | Winter _____ | Spring _____ | Summer _____ |
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The Bachelor of Arts in Biotechnology is intended for students who plan to be involved in the biotechnology industry as writers, artists, ethicists, executives, sales force, regulators, lawyers, politicians, and other roles that require an understanding of the technology, but not the intensive training needed for technicians, research scientists, engineers, and bioinformaticians. This major is designed to be suitable as a double major or minor for students in the humanities or social sciences.

Due to course overlap between the biomolecular engineering and bioinformatics (BMEB) B.S., the biotechnology B.A., and the bioinformatics minor, none of these double major or major/minor combinations will be considered. Other major/minor combinations are permitted and encouraged. Double majors with the biotechnology B.A. and majors in the Humanities, Social Sciences or Arts Divisions are specifically encouraged. Students considering double majoring with biology-related majors should consider a minor in bioinformatics.

The prerequisites listed on this curriculum chart are accurate as of August 15, 2024 according to UCSC's general catalog. Prerequisites listed on this chart are subject to change and students should refer to the catalog for the most up to date requirements.