

Biotechnology, M.Bt.

DEPARTMENT

MN in Biology, Minor
MS in Biology, M.S.
MBT in Biotechnology, M.Bt.
BS in Biology, B.S.
CERT in Biotechnology, Certificate of Adv. Study
CRED in Professional Clear Foundation Level General Science
CRED in Single Subject Credential - Biological Science

REQUIREMENTS

Department

Master of Biotechnology Requirements

The Master of Biotechnology offers students who are fundamentally educated in varied scientific disciplines the opportunities to advance their scientific skills. It allows them to acquire the business knowledge and skills necessary to commercialize emerging technologies or their products. Offered as a two-year program, it is representative of a unique interdisciplinary degree concept, the Professional Science Master's (PSM) degree, designed for students interested in entering the workforce in leadership roles to promote the development and production of new products and processes.

Admission Requirements for the M.Bt.

Students must complete university graduate division admission requirements and must possess an appropriate four-year undergraduate science degree with a minimum 3.0 GPA. There are six categories of specific course prerequisites; completion of three categories constitutes the minimum for classification, but five categories must be completed prior to award of degree. Fresno equivalent courses are indicated in parentheses.

Prerequisite courses are as follows:

General Genetics (BIOL 102, 103) Microbiology with Lab - BIOL 120) Biochemistry with Lab (CHEM 150/155A & 156)
Immunology with Lab (BIOL 157 and 157L) Analytical Chemistry (CHEM 102/105) Statistics (MATH 101)

Master of Biotechnology Degree Requirements

I. Core Curriculum (23 units)

- A. BIOL/CHEM 241A-B (3-3 for a total of 6 units)
- B. BIOL/CHEM 248 (1 unit)*
- C. BIOL 250 or CHEM 260 (3 units)*
- D. MBA 270 (3 units)
- E. MBA 272 or 273 (3 units)
- F. BIOTC 275 (3 units)
- G. BIOTC 298 or 299 (4 units)

II. Electives (9 units)

Minimum of three courses in separate categories A-L; only one may be undergraduate.

- A. BIOL/CHEM 242 (3 units)
- B. BIOL/CHEM 243 (3 units)
- C. BIOL/CHEM 244 (3 units)
- D. BIOL 245 (3 units)
- E. AGRI 200 or BIOL 274 (3 units)
- F. PLANT 108 (3 units)
- G. CSCI 101 (3 units)
- H. CHEM 106 (4 units)
- I. FSC 120 (4 units)
- J. FSC 178 (2 units)
- K. MBA 272 or 273 ** (3 units)

L. PHIL 123 (3 units)

Total (32 units)

* The Graduate Writing Requirement (GWR) is completed concurrently or after enrollment of BIOL/CHEM 248 and BIOL 250 or CHEM 260 (writing course). Consult advisor for details.

** Only the course not taken to fulfill Core Curriculum category E is allowed for credit.

FACULTY

Faculty expertise spans the range of biology from the molecular to the ecological, with a broad representation of taxonomic specialties. Laboratories in most upper-division majors' courses are taught by faculty, and individualized student/faculty research participation through independent study is strongly encouraged.

Faculty members have garnered independent research funding from various agencies including the National Institutes of Health, National Science Foundation, U.S. Department of Agriculture, Environmental Protection Agency, and National Sea Grant. Faculty and students also participate in collaborative studies on, for example, medical and clinical topics with local physicians and hospitals; agricultural topics with the University of California Kearney Agricultural Research and Extension Center, Agricultural Research Service San Joaquin Valley Agricultural Sciences Center in Fresno/Parlier; ecological and environmental topics with California Department of Fish and Wildlife, U.S. Forest Service and Endangered Species Recovery Program; and science educational topics with regional school districts and state and national credentialing agencies.

For faculty phone numbers and e-mail, see the campus directory.

For more on the faculty, see the faculty pages.

The faculty pages are updated by the department or program.