

# Biochemistry, B.S.

## DEPARTMENT

MN in Chemistry, Minor  
BA in Chemistry, B.A.  
BS in Chemistry, B.S.  
MS in Chemistry, M.S.  
BS in Biochemistry, B.S.  
CRED in Single Subject Credential - Chemistry

## REQUIREMENTS

Department of Chemistry and Biochemistry

### Bachelor of Science in Biochemistry Degree Requirements

The Bachelor of Science in Biochemistry is intended for students who plan to pursue a career in biochemical research, chemistry research, and suitable for a student pursuing health professions (medical, pharmaceutical, dental, and other clinical and health professions). The B.S. program is a comprehensive, multi-disciplinary program to prepare students for graduate study in pursuit of a Master of Science (M.S.) or Doctor of Philosophy (Ph.D.) in areas related to biochemistry.

**Note:** Biochemistry majors may not take courses listed in the major or additional requirements for CR/NC grades.

#### 1. Major requirements (50-54 units)

##### *Core Program*

CHEM 1A, CHEM 1AL, CHEM 1B, CHEM 1BL, CHEM 102, CHEM 110A, CHEM 112, CHEM 128A, CHEM 128B, CHEM 129A, CHEM 129B, CHEM 155A, CHEM 155B, CHEM 156

Select two additional upper-division CHEM courses (4-7 units): CHEM 106, CHEM 106S, CHEM 111, CHEM 123, CHEM 124, or CHEM 190 or other approved courses.

Select two additional upper-division BIOL courses (6-7 units): BIOL 102, BIOL 103, BIOL 104, BIOL 120, or other approved courses.

#### Additional requirements (24-27 units)

BIOL 1A, BIOL 1B, BIOL 1BL

MATH 75, MATH 76

PHYS 2A, PHYS 2B (or PHYS 4A, PHYS 4AL, PHYS 4B, PHYS 4BL, PHYS 4C strongly recommended)

#### 2. General Education requirements (48 units)

#### 3. Other requirements (9 units)

American Government and Institutions (PLSI 2), Multicultural and International (MI), and Upper-division writing.

#### 4. Sufficient elective units to meet required total units (varies)

#### 5. Total minimum (120 units)\*

\* Of the 48 required General Education units, 9 units will be satisfied by the following courses in the major and additional requirements: 3 units of CHEM 1A and 1AL or PHYS 2A (or PHYS 4A and 4AL) in G.E. Breadth B1; 3 units of BIOL 1A in G.E. Breadth B2; 3 units of MATH 75 in G.E. Foundation B4. See advisor for details.

## FACULTY

Our faculty provide excellent research opportunities in analytical, biochemistry, inorganic, organic, and physical chemistry. The broad interests within the faculty have resulted in interdisciplinary research projects in collaboration with scientists and professors in other science areas: agricultural chemistry, biotechnology, clinical chemistry, forensic chemistry, forensic biochemistry, chemical physics, enology, nutritional science, and molecular biology. Research projects have involved local

facilities such as the California State Crime Laboratory, University Medical Center, UCSF Fresno Medical Education Program, USDA Research Station, U.S. Veteran's Administration Hospital, U.S. Forest Laboratory, and Valley Children's Hospital.

The graduate faculty are dedicated to providing students with a high-quality, rigorous M.S. program. Several of the faculty have received awards for the quality of their mentoring and teaching. They are widely respected in their field and regularly publish their work in leading scientific journals. The faculty have received funding to support their work from private foundations, and state and federal agencies, including the National Institutes of Health and the National Science Foundation. They also work with researchers at several National Laboratories and a number of top-tier research universities.

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.