Chemistry, B.A.

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

Bachelor of Arts Degree Requirements

The Bachelor of Arts in Chemistry is intended primarily for those students who plan to take extensive coursework in other areas in addition to chemistry. This degree is suitable for prehealth professional students (premedical, predental, etc.), secondary school teaching credential students, and biochemistry students oriented toward biotechnology, forensic science, and the health professions. This degree is NOT intended for students who anticipate a career in chemistry, or who expect to continue their education in pursuit of graduate degrees.

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

1. The B.A. Chemistry Major requirements (38 units)

   Core Program
   CHEM 1A, 1AL, 1B, 1BL, 102, 108, 128A, 128B, 129A, 129B, 155A**, 155B***, 156 (38 units)

   Additional requirements (31-38 units)
   BIOL 1A, 1B, 1BL (8 units)
   Elect 7 units from BIOL 102, 103, 104, 120 or other approved courses (7 units)
   MATH 75, 76 (MATH 77 strongly recommended) (8-12 units)
   PHYS 2A, 2B (or PHYS 4A, 4AL, 4B, 4BL, 4C strongly recommended) (8-11 units)

2. General Education requirements (49 units)

3. Other requirements (6 units)
   Upper-division writing and Multicultural and International (MI)

4. Sufficient elective units to meet required total units (varies)
   (See Degree Requirements); may be used toward a double major or minor.

5. Total units (120)*

   * G.E. and MI courses can be double-counted with major requirements. The writing requirement may be met by taking the upper-division writing exam. Of the 49 required General Education units, 10 units will be satisfied by the following courses in the major and additional requirements: 4 units of CHEM 1A and 1AL or PHYS 2A in G.E. Breadth B1; 3 units of BIOL 1A in G.E. Breadth B2; and 3 units MATH 75 in G.E. Foundation B4. Consult the department chair or faculty advisor for additional details.

The following is an example of a four-year program for the B.A. in Chemistry.

First Semester - Fall
CHEM 1A and 1AL (5 units)
MATH 75 (4 units)
ENGL 5B or 10 (3 units)
General Education (3 units)
Total (15 units)
<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses and Units</th>
</tr>
</thead>
</table>
| **Second Semester - Spring** | CHEM 1B and BL (5 units)  
MATH 76 (4 units)  
PHYS 2A or 4A, 4AL (4 units)  
General Education (3 units)  
**Total (16 units)** |
| **Third Semester - Fall** | CHEM 128A (3 units)  
CHEM 129A (2 units)  
PHYS 2B or 4B, 4BL (4 units)  
BIOL 1A (4 units)  
General Education (3 units)  
**Total (16 units)** |
| **Fourth Semester - Spring** | CHEM 128B (3 units)  
CHEM 102 (5 units)  
BIOL 1B, BIOL 1BL (5 units)  
Electives or General Education (3 units)  
**Total (16 units)** |
| **Fifth Semester - Fall** | **CHEM 108 (4 units)**  
**CHEM 155A (3 units)**  
BIOL 102 (4 units)  
Electives or General Education (3 units)  
**Total (14 units)** |
| **Sixth Semester - Spring** | ***CHEM 156 (3 units)**  
BIOL 103 and 104 or BIOL 120 (4 units)**  
Electives or General Education (6 units)  
**Total (13 units)** |
| **Seventh Semester - Fall** | Electives or General Education  
**Total (15 units)** |
| **Eighth Semester - Spring** | Electives or General Education  
**Total (15 units)** |
| **Total (120 units)** | |

* It is important to fulfill the upper-division writing skills requirement by exam or W class during the junior year.  
** Offered fall semester only.  
*** Offered spring semester only.

**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.