CHEMISTRY, BACHELOR OF ARTS

College of Letters & Science

The Major Programs
Chemistry studies the composition of matter, its structure, and the means by which it is converted from one form to another.

The Program
We offer several degree programs leading to the Bachelor of Arts (A.B.) and the Bachelor of Science (B.S.). To meet and discuss these programs with our staff advisors, see Academic Advising (https://chemistry.ucdavis.edu/undergraduate/academic-advising/).

The curriculum leading to the A.B. degree offers a substantive program in chemistry while allowing students the freedom to take more courses in other disciplines and pursue a broad liberal arts education. Students with a deeper interest in chemistry should choose one of the several programs leading to the B.S. degree.

Career Alternatives
Chemistry graduates with bachelor's degrees are employed extensively throughout various industries in quality control, research & development, production supervision, technical marketing, and other areas. The types of industries employing these graduates include chemical, energy, pharmaceutical, genetic engineering, biotechnology, food & beverage, petroleum & petrochemical, paper & textile, electronics & computer, and environmental & regulatory agencies. The bachelor's programs also provide chemistry graduates with the rigorous preparation needed for an advanced degree in chemistry and various professional schools in the health sciences.

Major Advisor
To contact a major advisor in the Department of Chemistry, see Academic Advising (https://chemistry.ucdavis.edu/undergraduate/academic-advising/).

Honors & Honors Program
The student must take courses CHE 194HA, CHE 194HB, and CHE 194HC, and complete a capstone project (typically a written honors thesis).

Graduate Study
The Department of Chemistry offers programs of study and research leading to M.S. and Ph.D. degrees in Chemistry. Detailed information regarding graduate study may be obtained by contacting the Graduate Advisor, Department of Chemistry. See also Graduate Studies (http://gradstudies.ucdavis.edu/).

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tr>
<td>CHE 002A</td>
<td>General Chemistry &amp; General Chemistry</td>
<td>15</td>
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Due to space considerations, the table of course options has been cut off. However, I will provide a summary of the highlights.

### Preparatory Subject Matter

**Chemistry**

- Choose a series:
  - CHE 004A and General Chemistry for the Physical Sciences & Engineering
  - CHE 004B and General Chemistry for the Physical Sciences & Engineering
  - CHE 004C and General Chemistry for the Physical Sciences & Engineering

**Physics**

- Choose a series:
  - PHY 007A and General Physics
  - PHY 007B and General Physics
  - PHY 007C and General Physics

**Mathematics**

- Choose a series:
  - MAT 016A and Short Calculus
  - MAT 016B and Short Calculus
  - MAT 016C and Short Calculus

**Courses**

- MAT 017A and Calculus for Biology & Medicine
- MAT 017B and Calculus for Biology & Medicine
- MAT 017C and Calculus for Biology & Medicine

Preparatory Subject Matter Subtotal: 36-42

### Depth Subject Matter

**Chemistry**

- CHE 105 and Analytical & Physical Chemical Methods
- CHE 110A and Physical Chemistry: Introduction to Quantum Mechanics
- CHE 110B and Physical Chemistry: Properties of Atoms & Molecules
- CHE 110C and Physical Chemistry: Thermodynamics, Equilibria & Kinetics
- CHE 124A and Inorganic Chemistry: Fundamentals
- CHE 128A and Organic Chemistry
- CHE 128B and Organic Chemistry
- CHE 128C and Organic Chemistry
- CHE 129A and Organic Chemistry Laboratory
- CHE 129B and Organic Chemistry Laboratory

Additional Upper Division Units

At least 11 additional upper division units in Chemistry (CHE) or related areas, including one course with formal lectures; courses in related areas must be approved in advance by the major advisor. 

### Total Units

- Preparatory Subject Matter Subtotal: 36-42
- Depth Subject Matter Subtotal: 43
- Total Units: 79-85

1. Except CHE 107A or CHE 107B