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 research project (typically a written honors thesis). For more information, see Undergraduate Research (https://chemistry.ucdavis.edu/undergraduate/undergraduate-research/).

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/).

Code	Title	Units
Preparatory Subject Matter		
Chemistry		
Choose a series:		15
CHE 002A & CHE 002B & CHE 002C	General Chemistry and General Chemistry and General Chemistry	
CHE 004A & CHE 004B & CHE 004C	General Chemistry for the Physical Sciences & Engineering and General Chemistry for the Physical Sciences & Engineering and General Chemistry for the Physical Sciences & Engineering	
Physics		
Choose a series:		12-15
PHY 007A & PHY 007B & PHY 007C	General Physics and General Physics and General Physics	
PHY 009A & PHY 009B & PHY 009C	Classical Physics and Classical Physics and Classical Physics	
Mathematics		
Choose a series:		9-12
MAT 016A & MAT 016B & MAT 016C	Short Calculus and Short Calculus and Short Calculus	
MAT 017A & MAT 017B & MAT 017C	Calculus for Biology & Medicine and Calculus for Biology & Medicine and Calculus for Biology & Medicine	
MAT 021A & MAT 021B & MAT 021C	Calculus and Calculus and Calculus	
Preparatory Subject Matter Subtotal		36-42
Depth Subject Matter		
Chemistry		
CHE 105	Analytical & Physical Chemical Methods	4
CHE 110A	Physical Chemistry: Introduction to Quantum Mechanics	4
CHE 110B	Physical Chemistry: Properties of Atoms & Molecules	4
CHE 110C	Physical Chemistry: Thermodynamics, Equilibria & Kinetics	4
CHE 124A	Inorganic Chemistry: Fundamentals	3
CHE 128A	Organic Chemistry	3
CHE 128B	Organic Chemistry	3
CHE 128C	Organic Chemistry	3
CHE 129A	Organic Chemistry Laboratory	2
CHE 129B	Organic Chemistry Laboratory	2
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. [1]		11
Depth Subject Matter Subtotal		43
Total Units		**79-85**

[1] Except CHE 107A or CHE 107B