

Chemistry (College of)

College of Chemistry (<http://chemistry.berkeley.edu>)

Office of the Dean: 420 Latimer Hall

Dean: Douglas S. Clark, PhD

College Website: College of Chemistry (<http://chemistry.berkeley.edu>)

Overview

The College of Chemistry comprises two departments, the Department of Chemical and Biomolecular Engineering (<http://bulletin.berkeley.edu/archive/2013-14/departmentsandsubjects/chemicalandbiomolecularengineering>) and the Department of Chemistry (<http://bulletin.berkeley.edu/archive/2013-14/departmentsandsubjects/chemistrydepartment>). Both disciplines impact major world problems. Discovering new sources of energy, recovering and utilizing dwindling mineral resources, developing new drugs and food supplies, understanding and protecting the environment, and synthesizing new products biochemically all depend centrally upon chemistry and chemical engineering. Students entering these fields will spend their careers in the middle of the action on these and other highly important areas of research.

Both departments in the College of Chemistry rank nationally and internationally among the most prominent in their fields, and both are renowned for their breadth of activity in a diverse range of sub-disciplines and applications. At the same time, with only two departments, the college is a relatively small and comfortable place in which to work. Faculty members have many demands on their time, but students are able to develop close and satisfying contacts with them while in the college.

The college offers programs leading to the BS, MS, and PhD degrees in both chemistry and chemical engineering and the BS degree in chemical biology. The BS degree in chemistry is intended for students who are primarily interested in careers as professional chemists or wish a thorough grounding in chemistry in preparation for professional or graduate school. The BS degree in chemical biology is intended for students who are interested in careers as professional chemists, or in the biological sciences, including the biomedical, biotechnology, and pharmaceutical industries. The BS degree in chemical engineering is intended as preparation for a career in chemical engineering and related disciplines. Chemical engineering majors may choose one of five concentrations: applied physical science, biotechnology, chemical processing, environmental technology, or materials science and technology. Also, two BS degree joint major programs (Chemical Engineering and Materials Science and Engineering, and Chemical Engineering and Nuclear Engineering) are available.

The College of Letters and Science offers a chemistry major leading to a BA degree through a curriculum with a greater proportion of courses in the humanities and social sciences than is included in the BS chemistry program. It is intended for students interested in careers in teaching, medicine, or other sciences in which a basic understanding of chemical processes is necessary.

Advanced undergraduate and graduate students have opportunities to conduct research in analytical chemistry, molecular structure and dynamics, inorganic chemistry, theoretical chemistry, nuclear chemistry, organic chemistry, biophysical chemistry and chemical

biology, condensed matter and surface science, catalysis, biomolecular engineering and synthetic biology, multiscale modeling and computer simulation, micro- and nanosystems and technologies, and polymers and polymer physics.

Recommended high school preparation for chemistry, chemical biology, or chemical engineering should include chemistry (one year; AP chemistry strongly recommended); physics (one year); mathematics (four years, including trigonometry, intermediate algebra, analytical geometry, and pre-calculus); and a foreign language (two or three years).

For more specific descriptions of the degree programs, please see the College of Chemistry website (<http://chemistry.berkeley.edu>) . (<http://chemistry.berkeley.edu>)

Organizational Units

Chemical and Biomolecular Engineering (<http://bulletin.berkeley.edu/archive/2013-14/departmentsandsubjects/chemicalandbiomolecularengineering>)

Department Office: 201 Gilman Hall, (510) 642-2291

Chair: Douglas S. Clark, PhD

Chemistry (<http://bulletin.berkeley.edu/archive/2013-14/departmentsandsubjects/chemistrydepartment>)

Department Office: 419 Latimer Hall, (510) 642-5882

Chair: Daniel M. Neumark, PhD