Chemistry

(College of Letters and Science)
Susan M. Kauzlarich, Ph.D., Chairperson of the Department
Neil E. Schore, Ph.D., Vice-Chairperson of the Department (Graduate Matters)
Frank E. Osterloh, Ph.D. Vice-Chairperson of the Department (Undergraduate Matters)
David Goodin, Ph.D., Vice-Chairperson of the Department (Safety)

Department Office. 108 Chemistry Building 530-752-8900; Fax 530-752-8995; http://www.chem.ucdavis.edu

Faculty
James Ames, Ph.D., Professor
Shota Atsumi, Ph.D., Assistant Professor
Matthew P. Augustine, Ph.D., Professor
Alan L. Baich, Ph.D., Professor
Enoch Baldwin, Ph.D., Associate Professor
Peter Beal, Ph.D., Professor
Louise A. Berben, Ph.D., Assistant Professor
R. David Brit, Ph.D., Professor
William Casey, Ph.D., Professor
X. Chen, Ph.D., Professor
Stephen Cramer, Ph.D., Professor
Sheila David, Ph.D., Professor
Andrew J. Fisher, Ph.D., Professor
Annaliise K. Franz, Ph.D., Associate Professor
Jacquelyn Gervay Hague, Ph.D., Professor
David Goodin, Ph.D., Professor
Ting Guo, Ph.D., Professor
Susan M. Kauzlarich, Ph.D., Professor

Distinguished Graduate Mentoring Award
Peter B. Kelly, Ph.D., Professor
Kiriakos Konov, Ph.D., Assistant Professor
Mark J. Kurth, Ph.D., Professor
Donald P. Lund, Ph.D., Professor
Delmar Larsen, Ph.D., Associate Professor
Carlitto B. Lebrilla, Ph.D., Professor
Gang-Yu Lui, Ph.D., Professor
C. William McCurdy, Ph.D., Professor
Mark Mascal, Ph.D., Professor
Krishnan P. Nambiar, Ph.D., Associate Professor

Distinguished Graduate Mentoring Award
Alexandra Navrotsky, Ph.D., Professor
Cheuk-Yiu Ng, Ph.D., Professor
Marilyn Olmstead, Ph.D., Professor
Frank Osterloh, Ph.D., Professor
Philip P. Power, FRS, Ph.D., Professor
Neil E. Schore, Ph.D., Professor

Academic Senate Distinguished Teaching Award
Jared T. Shaw, Ph.D., Associate Professor
Justin Siegel, Ph.D., Assistant Professor
Alexei P. Stuchebrukho, Ph.D., Professor
Dean Tantillo, Ph.D., Director, Chemistry Academic Programs

Academic Senate Distinguished Teaching Award
Michael Toney, Ph.D., Professor

Emeriti Faculty
Thomas L. Allen, Ph.D., Professor Emeritus
W. Ronald Fawcett, Ph.D., Professor Emeritus
William H. Fink, Ph.D., Professor Emeritus
Edwin Friedich, Ph.D., Professor Emeritus
William M. Jackson, Ph.D., Professor Emeritus
Gerd N. LaMar, Ph.D., Adjunct Professor

Toby Allen, Ph.D., Adjunct Professor
Giulia Galli, Ph.D., Adjunct Professor

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. The Department of Chemistry offers several degree programs leading to the Bachelor of Arts and the Bachelor of Science. 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 who have a deeper interest in chemistry normally elect one of the several programs leading to the B.S. degree. The standard B.S. program, the only chemistry program accredited by the American Chemical Society, is appropriate for students who are interested in chemistry as a profession. The B.S. in Chemical Physics, the B.S. in Pharmaceutical Chemistry, and the two B.S. Applied Chemistry emphases are slightly less intense in chemistry, and draw on significant course materials from areas relevant to their particular focus but outside of a classical chemistry degree. Students following the A.B. or one of the B.S. programs may consider taking advantage of the Education Abroad Program. Our major adviser can assist students in planning a curriculum while abroad that assures regular progress in the major. A minor program in chemistry is also available.

Career Alternatives. Chemistry graduates with bachelor’s degrees are employed extensively throughout various industries in quality control, research and development, production supervision, technical marketing, and other areas. The types of industries employing these graduates include chemical, energy, pharmaceutical, genetic engineering, and biotechnology, food and beverage, petroleum and petrochemical, paper and textile, electronics and computer, and environmental and 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.

Chemistry

A.B. Major Requirements:

Preparatory Subject Matter.........................36-42
Chemistry 2A-2B-2C or 2AH-2BH-2CH........15
Physics 7A-7B-7C or 9A-9B-9C..................12-15
Mathematics 1A-1B-1C, or 1A-1B-1C-1D......15
or 21A-21B-21C.........................................9-12

Depth Subject Matter.........................43
At least 11 additional upper division units in chemistry (except Chemistry 107A or 107B) or related areas, including one course with formal lectures. Courses in related areas must be approved in advance by the major advisor

Total Units for the Major..........................79-85

Chemistry

ACS Accredited Program

B.S. Major Requirements:

Preparatory Subject Matter.........................53
Chemistry 2A-2B-2C or 2AH-2BH-2CH........15
Physics 9A, 9B, 9C-9D-9E......................15
Mathematics 21A, 21B, 21C, 22A, 221, 22C, 22D, 22E, 22F.........................23

Depth Subject Matter.........................54

Cell Biology and Human Anatomy

See Medicine, School of, on page 396.

Botany

See Plant Biology, on page 471; and Plant Biology (A Graduate Group), on page 473.

Business Management

See Managerial Economics, on page 386, for undergraduate study; and Management, Graduate School of, on page 382.

Cantonese

See Asian American Studies, on page 171.

Cell Biology

See Molecular and Cellular Biology, on page 430.

Cell and Developmental Biology

(A Graduate Group)

The Cell and Developmental Biology program has merged with the Biochemistry and Molecular Biology program to form Biochemistry, Molecular, Cellular, and Developmental Biology (BMCDB); see Biochemistry, Molecular, Cellular, and Developmental Biology, on page 177.

Group Office. 2278 Life Sciences
530-752-9091; http://biosci3.ucdavis.edu/GradGroups/BMCDB/

Quarter Offered: I=Fall, II=Winter, III=Spring, IV=Summer; 2015-2016 offering in parentheses

Pre-Fall 2011 General Education (GE): ArtHum=Arts and Humanities; SciEng=Science and Engineering; SocSci=Social Sciences; Div=Dominic Diversity; Wrt=Writing Experience
Fall 2011 and on Revised General Education (GE): AH=Arts and Humanities; SE=Science and Engineering; SS=Social Sciences; ACGH=American Cultures; DD=Dominic Diversity; OR=Oral Skills; QL=Quantitative; SL=Science; VL=Visual; WC=World Cultures; WE=Writting Experience