Department Overview

The Chemistry Department has a tradition of excellence, as evidenced by the quality of its programs, the caliber of its faculty, and the excellence of its students.

Our vision is to maintain a leading role in innovative education. The education of our students encompasses not only the transfer of knowledge, but also training to become tomorrow’s leaders in academia, government, health sciences, and scientific research and industry.

The department offers courses that lead to certificates and associates degrees in fields such as chemistry, biology, environmental studies, nursing and more. Courses are designed to prepare students for entry into four-year universities, professional schools in the health sciences, and for careers in industries and businesses that depend on chemically based technology.

Our facilities are equipped with high tech instrumentation, including a high-pressure liquid chromatograph, GC/MS, automated refractometer, polarimeter, FTIR spectro-photometers, and gas chromatographs. Plus, there is an extensive network of computer-aided equipment and software, including LabPro, Spartan, ChemDraw, Odyssey, and Virtual Chem Lab. These instruments, along with other technical equipment and service activities extend the reach and impact of our faculty.

Full-time Faculty

The department’s curriculums are lead by six distinguished full-time professors and several associate faculty members.

Dr. Bill Alston earned a Ph.D. in Organic Chemistry from the University of Arkansas. He teaches Introductory & Organic Chemistry. Email: walston@saddleback.edu

Dr. Teresa Bear received a B.S. in Chemistry & M.S. in Organic Chemistry from UC Irvine, and an Ed.D from Capella University. Dr. Bear was the 2011 recipient of the Professor of the Year Award and teaches the full range of courses offered by the department. Email: tbear@saddleback.edu

Dr. Scott Fier joined the college in 1993 and has been Department Chair since 2002. He is a UC Irvine graduate and recipient of the 2014 Professor of the Year award. Dr. Fier teaches Introductory and General Chemistry. Email: sfier@saddleback.edu Web: www.saddleback.edu/faculty/sfier

Dr. Ryan McKeachie earned a Ph.D. in Chemistry from UC Irvine. Dr. McKeachie joined the faculty in 2013 and teaches Introductory and General Chemistry. Email: rmckeachie@saddleback.edu

Dr. Christina White has a Ph.D. in Biophysical Chemistry from UC Santa Cruz & a B.S. in Biochemistry from Cal Poly San Luis Obispo. Dr. White teaches General Chemistry. Email: cabel@saddleback.edu Web: www.saddleback.edu/faculty/cabel

Dr. Jim Zoval has a Ph.D. in Chemistry from UC Irvine and joined with both academic and industrial experience. Dr. Zoval teaches Chem 108 & oversees a research group. Email: jzoval@saddleback.edu Web link: www.saddleback.edu/faculty/jzoval

Technical Support Staff

The department’s teaching operations are supported by one instructional programmer and two terrific technical support staff.

Jason Allen is a Senior Laboratory Technician and joined the department in 2014. Jason received a B.S. in Chemistry from UC Irvine. Email: jallen62@saddleback.edu

Bruce Lee is an Instructional Programmer/Analyst and manages the Chemistry Computer Laboratory. Bruce received his M.S. in Computer Engineering from Penn State University. Email: mlee@saddleback.edu

Sara Sheybani is a Senior Lab Technician and 2010 Classified Employee of the Year. Sara earned a B.S. in Biochemistry from UC Los Angeles and a certificate in Environmental Management from UC Irvine. Email: ssheybani@saddleback.edu

For more information contact:
Dr. Scott Fier (949)582-4687
MSE Division Office (949)582-4820

Visit our website: www.saddleback.edu/mse/chemistry
COURSES OFFERED

CHEM 3: Introductory Chemistry
4 units, UC/CSU transferrable
3 hrs lecture / 3 hrs lab weekly
Prerequisite: MATH 253
Course Description:
A study of the fundamental principles of chemistry. This is an excellent preparatory course for students planning to take CHEM 1A.

CHEM 1A: General Chemistry I
5 units, UC/CSU transferrable
3 hrs lecture / 6 hrs lab weekly
Corequisite: CHEM 106
Prerequisite: CHEM 3 / Challenge Exam & MATH 124
Course Description:
A study of the principles of chemistry. Topics include atomic and molecular structure, bonding, nomenclature, formulas, equations, stoichiometry, thermochemistry, gases, liquids, solids & solutions.

CHEM 1B: General Chemistry II
5 units, UC/CSU transferrable
3 hrs lecture / 6 hrs lab weekly
Prerequisite: CHEM 1A (‘C’ or better)
Course Description:
A continuation of CHEM 1A in the study of the principles of chemistry. Topics include thermodynamics, equilibria, kinetics, acid-base chemistry, oxidation-reduction reactions, electrochemistry, coordination chemistry, nuclear chemistry & qualitative analysis.

CHEM 12A: Organic Chemistry I
5 units, UC/CSU transferrable
3 hrs lecture / 6 hrs lab weekly
Prerequisite: CHEM 1B (‘C’ or better)
Course Description:
A study of the principles, theories, and reactions of organic chemistry with emphasis on the relations of structure and reactivity.

CHEM 12B: Organic Chemistry II
5 units, UC/CSU transferrable
3 hrs lecture / 6 hrs lab weekly
Prerequisite: CHEM 12A (grade of ‘C’ or better)
Course Description:
A continuation of CHEM 12A in the study of the principles, theories, and reactions of organic chemistry with emphasis on the relations of structure and reactivity.

CHEM 106: Basics of Chemistry
2 units, CSU transferrable (not guaranteed)
2 hrs lecture weekly
Corequisite: CHEM 1A
Course Description:
A course to be taken concurrently with CHEM 1A. Consists of quiz, discussion, problem solving, and drill sessions. Designed to help students succeed in their study of general chemistry.

CHEM 108: Introduction to General, Organic, and Biochemistry
4 units, CSU transferrable
3 hrs lecture / 3 hrs weekly
Course Description:
A course for health pre-professionals and non-science majors. Ideal for students planning to enter nursing and dental hygiene programs. Designed as the first chemistry course to assist students in biology and health-related professions. The focus is on the biochemistry of the human body. Health, nutrition and basic laboratory techniques included.

CHEMISTRY DEPARTMENT
SADDLEBACK COLLEGE
DIVISION OF MATHEMATICS, SCIENCE, & ENGINEERING

General Info: (949) 582-4500
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