Biochemistry, Cellular and Molecular Biology

Overview
This major is a convergence of many scientific fields, including modern biological chemistry, cellular and molecular biology, chemistry, botany and biology. It covers all requirements for the Medical College Admission Test. Your experience is defined not only by the quality of research facilities (ours are new, clean and well-equipped) but also by your relationships with peers and faculty. Labs are capped at 14 students, allowing for maximum interaction, instruction and sharing of ideas. Small classes mean you also gain experience with oral presentations and scientific writing in a research-oriented atmosphere. By the time you graduate, you will be proficient in the use of computers to model chemical systems and control lab instruments.

Research Opportunities
You spend a lot of time working with professors on innovative research in their fields. We view teaching and research with students as a single unified activity. You might spend your summers working with faculty through the Keck Foundation program or a fellowship funded by the National Science Foundation or the National Institutes of Health. Many students co-author articles in scientific journals with professors and present their work at major research seminars in the United States and abroad. Some go overseas to continue their research, participating in an ongoing collaboration with scientists at the University of Bologna.

Study Abroad
Study abroad for a semester or participate in one of the College’s own Study Away Teach Away (SATA) programs. Through SATA, you travel to destinations like South Africa or Italy and take classes with a Connecticut College professor and faculty at local universities.
Faculty

Phillip Barnes, Associate Professor of Biology
B.S., Xavier University; Ph.D., University of Minnesota
Genetics; evolution of complex quantitative traits; insect flight

Stanton Ching, Margaret W. Kelly Professor of Chemistry; Chair of Chemistry Department
B.A., Pomona College; Ph.D., Northwestern University; Postdoctoral Fellow, University of North Carolina
Inorganic materials chemistry; electrochemistry

Vicki Fontneau, Senior Lecturer in Chemistry
B.S., Florida State University; M.S., University of Hawaii
Protein biochemistry; laboratory safety; chemistry education

Timo V. Ovaska, Hans & Ella Vahlteich Professor of Chemistry
M.S., University of Turku; Ph.D., University of Connecticut
Organic chemistry

Maureen Ronau, Senior Lecturer in Chemistry
B.A., Niagara University; M.A., University of Notre Dame
Analytical chemistry; organic chemistry

Tanya Schneider, Assistant Professor of Chemistry
B.A., Williams College; M.S., Ph.D., Yale University; postdoctoral fellowship, Harvard Medical School
Biochemistry; biosynthesis of natural products; antibiotic resistance; enzymology

Marc Zimmer, Jean C. Tempel ’65 Professor of Chemistry, Dean of Studies
B.S., M.S., University of Witwatersrand, South Africa; Ph.D., Worcester Polytechnic Institute; Post-Doctorate, Yale University
Computational chemistry; fluorescent proteins

Selected Courses

Genetics; Molecular Development; Molecular Biology; Biochemistry; Atomic and Molecular Structure and Dynamics; Chemistry Seminar Series; Organic Spectroscopic Methods

About Connecticut College

Connecticut College is a private, highly selective liberal arts college with 1,850 students and more than 40 majors in the arts, sciences, social sciences and humanities, as well as the option for students to self-design majors. The College offers a high level of intellectual challenge, a campus culture that supports students to tailor their educational experience to their own interests and goals, and a four-year career development program that teaches students how to translate a liberal arts degree into a first job or graduate school admission. Connecticut College is situated in the small New England seaport of New London.

Examples of student research in biochemistry, cellular and molecular biology

Khushbu Pandya ’16
The effects of oil spill on amoA gene expression in ammonia oxidizing microbes

Derrick Roy ’15
Synthesis of the Novel Firefly Luciferase Inhibitor Benzothiophene Dehydroluciferin Sulfamoyl Adenosine

Parinda Darden ’13
The effectiveness of HIV/AIDS treatments on Botswana youth: traditional vs. conventional

What can you do with a major in biochemistry, cellular and molecular biology?

Health Physicist, National Institute of Standards & Technology
Chemist, Pfizer Inc.
Genetic Toxicologist, SRI International
Lab Technician, Massachusetts General Hospital
Research and Development Associate, Alexion Pharmaceuticals
Science Teacher, West Haven Public Schools
Assistant Professor, Illinois State University
Legislative Director, The Environmental League
Surgeon, Hartford Hospital
Registered Nurse, Tufts Medical Center
Professor and Department Chair, University of Tennessee Medical Center

For more information, visit www.conncoll.edu/academics/