

# B I O C H E M I S T R Y

CHEMISTRY THAT ALLOWS US TO UNDERSTAND LIFE

## INTRODUCTION

Biochemistry is the study of chemical compounds and processes occurring in living organisms. With new developments and current topics such as stem cell research and cloning, biochemistry is everywhere in today's society. In response to these trends, Eastern Connecticut State University has developed a new biochemistry major and minor, meeting standards set forth by the American Chemical Society (ACS) and the American Society of Biochemistry and Molecular Biology. In fall 2007 the program will join other Eastern science departments in moving into a new Science Building.



## PROGRAM DESCRIPTION

The biochemistry program begins with introductory courses common to the biological and chemical sciences. Biochemistry majors then take a rigorous yearlong lecture and laboratory course sequence that familiarizes students with the most significant aspects of biochemistry and biochemical research. In addition, upper level biochemistry courses examine aspects of modern biochemistry as well as the molecular and cellular techniques used in industrial and academic research facilities. Students are required to take additional courses in biology and physical biochemistry to further their quantitative knowledge of biological processes and bio-macromolecular structure and function.



## BIOTECHNOLOGY - A FIELD ON THE MOVE

The report, "Soaring to New Heights: Connecticut Job Outlook 1998 – 2008," (Connecticut Department of Labor) indicates that the number of jobs for biological scientists is growing at a rate of 43.2 percent.

"Research and development spending in Connecticut's bioscience sector rose to a record high in 2004," according to the 2004 Connecticut United for Research Excellence (CURE) Economic Report.

"Maintaining a supply of skilled workers to meet growth needs is one of the biggest challenges Connecticut faces in its efforts to be a world leader in bioscience." (2001 Connecticut United for Research Excellence (CURE) Economic Report)

## CAREER ALTERNATIVES

The biochemistry program provides a solid scientific background for students seeking a research, teaching, or service career in the life sciences. Biochemistry coursework and extensive hands-on laboratory experience provide the knowledge and training necessary for students seeking a future in:

- Medical School
- Biochemical research
- Dental School
- Biotechnology
- Veterinary School
- Biopharmaceuticals
- Graduate School (life science programs)
- Genetics
- Forensic Science
- Proteomic research

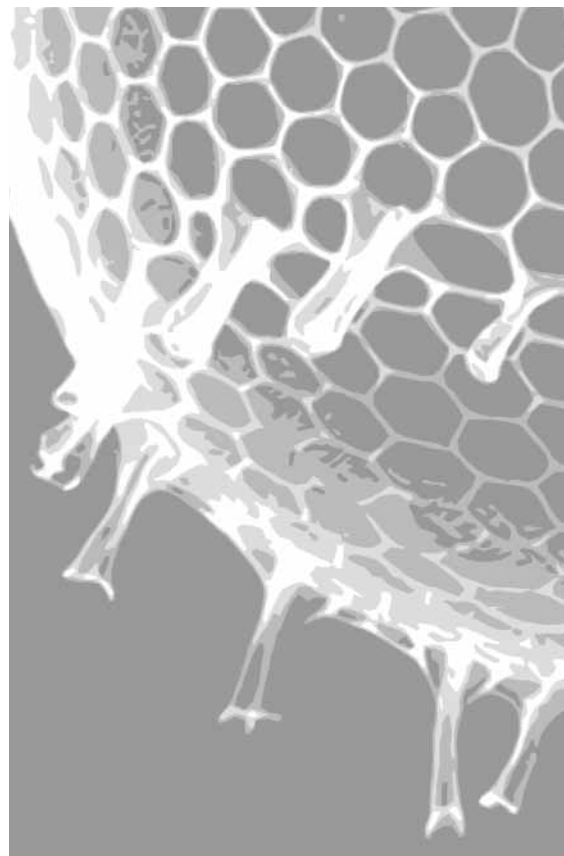


EASTERN CONNECTICUT STATE UNIVERSITY

## STUDENT SUCCESS

Recent Eastern students who have received either a bachelor's of science degree or minor in biochemistry are currently pursuing their future at the following professional/graduate schools and Connecticut-based companies:

- Dartmouth College
- Yale University
- University of Washington
- University of Connecticut
- Phoenix Environmental Laboratories
- Pfizer
- University of Connecticut School of Medicine
- Alexion Pharmaceuticals



“I think the program was definitely worthwhile and I feel prepared to obtain work in the outside world. I am very excited to be going to Dartmouth.”

JUSTIN PIRO  
Eastern Biotechnology Graduate  
Dartmouth College Graduate Student  
Molecular and Cellular Biology

“I’ve always been interested in math and science,” he said. “When I arrived at Eastern I found myself liking the quantitative areas of biology so I took some biochemistry classes. I ended up loving the classes and the major was declared just in time.”

CHRISTOPHER JENSEN  
Eastern Biotechnology Graduate  
Medical School Student

## FOR MORE INFORMATION

Please contact John M. Toedt, Biochemistry program coordinator at [toedtj@easternct.edu](mailto:toedtj@easternct.edu), or visit [www.easternct.edu/depts/phs/BioChemMajor1.htm](http://www.easternct.edu/depts/phs/BioChemMajor1.htm).