

BIOCHEMISTRY

<http://www.med.uvm.edu/biochemistry/grad>

OVERVIEW

The goal of the Biochemistry Graduate Program at the University of Vermont is to prepare students for careers in science as both researchers and educators. This is accomplished by expanding knowledge of both chemistry and biochemistry, while cultivating the ability for critical analysis, creativity and independent study.

DEGREES

Biochemistry AMP

Biochemistry M.S.

FACULTY

Berger, Christopher; Professor, Department of Molecular Physiology and Biophysics; PHD, University of Minnesota Twin Cities

Chatterjee, Nimrat; Assistant Professor, Department of Microbiology and Molecular Genetics; PHD, Baylor College of Medicine

Doublié, Sylvie; Professor, Department of Microbiology and Molecular Genetics; PHD, University of North Carolina Chapel Hill

Everse, Stephen; Associate Professor, Department of Biochemistry; PHD, University of California San Diego

Francklyn, Christopher; Professor, Department of Biochemistry; PHD, University of California Santa Barbara

Frietze, Seth; Assistant Professor, Department of Biomedical and Health Sciences; PHD, Harvard University

Glass, Karen; Associate Professor, Department of Pharmacology; PHD, University of Vermont

Godsey, Michael; Associate Professor, Department of Biochemistry; PHD, Oregon Health & Science University

Gordon, Jonathan; Assistant Professor, Department of Biochemistry; PHD, University of Western Ontario

Heath, Jessica; Assistant Professor, Department of Pediatrics; Department of Biochemistry; MD, SUNY Stony Brook

Hondal, Robert; Associate Professor, Department of Biochemistry; PHD, Ohio State University

Kelm, Robert; Associate Professor, Department of Medicine-Cardiovascular; PHD, University of Vermont

Lian, Jane; Professor, Department of Biochemistry; PHD, Boston University

Quénet, Delphine; Assistant Professor, Department of Biochemistry, PHD; University of Strasbourg, France

Silveira, Jay.; Assistant Professor, Department of Biochemistry; PHD, University of Vermont

Stein, Gary; Professor, Department of Biochemistry; PHD, University of Vermont

Stein, Janet; Professor, Department of Biochemistry; PHD, Princeton University

Wargo, Matthew; Associate Professor, Department of Microbiology and Molecular Genetics; PHD, Dartmouth College

Courses

BIOC 6001. General Biochemistry I. 3 Credits.

Survey for science majors. Chemistry, structure, metabolism, and function of proteins, carbohydrates, lipids; enzymes, bioenergetics and respiratory processes. Prerequisite: CHEM 2585 or Instructor permission.

BIOC 6002. General Biochemistry II. 3 Credits.

Survey for science majors. Amino acids, nucleic acids, protein synthesis, cellular and physiological control mechanisms. Prerequisite: BIOC 6001 or Instructor permission.

BIOC 6051. Proteins I: Structure&Function. 3 Credits.

Special Topics: Introduction to concepts in protein structure and chemistry as well as exploration of ideas in a hands on" fashion using computational resources. Prerequisite: BIOC 6001 or Department permission.

BIOC 6072. Cancer Biology. 3 Credits.

Overview of cancer biology for health science students. Foundation for cancer research. Lecture format; interdisciplinary viewpoint; outside lectures. Prerequisite: BIOC 6001 or Department permission.

BIOC 6391. Master's Thesis Research. 1-12 Credits.

Research for the Master's Thesis.

BIOC 6990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

BIOC 6991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BIOC 6993. Independent Study. 1-18 Credits.

A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BIOC 6995. Graduate Independent Research. 1-18 Credits.

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

BIOC 7001. Critical Reading and Analysis. 2 Credits.

Acquire a working knowledge of some highly impactful studies conducted in the field of biochemistry. By carefully reading and reviewing a series of classic and contemporary scientific papers, gain a greater appreciation for some of the conceptual and technical innovations in experimentation that provided answers to vexing problems or created entirely new fields of inquiry. Prerequisite: BIOC 6001.

BIOC 7491. Doctoral Dissertation Research. 1-18 Credits.

Research for the Doctoral Dissertation.

BIOC 7990. Special Topics. 1-18 Credits.

See Schedule of Courses for specific titles.

BIOC 7991. Internship. 1-18 Credits.

On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

BIOC 7995. Graduate Independent Research. 1-18 Credits.

Graduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.