

BIOCHEMISTRY - MD (BCH)

BCH 121 Medical Biochemistry 9 cr

This course provides the basic biochemical knowledge essential to the student's subsequent medical education experience. In addition, this course is intended to provide insight, where possible, into the mechanisms of disease at the molecular level. Finally, the course gives an adequate foundation to interpret and evaluate the current medical biochemical literature and stimulate continued education beyond the formal experience.

BCH 400 Biochemistry Externship 1-4 cr

To be determined.

BCH 410 Research in Biochem & Mol Biol 1-4 cr

: To carry out research under the supervision of a sponsoring faculty member. The student will help design experiments, learn and apply established techniques, record and evaluate data and make a final report both written and oral that describes the overall experimental results. The faculty member will assist the student in the project. This rotation is highly recommended for the student considering a career in academic medicine. Research areas include the biochemistry and molecular biology of cancer, lung diseases, and RNA viruses.

BCH 471 Res-Biochem and Molec Biology 1-4 cr

To carry out research under the supervision of a sponsoring faculty member. The student will help design experiments, learn and apply established techniques, record and evaluate data and make a final report both written and oral that describes the overall experimental results. The faculty member will assist the student in the project. This rotation is highly recommended for the student considering a career in academic medicine. Research areas include the biochemistry and molecular biology of cancer, malaria, lung diseases, lysosomal storage diseases, aging, RNA viruses, and drug design/synthesis.

BCH 520 Medical Biochemistry 7 cr

A basic course in biochemistry with emphasis on the physicochemical properties and intermediary metabolism of proteins, carbohydrates, lipids, and nucleic acids. The regulation and integration of metabolic pathways for energy transfer and biosynthesis of major cellular constituents are presented in detail. Enzymes, vitamins, hormones, biochemical genetics, and nutrition are included in the course material.

BCH 526 Biochemistry Lit Reports 1 cr

Students and faculty participate in a supervised reading of current literature and meet once a week to interact in a discussion of the selected article. The goal of this course is to maintain the student's level of information at a "state of the art" in both methods and theory in the discipline and to develop critical skills in reviewing the literature. Student presentation is required to receive credit.

BCH 527 Dir Studies Biochemistry 1-6 cr

Students participate in research under the direction of a graduate faculty member. The student may pursue independent research or participate in a literature project. This course should be taken by students who have completed their laboratory rotations, but have not yet submitted a research proposal.

BCH 590 Sp Top - 1-3 cr

This course provides in-depth tutorial exposure to specific areas in the discipline. Student and/or faculty presentations followed by group discussions (usually in the Socratic mode), examine the subject matter in an area of current interest either to one student or to a group of students. Credit and title are arranged with an individual faculty member.

BCH 620 Enzymes and Proteins 3 cr

The techniques used for the physical and chemical characterization of protein are presented and protein structure-function relationships, enzyme kinetics, and enzyme mechanisms are presented to provide a student with the basic knowledge to understand the role of functional proteins in life processes.

BCH 622 Molecular Biology 3 cr

The focus of this course is on cellular processes involving DNA repair, replication and translation. Current concepts regarding the organization and structure of chromosomes, genes and the regulation of gene expression will be discussed. Eukaryotic molecular biology is emphasized, however some eukaryotic and prokaryotic processes are compared and contrasted. This course stresses the methods and experimental design used to delineate and understand cellular information transfer and molecular phenomena.

BCH 626 Biochemistry Research Seminar 1 cr

Students and faculty present a research topic for discussion before members of the department. The presentations are usually scheduled on a rotational basis. The student may present research data for critique by the faculty.

BCH 799 Research-Dissertation 1-6 cr

Independent research by the student under the sponsorship of the graduate faculty. Students are required to submit a research project description form before enrolling in this course. Progress reports of the work accomplished are required every six months.