

BIOCHEMISTRY - BCH

BCH 301 Introduction to Biochemistry 3 Credits

Structure and function of biological molecules. Topics include proteins, carbohydrates, nucleic acids, lipids, enzyme kinetics, ligand binding, recombinant DNA technology and cell membrane structure and transport. Three lectures and one recitation per week.

Prerequisite: BIO 111 & minimum grade of C- in CHM 228.

Offered: every fall.

BCH 301L Introduction to Biochemistry Laboratory 1 Credit

Selected experiments demonstrating principles of comparative proteomics, Beer's Law, electrophoresis, immunodetection, and DNA fingerprinting. One four-hour lab per week.

Prerequisite: BCH 301 (or concurrent registration).

Offered: every fall.

BCH 302 Cellular Biochemistry 3 Credits

The more biological aspects of biochemistry. Topics include signal transduction, bioenergetics, metabolism of carbohydrates, lipids, proteins and metabolic control, emphasizing hormones. Three lectures and one recitation per week.

Prerequisite: minimum grade of C- in BCH 301.

Offered: every spring.

BCH 403 Molecular Biology 3 Credits

Biochemical processes at the cellular and molecular level. Topics include DNA structure in chromosomes, replication, repair, and recombination, DNA transcription, RNA structure and function, protein translation and regulation of these processes.

Prerequisite: minimum grade of C- in BCH 301.

Offered: spring of odd-numbered years.

BCH 403L Molecular Biology Laboratory 1 Credit

Selected experiments demonstrating principles of PCR, SDS-PAGE, protein extraction/purification, and cell culture. One four-hour lab per week.

Prerequisite: BCH 301L & BCH 403 (or concurrent registration in BCH 403).

Fulfills College Core: Advanced Writing-Intensive

Offered: spring of odd-numbered years.

BCH 450 Research in Biochemistry 3 Credits

Independent research under the direction of the biochemistry faculty.

Students are required to spend 9 hours per week conducting research.

BCH 450 may be taken in place of a biochemistry elective without lab. Research and consultation times to be arranged after approval of department chair.

Prerequisite: permission of department chair.

Offered: fall & spring.

BCH 451 Research in Biochemistry 4 Credits

Independent research under the direction of the biochemistry faculty.

Students are required to spend 12 hours per week conducting research.

BCH 451 may be taken in place of a biochemistry elective with lab. Research and consultation times to be arranged after approval of department chair.

Prerequisite: permission of department chair.

Offered: fall & spring.

BCH 499 Independent Study 3 Credits

Independent study under the direction of the biochemistry professor.

Independent studies require an application and approval by the associate dean.

Prerequisite: permission of the instructor, department chair, & associate dean.

Offered: fall & spring.