Biochemistry

Biochemistry (BCHM) courses at the advanced undergraduate level are offered by the Department of Biochemistry and Molecular Biology. Faculty members of the Biochemistry and Molecular Biology department are also involved in School of Medicine programs, the Physician Assistant program and graduate program in Molecular Biology, Microbiology and Biochemistry (MBMB).

Biochemistry Courses

**BCHM451A - Biochemistry** 451A-3 Biochemistry. (Same as CHEM 451A and MBMB 451A) First half of the 451A,B two semester course. Must be taken in A,B sequence. Three lectures per week. Introduction to biomolecules, biochemical techniques, expression of genetic information, basic thermodynamics, ligand binding, aqueous solutions, protein structure, hemoglobin, spectroscopy. Prerequisites: CHEM 340 and CHEM 342 or 442, or equivalents.

**BCHM451B - Biochemistry** 451B-3 Biochemistry. (Same as CHEM 451B and MBMB 451B) Second half of 451A,B two semester course. Must be taken in A,B sequence. Basic kinetics, enzyme kinetics, enzyme inhibitors, regulation of enzymes, oxidation-reduction, high energy bonds, transport across membranes, intermediary metabolism, hormonal control of metabolism. Prerequisites: MBMB 451A or BCHM 451A or CHEM 451A or equivalent.

**BCHM456 - Biophysical Chemistry** 456-3 Biophysical Chemistry. (Same as CHEM 456 and MBMB 456) A one-semester course in Biophysical Chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisites: CHEM 340 and CHEM 342 or 442, MATH 141 or 150, MBMB 451A or BCHM 451A or CHEM 451A, or equivalents.

**BCHM490 - Research Participation** 490-1 to 3 Undergraduate Research Participation. Investigation of a problem, either individually or as a research group, under the direction of a member of the faculty. Not for graduate credit. Prerequisites: 3.0 grade point average in sciences courses. Special approval needed from the instructor.

**BCHM451A - Biochemistry** 451A-3 Biochemistry. (Same as CHEM 451A and MBMB 451A) First half of the 451A,B two semester course. Must be taken in A,B sequence. Three lectures per week. Introduction to biomolecules, biochemical techniques, expression of genetic information, basic thermodynamics, ligand binding, aqueous solutions, protein structure, hemoglobin, spectroscopy. Prerequisites: CHEM 340 and CHEM 342 or 442, or equivalents.

**BCHM451B - Biochemistry** 451B-3 Biochemistry. (Same as CHEM 451B and MBMB 451B) Second half of 451A,B two semester course. Must be taken in A,B sequence. Basic kinetics, enzyme kinetics, enzyme inhibitors, regulation of enzymes, oxidation-reduction, high energy bonds, transport across membranes, intermediary metabolism, hormonal control of metabolism. Prerequisites: MBMB 451A or BCHM 451A or CHEM 451A or equivalent.

**BCHM456 - Biophysical Chemistry** 456-3 Biophysical Chemistry. (Same as CHEM 456 and MBMB 456) A one-semester course in Biophysical Chemistry intended for biochemists and molecular biologists. Emphasis will be on solution thermodynamics, kinetics and spectroscopy applied to biological systems. Prerequisites: CHEM 340 and CHEM 342 or 442, MATH 141 or 150, MBMB 451A or BCHM 451A or CHEM 451A, or equivalents.
BCHM490 - Research Participation

490-1 to 3 Undergraduate Research Participation. Investigation of a problem, either individually or as a research group, under the direction of a member of the faculty. Not for graduate credit. Prerequisites: 3.0 grade point average in sciences courses. Special approval needed from the instructor.

Last updated: 02/28/2018

Southern Illinois University
Carbondale, IL 62901
Phone: (618) 453-2121

Catalog Year Statement:
Students starting their collegiate training during the period of time covered by this catalog (see bottom of this page) are subject to the curricular requirements as specified herein. The requirements herein will extend for a seven calendar-year period from the date of entry for baccalaureate programs and three years for associate programs. Should the University change the course requirements contained herein subsequently, students are assured that necessary adjustments will be made so that no additional time is required of them.