Biological Chemistry (BIOCHEM)

Courses

**BIOCHEM 200A. Research in Biological Chemistry. 2-12 Units.**
Individual research under the supervision of a professor.

Repeatability: Unlimited as topics vary.

**BIOCHEM 200B. Research in Biological Chemistry. 2-12 Units.**
Individual research under the supervision of a professor.

Repeatability: Unlimited as topics vary.

**BIOCHEM 200C. Research in Biological Chemistry. 2-12 Units.**
Individual research under the supervision of a professor.

Repeatability: Unlimited as topics vary.

**BIOCHEM 200R. Research in Biological Chemistry for First-Year Students. 2-12 Units.**
Independent research within the laboratories of graduate training faculty in the Department of Biological Chemistry for first-year Ph.D. students.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be taken for credit 3 times.

**BIOCHEM 202A. Laboratory Seminar Series. 1 Unit.**
Study within a laboratory group including research and journal presentations.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: Unlimited as topics vary.

**BIOCHEM 202B. Laboratory Seminar Series. 1 Unit.**
Study within a laboratory group including research and journal presentations.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: Unlimited as topics vary.

**BIOCHEM 202C. Laboratory Seminar Series. 1 Unit.**
Study within a laboratory group including research and journal presentations.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: Unlimited as topics vary.

**BIOCHEM 207. Advanced Molecular Genetics. 4 Units.**
Literature-based discussion of molecular principles in genetics and functional genomics, with focus on cancer and stem cell biology.

Repeatability: May be taken for credit 2 times.

**BIOCHEM 215. Mouse Developmental Genetics. 4 Units.**
Introduction to using the mouse in contemporary biomedical research. The biology and development of the laboratory mouse, methods for manipulation of the mouse genome and embryos, and examples of application of these methods to understand mammalian development and homeostasis.

Same as DEV BIO 207.

Restriction: Graduate students only.
BIOCHEM 217. Human Evolution and Behavior. 4 Units.
Covers theories and empirical research concerning the evolutionary origins of human behaviors and their variations. An interdisciplinary course emphasizing both evolutionary psychology (e.g., mating strategies, kinship, and parenting) and molecular evolution (i.e., evolution of genes for various behaviors).

Same as PSY BEH P271.

Restriction: Graduate students only.

BIOCHEM 225. Epigenetics in Health and Disease. 4 Units.
Focuses on the role of chromatin/nuclear structure organization (histone and DNA modification, chromatin remodeling, higher order chromatin structure and nuclear organization) on gene regulation, DNA replication and repair, relevant to development, metabolism, learning and memory, and human disease.

Prerequisite: MOL BIO 203 or MOL BIO 204 or NEURBIO 206

Same as NEURBIO 230.

Restriction: Graduate students only.

BIOCHEM 240. New Breakthroughs in Basic and Translational Cancer Research. 4 Units.
Highlights breakthroughs in molecular and cellular aspects of cancer biology and emerging therapeutic approaches. Emphasis on new discoveries of critical pathways/processes in cancer etiology, progression, and metastasis. Introduces strategies used in the discovery, design of biological and small molecules-based therapies.

Prerequisite: MOL BIO 204 or PHYSIO 252. A gene regulation course is also required.

Restriction: Graduate students only.

BIOCHEM 291. Research Seminar. 2 Units.
Student research-based colloquium covering current topics in gene organization and expression, cell cycle and differentiation, DNA repair, checkpoint control, and the physical, chemical, and biological properties of macromolecules. Students are encouraged to read critically and analyze recent literature.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

BIOCHEM 292A. Scientific Communication. 2 Units.
Small group meetings for graduate students to practice scientific writing, debate, and presentation skills.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

BIOCHEM 292B. Scientific Communication. 2 Units.
Small group meetings for graduate students to practice scientific writing, debate, and presentation skills.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

BIOCHEM 292C. Scientific Communication. 2 Units.
Small group meetings for graduate students to practice scientific writing, debate, and presentation skills.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.