Physiology and Biophysics (PHYSIO)

Courses

PHYSIO 200. Research in Physiology and Biophysics. 2-12 Units.
Individual research directed toward doctoral dissertation and supervised by a particular professor.

Repeatability: May be repeated for credit unlimited times.

PHYSIO 200R. Research in Physiology and Biophysics for First-Year Students. 2-12 Units.
Independent research within the laboratories of graduate training faculty in the Department of Physiology and Biophysics for first-year Ph.D. students.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be taken for credit 3 times.

PHYSIO 201. Introduction to Physiology Research. 1-4 Units.
Introduction to research in physiology and related sciences. Concentrates on techniques emphasized in the various laboratories of the Department of Physiology and Biophysics.

Repeatability: May be repeated for credit unlimited times.

PHYSIO 204. Concepts of Biophysics. 3 Units.
Principles of crystallography; introduction to time-resolved absorption and fluorescence spectroscopy; the concepts of kinetic order and kinetic rate theory.

Restriction: Graduate students only.

PHYSIO 205. Electronics for Biologists. 4 Units.
Basic principles of electricity; properties and use of discrete components and integrated circuits; circuit analysis and design. Intended for advanced students in the life sciences.

Same as NEURBIO 249.

PHYSIO 206A. Introduction to Medical Physiology. 5 Units.
Vertebrate physiology with emphasis on humans and on the relationship between the function of normal tissues and the processes of disease. Fundamental principles of physiology and the interrelationships which control organ function.

Prerequisite: A biochemistry course.

Restriction: Graduate students only.

PHYSIO 206B. Introduction to Medical Physiology. 6 Units.
Vertebrate physiology with emphasis on humans and on the relationship between the function of normal tissues and the processes of disease. Fundamental principles of physiology and the interrelationships which control organ function.

Prerequisite: PHYSIO 206A

Restriction: Graduate students only.

PHYSIO 212. Medical Immunology. 1.5 Unit.
One of the cornerstones of the MS1 Molecular Basis of Medicine block. Includes temporal coordination of lecture material, regular course director meetings, and combined exams with PHYSIO 544: Medical Immunology.

Restriction: Graduate students only.

PHYSIO 215. Integrative Immunology . 4 Units.
Provides an introduction to immunology, but focuses on providing in-depth analysis of selected topics within the broader field of immunology, including relevant research techniques, while improving critical thinking skills.

Restriction: Graduate students only.

PHYSIO 232. The Physiology of Ion Channels. 4 Units.
Discusses how ion channels work (molecular/structural biophysics level) and what ion channels do in diverse cell types (cell physiology level).

Restriction: Graduate students only.
PHYSIO 252. Introduction to Proteomics. 4 Units.
Introduces students to concepts and methods of proteomics including protein identification, expression proteomics, and protein-protein interactions.

Repeatability: May be taken for credit 2 times.

PHYSIO 272. Eye: Health and Disease. 3 Units.
Introduces the anatomic and physiological basis of vertebrate vision and disease states in which the structure and function of the eye is disrupted with emphasis on current and developing research areas.

Restriction: Graduate students only.

PHYSIO 290. Topics in Physiology. 3 Units.
Contemporary research problems in physiology. Students review research articles in current literature and present ideas contained therein, focusing on groundbreaking discoveries and methodologies. Students present results of their own research and attend presentations given by other students and departmental researchers.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.

PHYSIO 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.

PHYSIO 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.

PHYSIO 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.

PHYSIO 299. Dissertation in Physiology and Biophysics. 2-12 Units.
Preparation and completion of the dissertation required for the Ph.D.

Grading Option: Satisfactory/unsatisfactory only.

Repeatability: May be repeated for credit unlimited times.

Restriction: Graduate students only.