

Department of Physiology

Chairperson (acting): Ziyadeh, Fuad
Professors: Bikhazi, Anwar; Birbari, Adel; Jabbur, Suhayl; Nasser, Michel; Saadé, Nayef

The Department of Physiology offers three programs of study: medical physiology, graduate physiology, and physiology for nursing and undergraduate students.

The medical physiology program provides each medical student with a core of physiological knowledge and skill over a period of one academic year. The graduate program is a broad one leading to the MS degree in physiology and in basic medical sciences. Students with a BS degree or its equivalent are eligible. These programs include basic undergraduate courses in mathematics, biology, physics, and chemistry in the Faculty of Arts and Sciences, as well as advanced courses in physiology and other medical science disciplines.

PHYL 200 Homeostasis 36.16; 2 cr.
A course that studies the internal environment and its physiological regulation by two homeostatic organs: the lungs and the kidneys. Didactic lectures cover the physiology of the topic, treating internal environment, homeostasis and feedback mechanisms, the lung, the kidney, and electrolytes. *Annually.*

PHYL 202 Cardiovascular Physiology 31.21; 2 cr.
A course in which the cardiovascular system is presented with clear reference to pathophysiological and clinical events. Didactic lectures and seminar sessions define physiological concepts and emphasize structure-function relationships. Laboratory sessions familiarize the student with instrumentation and techniques in the cardiovascular field. *Annually.*

PHYL 204 Metabolism 32.24; 3 cr.
A course that covers the physiology of the gastrointestinal tract, metabolism and its regulation by the endocrine system, and reproduction. This course consists of lectures, conferences, and discussion sessions. *Annually.*

PHYL 208 Neurophysiology 31.27; 3 cr.
A course that investigates the physiology and various functions of the human nervous system.

PHYL 210 General Physiology: Cellular Mechanisms 48.16; 3 cr.
A course on aspects of membrane transport processes across symmetrical and asymmetrical cell membranes, electrophysiology, membrane potentials, action potentials in excitable cells, synaptic transmissions, and excitation-contraction coupling in muscles. *Annually.*

PHYL 246 Physiology for Nursing Degree Students and Undergraduates 48; 4 cr.
A course that outlines fundamental principles of human physiology and the mechanisms governing the function of different body organs. *Prerequisite: BIOL 201 or BIOL 210. Annually.*

PHYL 300 Homeostasis
Similar to PHYL 200. *Offered to graduate students.*

PHYL 302 Cardiovascular Physiology

Similar to PHYL 202. *Offered to graduate students.*

PHYL 304 Metabolism

Similar to PHYL 204. *Offered to graduate students.*

PHYL 308 Neurophysiology

Similar to PHYL 208 and to IDTH 308B. *Offered to graduate students.*

PHYL 310 General Physiology: Cellular Mechanisms

Similar to PHYL 210. *Offered to graduate students.*

PHYL 311-312 Advanced Physiology**32.0; 2 cr.**

A guided study (experimental and theoretical) of the literature of the major topics in physiology. This course is conducted as a seminar. *Annually.*

PHYL 313-314 Physical Methods in Physiological Research**0.64; 2 cr.**

A guided laboratory course of the physical methods used in the major branches of physiology. *Annually.*

PHYL 317 Perspectives in the Physiological Sciences**32.0; 2 cr.**

A study of selected readings and seminars in the history, philosophy, and methodology of the physiological sciences designed to give the student a broad view of the field of biology and its implications in every day life. *Annually.*

PHYL 324 Electrophysiology of Excitable Cells**12.9; 1 cr.**

A study of the basic mechanisms of membrane cable property and resting potentials in all cells, action potential initiation and propagation in excitable cells, receptor physiology, central synaptic transmission, neuromuscular transmission, and muscular contraction. *Annually.*

PHYL 390 Directed Reading and Research**Credit hours vary**

Assignments based on the research interests of the graduate student and the adviser, aimed at formulating an original research project. *Annually.*

PHYL 391-392 Projects in Physiology**0.64; 2 cr.**

A physiological literature survey covering a given subject in the field. *Annually.*

PHYL 397-398 MS Thesis**Credit hours vary**

Original research under staff supervision, leading to the MS degree.

IDTH 208 Basic Neuroscience

See Interdepartmental Teaching.

PHYL 260 Elective in Physiology**0.180-360.**

An elective that covers one or more areas of physiology such as special physiologic techniques, general physiology, experimental gastroenterology, experimental neuroscience, and the physiology of cardiac and vascular smooth muscles. *One to two months.*