



- BIOC 300 Basic Biochemistry 72.44; 6 cr.**  
 A course that provides students with a coherent account of biochemistry and molecular biology, correlating clinical disorders with basic concepts. This course describes the living cell as a physiochemical, highly organized system that is precisely controlled, self-reproducing, and energy-generating. Homeostatic mechanisms, steady state, and molecular biology are fully described. *Offered to medical students and graduate students. First semester.*
- BIOC 302 Developmental Biochemistry 48.0; 3 cr.**  
 A course that discusses the pre- and post-natal development of cardiac and skeletal muscles as well as hemopoiesis. This course is a mix of didactic lectures and interactive teaching. Each topic is presented by a faculty member and further illustrated by an article discussed by the students. *The course is required by all graduates in biochemistry. Open to graduate students from other departments. Prerequisite: BIOC 300 or the consent of the coordinator. Second semester.*
- BIOC 303 Molecular Biology of Cancer 48.0; 3 cr.**  
 A course that deals with the regulatory mechanisms of tumor cell growth and cancer formation at the cellular, molecular, genetic, and epigenetic levels. This course includes a discussion of recent developments in the intra- and/or inter-cellular mechanisms involved in cellular proliferation, cell death, invasion, and metastasis. *Open to all graduate students in basic sciences and biology. Second semester.*
- BIOC 304 Receptors and Signaling 48.0; 3 cr.**  
 A course that presents classical pathways triggered by G-protein coupled receptors as well as the recent information and findings in the field. *This course is required of all biochemistry graduate students. Open to graduates from other departments in the basic medical sciences and biology. Prerequisite: Biochemistry 300 or the consent of the coordinator. First semester.*
- BIOC 305 Biochemical Research 48.0; 3 cr.**  
 An elective course that discusses the theoretical basis of ongoing research projects. This course consists of didactic lectures, student presentation, and written assignments on novel aspects related to each topic. *The course is open to all graduate students. Prerequisite: basic biochemistry (BIOC 300) or consent of coordinator. Summer.*
- BIOC 306 Mediators in Vascular Biology and Inflammation 32.0; 2 cr.**  
 An elective course that describes the different eicosanoids and their role in vascular biology and in mediating inflammation. *Open to graduate students in basic medical sciences, biology, and to medical doctors who want to enhance their knowledge in the field. Second semester or summer.*
- BIOC 307/308 Biochemical Methods 0.128; 4 cr. (each)**  
 A course that focuses on the basic principles and applications of the techniques of molecular biology, spectrophotometry, and chromatography. *Open to all graduate students. Prerequisite: BIOC 300, or a background in biology. Summer, alternate years.*
- BIOC 309 Proteins and Enzymes 22.20; 2 cr.**  
 An elective course open to all graduate students either as 2 credits or as 1 credit as 309A/309B, respectively. This course is composed of two units. Unit I: Protein Architecture discusses the stabilizing forces directing protein folding and thus conformation, introducing students to the various existing protein data banks. Unit II: Discusses the different kinetic approaches that may be used in studying the kinetic analysis of complex biological systems. *Prerequisite: a biochemistry course and/or consent of coordinator. Summer, alternate years.*

