

Course Descriptions Fall Semester – M1/PA1 Year

ACB 8101 Medical Gross Anatomy

Medical Gross Anatomy introduces the form and function of the human body by using clinical language. The course includes complete dissection of the human body with a regional focus that emphasizes relationships to the living system. Clinically relevant areas of radiologic imaging, surface anatomy, embryology and clinical correlations complement the dissection experience. Students acquire anatomical knowledge through lectures, small group work, and independent activities.

MED 8121 Clinical and Professional Skills I

Clinical and Professional Skills (CAPS) is a 3-semester sequence of courses designed to develop knowledge, skills and professional attitudes required for attaining clinical excellence. Activities encourage growth of intellectual inquiry, and foster a lifelong habit of skill development, self-assessment and reflective practice. CAPS incorporates the developmental process of learning by offering sequentially more challenging experiences, repeated practice opportunities, observation and feedback, and self-directed learning and reflection. Students will learn the art and science of medicine through an integrated approach with other strands and in a way that is similar to how they will practice medicine in the future.

CAPS I content includes: introduction to clinical reasoning (communication, physical examination and evidence-based clinical practice); principles of medical ethics; and the interprofessional approach to caring for patients. Progression of skill development will occur in the context of large groups, small groups and practice with simulated patients. Early clinical interactions will help place classroom experiences in the context of patient care and begin to prepare students to provide patient-centered care within changing healthcare systems. Students will also interact with students from other health sciences colleges as a way to begin to explore the inter-professional approach to caring for patients.

MED 8122 Medicine and Society I

Medicine and Society (MAS) is a 3-semester sequence of courses in which students learn about disease prevention, health promotion services, public health, epidemiology, health services organizations and delivery, and community dimensions of medical practice. MAS I introduces social determinants of health and investigates the influence and impact of culture and the community on healthcare. Students learn about community resources and apply health and risk assessment to patients and themselves.

MED 8123 Foundations of Cellular Life

Foundations of Cellular Life is an 8-week study of the things that happen in a single generalizable cell of the human body. Course content is drawn from the fields of Biochemistry, Cell Biology and Histology. A diverse team of basic scientists teach the course, each interpreting the events of cellular life in a slightly different way. The material in this course is foundational to learning the Mechanisms of Health and Disease. Students learn how to use these foundational lessons to solve clinical problems through

advanced application exercises. The course is also a foundation in developing habits and attitudes that essential for success in medical school. Assessments are a blend of individual and group, online and in-person assessments. This mix helps to better understand your learning process and how you individually will need to grow as a learner to be successful in the coming years of medical school.

MED 8124 Mechanisms of Health and Disease I: Human Energy and Genetics

Mechanisms of Health and Disease (MOHD) content consists of six multi-system mechanisms. MOHD 1 and 3 cover the mechanisms of Oxygenation, Metabolism, and Genetics/Development. MOHD 1- Human Energy and Genetics - will emphasize the normal physiological and genetic processes of oxygenation and metabolism. MOHD 3 will place the emphasis on development and disease of these processes. MOHD 2 and 4 cover the mechanisms of Immunology/Inflammation, Locomotion/Integument and Neuropsychiatry.

Oxygenation is the story of how molecular oxygen is acquired from the atmosphere, crosses membranes, binds to hemoglobin and is pumped through the cardiovascular system to individual tissues and cells where it is used to generate high energy phosphate compounds and to participate in catabolic reactions. It also includes the generation and disposal of carbon dioxide as well as other gases. Ischemia is the result of inadequate delivery of oxygen with resultant damage to or dysfunction of tissue.

Metabolism is the story of appetite, food consumption, digestion within and absorption from the gastrointestinal tract and its microbiome, and transport to the liver and other tissues. It is also the story of how metabolic products, medications and other substances are detoxified and excreted via the liver, GI tract and kidney. At the cellular level this story includes how the body generates energy-rich phosphate compounds in a tissue specific fashion to fuel the energy-requiring processes the body uses to maintain homeostasis, grow, reproduce, and move. Understanding hormonal modulation of these homeostatic processes is an important aspect of this mechanism. Disorders of these processes can result in disruption of internal homeostasis.

Genetics is the story that encompasses how individual cells, including stem cells, reproduce and become fully differentiated multicellular tissues. Modulation of these processes is an important aspect of this mechanism. An emphasis of the course will be to integrate and link genetic control mechanisms with the physiology of oxygenation and metabolism.