**Cellular and Molecular Biology**

This course includes integrated topics from Biochemistry, Physiology, Microanatomy, Pharmacology and Pathology. The course begins with an introduction to cell structure and function, examining the details of the plasma membrane, cytoskeletal structure and cell organelles. This material includes integrated information about the molecular structure of amino acids, proteins, enzymes and lipids and functional considerations for cell-to-cell communications. It also includes a discussion of the basic tissue types and an introduction to pathologic changes which may affect them. The final portion of this course is dedicated to a discussion of molecular human genetics. The concepts of carcinogenesis, mutagenesis and genetic alteration as well as an introduction to antineoplastic agents and gene therapy strategies, conclude the material to be presented.

**Human Structure and Development**

This course includes integrated topics from Gross Anatomy, Microanatomy and Embryology. The course is designed around a framework based on regional anatomy. In each segment, the appropriate macro-, microscopic and developmental anatomy will be covered. Students accomplish cadaver dissections and microanatomy labs during this block. Throughout the course, there is a strong emphasis on three-dimensional anatomical relationships that is reinforced by small group discussions and demonstrations of regional radiographic imaging. Each unit has clear clinical correlations that are presented to the students in a variety of ways, including panel discussions, small groups, demonstrations and meetings. Students have the opportunity to develop initial physical diagnostic skills in a series of workshops, which correlate surface anatomy with internal structures and normal thoracic, abdominal and ENT exams.

**Neuroscience**

The content of the medical neuroscience course includes not only the basic science concepts introduced in more traditional neuroanatomy courses, it also incorporates neurohistology, neuroembryology, neurophysiology, neuropathology, and neuroradiology. The usefulness of these concepts are reinforced by numerous clinically-based lectures which emphasize the importance of integrating basic neuroanatomical knowledge with the clinical symptoms presented by a neurological deficit. Other clinically-based lectures present current medical concepts concerning neuroimmunology, neurodegenerative diseases, pain, sleep, epilepsy, substance abuse, and memory and learning.

**Behavioral Science**

This course begins by presenting basic principles and theories of human behavior, then traces the sequence of development using standard models of emotional, social, cognitive and moral development from infancy to old age. Lectures on the elements of diagnosis of mental illness begin the section on psychopathology. Psychotherapeutic interventions are emphasized, with less time spent on psychopharmacology. The major emotional illnesses are discussed as they appear in children, adolescents, adults and older adults. Etiology, diagnosis, and the basics of treatment are presented for each category of illness.

**Clinical Decision Making I**

This longitudinal course includes a range of instructional strategies and experiences designed to provide medical students with fundamental knowledge and skills for clinical decision making. The basis of clinical decision making involves the integration of basic science knowledge with patient information obtained with patient centered clinical skills (communication, history taking and physical examination) as well as recommending and interpreting appropriate diagnostic tests. Students must be able to assimilate the acquired information so that they can generate and test hypotheses regarding relevant differential diagnosis. Clinical decisions related to treatment and management options requires further integration of basic science knowledge combined with knowledge related to the broader health care system to include medical ethics, health economics, medical jurisprudence, and evidence based medicine.

**Basic Life Support**

The Basic Life Support Healthcare Provider Course is designed to teach the skills of CPR for use in victims of all ages (including ventilation with a barrier device, a bag-mask device, and oxygen); use of an automated external defibrillator (AED); and relief of foreign-body airway obstruction (FBAO).