Preclinical Sciences (PCS)

PCS 80112  CELL AND TISSUE  5 Credit Hours
Histology is the study of the microscopic organization of the human body. Reciprocal relationships between normal structural features and their functions are emphasized. Macromolecules, organelles, cells, fundamental body tissues and organs are compared and contrasted. Light microscopic preparations are examined in laboratories, which are closely correlated with lecture topics.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Laboratory, Lecture
Contact Hours: 3 lecture, 1 lab, 1 other
Grade Mode: Standard Letter

PCS 80113  STAYING ALIVE  5 Credit Hours
The study of the physical and chemical properties of the major constituents of cells and body fluids. This includes structures, functions and biochemical mechanisms involved in the biosynthesis, utilization and degradation of amino acids, carbohydrates, lipids, proteins and nucleic acids. Also included are enzyme kinetics, bioenergetics, cellular communication, nutrition and biochemistry of specialized tissues and fluids.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 3 lecture, 5 lab, 1.5 other
Grade Mode: Standard Letter

PCS 80118  MEDICAL GENETICS  2 Credit Hours
This course provides basic principles of human genetics dealing with genetic variations and anomalies that impact medical practice. Molecular genetics, cytogenetics, genomics, and population genetics will be reviewed.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 2 lecture
Grade Mode: Standard Letter

PCS 80119  HUMAN ANATOMY AND EMBRYOLOGY  8 Credit Hours
The human upper limb, head and neck, thoracic, abdominal and pelvic anatomy is explored through lecture, audiovisual aids and cadaver dissection. The material is presented in a regional approach, with emphasis on structural and functional relationships, and is correlated with cadaver dissection. In addition, early events in human embryology are presented and discussed followed by coverage of regional and system-based events during embryological and fetal development. Anatomical and embryological topics are correlated throughout the course.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Combined Lecture and Lab
Contact Hours: 6 lecture, 4 lab
Grade Mode: Standard Letter

PCS 80124  LOWER EXTREMITY ANATOMY  8 Credit Hours
Lower extremity anatomy presents the detailed macroscopic anatomy of the lower limb. The course is augmented with radiographs, MRI, surface anatomy and cross sectional studies. The course includes an introduction to basic concepts of podiatric medicine, surgery and biomechanics. Laboratory instruction includes a detailed dissection of the lower limb, supplemented with computerized educational materials and study of natural bone specimens.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Laboratory, Lecture
Contact Hours: 4 lecture, 4 lab
Grade Mode: Standard Letter

PCS 80125  NEUROBIOLOGY  3 Credit Hours
Neurobiology is the study of the structure and function of the nervous system. The course will deal with the anatomy, microscopic anatomy and physiology of the individual neurons and systems of neurons, which comprise the component parts of the nervous system. Topics will include sensory, special sensory and motor systems, the cerebral cortex, diencephalon, cerebellum, brainstem and spinal cord. Discussions will include reference to clinical disorders related to those structures.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

PCS 80126  ORGAN SYSTEMS  8 Credit Hours
This course continues to elucidate the structural, chemical and functional components of the body. Muscular, blood, cardio-vascular, respiratory, and renalcells, tissues, organs and their functions are studied. Regulation of these functions, interrelationships between systems and their effects on the organism and its homeostasis are detailed and investigated. Light microscopic preparations are examined in laboratories which are closely correlated with lecture topics.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 3 lecture, 1 lab, 4 other
Grade Mode: Standard Letter

PCS 80128  MEDICAL MICROBIO/IMMUNOLOGY  6 Credit Hours
This course will introduce the student to the basic concepts, characteristics and techniques used in the study of the clinically significant microbial groups: viruses, bacteria, fungi, and protozoa. The structure, metabolism, genetics, control and laboratory techniques of each microbial group will be described. The roles and outcomes of these organisms in producing manifestations of human infection and disease will be investigated. This course will also introduce the student to the molecular, cellular and organismal mechanisms responsible for the human immune response system. Laboratory will provide hands on experience in staining, cultivation, identification, sensitivity testing, and immunologic techniques.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Combined Lecture and Lab
Contact Hours: 5 lecture, 1 lab
Grade Mode: Standard Letter
PCS 80218  HUMAN SYSTEMS PATHOLOGY I  8 Credit Hours
The study of disease with emphasis on epidemiology, pathogenesis, natural history, morphologic appearance and relationship to clinical manifestation. Emphasis is placed on basic cellular pathologic processes (injury, inflammation and repair, neoplasia), and description of diseases organized by organ system. An introduction to the concepts of clinical decision making through the use of case studies and current clinical literature will be emphasized.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 8 lecture
Grade Mode: Standard Letter

PCS 80219  PHARMACOLOGY AND THERAPEUTICS I  4 Credit Hours
Historically, the clinician was responsible for information about the sources, physical and chemical properties, compounding and dispensing of drugs. Today the practitioner’s responsibility requires the rational clinical use of therapeutic agents for the prevention, diagnosis, and treatment of disease based on an understanding of pharmacological principles. This course is designed to prepare practitioners to prescribe for maximum benefit and to recognize the clinical ramifications of concomitant drug therapy.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

PCS 80228  HUMAN SYSTEMS PATHOLOGY II  8 Credit Hours
The study of disease with emphasis on epidemiology, pathogenesis, natural history, morphologic appearance and relationship to clinical manifestation. Emphasis is placed on basic cellular pathologic processes (injury, inflammation and repair, neoplasia), and description of diseases organized by organ system. An introduction to the concepts of clinical decision making through the use of case studies and current clinical literature will be emphasized.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 8 lecture
Grade Mode: Standard Letter

PCS 80229  PHARMACOLOGY AND THERAPEUTICS II  4 Credit Hours
Historically, the clinician was responsible for information about the sources, physical and chemical properties, compounding and dispensing of drugs. Today the practitioner’s responsibility requires the rational clinical use of therapeutic agents for the prevention, diagnosis, and treatment of disease based on an understanding of pharmacological principles. This course is designed to prepare practitioners to prescribe for maximum benefit and to recognize the clinical ramifications of concomitant drug therapy.
Prerequisite: Student must be enrolled in the podiatric medicine program.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter