# Preclinical Sciences (PCS)

**PCS 80111 Human Anatomy 8 Credit Hours**
The macroscopic anatomy of the upper limb, thorax, abdomen, head and neck, pelvis and perineum of the human body is described, utilizing audiovisual teaching aids and full cadaver dissection. The course is taught using a regional approach, with emphasis on structural and functional relationships. The laboratory instruction includes cadaver dissection supplemented with anatomical prosections, as well as cross-sectional anatomy and computerized educational material.

**Prerequisite:** Student must be enrolled in the Podiatric Medicine program.

**Schedule Type:** Combined Lecture and Lab

**Contact Hours:** 4 lecture, 4 lab

**Grade Mode:** Standard Letter

**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 80114 Medical Genetics and Embryology 4 Credit Hours**
This course will include the basic principles of human genetics dealing with the genetic variations that impact medical practice. Molecular genetics, cytogenetics, genomics, and population genetics will be reviewed. This course will also review the major events and processes involved in normal and abnormal embryologic development of the human body organs and systems. This course is coordinated with Human Anatomy and Cell and Tissue Biology.

**Prerequisite:** Student must be enrolled in the Podiatric Medicine program.

**Schedule Type:** Lecture

**Contact Hours:** 4 lecture

**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, cardiovascular, respiratory, and renal cells, tissues, organs and their functions are studied. Regeneration 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 microbic groups: viruses, bacteria, fungi, and protozoa. The structure, metabolism, genetics, control and laboratory techniques of each microbic 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