

# Biomedical Studies (PBMS)

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**PBMS P100. Histology. 6.25 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P102. General Anatomy. 7 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P103. Lower Extremity Anatomy. 7.7 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P104. Neurophysiology. 2.5 Credit Hours.**

Upon successful completion of this course, the student will: Understand the development of the nervous system and how it relates to anatomy in the adult; Understand the function of electrically excitable cells, the diversity, distribution and action of chemical synapses, the cellular basis of information transmission in the nervous system, and the function of simple neural circuits, particularly spinal reflexes; Understand the principles of sensory transduction and the coding of sensory information in the nervous system; Know the nervous pathways associated with sensory systems, including those conveying cutaneous, proprioceptive, and pain information, as well as the special sense of vision, olfaction, audition and balance, and understand the basic functioning of these systems; Understand the physiology of muscle, and how the nervous system controls muscles to achieve desired movements, especially in relation to posture and gait; Know the nervous pathways associated with motor systems, including organization of the spinal cord, descending pathways, the basal ganglia and the cerebellum, and understand the basic functioning of these systems; Know the circuitry and understand the feedback pathways associated with nervous control of body homeostasis; Understand the structural bases of arousal, higher cortical functions, memory and emotion; Be familiar with hereditary, metabolic and mechanically induced pathologies, especially with respect to peripheral sensation and motor function; Understand the structural bases of neurological examination, and develop an appreciation of the clinical tests used to evaluate nervous system function, especially for the lower extremity.

**Class Restrictions:** Must be enrolled in one of the following Classes: First Year Podiatry.

**Level Registration Restrictions:** Must be enrolled in one of the following Levels: Podiatric Medicine.

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**PBMS P105. Neuroanatomy. 2 Credit Hours.**

The course involves the study of the structure and function of the central nervous system through an understanding of the principal neural pathways involved in the transmission of information. These pathways include those mediating motor and sensory functions, as well as those serving higher cortical functions such as cognition. The neuroanatomic basis of the neurological examination of a patient and the implications of damage to these pathways will be emphasized. The course will be presented primarily through lectures. In addition there will be one lab session and several sessions for the discussion of case studies.

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**PBMS P109. Biomechanics. 2 Credit Hours.**

The course reviews skeletal and muscular anatomy and discusses those processes necessary to allow posture and locomotion. The students will identify skeletal features through palpation and use these references for segment measurement and evaluation of joint range and quality of motion. Instrumented measurements will supplement clinical measurements. The course provides normal joint ranges of motion in the lower extremities in mature and pediatric individuals; introduces single plane and triplane motions in the open and closed kinetic chains; describes muscle action with respect to joint axes; prepares the student for clinical biomechanical examination and gait analysis; provides a basis for understanding biomechanical pathology; introduces terminology describing segmental deviations from normal structure and function; introduces the student to biomechanical evaluation of diagnostic imaging; and compares clinical measurement with radiological and instrumented findings for an individual.

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**PBMS P110. Biochemistry. 6 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P111. Physiology. 5 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P120. Microbiology. 6.8 Credit Hours.**

The etiology, control, immunology, and pathogenesis of infectious disease related to medical bacteriology, virology, mycology and parasitology. An understanding of the principles of Microbiology and Immunology. A knowledge of microorganisms, their identification and relationship to disease with an emphasis on those microbes of particular interest to the practicing podiatrist. The maintenance of a sanitary environment with an understanding of sources of infection, contagion, and practice of microbial control. A well-rounded scientific approach to the infectious problems of the patient with an appreciation of the contributing medical disciplines. An epidemiological awareness of the responsibility of the podiatrist to the patient. An understanding of microbiologic clinical laboratory services, their reporting systems and their value to clinical practice.

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**PBMS P201. Advanced Dissection. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P210. Pharmacology. 5.25 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P220. Microbiology. 13 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P221. Pathology. 9 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P222. Pathophysiology. 3 Credit Hours.**

Pathophysiology is the integrated study of the basic medical sciences. Usage of case studies and clinical vignettes taught in a comprehensive medical team approach will serve to help students better understand basic tenants of the medical sciences which will then help them achieve greater success on boards, rotations and clinical practice in the future.

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**PBMS P301. Advanced Dissection. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P401. Advanced Dissection. 0 Credit Hours.**

**Repeatability:** This course may not be repeated for additional credits.

**PBMS P504. Lower Extremity Anatomy. 1.5 Credit Hour.**

**Repeatability:** This course may not be repeated for additional credits.