

# MEDICINE SYSTEMS (MEDS)

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## **MEDS 7318. Clinical Clerkship Preparation. 3 Hours.**

This course provides the student with the opportunity to review salient principles and procedures essential for the success at the start of clinical rotations. The course reviews the interpretation of electrocardiograms, imaging studies, and laboratory data, as well as OSCE's, procedures in the simulation lab and osteopathic principles. Students are expected to be able to participate in the diagnosis and treatment of patients upon their arrival on a clinical service in their clerkships, and this course serves to ground them in basic medical knowledge and processes. Credits: 3

**Prerequisite:** Successful completion of all coursework in years 1 & 2, passing grade on COMLEX Level 1.

## **MEDS 7320. Systems Integration. 3 Hours.**

Students integrate and apply biomedical and clinical concepts previously presented throughout the first two years of the undergraduate osteopathic medical curriculum. Mastery of foundational biomedical and clinical concepts will be assessed. Based upon personal strengths and opportunities, students develop a personalized study plan in preparation for successful completion of the COMLEX-USA Level 1 examination which is required for continuation in the curriculum.

## **MEDS 7602. Neuroscience & Behavior. 6 Hours.**

Students explore functional anatomy and physiology of the nervous system in both health and disease, learning to use the neurologic examination, imaging techniques, and biochemical markers, to objectively assess the nervous system. Students learn the signs, symptoms, and consequences of nervous system pathologies resulting from trauma, ischemia, stroke, infection, toxins, autoimmune, and genetic conditions. Students are introduced to an overview of mental health issues, including developmental disorders, adaptive and maladaptive behaviors, mood disorders, stress-induced behavior, fear and anxiety disorders, substance abuse, somatoform disorders, and psychoses. Students also examine ethical, legal, and social aspects related to neuroscience and behavioral pathologies. In order to facilitate cognitive integration of basic and clinical sciences, this course is team-taught by clinicians and basic scientists.

## **MEDS 7603. Immune System & HEENT. 6 Hours.**

Students are introduced to the principles of trauma, inflammatory disorders, infections, and cancers associated with HEENT as it relates to the immune system. Students learn to apply the basic concepts of immunology in normal and disease states. Topics, such as immune responses to infections, immune deficiencies, hypersensitivity, tumor and transplantation rejection, are covered in detail. In this course, the HEENT and immune systems are integrated in case-based interactive instruction. Students also apply immunology to diagnose, prevent, and treat infections, cancers, and immunological diseases.

## **MEDS 7604. Skin Skeletal & Motor Systems. 6 Hours.**

Students investigate normal and abnormal structure and function of the integumentary, musculoskeletal, and motor systems. These systems are studied at the cellular, tissue, and organ system levels, including normal structure and function as well as states of disease and dysfunction.

## **MEDS 7605. Hematopoietic & Renal Systems. 6 Hours.**

Students integrate the functional anatomy and physiology of the renal and hematopoietic systems. Students assess and interpret biochemical markers, signs, and symptoms of renal and hematopoietic pathologies. Students design comprehensive pharmacologic and non-pharmacologic treatment plans and develop an understanding of the ethical, legal, and social aspects related to disease treatment, including dialysis and transplant.

## **MEDS 7606. CV & Respiratory Systems. 6 Hours.**

Students integrate concepts related to the cardiovascular and respiratory systems in health and disease. Students analyze environmental and socio-cultural aspects of the region influencing the normal function of the systems. Topics may include morphological sciences (anatomy, histology, and embryology), physiology, pathology, and contemporary therapeutic approaches. Students integrate basic and clinical sciences in the context of commonly presented clinical scenarios.

## **MEDS 7607. GI System & Nutrition. 6 Hours.**

Students examine the structure and function of the gastrointestinal (GI) and hepatobiliary systems in both health and disease. Basic tenets of nutrition and the impact of GI dysfunction on nutritional status are discussed. Students evaluate the impact of food and diet, including micro and macronutrients, on health and disease prevention. Topics may include therapeutic diets and nutrition for specific disorders as well as tube feeding, IV alimentation, medical and surgical interventions.

## **MEDS 7608. Endocrine Reproductive & Urinary Systems. 6 Hours.**

Students integrate the core biomedical sciences in the identification, differentiation, diagnosis, and management of the normal and abnormal states of the endocrine, reproductive, and genitourinary systems. Students explore the role of hormones and their impact during pregnancy, organ development, organ function, and on metabolism, including discussions relevant to historical and current medical and surgical interventions for localized and systemic diseases for these systems.

## **MEDS 7609. Lifecycle. 6 Hours.**

Students explore topics throughout the lifespan from pediatrics to geriatrics. Discussion includes normal growth and development as well as illness and disease. Basic science underpinnings are applied to divergent clinical manifestations and care at various stages of the lifecycle.