

# BLOCK DESCRIPTIONS

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## **M-ID 501 FUNDAMENTALS 5 Credit Hours**

This 5-week Block presents an integrated, comprehensive course that covers introductory information needed by all subsequent Blocks within Phase 1 of the curriculum. Material included in the Fundamentals Block includes content in biochemistry and cell biology, medical genetics, embryology, basic histology, general pathology, and basic pharmacologic principles. In addition, students are exposed to foundations of population health, clinical skills, and health systems quality. The block will utilize a combination of lectures, laboratories, team-based learning, case-based small groups, standardized patient encounters, patient-oriented problem-solving sessions, and flipped classroom activities as instructional methods.

Typically Offered: FALL

## **M-ID 513 BLOOD, DEFENSES & INVADERS 6 Credit Hours**

Blood, Defenses and Invaders takes an integrative approach to cover the immune system and pathogens that invade the cellular and humoral defenses. Topics include hematopoiesis, cellular interactions, antibody formation, antigen-antibody reactions, cell-mediated immunity, and the biological effects of immunological reactions. In addition, a comprehensive approach evaluating the pathogenesis, epidemiology, physical diagnosis and treatment of bacterial, viral, fungal and parasite-mediated infectious diseases is covered throughout this 6-week course. Finally, the course elaborates on the synthesis and function of hemoglobin, red blood cell structural components, blood types including Rh types, the pathogenesis of anemia, leukemia, and a basic understanding of blood banking and transfusion medicine. Students also investigate various components of the normal coagulation process including vasculature, platelets, pro-coagulants, and natural anticoagulation.

Typically Offered: FALL

## **M-ID 504 MUSCULOSKELETAL AND INTEGUMENT 6 Credit Hours**

This block focuses on the normal structure and function of the integumentary and musculoskeletal systems, and recognition of the etiology and manifestations of pathologic conditions of these two systems. Students actively apply basic knowledge about the human body through dissection, virtual histology, small group interactions, and dynamic lectures. This course is designed to prepare the student for real-life patient encounters, including enhancement of physical examination skills through mastery of surface anatomy.

Typically Offered: FALL

## **M-ID 505 CIRCULATORY 5 Credit Hours**

The 5-week circulatory block is focused on the fundamental knowledge of cardiac and vascular histology, embryology, anatomy, and physiology, and applies that knowledge toward building a more comprehensive understanding of various cardiovascular diseases such as hypertension, dyslipidemia, atherosclerosis, ischemic heart disease, vasculitis, cardiomyopathies, heart failure, congenital cardiac disorders, valvular heart disease, pericardial diseases, cardiac dysrhythmias, arterial and venous vascular disorders, traumatic and mechanical disorders of the cardiovascular system, and heart disease caused by infectious agents.

Typically Offered: SPRING

## **M-ID 506 RESPIRATORY 4 Credit Hours**

The Respiratory block emphasizes the anatomy, physiology, biochemistry, pharmacology, genetics, histopathology, and imaging of the respiratory system. This block examines the normal state and the variety of diseases that afflict the respiratory system. Students obtain knowledge of the structure and function of the entire respiratory system with comparative analysis of respiratory mechanics, gas exchange, and oxygen, as well as carbon dioxide homeostasis under normal and diseased conditions. The differentiation of important diseases is studied, including those affecting the lung parenchyma, airways, blood vessels, pleura and chest wall,