

MEDI 335: Current Topics in Omics Research for Metabolic Syndrome, IBD, and Gastrointestinal Cancers

This course provides a comprehensive survey of the pathophysiology of digestive and metabolic diseases and disorders, focusing on the most common diseases with public health implications. Diseases include, but are not limited to inflammatory bowel diseases (IBDs), diabetes and metabolic syndrome, common microbial infections, liver disease, irritable bowel syndrome (IBS), and GI cancers. Diagnoses, symptomology, and treatment strategies will be presented by guest lecturers with clinical and research expertise in specific disease pathologies. Within the context of these clinical topics on GI and metabolic disease, the underlying physiological, molecular, and cellular mechanisms will be reviewed and discussed along with current research. The course will be comprised of a combination of lectures and discussions, with reading assignments, an exam, a writing assignment, and a group presentation assignment.

Learning Objectives

- Identify the most common gastrointestinal/metabolic diseases
- Explain diagnostic criteria and symptoms associated with each disease/disorder; describe treatment strategies for each disorder
- Describe and discuss the underlying physiological, cellular, and molecular mechanisms associated with each disease
- Demonstrate an understanding of the relationship between pathology and the underlying physiological, molecular, and cellular mechanisms for each disease
- Analyze and critique research publications and data investigating the pathophysiological mechanisms for a selected disease

Credits: 1

Class Type: Graduate Course

Prerequisites:

Undergraduate coursework in cell biology, genetics, physiology, or college degree in biomedical sciences.

Program: Biology, Genetics, and Medicine