

CORE 6510

Molecular Mechanisms of Human Disease

Faculty: Debabrata Mukhopadhyay, Ph.D. and Anthony J. Windebank, M.D.

Credits: 3

Quarters: Spring

Prerequisites: None

This course is limited to students with no medical degree.

Overview

This course is designed to introduce students to the basic organization, histology, and function of major organ systems and provide an appreciation for patho-physiological conditions leading to disease and therapeutic interventions. Lecture topics will focus on five different systems: renal, immunologic, cardiovascular, gastroenteric, and endocrine with emphasis given to the importance of each system's structure and function. Students will have the opportunity to review case studies including imaging, pathology and treatments.

Objectives

The student will:

- Identify the basic organization, histology, and function of major organ systems.
- Describe the patho-physiological conditions leading to disease.
- Discuss the translational relevance of therapeutic interventions.
- Describe how understanding the cellular and molecular mechanisms of disease lead to development of therapeutic targets

Evaluation

Attendance and participation are a key component of this course. Final grades will be determined by quizzes on each of the five organ systems addressed, a paper presentation, and a comprehensive final exam.

Students will be expected to spend approximately six to eight hours per week on this 3-credit course.

For specific dates and times this course is provided, please see the [quarterly detailed course schedule](#).