

MEDI 311: Principles of Endocrinology

The endocrine system exerts control over the internal environment of the body through physiological detection, signaling, and feedback. It interacts with the systems of the body (digestive, nervous, renal, reproductive, cardiovascular, respiratory, skeletal, and metabolic) to provide a homeostatic environment. It adapts to stress, and it is essential for normal growth and development. The objective of this course is to provide students with an overview of endocrine physiology and pathophysiology. The course will describe how the endocrine system is integrated with the other physiological systems, along with the biochemistry of hormone synthesis and actions. Problem solving with endocrine disorders will form a basis for understanding the principles of hormone function. Students seeking basic knowledge on the principles of endocrinology to apply in their research or clinical training will find this course useful.

Learning Objectives

- Identify and describe the key hormones and their roles in metabolism, digestion, reproduction, and growth
- Understand regulation of hormonal control, including the principles of feedback control and hormone-receptor interactions
- Problem solve the biological basis of endocrine disorders and treatments
- Develop the scientific background needed to understand the literature about endocrine function and pathology

Credits: 2

Class Type: Graduate Course

Prerequisites:

general biology and chemistry required; prior coursework in introductory biochemistry and human physiology recommended.

Program: Biology, Genetics, and Medicine