

Course objective	Geisel competency	Course Objective
1	1a	To explain the roles of the endocrine system in maintaining homeostasis, integrating growth and development, responding to environmental insults and promoting successful reproduction.
2	1a	To discuss the definition of a hormone in terms of its general properties.
3	1a	To differentiate among endocrine, paracrine and autocrine systems.
4	1a	To describe the different classes and chemical structures of hormones.
5	1a	To identify the glands, organs, tissues and cells that synthesize and secrete hormones, hormone precursors and associated compounds.
6	1a	To describe the synthesis and modes of secretion of hormones.
7	1a	To explain how the secretion of hormones is regulated, including the principles of negative and positive feedback mechanisms.
8	1a	To explain the importance of patterns of hormone secretion such as pulsatile, diurnal and cyclical.
9	1a	To explain how hormones are transported in the blood and the consequences of the reversible binding of many hormones by plasma proteins.
10	1a	To explain the basis of hormone assays and assessment of biological activity.
11	1a	To describe how hormones are metabolized in blood and tissues and the importance of hormone activation and degradation.
12	1a	To discuss the clearance and excretion of hormones and their metabolic derivatives.
13	1a	To define and discuss the physiological actions of hormones relating them whenever possible to human disorders.
14	1a	To explain the consequences of under- and overproduction of hormones.
15	1a	To describe and discuss the roles of hormone receptors in hormone action including their location, type and signaling pathways .
16	1a	To compare and contrast the different mechanisms of action of hormones: i.e. those exerted by modulation of gene expression; those achieved by changes in protein activity.
17	1a	To identify and discuss the integration of the endocrine system in general with focus on specific interactions.
18	1a,1c	To apply endocrinological principles to determine the pathophysiological basis and consequences of specific endocrine disorders.
19	3f,3h	To communicate effectively and collegially with peers and faculty in conferences and to evaluate, assess, discuss and/or present relevant scientific literature.
20	1a	To discuss the physiological distribution and the control of turnover and utilization of critically important elements and substances such as calcium, phosphorus and energy-rich compounds.
21	1a	To discuss the molecular, biochemical and physiological effects of hormone on cells and tissues.
22	5b	Read critically, understand, evaluate, and assess scientific literature about endocrine function and pathology.