UZO-535 Molecular and Clinical Endocrinology-I Cr. (2)

Course Contents:

General Mechanisms in Molecular Endocrinology: Subcellular structure of cells secreting protein hormones; Process of hormone secretion; Transcription factors in developmental organisms in endocrine systems. Recombinant DNA technology and molecular genetics in diagnosis and treatment of endocrine diseases. Measurements of hormones: Radioimmunoassay, immunoradiometeric, immunochemiluminometeric and radioreceptor assays and their statistical procedures. Mechanisms of Action of Hormones: Hormone systems and intracellular communication; Hormones acting at cell surface: Properties of hormone receptor interaction, structure, biosynthesis and turnover of membrane receptors; Hormones acting in transcription regulation: Biochemistry and molecular interaction of steroid receptor, gene expression, messenger RNA stability and metabolism in hormone action.

Functional Pathology in Endocrine Glands: Neuroendocrine disorder of gonadotrophin, prolactin, growth hormone, cortictrophin regulation; **Pituitary Disorders:** Prolactinomas, acromegaly, Cushing's syndrome. Diabetes inspidus, hypo- and hyper-tonic syndromes; **Thyroid:** Diseases of excess and deficient hormones and autoimmunity.

Teaching-Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos /films will be shown on occasion.

Assignments

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

Assessments and Examination

Sessional Work:	25 marks
Midterm Exam:	35 marks
Final term Exam:	40 marks

Books Recommended:

1. Greenspan, F.S. and Strewler, G.J., 2011. Basic and clinical endocrinology, 7th Ed.. Prentice Hall International Inc., London.
2. Wilson, J.D., Foster, D.W., Kronenberg, H.M. and Larsen, P.R., 2020. Williams textbook of endocrinology, 9th Ed.. W.D. Saunders Company, Philadelphia.
3. DeGroot, L.J., Jameson, J.L. et al., 2006. Endocrinology, Vol. I, II and III, 4thEd.. W.B. Saunders,

Philadelphia.
4. Giffin, J.E. and Ojeda, S.R., 2004. 5thEd. Textbook of Endocrine Physiology. Oxford University Press, Oxford.
5. Neal, J.M., 2000. Basic Endocrinology: An interactive approach. Blackwell Science Inc., London.

UZO-536 Molecular and Clinical Endocrinology-I(Lab.) Cr. (1)

Course Contents:

Studies on recognition and response of receptors; Studies of disorders of pituitary by observing anatomical and histological features; Studies of thyroid status in deficient and excess hormone functions. Studies of type 1 and type 2 diabetes mellitus: Epidemiology of the types in population, studies of management of the type 2; Model studies of disorders of Ovarian and Testicular disorders; Model studies of obesity and aneroxia; Studies of hormonal status in puberty and aging.

Teaching-Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos /films will be shown on occasion.

Assignments

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

Assessments and Examination

Sessional Work:	25 marks
Midterm Exam:	35 marks
Final term Exam:	40 marks