2021-2022

**[ ב01 25.4017] – [Chapters in Human Endocrinology]
Semester [B]**

**Time:** [Monday] [10-12], Room [2002]

**Instructor:** [Professor] [Fuad] [Fares], **Email:** [ffares@univ.haifa.ac.il]

**Office Hours:** [Wednesday] [10-12], Room [74], [04-8288781]

**Course Level:** (BA+MA)**:**

**Course Type & Format:** [Lecture / Seminar]

**Number of Hours/Credits:** 2

**Prerequisites:** Cell Biology, Physiology

**Course Overview (Short Abstract):**

Presentation of human endocrine system; Endocrine glands, hormones and their mechanism of action in the target organs. Structure and function of hormones. hypothalamus-pituitary and re-feeding mechanisms. Sex hormones and their role in fertility. Thyroid gland hormones. Adrenal gland hormones. diseases related to deficiencies in endocrine system function.

**Learning Outcomes (What are the skills, abilities, or major concepts a student is expected to acquire in this course?) – At the end of the course students will be able to:**

1. Understand how hormones influence the body's development and function
2. Know the mechanisms of hormones action in the target organs
3. Recognize the structure-function of glycoprotein and steroid hormones
4. Understand the molecular mechanisms of hormones involved in human diseases
5. Read and discuss a manuscript in the field of human Endocrinology

**Assessment (Assessment Method and Grade Composition):**

Attendance, – [20]%

Class presentations – [50]%

[Report] – [30]%

**Course/Module Content:**

 **Week-by-Week Content and Assignements:**

|  |  |  |
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| **Week #** | **Topic** | **Assignment**  |
| 1 | Introduction to the Endocrine System | Powerpoint presentation |
| 2 | Structure-function of glycoprotein hormones | Powerpoint presentation |
| 2 | Gonadotropins and their role in reproduction  | Powerpoint presentation |
| 3 | Structure and function of steroid hormones | Powerpoint presentation |
| 4 | Steroidogenesis ; synthesis of steroid hormones in the endocrine glands | Powerpoint presentation |
| 5 | Hypothalamus-pituitary-thyroid axes  | Powerpoint presentation |
| 6 | Hypothalamus-pituitary-adrenal axes | Powerpoint presentation |
| 7 | Mechanism of steroid hormone action | Powerpoint presentation |
| 8 | Endocrinology of breast and ovarian cancer | Powerpoint presentation |
| 9 | The role of placental hormones in fetal growth and development | Powerpoint presentation |
| 10 | Endocrinology and obesity | Powerpoint presentation |
| 11 | Diabetis type I and type II | Powerpoint presentation |
| 12 | Pineal gland and its endocrine role | Powerpoint presentation |
| 13 | Physiological actions of Prolactin and its receptor | Powerpoint presentation |
| 14 | Modulation of growth hormone action | Powerpoint presentation |

**Website:** [[Moodel, university of Haifa]](http://online.haifa.ac.il)

**Reading List:**

1. Williams Textbook of Endocrinology, by: Shlomo Melmed, Ronald Koenig,

 Clifford Rosen, Richard Auchus, Allison Goldfine. 14th Edition, 2020.

1. Selected scientific manuscripts.