**T.C.**

**ATILIM UNIVERSITY FACULTY OF MEDICINE**

**EDUCATION IN 2023-2024 ACADEMIC YEAR**

**ACADEMIC CALENDAR**

**Laboratory Lessons:**

1. Histology of pituitary, pineal, tyroid, parathyroid and adrenal gland (1 hour, Dr. Aykanat, Dr. Süzer)
2. Thyroid and parathyroid (1 hour, Dr. Yurdakan Özyardımcı)
3. Medical Skills: Blood glucose determination (1 hour, Dr. Dursun)

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| **COMMITTEE NAME** | **STARTING DATE** | **COMPLETION DATE** |
| **MED 301** | 18.09.2023 | 27.10.2023 |
| **MED 303** | 30.10.2023 | 08.12.2023 |
| **MED 305** | 11.12.2023 | 05.01.2024 |

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| **COMMITTEE NAME** |
|  | **MED 301** | **MED 302** | **MED 303** | **MED 304** | **MED 305** | **MED 306** |
| **COMMITTEE EXAM DATE** |  |  |  |  | 04.01.2024 |  |

**MED305 ENDOCRINE SYSTEM**

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| **PHASE III COORDINATOR** | Prof. Dr. Yekbun ADIGÜZEL |
| **CHAIR OF THE MED 305 COMMITTEE** | Prof. Dr. Nedret Kılıç |
| **MED 305 COMMITTEE DATE RANGE** | 11.12.2023 – 05.01.2024 |
| **ACADEMIC STAFF** **AT THE MED 305 COMMITTEE** | Prof. Dr. Nedret KILIÇ- Medical BiochemistryProf. Dr. Necla TÜLEK- Medical MicrobiologyProf. Dr. Gamze Yurdakan Özyardımcı- PathologyAssoc. Prof. Dr. Hale ÖKTEM- Anatomy Assoc. Prof. Dr. Nuriye Ezgi BEKTUR AYKANAT- Histology and EmbryologyAssoc. Prof. Dr. Muhammed Erkam Sencar-EndocrinologyAsst. Prof. Dr. Ayşegül SÜZER-Histology and EmbryologyAsst. Prof. Dr. Gökşen Öz- Medical PharmacologyAsst. Prof. Dr. Ali Doğan DURSUN- PhysiologyAsst. Prof. Dr. Recep Ali BROHI- AnatomyAsst. Prof. Dr. Canan ÇİÇEK DEMİR-EndocrinologyInst. Dr. İbrahim Sinan BUĞUR-PediatricsInst. Dr. Evren TUNCER- Medical Pharmacology |
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**ACADEMIC STAFF** | **THEORETICAL LECTURE TIME** | **PRACTICAL LECTURE TIME** | **INTERACTIVE EDUCATION****TIME** | **TOTAL TIME** |
| **Anatomy** | 4 | - | - | 4 |
| **Histology and Embryology** | 4 | 1 | - | 6 |
| **Medical Microbiology** | 1 | - | - | 1 |
| **Medical Pharmacology** | 9 | - | 1 (Flipped Class) | 10 |
| **Medical Biochemistry** | 12 | - | - | 12 |
| **Medical Pathology** | 9 | 1 | - | 10 |
| **Physiology** | 9 | - | - | 9 |
| **Endocrinology** | 10 | - | - | 10 |
| **Pediatrics** | 3 | - | - | 3 |
| **Problem Based Learning**  | - | - | 6 | 6 |
| **TOTAL** | 61 | 2 | 7 | 70 |

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| **Advisor Visit** | - |

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| **CONTENT OF THE MED 305 COMMITTEE**  |
| Anatomy, histology and development of the thyroid, parathyroid and suprarenal glands; Clinical anatomy; Thyroid hormones and their effect mechanisms, biochemistry of thyroid gland diseases; Congenital & functional abnormalities of the thyroid; Neoplasms of thyroid gland; Classification of hormones and their effecting mechanisms; Parathormone, vitamin D, calcitonin, calcium-phosphate homeostasis; Functional disorders of the parathyroid gland, Neoplasms of the parathyroid Hormones of adrenal cortex and their effects; Hormones of adrenal medulla and their effects; Biochemistry of diseases of adrenal gland; Physiology of adrenal gland; Disorders & neoplasms of the adrenal cortex and medulla; Multiple endocrine neoplasms; Biochemistry of gonadal hormone pathologies; Oral contraseptives; Endocrine functions of the pancreas; Regulation of blood glucose level; Control of food intake; Metabolism; Fat cells; Effect mechanism of hormones; Biochemistry of diabetes and obesity; Pharmacology of hormones; Drugs used in hypocalcemia and hypercalcemia; Insulin and oral anti diabetics; Glucocorticoids; ACTH and mineralocorticoids; Pathologies of hypophysis; Growth physiology; Endocrine pancreas: Diabetus mellitus, Endocrine pancreas: Neuroendocrine neoplasms, Amiloidosis; Biostatistical sampling and regression studies |
| **MED 305 COMMITTEE AIM** |
| To give information about the development, structure and functions of endocrine system, the etiopathogenesis, pathology, symptoms and findings of disorders related to this system and its prevention, diagnosis and the treatment principles; to provide basic medical skills for endocrine system |
| **MED 305 COMMITTEE LEARNING OBJECTIVES** |
| 1. Describes the anatomical structures and their relation in endocrine system and recognizes them in cadavers and models.
2. Describes the mechanisms of hormones belonging to endocrine system, defines growth physiology and metabolism related factors.
3. Defines the structural properties of hormones and hormone receptors, biosynthesis and action mechanisms synthesized in different endocrine organs.
4. Defines the structural properties and functions of hypothalamic, pituitary, thyroid gland, adrenal cortex and medulla, adipose tissue and pancreas hormones.
5. Explains biochemical regulation of blood glucose and insulin.
6. Explains the key features and metabolic patterns of diabetes mellitus and hypoglycemia.
7. Describes the fine structure and development of endocrine organs.
8. Describes the relationship between the endocrine and nervous system, explains the physiological effects of hormones.
9. Defines the hormones effective on growth.
10. Defines the regulation of blood glucose level.
11. Explains the secretions of endocrine pancreas.
12. Describes the hormones of adrenal gland and their systemic effects.
13. Defines the hormones important in calcium phosphate metabolism and their effecting mechanisms.
14. Describes the effects of thyroid hormones on growth and metabolism.
15. Explains the hormones secreted from adipose tissue and their effects.
16. Recognizes the endocrine glands and the diseases/syndromes occurring in these regions.
17. Defines and distinguishes the pharmacology and pharmacokinetic properties of hormones.
18. Describes the developmental disorders of diabetes and diseases occurred in children.
19. Satetes the association of diabetes with infectious diseases, and explain the mechanism.
20. Defines thyroid developmental disorders and functional diseases.
21. Defines thyroid tumors and explains their prognostic factors.
22. Defines parathyroid dysfunctions and tumors. Explain the effects of parathyroid dysfunctions on other endocrine organs and non-endocrine organ systems.
23. Defines the development mechanism and physiopathology of diabetes, describes the effects of diabetes on tissues and organs.
24. Defines tumoral and nontumoral diseases developing in the pituitary.
25. Defines functional disorders of adrenal cortex and medulla and explains the characteristics of tumors.
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| **RECOMMENDED BOOKS**Atlas of human anatomy / |c Frank H. Netter, MD; consulting editors Carlos A. Machado; lead editor John T. Hansen, Brion Benninger, Jennifer Brueckner-Collins, Todd M. Hoagland, R. Shane Tubbs,2018Gray's atlas of anatomy / Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell, Richard M. Tibbitts, Paul E. Richardson,2020.Harper's illustrated biochemistry / Victor W. Rodwell, David A. Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil,2018.Textbook of biochemistry : with clinical correlations / edited by Thomas M. Devlin,2016Rang and Dale's pharmacology / H.P. Rang, J.M. Ritter, R.J. Flower, G. HendersoN,2018.Histology : a text and atlas : A Text and Atlas: With Correlated Cell and Molecular Biology 8th Edition, 2019/ Michael H. Ross, PhD (deceased), Wojciech Pawlina, MD.Guyton and Hall textbook of medical physiology / John E. Hall, PhD, Arthur C. Guyton.Robbins and Cotran pathologic basis of disease / [edited by] Vinay Kumar, Abul K. Abbas, Jon C. Aster, 2018.Understanding Pathophysiology First canadian Ed. 2018 by Elsevier Inc. Sue Huether; Kelly PowerKean; Mohamed ElHussein.Pathophysiology of Diseases: An introduction in clinical medicine 8 ed. 2019 by McGraw-Hill Education; Lange Inc. Gary D. Hammer, MD, PhD Stephen J. McPhee, MD.Pathophysiology: The biologic basis for diseases in adults and children 8th ed. 2019 by Elsevier Inc. Kathryn L. McCance, MS, PhD Sue E. Huether, MS, PhD Valentına L. Brashers, Neal S. Rote, PhD.Rapid Review Pathology, Fifth Edition 2019 by Elsevier, Inc. Edward F. Goljan, MDWilliams Textbook of Endocrinology 13th Edition, Shlomo Melmed MBChB MACP, Kenneth S. Polonsky MD, P. Reed Larsen MD FRCP, Henry M. Kronenberg MD, Elsevier, 2015. Greenspan's Basic and Clinical Endocrinology, 10th Edition, David G. Gardner,‎ Dolores M. Shoback, McGraw Hill Medical Books, 2018.Rang & Dale's Pharmacology 9th Edition, James M. Ritter DPhil FRCP FBPharmacolS FMedSci, Rod J. Flower PhD DSc FBPharmacolS FMedSci FRS, Graeme Henderson BSc PhD FBPharmacolS FSB, Elsevier, 2019. Basic and Clinical Pharmacology 15th Edition, Bertram Katzung (Author), Anthony Trevor (Author), McGraw-Hill Education / Medical, 2020. The Developing Human: Clinically Oriented Embryology, 11th Edition by Keith L. Moore BA FIAC FRSM FAAA, T. V. N. Persaud FRCPath (Lond.) FAAA, Mark G. Torchia MSc PhD, Saunders, 2019. Langman's Medical Embryology 13th Edition by Ph.D. Sadler, T. W. (Author), Lippincott Williams & Wilkins, 2014. Junqueira's Basic Histology: Text and Atlas, Fifteenth Edition 15th Edition by Anthony Mescher (Author), McGraw-Hill Education / Medical, 2018.Guyton and Hall Textbook of Medical Physiology (Guyton Physiology), 14th Edition by John E. Hall PhD (Author), Michael E. Hall MD MSc. (Author), Elsevier, 2020.Physiology, 6th Edition by Linda S. Costanzo PhD, Elsevier, 2017.Clinical Pathophysiology Made Ridiculously Simple™ Aarob Berkowitz 2007 By Medmaster Inc.Rapid Review Pathology, Fifth Edition, 2019 By Elsevier, Inc. EDWARD F. GOLJAN, MDPathophysiology The Biologic Basis For Disease In Adults And Children, Kathryn L. Mccance, Sue E. Huether, Valentına L. Brashers, Neal S. Rote 8th Ed. 2017.Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 9th Edition, Bennett, JE, Dolin R, Blaser MJ. Elsevier, 2019 |
| **MED 305 COMMITTEE EXAM WEEK** |
| **DATE** | **EXAM NAME** | **EXAM HOUR** |
| 04.01.2024 | MED 305 Committee Exam | 09:30-12:20 |
| **Teaching Methods and Techniques** |

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| [x]  Lecture |  [ ]  Case based learning | [ ]  Case discussion | [ ]  Student presentation |
| [ ]  Role playing |  [x]  Problem based learning | [ ]  Project | [ ]  Homework |
| [x]  Laboratory practice |  [ ]  Team based learning | [x]  Self Learning | [ ]  Student Panel |
| [x]  Medical Skill |  [x]  Flipped Class |  |  |

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| **Evaluation Method** | Theoretical Exam (85%), Problem Based Learning (10%), Flipped Class (5%) |
| **Lesson Language** | English |