**T.C.**

**ATILIM UNIVERSITY FACULTY OF MEDICINE**

**EDUCATION IN 2022-2023 ACADEMIC YEAR**

**ACADEMIC CALENDAR**

**Laboratory Lessons:**

1. The kidneys, ureters, urinary bladder & urethra (1-hour, Dr. Öktem & Dr. Brohi)
2. Histology of the urinary system (1-hour, Dr. Aykanat)
3. Urine sampling, Urine culture (1-hour, Dr. Tülek)
4. The pelvis and perineum, the male genital organs (1-hour, Dr. Öktem & Dr. Brohi)
5. Urinary system pathology (1-hour, Dr. Yurdakan)
6. Histology of male genital system (1-hour, Dr. Aykanat & Dr. Süzer)
7. The female genital organs (1-hour, Dr. Öktem & Dr. Brohi)
8. Histology of female genital system (1-hour, Dr. Aykanat & Dr. Süzer)
9. Biochemistry of Urine (1-hour, Dr. Kılıç)
10. Reproductive system diseases male & female, breast (1-hour, Dr. Yurdakan)

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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** |
| **ANATOMY PRACTICAL EXAM DATE** |  |  | 7.12.2023 |  |  |  |
| **HISTOLOGY AND EMBRYOLOGY PRACTICAL EXAM DATE** |  |  |  |  |  |  |
| **MEDICAL BIOLOGY PRACTICAL EXAM DATE** |  |  |  |  |  |  |
| **COMMITTEE EXAM DATE** |  |  | 7.12.2023 |  |  |  |

**MED303 UROGENITAL SYSTEM**

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| **PHASE III COORDINATOR** |  | Prof. Dr. Yekbun ADIGÜZEL |
| **CHAIR OF THE MED 303 COMMITTEE** |  | Assoc. Prof. Dr. Ezgi AYKANAT |
| **MED 303 COMMITTEE DATE RANGE** |  | 30.10.2023- 8.12.2023 |
| **ACADEMIC STAFF** **AT THE MED 303 COMMITTEE** |  | Prof. Dr. Nedret KILIÇ- Medical BiochemistryProf. Dr. Necla TÜLEK- Medical MicrobiologyProf. Dr. Gamze YURDAKAN- Medical PathologyProf. Dr. Ömer Nicat Çobanoğlu- Obstetrics and GynecologyProf. Dr. Turgut VAR- Obstetrics and GynecologyProf. Dr. Gürol CANTÜRK-Forensic MedicineProf. Dr. Özgür ÇAKMAK- UrologyProf. Dr. Yekbun ADIGÜZEL-Medical BiologyAssoc. Prof. Dr. Mehmet Emin DEMİR- NephrologyAssoc. Prof. Dr. Hale ÖKTEM- Anatomy Assoc. Prof. Dr Nuriye Ezgi BEKTUR AYKANAT- Histology and EmbryologyAsst. Prof. Dr. Gökşen ÖZ- Medical PharmacologyAsst. Prof. Dr. Merter GÜLEN- General SurgeryAsst. Prof. Dr. Safinur KESKİN- RadiologyAsst. Prof. Dr. Recep Ali BROHİ-AnatomyAsst. Prof. Dr. Ali Doğan DURSUN- PhysiologyAsst. Prof. Dr. İbrahim Sinan BUĞUR- Pediatrics |
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**ACADEMIC STAFF** | **THEORETICAL LECTURE TIME** | **PRACTICAL LECTURE TIME** | **CLINICAL SKILL** | **INTERACTIVE EDUCATION****TIME** | **TOTAL TIME** |
| **Medical Biology** | 2 | - |  | - | 2 |
| **Anatomy** | 12 | 3 | 1 | - | 16 |
| **Histology and Embryology** | 11 | 3 |  | - | 14 |
| **Medical Microbiology** | 15 | 1 |  | -  | 16 |
| **Medical Pharmacology** | 7 | - |  | - | 7 |
| **Medical Biochemistry** | 7 | 1 |  | - | 8 |
| **Medical Pathology** | 17 | 2 |  | 2 | 21 |
| **Physiology** | 9 | - |  | - | 9 |
| **Pediatry** | 3 | - |  | - | 3 |
| **Urology** | 2 | - |  | - | 2 |
| **Nephrology** | 4 | - |  | - | 4 |
| **Radiology** | 3 | - |  | - | 3 |
| **Gynecology and Obstetrics** | 5 | - |  | - | 5 |
| **Forensic Medicine** | 2 | - |  | - | 2 |
| **General Surgery** | 3 |  |  |  | 3 |
| **TOTAL** | 102 | 10 | 1 | 2 | 115 |

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| **Advisor Visit** | - |

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| **CONTENT OF THE MED 303 COMMITTEE**  |
| Location of urinary system organs; Neighborhood of kidneys; Calyx system and renal pelvis; Ureter; Vessels and innervation of kidney and ureter; Bladder; Male and female urethra; Development of the urinary system; The structure of the glomerulus; Structure of kidney tubules and collection tubules; Juxtaglomerular apparatus histology; Ureter, bladder and urethra histology; Renal functions and RAAS system; Glomerular filtration; Tubular reabsorption and secretion mechanisms; Water balance; Clearance; Hydrogen balance; Regulation of acid-base balance; Body fluids, osmotic pressure and edema; Electrolyte balance; Mycoplasma and Ureaplasma; Nisseriae; Treponema pallidum; Papillomaviruses; Polyomaviruses; Human Herpesviruses; Glomerular diseases of the kidney; Interstitial diseases of the kidney; Approach to acute renal injury; Approach to chronic kidney disease; Fluid-electrolyte balance disorders; Acid-base balance disorders; Diuretics; Bladder tumors and non-tumor diseases; Prostate tumors and non-tumor diseases; Tumors of the kidney and excretory tract; Urinary system Stones; Tumor and diseases in testis and appendages; Female genital tumors and diseases, Breast tumors and diseases, Pregnancy-related diseases and tumors |
| **MED 303 COMMITTEE AIM** |
| To gain the knowledge about the development, structure and functions of the urinary system.To gain the knowledge about the development, structure and functions of the reproductive system.To gain the knowledge about the etiopathogenesis, pathology, symptoms and signs, prevention, diagnosis and principles of treatment of the disorders related to these systems. |
| **MED 303 COMMITTEE LEARNING OBJECTIVES** |
| 1) Describes the embryonic development of the excretory system organs. 2) Describes the microscopic structure of the kidney and nephron. 3) Lists the functions of the kidney. 4) Explains the mechanisms of the glomerular filtration, tubular reabsorption and tubular secretion process and its control. 5) Describes the medullary osmotic gradient mechanisms. 6) Describes the dilution and concentration mechanisms of the urine. 7) Describes the concept and measurement of renal clearance. 8) Lists the factors affecting body water content, and defines the body fluid compartments and their electrolyte composition. 9) Explains how water balance is regulated. 10) Describes the concept of osmolality and its role in the regulation of water balance. 11) Describes the normal physical and chemical properties of urine. 12) Describes how the sodium and potassium balance is regulated. 13) Describes the regulation of acid-base balance. 14) Interprets the results of arterial blood gas analysis, and distinguishes the acidosis and alkalosis from respiratory or metabolic causes. 15) Describes the location, structure, and function of the ureters. 16) Describes the location, structure, and function of the urinary bladder. 17) Defines micturition and explains its control. 18) Lists the infectious agents of excretory system, and describe their virulence, microbiological and epidemiological properties. 19) Explains the mechanisms of the diseases caused by the infectious agents and the methods of protection from these diseases. 20) Describes the sample management for microbiological diagnosis and microbiological diagnostic methods of infection agents, and interprets the results. 21) Describes the etiopathogenesis, pathology, symptoms / signs and diagnostic methods of glomerular and tubulointerstitiel diseases of kidney. 22) Describes the etiopathogenesis, pathology, symptoms / signs, complications and diagnostic methods of acute renal injury. 23) Classifies the chronic kidney disease, and describes its etiopathogenesis, progression mechanisms, symptoms / signs, complications and diagnostic methods. 24) Describes the structure and function of the testes, penis and accessory reproductive organs of the male.25) Defines meiosis, and mitosis. 26) Defines spermatogenesis. 27) Discusses hormonal regulation of testicular function and the physiological effects of testosterone on male reproductive anatomy. 28) Describes the structure, and function of each of the organs of the female reproductive duct system. 29) Describes the anatomy of the female external genitalia. 30) Describes the regulation of the ovarian and uterine cycles. 31) Discusses the physiological effects of estrogens and progesterone. 32) Defines fertilization , embryogenesis, and implantation. 33) Describes the formation of placenta and its appendages, and lists the functions of placenta. 34) Defines organogenesis and indicates the important roles of the three primary germ layers in this process. 35) Discusses the determination of genetic sex and prenatal development of male and female structures. 36) Describes the major events of fetal development. 37) Describes anatomic and functional during pregnancy. 38) Explains the mechanism of labor, their stages and how normal labor is initiated. 39) Describes the puerperium. 40) Explains the lactogenesis and galactopoiesis processes and the roles of prolactin, oxytocin, insulin, glucocorticoids in these processes. 41) Describes in vitro fertilization and ART techniques. 42) Explains the contraceptive methods. 43) Lists the sexually transmitted and other genital infectious agents, and describes their virulence, microbiological and epidemiological characteristics. 44) Lists the Intrauterine infectious agents, and describes their virulence, microbiological and epidemiological properties are described. 45) Describes the menstrual cycle disorders.46) Define etiologic factors, physiopathologic mechanisms, morphologic types of diseases of the testis & epidydimis. Identify testis neoplasms & classify morphologic types.Describe malformations, inflammatory & neoplastic diseases of the penis. Associate morphological changes seen in these conditions with signs and symptoms.47) Explain epidemiology and pathophysiology of inflammatory diseases of the prostate. Depict physiopathologic mechanisms involved in benign prostate hypertrophy, explain symptoms & signs. 48) Define etiologic factors, physiopathologic mechanisms, morphologic types of prostate neoplasms.49) Explain nonneoplastic epithelial disorders of the vulva. Connect vulvar intraepithelial neoplasia to vulvar carcinogenesis, explain the importance of neoplastic diseases, define histomorphological subtypes and prognostic factors of vulvar neoplasms.50) Define nonneoplastic disorders of the uterine cervix. Classify & describe etiologic factors, clinical manifestation, histomorphologic findings of uterine cervical neoplasms.51) Describe etiologic factors, and pathophysiologic mechanisms, histomorphologic types of nonneoplastic uterine corpus diseases.52) Define etiologic factors, physiopathologic mechanisms, morphologic types of uterine neoplasms. Analyze clinical signs & symptoms, treatment options.53) Explain physiopathologic mechanisms and morphologic changes in nonneoplastic diseases of the ovaries & tubes.Classify neoplasms of the ovaries & tubes. Describe their etiologic factors, pathophysiologic mechanisms and clinical manifestations.54) Explain & classify inflammatory diseases & benign masses of the breast, explain etiologic factors, signs and symptoms of these diseases.55) Delineate etiologic factors, morphologic presentation and clinical manifestations of premalignant-malignant lesions of the breast. |
| **RECOMMENDED BOOKS**1. Basic & Clinical Pharmacology (15th Edition); Bertram G. Katzung,‎ Anthony J. Trevor; McGraw-Hill, 2020.
2. Katzung & Trevor’s Pharmacology Examination and Board Review (13th Edition); Bertram Katzung, Marieke Kruidering-Hall, Rupa Lalchandani Tuan, Todd W. Vanderah, Anthony Trevor; McGraw-Hill, 2021.
3. Goldman-Cecil Medicine (26th Edition); Lee Goldman, Andrew I. Schafer; Elsevier, New York, 2021.
4. Gray’s Anatomy for Students (3rd Edition); Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell; Churchill Livingston Elsevier, Philadelphia, 2015.
5. Guyton and Hall Textbook of Medical Physiology (13th Edition); John E. Hall; Elsevier, Philadelphia, 2016.
6. Harper’s Illustrated Biochemistry (30th Edition); Victor W. Rodwell, David Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil; McGraw-Hill, 2015.
7. Histology and Cell Biology: An Introduction to Pathology (4th Edition); Abraham L. Kierszenbaum, Laura L. Tres; Elsevier Saunders, Philadelphia, 2015.
8. Medical Microbiology (9th Edition); Patrick Murray, Ken Rosenthal, Michael Pfaller; Elsevier Saunders, Philadelphia, 2020.
9. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. John Bennett Raphael Dolin Martin J. Blaser. 9 th edition., 2019
10. Jawetz, Melnick, & Adelberg's Medical Microbiology, 28e, McGraw-Hill Education, 2019
11. Robbins Basic Pathology (10th Edition); Vinay Kumar, Abul K. Abbas, Jon C. Aster; Elsevier Saunders, Philadelphia, 2018.
12. Understanding Pathophysiology, first Canadian edition 2018 Elsevier Canada, by Sue E. Huether and Kathryn L. McCance
13. Smith and Tanagho's General Urology (19th Edition); Jack W. McAninch,‎ Tom F. Lue; McGraw-Hill, New York, 2020.
14. The Developing Human: Clinically Oriented Embryology (10th Edition); Keith L. Moore, T. V. N. Persaud, Mark G. Torchia; Elsevier, Philadelphia, 2015.
15. Berek & Novak's Gynecology, 16th Edition, Jonathan S Berek MD, MMS, LWW, 2019.
16. Speroff's Clinical Gynecologic Endocrinology and Infertility 9th Edition, Hugh S Taylor MD, Lubna Pal MD MBBS MRCOG MS, Emre Sell MD, LWW, 2019.
17. Williams Obstetrics, 25th Edition, F. Gary Cunningham, Kenneth Levenoz, Steven Bloom, Catherine Spong, Jodi Dashe, Barbara Hoffman, Brian Casey, McGraw-Hill Education / Medical; 25th edition, 2018.
18. Harrison's Principles of Internal Medicine, Twentieth Edition (Vol.1 & Vol.2), J. Larry Jameson, Anthony Fauci, Dennis Kasper, Stephen Hauser, Dan Longo, Joseph Loscalzo, McGraw-Hill Education / Medical, 2018.
19. Symptom to Diagnosis An Evidence Based Guide, Fourth Edition, Scott Stern, Adam Cifu, Diane Altkorn, McGraw-Hill Education / Medical, 2019.2018.
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| **MED 303 COMMITTEE EXAM WEEK** |
| **DATE** | **EXAM NAME** | **EXAM HOUR** |
| 07.12.2022 | MED 303 Committee Exam | 09:30-13:20 |
| 07.12.2023 | MED 303 Practical Exam | 13:30-16:20 |
| 08.12.2023 | MED 303 Medical Skills Exam | 09:30-13:20 |
| **Teaching Methods and Techniques** |

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

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| **Evaluation Method** | Theoretical Exam (90%), Practical Examination (5%: Anatomy), Medical Skills lab (5%) |
| **Lesson Language** | English |