**T.C.**

**ATILIM UNIVERSITY MEDICAL FACULTY**

**EDUCATION in 2022-2023 ACADEMIC YEAR**

**SPRING SEMESTER ACADEMIC CALENDAR**

**Laboratory Lessons:**

1. Skeleton and joints of upper limb (1 hour, Dr. Öktem & Dr. Brohi)
2. Skin histology (1 hour, Dr. Aykanat & Süzer)
3. The vertebral column, the ribs, the sternum and joints of the vertebral column (1 hour, Dr. Öktem & Dr. Brohi)
4. Disorders & neoplasms of keratinocytes & melanocytes & Disorders of Bone & Cartilage (1 hour, Dr. Yurdakan Özyardımcı)
5. Inflammation and neoplasia (1 hour, Dr. Yurdakan Özyardımcı)
6. Skeleton and joints of lower limb (1 hour, Dr. Öktem & Dr. Brohi)
7. Laboratory diagnosis of parasites (1 hour, Dr. Tülek)
8. Anatomy Review (1 hour, Dr. Öktem & Dr. Brohi)

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| **COMMITTEE NAME** | **STARTING DATE** | **COMPLETION DATE** |
| **MED 102** | 22.01.2024 | 01.03.2024 |
| **MED 104** |  |  |
| **MED 106** |  |  |

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| **COMMITTEE NAME** |
|  | **MED 101** | **MED 102** | **MED 103** | **MED 104** | **MED 105** | **MED 106** |
| **PRACTICAL EXAM DATE** | - | 29.02.2024 | - |  | - |  |
| **COMMITTEE EXAM DATE** |  | 01.03.2024 |  |  |  |  |

**MED102 TISSUES and SKELETAL SYSTEM**

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| **PHASE I COORDINATOR** | Asst. Prof. Dr. Badegül SARIKAYA |
| **CHAIR OF THE MED 102 COMMITTEE** | Assoc. Prof. Dr. Ezgi BEKTUR AYKANAT |
| **MED 102 COMMITTEE DATE RANGE** | 22.01.2024 – 01.03.2024 |
| **ACADEMIC STAFF AT THE MED 102 COMMITTEE** | Prof. Dr. Necla TÜLEK – Medical MicrobiologyProf. Dr. Nedret KILIÇ – Medical BiochemistryProf. Dr. Ahmet SALTIK – Public HealthProf. Dr. Gamze YURDAKAN ÖZYARDIMCI – Medical PathologyAssoc. Prof. Dr. Hale ÖKTEM – AnatomyAssoc. Prof. Dr. Ezgi BEKTUR AYKANAT – Histology & EmbryologyAsst. Prof. Dr. Badegül SARIKAYA – PhysiologyAsst. Prof. Dr. Recep Ali BROHİ – AnatomyDr. Evren TUNCER– Medical Pharmacology |
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**ACADEMIC STAFF** | **THEORETICAL LESSON TIME** | **PRACTICAL LESSON TIME** | **INTERACTIVE EDUCATION****TIME** | **TOTAL TIME** |
| **Anatomy** | 11 | 4 | 1 (Flipped Class) | 16 |
| **Histology and Embryology** | - | 1 | 2 (Flipped Class) | 3 |
| **Medical Microbiology** | 10 | 1 | 3 (CBL) | 14 |
| **Medical Pharmacology** | 2 | - | - | 2 |
| **Medical Biochemistry** | 9 | - | - | 9 |
| **Physiology** | 1 | - | - | 1 |
| **Pathology**  | 15 | 2 | - | 17 |
| **Public Health** | 13 | - | - | 13 |
| **TOTAL** |  61 | 8 | 6 | 75 |

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| **MED 122 RESEARCH PROJECT** | **Total Time**  |
| ALL ACADEMIC STAFF | 6 |

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| **Office Hour** | 08.02.2024, 11:30-12:20 |
| **CONTENT OF THE MED 102 COMMITTEE**  |
| Introduction to anatomy, histology and embryology of the skin, biochemistry of bone tissue and connective tissue, cartilage and joint tumors and tumor-like lesions, Disorders and neoplasms of keratinocytes and melanocytes, disorders of pigmentation, skin and tissue parasites and fungi, arthropods and viruses from arthropods, Infectious arthritis and osteomyelitis, Drugs for dermatologic disorders. Importance and functions of basic communication skills in medicine, Turkish Health System, Introduction to communication, What is communication?, Essentials of communication, Access to Health Services, CDC & FDA. Introduction to Inflammation & Acute inflammation, Chronic inflammation & clinical aspect of inflammation, Tissue repair, Introduction to neoplasm, nomenclature epidemiology, Introduction to neoplasm: anaplasia, invasion metastasis, hallmarks, Fluid & hemodynamic disorders (introduction), fracture, osteonecrosis, osteomyelitis for pathology |
| **MED 102 COMMITTEE AIM** |
| Definition of anatomical position, planes, sections and directional terms of movement to Describe the disfunctions of the bones and joints. Name the bones and joints to define the disfunction and injuries of them. Definition of the parts and structures of upper and lower extremity bones to diagnose the fractures, injuries of dislocations. Definition of the types of vertebral column and joints of vertebrae to diagnose trauma, vertebral injuries, fractures, dislocations, artritis, osteoartritis, tumors, disc hernias. To understand the histopathological mechanism of diseases such as osteoarthritis, osteoporosis, rheumatoid arthritis, giving information about cartilage, bone, joints types. To understand the histopathological mechanism of diseases such as skin tumors, bullous skin disease, dermatitis, avitaminous, giving information about skin and adnexa. Definition, diagnosis, treatment and prevention of skin parasitic infections. Definition, diagnosis and prevention of skin infections and absesses. Definition, diagnosis and prevention of skin fungal infections and absesses. Preliminary diagnosis and prevention of cutaneous Leishmaniasis. Definition and preliminary diagnosis of Infectious arthritis and osteomyelitis. To give information about the physiopathological features of fracture healing and the developmental mechanisms of avascular necrosis. Introduction to the developmental mechanisms of osteomyelitis. To explain the etiopathogenetic features of developmental and acquired disorders of bone. To give general information about inflammatory disorders, tumor and tumor-like lesions of the joint. To give general information about the melanocyte and keratinocyte origin disorders of the skin. To give general information on inflammation and types, to give general information on neoplasm and general properties, to give general information fluid and hemodynamic disorders |
| **MED 102 COMMITTEE LEARNING OBJECTIVES** |
| 1. Describe the anatomical position
2. Says the directional terms used in anatomy
3. Describes the anatomical planes and sections
4. Names the terms which decribes relation and comparison
5. Names the terms which decribe movement
6. Determine the components of bone tissue
7. Determine the types of the bones
8. Determine the differences between compact and spongious bones
9. Counts the components of skeleton system
10. Says the functions of the bones
11. Determines the structural classifications of joints
12. Determines the movements of the joints according to their types
13. Determine the components of the synovial joint
14. Determine the anatomical localisations of the bones of upper limb
15. Determine the anatomical structures on the bones of upper limb
16. Determine the surfaces on the bones of upper limb and the bones which they join with
17. Determine the articular surfaces, major supporting ligaments, key accessory structures of the shoulder joint, elbow joint, and wrist joint
18. Define the movements permitted and limited at the shoulder joint, elbow joint and the radiocarpal joint
19. Says the names of the joints of hand
20. Describe the features of major traumas to each upper limb joint.
21. Describe the vertebral column as a whole
22. Determine the anatomical structures of the vertebrae
23. Determine the atypical vertebrae
24. Describe the specific characteristics of the vertebrae according to region which they take place
25. Determine the sacrum and its anatomical structures on it
26. Describe the anatomical structures of costae
27. Determine the joints related with vertebrae, ribs and sternum
28. Determine the joints of the vertebral column
29. Counts the types of the joints of the vertebral column
30. Determine the related ligaments
31. Determine the anatomical localisations of the bones of lower limb
32. Determine the anatomical structures on the bones of lower limb
33. Determine the surfaces on the bones of lower limb and the bones which they join with
34. Determine the articular surfaces, major supporting ligaments, key accessory structures of the hip joint
35. Define the movements permitted and limited at the hip joint
36. Determine the articular surfaces, major supporting ligaments, key accessory structures and the movements permitted at the knee joint
37. Determine the movements that occur at the knee joint during normal locomotion. Describe the mechanics of “locking” and “unlocking” of the knee.
38. Determine the articular surfaces, major supporting ligaments, key accessory structures and the movements permitted at the ankle joint
39. Determine the joints, ligaments of the foot.
40. Describe the features of major traumas to each lower limb joint.
41. Identify the medial and lateral longitudinal and transverse arches of the foot. Describe the roles of bones, and ligaments in maintaining these arches
42. Evaluate the most common fractures of long bones of upper and lower extremity on anatomical base
43. Says the injuries of nerves in the fractures of upper and lower extremity bones
44. Describe the most common tears of ligaments of dislocations of upper and lower extremity joints
45. Describe the abnormal curvatures of the vertebral column
46. Identify the bones and joints of upper and lower extremity from the radiographs
47. Describe the bone and joint structures from different sections and views
48. Be bale to recognize the joint types and specialities to define the rheumatoid arthritis.
49. Be able to identify cells and structures in a sections of cartilage (e.g. chondroblast, chondrocyte, lacuna, isogenous group, two types of matrix, the perichondrium, etc.).
50. Define the contents of cartilage matrix and identify the molecular basis for cartilage resilience.
51. Be able to describe the process of chondrogenesis and know how cartilage grows.
52. Describe the regenerative potential of cartilage.
53. Define what changes occur with aging in the matrix to define the disease such as osteoporosis.
54. Be able to identify cells and structures in a sections of bone to be able to describe the diseases such as osteoarthritis, osteoporosis.
55. Use your knowledge of the basic tissues to describe the histological organization of skin.
56. Identify the epidermis and discuss its embryological origin, organization and functions.
57. Identify the dermis and hypodermis and discuss their embryological origins, organization and functions.
58. Examine a variety of skin adnexa and determine their function.
59. Describes the synthesis and functions of collagen fibers.
60. Defines the synthesis and functions of elastin, biochemistry of the elastic fibers in normal connective tissues and its alterations in diseases.
61. Describes the biochemistry of the elastic fibers in normal connective tissues and its alterations in diseases.
62. Explains the connective tissue related diseases briefly.
63. Determines the biochemistry of the different bone cells and defines their role within bone.
64. Explains the biochemical properties of bone tissue.
65. Defines bone metabolism.
66. Explains the bone tissue related diseases.
67. Defines the water-soluble vitamin derived enzyme cofactors.
68. Defines the biochemical significance and classification of water soluble vitamins.
69. Describes the role of common vitamins and minerals in normal physiology and disease.
70. Defines the beneficial effects of vitamins and minerals in the body.
71. Defines the lipid-soluble vitamin derived enzyme cofactors.
72. Defines the biochemical significance and classification of lipid soluble vitamins.
73. Describes the role of common vitamins and minerals in normal physiology and disease.
74. Defines the beneficial effects of vitamins and minerals in the body.
75. List common and important ectoparasites that cause human disease.
76. Identify common hosts for ectoparasites.
77. Describe the structures of parasites.
78. Explain the’ life cycles’’ of parasites
79. Discuss the relationship between parasite and its host.
80. Explains the, clinical manifestations, methods of diagnosis, prevention and control of parasites
81. Defines the scabies agents and mites which have medical importance
82. Identify signs and diagnostic approach
83. Performs effective and rational treatment of scabies.
84. Take the necessary prophylactic and preventive measures.
85. Explain the difference between a tick, a spider, a flea, a mosquito, a chigger and a blackfly.
86. Look on a patient for ticks and recognize insect bites.
87. Recognizing the importance of leishmaniasis in the country and around the world.
88. Classify parasite and explain the parasites’ life cycles’’
89. Discuss the relationship between parasite and its host.
90. Explains the sources of infection, clinical manifestations of cutaneous leishmaniasis, methods of diagnosis, prevention and control.
91. Understand the medical importance of parasites
92. Classify each parasite.
93. Describe the structure and life cycles of each parasite
94. Discuss the relationship between each parasite and its host.
95. Explain the sources, entry and exit of parasites in the human body, biological infection period, impact on host of parasite, host response and pathogenesis,
96. Describe clinical manifestations, methods of diagnosis, prevention and control.
97. Definition of skin and soft tissue infections and anatomic location
98. Name bacteria commonly involved in skin and soft tissue infections.
99. Describe the pathogenesis of various types of skin and soft tissue infections.
100. Differentiate the various types of skin and soft tissue infections and their clinical presentation.
101. Compare and contrast superficial, cutaneous mycoses in terms of characteristics/definition, example of diseases it may cause and its causative agent and laboratory diagnosis
102. Compare and contrast subcutaneous mycoses in terms of characteristics/definition, example of diseases it may cause and its causative agent and laboratory diagnosis
103. Definition and importance of dimorphic fungi
104. Identify examples of the primary causes of infections due to dimorphic fungi.
105. Describe the characteristics of dimorphic fungi
106. Define the infectious arthritis, osteomyelitis.
107. Name the most important infectious causes of osteomyelitis and infectious arthritis.
108. Identify predisposition factors, and clinical findings.
109. Describes the fracture and its types.
110. Identify fracture healing mechanisms and factors affecting positively / negatively.
111. Explain avascular necrosis and development mechanisms.
112. Describe the mechanisms of development of osteomyelitis, histomorphological and typical clinical features.
113. Defines the developmental diseases of bone and cartilage
114. Describe the diseases that develop due to metabolic disorders in bone and cartilage and explain their pathogenesis
115. Defines the relationship of common acquired bone diseases with other body systems
116. Defines bone tumors and common tumors according to their characteristics
117. Explains the development mechanisms of bone tumors and chromosomal changes effective in their pathogenesis
118. Defines common inflammatory disorders in joints and explains their etiopathogenesis.
119. Describes the morphological features of inflammatory disorders in the joints and determines their effects on the movement system with which the joints are associated.
120. Describes reactive tumor-like lesions of the joints and explains their differences from true neoplastic formations.
121. Defines the basic features of acute and chronic inflammatory dermatoses and infectious dermatoses that are frequently seen on the skin.
122. Defines vesiculobullous diseases with their general features.
123. Describes benign and malignant tumors originating from keratinocytes and melanocytes in the skin.
124. Defines pigmentation diseases with their morphological features.
125. Describes the use of topical agents for acne.
126. Describes the use of topical agents for superficial bacterial infections.
127. Describes the use of topical agents for agents used for rosacea.
128. Be able to develop an understanding about the meaning of Communication procedures in medicine. Identify communication and construct a conceptual framework then acquiring essential knowledge about it.
129. Conceive the importance of Medical Communication at a basic level.
130. Describe the crucial functions of Medical Communication at a basic level.
131. Define the organizational structure of Turkish Ministry d Health (MoH)
132. Recognise the structural and functional characteristics of Turkish Health System both for public & private sector including weak and strong sides comparatively with samples from other countries.
133. Define how people can access to health services in Turkiye. Indicates hierarchial structure & functioning of health services in terms of Primary, Secondary and Tertiary Health Care,  how to use referral chain, counselling general people and the patients about how to access health services under certain circumstences.
134. Pick up required information about these 2 internationally important institution of public health.
135. Utilise the sources and rules, major guidelines of CDC & FDA.
 |
| **RECOMMENDED BOOKS**1. Basic & Clinical Pharmacology (14th Edition); Bertram G. Katzung,‎ Anthony J. Trevor; McGraw-Hill, 2018.
2. Braddom's Physical Medicine and Rehabilitation (5th Edition); David X. Cifu MD; Elsevier, Philadelphia, 2016.
3. Gray’s Anatomy for Students (3rd Edition); Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell; Churchill Livingston Elsevier, Philadelphia, 2015.
4. Guyton and Hall Textbook of Medical Physiology (13th Edition); John E. Hall; Elsevier, Philadelphia, 2016.
5. Michael H., M.D. Pawlina Wojciech. Histology: A Text and Atlas, with Correlated Cell and Molecular Biology, 8th Edition, 2018.
6. Anthony Mescher. Junqueira's Basic Histology: Text and Atlas, Fifteenth Edition, 2018.
7. Keith L. Moore, BA, MSc, PhD, DSc, FIAC, FRSM, FAAA, T. V. N. Persaud, MD, PhD, DSc, FRCPath (Lond.), FAAA and Mark G. Torchia, MSc, PhD. The Developing Human Clinically Oriented Embryology 11th Edition, 2019.
8. Murray, Rosenthal, Pfaller. Medical Microbiology (9th Edition); 2020.
9. Jawetz, Melnick, & Adelberg's Medical Microbiology, 28e, 2019, McGraw-Hill Education
10. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 9th Edition, Bennett, JE, Dolin R, Blaser MJ. Elsevier, 2019
11. Robbins Basic Pathology (10th Edition); Vinay Kumar, Abul K. Abbas, Jon C. Aster; Elsevier Saunders, Philadelphia, 2018.
12. Understanding pathophysiology First canadian Ed. 2018 by Elsevier Inc. Sue Huether; Kelly PowerKean; Mohamed ElHussein
13. 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
14. 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
15. Rapid Review Pathology, Fifth Edition 2019 by Elsevier, Inc. Edward F. Goljan, MD
16. Harper’s Illustrated Biochemistry (30th Edition); Victor W. Rodwell, David Bender, Kathleen M. Botham, Peter J. Kennelly, P. Anthony Weil; McGraw-Hill, 2015.
17. Roger Detels (ed.), Quarraisha Abdool Karim (ed.), Fran Baum (ed.), Liming Li (ed.), Alastair H Leyland (ed.). **Oxford Textbook of Global Public** Health (7 edn), 2021,Online ISBN:9780191858383, Print ISBN:9780198816805, https://doi.org/10.1093/med/9780198816805.001.0001
18. Anjali Choudhary and Vineeta Gupta. Teaching communications skills to medical students: Introducing the fine art of medical practice. [Int J Appl Basic Med Res.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4552065/) 2015 Aug; 5(Suppl 1): S41–S44. doi: [*10.4103/2229-516X.162273*](https://doi.org/10.4103/2229-516X.162273)
19. Guillermo Ferreira-Padilla, Teresa Ferrández-Antón, José Baleriola-Júlvez, Marijana Braš, and Veljko Đorđević.. **Communication skills in medicine**: where do we come from and where are we going? [Croat Med J.](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500973/) 2015 Jun; 56(3): 311–314. doi: [10.3325/cmj.2015.56.311](https://doi.org/10.3325/cmj.2015.56.311)
20. Laurie Kelly McCorry  (Author), Jeff Mason (Author). Communication Skills for the Healthcare Professional. Enhanced Edition **2nd Edition, 2020,** 978-1284219999.
21. Martin Gulliford, Myfanwy Morgan Routledge (Eds.). Access to Health Care. 2nd ed.2013, Taylor & Francis Group, London and New York.
22. [Türkiye health system information](https://eurohealthobservatory.who.int/countries/turkiye#:~:text=T%C3%BCrkiye%20has%20universal%20public%20health,a%20nationwide%20shortage%20of%20doctors.)
23. [Turkish Healthcare: Overview of the Health System](https://healthmanagement.org/c/it/issuearticle/turkish-healthcare-overview-of-the-health-system)
24. [Health care in Turkey - Statistics and Facts](https://www.statista.com/topics/4782/health-care-in-turkey/)

**Websites**: John's Hopkins School of Public Health, Harvard School of Public Health, Turkish Ministry of Health (MoH), MEDLINE, WHO,<https://www.youtube.com/watch?v=aeSlJPLFk8Q> (Healthcare Communication)[How Effective Communication Can Save Lives in the Healthcare Settings](https://www.youtube.com/watch?v=oTJs5LJ4YKU) |
| **MED 102 COMMITTEE EXAM WEEK** |
| **DATE** | **EXAM NAME** | **EXAM HOUR** |
| 29.02.2024 | Anatomy Practical Examination | 10:30 – 12:20 |
| 01.03.2024 | MED 102 Committee Exam | 10:30 – 12:20 |
| **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]  Flipped-Class | [x] Self Learning |

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| **Evaluation Method** | Theoretical Exam (80%), Anatomy Practical exam (10%), Flipped Class (5%+ 5%) |
| **Lesson Language** | English |