**T.C.**

**ATILIM UNIVERSITY MEDICAL FACULTY**

**EDUCATION IN 2020-2021 ACADEMIC YEAR**

**SPRING SEMESTER ACADEMIC CALENDAR**

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| **COMMITTEE NAME** | **STARTING DATE** | **COMPLETION DATE** |
| **MED 102** | 22.02.2021 | 02.04.2021 |
| **MED 104** | 05.04.2021 | 17.05.2021 |
| **MED 106** | 17.05.2021 | 11.06.2021 |

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| **COMMITTEE NAME** |
|  | **MED 101** | **MED 102** | **MED 103** | **MED 104** | **MED 105** | **MED 106** |
| **ANATOMY PRACTICAL EXAM DATE** | - | - | - | 11.05.2021 | - | - |
| **HISTOLOGY AND EMBRYOLOGY PRACTICAL EXAM DATE** | - | - | - | 11.05.2021 | - | - |
| **MEDICAL BIOLOGY PRACTICAL EXAM DATE** | - | - | - | - | - | - |
| **COMMITTEE EXAM DATE** | - | - | - | 17.05.2021 | - | - |

**MED104 LOCOMOTION**

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| **PHASE I COORDINATOR** | Prof. Dr. Veli Cengiz ÖZALP |
| **PHASE I COORDINATOR ASSISTANT** | Asst. Prof. Dr. Nuriye Ezgi BEKTUR AYKANAT |
| **CHAIRMAN OF THE MED 104 COMMITTEE** | Assoc. Prof. Dr. Hale ÖKTEM |
| **MED 104 COMMITTEE DATE RANGE** | 05.04.2021 – 17.05.2021 |
| **ACADEMIC STAFF AT THE MED 104 COMMITTEE** | Prof. Dr. Nedret KILIÇ- Medical BiochemistryProf. Dr. Necla TÜLEK- Medical MicrobiologyProf. Dr. Gamze YURDAKAN – Medical PathologyProf. Dr. Veli Cengiz ÖZALP – Medical BiologyProf. Dr. Ali ACAR – Medical MicrobiologyProf. Dr. Müge TECDER- Medical PharmacologyAssoc. Prof. Dr. Hale ÖKTEM - AnatomyAssoc. Prof. Dr. Filiz KORKMAZ ÖZKAN – BiophysicsAsst. Prof. Dr. Fatma YERLİKAYA ÖZKURT - BiostatisticsAsst. Prof. Dr. Nuriye Ezgi BEKTUR AYKANAT- Histology and EmbryologyAsst. Prof. Dr. Esin BODUROĞLU- Medical PathologyAsst. Prof. Dr. Ali Doğan DURSUN – PhysiologyAsst. Prof. Dr. Sevil KÖSE – Medical BiologyInstructor Dr. Badegül SARIKAYA - Physiology |
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**ACADEMIC STAFF** | **THEORETICAL LESSON TIME** | **PRACTICAL LESSON TIME** | **INTERACTIVE EDUCATION****TIME** | **TOTAL TIME** |
| **Anatomy** | 21 | 7 | - | 28 |
| **Histology and Embryology** | 7 | 2 | - | 9 |
| **Medical Microbiology** | 6 | - | - | 6 |
| **Medical Pharmacology** | 3 | - | - | 3 |
| **Medical Biochemistry** | 6 | - | - | 6 |
| **Medical Pathology** | 9 | 1 | - | 10 |
| **Physiology** | 10 | 3 | - | 13 |
| **Medical Biology** | 1 | 1 | - | 2 |
| **Biostatistics** | 7 | - | - | 7 |
| **Biophysics** | 4 | - | - | 4 |
| **TOTAL** | 74 | 14 | 0 | 88 |

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| **Office Hour** | 28.04.2021 – (10:30-11:20) |

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| **CONTENT OF THE MED 104 COMMITTEE**  |
| Muscles: general considerations, spinal nerves, introduction of musculoskeletal system, its symptoms and findings, systemic diagnosis of rheumatic diseases, soft tissue and muscle tumors, non-steroidal antiinflammatory drugs, medications used in the treatment of gout and the other antiinflammatory drugs, basic principles of physical medicine and rehabilitation. |
| **MED 104 COMMITTEE AIM** |
| To introduce development, structure and functions of musculoskeletal system. To explain etiology, pathology, symptoms and findings of musculoskeletal disorders. To gain knowledge about the diagnosis and treatment principles of disorders in this system. |
| **MED 104 COMMITTEE LEARNING OBJECTIVES** |
| The students who succeeded in this course;1. Describes the formation of important nerve plexuses and explains the branches, process of nerve plexuses and the structures that innervated by them.
2. Describes the muscles of upper and lower limb and explains their innervations, anatomic features, starting and endpoints and functions.
3. Describes the spine muscles, and the other back muscles and explains their innervations, anatomic features, starting and endpoints and functions.
4. Describes the structural characteristics of muscle tissue and its types.
5. Explains the embryological development of muscle tissue and classifies it
6. Explains and compares histological features of skeletal, smooth and heart muscle
7. Describes the cells of nerve tissue, specifies histological features and functions
8. Distinguishes myelination in the central and peripheral nervous system
9. Describes the innervation pattern of skeletal and smooth muscles and knows the neuromuscular junction.
10. Explains the molecular mechanisms of muscle contraction and understands the role of calcium for skeletal and smooth muscle contraction.
11. Describes the neuron and components of the peripheral nervous system.
12. Describes the organization of the nervous system and knows the pathways for signal transduction.
13. Explains the synapse structure.
14. Describes the synaptic cleft, chemical transduction and neurotransmitters.
15. Describes the synaptic integration.
16. Lists the infection factors in musculoskeletal system and explains their microbiological and epidemiological features.
17. Explains the generation mechanisms and protection methods of diseases caused by infectious agents.
18. Explains the specimen management and methods for microbiological diagnosis towards the infectious agents and interprets the results.
19. Explains the biochemistry of muscle and nerve tissues.
20. Explains the biochemical markers of musculoskeletal diseases.
21. Lists the common symptoms/findings of musculoskeletal system diseases and explains the descriptive diagnosis.
22. Explains the principles of medical history taking towards to musculoskeletal system and methods of physical examination.
23. Explains the methods used in diagnosis of musculoskeletal diseases.
24. Describes the physiopathology, types, clinical reflection and diagnosis of pain.
25. Describes the causes and diagnosis of arthiritis and knows non-steroidal anti-inflammatory drugs.
26. Describes the causes and diagnosis of joint and lumbar pain.
27. Lists the medications effective on musculoskeletal system and explains their mechanism of action, indications and side effects.
28. Describes the terms of disabled and rehabilitation.
29. Takes the medical history of patient who has complains about musculoskeletal system and makes physical examination.
30. Applies basic vocational skills towards the musculoskeletal system.
31. Describes the muscular tissue’s and soft tissue’s pathologies and tumors
32. Describes the pathologies and tumors of peripheral nerves
33. Describes the bone, bone marrow and muscle stem cells
34. Describes the molecular basis of inheritance
35. Describes mitochondrial inheritance and related diseases
36. Describes gout disease and the drugs used in gout.
37. Lists the most common soft tissue tumors and tumor-like lesions except those of vascular origin
38. Explains the diseases associated with peripheral nerve and muscle damage.
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| **RECOMMENDED BOOKS** 1. Basic & Clinical Pharmacology (13th Edition); Bertram G. Katzung,‎ Anthony J. Trevor; McGraw-Hill, 2015.
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. Histology and Cell Biology: An Introduction to Pathology (4th Edition); Abraham L. Kierszenbaum, Laura L. Tres; Elsevier Saunders, Philadelphia, 2015.
6. Medical Microbiology (7th Edition); Patrick Murray, Ken Rosenthal, Michael Pfaller; Elsevier Saunders, Philadelphia, 2013.
7. Molecular and Cellular Biophysics; Meyer B. Jackson; Cambridge University Press, Cambridge, 2006.
8. Rheumatology Textbook (5th Edition); Marc Hochberg, Alan J. Silman, Joseph Smolen, Michael Weinblatt, Michael Weisman; Mosby Elsevier, Philadelphia, 2011.
9. Robbins Basic Pathology (10th Edition); Vinay Kumar, Abul K. Abbas, Jon C. Aster; Elsevier Saunders, Philadelphia, 2018.
10. The Developing Human: Clinically Oriented Embryology (10th Edition); Keith L. Moore, T. V. N. Persaud, Mark G. Torchia; Elsevier, Philadelphia, 2015.
11. Textbook of Biochemistry with Clinical Correlations (7th Edition); Thomas M. Devlin; John Wiley & Sons, 2010
12. Cell and molecular biology (2th edition); Nalini Chandar, PhD, Susan Viselli, PhD, Lipincot Wiliams & Wilkins, 2019.
13. Molecular cell biology (8th edition); Harvey Lodish, W.H.Freeman & Co Ltd, 2016.
14. Molecular biology of the cell (6th edition); Bruce Alberts, W. W. Norton & Company,2015.
15. Jawetz, Melnick, & Adelberg's Medical Microbiology, 28e, 2019, McGraw-Hill Education
16. Medical Microbiology 8th Edition . Murray . Rosenthal, . Pfaller, ,2016
17. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases, 9th Edition, Bennett, JE, Dolin R, Blaser MJ. Elsevier, 2019
18. Basic Immunology: Functions and Disorders of the Immune System, 5e, Abbas, Lichmann, Pillai, Elsevier, 2016
19. Gray’s Anatomy. Editor: Susan Standring, 41st Edition, 2015, Elsevier
20. Moore Clinically Oriented Anatomy. Authors: Keith L. Moore, Anne M. R. Agur, Arthur F. Dalley. 7th Edition, 2013, Lippincott Williams Wilkins
21. Sobotta Atlas of Human Anatomy. English: Musculoskeletal system, internal organs, head, neck, neuroanatomy by Friedrich Paulsen (Author), Jens Waschke (Author), Sabine Hombach-Klonisch (Translator), Thomas Klonisch (Translator). 15th Edition, 2013, Urban and Fischer, Elsevier
22. Atlas of Human Anatomy (Netter Basic Science). Author: Frank H. Netter. 7th Edition, 2019, Elsevier
23. Medical Physiology 3rd Edition by Boron MD PhD, Walter F, Boulpaep MD, Emile L. (2017)
24. Physiology 6th Edition by Costanzo PhD, Linda S. (2017)
25. Principles of Neural Science, Fifth Edition (Principles of Neural Science (Kandel)) 5th Edition by Eric R. Kandel, James H. Schwartz, Thomas M. Jessell, Steven A. Siegelbaum, A. J. Hudspeth. (2013)
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| **MED 104 COMMITTEE EXAM WEEK** |
| **DATE** | **EXAM NAME** | **EXAM HOUR** |
| 11.05.2021 | Histology Practical Examination | 10:30-12:20 |
| 11.05.2021 | Anatomy Practical Examination | 10:30-12:20 |
| 17.05.2021 | MED 104 Committee Exam | 09:30-12:20 |
| **Teaching Methods and Techniques** |

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

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| **Evaluation Method** | Theoretical Exam (85%), Practical exam (Anatomy 8% + Histology 2% + Physiology 5%= 15%) |
| **Language of lectures, practicals and all other applications** | English |