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| **Course title** | **Code** | **Semester** | **Type of course** | **Course volume (Contact hours)** | **ECTS** |
| **Musculoskeletal System Disorders** | **MED****2005** | **III** | **Mandatory** | **69** | **5** |
| **Faculty, the educational program and level of education** | * School of Medicine and Health Sciences
* Higher Medical Educational Program “Medicine”
* One cycle 6-year
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| **Learning Course Content** |
| * **BIOCHEMISTRY** Formation and degradation of bone, markers of bone turnover; Disorders of calcium and phosphorus homeostasis; Calcium regulation and hypocalcaemia;
* **CL. MICROBIOLOGY** Pseudomonas and Related Bacteria.; Haemophilus and Related Bacteria; Bordetella; Francisella and Brucella; Bartonella henslae; Coxiella burnetii; Pasteurella; Non- fermentative bacteria: Acinetobacter baumannii; Moraxella; Laboratory diagnosis of skin and soft tissue infections.; "Bone and Joint Infections.
* **CLINNICAL SKILLS** Bone System Diseases, Diagnostic Methods First aid in fracture
* **PATHOLOGY** Bones: Introduction, developmental anomalies of skeletal system; Congenital anomalies of pelvis and lower extremities; Congenital anomalies of trunk and upper extremities; Bone and joint infections: Osteomylitis and septic arthritis; Bone and joint infections: Tuberculosis and other specific infections of the bone and the joints.; Rickets, osteoporosis and other osteopaties; Cartilage degeneration and osteoarthritis; Epidemiology and classification of rheumatic disorders; Introduction to rheumatology; Pathogenesis of inflammatory arthritis; Connective tissues disorders (SLE, Sjögren syndrome, systemic sclerosis etc); Infectious and noninfectious arthritis; Metabolic bone diseases; osteoporosis and osteolmalasia; General principles of fractures and dislocations in growing skeleton; Common sport related injuries and their management in children and adults; Fractures and dislocations in upper extremity; Fractures and dislocations in lower extremity, pelvis and spine; Skeletal manifestations and management of osteoporosis, osteomalacia and rickets, hyperparathyroidism, Paget’s The pathogenesis and findings of vasculitis; Autoimmune diseases (FMF, Behçet's disease); Pathology of muscular diseases; Pathogenesis of spondyloarthropathies; Benign, locally aggressive and malignant bone tumors;
* **Pathology IMMUNOLOGY** Autoimmunity. Immunologic Tolerance;
* **Pharmacology** Non-steroidal anti-inflammatory drugs; Steroidal anti-inflammatory drugs; Narcotic analgesics; Prophylaxis and pharmacotherapy of osteoporosis; Drug Used in Gout.
* **RADIOLOGY** Radiological semiology for congenital skeletal anomalies; Radiological semiology for bone tumors. Radiologic evaluation of degenerative joint disease; Radiologic evaluation of arthritis: inflammatory conditions; Radiological semiology for fractures; Radiology of osteomyelitis. Radiological semiology for osteoporosis, osteomalacia and rickets; Basic magnetic resonance imaging patterns of skeletal muscle.
* **TOP. ANATOMY** Upper limb; Clavipectoral triangle, Deltoid region;Glenohumeral joint, Scapular region; Supraclavicullar region;Axillary region; Anterior and posterior brachial region;Cubital fossa; Anterior and posterior forearm region; Hand region (ant;post)
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| **Textbooks and Materials** |
| * Robbins Basic Pathology-Vinay Kumar; Abul K. Abbas; Elsevier; 10th. ed. 2018
* Elsevier's Integrated Pathology- King C. Thomas; Mosby Elsevier; 2007;
* Clinically Oriented Anatomy- Moore,Keith L; Wolters Kluwer; 8th.ed. 2018;
* Medical Microbiology- Murray, Patrick R; Rosenthal, Ken S; 7th ed. Elsevier Sounder; 2013.
* Case Studies in Infectious Disease- Peter Lydyard; Garland Science; 2010;
* Basic & Clinical Pharmacology: A lange medical book- Katzung, Bertram G; Mc- Graw Hill Education. 14th. ed; 2018.
* Lippincott Illustrated Reviews: Pharmacology- Karen Whalen; Wolter Kluwer; South Asian ed. 2019;
* Biochemistry: Lippincott's illustrated Reviews- Ferrier Denice R; Wolters Kluwer; 7th ed. 2017.
* Color Atlas of Biochemistry-Jan Koolman; Klaus-Heinrich Roehm; Thieme; 3rd.ed. 2013;
* Grainger & Allison's diagnostic radiology: a textbook of medical imaging-AndyAdam;Churchill Livingstone; 6th ed; 2015
* Introduction to Radiologic imaging sciences &patient care-Arlene M.Adler;Richard R.Carlton; Elsevier Saunders; 6th ed; 2016;
* Sobotta Atlas of Human Anatomy Latin nomenclature: General Anatomy and Musculoskeletal System- F.Paulsen;J.Waschke; Urban & Fischer; 15th.ed. 2015;
* 1. Introduction to Pharmacology-Mary K.Asperheim;Justin Favaro; Elsevier Sounder. 12th.ed; 2012;
* 2. Essentials of Medical Pharmacology-KD Tripathi; Jaypee Brothers Medical Publishers; 5th ed. 2003;
* 3. Roitt’s Essential Immunology- Delves, Peter J; Martin,Seamus J; Wiley –Blackwell; 12th.ed. 2011;
* 4. Medical Microbiology: A guide to microbial infections:Pathogenesis,Immunity,Laboratory Diagnosis and Control- David Greenwood;Mike Barer; Churchill Livingstone; 18th.ed. 2012;
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