

MED 5005–Orthopaedics, Traumatology

Course Name	Code	Semester	Type of course	Theory (hours)	Group work (hours)	ECTS
Orthopaedics, Traumatology	MED 5005	IX	Mandatory	20	36	4
Faculty, the educational program and education level	Faculty of Medicine, one-cycle Educational Program “Medicine”					
Author (s)	Michael Zimlitski – invited teacher Mob.tel.: 599 57 40 60; e-mail: arthrogeo@doctor.com Consultation day and time - individually					
Educational course format	Lecture Group Work					
Educational course Loading	Total: 120 hours Contact hours: 60 h 1. Lecture – 20 h 2. Team work – 36 h 3. Midterms – 2 h 4. Final exam -2 h Independent work – 60 h					
Prerequisites	MED 2005-Musculoskeletal system disorders					
The purpose (s) of tutorial course/modules	The learning course aims to teach the student the etiopathogenesis, instrumental research methods, clinical symptom-complex and methods of musculoskeletal system organs and soft tissues’ diseases treatment; maximum of information retrieval on the base of minimal anamnesis, subjective and objective data for the analysis and further treatment planning for.					
Teaching and learning methods	Lecture - Face-to-Face; direct verbal interactive contact, (notes taking); Demonstration –models, simulators, X-rays pictures, slides and other visual aids for visual perception of human musculoskeletal system structures deformation / damage / pathology; Report preparation and presentation in group with the following discussion and analysis of it; Discussion – questions and answers, answers analysis supported with practical facts; Practical skills on the base Orthopaedy-Traumatology department of clinic: clinical pictures, diagnostics and treatment of musculoskeletal system deformations, congenital diseases and traumas; Work with additional literature: Orthopaedics-Traumatology issues and internet information technology sources;					

Assessment criteria	<p>Maximum score- 100:</p> <ol style="list-style-type: none"> 1. Midterm assessment -60 , that includes: <ol style="list-style-type: none"> 1.1. Attendance -10 score ; 1.2. Activity – 30 score: <ol style="list-style-type: none"> 1.2.1. Practical skills 20 score; 1.2.2. Abstract preparation and presentation-10 scores; 1.3. Midterm Exam – 20 scores; <p>Student's current activity in practical classes is evaluated by the 5-point system. Each student is evaluated for the third part of the total number of classes at least. At the end of the semester, the activity score will be calculated by multiplying of average scores to the calculated coefficient (4 in this particular case) and will be converted to 20 points.</p> <p style="text-align: center;">Group Work are Assessed Based on the Following Criteria (maximum 5point)</p> <p>5 points: the answer is clear, the issue is conveyed comprehensively and accurately, Terminology is well reserved. Student is fluent in program covered material, has thoroughly mastered the basic and additional literature. According to the material in a solid knowledge.</p> <p>4 points: answered all the questions, but reduced; Terminological configured; There are no fundamental mistakes; The student is fluent in in the program covered material; Has only mastered the basic literature.</p> <p>3 points: the answer is incomplete; The issue is conveyed satisfactorily; Terminology is insufficient; The student holds the program material, but there are slight mistakes while explaining the theoretical material.</p> <p>2 points: the answer is incomplete; The terminology is incorrect; The corresponding entries of the issue are set out in part; The student has not sufficiently mastered the basic literature; There are fundamental mistakes while presenting theoretical material.</p> <p>1 point: The answer is insufficient; The terminology is not used, or is not appropriate; The answer is substantially incorrect. Only the individual fragments are set out in the relevant material.</p> <p>0 points: There is no answer or the answer is not appropriate.</p> <p style="text-align: center;">Abstract Grading – Maximum 10 points</p> <ol style="list-style-type: none"> 1. Problem actuality - 2; 2. Review of the researched literature on the issue -2; 3. Deductions accuracy and correlation with the main text - 2; 4. Writing culture -2 scores; 5. Visual and technical parts of the material - 1; 6. Accuracy and reliability of the cited literature - 1; <p>Midterm Exam – 20 scores (Written test -40 questions, 0,5 score for each) Minimal score of midterm assessment (for final exam) – is 11; to take in account that student will receive the maximum score at the final exam.</p> <p>Final Exam – 40 Is held in the written test form (test consists of 80 multiple-choice close questions, each question is rated as 0.5 score).</p>
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	<p>Students have to score equal or more than 70% from final exam maximum score (40X70/100=28 maximum 28 points from the overall 40) to pass the final examination.</p> <p>Credit will be given to the student if he has collected at minimum 51 scores out of 100.</p> <p>The students' assessment has to be done in the following way:</p> <p>Positive rate:</p> <ul style="list-style-type: none"> • (A) Excellent- 91 or more points; • (B) Very Good- 81-90 points; • (C) Good- 71-80 points; • (D) Satisfactory- 61-70 point; • (E) Enough- 51-60 points; <p>Negative rate:</p> <ul style="list-style-type: none"> • (FX) Failure - 41-50 points, which means that a student needs to work more and an independent and considerable further work is required to pass the exam once again to be re-awarded; <p>(F) Fail - 40 points or less, which means that the student's diligence is not sufficient and student has to learn the subject all over again.</p> <p>The student can pass the additional exam during the same semester.</p> <p>The time interval between the final and the additional exams should be not less than 10 days.</p>
The basic literature	<ol style="list-style-type: none"> 1. Harry B. Skinner, Patrick J. McMahon Current Diagnosis and Treatment Orthopedics, McGrawHill Education Lange, V, 2014; 2. John Ebnezar, Ashok N.Jonary TextBook Of Orthopaedics, Clinical Examination methods in Orthopedics, Second Edition, , JAYPEE, 2003; 3. Edited by:Robert R. Simon; Scott C.Sherman, Emergency Orthopedics, McGrow Hill Medical, VI, 2011; 4. Mark R.Brinker Review of Ophthopaedic Trauma, II, Wolters Cluwer Health Lippincott Williams&Wilkins, 2013; 5. Edited by: William C.Willson, Christopher M.Grande, David B.Hoyt Trauma Emergency Resuscitation, Perioperative Anesthesia Surgical Management- Volume I, Trauma Critical Care -Volume II, Informa Health Care; 2003; 6. Resnick Kang Pretterklieber Internal Derangement of Joints Volume I,II, Elsevier Saunders, II, 2007
The auxiliary literature	<ol style="list-style-type: none"> 1. Sumant G.Krishnan, Richard J.Hawkins, Russel F.Warren The Shoulder and the Overhead Athlete, Lippincott Williams&Wilkins, 2004; 2. Adler CarltonIntroduction to Radiography and Patient Care, Saunders Elsevier, 1994; 3. Edited by Christopher Bulstrode, Oxford textbook of trauma and orthopaedic, 2ed., Oxford university press, 2011; http://oxfordmedicine.com/ 4. www.Aofoundation.org <p>www.emedicine.com</p>

№	Subjects	Lecture (hour)	Work in group (hour)
1	<p>Introduction lecture – the development of traumatology and orthopaedy. Trauma and traumatism.</p> <p>Body traumas and damages classification. Traumatic diseases' development stages, terms and the peculiarities.</p> <p>Clinical examination of traumatic patients – anamnesis, inspection, palpation, anthropometry; the estimation of joint function, the definition and registration of movement amplitude.</p>	1	2
2	<p>Traumatology and Orthopaedic aid organization for polyclinic and hospital area; diagnostics and treatment features. Orthopedics and Traumatology examination methods.</p> <p>The basic principles and methods for the fractures treatment. Post-traumatic recovery period.</p>	1	4
3	<p>Organism reaction to trauma. Traumatic shock.</p> <p>Syndrome of long-term and positional pressure; traumatic asphyxia, drowning. Reparative regeneration of bone tissue.</p>	1	2
4	<p>Injuries and injuries' infections. Injuries classification, principles of treatment.</p> <p>Peculiarities of gunshot wounds. Traumatic amputation. Thermal injuries: burns and frostbite. Wound primary surgical treatment.</p>	1	2
5	<p>The classification of fractures, the diagnostics and clinics of closed fracture. The main methods of conservative treatment of fractures.</p> <p>The dislocation – classification; traumatic dislocations, diagnostics, treatment, the technique for correction.</p> <p>Traumatic injuries of pectoral arch and upper limb bones: bone fractures, dislocation. The definition of injury severity of the injuries of magistral blood vessels, tendons and nerves. Finger tendons injuries and their recovery features, shoulder biceps muscles and Achilles tendon injuries.</p> <p>Traumatic injuries of pelvic arch and lower limb bones: bone fractures, dislocation. The injuries of magistral blood vessels, tendons, ligaments and nerves.</p>	2	2
6	<p>Spinal column traumas. Vertebral fractures, spinal cord injury during the spine columns fractures.</p> <p>Chest traumas: ribs and chest bone fractures. Thoracic and abdominal cavities internal organs traumas.</p> <p>Determination of the musculoskeletal system injuries severity.</p> <p>The main types of immobilization - basic principles of desmurgy, skeletal strain, plaster cast putting.</p>	2	2

7	The brain traumatic injuries. Multiple trauma. Diagnosis and treatment principles of multiple fractures.	2	2
8	Complications of musculoskeletal system damages. Bone and joint infections: different forms of festering, osteomyelitis, pyogenic arthritis.	2	2
	Midterm		2
9	Nonspecific arthritis: rheumatoid arthritis, spondylitis, arthrosis. Classification of arthroses, coxarthroses, gonarthroses, deforming arthrosis of the upper and lower limbs and joints. Adults fibrous osteodystrophies.	2	2
10	Congenital and acquired deformations of spinal column, the spine developmental anomaly, (spina bifida), vertebral blocking, spondilolisis, spondilolistesis. Static deformations of the spine column: kyphosis, lordosis, scoliosis. Upper and lower limbs congenital and acquired deformations. Bones displaced diseases (osteopathy). Osteochondrosis. Foot deformation (talipes).	1	2
11	Deformations of the musculoskeletal system in children with cerebral palsy and as a result of rickets suffering.	1	2
12	Bone tumors and tumor's formation: diagnostics features. Benign and malignant bone tumors.	2	2
13	Pediatric trauma and pediatric orthopedics features. Children osteomyelitis and septic arthritis, juvenile septic arthritis; limbs general diseases, congenital diseases of the musculoskeletal system.	1	2
14	Geriatric orthopaedics features: distal forearm bone fractures, femoral neck fracture, osteoporosis, osteoarthritis, cervical disk syndrome, lumbar disc disease and canal stenosis.	1	4
15	General surgical technics: arthroscopy and arthroplasty. Evidence-based orthopedy. Instruments and implants in orthopedy. Prosthetics in traumatology and orthopedy Endoprosthesis methods.	2	4
	Final Exam		2

Learning Outcomes

Criteria	Competences
Knowledge and Understanding	At the end of learning course student will have knowledge of the crucial issues of orthopedics and traumatology: traumas and damages classification, congenital and acquired deformations of the musculoskeletal system, their clinical picture, diagnosis and treatment methods for the different ages patients.

Applying knowledge	After completing the course student will be able to provide patients with musculoskeletal traumas with primary assistance, if necessary, inspection, examination, assessment of the severity of the injury with the account of age and nature of the disease, clinical examination - (history taking, observation, palpation, antropometry); The basic principles of diagnosis and treatment methods under doctor's supervision.
Making judgment	Student will be able to assess the patient's condition, arrange the diagnosis and treatment planning under doctor supervision;
Communication Skills	Student will be able to work in group, make observation, listen, summarize, ask and answer questions, will be able to participate in the discussion to communicate with colleges in the frame of the professional field, with patients and their relatives to discuss patient's current disease.