Name of the course	**Orthopaedics and Traumatology**			**Code**	
Type of study program Cycle	Integrated university study program, Medicine			**Year of study**	V
Credits (ECTS):	5	*Semester*	X.	Number of hours per semester (l+s+e)	**75 (20+15+40)**
Status of the course:	mandatory	*Preconditions:*	Passed all exams of the 4th year	*Comparative conditions:*	/
Access to course:	Fifth year medical students			*Hours of instructions*:	According to schedule

Course teacher:	Grle Maki, MD, PhD
Consultations:	As agreed with students
E-mail address and phone number:	grlemaki@gmail.com
Associate teachers	Karlović Robert, MD
Consultations:	As agreed with students
E-mail address and phone number:	robert.karlovic69@gmail.com

The aims of the course:	The aims of the course are: To enable the students to learn about congenital and developmental diseases of the locomotor system, inflammatory and degenerative diseases, circulatory diseases, tumors, injuries, amputations and prosthetics, joint arthroplasty. The classes cover the knowledge in basic medical subjects with emphasis on functional anatomy of the locomotor system. Furthermore, they cover the acquired knowledge in clinical subjects, especially internal medicine with emphasis on clinical immunology and rheumatology, neurology and partly paediatrics.
Learning outcomes (general and specific competences):	General outcomes: • Independent learning through the study in the way of critical and self-critical questioning of scientific truth. • Demonstrate personal qualities through teamwork and personal contribution to it, attentiveness, active listening and positive teambuilding. Specific outcomes: • Understanding the basics of orthopedic diseases as well as injuries, etiology, clinical features, diagnostics and treatment of orthopedic patients. • Acquiring and demonstrating skills in diagnostic and therapeutic procedures. • Applying the preventive measures in a timely manner. The outcomes are in accordance with the Catalogue of Knowledge and Clinical Skills. Performance will be evaluated through continuous tests, active participation during lectures and seminars, and in final exam.
Course content (Syllabus):	This course consists of everyday lectures, seminars and exercises. After the lectures same topics with a different approach are covered in seminars and exercises. A seminar is an interactive method of teaching. During exercises students learn to apply the acquired skills in real life situations.

Format of instruction (mark in bold)	**Lectures**	**Exercises**	**Seminars**	Independent assignments
	Consultations	Work with mentor	Field work	Other

Student responsibilities	Students are obligate to attend the classes on schedule. Every absence student is required to compensate with colloquium. Getting late on classes will be treated the same as missing it. Colloquium is a short oral exam in which student has to demonstrate basic knowledge of the material. During the exercises students are required to wear clean and ironed white coats. Students with long hair are required to tie it back in a ponytail. Nails have to be neatly trimmed.

	Students are requested to study the seminar materials in advance.			
Screening student work (mark in bold)	Class attendance	Class participations	Seminar essay	**Practical training**
	Oral exam	**Written exam**	**Continuous assessment**	Essay

Detailed evaluation within a *European system of points*

STUDENTS RESPONSIBILITIES	**HOURS**	**PROPORTIONS OF ECTS CREDITS**	**PROPORTIONS OF GRADE**
Class attendance and participation	(20+15+40)=75	2,5	0%
Written exam	37	1,2	50%
Oral exam	38	1,3	50%
Total	150	5	

Further clarification:
Orthopedic surgery and traumatology exam consists of three parts: written, practical and oral exam.

Written exam consists of 40 multiple-choice questions and 10 clinical diagnosis in latin. Based on the number of correct answers the exam is graded as following:
45-50 points = grade 5
40-44 points = grade 4
35-39 points = grade 3
30-34 points = grade 2
Once passed, the written exam is valid throughout the full academic year and that part of the course won't have to be retaken.
In the practical exam, student is assigned one patient at the Orthopedic surgery clinic. The student has to examine the patient and suggest treatment. The practical exam is graded either as a pass or fail.
Oral exam is taken after passing the practical exam. In an oral exam student draws 4 cards with questions divided in the same number of categories. Student needs to demonstrate the basic knowledge in all drawn topics in order to pass the exam.
The final grade is the average of grades obtained in written and oral exam.
Students are able to take the exam in regular summer and autumn exam periods

Required literature:	Blom A, Warwick D, Whitehouse M: Apley & Solomon's System of Orthopaedics and Trauma, CRC Press, 2017.
Optional literature:	Canale et al: Campbell's Operative Orthopaedics, Elsevier, 2016
Additional information about the course	Course quality assessment: - Student questionnaire - Quality analysis from students and teachers - Analysis of exam results - Report of office for teaching control - External evaluation (visit of quality control team)

Annexes: calendar classes

The number of teaching units	**TOPICS AND LITERATURE**
I.	Title: Introduction – orthopedics through history, morphology and function of LMS, clinical features and methods of treatment. Orthopedic procedures in general (conservative and surgical). Orthopedic examination, radiology diagnostics. Working at the clinic and department. Working in the operating room
	Short description: Class organization, orthopedic service organization, general terms.

	Literature: required and optional
II.	Title: General disorders of muscle-skeletal system. Bone dysplasias – achondroplasia, mucopolysaccharidosis, osteogenesis imperfecta, arthrogryposis, metabolic and hormonal diseases – osteoporosis, Paget disease, gout, rickets.
	Short description: Clinical features, diagnostics and management.
	Literature: required and optional
III.	Title: Juvenile osteochondrosis, bone circulation disorders and epiphyseal/apophyseal ossification disorders. Postural deformations. Clinical cases – juvenile osteochondrosis, aseptic femur head necrosis
	Short description: Clinical features, diagnostics and management.
	Literature: required and optional
IV.	Title: Bones and joints of the lower limb – pelvis and hip. Degenerative joint diseases. Clinical cases – degenerative joint diseases, osteoarthritis, intervertebral disc hernia.
	Short description: Definition, etiology, clinical features, diagnostics and management.
	Literature: required and optional
V.	Title: Inflammatory diseases of the musce-skeletal system – specific and nonspecific osteomyelitis, infective arthritis, rheumatoid arthritis. Arthropathies. Clinical cases – osteomyelitis, Bechterew disease, RA.
	Short description: Definition, etiology, clinical features, diagnostics and management.
	Literature: required and optional
VI.	Title: Normal and disturbed bone healing (callus, pseudoarthrosis, bone bank). Orthopedic devices. Disability assessment.
	Short description: Definition, etiology, clinical features, diagnostics and management.
	Literature: required and optional
VII.	Title: Scoliosis. Orthopedic technique. Congenital hip dislocation – diagnosis and treatment. Plaster – conservative treatment. Tumors of the musculoskeletal system. Palsies. Sympathetic reflex dystrophy – Sudeck disease.
	Short description: Definition, etiology, clinical features, diagnostics and management.
	Literature: required and optional
VIII.	Title: Vertebral column – congenital and developmental disorders. Thorax.
	Short description: Definition, etiology, clinical features, diagnostics and management.
	Literature: required and optional
IX.	Title: Shoulder girdle. Arm.
	Short description: Diseases and injuries.
	Literature: required and optional
X.	Title: Pelvic girdle. Hip and upper leg – arthroplasty, epiphyseolisis of femoral head, Legg-Calve-Perthes disease. Knee.
	Short description: Diseases and injuries. Definition, etiology, clinical features, diagnostics and management.
	Literature: required and optional
XI.	Title: Lower leg, foot. Canalicular syndromes. Immobilization of bone fractures. Osteosynthetic materials. Fracture reduction. Monitoring of treatment of fractures and luxations
	Short description: Diseases and injuries. Treatment methods.
	Literature: required and optional
XII.	Title: Introduction – approach to the injured person. LMS injuries in general. Basic principles of fractures and fracture management and joint luxations. Clinical cases – surgical and conservative management of bone fractures and joint luxations.
	Short description: Procedures in traumatology.

	Literature: required and optional
XIII.	Title: LMS injuries in children. Vertebral column, thorax and pelvis injuries. Clinical features of LMS injuries in children.
	Short description: Clinical features, diagnostics and treatments.
	Literature: required and optional
XIV.	Title: Upper limb fractures. Pseudoarthrosis.
	Short description: Definition, clinical features, diagnostics and treatment.
	Literature: required and optional
XV.	Title: Upper limb fractures.
	Short description: Procedures.
	Literature: required and optional