



Course: Orthopedics

Course Coordinator: Tomislav Prpic, MD, PhD, Associate Professor

Department: Department for Orthopaedics and Physical Medicine

Study program: Integrated Undergraduate and Graduate University Study of Medicine in English

Study year: 5th

Academic year: 2021/22

SYLLABUS

Course description (a brief description of the course, general instructions, where and in what form the lessons are organized, necessary equipment, instructions for attendance and preparation for classes, student obligations, etc.):

Orthopedics is compulsory course on 5th year of study. It consists of 30 lectures and 32 practical hours (3,5 ECTS). Lectures and practicals will be organized at Clinic for orthopedic surgery Lovran, M. Tita 1, Lovran.

In the case of the unfavorable epidemiological situation educational process will be held online.

Learning outcomes:

- identify disorders and injuries of musculoskeletal system
- diagnose and explain causes of impairment of musculoskeletal system
- distinguish diagnostic and therapeutic procedures used to treat disorders and injuries of musculoskeletal system
- evaluate importance of right treatment method for orthopedic patient
- integrate acquired knowledge with general approach to the patient

Assigned reading:

1. Apley and Solomon's System of Orthopaedics and Trauma, 10th ed., CRC Press, 2017.

Optional/additional reading:

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

L1. Introduction and history of orthopedics

Learning outcomes:

Acquiring knowledge about history of orthopedics

Get acquainted with goal of orthopedics

L2. History, clinical examination, types of orthopaedic operations

Learning outcomes:

Get acquainted with basics in anamnesis, clinical examination, diagnostics and therapy in orthopedics

L3. Diagnostic imaging (plain radiography,computed tomography,magnetic resonance imaging,ultrasound,radionuclide imaging)

Learning outcomes

Get acquainted with diagnostic imaging methods encountered in diagnosis of orthopedic disorders
Describe and explain indications for each diagnostic method
Correlate results of diagnostic imaging with clinical examination

L4. Tissues of musculoskeletal system

Learning outcomes

Acquiring knowledge about tissues comprising musculoskeletal system

L5. Normal bone healing

Learning outcomes

Understanding mechanism of normal bone healing

L6. Impaired bone healing

Learning outcomes

Understanding causes of bone healing impairment

L7. Bone remodelling and endocrine disorders of skeletal system

Learning outcomes

Describe and explain mechanism of endocrine regulation of bone remodelling
Acquiring knowledge about endocrine bone disorders

L8.Metabolic disorders of skeletal system

Learning outcomes

Get acquainted with major metabolic disorders of skeletal system

L9., L10. Infections of musculoskeletal system

Learning outcomes

Recognize and explain causes of infection of musculoskeletal system
Know how to diagnose and treat bone infection

L11., L12. Degenerative disorders of musculoskeletal system

Learning outcomes

Describe and explain mechanism of musculoskeletal system degeneration
Recognize and determine diagnostics and therapy in degenerative disorders of musculoskeletal system

L13. Children's orthopedics: immature skeleton

Learning outcomes

Get acquainted with immature skeleton and its specificity
Distinguish pediatric from adult musculoskeletal system

L14. Children's orthopedics:the hip

Learning outcomes

Describe and explain causes of pediatric hip disorders
Recognize and determine diagnostics and therapy of pediatric hip disorders

L15. Children's orthopedics:the foot

Learning outcomes

Describe and explain causes of pediatric foot disorders
Recognize and determine diagnostics and therapy protocol of pediatric foot disorders

L16.,L17. The neck and pectoral girdle disorders

Learning outcomes

Get acquainted with major disorders of neck and pectoral girdle
Learn how to diagnose and treat neck and pectoral girdle disorders

L18., L19. The shoulder and upper arm

Learning outcomes

Acquiring knowledge about shoulder and upper arm disorders

Recognize and determine diagnostics and therapy in shoulder and upper arm disorders

L20. i L21. The elbow and forearm

Learning outcomes

Determine diagnostic and treatment protocol of elbow and forearm disorders

L22. The wrist and the hand

Learning outcomes

Get acquainted with major disorders affecting wrist and the hand

Selecting appropriate diagnostic and treatment method to solve disorder of wrist and the hand

L23., L24. The hip and upper leg

Learning outcomes

Recognize disorders of hip and upper leg

Determine diagnostics and therapy in hip and upper leg disorders

L25.,L26 The knee and lower leg

Learning outcomes

Describe knee and lower leg disorders

Determine diagnostic and treatment method for specific knee and lower leg disorder

L27.,L28. The foot and ankle

Learning outcomes

Recognize foot and ankle disorders

Determine appropriate diagnostic and treatment method in foot and ankle disorders

L29.,L30 Tumors of musculoskeletal system

Learning outcomes

Describe tumors of musculoskeletal system

Recognize and diagnose tumors of musculoskeletal system

Get acquainted with treatment options for musculoskeletal tumors

The list of practicals with descriptions:

Practicals 1-5. History and clinical examination of the spine

Learning outcomes

Following theoretical part apply practical knowledge of taking history and clinical examination of the spine

Practicals 6-10. History and clinical examination of the hip and upper leg

Learning outcomes

Following theoretical part apply practical knowledge of taking history and clinical examination of the hip and upper leg

Practical 11-15. History and clinical examination of the knee and lower leg

Learning outcomes

Following theoretical part apply practical knowledge of taking history and clinical examination of the knee and lower leg

Practical 16-20. History and clinical examination of the foot and ankle

Learning outcomes

Following theoretical part apply practical knowledge of taking history and clinical examination of the foot and ankle

Practical 21-25. History and clinical examination of the shoulder, upper arm, elbow and lower arm

Learning outcomes

Following theoretical part apply practical knowledge of taking history and clinical examination of the shoulder, upper arm, elbow and lower arm

Practical 26-32. History and clinical examination of the wrist and the hand

Learning outcomes

Following theoretical part apply practical knowledge of taking history and clinical examination of the wrist and the hand

Students' obligations:

Attendance on lectures and practicals are mandatory. Communication between the teaching staff and students will take place by e-mail addresses (@uniri.hr).
For a detailed description of obligations during classes, see the section "Assessment"

Assessment (exams, description of written / oral / practical exam, the scoring criteria):

Student assessment is carried out in accordance with the current University of Rijeka Study Regulations and the Student Regulations at the Faculty of Medicine Rijeka (adopted by the Faculty Council of the Faculty of Medicine Rijeka).

Students' performance will be evaluated during the course and at the final exam. Out of a total of 100 credits, a student can earn 50 credits (50%) during the course, and 50 credits (50%) at the final exam.

Student assessment is performed using ECTS (A-E) and number system (1-5). Student assessments in ECTS system is carried out by absolute distribution, and according to graduate assessment criteria.

Out of a total of 50 credits that can be earned during the course, student must earn minimum 25 credits to take final exam.

The student acquires grade points by completing the tasks as follows

I. During the course (maximum 50 credits):

Obligatory colloquium I and II test (maximum up to 25+25 credits)

During the course all students must take obligatory first colloquium earning maximum 25 credits (range 13-25 maximum). During course all students must take second obligatory colloquium as well earning maximum 25 credits (range 13-25).

grade	credits
sufficient	13-15
good	16-19
very good	20-23
excellent	24-25

II. Final exam (maximum 50 credits):

Final exam consists of obligatory written exam on Merlin platform in the form of essay. Student who earn 25 or more credits during the course can take final exam. Student who earn less than 25 credits during the course cannot take final exam. Final exam is scored maximal up to 50 credits. Final exam consists of 5 questions and brings 50 credits (range 25-50). To earn the credits student must pass 50% of final test. Correct answers are converted in credits by the following criteria:

grade	credits
sufficient	13-15
good	16-19
very good	20-23
excellent	24-25

For a passing grade during classes and on the final exam, student has to obtain minimum of 50 credits.

The ECTS grading system is defined by the following criteria:

- A - 90 -100% credits
- B - 80 - 89,9% credits
- C - 70 - 79,9% credits
- D - 60 - 69,9% credits
- E - 50 - 59,9% credits

Grades in ECTS grading system are converted in numerical system by the following criteria:

- A = excellent (5)
- B = very good (4)
- C = good (3)
- D = sufficient (2)
- E = insufficient (1)

Other important information regarding to the course:

Course content and all information related to the course as well as exam dates can be found on the MedRi web pages.

All student inquiries, regarding the course and possible problems, remarks and inquiries are provided exclusively using the official e-mail addresses (@medri.uniri.hr). It is possible to arrange consultations with the teaching staff during working hours.

COURSE SCHEDULE (for academic year 2021/2022)

Date	Lectures (time and place)	Practicals (time and place)	Instructor
28.02.2022.	L1 L2 L3 L4 L5 (08.00-13.00) on-line		<i>Prof. Veljko Šantić, M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Prof. Gordan Gulan, M.D, Ph.D.</i>
01.03.2022 .		A1, A2, B1,B2 (P1-P5) (08,00-11,45) Clinic Lovran	<i>Prof. Gordan Gulan, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
02.03.2022.	L6 L7 L8 L9 L10 (13.00 – 18.00) on-line		<i>Prof. Gordan Gulan, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D.</i>
03.03.2022.		C1 (P1 – P5) B1,B2 (P6-P10) (08,00-11,45) Clinic Lovran	<i>Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
04.03.2022.	L11 L12 L13 L14 L15 (16.00 – 20.00) on-line		<i>Prof. Zdravko Jotanović M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
07.03. 2022.		C1 (P6-P10) A1,A2 (P6-P10) (08,00-11,45) Clinic Lovran	<i>Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
08.03. 2022.	L16 L17 L18 L19 L20 (12.00 – 17.00) on-line		<i>Ass.prof.Tomislav Prpić, M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D.</i>
09.03. 2022.		A1,A2,B1,B2 (P11-P15) (08,00-11,45) Clinic Lovran	<i>Prof. Gordan Gulan, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>

10.03. 2022.	L21 L22 L23 L24 L25 (16.00 – 20.00) on-line		<i>Prof. Zdravko Jotanović M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Prof. Gordan Gulan, M.D, Ph.D. Prof. Gordan Gulan, M.D, Ph.D. Prof. Gordan Gulan, M.D, Ph.D.</i>
11.03. 2022.		C1 (P11-P15) B1,B2 (P16-P21) (08,00-11,45) Clinic Lovran	<i>Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
14.03. 2022.		C1 (P16-P21) A1,A2 (P16-P21) (08,00-11,45) Clinic Lovran	<i>Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
15.03. 2022.	L26 L27 L28 L29 L30 (16.00 – 20.00) on-line		<i>Prof. Gordan Gulan, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D.</i>
16.03. 2022.		A1,A2 (P22-P27) B1,B2 (P22-P27) (08,00-11,45) Clinic Lovran	<i>Prof. Gordan Gulan, M.D, Ph.D. Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
17.03. 2022.		C1 (P22-P27) B1,B2 (P28-P32) (08,00-11,45) Clinic Lovran	<i>Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>
18.03. 2022.		C1 (P28-P32) A1,A2 (P28-P32) (08,00-11,45) Clinic Lovran	<i>Prof. Veljko Šantić, M.D, Ph.D. Prof. Zdravko Jotanović M.D, Ph.D. Ass.prof.Tomislav Prpić, M.D, Ph.D.</i>

	PRACTICALS (Topics)	Teaching hours	Location/Lecture room
P1-P5	History and clinical examination of the spine	5	Clinic for orthopedic surgery Lovran
P6-P10	History and clinical examination of the hip and upper leg	6	Clinic for orthopedic surgery Lovran
P11-P15	History and clinical examination of knee and lower leg	6	Clinic for orthopedic surgery Lovran
P16-P20	History and clinical examination of foot and ankle	5	Clinic for orthopedic surgery Lovran
P21-P25	History and clinical examination of shoulder, upper arm, elbow and lower arm	5	Clinic for orthopedic surgery Lovran
P26-32	History and clinical examination of wrist and hand	5	Clinic for orthopedic surgery Lovran
	Total hours of practicals	32	

	FINAL EXAM DATES
1.	March 23rd, 2022
2.	July 8th, 2022
3.	September 1st, 2022
4.	September 15th, 2022
5.	

