



CLINICAL MEDICINE 1

FOURTH YEAR

2023/2024

RADIOLOGY

Subject:

Radiology

The course is evaluated with 4 ECTS. There are 4 hours of active teaching per week (2 hours of lectures and 2 hours of work in a small group).

Teachers:

	First and last name	Email adress	Title
1.	Radiša Vojinović	rhvojinovic@gmail.com	Associate professor
2.	Valentina Opančina	valentina.opancina@gmail.com	Teaching assistant

COURSE STRUCTURE:

Module	Name of the module	Week	Lectures weekly	Work in a small group per week	Teacher
1	Devices in radiology and principles of work, radiology of the heart and lungs	5	2	2	Prof. dr Radiša Vojinović
2	Contrast agents and endographic methods, radiology of the abdomen and pelvis, radiology of the breast	5	2	2	Prof. dr Radiša Vojinović
3	Radiology of the bone-joint system, interventional radiology, neuroradiology	5	2	2	Prof. dr Radiša Vojinović
					Σ 30+30=60

EVALUATION:

The grade is equivalent to the number of points won (see tables). Points are earned in two ways:

ACTIVITY DURING THE LESSON: In this way, the student can earn up to 30 points. In order to pass the activity during the lesson, the student must obtain more than 50% of the points.

FINAL TEST: In this way, the student can gain 70 points according to the attached scheme. In order to pass the final test, the student must obtain more than 50% of the points.

FINAL TEST 0-70 points

EVALUATION OF FINAL TEST

The test has 35 questions.
Each question is worth 2 points.

The final grade is formed as follows:

MODULE		MAXIMUM POINTS		
		ACTIVITY DURING LESSON	FINAL TEST	Σ
1	Devices in radiology and principles of work, radiology of the heart and lungs	10		
2	Contrast agents and endographic methods, radiology of the abdomen and pelvis, radiology of the breast	10		
3	Radiology of the bone-joint system, interventional radiology, neuroradiology	10		
	FINAL EXAM	30	70	100
	Σ	100		

In order to pass the course, the student must obtain a minimum of 51 points, pass pre-exam activities and pass the final exam (test).

number of points won	grade
0 - 50	5
51 - 60	6
61 - 70	7
71 - 80	8
81 - 90	9
91 - 100	10

LITERATURE:

the name of the textbook	authors	publisher	the library
Diagnostic Radiology, Volume one and two	A.Adam, A.K. Dixon, Grainger&Allison's	Churchill Livingstone	Has
The Radiology Handbook : A Pocket Guide to Medical Imaging	Benseler, J.S.	Athens, United States: Ohio University Press	Has
Fundamentals of Diagnostic Radiology, Fourth Edition	W.E. Brant, C.A. Helms	Wolters Kluwer Health / Lippincott Williams & Wilkins	Has

The presentations and accompanying document in *Word* can be found on the website of the Faculty of Medical Sciences :www.medf.kg.ac.rs

Program

MODULE 1

TEACHING UNIT 1 (FIRST WEEK):

BASIC PRINCIPLES OF RADIOLOGY PHYSICS, PRINCIPLES OF WORK OF RADIOLOGY MACHINES

2 hours of lectures	2 hours of work in a small group
-Basic principles of physics in radiology, - modalities and techniques in radiology, - diagnostic devices used in radiology	getting to know more about diagnostic devices used in radiology

TEACHING UNIT 2 (SECOND WEEK):

RADIOLOGY DEVICES AND PRICIPLES OF THEIR WORK (ULTRASOUND, COMPUTED TOMOGRAPHY, MAGNETIC RESONANCE)

2 hours of lectures	2 hours of work in a small group
-Basic principles of physics in radiology, - modalities and techniques in radiology, - diagnostic devices used in radiology	getting to know more about diagnostic devices used in radiology

TEACHING UNIT 3 (THIRD WEEK):

RADIOLOGY OF LUNGS AND MEDIASTINUM

2 hours of lectures	2 hours of work in a small group
- Radiological changes in diseases of the respiratory tract, - Radiological changes in diseases of the mediastinum	- Radiological changes in diseases of the respiratory tract, interpretation of radiographs, - Getting to know the pathology of the lungs and mediastinum on computed tomography

TEACHING UNIT 4 (FOURTH WEEK)

RADIOLOGY OF LUNGS AND MEDIASTINUM

2 hours of lectures	2 hours of work in a small group
- Radiological changes in diseases of the respiratory tract, - Radiological changes in diseases of the mediastinum	- Radiological changes in diseases of the respiratory tract, interpretation of radiographs, - Getting to know the pathology of the lungs and mediastinum on computed tomography

TEACHING UNIT 5 (FIFTH WEEK)

RADIOLOGY OF CARDIOVASCULAR SYSTEM

2 hours of lectures	2 hours of work in a small group
- Examination techniques, - X-ray anatomy of the heart, - Getting to know diagnostic procedures, - Radiological changes in heart diseases	- Heart examination techniques: radiography, computerized tomography and catheterization, - getting to know radiological changes in heart diseases

MODULE 2

TEACHING UNIT 6 (SIXTH WEEK)

CONTRAST UNITS AND ENDOGRAPHIC METHODS

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">-Introduction to the contrast media used during radiological examinations,- Acquaintance with side effects and measures of prevention and treatment of side effects of contrast agents,- Introduction to endographic methods in radiology	<ul style="list-style-type: none">-Introduction to the contrast media used during radiological examinations and endographic methods

TEACHING UNIT 7 (SEVENTH WEEK)

RADIOLOGY OF ABDOMEN

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">-RO techniques for examination of the digestive tract,-Ro anatomy of the digestive tract	<ul style="list-style-type: none">- Interpretation of Ro examination of the digestive tract, normal Ro anatomy

TEACHING UNIT 8 (EIGHTH WEEK)

RADIOLOGY OF ABDOMEN

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">-Ro pathology of the digestive tract,-UZ, CT and MR examinations of the abdomen,- Getting to know the pathology of the abdomen using imaging examination techniques	<ul style="list-style-type: none">- Interpretation of Ro examination of the digestive tract

TEACHING UNIT 9 (NINTH WEEK)

RADIOLOGY OF PELVIS

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">- Techniques for examination of the urogenital tract: native urotract, IVU, US, CT, MR,- Hysterosalpingography,- X-ray anatomy,- Radiological changes in diseases of the urogenital tract	<ul style="list-style-type: none">- Interpretation of Ro examination in pathological conditions of the urogenital tract

TEACHING UNIT 10 (TENTH WEEK)

RADIOLOGY OF BREASTS

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">-Ro examination modalities and techniques,- Ro and US anatomy of the breast,-Benign and malignant changes	<ul style="list-style-type: none">- Interpretation of Ro breast examination

MODULE 3

TEACHING UNIT 11 (ELEVENTH WEEK)

NEURORADIOLOGY

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">- Examination techniques, X-ray, CT and MR- Neurotrauma,- Tumors of the CNS,- CNS infections	<ul style="list-style-type: none">- Interpretation of Ro examination of the CNS

TEACHING UNIT 12 (TWELFTH WEEK)

NEURORADIOLOGY

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">- Diseases of the white matter of the brain,- Non-traumatic intracranial hemorrhage,- Brain infarction,- Diseases of the spinal column and spinal cord	<ul style="list-style-type: none">- Interpretation of Ro examination of the CNS

TEACHING UNIT 13 (THIRTEENTH WEEK)

INTERVENTIONAL RADIOLOGY

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">- Interventional vascular radiology, modalities and techniques,- Percutaneous biopsies,- Percutaneous drainage	<ul style="list-style-type: none">- how are therapeutic non-vascular RO procedures performed

TEACHING UNIT 14 (FOURTEENTH WEEK)

INTERVENTIONAL RADIOLOGY

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">- Interventional vascular radiology, modalities and techniques,- Catheterization technique,- Balloon dilatation and stenting of blood vessels,- Embolization of blood vessels	<ul style="list-style-type: none">- how are therapeutic and diagnostic vascular RO procedures performed

TEACHING UNIT 15 (FIFTEENTH WEEK)

RADIOLOGY OF BONE-JOINT SYSTEM

2 hours of lectures	2 hours of work in a small group
<ul style="list-style-type: none">- Examination techniques: X-rays, computerized tomography, magnetic resonance,- Trauma of the bone-joint system,- Bone tumors,- Osteomyelitis	<ul style="list-style-type: none">- Interpretation of the examination of the pathology of the bone-joint system

WEEKLY COURSE SCHEDULE

COURSE	TUESDAY
RADIOLOGY (2+2)	LECTURES 11:25 - 12:55 (H4) PRACTICE 15:00 - 21:00 (Nuclear Medicine Center UCCK)

SCHEDULE OF PRACTICE

PRACTICE (2x4 group) - according to the schedule of the department

SCHEDULE FOR THE COURSE RADIOLOGY

module	week	type	method unit name	teacher
1	1	L	BASIC PRINCIPLES OF RADIOLOGY PHYSICS, PRINCIPLES OF WORK OF RADIOLOGY MACHINES	prof. dr Radiša Vojinović
1	1	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
1	2	L	RADIOLOGY MACHINES AND PRINCIPLES OF THEIR WORK (ULTRASOUND, COMPUTED TOMOGRAPHY, MAGNETIC RESONANCE)	prof. dr Radiša Vojinović
1	2	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
1	3	L	RADIOLOGY OF RESPIRATORY SYSTEM	prof. dr Radiša Vojinović
1	3	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
1	4	L	RADIOLOGY OF RESPIRATORY SYSTEM	prof. dr Radiša Vojinović
1	4	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
1	5	L	RADIOLOGY OF CARDIOVASCULAR SYSTEM	asist. dr Valentina Opančina
1	5	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina

SCHEDULE FOR THR COURSE RADIOLOGY

module	week	type	method unit name	teacher
2	6	L	CONTRAST UNITS AND ENDOGRAPHIC METHODS	asist. dr Valentina Opančina
2	6	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
2	7	L	RADIOLOGY OF ABDOMEN	asist. dr Valentina Opančina
2	7	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
2	8	L	RADIOLOGY OF ABDOMEN	asist. dr Valentina Opančina
2	8	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
2	9	L	RADIOLOGY OF PELVIS	prof. dr Radiša Vojinović
2	9	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
2	10	L	RADIOLOGY OF BREASTS	asist. dr Valentina Opančina
2	10	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina

SCHEDULE FOR THR COURSE RADIOLOGY

module	week	type	method unit name	teacher
3	11	L	NEURORADIOLOGY	asist. dr Valentina Opančina
3	11	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
3	12	L	NEURORADIOLOGY	asist. dr Valentina Opančina
3	12	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
3	13	L	INTERVENTIONAL RADIOLOGY	asist. dr Valentina Opančina
3	13	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
3	14	L	INTERVENTIONAL RADIOLOGY	asist. dr Valentina Opančina
3	14	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
3	15	L	RADIOLOGY OF BONE-JOINT SYSTEM	asist. dr Valentina Opančina
3	15	P		prof. dr Radiša Vojinović asist. dr Valentina Opančina
		exam		