

Study program: Integrated academic studies in medicine			
Type and level of the study program: integrated academic studies			
Course title: Interventional radiological methods (M4-IRAD)			
Teacher: Sanja S. Stojanović, Viktor E. Till, Dijana D. Nićiforović			
Course status: elective			
ECTS Credits: 3			
Condition: General Radiology; Clinical Radiology			
Course aim Introducing students to utilization of contemporary interventional radiology methods of examinations and procedures in diagnosis and treatment of patients.			
Expected outcome of the course: Evaluation of indications for utilization of different interventional procedures, devices and materials used for these procedures, introduction to different interventional techniques, recognition of pathological changes, reporting, therapeutic procedures, i.e. performing vascular and non vascular interventional procedures.			
Course description <i>Theoretical education</i> Short history of interventional radiological methods, division to vascular and non-vascular interventions, imaging modalities in interventional radiology (angiography room, CT, US), basic physical principles, radiation protection of patients and interventional team, advantages and limitations of different modalities, patient preparation for the intervention (general and specific, medications used) Vascular interventional radiology: vascular diagnostics (clinical vascular examination, non invasive vascular diagnostics, invasive vascular diagnostics), materials and instruments, contrast agents, access points in vascular interventions, Seldinger puncture technique, percutaneous transluminal angioplasty, artery stenting, aortic stent graft, cava filter, embolization, intraarterial chemical and mechanical thrombolysis, intracranial vascular interventions, coronarography, percutaneous transluminal angioplasty of coronary arteries and stenting. Non vascular interventional radiology: non vascular diagnostics, materials and instruments, cyst punctions and sclerotherapy, CT and US guided biopsy, biliary drainage and stents, percutaneous nephrostomy and ureteral stents, vertebroplasty, osteoplasty, tumor ablation (RFA, microwave, cryoablation), ozone therapy. <i>Practical education: exercises, other forms of education, research related activities</i> Practical classes are identical to methodic units of theoretical classes.			
Literature <i>Compulsory</i> 1. Gunderman RB. Essential Radiology: Clinical Presentation, Pathophysiology, Imaging. Thieme, 2014. <i>Additional</i> 1. Tam MD, Wang W. Radiology Case Review Series: Interventional Radiology. McGraw Hill, 2014.			
Number of active classes			Other:
Lectures: 30	Practice: 15	Other types of teaching:	
Teaching methods Theory classes. Demonstration of materials used in interventional radiology. Demonstration of selected interventional radiology procedures.			
Student activity assessment (maximally 100 points)			
Pre-exam activities	points	Final exam	points
Lectures	15	Written	30
Practices	15	Oral	40
Colloquium			
Essay			