UNIVERSITY OF NOVI SAD
FACULTY OF MEDICINE

Study program: Integrated Academic Studies in Medicine

Course title: Radiology

Teacher: Sanja S. Stojanović, Viktor E. Till, Duško B. Kozić, Miloš A. Lučić, Katarina M. Koprivšek, Jasna M.Mihailović, Viktorija A. Vučaj-Ćirilović, Olivera R. Nikolić, Jovan D. Lovrenski, Dijana D. Nićiforović, Nataša M. Prvulović-Bunović, Marijana Basta Nikolić, Jasmina Boban

Course status: compulsory

ECTS Credits: 6

Condition: Anatomy; Neuroanatomy; Histology and Embryology; Physiology; Pathology; Patophysiology

Course aim:

Students are acquainted with radiology physics and radiographic anatomy. In practical classes students are instructed of diagnostic imaging modalities, radiography, ultrasound, computerized tomography and magnetic resonance imaging, as well as angiographic procedures. Students are acquainted with radiologic appearance of hereditary, vascular, inflammatory, oncologic diseases of the thorax, abdomen, pelvis, musculoskeletal, central nervous system and neck. In practical classes students are instructed in X-Ray, ultrasound, computerized tomography and magnetic resonance imaging interpretation. Teaching activities in Radiology are specific due to education in conventional radiology combined with novel diagnostic procedures.

Expected outcome of the course:

Student will be introduced to the spectrum of imaging methods, their basic principles and utilization. Particular attention is paid to accurate indications and becoming accustomed with the diagnostic options of particular categories of radiological examination. Student will accomplish necessary skills to perform X-ray, ultrasonography examination, to analyze radiography images, computed tomography and MR images and to demonstrate particular techniques of interventional radiology.

Detailed knowledge of the anatomical details in each diagnostic modality will be required. Student will be able to establish the diagnosis based on obtained diagnostic data and understand radiological findings. Particular attention is paid to accurate indications and becoming accustomed with the diagnostic options of particular categories of radiological examination.

Course description:

Theoretical education

1. Basics of medical application of ionizing radiation; physics of imaging methods (X-ray, ultrasound, computed tomography, magnetic resonance imaging); interventional radiology; 2. Application and indications for radiological examinations (X-ray, computed tomography, ultrasound, magnetic resonance imaging); 3. Basic principles and indications for invasive diagnostic and intervention-radiology methods; 4. Radiological appearance of “head to toe” pathological conditions (malformations, variations, trauma, inflammatory diseases, primary benign and malignant tumors, secondary tumors); 5. Radiological characteristics of common disorders of respiratory-, digestive- and urinary system, acute abdomen, reproductive system (breast, female pelvis and male reproductive organs: prostate and scrotum); musculoskeletal and nervous system, acute abdomen in adult patients; 6. Radiological characteristics of common disorders of circulation, respiratory, nervous, musculoskeletal and urinary system and acute abdomen in children.

Practical education

1. Demonstration of radiology-imaging equipment and instruments and their operations; 2. Analysis of radiology images and scans (X-ray, CT, MR); 3. Practical work with ultrasound; image analysis; 4. Practical work with magnetic resonance; image analysis; 5. Observing particular techniques in interventional radiology; 6. Detailed identification of the anatomical structures on each diagnostic modality;

Literature

Compulsory

1. Richard B. Gunderman. Essential Radiology: Clinical Presentation, Pathophysiology, Imaging. Thieme 2014.
2. William Herring.Learning Radiology: Recognizing the Basics, 3e. Elsevier Science 2015.
3. Lothar Wicke. Atlas of Radiologic Anatomy. Saunders 2004

Number of active classes	**Theoretical classes:** 45	**Practical classes:** 60

Teaching methods:

Lectures, practical work

Student activity assessment (maximally 100 points)			
Pre-exam activities	**points**	**Final exam**	**points**

Lectures	15	Test	20
Practices	15	Practical	25
Colloquium	-	Oral	25
Essay	-		