SUBJECT CARD

Faculty of Medicine and Health Sciences
Field of Studies: Medicine
Form of studies: Full-time
Degree: long-cycle Master's program
Specializations: No specialization
Academic year: 2022/2023

BASICS OF DIAGNOSTIC IMAGING	
SUBJECT	**Basics of diagnostic imaging**
NUMBER OF ECTS POINTS	2
LANGUAGE OF INSTRUCTION	English
TEACHER(S)	Maciej Krupiński, MD, PhD
PERSON RESPONSIBLE	Maciej Krupiński, MD, PhD
NUMBER OF HOURS	
LECTURES	10 h
SEMINARS	10 h
GENERAL OBJECTIVES	
OBJECTIVE 1	Obtainment of knowledge in physical basics of x-ray, ultrasound, computed tomography and magnetic resonance.
OBJECTIVE 2	Obtainment of knowledge in image interpretation in x-ray, ultrasound, computed tomography and magnetic resonance.
LEARNING OUTCOMES	
MK1	**Knowledge:** Student knows physical basics of medical images formation in various diagnostic modalities.
MK2	**Knowledge:** Student is familiar with diagnostic imaging and contrast agents usage including their indications and side effects.
MK3	**Knowledge:** Student gains basic knowledge in nuclear medicine, radiotherapy and radiation related topics.
MS1	**Skills:** Student differentiates medical images in diagnostic modalities.
MS2	**Skills:** Student distinguishes anatomical structures of human body in diagnostic modalities.

BASICS OF DIAGNOSTIC IMAGING	
MS3	**Skills:** Student knows basic indications of each diagnostic modality usage.
INTRODUCTORY REQUIREMENTS	
Basic knowledge of medical physics and chemistry. Basic knowledge of human anatomy.	
COURSE PROGRAM	**DETAILED DESCRIPTION OF THE TOPIC BLOCKS**
LECTURE 1	The role of diagnostic imaging and its development over years
LECTURE 2	Physical basics of x-ray and computed tomography
LECTURE 3	Physical basics of ultrasound and magnetic resonance
LECTURE 4	Contrast agents and radiation related topics
LECTURE 5	Nuclear medicine
SEMINAR 1	The basics of x-ray images interpretation
SEMINAR 2	The basics of computed tomography images interpretation
SEMINAR 3	The basics of ultrasound images interpretation
SEMINAR 4	The basics of magnetic resonance images interpretation
SEMINAR 5	Multimodality images interpretation
DIDACTIC METHODS (APPLIED)	
	Lectures and classes
STUDENTS WORKLOAD	
NUMBER OF HOURS UNDER SUPERVISION	20 hours
NUMBER OF PREPARATION HOURS	Preparation for classes: 20 hours Preparation for the exam: 20 hours
TOTAL NUMBER OF HOURS FOR THE COURSE	60 hours
CONDITIONS FOR COURSE COMPLETION	
	Attendance of all lectures and seminars is obligatory. Passing of exam.
METHODS OF ASSESMENT	
IN TERMS OF KNOWLEDGE	Theoretical test
IN TERMS OF SKILLS	Practical image interpretation quiz
IN TERMS OF SOCIAL COMPETENCY	Active cooperation with other students during the classes

BASICS OF DIAGNOSTIC IMAGING	
FORMATIVE	Participation in the classes
SUMMATIVE (I & II term)	**I term (EXAM):** Multiple choice questions (40 questions and points) **II term (RETAKE EXAM):** Structured open questions (40 points)
GRADING SCALE	
3,0 (SATISFACTORY)	**55%** correct answers
3,5 (SATISFACTORY PLUS)	**70%** correct answers
4,0 (GOOD)	**77%** correct answers
4,5 (GOOD PLUS)	**90%** correct answers
5,0 (VERY GOOD)	**97%** correct answers
BASIC LITERATURE	
[1] Brant and Helms Fundamentals of Diagnostic Radiology Fifth Edition by Jeffrey Klein MD FACR (Author), Emily N. Vinson MD (Author), William E. Brant MD (Author), Clyde A. Helms MD (Author).	