



12048-3-B

ECTS: 2

YEAR: 2016L

**COURSE CONTENT
CLASSES**

CLINICAL CLASSES: Repetition of knowledge of radiological and clinical anatomy. Introduction and general information in the field of diagnostic imaging. Acquainted with the organization and functioning of the different lab in radiology department: X-ray, ultrasound, CT and MRI lab. The scope of different examinations methods performed in laboratories like radiography (X-rays), ultrasound, CT and MRI, and interpretation of images based on selected disease. Recognition of the correct anatomical structures of the chest and technically correct chest X-ray. Diagnostic imaging of selected diseases of lung, pleura and mediastinal organs - the interpretation of particular images in the field of radiology classic chest X-ray and CT studies in the field of diseases of the chest. Diagnostic imaging of selected diseases of the liver, biliary tract, pancreas and stomach, XII-old, small intestine, colon and rectum, in the particular images of classical radiology X-ray, CT and MRI - interpretation of certain radiological images. Radiological features of obstruction, bowel perforation, and nodular changes of the gastrointestinal tract. SEMINAR: understanding of the fundamentals of anatomy and identification of the correct structures of the chest and abdomen in CT images. Diagnostic imaging of selected diseases of the chest including the lung and pleura. Differentiation between disease alveolar and interstitial lung diseases. Recognition of pneumonia. Recognition and differentiation of edema, atelectasis and pleural fluid in the cavities and the pericardial cavity. Recognizing the fundamental heart disease. Recognition and interpretation of anomalies in the diagnosis image of the abdominal cavity with particular reference to selected diseases of the liver, biliary tract and pancreas, stomach, XII months, small intestine, colon and rectum.

LECTURES

Introduction to diagnostic imaging, selected methods of diagnostic imaging e.g. X-ray, MMG, ultrasound and CT and MRI. Radiation protection. How to prepare the patient for examination using different radiological diagnostic methods. Contrast media for radiology. Hospital Information Systems. Teleradiology. Diagnostic imaging of the chest on the basis of selected diseases: radiography and basic symptoms in the diagnosis of selected diseases of the chest. Diagnostic imaging in selected diseases of the mediastinum. Diagnostic imaging in selected diseases of the abdominal cavity, using different diagnostic imaging technique: classical radiology, CT and MRI.

EDUCATIONAL OBJECTIVE:

Preparing student to recognize and understand different modern imaging methods in radiology, taking into account the physical and technical basis of selected imaging tests. Prepare the student to interpret the basic physical phenomena used in radiology and diagnostic imaging, and to recognize some basic and symptoms as well as pathology in the diagnosis of specific diseases of the chest and abdomen based on the selected imaging. Shaping the professional attitudes of students focusing on patient needs, possibilities of cooperation in an interdisciplinary team and an indication of the possibility of deepening and updating the knowledge of radiology and diagnostic imaging.

**DESCRIPTION OF LEARNING OUTCOMES FOR THE COURSE IN RELATION TO FIELD AND MAJOR
LEARNING OUTCOMES**

Codes of learning outcomes in a major field of study:

Codes of learning outcomes in a major area of study: A.U4. +, B.U2. +, B.W6. +, B.W8. +, F.W11. +, H.U.4. +, K.1. +, K.2. +, K.3. +, K.4. +,

LEARNING OUTCOMES:**Knowledge**

W1 - Student knows natural and artificial sources of the ionising radiation and an influence with matter

W2 - He knows physics bases of noninvasive imaging methods

W3 - He has a knowledge in the scope of examinations in our times used vivid, in particular knows: and.

radiological symptomatology of essential illnesses, b. instrumental methods and vivid techniques used to of performing healing treatments, c. convictions, contraindications and the preparation of patients to of individual types of vivid examinations and the contraindication to of applying contrasting means

Skills

U1 - Based on vivid examinations the student is petitioning for presences of the pathological process, is conducting the differential diagnosis

U2 - The student is able to assess doses of the ionising radiation the harmfulness and is obeying principles of the anti-radiation protection

U4 - Apply the principles of radiation protection based on selected imaging studies requested by the presence of pathological process performs differential diagnosis

Social competence

K1 - A contact deep and full of the respect with the sick person is able to establish and to hold,

K2 - The student is possessing the awareness of own restrictions and a skill of permanent training oneself

K3 - He/she is guided by the best interests of the sick person, putting them first

K4 - He is abiding by the doctor-patient privilege and patient's rights

BASIC LITERATURE**Course/module:**

Diagnostic Imaging 1/2

Fields of education:

Obszar nauk medycznych, nauk o zdrowiu i nauk o kulturze fizycznej

Course status: mandatory**Course group:** B - major course**ECTS code:** 12048-3-B**Field of study:** Medicine**Specialty area:** Medicine**Educational profile:** Practical**Form of study:** full-time**Level of study:** uniform master's studies**Year/semester:** 3 / 6**Type of course:**

Classes, Seminar, Lecture

Number of hours per semester/week: Classes: null, Seminar: null, Lecture: null**Teaching forms and methods**

Classes(K1, K2, K3, K4, U1, U2, U4, W1, W2, W3) : Interactive discussion in small teaching group with interpretation of selected diagnostic imaging cases in various fields of clinical trials including radiological protection of the patient and medical staff , Seminar(K1, K2, K3, K4, U1, U2, U4, W1, W2, W3) : Interactive discussion with interpretation of selected diagnostic imaging cases in various fields of clinical trials including radiological protection of the patient and medical staff , Lecture(K2, K4, U1, U4, W1, W2, W3) : PowerPoint presentation; interactive discussion

Form and terms of the verification results:

CLASSES: Written test - Final test to verify the ability to recognize the basic pathology and signs in diagnostic imaging of the chest and abdomen and knowledge in this field(K1, K2, K3, K4, U1, U2, U4, W1, W2, W3) ; CLASSES: Evaluation of the work and cooperation in the group - Skills assessment discussion and cooperation in the group including the assessment of the various methods and skills during analysis of various clinical cases test((K4, U4) ; SEMINAR: Colloquium test - Final test to verify the ability to recognize the basic pathology and signs in diagnostic imaging of the chest and abdomen and knowledge in this field(U1, U2, U4, W1, W2, W3) ; SEMINAR: Written test - entrance small exam during each of seminar: 1. review of radiological and clinical anatomy, 2. selected signs in chest radiology practical and theoretical interpretation etc(K1, K2, K3, K4, U1, U2, U4, W1, W2, W3) ; SEMINAR: Evaluation of the work and cooperation in the group - Interactive discussion with interpretation of selected diagnostic imaging cases in various fields of clinical trials including radiological protection of the patient and medical staff (K4, U4) ; LECTURE: Part in the discussion - activity during interactive discussion (U1, U2) ; LECTURE: Competention test - Final test to verify the ability to recognize the basic pathology and signs in diagnostic imaging of the chest and abdomen and knowledge in this field(K1, K2, K3, K4, U1, U2, U4, W1, W2, W3)

Number of ECTS points: 2**Language of** English

1. Herring William. Learning Radiology. Recognizing the basics. Elsevier 2nd ed. 2. Lange S. Walsh G. Radiology of chest diseases. Thieme. 3rd ed.

SUPPLEMENTARY LITERATURE

1) Gunderman R.B. , Essential Radiology. Clinical Presentation. Pathophysiology. Imaging. , t. , Thieme, , s. 2) Brant WE. Helms CA. , Diagnostic Radiology. , t. , LWW, , s.

instruction:
Introductory courses: Radiological and clinical anatomy, biophysics, pathophysiology
Preliminary requirements: Review knowledge about radiological and clinical anatomy and biophysics
Name of the organizational unit offering the course: Katedra Radiologii ,
Person in charge of the course: dr med. Anna Żurada, , dr med. Maciej Michalak,
Course coordinators:
Notes:

Detailed description of the awarded ECTS points - part B

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DIAGNOSTIC IMAGING 1/2

The awarded number of ECTS points is composed of:

1. Contact hours with the academic teacher:

- participation in: classes	h.
- participation in: seminar	h.
- participation in: lecture	h.
- consultation	2 h.
	2 h.

2. Student's independent work:

- preparing of student to classes and the credit	18 h.
	18 h.

1 ECTS point = 25-30 h of the average student's work, number of ECTS points = 20 h : 25 h/ECTS = 0,80 ECTS
on average: **2 ECTS**

- including the number of ECTS points for contact hours with direct participation of the academic teacher:	0,08 ECTS points,
- including the number of ECTS points for hours completed in the form of the student's independent work:	1,92 ECTS points,