Azerbaijan Medical University «CONFIRM»

«Radiology and radiation therapy»

head of the department

prof. M.J. Sultanova

**RADI OLOGYSYLLABUS**Signature**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **10.09.2021**

**SUBJECT CODE:**

**SUBJECT TYPE:** Mandatory

**STUDY SEMESTER:** VI

**Total Number of credits:** 3 credit

**SUBJECT LEARNING FORM:** full time education

**SUBJECT LEARNING LANGUAGES:** Azerbaijani, Russian, English

**TEACHERS Staff:**

**t.e.d., prof.Sultanova M.J.**

**phd.,dos.Panakhova M.S.**

**phd.dos.Bayramov R.B.**

**phd.,dos.Asgarova H.E.**

**phd.,ass. Aghamalıyeva A.J.**

**phd., ass.Asgarov N.M.**

**phd., ass.Aghabayli L.Z.**

**ass. Mammadova S.R.**

**ass.Mehdiyeva A.Y.**

**ass.Rahimov N.R.**

**ass.Qambarova G.H.**

**CONTACT NUMBERS: 012 4411338, 0124400126**

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**PREREQUISITES:**

Normal anatomy, normal physiology, pathoanatomy, pathophysiology

**COREQUISITES:**

Internal diseases

**COURSE DESCRIPTION**

Diagnostic radiology utilises a wide range of imaging modalities and techniques to identify and characterise pathology in the body and can be used to investigate any body system or anatomical region.The student should be made familiar with radiographic appearance both of the normal subject and of common abnormal conditions where elementary knowledge of the pathology involved will ensure the application of the appropriate radiographic technique which may be necessary for various disabilities or types of subject. The need for radiation precautions should be emphasised, as they apply to both patients and all hospital staff.

The provision of high quality health care in the goal of all medical service. Diagnostic radiology provides a valuable input into health care delivery system. Efficient utilization of the technology can be assured only through planned systematic and organized quality assurance procedures. Good diagnostic images would lead to accurate diagnosis and better management of health problem. This subject also enables the student to learn and understand the basic concept of computer applications in diagnostic radiology and imaging.

This course gives basic knowledge in the various sub – specialties of radiology such as neuroradiology, gastrointestinal radiology, uroradiology, vascular radiology, musculokeletal, interventional radiology, paediatric radiology and ımaging of breast.

**PROGRAM OBJECTIVES**

The objectives is to train a student to appreciate the fundamental role and value of imaging to provide timely, accurate and actionable diagnostic information regarding a patient’s medical condition.

**LEARNING GOALS**

At the completion of the course the student will be able to: describe the spectrum of diagnostic imaging (e.g., ultrasound, CT, MR, nuclear medicine, angiography, conventional radiology) and diagnostic and therapeutic image-guided interventional techniques; appreciate the fundamental role and value of imaging to provide timely, accurate and actionable diagnostic information regarding a patient’s medical condition; utilize criteria’s to determine the most effective and appropriate imaging studies for common clinical problems.

**SUBJECT TOPICS**

|  |  |  |
| --- | --- | --- |
| № | Subjects of the practical lessons | hours |
| 1 | Introduction to Radiology. Technology of radiological diagnostic methods and its organization. Diagnostic criteria of imaging: sensibility, specificity, accuracy, positive prognostic value, negative prognostic value. Prevention methods from the harm of X-ray. | 2 |
| 2 | Discovery, nature and properties of X rays. X-ray diagnostic methods. Contrast imaging. | 2 |
| 3 | Computed tomography. Medical ultrasonography. Medical thermography | 2 |
| 4 | Magnetic resonance imaging. Radioisotope methods, PET and SPECT. Basics of interventional radiology | 2 |
| 5 | Diagnostic radiology of respiratory system organs. Radiological diagnostics of pulmonary inflammatory diseases | 2 |
| 6 | Diagnostic radiology of pulmonary tuberculosis | 2 |
| 7 | Diagnostic radiology of pulmonary tumors. Diseases of mediastinum and diaphragm | 2 |
| 8 | Diagnostic radiology of cardiovascular diseases. Congenital anomalies of the heart. | 2 |
| 9 | Acquired diseases of the cardiovascular diseases. Diseases of myocardium and pericardium. Diagnostic radiology of aortic diseases | 2 |
| 10 | Diagnostic radiology of digestive system. Diagnostics of esophageal and gastric diseases. | 2 |
| 11 | Diagnostic radiology of intestines and colon | 2 |
| 12 | Diagnostic radiology of hepatobiliary system | 2 |
| 13 | Diagnostic radiology of urogenital system and associated diseases | 2 |
| 14 | Diagnostic radiology of female reproductive system and associated diseases | 2 |
| 15 | Diagnostic radiology of musculoskeletal system and associated diseases | 3 |
| 16 | Diagnostic radiology of central nervous system, endocrine system and associated diseases | 3 |
| 17 | Diagnostic Radiology of the jaw and teeth | 2 |
| TOTAL | | 35 |

**SUBJECT LECTURE TOPICS:**

Lecture texts, electronic versions and sample tests on all subjects of the subject were prepared in electronic form and posted on the university website.

**Site address: amu.edu.az.**

The tests for this subject are compiled from these texts.

**SCHEME OF EXAMINATION**

Maximum marks for the exam are 100. 50 marks - before the exam

Including:

10 marks - attendance

10 marks – free works

10 marks - practical skills

20 marks - Internal Assessment - theory-25 marks.

50 marks - on the exam.

The exam will be by test method. The test will consist of 50 questions. Each question is one point. For incorrectly answered questions, the scores for correctly answered questions are deleted.

**NOTE:**

If the exam does not score at least 17 marks, the markswhere given before the exam will not be awarded. All marks are summed and the final total is estimated as:

A- "Excellent" -91-100

B- "Very good" -81-90

C- "Good" -71-80

D- "Satisfactory " -61-70

E- "Sufficient" -51-60

F- "Unsatisfatory" - less than 51 marks

**Free works**

During the semester, 10 free works should be done. Each work is estimated with 1 point.

Free work should be in writing, in the form of a text file, 1-2 pages (font 12).

Each student will create a 5-10minute Power point presentation to present to the class. The presentation should include the clinical case, differential diagnostic considerations, recommended imaging workup, potential complications, contraindications, relative cost, and relative radiation dose of the imaging involved. Imaging examples of the pathologic disease process should be included.

Plagiarism is unacceptable.

**FREE WORKS TOPICS AND LAST DATE OF ISSUES**

|  |  |  |
| --- | --- | --- |
| № | TOPICS | LAST DATE |
| 1 | X-ray diagnostic methods | 4th week |
| 2 | Modern diagnostic methods | 5th week |
| 3 | Diagnostic radiology of respiratory system | 6th week |
| 4 | Diagnostic radiology of cardiovascular system | 7th week |
| 5 | Diagnostic radiology of digestive system | 8th week |
| 6 | Diagnostic radiology of hepatobiliary system | 9th week |
| 7 | Diagnostic radiology of urogenital system | 10th week |
| 8 | Diagnostic radiology of bone disease | 11th week |
| 9 | Diagnostic radiology of nervous disease | 12th week |
| 10 | Diagnostic radiology of endocrinology disease | 13th week |

The marks for free works are noted in the journal.

**Books for study**

1. Baxşıyev B.Ə. Şüa diaqnostikası (dərslik). Bakı, 2012
2. Линденбратен Л.Д., Королюк И.П. Медицинская радиология. М., 2000
3. Труфанов Г.Е.Лучевая диагностика и лучевая терапия. М., 2007
4. Roberts G.M. Clinicalradiologyfor medical students. Reed educational and Professional Publishing. LTD, 2008
5. Paul Suetens Fundamentals of Medical Imaging Cambridge,2009

**COURSE WORK**

There is no course work in this subject/

**EXPERIENCE**

There is no practical experience in this course.