UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Diagnostica per Immagini e Radioterapia

2627-4-H4101D020

Aims

The aim of the course is to provide the student with the basic notions relating to diagnostic imaging techniques and the pharmacology of diagnostic agents for imaging; it also provides the theoretical and practical knowledge necessary for the correct prescription of diagnostic imaging tests and related interpretation of the reports, as well as for the indications and for the fundamental radiation treatment schemes of the most frequent neoplastic diseases.

1. Knowledge and understanding
   The student shall:

- know the basic physical principles of the main imaging techniques
- understand the clinical indications of radiological, nuclear medicine, and radiotherapy methods
- acquire general knowledge of the main clinical applications

2. Applying knowledge and understanding
   The student will be able to:

- identify the most appropriate imaging method
- provide a general interpretation of imaging findings
- understand the role of diagnostic imaging in clinical pathways

3. Making judgements
   The student shall:

- assess the benefits and risks of the different methods
- consider aspects of appropriateness and radiation protection
- develop a critical approach to requesting diagnostic examinations

4. Communication skills
   The student will be able to:

- use appropriate medical terminology in the field of radiology
- correctly communicate basic indications and results
- interact with diagnostic imaging specialists

5. Learning skills
   The student shall:

- develop the ability to update knowledge independently
- consult and understand review articles
- integrate theoretical and clinical knowledge

Contents

IMAGE DIAGNOSTICS INSTRUMENTATION
PHARMACOLOGY OF DIAGNOSTIC MEDICINAL PRODUCTS
DIAGNOSTIC IMAGING
RADIOTHERAPY AND RADIOMETABOLIC THERAPY
RADIOBIOLOGY AND RADIATION PROTECTION

Detailed program

For the detailed program, refer to the individual modules

Prerequisites

Propedeuticity: Exam of General Pathology and Immunology.
Futhermore: Basic knowledge on Physics, Chemistry, Physiology and Anatomy.

Teaching form

The course includes 3 lesson modules in didactic teaching mode (Image diagnostics and radiotherapy; Bioengineering B and Applied medical technical sciences A) and small group exercise modules in interactive mode (Bioengineering A and Applied Medical technical sciences B). During the exercises, students are involved in the discussion and interpretation of specific clinical cases

Textbook and teaching resource

Suggested textbooks

1. R. Passariello - G. Simonetti: “Compendio di Radiologia: con 2172 figure a colori e b/n e 41 tabelle” Ed. Idelson-

Gnocchi 2010.

2. P. Torricelli e M. Zompatori: "Manuale di Diagnostica per Immagini: per il corso di laurea in Medicina e Chirurgia" Ed. Esculapio 2016.

3. G. Cittadini: "Diagnostica per immagini e Radioterapia" Ed. Edra 2015

4. Perez & Brady: "Principles and Practice of Radiation Oncology" 2013

5. Lecture notes of Nuclear Medicine lessons

Semester

Second semester

Assessment method

The exam takes place with questions on the topics covered in the modules: written test consisting of 30 multiple choice questions of which only one is correct (1 point for each correct answer) and subsequent oral exam, aimed at verifying the knowledge and skills acquired.
The student can access the oral exam only after passing the written test (minimum score 18/30). There are no ongoing tests planned.

Office hours

By appointment, by e-mail contact
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Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY