UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Diagnostic Imaging Techniques II

2324-2-I0303D008

Aims

The student will have to understand the main characteristics and technical basis of Computed Tomography and angiography and the principal clinical indications for body CT, neuro CT and angio CT. He/she will have to gain a solid radiological anatomy knowledge, skills about image acquisition, reconstruction, processing, visualization and storage procedures in diagnostic neuro, body and angio CT protocols. Lastly, he/she will have to gain skills about the definition of CT normality and pathology for organs and anatomical structures discussed during the course.

Contents

The course aims to provide students with theoretical knowledge, techniques and practices of Computed Tomography and Angiography for the study of different organs and systems.

Detailed program

- Main components and technical bases of Computed Tomography
- Main components and technical bases of angiography
- Image acquisition procedures
- Analytic and iterative reconstruction algorithms
- CT image quality and artifacts
- Main clinical indications to CT and angiographic exams
- Radiological anatomy
- Thorax and abdomen CT: introduction, indications, normal and pathologic findings
- Neuroradiological CT semeiotics: institutions of neuroradiological and semeiotic CT anatomy in main pathological areas

- Diagnostic protocols in CT and neuro-angiography
- Angiography: anatomy, pathology
- Introduction to interventional procedures

Prerequisites

Diagnostic Imaging Techniques I

Teaching form

Lessons

Textbook and teaching resource

“Tecniche di Tomografia Computerizzata e Risonanza Magnetica”, Cei Luigi, Ed. Universo.

"Manuale di TC per TSRM" (a cura di R.Glìlfieri, R.Trenti, A.G.Maccione) - Poletto Editore.

“Lezioni di neuroradiologia”, Bozzao, Colonnese, Pantano; Ed: Società Editrice Esculapio, 2019.

Didactic material provided by teachers

Semester

First semester

Assessment method

Written and oral exam.
The written test will consist of:
• 3 open questions on CT and Angiographic equipment
• 3 open questions on Construction and Processing of CT and Angiographic Images
• 31 multiple choice questions on Angiographic Techniques
• 2 open questions on Neuroradiological CT Semeiotics
The oral test will concern the CT Diagnostic Techniques and the Chest and Abdomen CT Semeiotics modules.
The overall evaluation will be expressed in thirtieths.

Office hours

By appointment required by mail

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING