



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Mri Diagnostic Techniques

2425-2-I0303D035-I0303D055M

Aims

At the end of the study course the student must achieve the following objectives:

- knowledge of the physical principles applied to Magnetic Resonance imaging;
- knowledge of radiological anatomy in order to correctly set up the diagnostic examination;
- ability to critically analyze the main clinical indications for body and joint examinations;
- ability to understand and choose the correct coils, sequences and contrast agents useful for setting up diagnostic protocols in body Magnetic Resonance;
- knowledge of the main basic and special MRI acquisition protocols and techniques of the body district;
- knowledge of angiographic sequences without and with the use of contrast medium.

Contents

The course aims to provide students with basic knowledge of physical principles, radiological anatomy, diagnostic protocols, sequences and techniques of Magnetic Resonance body.

Detailed program

- Elements of genesis and spatial coding of the signal in MRI, management of intrinsic and extrinsic parameters;
- Classification of coils for the study of the body and joint district;
- Classification and analysis of the characteristics of basic sequences, fast sequences and special sequences applied to body and joint MRI studies;
- Use and management of body angiographic sequences without and with contrast medium;

- Diagnostic protocols for the MRI study of the neck, lung and mediastinum, heart, breast, upper abdomen, lower abdomen and pelvis, musculoskeletal structures;
-Outline of general and flow semiotics in body MRI studies.

Prerequisites

Diagnostic Imaging Techniques I

Teaching form

4 practical lessons of 2 hours carried out in attendance

Textbook and teaching resource

1- RM ADDOMINALE. PARTE GENERALE- Stefano Colagrande e Pasquale Paolantonio. Poletto Editore (2014).
2- TECNICHE DI TOMOGRAFIA COMPUTERIZZATA E DI RISONANZA MAGNETICA- Cei Luigi. Società Editrice Universo (2011).

The teachers will provide other educational materials

Semester

Second semester

Assessment method

Monza

Oral interview to evaluate preparation on the exam program, the ability to organize knowledge and communication skills in a disciplinary context.

Bergamo

Multiple choice questions and open questions to evaluate preparation on the exam programme, the ability to organize knowledge and communication skills in a disciplinary context. Possible additional oral interview if requested by the teacher or the student.

Office hours

By appointment required by mail

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION
