



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Mri Diagnostic Techniques

2021-2-I0303D035-I0303D055M

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#### Aims

At the end of the course the student will have to 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 media useful for setting the diagnostic protocols in Magnetic Resonance body;
- Knowledge of the main protocols and techniques of basic and special MRI acquisitions of the body district;
- Knowledge of angiographic sequences without and with the use of the 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 MRI signal, management of intrinsic and extrinsic parameters;
- Classification of coils for the study of the body and joint district;
- Classification and characteristics analysis of the basic, fast and special sequences, applied to the RM body and joint study;
- Use and management of body angiographic sequences without and with contrast medium;
- Diagnostic MRI protocols of neck, lung, mediastinum, heart, breast, upper abdomen, lower abdomen and pelvis, musculoskeletal structures;
- General semeiotics in MRI body studies.

## **Prerequisites**

Diagnostic Imaging Techniques I

## **Teaching form**

Exercises

## **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**

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Oral examination

## **Office hours**

By appointment required by mail

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