

## COURSE SYLLABUS

### Mri Diagnostic Techniques

2526-2-I0303D035-I0303D055M

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#### 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 the ability to properly use the technical language.

### **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

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