



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Mri and Ultrasonography Instruments

2425-2-I0303D035-I0303D051M

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#### Aims

Students are expected to acquire basic knowledge on MR physics and Ultrasonography

#### Contents

The module aims to provide the student with the basic notions relating to the technical characteristics of Magnetic Resonance and Ultrasonography

#### Detailed program

Magnetic Resonance Imaging:

- Technical characteristics of MRI equipment (static magnetic field magnets, gradient coils, RF coils, Faraday cage, magnetic shielding)
- Security in MRI

Ultrasonography:

- Technical characteristics and operating principles of ultrasound probes
- Acquisition of ultrasound images in b-mode
- Doppler acquisition techniques (spectrum Doppler, color Doppler, power Doppler)

## **Prerequisites**

Diagnostic Imaging Techniques I

## **Teaching form**

4 frontal lessons of 2 hours carried out in attendance

## **Textbook and teaching resource**

“Elementi di Risonanza Magnetica: Dal protone alle sequenze per le principali applicazioni diagnostiche” a cura di Mario Coriasco, Osvaldo Rampado, Gianni Boris Bradac. Edizioni Springer

The teachers will provide other educational materials

## **Semester**

Second semester

## **Assessment method**

### **Monza**

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.

### **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. Any additional oral interview if requested by the teacher or student.

## **Office hours**

By appointment required by mail

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION

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