



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Imaging Medico

2425-1-113R-13

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#### Title

Medical imaging

#### Teacher(s)

Prof. Marco Paganoni, Dr. Marco Pizzichemi, Prof. Laura Sironi, Dr. Luca Presotto

#### Language

English

#### Short description

The aim of the course is to present the status of the art of advanced Medical Imaging methodologies, both from hardware and software points of view.

The main subjects of lectures will be:

1. Introduction to PET, CT and Multimodal Imaging
2. Introduction to image reconstruction techniques applied to tomographic imaging to minimize noise (bayesian and non-bayesian statistical priors, convolutional neural networks)
3. Use of Artificial Intelligence for disease detection, classification and prognosis

4. Introduction to Digital Pathology (image acquisition through whole-slide scanners; artificial intelligence-based algorithms for image analysis; morphology and texture features for diagnosis and prognosis; clinical applications)

### **CFU / Hours**

2 CFU/ 16 hours

### **Teaching period**

II semester (April-May)

### **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY | DECENT WORK AND ECONOMIC GROWTH | INDUSTRY, INNOVATION AND INFRASTRUCTURE | REDUCED INEQUALITIES | SUSTAINABLE CITIES AND COMMUNITIES

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