



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Formazione ed Elaborazione delle Immagini Tc e Angiografiche

2021-2-I0303D008-I0303D037M

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#### Aims

The student will have to gain and prove skills about image reconstruction, visualization and processing in CT and angiographic protocols.

#### Contents

The course aims to provide students with theoretical knowledge, techniques and practices about reconstruction, visualization and post-processing of Computed Tomography and Angiography images for the study of different organs or systems.

#### Detailed program

- Analytical and iterative reconstruction algorithms
- Visualization techniques: MPR, MIP, Surface Rendering, Volume Rendering
- CT image quality and artefacts
- Image processing techniques: spatial filtering, segmentation, registration, fusion, feature extraction

## **Prerequisites**

Diagnostic Imaging Techniques I

## **Teaching form**

During Covid-19 emergency period, exercises will take place remotely in asynchronous mode, with some synchronous events via videoconference.

## **Textbook and teaching resource**

Teaching material provided by the teacher.

“Tecniche di Tomografia Computerizzata e Risonanza Magnetica”, Cei Luigi, Ed. Universo.

## **Semester**

First semester

## **Assessment method**

In the Covid-19 emergency period, exams will only be telematic and will be carried out using the WebEx platform and a proctoring system. The course exam consists of 3 open questions aimed at verifying the student's knowledge in 3 of the macro-areas of the course, i.e. reconstruction of CT images, visualization techniques, image quality, spatial filtering, segmentation, registration and semi-automatic quantification. Each question is given a score between 0 and 10. Laude is assigned in case of particularly deserving tests.

## **Office hours**

By appointment required by mail

