UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Formazione ed Elaborazione delle Immagini Tc e Angiografiche

2122-2-I0303D008-I0303D037M

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