UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Modelling

2122-1-H4102D004-H4102D011M

Aims

The objective of the module is to enable students to acquire and deepen their knowledge about human modelling techniques starting from diagnostic images and 3D scanning systems up to 3D printing of body parts and organs.

Contents

The module contents concern: i) techniques and tools to create and use 3D geometric model of human body and anatomical districts at different level of details; ii) simulation techniques; ii) technologies for the 3D printing of anatomical districts and organs.

Detailed program

LECTURES SESSIONS
The course includes the following topics:

- Systems for the human body acquisition (3D scanners);
- Devices for motion capture;
- Generation of the geometric models of the human body, anatomical districts and organs from medical images (e.g. from TC or MRN) and 3D scanners;
- Numerical simulation and devices for Virtual amd Augmented Reality;
- Technologies and materials for 3D printing for medicine;

-

LABORATORY SESSIONS

Laboratory sessions are programmed in order to guide the student in the direct experimentation and use of SW packages for 3D anatomical districts acquisition and 3D modeling of human body and/or its parts starting from medical images and 3D scanning.

Prerequisites

None.

Teaching form

-
-

During the COVID-19 restrictions the lessons will be recorded and available online, with some live events that will be planned and communicated on e-learning.

Textbook and teaching resource

Lectures Slides

Semester

I semester

Assessment method

-
-

During the COVID-19 emergency, the exam will be exclusively oral through a dedicated platform. Students will be sent the link to access the virtual classroom. Any changes to the exam procedures will be communicated immediately to the students via email.

Office hours

Thursday, h. 14.30