UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Modeling and Simulation I

2021-4-H4102D027-H4102D096M

Aims

To provide the concepts necessary for understanding modeling and simulation tools for the cardiovascular system.

Contents

The clerkship will cover the most important aspects related to theoretical models of cardiovascular fluid mechanics. Students will acquire the basic knowledge required to investigate blood flow distribution and the role of physical parameters in cardiovascular function.

Detailed program

1) Simplified theoretical models of cardiovascular fluid mechanics.

2) Boundary conditions and physical properties of biological tissues.

3) Practical use of software simulator for blood and cardiac flow.

Prerequisites

Basic knowledge of fundamentals of physiology of the cardiovascular system and computer science.

Teaching form

Teaching of basic concepts of theoretical models and cardiovascular fluid mechanics, practical demonstration on the use of theoretical models and software tools.

Textbook and teaching resource

to be defined

Semester

First Semester

Assessment method

Practical skills observation both in the ward and in the operating room and rating scale assessment

Office hours

Contact by e-mail