UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Physics

2122-1-I0201D129-I0201D186M

Aims

KINEMATICS: The student must be able to: - Describe the physical laws of linear and parabolic motion. - Describe the laws of statics of rigid bodies - Describe the law of conservation of mechanical energy.

Contents

After the module the student will be able to accurately describe the movement of the joints of the human body segments using the appropriate vocabulary. The course aims at developing the students' knowledge of structure and function of the human body and its systems, with particular attention to the morphofunctional aspects of the musculoskeletal system, to develop the student's knowledge of the morphology of the bones, muscles and joints of the human body, their mutual relations and their function, biomechanics and kinesiology of the joint. The student will be able to make appropriate use of terms that identify the reference planes and the parameters that describe the movement kinesiology.

Detailed program

KINEMATICS:

- Vectors and scalars - Kinematics of a particle - Parabolic motion. - Forces and dynamics. - Weight and elastic Forces. - Work - Kinetic energy. - Potential energy and conservation of mechanical energy. - Statics of rigid bodies with application to the human body - Levers and Applications.

Prerequisites

Basic knowledge in elementary mathematics

Teaching form

Lessons in attendance, subject to any ministerial changes following the COVID pandemic situation

Textbook and teaching resource

CINEMATICA: - D. Scannicchio, Esercizi e problemi di Fisica, Edizioni Unicopli - D. Scannicchio, Fisica Biomedica, EDISES

Semester

First semester

Assessment method

Written examination with numerical open questions.

Office hours

By appointment