UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Anatomy and Kinesiology

2425-1-I0201D129

Aims

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.

The module aims to allow the knowledge and learning of the basic elements of physics and biomechanics as a function of the ability to understand and analyze the movement of the human body, integrating the knowledge of anatomy and physiology of the nervous system and the knowledge of anatomy and physiology of the osteo-myo-articular system. Analyze the anatomy and function of the spine and limbs. Describe normal standing and sitting posture and locomotion. Advanced knowledge of the physiology of the osteo-myo-articular system (muscle contraction, analysis of physiological characteristics).

The module aims to Understand the morphological, biochemical, physiological, and social factors that contribute to determining individuals' health status, including from a gender perspective.

Contents

The topics of the course include the notions of anatomy, kinesiology and biomechanics of the axial and appendicular skeletal joints. Particular attention will be paid to the action of the individual muscles or muscle groups responsible for the different modes of movement for each individual joint, whose degrees of freedom, joint widths, factors limiting movements and position of function will be assessed. The main muscle functions will be specified so that the different movements can take place and those that oppose them (antagonist muscles), contribute to movement (synergistic muscles) or limit the action of a component of the agonist muscle (neutralizing muscles).

Each single module is described in its own reference syllabus

Detailed program

The detailed program is described within each individual module.

Will be presented:

- Anatomy of the locomotor system
- Introduction to Kinesiology 1 & 2
- Kinesiology 1 & 2

Prerequisites

Teaching form

Lessons in attendance

Textbook and teaching resource

Slides presented during the lessons

Bibliography present in the syllabus of each single module

Semester

First semester

Assessment method

The assessment and evaluation of learning consist of a structured exam that includes:

- Multiple-choice questions: Each question has only one correct answer, except where stated otherwise, allowing for more than one correct answer.
- Open-ended questions: These questions have a predefined response space. The answers will be evaluated based on their correctness and coherence with the required query.
  The total points will be divided based on the number of questions present. An oral exam is also expected, with its format to be described by the instructor. The duration of the written exam is 2 hours and 20 minutes.

No interim assessments are planned.

Office hours

By appointment

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING