

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

# SYLLABUS DEL CORSO

# Introduzione alla Cinesiologia 2

2425-1-I0201D129-I0201D108M

# Aims

- · know the basic principles of kinesiology
- know the basic principles of muscle kinesiology
- know the movement system and its components
- · know the rudiments of the clinical implications of muscular component dysfunctions

### Contents

### **Detailed program**

When and how to use it?

- The movement system and its components
- Dysfunctions of the muscular component: Weakness Changes associated with length Increased-reduced length
- · Dissociated changes in synergists Muscle stiffness
- Muscle physiology Muscle structure: an overview, from macroscopic to microscopic
- The physiology of contraction: outline of the three types of muscle fibres: Type 1 Type 2 type 2b
- Muscle recruitment Central and peripheral fatigue The motor unit
- Classification of muscles Local/global stabilizers global mobilizers
- Types of contraction: isometric-isotonic-concentric-eccentricisokinetic-auxotonic-plyometric
- Definition of muscular work, power, resistance. Muscle tone/trophism
- Clinical implications of muscle component dysfunctions
- · Strength and stretching: between myths and reality
- Abdominal and clichés

# Prerequisites

Basic concepts of Kinesiology

# **Teaching form**

Frontal teaching

### Textbook and teaching resource

handouts

#### Semester

1st semester

#### **Assessment method**

Test: multiple choice, open-ended questions. Weighted number of questions compared to those of the other integrated teaching modules

### **Office hours**

By appointment

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY