



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Robotica ed Informatica in Riabilitazione

2021-2-I0201D136-I0201D132M

---

#### Aims

- know and understand the use of new available technologies for rehabilitation

#### Contents

#### Detailed program

- robotics in physiscal therapy: principles and rationale
- systems for data collection and data analysis
- robotic deveices (upper and lower limb)
- virtual reality

- efficacy and limitation of the robotic rehabilitation

## **Prerequisites**

## **Teaching form**

during the Covid-19 emergency period, lessons will take place remotely asynchronously with synchronous videoconferencing events

## **Textbook and teaching resource**

**Swinnen E, Beckwée D, Meeusen R, Baeyens JP, Kerckhofs E. Does robot-assisted gait rehabilitation improve balance in stroke patients? A systematic review. Top Stroke Rehabil. 2014 Mar-Apr;21(2):87-100**

**Krebs HI, Hogan N. Robotic therapy: the tipping point. Am J Phys Med Rehabil. 2012 Nov;91(11 Suppl 3):S290-7**

**Krebs HI. Robotic technology and physical medicine and rehabilitation. Eur J Phys Rehabil Med. 2012 Jun;48(2):319-2**

**Lewis GN, Rosie JA. Virtual reality games for movement rehabilitation in neurological conditions: how do we meet the needs and expectations of the users? Disability and Rehabil.**

**2012 ;34(22):1880-6.**

## **Semester**

1st semester

## **Assessment method**

During the Covid-19 emergency period, oral exams will only be online. They will be carried out using the WebEx platform and on the e-learning page of the course there will be a public link for access to the examination of possible virtual spectators.

## **Office hours**

By appointment

---