UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# SYLLABUS DEL CORSO

# Exploring the mind-brain relationship: Theory and Practice in FMRI studies

**2526-127R-12**

## Title

EXPLORING THE MIND-BRAIN RELATIONSHIP: THEORY AND PRACTICE IN fMRI STUDIES

## Teacher(s)

Eraldo Paulesu/Marco Tettamanti/Lucia Sacheli/Laura Zapparoli

## Language

English

## Short description

The course aims to introduce the technique of functional magnetic resonance imaging (fMRI) starting from the fundamentals to the understanding of procedures for designing, analyzing, and interpreting fMRI experiments in normal subjects and/or in neurological or psychiatric patients. After an initial theoretical introduction to the principles of anatomo-behavioral inference, students will learn how to quantitatively assess the previous literature on their area of interest. In the next lectures, the following topics will be illustrated: the biophysical principles underlying the measurement of the fMRI signal; the procedures to maximize the measured signal in relation to the experimental

design; different types of experimental design and related statistical analyses. The subsequent sessions will be focused on the "hands-on" component, covering analytical procedures on individual cases, group studies, up to the interpretation of results, and finally, the design of new experiments and how to present them in a funding request.

See the detailed programme and schedule on the course homepage.

## CFU / Hours

2CFU/16h

## Teaching period

See the Calendar

## Sustainable Development Goals