UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Neuro-functional Basis of Cognitive and Affective Processes

2122-2-F5105P012-F5105P014M

Learning area

Applied Experimental Psychological Sciences

Learning objectives

Knowledge and understanding

. Knowing the cognitive, neurobiological and functional bases of social and affective mental processes.

. Understanding the genesis and dynamics of alterations and disorders of cognitive, communicative, emotional-motivational and social activity

Applying knowledge and understanding

• Acquisition of the ability to apply the acquired knowledge in order to design and carry out empirical studies in the field of social and affective neuroscience.

• Acquisition of the ability to apply the acquired knowledge in order to personally design and carry out clinical interventions focused on specific patients with socio-affective disorders.

Contents

This course provides essential knowledge concerning the main cognitive models and the neurophysiological bases of social and emotional-motivational processes in humans, in order to promote the understanding of socio-emotional and behavioral functions, both in healthy people and patients with specific social or affective disorders.

Detailed program

Perception of causality, biological motion and animacy
Mentalization
Face and gaze perception
Social attention and gaze following
Attentional biases towards social and emotional stimuli.
Embodied cognition
Neural bases of social cognition and self-referential processes
Default mode network
Conscience: free will and forensic neurosciences
Mirror neurons, empathy, intention understanding, Autism
Faces and gestures coding, the Affective and Emotional Brain
Sex differences in social cognition
Action Coding: Neuroscience of dance and movement
Audio-visuomotor neurons and multimodal coding
Neuroscience of music and Neuroaesthetics

Prerequisites

This course requires a basic knowledge of anatomy and physiology of the nervous system and its cognitive functions.

The understanding of textbook and scientific article in English.

Teaching methods

Frontal lessons with slides and audio/video presentations. Presentation and discussion of ongoing data and research articles.

Lessons will be held in presence, unless further COVID-19 related restrictions are imposed.

Assessment methods

Written exam with an oral interview on demand (either by the student or by the lecturers). The written examination

consists of open questions on textbooks and handouts of the lectures.

Textbooks and Reading Materials

- Boggio, P. and Wingerbach, T., Eds. (2021). "Social and Affective Neuroscience of Everyday Human Interaction: from theory to methodologyy". Springer Verlach Foreword by RALPH ADOLPHS. (**Chapters 4, 5, 12** authored by Alice Mado Proverbio).

- Gazzaniga M.S., Ivry R.B., & Mangun G.R. (2019). Cognitive Neuroscience. New York: Norton (**Chapters 13 &14**).

Scientific papers/chapters will be provided during the course and uploaded on the appropriate E-learning web page.