UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Social Cognitive and Affective Neurosciences

2223-1-F5104P047

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

1. Perception of causality, biological motion and animacy
2. Mentalization
3. Face and gaze perception
4. Social attention and gaze following
5. Attentional biases towards social and emotional stimuli.
6. Embodied cognition
7. Mirror neurons, empathy, intention understanding, Autism
8. Pathological and atypical aspects of social cognition
9. Neural bases of social cognition and self-referential processes
10. Default mode network
11. Conscience: free will and forensic neurosciences
12. Faces and gestures coding, the Affective and Emotional Brain
13. Sex differences in social cognition
14. Action Coding: Neuroscience of dance and movement
15. Audio-visuomotor neurons and multimodal coding
16. 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.

Assessment methods

The exam is written and devided in two parts, one concerning the first module (see assessment method of Cognitive Foundation of Cognitive and Affective Processes) and the other one concerning the second module (see assessment method of Neuro-Functional Basis of Cognitive and Affective Processes). The exam papers for both modules altogether will give to the students at the same time and they will have a to complete all the parts.

The final mark of the couse is an avarage of the marks obtained in both modules and it will be notified on the same day. The student can then decide to integrate it with an oral examination (optional) straight after they have been notified the final mark.

Textbooks and Reading Materials

Ward, J. (2012). The Student's Guide to Social Neuroscience. Hove and New York: Psychological Press. (cap. 5, 6). (Prof. Ricciardelli)

(Prof. Proverbio) From the handbook (online & open access) “Social and Affective Neuroscience of Everyday Human Interaction - From Theory to Methodology”, Springer Nature, Boggio et al. (2022).
Part 2. Social Neuroscience and Moral Emotions
Chapter 5. AM Proverbio, A Zani Mirror neurons in actions…ERP and neuroimaging evidences
Chapter 6: AM Proverbio Sex differences in social cognition
Part 4. Methods used in Social and Affective Neuroscience
Chapter 12: AM Proverbio EEG and ERPs in the study of Language and Social Knowledge

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

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

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | GENDER EQUALITY