UNIVERSITÀ CATTOLICA del Sacro Cuore

Neuropsychological Foundations of Inclusive Education

PROF. CINZIA DI DIO

COURSE DESCRIPTION

This course offers an interdisciplinary introduction to the neuropsychological principles underlying inclusive education. Drawing from developmental neuroscience, neuropsychology, and education sciences, it explores the role of the nervous system in shaping human behavior, learning capacities, and relational competencies. Special focus is given to the neural foundations of reflexivity, resilience, and self-determination - constructs that support personal agency and social inclusion across the lifespan.

The course is designed to help students critically connect neurobiological mechanisms with inclusive educational practices. Through analysis of brain structures and functions (e.g., neurons, signal transmission, sensorimotor integration, mirror systems), students will gain insight into how individuals perceive, interact, and grow within diverse learning environments. The course emphasizes the development of relational assets (e.g., empathy, emotional understanding, executive functioning) and supports the recognition of learners' individual profiles to foster equity and participation.

PREREQUISITES

A basic background in psychology or education is helpful, but not required. The course is accessible to students from multiple disciplines interested in inclusive education.

METHOD OF TEACHING

- Lectures with audiovisual support
- Case-based analysis and examples from inclusive educational contexts
- Neuroeducational readings and reflective assignments

COURSE REQUIREMENTS

- Active participation in class debates and discussions
- Assigned readings to be completed before selected classes
- Final exam (written test with open questions)
- Written reflection on a selected theme related to inclusive education and neuroscience

CREDITS

5 ECTS (30 CONTACT HOURS)

GRADING

Class participation: 20%
Written assignment: 30%
Final exam: 50%

COURSE READINGS AND MATERIALS

Readings and audiovisual materials will be made available via Blackboard. Lecture slides and additional scientific articles will also be provided throughout the course.

INSTRUCTOR BIO

Cinzia Di Dio is an Associate Professor of Developmental Psychology at Università Cattolica del Sacro Cuore. Her research focuses on social cognition and decision-making processes in humans and in human–robot interactions across the lifespan. She has extensive experience in interdisciplinary research bridging

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psychology and neuroscience, as well as in educational projects involving vulnerable populations and innovative technologies such as robotics and AI.

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