

Credits: 6

Code: M-PED/03 Matter: Education and neuroscience Main language of instruction: Italian Other language of instruction: English

Teaching Staff

<u>Head instructor</u> Prof. Francesco Peluso Cassese - francesco.peluso@unicusano.it Dr. Stefania Morsanuto - stefania.morsanuto@unicusano.it

Introduction.

This course represents an interesting contribution of neurosciences to the recent studies in the field of education through which, today, we know that the brain makes the reality of the past and weaves a tapestry that combines feelings, information and experiences. Feelings, knowledge and experiences are the subject of historical debate on the connection between body and mind. The whole body-mind, in its fascinating complexity, not to suppose that there are single-discipline studies, thorough exhaustive and rigorous, can provide a comprehensive model of its cerebral operation and its use. The mind, in fact, can be defined as a process – rather than as a structure - and this mind – processes building as shared construction (co-construction) with other minds. It follows that biological and psychological events are linked in a relationship of circular causality, which is hardly possible to identify a primary determinant.

Objectives.

In this perspective, the body assumes a meaning and a educational determinant value. On the bases of these presuppositions envisaging an interdisciplinary relationship between Neurosciences and Didactic, there seems to be the new epistemic horizon through which to explore this circular reaction of body and mind. Neurosciences offer a new prospective to the study of brain activities separated from emotions such as traditional philosophy has supported, but they open up to a new set of analysis creating a fruitful subject, Neuro-Didactic, where education becomes the promotion of human evolution. Therefore, the aim of this study is to investigate how the meta category Neuro-Didactic can rise to the interpretative



mind-body relationship and, at the same time, encourage the growth of a Being who feels with his mind's eye speaking of the heart.

Competencies:

- To understand and know how to use neurodidactic instruments.
- To know how neurodidactic function in education.
- To know and understand the neurodidactic and be able to apply it to practical cases.
- To be able to work in another language and use terminology and structures related to the neurodidactic.
- To acquire problem solving skills based on quantitative and qualitative information.
- To acquire in this area the abilities to solve problems and make decisions using relevant information, applying the appropriate methods and placing the problem within the organisation as a whole.
- To acquire the ability to relate concepts and carry out analytical exercises and their synthesis.
- To acquire skills for independent learning.
- To be able to create arguments which are conducive to critical and self-critical thinking.
- To acquire the ability to put knowledge into practice.

Syllabus

Subject I – origins of cognitive neuroscience.

Subject II - attentive process.

Subject III – memory.

Subject IV – learning.

Subject V – new perspectives of learning.

Subject VI – language.

Subject VII – Emotion and Didactic.

Subject VIII – Communication.

Evaluation system and criteria

The assessments of course is based on the following criteria:



Final exam (two types)

1) An objective test or multiple choice answers, the student should tick the right answer. The wrong answer will less $\frac{1}{2}$ right answer.

2) A written test, in which the student should choose 2 questions out of 4. That question will correspond to a specific point headings contained in the program of the sessions of the course. The evaluation of the written test will be determined by the degree of knowledge, training and legal rigor that is manifested in the response to the question and, not least, also assess the correction in the expression of legal language. The contents of the response are considered for qualification with explanations correspond mainly given by the professor during the lecture sessions, with regulatory support and case law indicated in these sessions. Also, consider the complement of learning with recommended reading. Each part of the exam will assess a 50% of the grade corresponding to the final exam.

Bibliography and resources

Objects published on the platform.

1. Recommended bibliography:

Ansari D., Christodoulou, J.A., Coch, D., et al., (2010). *Mind, Brain, and Education: Neuroscience Implications for the Classroom (The Leading Edge Series).* David Sousa editor.