UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Neurolinguistics

2122-1-F5104P012

Learning area

1. Psychological functioning: models and methods for assessment

Learning objectives

Knowledge and understanding

· genesis and dynamics of language impairments

· neural basis of language processing

· testing theoretical neuro- and psycholinguistic models through the observation of language impaired patients

Applying knowledge and understanding

· experimental testing of theoretical models of language processing

· application of functional neuroimaging techniques to the language processes

Contents

The course aims at providing advanced theoretical experience concerning the functional basis and the

neurobiology of language processing, through the study of patients suffering from language disorders after brain damage, and of functional and structural neuroimaging.

The course aims at the acquisition of the skills that are required to comprehend, read critically and employ scientific results in the neurolinguistic field, and to plan and carry out experiments in the field of neuropsychology of language.

Detailed program

Introduction:

? Functional anatomy of higher cognitive abilities and language

? Principles of neurology and methods of investigation

? History of the mind-body relation

? Foundations of linguistics and psycholinguistics

? Principles of neurolinguistics and of the diagnosis of aphasia

Language processing and its disorders after focal brain damage:

? Speech motor control and acquired impairments of speech

? Models of lexical processing and acquired lexical impairments: category and grammatical class dissociations

? Acquired morpho-syntactic disorders

? Cognitive models of reading and acquired reading impairments

? Cognitive models of spelling and acquired spelling impairments

? Figurative language

? Language and the cerebellum

Specific forms (optic aphasia, word deafness, etc.)

Language deficits in low-grade gliomas

Language impairments in degenerative diseases:

? Language disorders in dementia

? Primary progressive aphasia

Verbal STM and language

Prerequisites

Basic knowledge is requested concerning anatomy and physiology of the central nervous system as well as neurofunctional organization of cognitive processes, as taught in the courses “Anatomo-physiological foundations of the psychic activity” and “Physiological psychology” (BA degree in Psychological sciences and techniques”). Further knowledge is requested concerning clinical diagnosis in neuropsychology, given in the “Neuropsychology” course.

Teaching methods

In addition to classroom lectures, part of the teaching will take place through the discussion of case studies, and exercises and discussions on clinical material.
The material (slides and, when possible, scientific articles) is made available on the e-learning site of the course.

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

The language will be Italian.

Assessment methods

The final assessment consists in an oral examination based on the topics of the course.

During the Covid-19 emergency, exams will be conducted according to the University’s regulations regarding the COVID-19 emergency situation.

Textbooks and Reading Materials

Basso A. (2005). *Conoscere e rieducare l’afasia*. Roma: Il Pensiero Scientifico.

Denes G., Pizzamiglio L. et al (a cura di) (2019) *Manuale di Neuropsicologia. Normalità e patologia dei processi cognitivi,* Zanichelli,Bologna; capitoli 1, 6, 7, 8, 9, 10, 11, 15, 16.