

Neurosciences and Wellbeing in the Lifespan

PROF. MICHELA BALCONI

COURSE AIMS

The aim of the course is to teach students certain theoretical and methodological aspects of neuropsychology and the neurosciences, studying both subjective and intersubjective wellbeing across the lifespan. More specifically, the main *emotional and cognitive processes* will be explored from the dual perspective of *empirical research* and analysis of *clinical-rehabilitation* contexts. Special attention will focus on studying psycho-physiological conditions and factors that help to maintain and reinforce wellbeing. The course will then focus on assessment and diagnostic procedures for studying neuropsychological deficits in stressful environments, as also the application of new *tools* (EEG, TMS, TDCS, neuro feedback, fNIRS) and *methods* for recovering emotional and cognitive functions throughout the lifespan.

COURSE CONTENT

The course will be divided into two separate parts. The first part of the course will look at the main issues related to *theoretical models* and neuroscientific methods associated with wellbeing, mainly focusing on supplementary neuroscientific approaches for clinics, laboratory research and field work. The various phases of research will be explored based on a study of *intervention protocols* related to subjective and intersubjective wellbeing, concentrating on psycho-physiological and neuro-psychological dynamics capable of defining the necessary conditions for maintaining and reinforcing functional adaptation. The second part of the course will take a more specific look at the relationship between the neurosciences and certain specific fields, such as the dynamics associated with cerebral plasticity, supporting optimum emotional behaviour, the supportive conditions of *social neuroscience* and *networking* during developmental age and adulthood, and supporting/reinforcing in physiological ageing. Both parts of the course will provide applications for *empirical* purposes (laboratory experiments) and *clinical neuropsychology* (studies of clinical cases), also thanks to the help of experts in the sector.

READING LIST

The reading list will be provided by the lecturer at lectures. There will be a supplementary reading list for students unable to attend the course.

TEACHING METHOD

The course will be taught in lectures, also discussing clinical cases based on clinical and research protocols and using audio-visual aids. Methodological aspects will be studied in greater depth during a special series of practical lessons about neuro-psychological and psychometric tools (neuropsychological tests), mainly focusing on clinical and rehabilitation neuropsychology. There will also be seminars held by experts in experimental and clinical neurosciences of wellbeing.

ASSESSMENT METHOD

Students will be assessed on two different levels:

- a written paper (based on research or clinical work) examining one of the topics studied during the course in greater depth. This level of evaluation will help verify the student's acquisition of skill in designing a research/intervention protocol;
- an oral test focusing on the specific subject matter of the lectures. This level of evaluation will help verify the student's acquisition of the principal clinical and research models and approaches in the neurosciences of wellbeing.

Students are advised to attend lectures and practical work.

NOTES

Further information can be found on the lecturer's webpage at <http://docenti.unicatt.it/web/searchByName.do?language=ENG>, or on the Faculty notice board.