

Master Program in Neuropsychology

Description

The Neuropsychology Master Program is an international program that prepares the students for research and clinical practice in the field of neuropsychology. The program focuses on the relationship between brain function, behaviour and psychological processes.

The curriculum combines in-depth courses about normal and abnormal cognitive functioning with fundamental research skills in the neurosciences. Students will learn to conduct empirical investigations using different scientific research methodologies and up-to-date technology to investigate topics in cognitive neuroscience. Students will also learn to interpret clinical cases using cognitive and neuropsychological theories, and to critically evaluate these theories.

The program is based on a collaboration between Dept of Psychology in Aalborg, Danish Neuroscience Center in Aarhus, Hammel Neurorehabilitation and Research Center, Unit for Cognitive Neuroscience, Copenhagen, and Center for Sensor-Motor Integration, Aalborg. Students will benefit from the scientific expertise in this network, as well as their international contacts, and will be allowed, and expected, to conduct their own experimental studies.

Mission

The mission of the program is to provide students with scientific, empirical, clinical and theoretical bases necessary to work in an academic, research and clinical environments as well as a wide range of alternative careers (for example: pharmacological industry often offers good job opportunities for cognitive neuropsychological researchers, human factors consultant, etc.).

The program is constructed on the basic understanding that experimental basic research, clinical research and practice, and conceptual/philosophical issues must be integrated to make progress in the endeavour to understand mental phenomena.

Knowledge

- ❖ Providing an advanced education in fundamental topics of cognitive neuropsychological theories
- ❖ Providing an advanced knowledge of appropriate neuropsychological research and assessment methods
- ❖ Providing a suitable foundation for graduate students wishing to continue to a program of further postgraduate study (PhD education)

Teaching Topics

Neurobiology and Psychopharmacology

Neurophysiology

Neuroanatomy

Research Methods and Statistics in Cognitive Neuropsychology

Neuroimaging Methods in Neuropsychology

Neuropsychological Assessment

Cognitive Neuroscience

Neuropsychological Disorders

Rehabilitation Neuropsychology
Developmental Neuropsychology
Neuropsychology of Aging
Brain Plasticity
Philosophy of Mind
Philosophy of Science

Teaching Methods

Lectures
Laboratory research classes
Group discussions
Tutorials

7 Semester

Higher Applied Neuropsychology

The objective of the course is to get a deeper understanding of core concepts in cognitive neuroscience and neuropsychology. The course has a modular bases with intensive lectures in selected coherent topics, such as: Higher neuroanatomy, physiology, biology and chemistry”; “Neural plasticity and neurorehabilitation”, “Mapping of cognitive functions using scanning methods”, “consciousness” and many others. From time to time external invited lectures will join the teaching modules.

8 Semester

Neuropsychological problems constitution: investigation and intervention

The objective of the course is based in identifying and assessing neuropsychological disorders and in creating possible interventions. The course has a modular bases with intensive lectures presenting practical “single cases” or syndromes, such as certain types of brain damages or psychiatric disorders.

Part of this semester is devoted to a practical internship.

9 Semester

Theory, Practice and Scientific Method

The objective of the course is to integrate the knowledge acquired along the previous semesters so that theory, practice and scientific method can be combined.

In this course students are expected to produce a scientific, publishable paper based on empirical data from the students’ own experiments. The students will be offered to carry out already-designed experiments or to design their own. The course is organized in seminars or mini workshops where

each of them corresponding to a step of students' project (Theory, Methods, Statistical Analyses, Presentation of the Results and Discussion).

The topic of the empirical investigation should be presented for teaching approval at the end of the 8th semester and consequently before the beginning of the 9th semester.

Internship

Internship may be clinical (typically neuropsychological testing and rehabilitation, psychiatric centers etc), research-oriented (in Aalborg, Aarhus, Copenhagen or abroad) or in some cases a combination of the two. At present, the internship may be placed at the 8th or 9th semester.

10 Semester

Master Thesis

This semester is devoted to work on the Master thesis. The students are asked to work on an empirical study in the thesis context. The students will be offered the opportunity to realize their work in higher international recognized research groups such as CNRU/MindLab in DNC (in Aarhus), SMI (in Aalborg), UCN and ReCBIR (in Copenhagen).

For further information you can contact:

Professor Morten Storm Overgaard: mortover@rm.dk - cnru.dk

Professor Jesper Mogensen: jesper.mogensen@psy.ku.dk - <http://ucn.psy.ku.dk>

Associate Professor Laura Petrini: lap@hst.aau.dk - <http://www.smi.auc.dk/lab/cphbm/>