

## Cognitive Neurosciences (H002001)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits** 5.0

**Study time** 150 h

**Contact hrs**

30.0h

**Course offerings and teaching methods in academic year 2022-2023**

A (semester 1)

English

Gent

microteaching

30.0h

**Lecturers in academic year 2022-2023**

Caspar, Emilie

PP02

lecturer-in-charge

Sahan, Muhammet Ikbal

PP02

co-lecturer

**Offered in the following programmes in 2022-2023**

[Master of Science in Psychology\(main subject Theoretical and Experimental Psychology\)](#)

**crdts**

5

**offering**

A

[Exchange Programme in Psychology](#)

5

A

**Teaching languages**

English

**Keywords**

neuroscientific methods, cognitive functions

**Position of the course**

Cognitive Neurosciences is a specialist course in the master Theoretical and Experimental Psychology. Building on the bachelor course Neuropsychology, the possibilities and limitations of the neuroscientific methods that are used to study cognitive functions are studied in further depth.

**Contents**

Depending on recent developments in the domain of cognitive neurosciences a number of themes will be selected, from the following research areas

- visual perception
- emotion
- cognitive control
- consciousness
- social cognition
- language
- numerical cognition
- memory

The themes will be studied against the background of different research methods:

- single-cell recording
- functional imaging (fMRI)
- electrophysiological measurements
- transcranial magnetic stimulation

Special attention will be given to the advantages and limitations of each of these techniques and to how these limitations are compensated by other techniques

**Initial competences**

This course unit builds on certain course competencies of Neuropsychology.

**Final competences**

- 1 Being able to critically evaluate findings in the cognitive neurosciences.
- 2 Being able to design empirical studies.
- 3 Being able to situate research findings in a multidisciplinary context.
- 4 Being able to independently process the relevant literature.

- 5 Knowing strengths and weaknesses of different research methods.
- 6 Being able to employ the strengths of a research method.

**Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

**Conditions for exam contract**

This course unit cannot be taken via an exam contract

**Teaching methods**

Microteaching

**Extra information on the teaching methods**

Students are divided in small groups. For each class, two research articles with opposed conclusions are used. In light of these articles each small group has to perform one of the following tasks:

- presentation of first paper - presentation of second paper
- discussion
- design a research proposal to solve the controversy

**Learning materials and price**

Selected literature. Cost: 10 EUR

**References**

- Baars, B. J., Gage, N. M. (2007). Cognition, brain and consciousness: Introduction to cognitive neuroscience. Elsevier.
- Gazzaniga, M. (2004). The cognitive neurosciences III. MIT Press.
- Ward, J. (2006). The student's guide to cognitive neuroscience. Psychology Press.

**Course content-related study coaching**

- \* Interactive support using Ufora.
- \* By appointment.

**Assessment moments**

end-of-term and continuous assessment

**Examination methods in case of periodic assessment during the first examination period**

Assignment

**Examination methods in case of periodic assessment during the second examination period**

Oral examination

**Examination methods in case of permanent assessment**

Assignment

**Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible in modified form

**Extra information on the examination methods**

Evaluation of tasks during seminars

For the non-periodical evaluation there is the possibility for an alternative exam in the second examination period. Description:

New task with oral presentation.

Feedback on the non-periodical evaluation:  
immediate feedback during seminars.

**Calculation of the examination mark**

A combination of periodic evaluation (8/20) and permanent evaluation (12/20).

Students who eschew one or more parts of the evaluation can no longer pass the course. Final scores will be reduced to the highest non-deliberative quotation (7/20) in case the final score is higher.