Cognitive Neuroscience

Single subject and programme course

6 credits

Kognitiv neurovetenskap

729G33

Valid from: 2018 Autumn semester

Determined by
The Quality Board at the Faculty of Arts and Sciences

Date determined
2017-10-20

Revision date
2018-02-28

Main field of study
Cognitive Science

Course level
First cycle

Advancement level
G1X

Entry requirements
For admission to the course, the specific entry requirements that apply for admission to the Bachelor's Programme in Cognitive Science must be satisfied and the course Introduction to Cognitive Science (6 ECTS Credits), or Cognitiv Psychology (6 ECTS Credits), or equivaltent, must have been completed with a passing grade.

Intended learning outcomes
After completion of the course, the student should be able to:

- Account for different methods used in cognitive neuroscience, including studies of neuropsychological patients, and with particular focus on brain imaging techniques (eg fMRI, MEG/TMS, EEG)
- Account for principles underlying neurostimulation (eg TMS, tDCS)
- Account for the development, structure and function of the brain and nervous system
- Account for and reflect critically on neuropsychological and neurobiological concepts in relation to cognition
- Account for the most common cognitive neuropsychological deviations
- Use basic brain imaging techniques (eg EEG)
- Apply knowledge about neuropsychology and neurobiology to cognitive functions with a critical approach
- Critically reflect on scientific literature in cognitive neuroscience.

Course content

The course deals with basic neuropsychology and neurobiology, and the structure of the brain and cognitive functions in eg perception, recognition, language, memory and problem solving, as well as the consequences of different deviations. The course also deals with the development, structure and function of the brain and nervous system, including neuroanatomy and neural communication. Furthermore, the course provides the conditions for making relevant connections between the brain structure and basic cognitive functions. A basic orientation is given in cognitive neuropsychology, including awareness of brain imaging techniques and the use of such techniques in order to study cognition, and partly to control computers (BCI, brain-computer interaction). An ethical approach in relation to neuroscience research is applied in all parts of the course.

Teaching and working methods

Laboratory work with brain imaging technology plays a central role. The course content is further processed through lectures and seminars. The student is also expected to work with self-studies, individually or in groups. The course may be given in English if necessary.

Examination

Examination takes place in the form of laboratory work, individual written examinations, and work where the presentation can be both oral and written. Detailed information can be found in the study guide.

Students failing an exam covering either the entire course or part of the course twice are entitled to have a new examiner appointed for the reexamination.

Students who have passed an examination may not retake it in order to improve their grades.

Grades

Three-grade scale, U, G, VG

Other information

Planning and implementation of a course must take its starting point in the wording of the syllabus. The course evaluation included in each course must therefore take up the question how well the course agrees with the syllabus.

The course is carried out in such a way that both men´s and women´s experience and knowledge is made visible and developed.

Department

Institutionen för beteendevetenskap och lärande