



Faculty of Social Sciences

PSYD53, Psychology: Cognitive Neuroscience, 30 credits

Psykologi: Kognitiv neurovetenskap, 30 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus is an old version, approved by Committee for Single Subject Courses at the Department of Psychology on 2020-04-08 and was valid from 2021-01-18, spring semester 2021.

General Information

The course is offered as a freestanding first cycle course and can be included in a Bachelor of Science degree in Psychology.

Main field of studies

Psychology

Depth of study relative to the degree requirements

G1N, First cycle, has only upper-secondary level entry requirements

Learning outcomes

On completion of the course, the student shall demonstrate

Knowledge and understanding

- knowledge about the structure and function of the brain
- knowledge about the structure of nerve cells and the principles of communication and change
- understanding of the development of the central nervous system and the factors that can affect brain development and change
- knowledge about the principles behind the methods of cognitive neuropsychology, such as response times and performance indicators, lesion and patient data, as well as different types of brain imaging technology
- understanding of neurocognitive conditions related to basic functions such as sensory processing, perception, motor skills, motivation and sleep
- understanding of neurocognitive conditions related to higher cognitive functions, such as attention, memory, language, thinking, problem-solving, cognitive control, decision-making and awareness

- understanding of neurocognitive conditions related to emotions and social interaction
- knowledge about different types of brain damage, psychoorganic syndrome, and psychopathology

Competence and skills

- the ability to apply theories of cognitive neuropsychology to understand everyday phenomena
- the ability to identify, formulate and solve problems within the field of cognitive neuropsychology
- the ability to conduct minor empirical studies on cognitive functions, and report the results of such studies in accordance with the international standards for the publication of empirical research in psychology
- the ability to make critical assessments of information on cognitive neuropsychology
- the ability to find and evaluate scientific information in cognitive neuropsychology
- the ability to communicate knowledge within cognitive neuropsychology to different target audiences

Course content

Through theoretical studies and practical exercises, the course aims to convey knowledge about the structure and function of the brain, and key areas of modern cognitive psychology, such as attention, memory, language, and cognitive control, as well as emotions and social interaction. The understanding of normal function is the primary focus of the course, but clinical examples will also be used, as they provide substantial illustrations of normal functioning. Furthermore, the course aims to provide students with knowledge of relevant research methods within the area, and major emphasis will be placed on the interdisciplinary nature of the subject.

The course consists of six modules.

Module 1. Introduction (7 credits)

This module provides students with basic knowledge of neuroanatomy, cellular function, neural communication and brain development and change. It also describes important methods for studying cognitive functions and mental processes (e.g. response times, performance indicators), and for studying brain activity and functional anatomy (e.g. lesion and patient data, brain imaging technology).

Module 2. Basic functions (4 credits)

This module focuses on basic functions such as sensory processing, perception, motor skills, motivation and sleep.

Module 3A. Higher cognitive functions (7 credits)

This module focuses on attention, memory, language, thinking, problem-solving, cognitive control, decision-making and awareness.

Module 3B. Laboratory exercise (5 credits)

This module is an exercise in conducting an empirical study of a chosen issue related to cognitive function, including reporting the results in accordance with international publishing standards in the field of psychology.

Module 4. Emotions and social interaction (4 credits)

This module provides students with knowledge about the neurocognitive basis of emotion, social communication and understanding, and how the influence of cognitive control functions allows for an adaptive and appropriate social interaction.

Module 5. Project work (3 credits)

This module is generally a literature review, but can also be a minor empirically oriented project.

Course design

The teaching consists of lectures, demonstrations, laboratory exercises and seminars. Attendance at the seminars and laboratory experiments is compulsory, as well as the first meeting with the supervisor before the experiment, unless there are special grounds. An alternative form or date for compulsory components is offered to students who are unable to complete a compulsory component owing to circumstances beyond their control, e.g. accident, sudden illness or similar. This also applies to students who have missed teaching because of activities as a student representative.

Assessment

The assessment of modules 1, 2, 3A and 4 is based on written exams. Module 3B includes a compulsory laboratory report. The assessment of module 5 is based on the project work and subsequent presentation at a special seminar. Three opportunities for examination are offered in conjunction with the course: a first examination and two re-examinations. Within a year of the end of the course, two further re-examinations on the same course content are offered. After this, further re-examination opportunities are offered but in accordance with the current course syllabus.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, E, D, C, B, A.

The grades awarded for the course modules 1, 2, 3A, 4, and 5 are A, B, C, D, E or Fail. The highest grade is A, and the lowest passing grade is E. The grade for a non-passing result is Fail. The student's performance will be assessed based on the course learning outcomes. For the grade of E the student must show acceptable results. For the grade of D the student must show satisfactory results. For the grade of C, the student must show good results. For the grade of B the student must show very good results. For the grade of A the student must show excellent results. For the grade of Fail the student must have shown unacceptable results.

The grades awarded for module 3B (Laboratory exercise, 5 credits) are Pass or Fail.

The overall course grade will be based on an average of the grades from course modules 1, 2, 3A, 4 and 5 (where A = 5, B = 4, C = 3, D = 2, E = 1), in accordance with the formula stated in the course description. To pass the entire course, the student must have passed all the course modules (minimum E for modules 1, 2, 3A, 4 and 5, and a Pass for module 3B).

Entry requirements

General and courses corresponding to the following Swedish Upper Secondary School Programs: Social Studies 1b/1a1 + 1a2

Subcourses in PSYD53, Psychology: Cognitive Neuroscience

Applies from V21

- 2101 Introduction to brain function, 10,0 hp
Grading scale: Fail, E, D, C, B, A
- 2102 Seminar - introduction to brain function, 0,0 hp
Grading scale: Fail, Pass
- 2103 Higher cognitive functions (moment 1), 10,0 hp
Grading scale: Fail, E, D, C, B, A
- 2104 Higher cognitive functions (moment 2), 5,0 hp
Grading scale: Fail, Pass
- 2105 Seminar - higher cognitive functions, 0,0 hp
Grading scale: Fail, Pass
- 2106 Project work, 5,0 hp
Grading scale: Fail, E, D, C, B, A