Faculty of Medicine

VMFB38, Fundamental Cognitive Neuroscience, 5 credits

Grundläggande kognitiv neurovetenskap, 5 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by The Master's Programmes Board on 2025-02-05. The syllabus comes into effect 2025-02-05 and is valid from the autumn semester 2025.

General information

The course, which is a freestanding course, is an introduction to the subject of cognitive neuroscience and concerns how the brain enables mental processes and psychological phenomena.

The aim is to provide a basic understanding of cognitive neuroscience for further studies in, for example, medicine, nursing or psychology. The course covers the structure and function of the brain and how perception, attention, working memory and executive functions interact to create higher consciousness. It also explores basic memory psychology, communication and emotions and how we see other people.

Language of instruction: English

Main field of study	*Specialisation*
Speech and Language Pathology	G1N, First cycle, has only upper-secondary level entry requirements
Audiology	G1N, First cycle, has only upper-secondary level entry requirements
Public Health Science	G1N, First cycle, has only upper-secondary level entry requirements
Medicine	G1N, First cycle, has only upper-secondary level entry requirements
Reproductive, Perinatal and Sexual Health	G1N, First cycle, has only upper-secondary level entry requirements
Nursing	G1N, First cycle, has only upper-secondary level entry requirements

Physiotherapy	G1N, First cycle, has only upper-secondary level entry requirements
Radiography	G1N, First cycle, has only upper-secondary level entry requirements
Biomedical Laboratory Science	G1N, First cycle, has only upper-secondary level entry requirements
Occupational Therapy	G1N, First cycle, has only upper-secondary level entry requirements
Biomedicine	G1N, First cycle, has only upper-secondary level entry requirements

Learning outcomes

The course covers the subject of cognitive neuroscience, which includes topics such as perception, attention, language, memory and emotions. The course also covers age-related changes in higher cognitive function.

Knowledge and understanding

On completion of the course, the students shall be able to:

- explain the function and structure of the brain using medical terminology,
- explain different forms of perception using medical terminology,
- explain how the brain and mind change throughout life, using medical terminology,
- describe on a basic level the dominant theories of memory and attention,
- explain on a basic level how theories of how language is represented in the brain have changed over time and how language and emotions interact.

Competence and skills

On completion of the course, the students shall be able to:

- apply theories from cognitive neuroscience to everyday phenomena,
- search and summarise scientific studies in a scientific report in accordance with instructions.

Judgement and approach

On completion of the course, the student shall be able to:

- relate findings from cognitive neuroscience to their own experiences,
- reflect on human behaviour based on scientific theories.

Course content

The course aims to highlight, through theoretical studies and student active learning (individually and in groups), central perspectives from the subject of cognitive neuroscience, such as the structure of the brain and its function, how perception and attention work, and basic memory psychology. The course also covers human communication and language, how emotions affect us and our environment, and how higher cognitive functions such as consciousness and cognitive control work. These topics are rounded off with a life-cycle perspective on our cognitive and neural abilities.

Course design

Teaching is in the form of group exercises and seminars with a high degree of student-active learning, which may require active preparation and participation in non-examination tests. There are also lectures that place the literature and exercises in a wider context. Seminars and group exercises are compulsory as they give students the opportunity to practice applying theories in collaboration with others and to develop their reflective and analytical skills, which are central to achieving the course learning outcomes of skills and abilities, values and attitudes. Students work on an individual written assignment in the form of a project report during the course. The course can be delivered part-time and partly by distance learning.

Assessment

Examination takes place via classroom exams and via participation in seminars and group exercises. In case of non-participation in the seminars and group exercises, supplementary assessment will take the form of a pick-up group or written supplementation. Other forms of assessment may occur.

The course is examined through two assessed components:

- Written tests, 3 credits, Pass/Fail
- Course portfolio, 2 credits, Pass/Fail

A written test examines the student's knowledge and understanding of the central theories, concepts and methods described in the course learning outcomes. Students are assessed on their ability to describe, explain and analyse key aspects of cognitive neuroscience with a focus on the learning outcomes described under knowledge and understanding.

Course portfolio examines the student's active participation in compulsory seminars and group exercises, focusing on skills and abilities, values and attitudes.

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.

Grades

Grading scale includes the grades: Fail, Pass

Entry requirements

General requirements