



Course syllabus

Neurobiology Neurobiology

EXTN65, 15 credits, A (Second Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED W

Date of Decision: 2023-03-27

General Information

Elective for: BME4, N4-nbm

Language of instruction: The course will be given in English

Aim

The aim of the course is to provide knowledge for advanced studies, work and research especially within chemical-biological-biochemical areas.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to explain the different cell types in nervous systems, their function and components
- be able to explain the structure of nervous systems of different animal groups, their evolution and development
- be able to explain neurophysiological principles
- be able to explain how behaviour, memory and cognitive functions are generated and controlled by nervous systems

Competences and skills

For a passing grade the student must

- be able to understand and critically discuss both older and new scientific papers on the subject of neurobiology with their peers
- have been trained in performing and reporting simpler neurobiological experiments

Contents

Subject of the course are basic aspects of structure and function of neurons, signalling between and within neurons, the structure, evolution and development of nervous systems, and the neural basis of behaviour, memory and cognition.

Examination details

Grading scale: UV - (U,G,VG) - (Fail, Pass, Pass with Distinction)

Assessment: Teaching consists of lectures, tutorials and practicals. Tutorials and practicals and the course elements associated with these are compulsory. Students who do not pass the ordinary examination will have an opportunity to take another examination in close proximity to the ordinary test.

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.

Parts

Code: 0114. **Name:** Theory.

Credits: 9. **Grading scale:** UV. **Assessment:** Written exam.

Code: 0214. **Name:** Seminar.

Credits: 3. **Grading scale:** UG. **Assessment:** Passed seminar.

Code: 0314. **Name:** Laboratory Work.

Credits: 3. **Grading scale:** UG. **Assessment:** Passed laboratory work.

Admission

Admission requirements:

- EXTA70 Biology of the Cell
- EXTG50 Human Physiology

The number of participants is limited to: 8

Selection: Credits awarded or credited within the study programme. Priority is given to students enrolled on programmes that include the course in their curriculum.

Reading list

- According to a list established by the department, available at least eight weeks before the start of the course, see the web-page for Undergraduate Studies in Biology.

Contact and other information

Course coordinator: Stanley Heinze, stanley.heinze@biol.lu.se

Course homepage: <https://www.biologi.lu.se/utbildning/grund-och-avancerad-utbildning/kurser/kurser-avancerad-niva/biologiska-kurser-pa-avancerad-niva-for-teknologer>

Further information: The course is to be studied together with BIOR58, which is given by the Department of Biology. Does not follow the study period structure.