

# Education plan

for

**Master's Programme in Neurochemistry with Molecular Neurobiology**  
**Masterprogram i neurokemi med molekylär neurobiologi**

**120.0 Higher Education  
Credits**  
**120.0 ECTS credits**

**Programme code:** NNEUO  
**Valid from:** Autumn 2010  
**Date of approval:** 2009-08-20  
**Department:** Department of Biochemistry and Biophysics

## Decision

This study programme has been approved by the Board of the Faculty of Science at Stockholm University 2009-08-20.

## Prerequisites and special admittance requirements

Bachelor of Science degree including at least 90 credits (hp) in Chemistry including 7.5 credits in Biochemistry or 90 credits in Biology including 9 credits in Zoo Physiology. Also required is knowledge equivalent to the Swedish upper secondary school course English B/English 6

## Programme structure

The programme comprises one compulsory course (15 higher education credits), at least three eligible advanced courses (45 higher education credits) and a compulsory degree project of at least 30 higher education credits. There is additional scope for optional academic courses. The programme is intimately connected with research work at the Department of Neurochemistry and is designed to cover most specializations within neurochemistry with molecular neurobiology. The programme offers knowledge and skills that form a good foundation for research education and for a professional career, both domestically and internationally. It is useful, e.g., for continued work in pharmaceutical industry.

## Goals

For a Master's degree the student must demonstrate:

- Knowledge and understanding in the major field of Neurochemistry with Molecular Neurobiology, including broad knowledge within the field as well as appreciable in-depth knowledge within certain parts of the field and in-depth insight into topical R&D work in neurochemistry.
- In-depth knowledge of methodology in neurochemistry.
- Ability to integrate knowledge in neurochemistry critically and systematically in order to analyze, evaluate and handle complex neurochemical phenomena, even with limited information.
- Ability to critically, independently and creatively identify and formulate problems of relevance to neurochemistry, to plan and, using methods adequate to neurochemistry, carry out advanced tasks within given time limits and thereby contribute to the development of knowledge, and also to evaluate this work.
- Ability to, orally and in writing, in both national and international settings, account for and discuss conclusions and the knowledge and arguments supporting these conclusions, in interaction with different groups.
- Skills required for participation in R&D work or for independent work in other advanced functions.
- Ability to make evaluations within the field of neurochemistry, with regard to relevant scientific, societal

and ethical aspects and to demonstrate awareness of ethical issues in R&D work.

- Insight into the possibilities and limitations of science, its societal role, and human responsibility for its use.
- Ability to identify the need for additional knowledge and to assume own responsibility for competence development.

### **Courses**

Compulsory courses:

Neurochemistry with Molecular Neurobiology, SC, 15 higher education credits.

Degree Project in Neurochemistry with Molecular Neurobiology, SC, 30/45 higher education credits.

Eligible courses (at least three of those below)

Advanced Neurochemistry with Molecular Neurobiology, FC, 15 higher education credits.

Recombinant Peptides and Proteins, FC, 15 higher education credits.

Peptides, Proteins and Proteomics, 15 higher education credits.

Signal Transduction, FC, 15 higher education credits.

A course in neuroscience, 15 higher education credits, at Stockholm University or other university.

Optional courses

Optional courses within or beyond the main field, 15/30 higher education credits.

### **Degree**

Master's degree.

### **Misc**

Students who have been admitted to the programme but not completed it within the two planned years of study may request that they be allowed to complete the programme even if the study programme has ceased to apply. The restrictions stated in the syllabus of the courses comprised in the education are then applicable.