



## INSTITUTE OF NEUROSCIENCE AND PHYSIOLOGY

### **SN00036 Laboratory animal science, compulsory course in laboratory animal science including ethical reflection, 3 credits**

Försöksdjurskurs, obligatorisk kurs inom försöksdjursvetenskap med etisk reflektion, 3 högskolepoäng

*Third-cycle level / Forskarnivå*

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### **Confirmation**

This syllabus was confirmed by the Council for PhD Education at Sahlgrenska Academy on 2020-03-25, and is valid from Autumn semester 2020.

#### ***Responsible Department***

Institute of Neuroscience and Physiology, Sahlgrenska Academy

#### ***Participating Department/s***

Core Facilities

### **Entry requirements**

Admitted to postgraduate education.

### **Learning outcomes**

After completing the course the student is expected to be able to:

#### ***Knowledge and understanding***

- Describe the requirements of Swedish legislation concerning scientific use of animals. Recitate the content of chosen parts of the legislation.
- Describe species-specific basic biology (anatomy, physiology, nutrition) breeding and genetics.
- Describe normal behavior of our most common laboratory animals, handling, husbandry needs, and enrichment.
- Recognize signs of discomfort, pain, suffering, and distress.
- Describe methods of anesthesia, analgesia, pain relief, injections, sampling, and euthanasia.
- Describe the basis of disease control and how to implement hygiene in animal housing and

experimental work.

### ***Competence and skills***

- Perform basic handling of current species. If the current species is mouse and rat it includes to inject them ip and sc and euthanise them to understand the significance of further training.

### ***Judgement and approach***

- Identify ethical issues in human-animal interaction, show empathy, and define clear humane endpoints when animals are used for scientific purposes.
- In every stage consider animal welfare, including replacement, reduction and refinement in the use of animals.
- Understand the importance of good experimental design and high scientific quality. This is important in order to publicly motivate and give legitimacy to the use of laboratory animals in biological and medical research.
- Discuss different (ethical) attitudes towards animal experiments.

## **Course content**

The content that the course have to cover is defined in the law, Statens jordbruksverkets föreskrifter och allmänna råd om försöksdjur, SJVFS2019:9. This includes:

- National law
- Ethics
- Basic and appropriate species-specific biology
- Animal behaviour, animal housing
- Species-specific experimental procedures
- Hygiene and infection prevention and control
- Recognition of species specific signs of discomfort, pain and suffering
- Anaesthesia, pain relief and euthanasia
- Endpoint and humane endpoints
- Alternative methods

## **Types of instruction**

Webbased lectures, practical sessions, lecture

### ***Language of instruction***

The course is given in Swedish but can be given in English if necessary.

## **Grades**

The grade Pass (G) or Fail (U) is given in this course.

## Types of assessment

The theoretical web based part is examined through multiple choice questions within the webcourse. Questions are at the end of the moduls. 100% right answers are required.

The practical part is judged using a template where all elements have to be mastered.

Ethical reflections are examined by a submitted written assignment

If a student, who has been failed on the same examining course component twice, requests a change of examiner before the next examination session, a request of this kind should be sent in writing to the department responsible for the course, and granted, unless there are special reasons to the contrary (Chapter 6, Section 22, Higher Education Ordinance).

## Course evaluation

Course evaluation is made electronically. The teacher responsible for the course compiles an analysis of the course evaluations and makes suggestions for the development of the course. The result and any changes in the set-up of the course shall be communicated both to the students that carried out the evaluation and to the students who are about to start the course.

## Other information

If the theoretical web-based part and the practical examination was previously achieved this will be credited in the course.