



## COMPARATIVE MEDICINE

### **CKF3160, Function A - to Carry Out Minor Procedures on Laboratory Animals, 3 credits (hec)**

Funktion A - att utföra mindre procedurer på försöksdjur, 3 högskolepoäng

*Third-cycle level / Forskarnivå*

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#### **Approval**

This syllabus was approved by the The Committee for Doctoral Education on 2023-11-28, and was last revised on 2024-09-05. The revised course syllabus is valid from spring semester 2025.

#### ***Responsible department***

Comparative Medicine, Faculty of Medicine

#### **Prerequisite courses, or equivalent**

No prerequisite courses, or equivalent, demanded for this course.

#### **Purpose & Intended learning outcomes**

##### **Purpose**

Education and training in laboratory animal science are both essential and a legal requirement for all those who need to undertake procedures on laboratory animals (Function A) for their research. The course is designed to meet the learning outcomes specified by the Swedish legislation L150 (SJVFS 2019:9) and the EU Education and Training Framework as set out by the Directive 2010/63/EU.

##### **Intended learning outcomes**

After completion of this course, the students should be able to meet the defined learning outcomes as set out by the Swedish Legislation L150 and the EU Education and Training Framework, specifically in modules 1 to 8. Such modules require either theoretical knowledge, or acquisition and demonstration of practical skills. The list of suggested learning outcomes by such guidelines is comprehensive, but in summary, participants will acquire the knowledge and skills to carry out minor procedures on research animals safely and humanely. In particular, at

the end of the course participants should be able to:

1. Indicate key principles of the Swedish Legislation and the EU directive regarding the use of animals in science.
2. Show that they understand ethical and welfare issues in relation to the use of animals in scientific procedures, including basic principles of the 3Rs (replacement, reduction, and refinement).
3. Recognize basic principles of species-specific biology and husbandry, including anatomy, physiology, reproduction, nutrition, behavior, enrichment and genetics.
4. Relate various aspects regarding animal health, care and management, including control of the environment, husbandry practices, diet, health status and disease.
5. Identify behavioral signs of discomfort, pain, suffering, and distress in animals.
6. Indicate appropriate principles and different methods of humane killing of animals.
7. Approach, handle/pick up and restrain an animal according to good practice.
8. Carry out minor procedures on animals such as injecting, dosing and sampling, including humane killing.

## Course content

The course provides education and training to individuals who, during their research work with animals, will need to perform minor procedures on research animals (rodents, lagomorphs, fish, cyclostomes, aquatic amphibians, swine, or non-human primates). The course contents are based on the Swedish Legislation and the EU Education and Training Framework and include:

- Legislation affecting animal research.
- Ethics, animal welfare and the 3Rs.
- Species-specific basic and appropriate biology (theory and skills).
- Species-specific animal care, health and management.
- Species-specific recognition of pain, suffering and distress.
- Species-specific humane methods killing (theory and skills).
- Species-specific minimally invasive procedures without anaesthesia (theory and skills).

## Forms of teaching and learning

The course will adopt a blended learning approach that combines web-based learning and hands-on practical training. Laboratory practical sessions are aimed at enabling the trainee to attain a level of proficiency that would eventually allow the student to work under supervision.

### *Language of instruction*

The course is given in English

## Grading scale

Pass (G) /Fail (U)

## Compulsory components & forms of assessment

### Compulsory components

All parts of the e-learning modules, including the examination of the theoretical parts must be successfully completed before starting the hands-on training.

### Forms of assessment

An exam containing short answer questions and/or multiple choice questions will be used to assess theoretical knowledge. Practical skills are assessed during the laboratory session using direct observation of practical skills.

## Course literature

E-learning material is available online at the learning platform of the course. As the key reference material, the students are referred to:

1. Swedish legislation on the Protection of Animals Used in Science (2018). L150, SJVFS 2019:9.
2. EU Directive on the Protection of Animals Used in Science (2010). Directive 2010/63/EU.
3. European Commission (2014). National competent authorities for the implementation of Directive 2010/63/EU on the protection of animals used for scientific purposes. A working document on the development of a common education and training framework to fulfill the requirements under the Directive. Brussels, 19-20 February 2014.
4. Handbook of Laboratory Animal Science: Essential Principles and Practices. Hau, Jann; Schapiro, Steven Jay 3. ed.: Boca Raton: CRC Press, cop. 2011 - 723 s. ISBN:978-1-4200-8455-9 (vol.1) LIBRIS-ID:12096142