**Module:**

**Anaesthesia, Analgesia and Euthanasia of Laboratory Animals**

This module covers anaesthesia, analgesia and euthanasia of the main species of laboratory animals and their impact on animal welfare and experimental results. The course also focuses on the knowledge required by designated veterinarians and other onsite personnel responsible for the welfare and care of laboratory animals in the conduct of experimental procedures.

The content of this module complies with the training requirements set out in the European Directive EU63/2010 developed by the European Commission in respect of the following modules: 6.1 Humane methods of killing (theory); 6.2 Humane methods of killing (skills); 20 Anaesthesia for minor procedures; 21 Advanced anaesthesia for surgical or prolonged procedures; 24 Designated Veterinarian, (iv) Anaesthesia, analgesia, surgery.

**Syllabus:**

Anaesthesia

Topic 1. Basic principles (review)\*

1.1 Peri-operative management. Fluidotherapy

1.2 Pharmacology of anaesthetics. Drug selection

1.3 Anaesthetic equipment and breathing circuits

1.4 Monitoring

1.5 Drug and animal data management

Topic 2. Anaesthesia in most common species

2.1 Anaesthesia in rodents

2.2. Anaesthesia in rabbits

2.3. Anaesthesia in pigs

2.4. Anaesthesia in ruminants

2.5 Anaesthesia in fish, birds and reptiles

2.6. Anaesthesia in primates

2.7. Anaesthesia in carnivores (review)\*

Topic 3. Mechanical ventilation

3.1 Basic mechanical ventilation

3.2 Advanced mechanical ventilation

Topic 4. Local and regional anaesthesia

4.1 Local and regional anaesthesia

4.2 Electro & ultrasound guided regional anaesthesia

Topic 5. Monitoring

5.1 Monitoring in rodents

5.2 Advanced Monitoring

Topic 6. Impact of anaesthesia in research results

Analgesia

Topic 7. Recognising and Alleviating Animal Pain

Topic 8. Management of Pain in laboratory animals

Topic 9. Analgesia in non-mammalian species

Euthanasia

Topic 10. Update on euthanasia of laboratory animals

Practical Sessions

Anaesthesia in rodents and rabbits

Anaesthesia in sheep, including advanced ventilation

Anaesthesia in pig, including electrical-guided and ultrasound-guided techniques

Simulation of anaesthesia, cardiovascular complications

**Duration of course:** 6 ECTS (44 attendance hours).

**Course dates:** 1 March - 15 May, 2024

**Attendance dates at UAB**: 11-15 March, 2024