

FORENSIC SCIENCES IN VETERINARY MEDICINE

Study Programme: MIMV Curricular Year: 5th Semester: 10th Optional Credits: 2.5 ECTS

Lecturer(s): Manuela Rodeia (SPC), Anabela Moreira (R), Ilda Rosa, Isabel Pereira Fonseca, Graça Alexandre-Pires Melo, Hugo Pissarra and external invited lecturers

1. Contact hours:

Lectures – 24 hours, **Practicals** – 4 hours, **Total** – 28 hours

2. Objectives:

Combine under a single course, several aspects of knowledge and attributions of veterinary medical profession and make their integration in the forensic point of view (*post-mortem* examination and pathology, entomology, toxicology, clinics, odontology)

Explore some basic concepts of non-biological forensic science, particularly in the area of criminalistics and ballistic.

Analyze legal aspects: national and international legislation, jurisprudence

3. Programme:

Theoretical Course:

Introduction: The Forensic Science and Veterinary Medicine: areas of activity.

Criminal and Civil Actions: Legal aspects. The portuguese jurisprudence. Relevant national law.

Veterinary Forensic Clinics: Methodology of evidence collection and documentation. Cruelty and animal abuse, clinical conditions. Preparation of the expert report.

Veterinary Forensic Pathology: Methods and procedures.

Forensic Entomology: Applications of forensic entomology. Insects identification. Sample collection and handling. Entomology and *postmortem* interval.

Forensic Toxicology: Evidence and toxicological examination: methodology and limitations.

Forensic Odontology: Bites and bitemarks as forensic evidence. Methodology of documentation and assessment. Result interpretation and expert report.

Criminalistics: Basic concepts. Description and summary characterization of methods and procedures and their application or adaptation to the veterinary field.

Ballistics: Basic concepts. Terminal ballistic.

Forensic Genetics: Basic concepts and application of animal genetic profile databases. Forensic Genetics and wildlife crimes.

Forensic Ethology: Animal behavior, importance in a criminal process in a context of abuse. Behavioral manifestations/psychological state. Behavioral assessment. Documentation of behavioral evidence. Assessment of animal suffering.

Practical Course:

Practical aspects of forensic necropsy, entomology and odontology. Collection, packaging and handling of samples/evidences. Analysis of a crime scene.

4. Bibliography:

Byrd JH, Norris P, Bradley-Siemens N., editors. 2020. *Veterinary Forensic Medicine and Forensic Sciences*. CRC Press.

Merck MD, editor. 2012. *Veterinary Forensics, animal cruelty investigations*. 2nd edition. Blackwell Publishing.

Otterman K, Fielser L, Lewis E, editors. 2022. *Animal Cruelty Investigations: a collaborative approach from Victim to Verdict*. Willey Blackwell.

Rogers E, Stern AW, editors. 2018. *Veterinary Forensics: Investigation, Evidence Collection and Expert Testimony*. CRC Press.

5. Assessment:

Attendance, scale 0-100 – 10% of total mark

Written examination, scale 0-20 (minimum of 9.5 for approval) – 90% of total mark