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), Isabel Pereira Fonseca, José Ferreira da Silva, Graça Alexandre-Pires Melo, Hugo Pissarra and external invited experts

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. Mode of action/intervention of the veterinarian in the context of illicit.
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: Applications and components. 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 animals genetic profile databases. Forensic Genetics and wildlife crimes.
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, J.H., Norris, P., Bradley-Siemens, N. (eds). (2020). *Veterinary Forensic Medicine and Forensic Sciences*. CRC Press
- Rogers, E. & Stern, A.W. (eds). (2018). *Veterinary Forensics: Investigation, Evidence Collection and Expert Testimony*. CRC Press.
- Brooks, J.W. (ed). (2018). *Veterinary Forensic Pathology* (I, II vol). Springer
- Merck, M. D. (ed). (2013). *Veterinary Forensics, animal cruelty investigations* (2nd edition). Blackwell Publishing.
- Munro, R., Munro, H.M.C. (2008). *Animal Abuse and Unlawful Killing, Forensic Veterinary Pathology*. Saunders.

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