Course Unit Descriptor

Study Programme: Master Academic Studies in Forensic Sciences

Course Unit Title: Forensic zoology

Course Unit Code: FB-11

Name of Lecturer(s): Associate Professor Aleksandar Jurišić, PhD; Assistant Professor Aleksandra Petrović, PhD

Type and Level of Studies: Master Academic Degree

Course Status (compulsory/elective): elective

Semester (winter/summer): summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 6

Prerequisites: None

Course Aims:

The course aim is to introduce and demonstrate the students the basics of zoology in forensic sciences. Educating and training students for assessment and solving the forensic cases and studies regarding different animal species, their remains, determination of living and dead organisms, determination of the bones, hair, feathers and other epidermal derivatives according to species and its type, faeces, gastric contents, urine and tracks, as well as and the researches concerning the animal illegal trade and transport.

Learning Outcomes:

Upon completing the course, the student will be able to: 1. apply theoretical and practical knowledge in the field of zoology for different forensic research; 2. independently assess and use the interactive effects of different animal species in forensic cases; 3. apply the taxonomic and bio-ecological knowledge of different animal species from the communal, medical, veterinary and agricultural aspects in forensics; 4. conduct conclusions and gives expert opinion on the forensic science principles for procedural authorities and other entities, the expertise purchasers.

Syllabus:

Theory: Introduction to forensic zoology. Morphology, anatomy and bio-ecology of selected animal species, important for forensic research. Methods, procedures and protocols for the sampling, collection, analysis and storage of animal samples. Determination of living and dead animals, determination of bones and skeletons, hair, feathers and other epidermal derivatives according to the species and type, as well as, faeces, gastric contents, urine and tracks on the different substrate types. Determination and significance of the selected animal groups in forensic studies: Protozoa, Platyhelminthes, Nematoda, Annelida, Arthropoda, Mollusca, Pisces, Amphibia, Reptilia, Aves and Mammalia. Calculating and assessment of population attributes important for forensic research from communal, medical, veterinary and agricultural aspects. Determination and protection of the most common animal species involved in illegal trade, hunting and transport.

Practice: The sampling, collection, analysis and storage of animal samples, methods for capturing and collecting live and dead organisms. Systematic and determination of various animal species of importance for forensic researches: Protozoa, Trematodes, Cestodes, Nematode, Annelida, Acarina, Mollusca, Pisces, Amphibia, Reptilia, Aves, Mammalia. Determination of residues, skeletons and parts of the bones, jaws, teeth and tooth prints, hairs, feathers, horns and other epidermal derivatives. Determination of residues of gastric contents, faeces, urine and damage caused by animals on different material types. Determination and identification of tracks on different substrate types. The use of different animal species in estimating the time of death, poisoning, fire, flood and other deliberately caused cases or natural disasters. Determination and protection of the most common animal species involved in illegal trade, hunting and transport.

Required Reading:

1. Hickman, Jr. C.P., Roberts, L.S., Keen, S.L., Larson, A., I'Anson, H., Eisenhour, D.J. (2008): Integrated Principles Of Zoology, 14th Ed. McGraw-Hill, New York, USA
2. Gunn, A. (2009): Essential Forensic Biology. 2nd Ed. Wiley Blackwell, Oxford, UK.
3. Murie, O.J. (1974): A field guide to animal tracks. 2nd Ed. Houghton Mifflin Company, New York, USA.
4. Linacre A. Ed. (2009): Forensic Science in Wildlife investigation. CRC Press, USA

Weekly Contact Hours: 5 (75)	**Lectures:** 3 (45)	**Practical work:** 2 (30)

Teaching Methods: Lectures, laboratory exercises, case studies.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	30
Practical work	5	oral exam	30
Preliminary exam(s)	30	…….	
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.