



UNIVERSIDADE DE LISBOA
Faculdade de Medicina Veterinária

Physiology

Curricular Year: 1st

Duration: 2nd Semester

Credits: 10 ECTS

Teachers: Graça Dias (CCP e R); António Freitas Duarte.

Contact Hours: 125H Total.

56H Lectures; 56H Practical and laboratory teaching; 13H Tutorial orientation.

Learning objectives:

The general objectives of the course consist of learning different concepts and physiological and biophysical mechanisms of maintaining homeostasis in domestic animals. This UC aims to provide the development of students' skills necessary to understand, explain and interpret the physiological phenomena that serve as the foundation of Veterinary Sciences.

The specific objectives are (i) to explain the physiological mechanisms of maintenance of homeostasis in the nervous, endocrine, digestive, respiratory, thermoregulation, renal, reproductive and cardiovascular systems; (ii) to interpret the relationship between the various physiological systems studied; and (iii) to contribute to the ability to recognize the healthy status of animals (livestock and companion species).

The skills developed consist of the understanding of scientific research methods and their contribution applied to science, and implementation of the principle of the 3Rs (Replacement, Reduction, Refinement).

Program contents:

Theoretical Classes: The subjects necessary for the understanding and interpretation of the physiological mechanisms of maintenance of homeostasis in the nervous (including electrophysiology), endocrine, digestive, respiratory, thermoregulation, renal, reproductive and cardiovascular systems will be addressed, in order to recognize the healthy state in animals, especially livestock and companion species.

Practical classes: The practical classes will take place using methodologies for solving exercises in computer simulation (PhysioEx); the observation and discussion of films; the discussion of hypothetical cases ("problem based learning") in the learning of the physiology of reproduction; the use of the stethoscope for the evaluation of the physio-logical motility of the cecum and colon in horses and of the reticule-rumen in the cow; and laboratory experiments for the learning of concepts of respiratory and renal physiology.

Bibliography:

Ferreira-Dias, G. & Duarte, A. Protocolos de Aulas Práticas (anual).

Klein B.G. 2020. Cunningham's Textbook of Veterinary Physiology. 6th Ed. W. B. Saunders Company. Philadelphia.

García Sacristan A. 2018. Fisiología Veterinaria. Editorial Tébar Flores. 2ª Ed. Madrid.

Hall J and M. E. Hall. E. 2020. Guyton and Hall Textbook of Medical Physiology. 14ª Ed. Elsevier.



UNIVERSIDADE DE LISBOA

Faculdade de Medicina Veterinária

Senger, P.L. 2015. Pathways from Pregnancy to Parturition. (3ª ed.), Current Conceptions, Inc., Pullman, WA, USA.

Koeppen B.M., Stanton B.A. 2023. Berne & Levy Physiology. (Updated Edition: with Student Consult online access) (8ª ed.) Elsevier. USA. ISBN: 9780323847902.

Assessment:

*The evaluation of the theoretical and practical components will be carried out through "**Traditional Evaluation**", which consists of a written exam with multiple answer questions during the exam season. – Individual written assessment (AEI). The final classification in Physiology will correspond to the classification obtained in the Final Exam (EF).*

*If the student opts for **Continuous Assessment**, he/she will be evaluated by his/her performance throughout the semester, by answering written quizzes carried out at the end of each block of subject taught. The arithmetic average of the classification of the quizzes (MT) will correspond to 30% of the final classification of the UC and the classification of the Final Exam (EF) will correspond to 70% of the final classification.*

Thus, the final grade (CF) of the course will be defined by the following formula:

$$CF=0.7EF+0.3MT$$

If the average classification of the quizzes is lower than the Final exam grade, only the grade of the Final Exam will be considered.

To obtain approval, students must obtain a classification higher than 9.5.