

Academic subject: Principles of Pets Physiology and Endocrinology			
Degree Class: L-38		Degree Course: Animal Sciences	
		Academic Year: 2020/2021	
		Kind of class: Mandatory	
		Year: I	Period: II semester
		ECTS: 6 divided into ECTS lessons: 5 ECTS exe/lab/tutor: 1	
Time management, hours, in-class study hours, out-of-class study hours lesson: 50 exe/lab/tutor: 25 in-class study: 0 out-of-class study: 75			
Language: Italian		Compulsory Attendance: Yes	
Subject Teacher: Maria Albrizio		Tel: +390804679928 e-mail: maria.albrizio@uniba.it	
		Office: Department of Emergency and Organs Transplantation Room 16 Floor 1	
		Office days and hours: Tuesday 12.30-2:30 p.m. Thursday 2:00-3:00 p.m.	
Prerequisites: Structural and metabolic biochemistry, Zoology, histology and anatomy			
Educational objectives: The course of "Principles of Physiology and Endocrinology" has as its main objective the acquisition of basic knowledge of cell physiology and an understanding of physiological mechanisms underlying the functioning of the main organs that make up the different systems and apparatuses, as well as understanding the regulation of the activity of organs and systems exercised by the endocrine system. Students will have to undertake a comparative study of the physiology of the different animal species in line with the aim of the degree course.			
Expected learning outcomes (according to Dublin Descriptors)		<p>Knowledge and understanding: At the end of the course the student will have acquired essential knowledge of cellular and organs physiology, as well as of endocrinology. He will also have understood the role of the nervous and endocrine systems in the functional regulation of the organism</p> <p>Applying knowledge and understanding: He will be able to functionally relate the various systems and apparatuses.</p> <p>Making judgements: Thanks to this course the strong knowledge of animal physiology will be the starting point to look for an adequate job in the field of animal science and care.</p> <p>Communication: At the end of the course the student will have acquired the scientific nomenclature to communicate and share knowledge in the world of animal care and science</p> <p>Lifelong learning skills: The study of the basic knowledge of animal physiology and endocrinology is the starting point to deep the comparative study of animal behavior, reproduction and/or animal productions that are the basic instruments to develop the working future of the young graduate.</p>	
Course program - Physiology: Cell. Plasma membrane. Osmosis. Diffusion. Active transport. Membrane potential. Action potential. Neuron. Transmission of nerve impulses. Synapses. Central and peripheral nervous system. Autonomous nervous system. Muscle. Blood and its functions. Cardiovascular system. Respiratory system. Digestive system. Kidneys. Endocrinology: Introduction to the endocrine system: glands and hormones (chemical nature, synthesis, storage and transport, interaction with target cells, regulation of their secretion, hormone dosage: RIA and ELISA methods).			

Endocrine pancreas: insulin, glucagon, somatostatin, pancreatic polypeptide, gastrin. Endocrine regulation of calcium and phosphate metabolism. Hypothalamus and pituitary. Thyroid. Adrenal: cortical and medullary. Endocrine regulation of reproductive activity. Mammary gland and lactation. Endocrine regulation of metabolism.

Teaching methods: The objectives of the course will be achieved through lectures that will take place in the classroom using didactic material appropriately developed in power point format. During the course self-assessment questionnaires are foreseen to check the learning status. The teacher will also provide scientific works to students supplementing the knowledge available in the recommended textbook. The course will be completed by a series of laboratory exercises through which students will practice some basic knowledge learned. Students will participate in the exercises divided into small groups supported by the teacher and laboratory staff. Halfway through the course, the teacher will split students in groups and will assign each one a topic to deepen. The result of the work should be organized in a power point presentation that each group will show to the class.

The teacher will formulate an opinion on the learners regarding their ability to deepen a topic, of aggregation and division of work and presentation of results.

Auxiliary teaching: White coat or disposable coat, disposable gloves, cap

Assessment methods: The exam will be carried out at the end of the course by students in good standing with the prerequisites. The exam will consist of an interview or a written test with multiple choice questions on the topics of cellular and organ physiology and endocrinology. In formulating the judgment for each student, the teacher will hold account of the commitment that each will have shown in passing the ongoing tests and the presentation of group work

Bibliography: Physiology of Domestic Animals, Ø.V. Sjaastad, O. Sand, K. Hove, Ambrosiana Publishing House, 2013. Scientific articles proposed by the teacher