ACADEMIC YEAR 2024/2025

General information	
Name of the course	**PRICIPLES OF PHYSIOLOGY AND ENDOCRINOLOGY OF DOMESTIC ANIMALS**
Degree course	Animal Sciences (L38)
Academic Year	I
European Credit Transfer and Accumulation System (ECTS)	6 (ECTS lessons: 5; ECTS exe/lab/tutor: 1)
Language	Italian
Period of teaching	II semester: 03/03/2025- 20/06/2025
Attendance	Mandatory

Teachers	
Name and Surname	Serenella d'Ingeo; Gianluca Ventriglia
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Telephone	+39 080 5713779 (Serenella d'Ingeo); +39 0805443902 (Gianluca Ventriglia)
Department and address	Campus di Medicina Veterinaria, S.P. 62 per Casamassima km 3, 70010 Valenzano (BA)
Virtual headquarters	Microsoft Teams platform (Teams Code: djrwa23)
Tutoring (time and day)	Tuesday and Thursday 10.00 - 12.00; Monday and Wednesday 3.00pm - 5.00pm or by appointment via email

Syllabus	
Learning Objectives	Main objectives of the course are: the acquisition of basic knowledge of cellular physiology and the understanding of the physiological mechanisms underlying the functioning of the main organs; the understanding of the endocrine mechanisms regulating the activity of organs and systems. Students have to undertake a comparative study of the physiology of different animal species in line with the educational objectives of the course.
Course prerequisites	To be admitted to the final exam, students must have taken and passed the following exams: • Structural and Metabolic Biochemistry • Zoology, Histology and Anatomy.
Contents *Teacher:* ***Serenella d'Ingeo and Gianluca Ventriglia*** ***Lectures*** ***ECTS: 4*** ***Hours: 40***	**Physiology** Cells: plasma membrane, transport, electrophysiology. Neuron and nervous system. Sense organs. Muscle. Blood and its functions. Cardiovascular system. Respiratory system. Digestive system. Excretory system. **Endocrinology** Glands and related hormones: hypothalamus, pituitary gland, endocrine pancreas, thyroid, parathyroids, adrenal glands.
Practical activities ***ECTS: 1*** ***Hours: 10***	External manifestations of cardiac activity: heart sounds, electrocardiogram, blood pressure. Evaluation and calculation of respiratory rate, types of breathing. Principles of physical-chemical examination of urine. Glandular secretions of the stomach. Nervous reflexes. Practical evaluation of vision and smell.

Biosafety rules for the attendance of practical activities	The access to the LabDog laboratory and its external area is permitted to students wearing suitable clothing, as indicated in the biosafety manual (previously viewed).
Books and bibliography	Fisiologia degli animali domestici, Ø.V. Sjaastad, O. Sand, K. Hove. Casa editrice Ambrosiana.
Additional materials	Lecture notes and scientific papers are recommended

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
150	***40***	***10***	***100***
ECTS			
6	***5***	***1***	

Teaching strategy	The course mainly consists of frontal lessons which are combined with active learning methods in order to integrate the information and promote learning. The learning process will be implemented through iconic, verbal and graphic communication models. In practical lessons, problem solving activities and learning by doing are encouraged for skills and competences acquisition. Practical lessons are carried out in the LabDog, the laboratory of the Animal Physiology and Behaviour Research Unit, and in its external area. Students are divided into groups of 8-10 people, guided by the teachers and their collaborators to carry out the proposed practical activities, individually or in groups.
Expected learning outcomes	
Knowledge and understanding on:	At the end of the course, students will acquire knowledge and understanding of: • the functioning mechanisms of the organs and systems of domestic animals. • the interactions between the nervous, endocrine and immune systems for the functional regulation of the organism. • the functional relationship between the various endocrine glands
Applying knowledge and understanding on:	At the end of the course, students must be able to: • put the different organs and systems into functional relationships. • autonomously interpret a report relating to the main clinical and endocrine chemistry blood tests
Soft skills	• *Making informed judgments and choices* o At the end of the course, students must be able to: evaluate the functioning mechanisms of the organs and systems of domestic animals; to express their opinion about the causes and factors affecting the organs functioning. • *Communicating knowledge and understanding* o Students must be able to use a scientific terminology to provide valid specialist professional support • *Capacities to continue learning* o Ability to improve their knowledge independently through further studies, by consulting specialist texts and scientific literature, as well as through the in-depth study of specific topics in courses and through direct observation of animals.

Assessment and feedback	
Methods of assessment	The exam will be taken at the end of the course by students in compliance with the preparatory requirements. The verification of the acquisition of skills is carried out through an oral test which will cover the topics of the program and practical exercises. Students'

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	knowledge of the mechanisms that regulate the function of organs and systems and their skills acquired during practical exercises will be evaluated.
Evaluation criteria	• *Knowledge and understanding* ***(score from 1 to 8):*** Students' ability to discursively organize knowledge of the basic and fundamental concepts of the course as well as to analyse the principles of functioning of organs and systems, which are useful for the understanding of pathological processes, will be evaluated. • *Applying knowledge and understanding* ***(score from 1 to 8):*** Students' knowledge of the methodologies for evaluating the physiological parameters of domestic species, their ability to connect all the notions learned and to report a specific topic will be evaluated. • *Autonomy of judgment* ***(score from 1 to 8):*** Students' ability to formulate critical hypotheses on the causes and factors affecting the functioning mechanisms of the organs and systems of domestic animals will be evaluated. • *Communicating knowledge and understanding* ***(score from 1 to 3):*** Students' ability to discuss critically and autonomously the topics of the course program and to present them with appropriate terminology will be evaluated. • *Capacities to continue learning* ***(score from 1 to 3):*** Students' ability to make connections between the different topics of the program as well as their acquisition of an adequate study method that allows to continue studying independently will be evaluated
Criteria for assessment and attribution of the final mark	The assessment of learning takes place through an interview aimed at evaluating the level of knowledge of the proposed topics. The final grade is the result of the collegial judgment relating to the partial tests, in which students demonstrate that they have acquired a critical sense with respect to the topics studied. The final evaluation, expressed in thirtieths, will be considered passed with a grade equal to or higher than 18 and will take into consideration not only the accuracy of the answer, but also the communication skills, the clarity of presentation, the disciplinary competence and the level of in-depth analysis.
Additional information	

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