General information	
Academic subject	**Veterinary Physiology 2** Module of the course: **Physiology 2**
Degree course	Veterinary Medicine
Academic Year	2021/2022
European Credit Transfer and Accumulation System (ECTS)	5
Language	Italian
Academic calendar (starting and ending date)	II Bimester
Attendance	Mandatory

Professor/ Lecturer	
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Department and address	Veterinary Medicine Campus – Valenzano (BA)
Virtual headquarters	*Teams cod. 3s0gn55*
Tutoring (time and day)	Tuesday- Thursday 10.00-12.00 am Monday and Wednesday 3.00-5.00 pm At the Department or via Teams

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Syllabus	
Learning Objectives	The course aims at transferring technical and in-depth knowledge of the functional mechanisms of the organs and systems of domestic animals.
Course prerequisites	Students must have taken and passed the exam of the Physiology 1 exam. They should have acquired therefore knowledge about the mechanisms that regulate cell function the central and peripheral nervous system.
Contents	FUNDAMENTAL SCIENCE: PHYSIOLOGY OF THE CARDIO-CIRCULATORY SYSTEM. The heart as a pump. Cardiac output. Cardiac electrophysiology and electrocardiography. Blood vessels and blood pressure. Special Circulations. PHYSIOLOGY OF BREATHING. Ventilation and gas exchange. Transport of O2 and CO2. Breathing regulation. Breathing in birds. PHYSIOLOGY OF THE KIDNEYS AND URINARY TRACT. Renal circulation and glomerular filtration. Tubular function. Adjusting the volume and osmolarity of body fluids. Acid-base regulation. Urinary tract and urination. Principles of physical and chemical examination of urine. PHYSIOLOGY OF DIGESTION. Oral cavity. Pharynx and esophagus. Stomach. Liver and pancreas. Small and large intestine. Prestomaci and rumination. Digestion in birds.
Books and bibliography	Sjaastad, Sand, Hove, "Fisiologia degli animali domestici", Casa Editrice Ambrosiana, 2013
Additional materials	Lecture notes are recommended

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
125	40	25 (Practical lessons will be repeated for limited	60

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		group of students, on the bases of the total number of students)	
ECTS			
5	*4*	*1*	

Teaching strategy	Lessons will take place in the classroom, using the support of a projector, and will be presented as PowerPoint slideshow. The practical lessons will take place at the Labdog laboratory of the Section of Animal Physiology and Behaviour of the Department of Veterinary Medicine for the direct measurement of the physiological parameters for the clinical evaluations of domestic animals.
Expected learning outcomes	
Knowledge and understanding on:	○ Basic knowledge of the functioning mechanisms of the organs and systems of domestic animals. ○ Basic knowledge of the factors that modulate these mechanisms
Applying knowledge and understanding on:	○ 1.4 Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the audience concerned and in full respect of confidentiality and privacy. ○ 1.6 Work effectively as a member of a multi-disciplinary team in the delivery of services. ○ 1.8 Be able to review and evaluate literature and presentations critically. ○ 1.9 Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine ○ 1.13 Demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence. ○ 1.16 Handle and restrain animal patients safely and with respect of the animal, and instruct others in helping the veterinarian perform these techniques. ○ 1.20 Assess the physical condition, welfare and nutritional status of an animal or group of animals and advise the client on principles of husbandry and feeding. ○ 1.31 Assess and manage pain. ○ 1.36 Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards.
Soft skills	• *Making informed judgments and choices* ○ At the end of the course, students must be able to evaluate the meaning of specific animal behaviours and to express their opinions about the cause / effect processes underlying the different functioning of the organs of domestic animals ○ Students are also expected to acquire the following soft skills: Must also acquire the following cross-cutting competence: 2.3 The structure, function and behaviour of animals and their physiological and welfare needs. • *Communicating knowledge and understanding* ○ Students must acquire the correct scientific skills and technical language to provide specialist professional support. ○ Students are also expected to acquire the following soft skills: 2.1 Understanding of, and competence in, the logical approaches to both

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	scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each. • *Capacities to continue learning* ○ Students must acquire the ability to improve their knowledge independently through further studies by reading specialized texts and scientific literature, as well as through courses and by the direct observation of animals. ○ Students are also expected to acquire the following soft skills: 2.2 Research methods, the contribution of basic and applied research to veterinary science and implementation of 3Rs (Replacement, Reduction, Refinement).

Assessment and feedback	
Methods of assessment	Oral exam. Student have to demonstrate technical and in-depth knowledge of several topics of the course program, using scientific terminology and showing critical skills in analysing the functioning of the organs of domestic animals.
Evaluation criteria	• *Knowledge and understanding* ○ Students are expected to organize the knowledge of the basic and fundamental concepts of the program course and show the ability to analyse the principles of functioning of organs and apparatuses, which are crucial for the study and the understanding of pathological processes. • *Applying knowledge and understanding* ○ Students are expected to demonstrate their knowledge about the methodologies for evaluating the physiological parameters of domestic species. • *Autonomy of judgment* ○ Students are expected to propose critical hypotheses on the causes and factors affecting the functioning mechanisms of the organs and systems of domestic animals • *Communicating knowledge and understanding* ○ Students are expected to critically and independently discuss the issues addressed in the course program ○ Students are expected to make connections between the different topics of the course program • *Communication skills* ○ Students are expected to discuss the program topics with appropriate scientific and technical language • *Capacities to continue learning* ○ Students are expected to show the ability to improve their knowledge independently through the reading of specialized texts and scientific literature.
Criteria for assessment and attribution of the final mark	The assessment of students' knowledge will be carried out through an oral interview. The final mark is expressed in thirtieths. The minimal final mark to pass the exam is 18/30. The final exam of the "Veterinary Physiology 2" module contributes to the definition of the final mark of the "Physiology 2" exam for 5/11.
Additional information	

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