

**ACADEMIC YEAR 2023/2024**

<b>General information</b>	
Academic subject	<b>Veterinary Physiology 1</b>
Modules	<b>Veterinary Physiology 1; Veterinary Ethology; Behavioural problems of cats and dogs.</b>
Degree course	Single cycle degree in Veterinary Medicine LM42
Academic Year	II
European Credit Transfer and Accumulation System (ECTS)	10 (ECTS lectures: 7; ECTS exe/lab/tutor: 3)
SSD	VET/02
Language	Italian
Academic calendar (starting and ending date)	I 7-weeks period
Attendance	Mandatory

<b>Teacher</b>	<b>email address</b>	<b>phone</b>
Marcello Siniscalchi	marcello.siniscalchi@uniba.it	+39 080 0805443927
Angelo Quaranta	angelo.quaranta@uniba.it	+39 080 0805443927

Department and address	Campus of Veterinary Medicine, S.P. per Casamassima km 3, Valenzano
Virtual headquarters	Microsoft Teams (access code 2p54i8q)
Tutoring (time and day)	Tuesday- Thursday 10.00-12.00 am Monday and Wednesday 3.00-5.00 pm or by appointment

<b>Syllabus</b>	
<b>Learning Objectives</b>	The course aims at transferring in-depth knowledge of the functioning of the nervous system, muscle tissue, blood, and sense organs of domestic animals. Moreover, the course will transfer the knowledge of physiological bases of behavior and on different aspects of the ethology of the species of veterinary interest as well as technical and in-depth knowledge about the appropriate ethological management of pets and about the main behavioural problems of dogs and cats.
<b>Course prerequisites</b>	Students must have taken and passed the exam of Biochemistry 2 and Anatomy 2 having thus acquired skills in the field of molecular biology, veterinary clinical biochemistry, and anatomy of the organs of the various systems of domestic animals.



<p><b>Hands on (Laboratory, working groups, seminars, field trips)</b></p> <p><b>ECTS: 1</b></p> <p><b>Hours: 15</b></p>	<p><b>SOCIAL BEHAVIOR:</b> Social behaviour and communication in domestic animals. Regulation of food intake and eating behaviour. Reproductive and maternal behaviour. Sexual behaviour. The game. Calm signals. Behavioural disturbances. Stress. Anxiety, fear and phobias. Aggression.</p> <p><b>APPLIED ETHOLOGY:</b> Basic behaviour modification techniques. Reinforcement. Differential reinforcement. Flooding. Systematic desensitization. Attention check. Conditioning. Counterconditioning. Chaining. Shaping.</p> <p><b>HUMAN-ANIMAL RELATIONSHIP</b> Human-animal relationship. Sensitive periods. Human-animal communication. Bond of attachment. Strange situation. Use of animals for therapeutic purposes: pet therapy.</p>
<p>Contents of the teaching module: <b>Behavioural problems of cats and dogs</b> Teacher: <b>Angelo QUARANTA</b></p> <p><b>Lectures</b> <b>ECTS: 1</b></p> <p><b>Hours: 10</b></p> <p><b>Hands on (Laboratory, working groups, seminars, field trips)</b></p> <p><b>ECTS: 1</b></p> <p><b>Hours: 15</b></p>	<p>The module concerns Basic Sciences.</p> <p>The Veterinarian and Behavioural Medicine. Problems related to anxiety in dogs. Aggression in the dogs. Sensory deprivation syndrome.</p> <p>Obsessive-compulsive disorders and hypersensitivity-hyperactivity syndrome.</p> <p>Behavioural problems in older dogs.</p> <p>Inappropriate elimination in cats.</p> <p>Presentation, discussion and analysis of practical cases related to the main disorders of dogs and cats: anxiety, phobias, obsessive-compulsive disorders, hyperactivity / hypersensitivity, aggression, disorders of the elderly dog.</p>
<p><b>Hands on activities</b></p>	<p>The practical activities will be held in the afternoon during the two-month period of teaching according to the schedule reported in the lesson diary. Students will be divided into groups of 8-10 students and the individual activities will be replicated for each of the groups. The number of groups is related to the type of practical activity and the consistency of the cohort of students attending the course.</p>
<p><b>Biosecurity measures</b></p>	<p>Students must wear protective clothing (white coat and gloves) and have read the biosecurity manual.</p>
<p><b>Books and study materials</b></p>	
<p><b>Books and bibliography</b></p>	<p>Sjaastad, Sand, Hove, "Fisiologia degli animali domestici", Casa Editrice Ambrosiana, 2013. Per Jensen: Etologia degli animali domestici. McGraw-Hill - 2011.</p>

	La clinica comportamentale del cane e del gatto, Karen Overall, Edizioni Medico-Scientifiche.
<b>Additional materials</b>	Lecture notes and scientific papers are recommended

<b>Work schedule</b>			
<b>Hours</b>			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
250	70	45	135
<b>ETCS</b>			
10	7	3	/

<b>Teaching strategy</b>	<p>Lectures will take place in the classroom, using the support of a projector, and will be presented as PowerPoint slideshow.</p> <p>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, for the direct observation of animal behaviour and the behavioural problems of dogs and cats.</p>
--------------------------	--

<b>Expected learning outcomes</b>	
<b>Knowledge and understanding on:</b>	<p>Students should acquire the basic knowledge of the functioning mechanisms of the:</p> <ul style="list-style-type: none"> <li>- mechanisms that regulate cellular, blood, striated, smooth and cardiac muscle function and the mechanisms that govern the functioning of the central and peripheral nervous system of domestic animals</li> <li>- factors that modulate these mechanisms</li> <li>- physiological basis of animal behavior</li> <li>- aspects of the ethology of the species of veterinary interest</li> <li>- appropriate ethological management of pets.</li> <li>- main behavioral problems of dogs and cats</li> </ul> <p>Basic knowledge of the factors that modulate these mechanisms:</p> <ul style="list-style-type: none"> <li>o The structure, function and behaviour of animals and their physiological and welfare needs (DOC 2.3).</li> </ul>
<b>Applying knowledge and understanding on:</b>	<ul style="list-style-type: none"> <li>o 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 (DOC 1.4).</li> <li>o Work effectively as a member of a multi-disciplinary team in the delivery of services (DOC 1.6).</li> <li>o Be able to review and evaluate literature and presentations critically (DOC 1.8).</li> <li>o Understand and apply principles of clinical governance, and practise evidence-based veterinary medicine (DOC 1.9).</li> <li>o 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 (DOC 1.13).</li> </ul>



	<ul style="list-style-type: none"> <li>○ 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 (DOC 1.20).</li> <li>○ Assess and manage pain (DOC 1.31).</li> <li>○ Advise on, and implement, preventive and eradication programmes appropriate to the species and in line with accepted animal health, welfare and public health standards (DOC 1.36).</li> </ul>
<b>Soft skills</b>	<ul style="list-style-type: none"> <li>● Making informed judgments and choices           <ul style="list-style-type: none"> <li>○ 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</li> <li>○ Students are also expected to acquire the following soft skills: Must also acquire the following cross-cutting competence: DOC 2.3 The structure, function and behaviour of animals and their physiological and welfare needs; DOC 2.5 Etiology, pathogenesis, clinical signs, diagnosis and treatment of common diseases and disorders occurring in common domestic species.</li> </ul> </li> <li>● Communicating knowledge and understanding           <ul style="list-style-type: none"> <li>○ Students must acquire the correct scientific skills and technical language to provide specialist professional support.</li> <li>○ Students are also expected to acquire the following soft skills: DOC 2.1 Understanding of, and competence in, the logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each.</li> </ul> </li> <li>● Capacities to continue learning           <ul style="list-style-type: none"> <li>○ 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.</li> <li>○ Students are also expected to acquire the following soft skills: DOC 2.2 Research methods, the contribution of basic and applied research to veterinary science.</li> </ul> </li> </ul>
<b>Summary of the skills that the integrated course concurs to make students acquire according to as provided by the EAEVE(ECCVT 17/01/2019)</b>	1.4 1.6 1.8 1.9 1.13 1.20 1.31 1.36 2.1 2.2 2.3 2.5

<b>Assessment and feedback</b>	
Methods of assessment	At the end of the course, students in good standing with prerequisites will be admitted to the final examination. The exam will consist of an interview or a written test with multiple-choice questions on the topics of the course.



	<p>Students must 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, the physiology of animal behaviour and the main behavioural problems of dogs and cats, as well as the skills and knowledge acquired during practical lessons.</p>
<p>Evaluation criteria</p>	<p>In formulating the judgment for each student, the teacher will take into account:</p> <ul style="list-style-type: none"> <li>• Knowledge and understanding (<b>scored from 1 to 8</b>): <ul style="list-style-type: none"> <li>○ 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.</li> <li>○ Students are expected to organize the knowledge of the basic and fundamental concepts of the program course and show the ability to analyse the features and causes of the main behavioural problems of dogs and cats</li> </ul> </li> <li>• Applying knowledge and understanding (<b>scored from 1 to 8</b>): <ul style="list-style-type: none"> <li>○ Students are expected to demonstrate their knowledge about the methodologies for evaluating the physiological parameters of domestic species.</li> <li>○ Ability to connect all the notions learned and report on a specific topic</li> <li>○ Students are expected to acquire the ability of effectively approach the behavioural problem and the client, in order to formulate a correct diagnosis and chose an adequate therapeutic plan.</li> </ul> </li> <li>• Autonomy of judgment (<b>scored from 1 to 8</b>): <ul style="list-style-type: none"> <li>○ Students are expected to propose critical hypotheses on the causes and factors affecting the functioning mechanisms of the organs and systems of domestic animals and the mechanisms of animal behaviour</li> <li>○ Critical analysis of the main behavioural problems of dogs and cats</li> </ul> </li> <li>• Communicating knowledge and understanding (<b>scored from 1 to 3</b>): <ul style="list-style-type: none"> <li>○ Students are expected to critically and independently discuss the issues addressed in the course program</li> <li>○ Students are expected to make connections between the different topics of the course program</li> <li>○ Students are expected to discuss the program topics with appropriate scientific and technical language</li> </ul> </li> <li>• Capacities to continue learning (<b>scored from 1 to 3</b>): <ul style="list-style-type: none"> <li>○ Students are expected to show the ability to improve their knowledge independently through the reading of specialized texts and scientific literature.</li> <li>○ Students will have acquired an adequate study method that allows him to continue the study independently</li> </ul> </li> </ul>
<p>Criteria for assessment and attribution of the final mark</p>	<p>The assessment of students' knowledge will be carried out through an oral and a written interview. The final mark will be the result of the collegial judgment relating</p>



	to the partial tests in which the student must demonstrate to have acquired a critical sense of the topics studied. The final mark is expressed out of thirty. The exam will be passed with a mark equal to or greater than 18 and will take into consideration not only the accuracy of the answer, but also the communication skills, clarity of presentation, disciplinary competence, and the level of detail.
<b>Additional information</b>	