

General information	
Academic subject	Diagnostic Imaging
Degree course	VETERINARY MEDICINE
Academic Year	2021/2022
European Credit Transfer and Accumulation System (ECTS)	2
Language	ITALIAN
Academic calendar (starting and ending date)	II – III Bimester
Attendance	MANDATORY

Professor/ Lecturer	
Name and Surname	PAOLA PARADIES
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Department and address	Veterinary Medicine Campus – Valenzano (BA)
Virtual headquarters	Teams code: khxq6ki
Tutoring (time and day)	Monday- Friday h 15-18 after email appointment

Syllabus	
Learning Objectives	The aim of the course is to develop the student's ability to analyze and interpret radiographic and ultrasound studies of interest in small animal internal medicine and provide knowledge on the appropriate use of second level diagnostics.
Course prerequisites	
Contents	<p>CLINICAL SCIENCE OF COMPANION ANIMALS</p> <p>Interpretation of radiographic images: from normal to pathological findings. Clinical applications of ultrasounds. Role, technique and interpretation of the ultrasonographic examination. Physical principles of ultrasounds and interaction of ultrasound with tissues. Transducers and main ultrasound regulation systems. Abdominal ultrasound anatomy and semeiotics. Orientation of images, interpretation and terminology. Ultrasound artifacts. Interpretation of common abdominal pathological pictures.</p> <p>Echocardiography: basis for a standard examination. Representation of the echoes: B-mode, M-mode, doppler.</p> <p>Application fields and operating principles of second level diagnostics (CT, MRI, CEUS, endoscopy).</p>
Books and bibliography	<ul style="list-style-type: none"> -Textbook of Veterinary Diagnostic Radiology. Thrall D.E., W.B. Saunders. Philadelphia. VI° Ed. 2013 o later editions -Atlas of small animal ultrasonography, Dominique Penninck e Marc-André d'Anjou, Blackwell Publishing Ed. - Ames Iowa USA 2015 or later editions -Ecografia in emergenza nel cane e nel gatto, con contenuto digitale Faverzani, Lodi, Barella, 2020, Poletto Ed -Ecocardiografia nel cane, nel gatto e nel cavallo. Con espansione online. Porciello, Birettoni, Caivano, 2019, Poletto Ed -Endoscopia negli animali d'affezione (cane, gatto, esotici) - Testo atlante, BOTTERO-RUGGIERO 1° ed., 328 pagg., 1000 ill., Poletto Editore, Maggio 2011

Additional materials	Pdf from Teacher and personal lecture notes

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
50	13	25	12-
CFU/ETCS			
2	1	1	
Teaching strategy	Part of the course is carried out in the classroom using power points integrated with images and videos selected by the teacher. Practical lessons are held in small animal clinics, or in the large animal examination room and are aimed to acquire the ability to perform an ultrasound exam or to discuss the radiographic or echographic aspects of clinical cases referred to the clinics. During practices, students divided into groups will be invited to perform ultrasound scans and to interpret the X-ray or ultrasound images through the description of the pathological findings and their differential diagnosis. The radiographic, ultrasound and endoscopic pictures of clinical cases of medical interest presented by the teacher or by volunteer students (according to the inverted lesson method) will be discussed.		
Expected learning outcomes			
Knowledge and understanding on:	Knowledge of the ultrasound equipment. Knowledge of applied anatomy and semeiotics. Knowledge of the radiographic and ultrasonographic signs of the main intrathoracic and abdominal pathologies of clinical interest. Basic knowledge of the role of the second level diagnostics (CEUS, MRI, CT, endoscopy).		
Applying knowledge and understanding on:	<p>Skills in interpreting radiographic and ultrasonographic studies, ability to recognize radiographic and ultrasound signs of the main intrathoracic and abdominal pathologies of small animals, ability to draw up a report; ability to create a list of radiographic and ultrasound differential diagnoses.</p> <p>Students are expected to be able to obtain the following Day One Competences adopted by ECCVT:</p> <p>1.12, 1.14, 1.23</p> <p>○</p>		
Soft skills	<ul style="list-style-type: none"> • Making informed judgments and choices the student will have greater autonomy in the future in choosing a specialistic course based on his interest in the subject • Communicating knowledge and understanding the course confers knowledge and skills in the use of the specific technical language used in radiology and echography. • Capacities to continue learning 		

	<p>The skills acquired will help the student to become a good practitioner and open new perspectives towards postgraduate specialized courses such as the Master in Diagnostics, the European College in Diagnostic Imaging or even Cardiology.</p> <p>Day One Competences adopted by ECCVT: 2.5, 2.11</p> <p>○</p>
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Assessment and feedback	
Methods of assessment	Final oral exam with evaluation of the knowledge of basic concepts of ultrasonography and interpretation of radiographic studies and ultrasound pictures or videos of normal or pathological animals.
Evaluation criteria	<ul style="list-style-type: none"> • Knowledge and understanding Basic concepts and normal pictures. • Applying knowledge and understanding Interpretation of pathological pictures. Choosing the right exam in the diagnostic plan. • Autonomy of judgment • Communicating knowledge and understanding Description of radiographic and echographic pictures and reports. • Communication skills Correct terminology • Capacities to continue learning Capacity to adapt skills and knowledge to new scenarios
Criteria for assessment and attribution of the final mark	<p>The evaluation is reported in /30. To pass the examination an evaluation > or = 18/30 is asked. The inter-course self-assessment tests do not affect the final exam in any way.</p> <p>The evaluation acquired in the Module Diagnostic Imaging (2/10), together with that acquired in "Legal Veterinary Medicine" (2/10), and "Veterinary Clinical Medicine" (4/10) and "Therapy" (2/10) will contribute to the determination of the final vote of the integrated examination of "Veterinary Clinical Medicine".</p> <p>Students can take the four Exam Modules together or separately in no more than two different partial sessions within a maximum period of six months as follow:</p>