General information	
Academic subject	**Clinical Pathology** Module of the integrated course: **Clinical Examination and Medical Pathology**
Degree course	Veterinary Medicine
Academic Year	2021/2022
European Credit Transfer and Accumulation System (ECTS)	3
Language	Italian
Academic calendar (starting and ending date)	First two months
Attendance	Mandatory

Professor/ Lecturer	
Name and Surname	Grazia Carelli
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Telephone	0804679859
Department and address	Veterinary Medicine Campus – Valenzano (BA)
Virtual headquarters	Microsoft team code "Diagnostica di laboratorio": hk3r2ko
Tutoring (time and day)	Tuesday: 3 p.m. - 5 p.m. and Thursday: 12 p.m. - 1 p.m. By appointment on other days and at other times

Syllabus	
Learning Objectives	The course aims to provide students with basic knowledge of laboratory methodologies and procedures, techniques for taking and preserving biological samples, and to provide the basis for identifying, based on pathophysiological mechanisms, the most appropriate laboratory investigations to be carried out in the diagnostic process and to be able to interpret and understand the limitations of the tests.
Course prerequisites	The student must have acquired knowledge and skills related to anatomical districts, biochemical, physiological and pathological mechanisms. Propaedeuticity**:** Pharmacology and Veterinary Toxicology
Contents	General procedures for handling biological samples. Complete blood count. Evaluation of the bone marrow. Evaluation of hemostasis. Evaluation of serum proteins and electrophoresis. Examination of effusions. Urinalysis. Clinical enzymology. Evaluation of hepatic, renal, pancreatic and gastrointestinal function. Evaluation of endocrine, metabolic and lipid disorders. Hints of diagnostic cytology. Area: Clinical sciences of companion animals Clinical sciences in production animals
Books and bibliography	Villiers E. and Ristic J. Gli esami di laboratorio. Indicazioni, esecuzione, interpretazione. Cane e gatto. Edra, 2017. Paltrinieri S., Bertazzolo W., Giordano A. Patologia clinica del cane e del gatto. Approccio pratico alla diagnostica di laboratorio - 1° ed., Elsevier-Masson, 2010
Additional materials	Lesson notes.

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study

U.O. Didattica e servizi agli studenti
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			hours
Hours			
75	26	25	24
ECTS			
3	2	1	
Teaching strategy			
	Lectures take place in the classroom with PC presentations. The lectures are followed by practical exercises in the well-equipped laboratories of the Medical Clinic section of the Department of Veterinary Medicine. The students are divided into groups and supervised by the teacher and any collaborators. Each student is asked to perform individually the laboratory techniques object of the practise and to discuss them with the teacher or collaborators. The course is not delivered in e-learning mode.		
Expected learning outcomes			
Knowledge and understanding on:	o The student should learn how to handle, store and send the different biological samples, should be aware of the potential and limits of the information provided by laboratory tests and should know the laboratory tests are used in practice.		
Applying knowledge and understanding on:	o The student must be aware of the sources of variability in the measurement of laboratory parameters depending on the collection, storage and sending of a sample in order to be able to correctly interpret the data obtained		
Soft skills	• Making informed judgments and choices o The student must be able to choose in complete autonomy, on the basis of the theoretical and practical knowledge acquired in the field of clinical pathology, the most appropriate investigations to be made for the evaluation of an organ/apparatus. • Communicating knowledge and understanding o The student will have to demonstrate communication skills such as to be easily understandable and to possess a good property of language • Capacities to continue learning o The student must have acquired the methodological and cultural bases to continue studying independently in order to extend the knowledge useful for the profession and for lifelong learning.		

Assessment and feedback	
Methods of assessment	The Clinical Pathology exam takes place simultaneously with the other two modules or, as a partial test, with the Clinical Examination exam. The evaluation acquired in the three modules will determine the final grade.
Evaluation criteria	• Knowledge and understanding o The student must have acquired the ability to apply a correct diagnostic approach • Applying knowledge and understanding o The student must be able to correctly interpret the results of laboratory investigations also in the light of the pre-analytical and analytical variables • Autonomy of judgment o The student must be able to formulate a critical reasoning on the topics under examination • Communicating knowledge and understanding o The student must be able to understand and communicate what he has learned with mastery of specific terminology to specialist and non-specialist interlocutors.

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	- Communication skills - The student must be able to express himself correctly with mastery of specific terminology and be able to communicate what he has learned to specialist and non-specialist interlocutors. - Capacities to continue learning - The methodological approach acquired during the course will give the student the opportunity to expand the knowledge useful for the future profession in full autonomy
Criteria for assessment and attribution of the final mark	Learning will be assessed with at least three questions on the program carried out. The student must be able to demonstrate that he has acquired the basic knowledge to be able to apply a correct diagnostic approach and to be able to correctly interpret the results obtained from laboratory investigations. The student must also demonstrate a command of language and a good use of scientific terminology.
Additional information	

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