

ACADEMIC YEAR 2023/2024

General information	
Name of the integrated course	VETERINARY SURGERY 1
Integrated teaching module	Veterinary Surgical Pathology; Surgical Semeiotics; Radiology.
Degree course	VETERINARY MEDICINE (LM 42)
Academic Year	IV
European Credit Transfer and Accumulation System (ECTS)	8 ECTS (lectures: 5ECTS; practical activity: 3 ECTS)
Language	Italian
Academic calendar	II 7 week term
Attendance	Mandatory attendance

teacher	Email address	phone
Antonio Vito Francesco Di Bello	antonio.dibello@uniba.it	080 5443816
Francesco Staffieri	francesco.staffieri@uniba.it	080 5443812
Luca Lacitignola	luca.lacitignola@uniba.it	080 5443890

Location and address	Campus of Veterinary Medicine, S.P. 62 per Casamassima km 3, 70010 Valenzano
Virtual classroom:	Microsoft Teams
Tutoring (time and day)	From Monday to Friday 9: 30-16: 30 by appointment via e-mail

Syllabus	
Learning Objectives	The integrated course of Veterinary Surgery 1 aims to teach the student: <ol style="list-style-type: none"> 1) The main etiopathogenetic mechanisms of diseases of surgical interest through the definition of aspects concerning etiology, pathogenesis and possible clinical manifestations; allow the acquisition of the correct methods of clinical approach and interpretation of the pathological processes of surgical diseases. 2) The diagnostic imaging techniques most commonly used in the veterinary clinic; the methods and systems of operation of radiographic and imaging equipment; the radiographic anatomy of the various anatomical areas and identification of the related pathological changes. 3) Semeiotics of the different systems and districts concerning surgical pathologies. Ensure the learning of the diagnostic process necessary for the diagnosis and treatment of the main surgical pathologies.
Course prerequisites	General Pathology. Adequate training in Anatomy and Physiology is also required to understand disease processes and alterations of surgical interest, as well as knowledge of Biosafety principles in dealing with animals.
Contents of the teaching module:	The module pertains to the Clinical Sciences area of companion, horse, livestock and unconventional animals.



<p>Veterinary Surgical Pathology</p> <p>Teacher: Antonio Vito Francesco DI BELLO</p> <p>Lectures ECTS: 3</p> <p>Hours: 39</p>	<p>The module concerns the Clinical Sciences</p> <ul style="list-style-type: none"> - Basic pathological processes of tissues: Atrophy, Hypotrophy, Hypertrophy, Dystrophy. Aplasia, Hypoplasia, Hyperplasia, Dysplasia. Anaplasia and Metaplasia. Wounds and contusions. Healing processes. Pathology of healing. Wound, Ulcer, Keloid. Adhesions and coalescences. Fistulae. Bone tissue repair, Pathology of bone repair, Pathology of bone callus. - Basic pathological processes of organs: Atresias, Stenosis, Occlusions. Retentions. Collections. Ectasia and diverticulae. Ectopias. Paratopias. Trauma and shock. Neoplasms. - Bone and bone tissue disorders: Pathophysiology and classification of fractures. Metabolic osteopathies, Hypertrophic osteodystrophy, Enostosis, Osteomyelitis, Periostitis and osteoperiostitis. Primary and secondary tumors. - Joint and epiphyseal disc diseases: Dysplasia, Osteochondrosis and osteochondritis dissecans. Arthrosis. Dislocation and subluxation. Ankylosis. Retained cartilage core. Varus and valgus. - Pathologies of muscles, tendons and ligaments: Myositis, Tenitis and desmitis, Synovitis, Bursitis. - Pathologies of the nervous system: Paralysis, paresis and spinal cord pathologies. Discopathies, Wobbler's syndrome, Cauda equina syndrome. Spinal osteomyelitis and discospondylitis. - Digestive system disorders: Megaesophagus, Pathophysiology of gastric dilatation-torsion syndrome, Pathophysiology of intestinal obstruction, Dislocations, Anorectal diseases. - Respiratory system disorders: Respiratory tract syndrome of brachycephalic dog breeds, Laryngeal paralysis and collapse, Pneumothorax. - Diseases of the urinary system: Ectopia of the ureters; Stenosis, occlusions and ectasias of the upper and lower urinary tract; Urolithiasis; Urethral prolapse.
<p>Practical activities ECTS: 1</p> <p>Ore: 20</p>	<p>Practical activities take place in the outpatient departments of the University Veterinary Didactic Hospital on clinical cases that come daily for observation. Based on the cases, clinical situations that have already been discussed in the lectures will preferably be evaluated. The students, divided into groups, are supervised by the teachers and collaborators. Each student can face, under the guidance of the teacher, the clinical process of the individual case and discuss the pathophysiological picture with the teacher.</p> <p>Each student has the opportunity to deal autonomously, under the guidance of the teacher, with the clinical process of the individual case, learn to collect the clinical history, interpret the clinical sign and, finally, know how to reconstruct the pathophysiological evolution of pathologies of surgical interest.</p>
<p>Contents of the teaching module: SURGICAL SEMEIOTICS</p> <p>Teacher: Francesco STAFFIERI</p> <p>Lectures ECTS: 1</p> <p>Hours: 13</p>	<p>The module refers to the Clinical Sciences area of pets, horses, production animals and non-conventional animals.</p> <ul style="list-style-type: none"> • Decision making in the surgical patient: from symptoms and signs to diagnosis • General and particular physical examination • Triage and emergency clinical examination • Shock and systemic inflammatory syndrome • Preoperative diagnostic tests and surgical risk assessment • Semeiology of swellings • Clinical examination of the musculoskeletal system in dogs, cats and horses • Neurological examination in dogs, cats and horses • Eye examination and ophthalmoscopy

	<ul style="list-style-type: none"> • Examination of the abdomen and digestive system with specific reference to surgical pathologies (see surgical pathology program) • Examination of the chest and respiratory system with specific reference to surgical pathologies (see surgical pathology program) • Semeiotics of the urinary system with specific reference to surgical pathologies (see surgical pathology program)
<p>Practical activities</p> <p>ECTS: 1</p> <p>Hours: 20</p>	<p>Practical activities take place in the outpatient departments of the University Veterinary Didactic Hospital on clinical cases that come daily for observation. Based on the cases, clinical situations that have already been discussed in the lectures will preferably be evaluated. The students, divided into groups, are supervised by the teachers and collaborators. Each student has the opportunity to deal autonomously, under the guidance of the teacher, with the clinical process of the individual case, learn to collect an accurate medical history, recognize the clinical signs and know how to interpret them for the purpose of identifying the semiological picture.</p>
<p>Contents of the teaching module:</p> <p>Radiology</p> <p>teacher:</p> <p>Luca LACITIGNOLA</p> <p>Lectures</p> <p>ECTS: 1</p> <p>Hours: 13</p>	<p>Radiation physics. The X-ray tube and radiographic equipment. L' Interaction of radiation with matter. The formation of the image radiographic image. Secondary radiation and antidiffusion gratings. Radiology Digital. Radiation protection. Radioscopy. Digital radiography. The projections radiography: terminology and radiographic positioning of the patient. Physics and geometry of the radiographic image. Contrast media. Scintigraphy. Tomography computed tomography. Nuclear magnetic resonance imaging. Ultrasound.</p> <p>Skeletal system: Anatomy and radiological semeiotics. Chronological appearance Of ossification nuclei. Osteopathies. Fractures, Dislocations, Epiphyseal detachments. Normal and pathological radiographic appearance of bone repair processes. Osteodysplasias. Osteochondrosis. Osteomyelitis. Neoplasms. Arthrosis. Osteopathies of growing animals. Laminitis. Naviculitis. Bone cysts. Sesamoiditis. Periostitis.</p> <p>Enthesiopathies. Angular deformities.</p> <p>Respiratory system and thorax: Anatomy and radiological semeiotics. Alterations of pulmonary transparency. Alterations of the trachea. Bronchopneumonia and Pneumonitis. Pneumothorax. Pleural effusions. Pulmonary edema. Neoplasms.</p> <p>Digestive tract and abdomen: Anatomy and radiologic semeiotics. Direct examination and contrastography. Periodontal disease. Megaesophagus. Hernias. Dilatation and gastric torsion. Intussusception. Enteritis. Foreign bodies. Coprostitis. Megacolon. Neoplasms. Peritonitis. Ascites.</p> <p>Urinary and genital tract: Anatomy and radiological semeiotics. Direct and contrastography. Hydronephrosis. Nephropathies. Ectopic ureter. Cystitis. Ruptures Bladder and urethral ruptures. Lithiasis. Neoplasms. Prostate pathologies. Uterine pathologies.</p> <p>Nervous system: Anatomy and radiological semeiotics. Myelography, Epidurography, Discography. Pathologies of the spine and marrow. Neoplasms.</p> <p>Radiology of wild and unconventional animals.</p>
<p>Practical activities</p> <p>ECTS: 1</p> <p>Hours: 20</p>	<p>The exercises will be organized in small groups of 5-8 students, and will cover:</p> <p>Knowledge and of radiological equipment and performing radiograms in patients.</p> <p>Knowledge of the CT scanner and performance of CT in patients.</p> <p>Knowledge of the ultrasound scanner and performing diagnostic ultrasound scans in patients.</p>

<p>Books and bibliography</p>	<p>Interpretation and reporting of x-ray, ct, and ultrasound examinations of patients.</p> <p>Veterinary Surgical Pathology module</p> <ul style="list-style-type: none"> - Bojrab J. B.: "Le basi patogenetiche delle malattie chirurgiche nei piccoli animali", I edizione italiana, Giraldi Editore, 2001. - Tobias K.M., Johnston S.A.: Chirurgia Veterinaria dei Piccoli Animali, II ed., Delfino Editore, 2020. - Fossum T.W.: Chirurgia dei piccoli animali, Elsevier-Masson, III o IV o V edizione italiana, 2008 e 2013 e 2021. - Micheletto B.: "Patologia Chirurgica Veterinaria e Podologia", UTET. - Rose R.J., Hodgson D.R.: Manuale di clinica del cavallo, II edizione italiana, Delfino editore, 2005. - Stashak T.S.: Adams' La zoppicatura dei cavalli, Edizione italiana della IV americana, Noceto sbm, 1990. <p>Surgical semeiotic module</p> <ul style="list-style-type: none"> - T.W Fossum Chirurgia dei piccoli animali 3a Ed Mosby 2007 - Slatter D.H. Trattato di chirurgia dei piccoli animali 3a Ed Antonio Delfino 2005. - Tobias K.M: Veterinary surgery: small animal - Auer & Stick Equine surgery W.B. Saunders, 2005 <p>Radiology Module</p> <ul style="list-style-type: none"> - Bertoni G., Brunetti A., Pozzi L.: "Radiologia Veterinaria", Idelson-Gnocchi, 2005. - Burk R.L. e Ackermann N.: "Radiologia diagnostica ed ecografia del cane e del gatto", UTET. Morgan J.P.: "Radiologia del cane e del gatto", Masson Edizioni Veterinarie. - O'brien "Radiologia per la pratica ippiatrica", Antonio Delfino Editore, I Edizione Italiana, 2008.
<p>Additional materials</p>	<p>Auxiliary material provided by teachers and PDF presentations will be available on the Google Drive and Microsoft Teams platforms.</p> <p>The books are recommended for the purpose of deepening and integration; given the compulsory attendance, the lesson notes and the material provided by the teachers during the course will be of fundamental importance.</p>

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
200	65	60	75
ECTS			
8	5	3	NP
Teaching strategy		<p>The teaching will consist mainly of theoretical lectures that take place in a classroom equipped with multimedia tools such as PCs, projector, internet connection, so as to show, at the same time as the explanation, power point slides, photos and explanatory videos. Different teaching methodologies such as problem solving, case study and role-playing will also be adopted, through which, through simulations and propositions of real cases, information can be integrated in order to mature a full learning process and to consolidate the knowledge and skills delivered by the integrated course.</p>	

	In the practical activities, greater emphasis will be placed on problem solving and learning by doing, which enable the acquisition of skills and competencies to be fostered.
Expected learning outcomes	
Knowledge and understanding on:	<p>Upon completion of the course, the student will acquire knowledge and understanding of:</p> <ul style="list-style-type: none"> • Etiological and pathogenetic mechanisms of diseases of surgical interest; • Pathophysiological mechanisms and clinical manifestations of diseases of surgical interest; • Clinical methodology of approach to evaluate different clinical manifestations of diseases of surgical interest; • Correct technical and scientific terminology for the description and understanding of pathologies of surgical interest. • Perform a complete clinical examination • Knowing how to recognize the clinical signs related to surgical pathologies • Knowing how to decide the surgical decision-making process
Applying knowledge and understanding on:	<ul style="list-style-type: none"> • Upon completion of the course, the student should be able to: • Ability to use the knowledge acquired in order to recognize, understand and interpret the various clinical manifestations and be able to critically evaluate the evolution of surgical diseases; • Ability to detect, note, describe, analyze and communicate the clinical manifestations of a pathological event of surgical interest; • Ability to adopt the most appropriate procedure to reach from clinical manifestation to pathophysiological framing and diagnosis. <p>In line with the Day One Competencies adopted by ECCVT, at the end of the course the student should be able to:</p> <ul style="list-style-type: none"> • Communicate effectively with clients and professional colleagues, using appropriate language (DOC 1.4); • Prepare accurate medical records and case reports in a form satisfactory to colleagues and understandable to clients (DOC 1.5); • Work effectively as a member of a multidisciplinary team in service delivery (DOC 1.6); • Understand and apply the principles of clinical governance and do evidence-based practice of veterinary medicine (DOC 1.9); • Obtain an accurate and relevant history of the individual animal and its environment (DOC 1.15); • Manipulate and restrain animal patients safely and with respect for the animal, and instruct others in helping the veterinarian perform these techniques (DOC 1.16). • Perform a comprehensive clinical examination and demonstrate skills in clinical decision making (DOC 1.17). • Communicate clearly and collaborate with referral and diagnostic services, including providing an adequate history (DOC 1.22). • Understand the contribution that imaging and other diagnostic techniques can make in reaching a diagnosis. Use basic diagnostic imaging equipment and effectively perform an examination as appropriate, in accordance with good health and safety practices and applicable regulations (DOC 1.23). • Apply biosafety principles correctly (DOC 1.28).

<p>Soft skills</p>	<p>Autonomy of judgment</p> <ul style="list-style-type: none"> • Ability to gather information about the clinical case and symptomatology, useful in defining the etiopathogenetic evolution of surgical disease; • Ability to critically analyze the most appropriate procedures in the course of a diagnostic procedure; • Ability to discern misleading and ancillary information from data useful in framing the clinical problem. • Ability to propose solutions in problematic situations <p>Communication skills</p> <ul style="list-style-type: none"> • Acquisition of the correct scientific skills and terminology to be able to properly present one's inferences to fellow students and faculty, and to be able to relate later to professional colleagues and clients; • Acquisition of the ability to work in teams, adopting appropriate communication and interaction strategies. <p>Ability to learn independently</p> <ul style="list-style-type: none"> • Acquisition of the ability to independently improve one's knowledge through further study and insights from databases or specialized journals and books. <p>The competencies achieved are framed with the following Day One Competencies adopted by the ECCVT:</p> <ul style="list-style-type: none"> • Ability to independently learn and investigate topics of professional interest, reflect on professional experience, and take steps to improve performance and competence (DOC 1.13). • Understanding and competence in logical approaches to both scientific and clinical reasoning, the distinction between the two, and the strengths and limitations of each (DOC 2.1); • Know etiology, pathogenesis, clinical signs, diagnosis and treatment of common diseases and disorders occurring in common domestic species (DOC 2.5); • Acquire principles of effective interpersonal interaction, including communication, leadership, management and teamwork (DOC 2.11); • Know ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional ethics and related to animal welfare (DOC 2.12).
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<p>Assessment and feedback</p>	
<p>Methods of assessment</p>	<p>The examination of the integrated course "Veterinary Surgery 1" allows the acquisition of 8 ECTS.</p> <p>The examination includes a partial examination of the "Veterinary Surgical Pathology" module, after passing it the student may take the examination of the "Surgical Semeiotics" and "Radiology" modules. The examination of the two parts can be taken in the same session or in different sessions. ECTS (8) are considered acquired only after passing the two parts and registering the transcript on the ESSE3 portal.</p>
<p>Evaluation criteria</p>	<ul style="list-style-type: none"> • Knowledge and Ability to Understand: <ul style="list-style-type: none"> - The student must demonstrate that he has acquired in an organic and thorough way the knowledge of the fundamental etiopathogenetic and pathophysiological processes of surgical diseases. • Applied knowledge and understanding skills: <ul style="list-style-type: none"> - Adequate ability to recognize, describe and correctly classify the main pathologies of surgical interest, together with the ability to correctly expose

	<p>the contents;</p> <ul style="list-style-type: none"> - Ability to make links between different disciplines and provide appropriate examples; - Ability to evaluate a case history and prepare a diagnostic algorithm. <ul style="list-style-type: none"> • Autonomy of judgment: <ul style="list-style-type: none"> - Ability to analyze and critical sense of the topics studied; - Overall and unitary assessment capacity of the most common clinical situations. • Communication skills: <ul style="list-style-type: none"> - Exposing capacity and clarity; - Expressive appropriateness, with particular reference to specialist terminology. • Ability to learn: <ul style="list-style-type: none"> - Demonstrate the ability to rework the concepts learned to adapt them to new situations and be able to draw on the sources available for their management.
<p>Criteria for assessment and attribution of the final mark</p>	<p>Assessment of the level of learning achieved is by oral interview, aimed at ascertaining the degree of knowledge of the proposed topics. The final grade is given in thirtieths. The outcomes of the "Veterinary Surgical Pathology," "Surgical Semeiotics," and "Radiology" tests will contribute to the final grade of the Veterinary Surgery 1 exam. The exam is considered passed when the grade is greater than or equal to 18/30, and the student must still acquire a grade greater than or equal to 18/30 for each part of the exam related to the three subjects. The final grade is the result of the collegial judgment related to the two partial examinations in which the student must demonstrate that he or she has acquired a critical sense of the topics studied. The final grade will take into consideration not only the accuracy of the answer, but also the ability to communicate, clarity of exposition, disciplinary competence and the level of in-depth study.</p>
<p>Additional information</p>	