

ACADEMIC YEAR 2023/2024

General information	
Academic subject	VETERINARY SURGERY 2
Integrated teaching modules	Veterinary surgical clinic; Practical Surgical Activity; Applied Anatomy; Veterinary Anesthesiology; Surgical procedures.
Degree course	VETERINARY MEDICINE (LM 42)
Academic Year	V
ECTS	14 ECTS (lectures: 7 ECTS; practical activity: 7 ECTS)
Language	Italian
Academic calendar	7 week term
Attendance	Mandatory

Teacher	Email address	phone
Antonio Crovace	antonio.crovace@uniba.it	080 5449817
Francesco Staffieri	francesco.staffieri@uniba.it	080 5449812
Luca Lacitignola	luca.lacitignola@uniba.it	080 5449890
Delia Franchini	delia.franchini@uniba.it	080 5449816
Salvatore De Santis	salvatore.desantis@uniba.it	080 5443902

Headquarters	Campus of Veterinary Medicine, S.P. 62 per Casamassima km 3, 70010 Valenzano
Virtual rooms:	Microsoft Teams platform Veterinary surgical clinic: qwvngvz Practical Surgical Activity: aby626g Applied Anatomy: hoyzab4 Veterinary Anesthesiology: 5g487u1 Surgical procedures: 3uudvbm
Tutoring (time and day)	Tuesdays and Wednesdays, 2:30 to 5:30 p.m. by appointment Prof. Delia Franchini From Monday to Friday 9: 30-16: 30 by appointment via e-mail

Syllabus	
Learning Objectives	The course aims to deliver clinical, theoretical and practical knowledge and skills in the area of surgically relevant disease of small and large animals. The teaching process will include the framing of the pathology through a standardized diagnostic procedure including clinical examination, anesthesiologic management, targeted choice for the use of complementary diagnostic pathways, patient prognosis, the



	<p>most appropriate treatment to resolve the specific pathology, and any expected and unexpected complications. These skills will be acquired by attending the clinical care activities of the Veterinary Hospital. The student will acquire communication skills by interacting directly with the owner in all phases of clinical management of the patient.</p>
Course prerequisites	Veterinary Surgery 1 and Veterinary Pharmacology and Toxicology
<p>CLINICAL SURGERY</p> <p>Teacher: ANTONIO CROVACE</p> <p>Lectures: 4 ECTS 52 h</p>	<ul style="list-style-type: none"> • The course concerns the Clinical Science ➤ Clinic of the Locomotor System of Large Animals: <ul style="list-style-type: none"> ➤ Podophlemmatitis , Naviculitis , ➤ Osteitis of the third phalanx , ➤ Tarsal arthritis, ➤ Proximal sesamoiditis, ➤ Sesamoid fracture, ➤ Chiovarado, Patellar cramp, ➤ Dislocation of the vastus longus, ➤ Podiatric injuries of cattle. ➤ Corneggio and laryngeal pathologies. ➤ Clinic of the locomotor system of small animals: <ul style="list-style-type: none"> ➤ Shoulder OCD, ➤ glenoid injuries, ➤ OCD medial condyle of humerus, ➤ medial/lateral coronoid process (FCP) fragmentation, ➤ nonunion of the anconeal process (UAP), ➤ elbow joint incongruence, ➤ growth disorders of the radius, ➤ growth disorders of the ulna, ➤ radioulnar dysmetria, ➤ Fragmentation of the sesamoids, ➤ Pathologies of teno-muscular structures of the forelimb, ➤ Hip dysplasia, ➤ Aseptic necrosis of the femoral head, ➤ Traumatic and pathological dislocations of the femur, ➤ dislocation of the patella, ➤ rupture of the anterior cruciate ligament , ➤ dislocation of the knee, ➤ OCD of the femoral condyle, ➤ growth disorders of the tibia, pathologies of the tarsus. ➤ Growth disorders: <ul style="list-style-type: none"> ➤ Panosteitis, ➤ hypertrophic osteodystrophy, ➤ secondary hyperparathyroidism, rickets, ➤ hypervitaminosis A, ➤ osteogenesis imperfecta, ➤ osteopetrosis. ➤ Eye injuries, ➤ lesions of the ear, ➤ injuries of the digestive system of monogastrics, ➤ Digestive tract injuries of polygastrics. ➤ Injuries of the first airways in the horse



<p>Practical activities and exercises: CFU: 1 hours:20</p>	<p>➤ Injuries of the nervous system.</p> <p>Special part: approach to the surgical patient from clinical examination , to treatment and postoperative management..</p> <p>The practical activities will be conducted by dividing the students into groups, in the surgery clinics, diagnostic rooms, operating rooms and surgery lab. Students will carry out the activities supervised by academic tutors Group activities will be carried out in co-presence with all module teachers. Students will be involved in clinical cases from the examination, diagnostic approach until establishing the treatment plan and performing any surgical procedures under the supervision of the tutor.</p>
<p>Teaching module program of: VETERINARY ANESTHESIOLOGY</p> <p>Teacher: FRANCESCO STAFFIERI</p> <p>Lectures 1 ECTS 13 h</p> <p>Practical activities and exercises: 1 ECTS 20 h</p>	<p>The course concerns the Clinical Science</p> <p>- General concepts</p> <p>Teaching content pertains to the Clinical Sciences area of companion animals (including horses and exotics), and includes the following topics:</p> <p>Preanesthetic examination.</p> <p>Premedication: generalities, phenothiazines, alpha 2 agonists, benzodiazepines, opioids, butyrophenones.</p> <p>Induction: generality, thiopental, propofol, ketamine.</p> <p>Maintaining general anesthesia: generalities, inhalation agents (halothane, isoflurane, sevoflurane, desflurane), totally intravenous anesthesia.</p> <p>Anesthesia monitoring: clinical monitoring, electrocardiography, pulse oximetry, blood pressure, capnography, temperature.</p> <p>Equipment and instruments: anesthesia machine, vaporizer, breathing circuits, laryngoscope and endotracheal tubes, infusion pump.</p> <p>Physiology of pain. Perioperative pain therapy.</p> <p>Local-regional anesthesia and analgesia.</p> <p>Peculiarities of anesthesia in the dog and cat.</p> <p>Peculiarities of anesthesia in the horse.</p> <p>The practical activities will be conducted , dividing the students into groups, in the outpatientclinics of the Surgery, the diagnostic rooms , the operating rooms and the surgery lab.Students will carry out the activities supervised by academic tutors. Group activities will be carried out in co-presence with all lecturers of the module. Students will attend to the clinical cases, from the examination of the animal, the choice of the anesthetic protocol and its management. Each student will be in charge for induction, intubation, maintenance of anesthesia and recovery. The choice of a perioperative and postoperative analgesic protocol will be part of the assessment.</p>
<p>Teaching module program of: APPLIED ANATOMY</p> <p>Teacher: SALVATORE DE SANTIS</p> <p>Lectures 1 ECTS 10 h</p>	<p>The contents of the subject "Applied Anatomy" belongs to the area of Sciences Clinical Sciences of companion animals.</p> <p>The theoretical-practical module will address the regional anatomy of the main domestic species with special reference to domestic carnivores with application modalities of diagnostic imaging. Particular attention will be paid to the study of the thoracic and pelvic limb regions, the thorax, abdomen and perineal region; Among the treated parts a particular space will be reserved for the distribution of vases, nerves,lymph nodes and glands in consideration of the needs of the surgical clinic.</p> <p>The course will be supplemented by practical exercises on cadavers during which the student will be able to practice localization of the structures described in lecture. The anatomical landmarks required for the surgical procedure will be defined. The</p>



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Practical activities and exercises 1 ECTS 15 h	
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	practical activities will be conducted both in the anatomic classroom and in surgical facilities inco-presence with module colleagues
<p>Teaching module program of: Veterinary Surgical procedures</p> <p>Teacher: Luca Lacitignola</p> <p>Lectures 1 ECTS</p> <p>13 h</p> <p>Practical activities and exercises 1 ECTS</p> <p>20 h</p>	<p>The course concerns the Clinical Science</p> <p>General concepts. Principles of surgical asepsis. Sterilization and disinfection. Environments equipment and personnel intended for surgery. Preparation of the surgical field. Preparation of the surgical team. Surgical instrumentation. Containment of animals. Administration of medications. Electrosurgery. Dieresis and exeresis. Hemostasis. Synthesis: types of sutures, characteristics of needles and suture threads. Drainages. Bandages. Biopsy techniques. Postoperative treatment of the surgical patient. Antibiotic therapy in surgery. Osteosynthesis media. Special Part: Wound treatment; Celiotomy and laparotomy; Herniorrhaphy; Stomach surgery; Bowel surgery; Splenectomy; Bladder and urethra surgery; First airway surgery; Thoracotomy and sternotomy; Principles of osteosynthesis.</p> <p>The exercises will be conducted, dividing the students into groups, in the surgery outpatient clinics, diagnostic rooms, operating rooms and the surgery lab. Students will carry out the activities supervised by academic tutors. Group activities will be conducted in co-presence with all module lecturers. Students will discuss with the teacher the best surgical approach with the choice of instrumentation to be used and their proper use. They will also be involved in the choice of suture material and their use to perform surgical plane closure under the supervision of the tutor.</p>
<p>Teaching module program of: PRACTICAL SURGICAL ACTIVITY</p> <p>Teacher:Delia Franchini</p> <p>Practical activities and exercises</p> <p>3 ECTS</p> <p>60 h</p>	<p>Introduction to the course; For each clinical case observed: preoperative evaluation of the surgical patient; Clinical history collection; Basic and specialist clinical visit; Medical records compilation; Discussion on the decision-making algorithm for the most suitable diagnostic procedures for the clinical case; Differential diagnosis formulation; Issuing a diagnosis; Discussing surgical treatment, postoperative care and potential short-, medium- and long-term complications; Issuing a prognosis; Compilation of patient discharge sheet, compilation of collateral examination forms; Reading of reports (haematological, cytological, histological, diagnostic imaging); Participation in the illustration of the informed consent to the surgical and anesthetic procedures to the owner; Compilation of anesthetic records / execution of some procedures such as venous access and patient intubation; Assistance to surgical procedures / execution of some surgical procedures; Compilation of surgical reports; Prescription of drug therapies (if necessary).</p> <p>On the basis of the clinical cases observed, topics relating to the following subjects will be discussed:</p>



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SMALL ANIMALS:- Surgery of the integumentary system; Ear surgery; Upper respiratory tract surgery, Chest wall surgery; Surgery of the digestive system, Surgery of the perineum; Surgery of the urinary system, Herniorrhaphy, Basics of oncological surgery; Surgery and oncological treatment of bone, joint and muscle neoplasms; Basics of orthopedics.
Equine: Basic and specialist clinical examination, Examination of the respiratory tract

	<p>of the horse and diagnostic imaging (endoscopy, radiology and ultrasonography of the upper respiratory tract), Surgery of dental pathologies Diagnosis and treatment of neoplasms in large animals.</p>
<p>Books and bibliography</p>	<ul style="list-style-type: none"> • Slatter D.H. Trattato di chirurgia dei piccoli animali 3a Ed Antonio Delfino 2005. • Tobias K.M: Veterinary surgery: small animals • Cheli -Clinica Chirurgica Veterinaria • Mensa- Patologia Chirurgica Veterinari • Tommasini Degna: Atlante di chirurgia veterinaria del cane e del gatto, Poletto Editore • Anestesia del Cane e del Gatto. Autore: Federico Corletto. Editore: Poletto editore • Anestesia del Cane, del Gatto e degli Animali non convenzionali. Autori: • Bufalari Antonello, Lachin Adriano. Editore: Elsevier • Chirurgia del Cavallo (capitolo sull'Anestesia Equina). Autore: Auer A. Editore: Edagricole Editore • Anestesia e Analgesia Locoregionale del Cane e del Gatto. Autore: • Francesco Staffieri. Editore: Poletto Editore • Terapia del dolore negli animali da Compagnia. Autore: Giorgia della Rocca e Antonello Bufalari. Editore: Poletto Editore • Chirurgia veterinaria dei piccoli animali; JOHNSTON-TOBIAS; 2° ed., 2480 pagg., 1500 ill., Antonio Delfino Editore, Novembre 2020 • Chirurgia dei piccoli animali; Theresa Fossum 5a ed., 1584 pagg., 950 ill., Edra-EV Editore, Gennaio 2021 • Atlas of small animal wound management and reconstructive surgery; PAVLETIC 4a ed, 866 pagg., 1000 ill., John Wiley & Sons, Maggio 2018 • Equine Surgery 5th Ed Jorg A. Auer & John A. Stick; 5a Ed Saunders Editore 2018 • Barone R., Anatomia Comparata dei Mammiferi domestici, Edagricole, Bologna: voll. I, II, III, IV, V. • Merighi, A, Anatomia Applicata e Topografica regionale Veterinaria. Piccin Editore. 2005 • König, HE, Liebich HG. Anatomia dei Mammiferi Domestici. Piccin Editore. 2006 (testo-atlante) • Boyd J.S. "Atlante a colori di Anatomia Clinica del Cane e del Gatto" Ed. Masson Coulson A., Lewis N. An atlas of interpretative radiographic anatomy of the dog and cat – 2nd Edition, Blackwell Science, Oxford (2008) • Piermattei D.L., Atlante delle vie di accesso chirurgiche alle ossa e alle articolazioni del cane e del gatto, Ed. Veterinarie. 1995
<p>Additional materials</p>	<p>The practical activities are organized in the business hours of the veterinary hospital on Wednesdays and Fridays during the teaching period according to the schedule given in the lecture diary.</p> <p>The number and size of groups depends on the type of practical activity and the size of the cohort of course attendees. (See individual activity specification).</p> <p>Activities involving students entering surgical wards will be divided into groups of 8 to 10 students, and individual activities will be replicated for each of the groups, and will be taught by all five module lecturers.</p> <p>Access in the surgery department, imaging rooms and in the inpatient ward is allowed only to students equipped with protective clothing (gowns, gloves, caps)</p>

	masks , etc.), who have read the biosafety manual and signed the consent form for risk exposure
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Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
350	88	135	127
ECTS			
14	7	7	
Teaching strategy		<p>Teaching will be mainly based on technology enhanced active learning (technology enhanced active learning, TEAL), a model in which the frontal lecture , which will constitute the main teaching methodology, will be flanked by methodologies such as problem solving, case study and role-playing, through which, by means of simulations and propositions of real cases, information can be integrated to mature a full learning process leading to the consolidation of knowledge and the building of skills and competencies.</p> <p>The entire teaching process will be implemented through iconic, verbal and graphic communication models making use of available teaching resources and technologies. Self-learning activities are planned through the use of audiovisuals and movies available to students on the TEAMS platform and self-assessment tests provided by teachers. In addition, this will be supplemented by surgery lab activities on phantom , cadavers and live animals under faculty supervision.</p> <p>The role of frontal lecture will be consistently reduced, instead, in the hours of practice, more emphasis will be given to problem solving and learning by doing, which allow the use of logical thinking applied to real problems, encouraging the conscious use of techniques and strategies explicated in frontal lectures and will foster the building of skills and competencies.</p>	
Expected learning outcomes			
Knowledge and understanding on:		<p>The student will learn the main practical skills required in basic hospital activities, carried out in the different departments of the Veterinary Hospital, and will be able to integrate all clinical and diagnostic information referring to the clinical cases faced, in order to formulate a diagnosis and set up an appropriate treatment plan. He/she should also be able to interact and communicate properly with the patient's owner.</p>	
Applying knowledge and understanding on:		<ul style="list-style-type: none"> ○ The student will have to critically judge and skim the anamnestic information and the most useful clinical signs to arrive at the diagnosis, identify the diagnostic path and possible differential diagnoses ○ The student must demonstrate that he is able to choose the most suitable diagnostic and surgical therapeutic solutions in the treatment of pathologies with surgical indication <p>In line with the Day One Competences adopted by the ECCVT, at the end of the course the student must be able to:</p> <ul style="list-style-type: none"> ○ DOC 1.4 Communicate effectively with clients, the public, professional colleagues and responsible authorities, using language appropriate to the relevant public ○ DOC 1.5 Prepare accurate medical and client records and case reports when necessary, in a form satisfactory to colleagues and understandable by 	

	<p>the public.</p> <ul style="list-style-type: none"> ○ DOC 1.6 Work effectively as a member of a multidisciplinary team in the delivery of services. ○ DOC 1.9 Understand and apply the principles of clinical governance and practice evidence-based veterinary medicine. ○ DOC 1.11 Demonstrate the ability to cope with incomplete information, face unexpected events and adapt to change. ○ DOC 1.12 Demonstrate recognizing personal and professional limitations and knowing how to seek professional advice, assistance and support when needed ○ DOC 1.13 Demonstrate lifelong learning ability and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking steps to improve performance and competence. ○ DOC 1.14 Participate in self-assessment and peer review processes to improve performance. ○ DOC 1.17 Perform a comprehensive clinical examination and demonstrate clinical decision making skills. ○ DOC 1.18 Develop appropriate treatment plans and administer treatment in the interest of patients and with respect to available resources. ○ DOC 1.19 Assist all species in emergencies and perform first aid. ○ DOC 1.22 Clearly communicate and collaborate with referral and diagnostic services, including providing appropriate history ○ DOC 1.23 Understand the contribution that imaging and other diagnostic techniques can make in achieving a diagnosis. Use basic imaging equipment and perform an exam effectively, as appropriate, in accordance with good health and safety practices and applicable regulations. ○ DOC 1.26 Prescribe and dispense medicines in a correct and responsible way in accordance with the legislation and the latest indications. ○ DOC 1.29 Perform aseptic surgery correctly. ○ DOC 1.30 Safely perform general and regional sedation and anesthesia; implement chemical methods of moderation. ○ DOC 1.31 Assess and manage pain. ○ DOC 1.32 Recognize when euthanasia is appropriate and carry it out with respect for the animal, using an appropriate method, while showing sensitivity to the feelings of owners and others, with due respect for the safety of those present; advice on carcass disposal.
<p>Soft skills</p>	<p><i>Making informed judgments and choices</i></p> <ul style="list-style-type: none"> ○ Ability to collect information on the clinical case and symptoms, useful for formulating a diagnosis and prognosis of a surgical disease; ○ Ability to critically analyze the most appropriate procedures during a diagnostic procedure; ○ Ability to discern misleading and ancillary information with respect to data useful for framing the clinical problem. <p>○</p> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Acquisition of the skills and the correct scientific terminology to be able to correctly present one's conclusions to fellow students and the teacher, to be able to relate later on with professional colleagues and customers; ○ Acquisition of the ability to work in a team, adopting adequate

	<p>communication and interaction strategies.</p> <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Ability to learn independently. ○ Acquisition of the ability to autonomously improve one's knowledge through further studies and in-depth studies on databases or specialized magazines and books. <p>The skills achieved fall within the framework of the following Day One Competences adopted by the ECCVT:</p> <ul style="list-style-type: none"> ○ DOC 2.1 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 2.5 Etiology, pathogenesis, clinical signs, diagnosis and treatment of common diseases and disorders occurring in common domestic species. ○ DOC 2.11 Principles of effective interpersonal interaction, including communication, leadership, management and teamwork. ○ DOC 2.12 The ethical framework within which veterinary surgeons should work, including important ethical theories that inform decision-making in professional and animal welfare ethics.xx.
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Assessment and feedback	
<p>Methods of assessment</p>	<p>The examination of the integrated course of "Surgery 2" allows the acquisition of 14 of the CFUs stipulated in the study plan.</p> <p>The examination includes a final examination of the modules of "Surgical Clinic, Surgical procedures , Veterinary Anesthesiology, Practical Clinical Surgical Activities and Applied Anatomy. The examination of the parts must be taken in the same session. CFUs (14) are considered to be acquired only after passing all parts with registration on the ESSE3 portal of the transcript. For the Practical Surgical Activity module, there are tests to verify ongoing learning through the discussion of clinical cases, verification of manual skills acquired in relation to the basic surgical techniques treated, and through multiple choice tests relating to the topics discussed.</p>
<p>Evaluation criteria</p>	<p>- Knowledge and Ability to Understand:</p> <ul style="list-style-type: none"> ○ The student must demonstrate organic and thorough knowledge of the basic principles of veterinary surgery, Surgical procedures, and anesthesiology including the major routes of access to structures and organs <p>○ Score from 1 to 8</p> <p>- Applied knowledge and understanding skills:</p> <ul style="list-style-type: none"> ○ The student should demonstrate good ability to apply the knowledge acquired through the diagnosis of major surgical injuries of small and large animals including through the application of basic surgical techniques <p>Score from 1 to 8</p> <p>- Autonomy of judgment:</p> <ul style="list-style-type: none"> ○ The student must demonstrate the ability to identify and prospect the best therapeutic solutions and anesthesiological protocol with respect to the diagnosed



	<p>lesion. Score from 1 to 8</p> <p>- Communication skills: o The student must demonstrate good expository skills in the topics studied and be able to use medical-scientific terminology appropriately Score from 1 to 3</p> <p>- Ability to learn: o The student must demonstrate ability to independently rework the knowledge acquired and be able to access scientific literature and databases for continuous updating. Score from 1 to 3</p>
<p>Criteria for assessment and attribution of the final mark</p>	<p>The outcomes of the tests of the five modules will contribute to the final grade of the “Veterinary Surgery 2” exam. The final grade is the result of the collegial judgment related to the partial tests in which the student must demonstrate that he/she has acquired critical sense with respect to the topics studied. The final grade, of the integrated course Veterinary Surgery 2 expressed in thirtieths, will be considered passed with a grade of 18 or higher and will take into consideration not only the accuracy of the answer, but also communication skills, clarity of exposition, disciplinary competence basic surgical technical skills and the level of thoroughness.</p> <p>The student who obtains the highest score on all indicators may be awarded honors.</p>
<p>Additional information</p>	