

Professional Master's Degree

Equine Medicine and
Surgery





Professional Master's Degree Equine Medicine and Surgery

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/veterinary/professional-master-degree/master-equine-medicine-surgery

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01

Introduction

This innovative program in Equine Medicine and Surgery is oriented toward the outpatient clinic. Our proposal opens a new opportunity of distinction for clinical veterinarians specializing in equines who practice their daily work in the field on an ambulatory basis, covering their high demand for non-classroom specialization. The program is aimed at clinicians who wish to expand their knowledge of advanced aspects of their work, enabling them to develop their activity based on professional excellence.

A high-quality program that will drive you to the highest levels of competence in the industry.





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With this high-level program, you will learn to identify the different anatomical structures and pathologies of the horse's digestive tract, among many other issues of great interest to the veterinarian.”

The Equine Veterinary Clinic covers numerous and complex specialties in continuous development that requires a constant updating of skills by the clinician. It is a highly competitive professional sector that quickly incorporates new scientific advances into the outpatient clinic, so the veterinarian deals with a labor market that demands a very high level of competence in all aspects.

The mobile veterinarian's daily work is very demanding in terms of the number of working hours, both in terms of the volume of hours involved in the mobile visits and the degree of personal dedication and time required for the administrative management of his own company. For this reason, they often do not have all the time they need, and often resort to consulting procedures and other information on the Internet. In the network, the professional expects to find reliable online education.

Another important aspect is the need for the field clinician to obtain postgraduate endorsed specialization. In today's job market, obtaining an accredited specialization diploma not only guarantees preparing as a specialist, but is also a source of prestige and recognition in the eyes of your clients, colleagues and co-workers.

In order to address all of these issues, the equine veterinarian needs an up-to-date program that is manageable and affordable to purchase.

The existing online offer of specialization in Equine Clinical Practice is insufficient and does not meet the needs of the veterinary sector to date. Therefore, this innovative program covers this lack of specialization in telematic format. It is an exclusive product, as there are no other first level postgraduate distance learning tools in its field, capable of offering qualified and extensively developed teaching completely online.

The Professional Master's Degree presented here meets all the needs of advanced education and has a carefully selected syllabus, developed by internationally recognized professionals in both equine medicine and surgery. It therefore represents an excellent opportunity for students to continue their professional activity simultaneously with the essential expansion of quality knowledge in this new digital era in which we find ourselves.

This **Professional Master's Degree in Equine Medicine and Surgery** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ♦ The latest technology in online teaching software
- ♦ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ♦ Practical cases presented by practising experts
- ♦ State-of-the-art interactive video systems.
- ♦ Teaching supported by telepractice
- ♦ Continuous updating and recycling systems
- ♦ Autonomous learning: full compatibility with other occupations
- ♦ Practical exercises for self-evaluation and learning verification
- ♦ Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- ♦ Communication with the teacher and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.
- ♦ Supplementary documentation databases are permanently available, even after the program



Join the elite, with this highly effective educational program, and open new paths to your professional progress".

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Acquire the most advanced knowledge in all fields of Equine Veterinary Intervention, from professionals with years of experience in the sector”.

Our teaching staff is made up of professionals from different fields related to this specialty. In this way we ensure that we deliver the educational update we are aiming for. A multidisciplinary team of specialized and experienced professionals in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at your service the practical knowledge derived from their own experience: one of the differential qualities of this program.

This mastery of the subject matter is complemented by the effectiveness of the methodological design. Developed by a multidisciplinary team of *e-Learning* experts, it integrates the latest advances in educational technology. In this way, you will be able to study with a range of easy-to-use and versatile multimedia tools that will give you the necessary skills you need for your specialization.

The design of this program is based on Problem-Based Learning: an approach that views learning as a highly practical process. To achieve this remotely, we will use telepractice learning: with the help of an innovative interactive video system, and *learning from an expert*, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

With the experience of working professionals and the analysis of real success stories, in a high-impact educational approach.

A path of specialization and professional growth that will drive you towards greater competitiveness in the labor market.



02

Objectives

The objective is to enable highly qualified professionals for work experience. This objective is materialized in helping professionals to reach a much higher level of competence and control. A goal that, in just a few months, you will be able to achieve with high-intensity and effective education program.





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A complete and total update in Equine Medicine and Surgery with the most comprehensive and effective online education program on the market".



General Objectives

- ♦ Identify the different anatomical structures and pathologies of the digestive tract of the horse.
- ♦ Develop and advance in the most frequent procedures to solve oral cavity pathologies.
- ♦ Recognize the symptoms of digestive disorders.
- ♦ Enable the clinician to correctly assess the systemic state of the animal and the consequent severity of the pathology.
- ♦ Establish diagnostic protocols and generate optimized treatments and prognoses.
- ♦ Establish optimal preventive medicine criteria and good management guidelines.
- ♦ Establish an appropriate methodology for the examination of the horse with respiratory or cardiac problems.
- ♦ Identify all clinical signs associated with respiratory or cardiovascular disease in equines.
- ♦ Generate specialized knowledge of respiratory and cardiac auscultation
- ♦ Establish the specific clinical approach to the horse with a respiratory or cardiovascular disorder.
- ♦ Enable the clinician to approach the patient with advanced alterations in blood count, biochemistry or hematopoiesis disorders.
- ♦ Develop an innovative and up-to-date methodology for patients with immune-mediated disorders.
- ♦ Develop an expanded understanding of endotoxic shock, in order to provide the patient with the latest treatments
- ♦ Examine the physiology of food consumption and the physical distribution and transport of the food bolus through the small and large intestine, as well as the processes of nutrient absorption in the different digestive compartments.
- ♦ Determine the conversion of nutrients into available energy for the different organic functions of the horse.
- ♦ Establish the different nutritional needs in the horse's diet, as well as its energy requirements according to sport discipline, productive objective or maintenance as a domestic animal.
- ♦ Assess the cachectic horse: history and nutritional status, possible differentials, knowledge of metabolic consequences and requirements for subsequent dietary adjustment.
- ♦ Generate specialized knowledge on antibiotic therapy and antibiotic resistance novelties.
- ♦ Examine prebiotics, probiotics, as well as the use of medicinal plants in response to the high market demand that exists today in this field of medicine.
- ♦ Update and develop in depth knowledge and new concepts in the diagnosis and treatment of lameness in horses
- ♦ Identify the applied anatomy and pathologies affecting the different structures of the locomotor system of the equine.
- ♦ Develop advanced screening and diagnostic methods available in the field clinic.
- ♦ Delve into both medical and surgical treatments applicable in the field clinic.
- ♦ Fundamental knowledge of wounds, tendon lacerations and musculoskeletal infections.
- ♦ Establish an appropriate methodology for its exploration, diagnosis and treatment.
- ♦ Generate specialized knowledge of the different materials and techniques used for the treatment of these pathologies.

- ♦ Propose therapeutic strategies in wound management alternative to the conventional ones.
- ♦ Provide an in-depth knowledge of the most common dermatological problems.
- ♦ Identify all clinical signs associated with each dermatological disease.
- ♦ Establish the specific clinical approach to each pathology and determine the most appropriate prognosis and treatment for each skin disease.
- ♦ Identify the challenges and problems encountered by the veterinarian in the practice of equine clinical oncology.
- ♦ Establish the principles of diagnosis and treatment of cutaneous neoplasms affecting horses.
- ♦ Develop a detailed knowledge of the pathological processes affecting the endocrine system of the horse.
- ♦ Develop management strategies for the obese and insulin resistant horse.
- ♦ Establish an appropriate methodology for the identification and localization of neurological injuries in the horse.
- ♦ Identify the alterations of consciousness and behavior and establish protocols.
- ♦ Define the approach to the ataxic horse and establish protocols for action.
- ♦ Examine diagnostic methods in equine neurology
- ♦ Detail therapeutic protocols.
- ♦ Establish an appropriate methodology for ophthalmologic examination of the horse.
- ♦ Identify all clinical signs associated with ocular alterations in equines.
- ♦ Determine the specific clinical approach to the horse with an ocular disorder.
- ♦ Analyze the complementary methods available to diagnose the main ocular disorders in equids.
- ♦ Generate specialized knowledge on the main ocular pathologies in the horse.
- ♦ Establish the general and specific treatment for the main ocular pathologies in the horse.
- ♦ Identify the pathologies of the urinary system of the horse.
- ♦ Establish diagnostic protocols to facilitate the recognition of patients with urinary pathology.
- ♦ Expand the alternatives of possible treatments according to pathological situations.
- ♦ Recognize the medical and surgical genital pathologies of the stallion and the dam mare, assess their extent and provide appropriate treatments for recovery and restoration of proper reproductive function.
- ♦ Develop surgical techniques for the resolution of pathologies of the reproductive system that can be performed in the field.
- ♦ Recognize representative clinical signs of disease in the newborn foal.
- ♦ Establish effective working protocols for the early detection of sick neonates.
- ♦ Develop treatment protocols for the different diseases of the neonate.
- ♦ Optimize the use of foal imaging in the field.

tech 12 | Objectives

- ♦ Identify and decipher the particular characteristics of the pathologies of the locomotor system that appear during the development and growth of the foal from birth until the end of its pediatric period.
- ♦ Develop the main specific medical and surgical techniques for pathologies affecting the foal in the field.
- ♦ Develop sedation and ambulatory anesthesia procedures.
- ♦ Determine the necessary tools for the assessment of the critically ill patient, providing the knowledge that enables the student to perform hospital treatments, such as advanced pain management, correction of hydro-electrolyte balance and acid-base balance, intensive care in the neonate and intensive care in the adult.
- ♦ Delve into the fundamental medicinal and pharmacological considerations of high-level sport horses.
- ♦ Delve into equine toxicology.
- ♦ Develop the application of humane euthanasia protocols.





Specific Objectives

Module 1. Digestive System

- ♦ Define correct methods of anamnesis, evaluation and assessment of the patient with digestive pathology.
- ♦ Establish anesthetic blocking protocols for oral surgery and dental extractions.
- ♦ Recognize and resolve mandibular and maxillary pathologies.
- ♦ Properly develop general examination procedures such as rectal palpation, nasogastric probing, abdominocentesis, interpretation of analytical tests and diagnostic imaging in field conditions, and establish the appropriate treatments and issue the correct prognosis in the horse with abdominal pain.
- ♦ Develop and advance in depth in the diseases affecting the digestive tract from the stomach to the rectum, assessing the stage of the pathologies that appear.
- ♦ Develop and advance in depth on liver and biliary tract diseases in the horse and their possible treatments.
- ♦ Develop and advance in depth in infectious and parasitic diseases of the digestive tract, as well as their various treatments.
- ♦ Enhance knowledge, establish and develop the correct decision criteria to treat abdominal syndrome in the horse in the field, or in case of requiring surgical treatment, to be able to correctly inform the owner and advise on the referral of cases to the hospital in case surgery is required.

Module 2. Cardio-Respiratory and Vascular System

- ♦ Specify the necessary information in the clinical examination of the horse with respiratory or cardiac pathology.
- ♦ Accurately recognize normal respiratory and cardiac sounds in horses
- ♦ Identify respiratory pathologies in order to classify them and decide on possible diagnostic tests if needed
- ♦ Establish the knowledge required when performing diagnostic procedures for the respiratory patient such as Laboratory tests, cytology, BAL Diagnostic Imaging.
- ♦ Propose work methodologies for patients with upper respiratory tract pathologies
- ♦ Propose a work methodology for patients with inflammatory lower respiratory tract pathologies.
- ♦ Identify the surgical pathologies of the upper respiratory tract and develop the technical procedures that can be performed in the field, both in scheduled and emergency conditions.
- ♦ Propose a work methodology for patients with infectious respiratory pathologies.
- ♦ Differentiate between physiological murmurs and pathological murmurs.
- ♦ Establish differential diagnoses of abnormal rhythms based on irregularity and heart rate.
- ♦ Propose work methodologies for patients with cardiac murmurs
- ♦ Propose a work methodology for patients with arrhythmias.

Module 3. Hematopoietic System, Immunology and Nutrition

- ♦ Delve into the study of blood components, as well as to attend in detail to the serological biochemical markers, all of them analytical parameters that the clinical specialist must know in depth, in order to be able to relate possible alterations in this sense to pathological situations of any kind.
- ♦ Develop advanced knowledge on possible alterations related to hematopoiesis, as well as alternatives in terms of leading-edge treatments.
- ♦ Achieve a high degree of knowledge of the pathophysiological mechanisms of immune-mediated disorders in order to select the latest diagnostic tests and appropriate treatment.
- ♦ Delve into the pathophysiological mechanisms of endotoxemia and the development of endotoxic shock, in order to prevent secondary complications associated with this process and to apply the most up-to-date treatments.
- ♦ Understand the processes of digestion and absorption of nutrients in the different anatomical compartments of the horse's digestive tract.
- ♦ Provide the basic knowledge on nutrients necessary for the development of feeding programs.
- ♦ Estimate a horse's weight and determine its body condition.
- ♦ Easy calculation of daily fodder and grain or compound feed requirements
- ♦ Differentiate and know how to apply the terms gross, digestible and net energy.
- ♦ Delve deeper into the knowledge of antibiotic treatment alternatives, as well as the development of antibiotic resistance, in order to prepare the clinician in decision making in situations where there is an important restriction of antibiotic use, either by the patient's category or by the appearance of bacterial resistance.
- ♦ Update on prebiotics, probiotics, as well as the use of medicinal plants and their relevance as important tools in preventive medicine and in the treatment of specific pathologies.

Module 4. Locomotor System

- ♦ Identify in depth the pathologies affecting the musculoskeletal system of the horse by types of pathologies of the different anatomical regions.
- ♦ Master in depth the correct approach to the clinical case that may be presented. Obtain and control the tools to correctly explore animal patients and correctly interpret the data obtained
- ♦ Develop optimized work schemes and diagnostic protocols.
- ♦ Advanced diagnosis of joint, tendon, bone and muscle pathologies in horses.
- ♦ Master the neural anesthetic blocks, their technique, main advantages and possible disadvantages; Develop proximal blockage and other advanced anesthetic desensitization techniques.
- ♦ Master and develop in depth imaging techniques and other complementary diagnostic methods in the field.
- ♦ Receive education in the latest published therapeutic measures and the latest advances in research in the treatment of locomotor pathologies.
- ♦ Master and develop advanced medical and surgical techniques that can be performed in the field.

Module 5. Surgical Pathologies of the Skin and Related Structures

- ♦ Specify the different types of wounds that may occur in the Equine Clinical Practice; Identify and differentiate between acute and chronic pathologies, assess their degree of contamination and/or infection if any, and recognize damaged adjacent structures, assessing whether they are septic or not.
- ♦ Develop knowledge of the different phases of skin healing.
- ♦ Determine the techniques of tissue management, hemostasis, suturing, reconstruction and skin grafting.
- ♦ Set guidelines for the choice of the different types, materials and patterns of suture and needle and drainage models available to the clinician in the field.

- ♦ Establish the different types and materials of bandages, both for wound treatment and for immobilization; Select the dressing or bandage indicated in each clinical situation.
- ♦ Apply the different therapeutic guidelines and reparation procedures and other first aid techniques for acute and fresh wounds.
- ♦ Apply the different therapeutic guidelines and repair procedures for complicated, chronic and infected wounds, contemplating the possibility of the application of alternative procedures and technologies.
- ♦ Indicate the tests to be performed on a patient with a musculoskeletal injury or infection to determine the significance of the injury.
- ♦ Carry out correct diagnosis and treatment of synovial and bone infections, and perform joint lavage procedures and regional and intraosseous perfusion of antibiotics in the field.
- ♦ Specify the use of the different tenorrhaphy techniques in order to treat damage and lacerations of tendon and/or ligamentous structures.
- ♦ Present the different causes of exuberant granulation and its treatment.
- ♦ Apply the different therapeutic guidelines in burns and abrasions of different types.

Module 6. Medical Pathologies of the Skin Endocrine System

- ♦ Identify the main pathologies affecting the skin.
- ♦ Examine the origin of the problem and establish the prognosis of dermatitis.
- ♦ Recognize the clinical and laboratory signs of the main dermatological diseases.
- ♦ Identify the symptoms of bacterial and viral skin diseases and propose therapeutic options.
- ♦ Determine the symptoms of skin diseases of fungal and parasitic origin and propose therapeutic options.
- ♦ Establish the symptoms of allergic and immune-mediated skin diseases, and propose therapeutic options.
- ♦ Examine the symptoms of other skin diseases as well as their prognosis and treatment options.

- ♦ Identify and develop the clinical presentation, diagnosis and management of the main types of neoplasms affecting horses.
- ♦ Generate advanced knowledge on the pathology, diagnosis and management of sarcoids, squamous cell carcinomas, melanocytic tumors, mastocytomas and lymphomas.
- ♦ Examine recent developments in the therapy of cutaneous neoplasms in horses.
- ♦ Develop advanced knowledge on the pathology, diagnosis and management of equine metabolic syndrome and dysfunction of the intermediate pituitary gland in horses.
- ♦ Identify the processes that occur with alterations in thyroid hormone concentrations.
- ♦ Determine the most common causes of alterations in calcium, phosphorus and magnesium levels in horses.

Module 7. Nervous System and Ophthalmology

- ♦ Identify all clinical signs associated with neurological disease.
- ♦ Define the key points of the neurological assessment.
- ♦ Establish differential diagnoses based on the main neurological pathologies of the horse.
- ♦ Present and analyze the diagnostic tools available for the different processes.
- ♦ Propose specific measures for the management of the neurological patient.
- ♦ Update neurological patient treatments both in the field and at the hospital setting.
- ♦ Define parameters that help us to establish a prognosis for the patient.
- ♦ Delve into the use of diagnostic tools in ophthalmology, such as direct and indirect ophthalmoscopy, fundus assessment and electroretinography.
- ♦ Accurately recognize clinical signs of eye pain in horses.
- ♦ Establish differential diagnoses of ocular clinical signs.
- ♦ Propose a working methodology for patients with corneal ulcers and/or infectious keratitis.

- ♦ Propose a working methodology for the patient with stromal abscess and immune-mediated keratitis.
- ♦ Establish a working methodology for the patient with equine recurrent uveitis and for the patient with cataracts.
- ♦ Propose working methodologies for patients with glaucoma and for horses with ocular neoplasia

Module 8. Reproductive and Urinary System

- ♦ Increase knowledge of pathologies affecting the urinary system.
- ♦ Recognize and establish protocols for the management of patients with acute renal failure and chronic renal failure.
- ♦ Establish working protocols for patients with post-renal urinary tract pathology.
- ♦ Comprehend the predisposing factors that may condition the appearance this type of pathologies, and expand knowledge on the relevance of prevention.
- ♦ Develop treatment alternatives available to the ambulatory veterinary clinician.
- ♦ Delve into the pathology of the testicles, adnexal glands and penis, as well as their respective treatments.
- ♦ Improve the productive management of the subfertile stallion and mare.
- ♦ Identify and assess possible anomalies in the horse's ejaculate, applying the necessary procedures to guarantee its quality.
- ♦ Identify, treat and prevent parasitic and infectious pathologies of the equine reproductive system.
- ♦ Develop the pathologies of the female during the mating period and their possible treatments.
- ♦ Develop the pathologies that affect the female during the gestation period and their possible treatments.
- ♦ Develop the pathologies that affect the female in the prepartum and postpartum period

and their possible treatments.

- ♦ Attend to the needs and demands of euthyroid delivery and placental assessment.
- ♦ Develop the procedures involved in the care of dystocic labor and the performance of fetotomy.
- ♦ Develop procedures that include the resolution of possible injuries associated with labor and delivery, such as correction of rectovestibular fistulas, reconstruction of external lacerations and repair of the perineal body.

Module 9. Foal Medicine and Surgery

- ♦ Identify the neonatal patient with abnormal behaviors indicative of disease.
- ♦ Establish lines of action for neonatal patients with sepsis, based on severity.
- ♦ Determine work protocols for patients with symptoms of neonatal asphyxia syndrome.
- ♦ Recognize the patient with cardio-respiratory symptomatology, being able to issue prognoses that determine their viability.
- ♦ Develop field stabilization protocols for patients with bladder rupture or persistent urachus.
- ♦ Identify the difference in diagnostic test results between neonates and adults.
- ♦ Determine the use of diagnostic imaging tools that can be used in the field to diagnose pathologies in the foal, both in the neonatal and pediatric period. Use these methods accurately to diagnose and assess the different pathologies that may occur in these stages.
- ♦ Develop the techniques of examination, diagnosis and parenteral and local treatment by joint lavage of septic arthritis in the neonate.
- ♦ Develop techniques that can be performed in the field to solve surgical pathologies of the growing foal, such as umbilical hernia correction.
- ♦ Compile knowledge of angular and flexural deformities of the foal. Develop different

treatments and establish specificities according to patient age and the anatomical region affected

- ◆ Detail the medical treatments and application of resins, splints and orthopedic hardware used in the treatment of angular and flexural deformities.
- ◆ Specify the techniques for delaying and stimulating bone growth used in the surgical treatment of angular deformities.
- ◆ Determine the desmotomy and tenotomy techniques used in the treatment of flexural deformities.
- ◆ Establish an appropriate methodology for the identification, treatment and prognostication of osteochondral injuries and subchondral bone cysts.

Module 10. Advanced Therapeutic Protocols and Toxicology

- ◆ Analyze the new alternatives in terms of drugs used in sedation and anesthesia for outpatient use, as well as to delve into the most established protocols in order to optimize this type of procedures.
- ◆ Prepare the clinician in effective and dynamic decision making when dealing with a patient with a serious systemic condition, in order to ensure diagnoses and treatments that ensure patient stabilization despite non-hospital conditions.
- ◆ Enable the clinician in the correction of hydroelectrolyte and acid-base imbalances to ensure the reversal of hemodynamic alterations.
- ◆ Ensure advanced knowledge of equine pain management with the latest medications.
- ◆ Examine the characteristics and special considerations to be taken into account when applying pharmacological treatments in the sport horse, with special emphasis on avoiding problems in the face of possible positive results in control tests for biological substances in competitions.

- ◆ Generate advanced knowledge on equine toxicology, ensuring education for the recognition of toxic symptoms, as well as the identification of plants and agents harmful to equids.
- ◆ Analyze euthanasia procedures in depth; The clinician must be able to act correctly with patients in these last moments of their life trajectory, applying euthanasia in the most humane way possible in the worst-case scenario.



The innovative telepractice concept will give you the opportunity to learn through an immersive experience, providing faster integration and a much more realistic view of the content: Learning from an expert”

03 Skills

This Professional Master's Degree in Equine Medicine and Surgery has been created as a high qualification tool for the professional. This program will enable you to work in all areas related to this field with the security of an expert in the field.



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The Professional Master in Equine Medicine and Surgery will provide you with the personal and professional competences necessary to play an adequate role in any professional situation in this field of intervention".



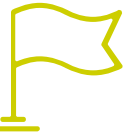
General Skills

- ♦ Recognize Equine Diseases
- ♦ Master the action protocols in each case.
- ♦ Master equine examination protocols.
- ♦ Be competent in acting in the places to which they travel.
- ♦ Competently perform the tasks of the equine ambulatory clinic.
- ♦ Issue appropriate diagnoses.

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A comprehensive program that will allow you to acquire advanced knowledge in all fields of intervention of the equine veterinarian”.





Specific Skills

- ♦ Know How to Diagnose Equine Colic
- ♦ Handle the Most Complicated and the Mildest Cases
- ♦ Make Quick Decisions in Case of Emergency
- ♦ Decide when Hospital Referral is Appropriate
- ♦ Perform Adequate Nutritional Management
- ♦ Determine Group Conditions and their Intervention
- ♦ Diagnose Respiratory Diseases in Equines
- ♦ Recognize Upper Airway Diseases
- ♦ Recognize Lower Respiratory Tract Diseases
- ♦ Educate the Owner on Prevention and Early Detection Measures
- ♦ Prescribe Suitable Treatments
- ♦ Recognizing Equine Heart Diseases
- ♦ Assess the Clinical Impact of a Murmur or Arrhythmia
- ♦ Know the Alterations of the Cardiovascular System
- ♦ Know the Alterations of Respiratory Pathologies
- ♦ Master Diagnostic Techniques and Protocols
- ♦ Be highly competent in the diagnosis of diseases related to the hemotopoietic and immune system.
- ♦ Prescribe and Interpret Laboratorial Studies of Blood Components
- ♦ Recognize and Deal with Endotoxic Shock
- ♦ Stabilize the Patient Quickly and Effectively, Especially in Life-Threatening Situations.
- ♦ Proper Feeding and Teaching the Owner How to Do It
- ♦ Perform Advanced Nutritional Counseling in Special Cases
- ♦ Know the Latest Advances in Equine Antibiotic Therapy
- ♦ Know which medicinal plants are useful in equine treatments
- ♦ Diagnose diseases of the locomotor system
- ♦ Mastering Equine Anatomy
- ♦ Utilize Medical Advances in the Locomotor Area in Equines
- ♦ Know the Equine Integumentary System at an Advanced Level
- ♦ Use Available Therapeutic Options for the Treatment of Musculoskeletal Wounds and Injuries
- ♦ Achieve Wound Healing
- ♦ Intervene in Joint and Tendon Injuries
- ♦ Surgical Approach to Injuries in this Field
- ♦ Perform Perioperative Management
- ♦ Diagnose and Intervene Early in Musculoskeletal Infections
- ♦ Use in Appropriate Cases Larvotherapy and Skin Grafts

- ◆ Recognize Cutaneous Neoplasms
- ◆ Early Diagnosis of the Same
- ◆ Detect, Diagnose and Treat Endocrine Diseases
- ◆ Recognize Equine Metabolic Syndromes
- ◆ Recognize Cushing's Syndrome in Equines
- ◆ To know which are the geographic locations with the highest prevalence of these syndromes.
- ◆ Recognize the Most Affected Breeds
- ◆ Prescribe the Appropriate Diagnostic Tests
- ◆ Using Conventional and Advanced Techniques in the Approach
- ◆ Recognize Neurological Equine Diseases
- ◆ Distinguish the Etiological Conditions that Causes
- ◆ Know the Etiological Agents that Originates Them
- ◆ Early Detection and Management of Eye Conditions in Equines
- ◆ Diagnose and Treat Corneal Ulcers
- ◆ Diagnose and Treat Uveitis
- ◆ Diagnose and Treat Stromal Abscesses
- ◆ Diagnose and Treat Immune-Mediated Keratitis
- ◆ Diagnose and Treat Retinal Detachment
- ◆ Diagnose and treat cataracts
- ◆ Diagnose and Treat and Glaucoma





- ◆ Prescribe Appropriate Diagnostic Tests for Each Case
- ◆ Attend Equine Birth
- ◆ Intervene in Disorders of the Reproductive System of Equine Males
- ◆ Intervene in Disorders of the Reproductive System of Equine Females
- ◆ Address Surgical Pathologies
- ◆ Perform Traditional and Leading-Edge Techniques
- ◆ Detect, Diagnose and Intervene in Alterations of the Urinary System
- ◆ Guideline and Interpret Diagnostic Tests
- ◆ Detect and Intervene in Pathologies during Equine Pregnancy and Labor
- ◆ Perform Early Detection of Labor and Foal Problems
- ◆ Handle Portable Diagnostic Equipment in Radiology and Ultrasound in Labor and the Foal
- ◆ Detect and Intervene in Osteochondrosis in Foals
- ◆ Use Up-To-Date and Advanced Methods and Protocols
- ◆ Master all Aspects of Sedation and Anesthesia
- ◆ Induce, Maintain and Reverse Anesthesia
- ◆ Perform the Care and Protocols of a Hospital Intensive Care Unit
- ◆ Pharmacological Management of the Sport Horse, Anti-Doping
- ◆ Address Toxicological Problems
- ◆ Know all Aspects of Euthanasia Procedures

04

Course Management

We are proud to put at your disposal professionals from different fields and competencies that make up a complete multidisciplinary team. A unique opportunity to learn from the best.





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Our teaching team, experts in Equine Medicine and Surgery, will help you achieve success in your profession.”

International Guest Director

As one of the foremost veterinary surgeons in equine patient care, Dr. Andy Fiske-Jackson is the Deputy Director of the Royal Veterinary College Equine in the United Kingdom. This is one of the leading institutions in both equine patient care and veterinary development, education and innovation. This has allowed him to develop in a privileged environment, even receiving the James Bee Educator Awards for excellence in educational work.

In fact, Dr. Andy Fiske-Jackson is also part of the team of surgeons at the Equine Referral Hospital, focusing his work on orthopedic and soft tissue surgery. Thus, his main areas of focus are low performance, back pain, dental and sinus issues, digital flexor tendinopathies and regenerative medicine.

In terms of research, his work leans between diagnostic techniques for digital flexor tendinopathies, clinical uses of objective gait analysis and objective evaluation of back pain. His efficiency in this field has led him to actively participate in various international events and conferences, including congresses in Portugal, Czech Republic, Finland, Belgium, Hungary, Switzerland, Austria, Germany, Ireland, Spain and Poland.



Dr. Fiske-Jackson, Andy

- ♦ Deputy Director at the Royal Veterinary College Equine. Hertfordshire, United Kingdom
- ♦ Associate Professor of Equine Surgery at the Royal Veterinary College.
- ♦ Equine Surgeon at the Equine Referral Hospital. Hertfordshire, United Kingdom
- ♦ Veterinarian at Axe Valley Veterinary
- ♦ Veterinarian at Liphook Equine Hospital.
- ♦ Veterinarian at the Society for the Protection of Animals Abroad. Morocco
- ♦ Graduate of the University of Liverpool
- ♦ Master's Degree in Veterinary Medicine from the Royal Veterinary College

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Thanks to TECH, you will be able to learn with the best professionals in the world”

Management



Dr. Varela del Arco, Marta

- ♦ Head of the Large Animals Area of the Complutense Veterinary Clinic Hospital of Madrid (UCM).
- ♦ Clinical Veterinarian in Equine Medicine, Surgery and Sports Medicine
- ♦ She teaches in different undergraduate and graduate courses, university specialization programs and Professional Master's Degrees.
- ♦ She actively participates as director of final projects in the Veterinary Degree and as a member of the examining board of several doctoral theses.
- ♦ Associate Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid (UCM)
- ♦ Assistant Professor of the Department of Animal Medicine and Surgery, UCM



Dr. De la Cuesta Torrado, María

- ♦ Veterinarian with clinical specialty in Equine Internal Medicine
- ♦ Member of the Organizing Committee of the "12th *European College of Equine Internal Medicine Congress (ECEIM)*"
- ♦ Member of the Board of Directors of Spanish Society of Ozone Therapy
- ♦ Member of the Equine Clinicians Commission of the Official College of Veterinarians of Valencia.
- ♦ Member of the Spanish Association of Equine Veterinarians (AVEE).
- ♦ Member of the scientific committee and coordinator of courses and congresses in the field of ozone therapy, supported by continuing education credits (CEC) granted by the National Health System.
- ♦ Associate Professor, Department of Equine Medicine and Surgery, Universidad Cardenal Herrera Ceu, Valencia, Spain

Professors

Dr. Aguirre Pascasio, Carla

- ♦ PhD in Veterinary Medicine from the University of Murcia. After obtaining the Postgraduate Certificate in Advanced Studies
- ♦ Degree in Veterinary Medicine from the University of Santiago de Compostela
- ♦ Practicing veterinarian with a specialty in Internal Medicine: Second opinion for peers, competition team veterinarian, freelance in Equine Hospitals and Telemedicine
- ♦ Partner, Manager and Executive Director of the Veterinary Center, Animalicos Veterinary Medicine and Surgery in Murcia.
- ♦ Equine clinical veterinarian, in charge of the Equine Internal Medicine Service at the Clinical Veterinary Hospital of the University of Murcia.
- ♦ Managing partner and clinical field veterinarian at Ekisur Veterinary Team.
- ♦ Fellowship at Casal do Rio Equine Hospital
- ♦ Senior graduate, for TRAGSA for animal and farm inspection.

Dr. Alonso de Diego, María

- ♦ Equine Internal Medicine Service at Clinical Veterinary Hospital of the Alfonso X El Sabio University
- ♦ Spanish Certificate in Equine Clinic
- ♦ Member of the Association of Equine Veterinary Specialists
- ♦ Member of the Spanish Society of Ozone Therapy
- ♦ Residency at the Clinical Veterinary Hospital of the UCM.
- ♦ Mobile equine clinic veterinarian hired by self-employed veterinarians
- ♦ Freelance equine ambulatory clinic veterinarian in Madrid
- ♦ Training stays in several hospitals in Kentucky(USA) in the area of Equine Internal Medicine
- ♦ Associate Professor of the Faculty of Veterinary Medicine of the Alfonso X El Sabio University.

Dr. Barba Recreo, Martha

- ♦ PhD in Biomedical Sciences, Auburn University, Alabama, USA
- ♦ Degree in Veterinary from the University of Zaragoza
- ♦ Postgraduate Certificate of the American College of Internal Medicine, Large Animals
- ♦ Rotating internship in Equine Medicine and Surgery at the University of Lyon, VetAgro-Sup, France
- ♦ Residency in Equine Internal Medicine, "J.T. Vaughan Large Animal Teaching Hospital, Auburn University, Alabama, U.S.A.
- ♦ Assistant Professor, Department of Animal Medicine and Surgery, Faculty of Veterinary Medicine, CEU Cardenal Herrera University, Valencia.
- ♦ Professor and veterinary specialist in Equine Internal Medicine and research associate, *Weipers Centre Equine Hospital*, University of Glasgow, Scotland, United Kingdom.
- ♦ Mobile equine veterinary clinic, Gres-Hippo, St. Vincent de Mercuze, France.

Dr. Benito Bernáldez, Irene

- ♦ Degree in Veterinary Medicine. University of Extremadura (UEX), Faculty of Veterinary Medicine of Cáceres
- ♦ Internship in Equine Medicine and Surgery at the Veterinary Clinic Hospital of the UAB (Autonomous University of Barcelona).
- ♦ University of Bristol Equine Hospital, *Referral Equine Hospital* (directed by Prof Alistair Barr) in Langford, (North Somerset), United Kingdom, under the supervision and coordination of Mr Henry Tremaine.
- ♦ Online training course on administrative activities in customer relations and administrative management given by Academia La Glorieta (Denia).
- ♦ Attendance to the courses of Ozone Therapy in Equids coordinated by María de la Cuesta and organized by the SEOT (Spanish Society of Ozone Therapy) in Valencia.
- ♦ Attendance at education and refresher courses and seminars given by Spanish universities.

Ms. Carriches Romero, Lucía

- ♦ Degree in Veterinary Medicine from Alfonso X El Sabio University
- ♦ Rotating and Advanced Internships for Equine Specialization at the Hospital Clínico Veterinario Complutense
- ♦ Outpatient veterinary clinic specializing in equine medicine, surgery, emergencies and reproduction.
- ♦ Contracted external collaborating veterinarian at the Clinical Veterinary Hospital Complutense, Complutense University of Madrid (UCM).
- ♦ Attendance and publication of posters in national and international congresses
- ♦ Collaborating Professor in Practical Teaching, Department of Animal Medicine and Surgery, Complutense University of Madrid (UCM)

D. Cervera Saiz, Álvaro

- ♦ Equine clinical veterinarian in ambulatory service in the company "MC Veterinaria Equina".
- ♦ Graduated in veterinary medicine at the Catholic University of Valencia "San Vicente Martir".
- ♦ Attendance to specific courses and conferences in the equine area of the HUMECO group.
- ♦ Attendance at training and refresher courses and seminars given by Spanish universities
- ♦ Collaboration as an internship teacher during the internship at CEU Cardenal Herrera University.
- ♦ Stays in reference hospitals in the United Kingdom, under the supervision of specialists in equine medicine and surgery such as Luis Rubio, Fernando Malalana and Marco Marcatil.
- ♦ Internship in Equine Medicine and Surgery at the Clinical Veterinary Hospital of the CEU

Cardenal Herrera University.

Dr. Domínguez, Mónica

- ♦ Clinical equine veterinarian specializing in internal medicine and reproduction
- ♦ Clinical Veterinary of the Reproduction Service of the Complutense Clinical Veterinary Hospital (HCVC).
- ♦ Degree in Veterinary Medicine from the Complutense University of Madrid (UCM).
- ♦ Official Master's Degree in Veterinary Science (UCM).
- ♦ Spanish Certificate in Equine Clinical (CertEspCEq)
- ♦ Associate Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid (UCM)
- ♦ Collaborator in Practical Teaching at the Department of Animal Medicine and Surgery, Complutense University of Madrid (UCM).
- ♦ Teaching experience in Veterinary Technical Assistant (VTA) training in private academies (IDEA, Madrid) and other courses in the COVECA center (Equine Reproduction Center, Toledo)

Dr. Forés Jackson, Paloma

- ♦ Doctorate in Veterinary from the Complutense University of Madrid.
- ♦ Vice-Dean of Students and Professional Orientation (Faculty of Veterinary Medicine, Complutense University of Madrid)
- ♦ Member of the Equine Medicine Service of the Complutense Clinical Veterinary Hospital (HCVC).
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Full Professor of the Department of Animal Medicine and Surgery at UCM

- ♦ Department of Animal Pathology II of the Faculty of Veterinary Medicine of the UCM.
- ♦ *College of Veterinary Medicine, Department of Large Animal Clinical Sciences, Gainesville University, Florida*

Dr. Gómez Lucas, Raquel

- ♦ Doctor of Veterinary Medicine specializing in large species
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Graduate of the American College of Veterinary Sports Medicine and Rehabilitation (ACVSMR).
- ♦ Head of the Sports Medicine and Diagnostic Imaging Service of the Large Animal Area of the Clinical Veterinary Hospital, Alfonso X el Sabio University

Mr. Goyoaga Elizalde, Jaime

- ♦ Head of the Equine Surgery Service of the Complutense Clinical Veterinary Hospital (UCM)
- ♦ Degree in Veterinary Medicine from the University of Bern, Germany (veterinary clinic "Dr. Cronau") and the United States (University of Georgia).
- ♦ Professor in the Professional Master's Degree in Animal Medicine, Health and Improvement. Diagnostic Imaging. Cordoba
- ♦ Lecturer in Expert in Bases of Physiotherapy and Animal Rehabilitation. UCM.
- ♦ Co-director and Professor of the Master "Equine Medicine and Surgery". *Improve International*
- ♦ Associate Professor in the Department of Animal Medicine and Surgery, Faculty of Veterinary Medicine, Complutense University of Madrid.
- ♦ Professor of Medical and Nutritional Pathology, Special Surgery of Large Animals, Equine Pathology and Clinic, Hospitalization, Emergency and Intensive Care in Equine Clinic,

Radiology and Diagnostic Imaging.

Dr. Iglesias García, Manuel

- ♦ Surgeon at the Veterinary Hospital of the University of Extremadura.
- ♦ Doctor by the Alfonso X el Sabio University.
- ♦ Degree in Veterinary Medicine from the Alfonso X el Sabio University in Madrid.

Dr. León Marín, Rosa

- ♦ Clinical veterinarian specialized in Equine Dentistry
- ♦ Degree in Veterinary Medicine, Universidad Complutense de Madrid.
- ♦ PhD in Veterinary Medicine from the Complutense University of Madrid with the qualification of "Outstanding cum Laude by unanimity".
- ♦ External tutor of the subject "Internships", tutoring second cycle students of the Faculty of Veterinary Medicine of the Complutense University of Madrid, the Alfonso X El Sabio University of Madrid and the CEU Cardenal Herrera University of Valencia.
- ♦ Courses of "Sport Technician in Riding" of the Madrid Equestrian Federation, courses for the education of professionals in the handling of racehorses.
- ♦ Professor in postgraduate courses in Veterinary Rehabilitation at the Equine Clinic. IACES, courses of Expert in Therapeutic Riding and Expert in Bases of Physiotherapy and Animal Rehabilitation of the Faculty of Veterinary Medicine of the Complutense University of Madrid.

Dr. López San Román, Javier

- ♦ Doctor in Veterinary Medicine specializing in organisms of larger species.

- ♦ Degree in Veterinary Medicine (Specialty in Medicine and Health).
- ♦ Degree in Veterinary Medicine. Organism: Faculty of Veterinary Sciences. UCM.
- ♦ Doctorate Recognition of research proficiency. Surgery and Reproduction Program. Department of Animal Pathology II. Faculty of Veterinary Medicine, Complutense University of Madrid.
- ♦ Postgraduate Certificate European College of Veterinary Surgeons.

Dr. Manso Díaz, Gabriel

- ♦ Clinical veterinarian, member of the Diagnostic Imaging Service at Complutense Veterinary Clinical Hospital (HCVC).
- ♦ Degree in Veterinary Medicine from the Complutense University of Madrid (UCM), obtaining the Extraordinary National Award.
- ♦ Dr. from the UCM with which he obtained the European Mention and the Extraordinary Doctorate Award.
- ♦ Master's Degree in Veterinary Science Research
- ♦ Assistant Professor of the Department of Animal Medicine and Surgery, Universidad Complutense de Madrid (UCM)
- ♦ Collaborator in Practical Teaching in the Department of Animal Medicine and Surgery (UCM).
- ♦ Assistant Professor of the Department of Animal Medicine and Surgery of the UCM
- ♦ Regular speaker at courses, workshops and congresses in the field of Equine Diagnostic Imaging.

Dr. Marín Baldo Vink, Alexandra

- ♦ Head of the large animal hospitalization service at the Clinical Veterinary Hospital of Alfonso X El Sabio University.
- ♦ Degree in Veterinary Medicine from the University of Murcia.

- ♦ Completed the first course of the third cycle. Currently approved Postgraduate Certificate of Advanced Studies. Animal Medicine and Reproduction. University of Murcia.
- ♦ Equine Hospitalization Service of the Veterinary Clinic Hospital of the Alfonso X El Sabio University.
- ♦ Professor at the Faculty of Veterinary Medicine, Alfonso X El Sabio University.
- ♦ Training stays in several hospitals in Spain in the area of large animals.
- ♦ Fellowship in the Department of Equine Surgery and Large Animals Veterinary Hospital of the University of Murcia.

Dr. Martín Cuervo, María

- ♦ Head of the Internal Medicine Department of the Hospital Clínico Veterinario of the University of Extremadura
- ♦ PhD in Veterinary Medicine by the Extremadura University.
- ♦ Degree in Veterinary Medicine from the University of Córdoba.
- ♦ Veterinarian, member of the *European Board of Veterinary Specialization* (EBVS) and the *European College of Equine Internal Medicine* (ECVIM). Member of the Spanish Association of Equine Veterinarians (AVEE).
- ♦ Associate Professor of the Department of Animal Medicine and Surgery, Extremadura University.

Dr. Muñoz Morán, Juan Alberto

- ♦ Doctor of Veterinary Sciences specializing in major species
- ♦ Degree in Veterinary Medicine from the Complutense University of Madrid
- ♦ Graduate of the European College of Veterinary Surgeons.
- ♦ Professor in Large Animal surgery at the Veterinary University of Pretoria, South Africa.

- ♦ Head of the Equine Surgery Residency Program at the Veterinary University of Pretoria, South Africa.
- ♦ Head of the large animal surgery service and professor at the Alfonso X El Sabio University, Madrid.
- ♦ Surgeon at the Equine Hospital of Aznalcollar, Seville.

Dr. Rodríguez Hurtado, Isabel

- ♦ Specialist in Internal Medicine of Horses
- ♦ Veterinary Degree - Madrid Complutense University.
- ♦ Postgraduate Certificate from the American College of Veterinary Internal Medicine (ACVIM).
- ♦ Internship and Residency in Equine Internal Medicine at *Auburn University* (USA).
- ♦ Master's Degree in Biomedical Sciences.
- ♦ Master's Degree in Research Methodology in Health Sciences
- ♦ Professor and Coordinator of the subject "Medical Pathology" and "Nutrition" of the Veterinary Degree (University Alfonso X El Sabio- UAX, Madrid).
- ♦ Professor of the Postgraduate Master's Degree in Equine Internal Medicine at the Alfonso X El Sabio University.
- ♦ Head of the Internal Medicine Service of Horses (UAX)
- ♦ Head of the Large Animals Area of the Clinical Veterinary Hospital (UAX)

Dr. Roquet Carne, Imma

- ♦ Veterinary surgeon in Spain and Portugal
- ♦ Degree in Veterinary Medicine, Autonomous University of Barcelona
- ♦ Master's Degree in Veterinary Science from the University of Saskatchewan (Canada)

- ♦ Professor of several Master's Degrees in Equine Veterinary Medicine at the University of Extremadura and the Autonomous University of Barcelona.
- ♦ Professor of Surgery at the University of Lusófana

Dr. Santiago Llorente, Isabel

- ♦ Doctorate in Veterinary from the Complutense University of Madrid.
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Professor at Lusofona University of Lisbon (Portugal) in the Department of Clinical Medical Pathology II.
- ♦ Her professional career is focused on Equine Clinical and Research, currently as a Veterinarian hired in the area of large animals at the Veterinary Clinic Hospital Complutense of the Complutense University of Madrid.
- ♦ Head of Equine Internal Medicine and member of the Anesthesia Service at the Veterinary Clinic Hospital Complutense of the Complutense University of Madrid.

Dr. Villalba Orero, María

- ♦ Scientific advisor in cardiovascular and pulmonary ultrasound at the National Center for Cardiovascular Research.
- ♦ Doctor of Veterinary Medicine, Complutense University of Madrid.
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Master's Degree in Veterinary Sciences from the Complutense University of Madrid
- ♦ Master's Degree in Veterinary Cardiology
- ♦ European Certificate in Veterinary Cardiology (ESVPS)
- ♦ Scientific publications in the field of equine cardiology and anesthesia, as well as in the field of cardiovascular diseases in humans.

05

Structure and Content

The contents of this Professional Master's Degree have been developed by the different experts of this program, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field.

A complete and well-structured program that will take you to the highest standards of quality and success.






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*A comprehensive teaching program,
structured in well-developed teaching units,
oriented towards learning that is compatible
with your personal and professional life"*

Module 1. Digestive System

- 1.1. Approach to Acute Abdominal Syndrome Evaluation Treatment Decision
 - 1.1.1. Introduction
 - 1.1.1.1. Epidemiology of Colic and Predisposing Factors
 - 1.1.1.2. Categorization of Diseases Causing Colicky Conditions
 - 1.1.2. General Screening Methods
 - 1.1.2.1. Medical History
 - 1.1.2.2. Assessment of General Condition and Degree of Pain
 - 1.1.2.3. Measurement of Vital Signs, Degree of Dehydration, Degree of Tissue Perfusion and State of Mucous Membranes
 - 1.1.2.4. Auscultation, Palpation and Percussion of the Abdomen
 - 1.1.2.5. Rectal Examination
 - 1.1.2.6. Nasogastric Catheterization
 - 1.1.3. Advanced Diagnostic Methods
 - 1.1.3.1. Blood Biopathology in the Diagnosis of Colic
 - 1.1.3.2. Abdominocentesis
 - 1.1.3.3. Ultrasound, Radiology, Endoscopy
 - 1.1.4. Treatment Decision: Medical or Surgical? When to Refer?
- 1.2. Diagnostic Imaging of the Digestive System in the Field
 - 1.2.1. Introduction to Diagnostic Imaging in the Field
 - 1.2.2. Technical Basis
 - 1.2.2.1. Radiology
 - 1.2.2.2. Ultrasound
 - 1.2.3. Oral Pathology
 - 1.2.4. Esophageal Pathology
 - 1.2.5. Abdominal Pathology
 - 1.2.5.1. Digestive System
 - 1.2.5.1.1. Stomach.
 - 1.2.5.1.2. Small Intestine
 - 1.2.5.1.3. Large Intestine
 - 1.2.5.2. Peritoneal Cavity
- 1.3. Oral cavity Examination Exodontia
 - 1.3.1. Exploration of the Head
 - 1.3.2. Oral cavity Examination
 - 1.3.3. Regional Nerve Blocks for Surgery and Dental Extractions
 - 1.3.3.1. Maxillary Nerve
 - 1.3.3.2. Mandibular Nerve
 - 1.3.3.3. Infraorbital Nerve
 - 1.3.3.4. Mental Nerve
 - 1.3.4. Exodontia: Indications and Techniques
- 1.4. Malocclusions Tumors Maxillary and Mandibular Fractures Temporomandibular Joint Pathology
 - 1.4.1. Malocclusions. Filing
 - 1.4.1.1. Wear Alterations
 - 1.4.2. Tumors Classification
 - 1.4.3. Maxillary and Mandibular Fractures Reparation
 - 1.4.4. Temporomandibular Joint Pathology
 - 1.4.4.1. Alterations and Clinical Signs
 - 1.4.4.2. Examination and Diagnosis
 - 1.4.4.3. Treatment and Prognosis
- 1.5. Diseases of the Esophagus and Stomach
 - 1.5.1. Oesophageal
 - 1.5.1.1. Esophageal Obstruction
 - 1.5.1.2. Oesophagitis
 - 1.5.1.3. Other Esophageal Alterations
 - 1.5.2. Stomach.
 - 1.5.2.1. Gastric Ulcers
 - 1.5.2.2. Gastric Impaction
 - 1.5.2.3. Squamous Cell Carcinoma
 - 1.5.2.4. Other Stomach Alterations
- 1.6. Small Intestine Diseases
 - 1.6.1. Simple Obstruction
 - 1.6.2. Proximal Enteritis
 - 1.6.3. Inflammatory Bowel Disease
 - 1.6.4. Intestinal Lymphoma
 - 1.6.5. Strangulating Alterations
 - 1.6.6. Small Intestinal Alterations

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- 1.7. Large Intestinal Diseases
 - 1.7.1. Impactions
 - 1.7.1.1. Large Colon
 - 1.7.1.2. Cecum
 - 1.7.1.3. Minor Colon
 - 1.7.2. Large Colon Displacement
 - 1.7.3. Colitis
 - 1.7.4. Peritonitis
 - 1.7.5. Enterolithiasis
 - 1.7.6. Other Large Intestinal Alterations
 - 1.8. Liver and Biliary Tract Diseases
 - 1.8.1. Approach to the Patient with Liver Disease
 - 1.8.2. Acute Liver Failure
 - 1.8.3. Cholangiohepatitis
 - 1.8.4. Chronic Hepatitis
 - 1.8.5. Neoplasms
 - 1.8.6. Other Liver and Biliary Tract Alterations
 - 1.9. Infectious and Parasitic Diseases of the Digestive Tract
 - 1.9.1. Infectious Diseases of the Digestive Tract
 - 1.9.1.1. Salmonellosis
 - 1.9.1.2. Proliferative Enteropathy
 - 1.9.1.3. Clostridiosis
 - 1.9.1.4. Rotavirus
 - 1.9.1.5. Potomac Equine Fever
 - 1.9.1.6. Equine Coronavirus
 - 1.9.2. Parasitic Diseases of the Digestive Tract
 - 1.9.2.1. Gastrointestinal Myiasis
 - 1.9.2.2. Intestinal Protozoa
 - 1.9.2.3. Intestinal Cestodes
 - 1.9.2.4. Intestinal Nematodes
 - 1.10. Treatment of Medical Colic in the Field
 - 1.10.1. Management of the Patient with Colicky Pain
 - 1.10.2. Pain Control in Colicky Patients
 - 1.10.3. Fluid Therapy and Cardiovascular Support
 - 1.10.4. Treatment for Endotoxemia

Module 2. Cardio-Respiratory and Vascular System

- 2.1. Clinical Assessment of the Respiratory System and Diagnostic Methods
 - 2.1.1. Examination of the Respiratory System
 - 2.1.2. Respiratory Tract Sampling
 - 2.1.2.1. Samples from Nasal Cavity, Pharynx and Guttural Pouches
 - 2.1.2.2. Tracheal Aspirate and Bronchoalveolar Lavage
 - 2.1.2.3. Thoracentesis
 - 2.1.3. Endoscopy
 - 2.1.3.1. Static and Dynamic Endoscopy of Upper Airways
 - 2.1.3.2. Sinuscopy
 - 2.1.4. Radiology
 - 2.1.4.1. Nasal Cavity, Sinuses and Guttural Pouches
 - 2.1.4.2. Larynx and Trachea
 - 2.1.5. Ultrasound
 - 2.1.5.1. Ultrasound Techniques
 - 2.1.5.2. Pleural Effusion
 - 2.1.5.3. Atelectasis, Consolidation and Masses
 - 2.1.5.4. Pneumothorax
- 2.2. Diseases of the Upper Respiratory Tract I (Nose, Nasal Cavity and Paranasal Sinuses).
 - 2.2.1. Diseases and Pathologies Affecting the Rostral/Larynxes Area
 - 2.2.1.1. Clinical Introduction and Diagnosis
 - 2.2.1.2. Atheroma-Epidermal Inclusion Cyst
 - 2.2.1.2.1. Treatment
 - 2.2.1.3. Redundant Wing Fold
 - 2.2.1.3.1. Treatment
 - 2.2.2. Diseases and Pathologies Affecting the Nasal Cavity
 - 2.2.2.1. Diagnostic Techniques
 - 2.2.2.2. Nasal Septum Pathologies
 - 2.2.2.3. Ethmoidal Hematoma
 - 2.2.3. Diseases and Pathologies Affecting the Paranasal Sinuses
 - 2.2.3.1. Clinical Presentation and Diagnostic Techniques
 - 2.2.3.2. Sinusitis
 - 2.2.3.2.1. Primary Sinusitis
 - 2.2.3.2.2. Secondary Sinusitis
 - 2.2.3.3. Paranasal Sinus Cyst
 - 2.2.3.4. Paranasal Sinus Neoplasia
- 2.2.4. Approaches to the Paranasal Sinus
 - 2.2.4.1. Trepanation Anatomical References and Technique
 - 2.2.4.2. Synocentesis
 - 2.2.4.3. Sinuscopy
 - 2.2.4.4. Flaps or Bone Flaps of the Paranasal Sinuses
 - 2.2.4.5. Associated Complications
- 2.3. Diseases of the Upper Tract II (Larynx and Pharynx)
 - 2.3.1. Diseases and Pathologies Affecting the Pharynx-Nasopharynx
 - 2.3.1.1. Anatomical Pathologies
 - 2.3.1.1.1. Nasopharyngeal Scar Tissue
 - 2.3.1.1.2. Nasopharyngeal Masses
 - 2.3.1.1.3. Treatment
 - 2.3.1.2. Functional Pathologies
 - 2.3.1.2.1. Dorsal Displacement of the Soft Palate (DDSP)
 - 2.3.1.2.1.1. Intermittent DDSP
 - 2.3.1.2.1.2. Permanent DDSP
 - 2.3.1.2.1.3. Surgical and Non-Surgical Treatments
 - 2.3.1.2.2. Rostral Pharyngeal Collapse
 - 2.3.1.2.3. Dorsal/Lateral Nasopharyngeal Collapse
 - 2.3.1.3. Nasopharyngeal Pathologies in Foals
 - 2.3.1.3.1. Choanal Atresia
 - 2.3.1.3.2. Cleft Palate
 - 2.3.1.3.3. Nasopharyngeal Dysfunction
 - 2.3.2. Diseases and Pathologies Affecting the Larynx
 - 2.3.2.1. Recurrent Laryngeal Neuropathy (Laryngeal Hemiplegia)
 - 2.3.2.1.1. Diagnosis
 - 2.3.2.1.2. Gradation
 - 2.3.2.1.3. Treatment and Associated Complications
 - 2.3.2.2. Vocal Cord Collapse
 - 2.3.2.3. Bilateral Laryngeal Paralysis
 - 2.3.2.4. Cricopharyngeal-Laryngeal Dysplasia (Fourth Branchial Arch Defects)
 - 2.3.2.5. Collapse of the Apex of the Corniculate Process

- 2.3.2.6. Medial Deviation of the Aryepiglottic Folds
- 2.3.2.7. Chondropathy of the Arytenoid Cartilage
- 2.3.2.8. Pathologies in the Mucosa of the Arytenoid Cartilages
- 2.3.2.9. Pathologies Affecting the Epiglottis
 - 2.3.2.9.1. Epiglottic Entrapment
 - 2.3.2.9.2. Acute Epiglottitis
 - 2.3.2.9.3. Subepiglottic Cyst
 - 2.3.2.9.4. Subepiglottic Granuloma
 - 2.3.2.9.5. Dorsal Epiglottic Abscess
 - 2.3.2.9.6. Hypoplasia, Flaccidity, Deformity of Epiglottis
 - 2.3.2.9.7. Epiglottic Retroversion
- 2.4. Diseases of Guttural Pouches and Trachea Tracheostomy
 - 2.4.1. Diseases and Pathologies Affecting the Guttural Pouches
 - 2.4.1.1. Tympanism
 - 2.4.1.1.1. Functional Nasopharyngeal Obstruction in Adults
 - 2.4.1.2. Empyema
 - 2.4.1.3. Mycosis
 - 2.4.1.4. Trauma-Rupture of the Ventral Rectus Muscles
 - 2.4.1.5. Osteoarthropathy of the Temporohyoid Joint
 - 2.4.1.6. Other Pathologies
 - 2.4.2. Diseases and Pathologies Affecting the Trachea
 - 2.4.2.1. Trauma
 - 2.4.2.2. Tracheal Collapse
 - 2.4.2.3. Tracheal Stenosis
 - 2.4.2.4. Foreign Bodies
 - 2.4.2.5. Intraluminal Masses
 - 2.4.3. Tracheal Surgeries
 - 2.4.3.1. Tracheostomy and Tracheostomy (Temporary)
 - 2.4.3.2. Permanent Tracheostomy
 - 2.4.3.3. Other Tracheal Surgeries
- 2.5. Inflammatory Diseases of the Lower Respiratory Tract
 - 2.5.1. Introduction: Functionality of the Lower Respiratory Tract
 - 2.5.2. Equine Asthma
 - 2.5.2.1. Etiology and Classification
 - 2.5.2.2. Epidemiology
 - 2.5.2.3. Classification
 - 2.5.2.4. Pathophysiology
 - 2.5.2.5. Clinical Signs
 - 2.5.2.6. Diagnostic Techniques
 - 2.5.2.7. Therapy Options
 - 2.5.2.8. Prognosis
 - 2.5.2.9. Prevention
 - 2.5.3. Exercise-Induced Pulmonary Hemorrhage
 - 2.5.3.1. Etiology
 - 2.5.3.2. Epidemiology
 - 2.5.3.3. Pathophysiology
 - 2.5.3.4. Clinical Signs
 - 2.5.3.5. Diagnostic Techniques
 - 2.5.3.6. Therapy Options
 - 2.5.3.7. Prognosis
- 2.6. Bacterial and Fungal Infectious Diseases of the Respiratory Tract
 - 2.6.1. Equine Mumps *Streptococcus* Equine Infection
 - 2.6.2. Bacterial Pneumonia and Pleuropneumonia
 - 2.6.3. Fungal Pneumonia
- 2.7. Pneumonias of Mixed Origin Viral Infectious Diseases of the Respiratory Tract and Tumors
 - 2.7.1. Interstitial Pneumonia and Pulmonary Fibrosis
 - 2.7.2. Equine Herpesvirus I, IV and V
 - 2.7.3. Equine Influenza
 - 2.7.4. Tumours of the Respiratory System
- 2.8. Exploration of the Cardiovascular System, Electrocardiography and Echocardiography
 - 2.8.1. Anamnesis and Clinical Examination
 - 2.8.2. Basic Principles of Electrocardiography
 - 2.8.3. Electrocardiography Types
 - 2.8.4. Electrocardiogram Interpretation
 - 2.8.5. Basic Principles of Echocardiography
 - 2.8.6. Echocardiographic Planes

- 2.9. Structural Cardiac Alterations
 - 2.9.1. Congenital
 - 2.9.1.1. Ventricular Septal Defect
 - 2.9.2. Acquired
 - 2.9.2.1. Aortic Insufficiency
 - 2.9.2.2. Mitral Insufficiency
 - 2.9.2.3. Tricuspid Regurgitation
 - 2.9.2.4. Aorto-Cardiac Fistula
- 2.10. Arrhythmias
 - 2.10.1. Supraventricular Arrhythmias
 - 2.10.2. Ventricular Arrhythmias
 - 2.10.3. Conduction Disturbances

Module 3. Hematopoietic System, Immunology and Nutrition

- 3.1. Analytical Interpretation: Blood Count and Serum Biochemistry
 - 3.1.1. General Considerations for the Interpretation of Analytical Reports
 - 3.1.1.1. Essential Patient Data
 - 3.1.1.2. Sample Collection and Handling
 - 3.1.2. Interpretation of Blood Count
 - 3.1.2.1. Red Blood Cells
 - 3.1.2.2. White Blood Cells
 - 3.1.2.3. Platelet Cells
 - 3.1.2.4. Smears
 - 3.1.3. Interpretation of Serum or Plasma Biochemistry
 - 3.1.3.1. Electrolytes
 - 3.1.3.2. Bilirubin
 - 3.1.3.3. Creatinine, Blood Urea Nitrogen (BUN), Urea and Symmetrical Dimethylarginine (SDMA)
 - 3.1.3.4. Proteins: Albumin and Globulins
 - 3.1.3.5. Acute-Phase Proteins: Fibrinogen and Serum Amyloid A.
 - 3.1.3.6. Enzymes
 - 3.1.3.7. Glucose
 - 3.1.3.8. Bicarbonate
 - 3.1.3.9. Lactate
 - 3.1.3.10. Triglycerides and Bile Acids

- 3.2. Hematopoietic System Pathologies
 - 3.2.1. Hemolytic Anemia
 - 3.2.1.1. Immune-Mediated Hemolytic Anemia
 - 3.2.1.2. Equine Infectious Anemia
 - 3.2.1.3. Piroplasmosis
 - 3.2.1.4. Other Causes
 - 3.2.2. Hemorrhagic Anemia
 - 3.2.2.1. Hemoperitoneum and Hemothorax
 - 3.2.2.2. Gastrointestinal Losses
 - 3.2.2.3. Losses From Other Origin
 - 3.2.3. Non-Regenerative Anemias
 - 3.2.3.1. Iron Deficiency Anemia
 - 3.2.3.2. Anemia due to Chronic Inflammation/Infection
 - 3.2.3.3. Aplastic Anemia
 - 3.2.4. Coagulation Alterations
 - 3.2.4.1. Platelet Alterations
 - 3.2.4.1.1. Thrombocytopenia
 - 3.2.4.1.2. Platelet Functional Alterations
 - 3.2.4.2. Alterations of Secondary Hemostasis
 - 3.2.4.2.1. Hereditary
 - 3.2.4.2.2. Acquired
 - 3.2.4.3. Thrombocytosis
 - 3.2.4.4. Lymphoproliferative Disorders
 - 3.2.4.5. Disseminated Intravascular Coagulation (DIC)
- 3.3. Endotoxic Shock
 - 3.3.1. Systemic Inflammation and Systemic Inflammatory Response Syndrome (SIRS)
 - 3.3.2. Causes of Endotoxemia in Horses
 - 3.3.3. Pathophysiological Mechanisms
 - 3.3.4. Endotoxic Shock
 - 3.3.4.1. Hemodynamic Changes
 - 3.3.4.2. Multiorgan Dysfunction
 - 3.3.5. Clinical Signs of Endotoxemia and Endotoxic Shock.
 - 3.3.6. Diagnosis

- 3.3.7. Management
 - 3.3.7.1. Endotoxin Release Inhibitors
 - 3.3.7.2. Endotoxin Uptake and Inhibition
 - 3.3.7.3. Cell Activation Inhibition
 - 3.3.7.4. Inhibition of the Synthesis of Inflammatory Mediators
 - 3.3.7.5. Other Specific Therapies
 - 3.3.7.6. Support Treatments
- 3.4. Treatment of Hematopoietic Alterations Transfusion Therapy
 - 3.4.1. Indications for Transfusion of Whole Blood
 - 3.4.2. Indications for Plasma Transfusion
 - 3.4.3. Indications for Transfusion of Platelet Products
 - 3.4.4. Donor Selection and Compatibility Testing
 - 3.4.5. Technique for Whole Blood Collection and Processing of Plasma
 - 3.4.6. Administration of Blood Products
 - 3.4.6.1. Volume of Administration
 - 3.4.6.2. Administration Techniques
 - 3.4.6.3. Adverse Reaction Monitoring
- 3.5. Immune System Alterations Allergies.
 - 3.5.1. Hypersensitivity Types
 - 3.5.2. Pathologies Associated with Hypersensitivity
 - 3.5.2.1. Anaphylactic Reaction
 - 3.5.2.2. Hemorrhagic Purpura
 - 3.5.3. Autoimmunity
 - 3.5.4. Most Important Immunodeficiencies in Equines
 - 3.5.4.1. Diagnostic Tests
 - 3.5.4.2. Primary Immunodeficiencies
 - 3.5.4.3. Secondary Immunodeficiencies
 - 3.5.5. Immunomodulators:
 - 3.5.5.1. Immunostimulants
 - 3.5.5.2. Immunosuppressants
- 3.6. Nutrition Basic Principles I
 - 3.6.1. Physiology of Gastrointestinal Tract
 - 3.6.1.1. Oral Cavity, Esophagus and Stomach
 - 3.6.1.2. Small Intestine
 - 3.6.1.3. Large Intestine
 - 3.6.2. Dietary Components and Nutrients
 - 3.6.2.1. Water
 - 3.6.2.2. Proteins and Amino Acids
 - 3.6.2.3. Carbohydrates
 - 3.6.2.4. Fats and Fatty Acids
 - 3.6.2.5. Minerals and Vitamins
 - 3.6.3. Estimation of Horse Weight and Body Condition
- 3.7. Nutrition Basic Principles II
 - 3.7.1. Energy and Available Energy Sources
 - 3.7.1.1. Forage
 - 3.7.1.2. Starches
 - 3.7.1.3. Fats
 - 3.7.2. Metabolic Pathways of Energy Production
 - 3.7.3. Energy Needs of the Horse
 - 3.7.3.1. In Maintenance
 - 3.7.3.2. For Breeding and Growth
 - 3.7.3.3. For the Show Horse/Racehorse
- 3.8. Cachectic Horse Nutrition
 - 3.8.1. Metabolic Response
 - 3.8.2. Physical Examination and Clinical Signs
 - 3.8.3. Blood Analysis
 - 3.8.4. Differential Diagnoses
 - 3.8.5. Nutritional Requirements
- 3.9. Use of Probiotics, Prebiotics and Medicinal Plants
 - 3.9.1. Role of the Microbiota in the Large Intestine
 - 3.9.2. Probiotics, Prebiotics, and Symbiotics
 - 3.9.3. Medicinal Plants Use
- 3.10. Rational Use of Antibiotics: Bacterial Resistance
 - 3.10.1. Responsible Antibiotic Use
 - 3.10.2. New Antibiotic Therapies
 - 3.10.3. Resistance Mechanisms
 - 3.10.4. Main Multi-resistant Pathogens

Module 4. Locomotor System.

- 4.1. Examination and Diagnosis of Lameness
 - 4.1.1. Introduction
 - 4.1.1.1. Definition of Lameness
 - 4.1.1.2. Causes and Types of Lameness
 - 4.1.1.3. Symptoms of Lameness
 - 4.1.2. Static Examination of Lameness
 - 4.1.2.1. Medical History
 - 4.1.2.2. Approach to the Horse and General Examination
 - 4.1.2.2.1. Visual Examination: General Condition and Conformation
 - 4.1.2.2.2. Static Physical Examination, Palpation, Percussion and Flexion
 - 4.1.3. Dynamic Examination of Lameness
 - 4.1.3.1. Examination in Motion
 - 4.1.3.2. Flexion Test
 - 4.1.3.3. Assessment and Quantification of Lameness Objective and Subjective Methods
 - 4.1.3.4. Introduction to Neural Anesthetic Blocks
 - 4.1.4. Introduction to Complementary Diagnostic Methods
- 4.2. Anesthetic Nerve Blocks
 - 4.2.1. Diagnostic Loco-Regional Analgesia: Introduction
 - 4.2.1.1. General Considerations and Pre-Diagnostic Requirements
 - 4.2.1.2. Types of Blockages and Injection Techniques
 - 4.2.1.3. Drugs to be Used
 - 4.2.1.4. Election of Blockages
 - 4.2.1.5. Approach to the Patient
 - 4.2.1.5.1. Patient Management and Preparation
 - 4.2.1.5.2. Chemical Containment
 - 4.2.1.6. Evaluation of Results
 - 4.2.1.6.1. Subjective Assessment
 - 4.2.1.6.2. Objective Assessment
 - 4.2.1.7. Complications
 - 4.2.2. Perineural Anesthetic Blocks
 - 4.2.2.1. Perineural Analgesia in the Forelimb
 - 4.2.2.2. Perineural Analgesia in the Hindlimb
 - 4.2.3. Regional Anesthetic Blocks
 - 4.2.4. Intrasynovial Anesthetic Blocks
 - 4.2.4.1. Intra-Articular Blocks
 - 4.2.4.2. Bursa and Tendon Sheath Blocks
- 4.3. Diagnostic Imaging of Lameness
 - 4.3.1. Introduction to Diagnostic Imaging in the Field
 - 4.3.2. Technical Basis
 - 4.3.2.1. Radiology
 - 4.3.2.2. Ultrasound
 - 4.3.2.3. Advanced Techniques
 - 4.3.2.3.1. Gammagraphy
 - 4.3.2.3.2. Magnetic Resonance
 - 4.3.2.3.3. Computerized Tomography
 - 4.3.3. Bone Pathology Diagnosis
 - 4.3.4. Joint Pathology Diagnosis
 - 4.3.5. Diagnosis of Tendon and Ligament Pathology
- 4.4. Pathologies of the Axial Skeleton Diagnosis and Treatment
 - 4.4.1. Introduction to Axial Skeletal Pathology
 - 4.4.2. Axial Skeleton Exploration
 - 4.4.3. Cervical Spine Diagnosis
 - 4.4.4. Diagnosis of the Thoracolumbar and Sacroiliac Spine
 - 4.4.5. Axial Skeleton Pathology Treatment
- 4.5. Degenerative Joint Disease (DJD) Traumatic Arthritis and Post-Traumatic Osteoarthritis Etiology, Diagnosis and Treatment
 - 4.5.1. Anatomy and Physiology of the Joints
 - 4.5.2. Definition of EDA
 - 4.5.3. Cartilage Lubrication and Repair
 - 4.5.4. DJD Manifestations
 - 4.5.4.1. Acute Injuries
 - 4.5.4.2. Chronic Fatigue Injuries
 - 4.5.5. DJD Diagnosis
 - 4.5.5.1. Clinical Examination
 - 4.5.5.2. Objective and Subjective Examination of Lameness
 - 4.5.5.3. Diagnostic Anesthesia
 - 4.5.5.4. Diagnostic Imaging

- 4.5.5.4.1. Radiology
 - 4.5.5.4.2. Ultrasound
 - 4.5.5.4.3. Magnetic Resonance Imaging and Computerized Axial Tomography
 - 4.5.5.4.4. New Technologies
 - 4.5.6. Treatment of DJD
 - 4.5.6.1. Nonsteroidal Anti-Inflammatories
 - 4.5.6.2. Steroid Anti-Inflammatories
 - 4.5.6.3. Hyaluronic Acid
 - 4.5.6.4. Glucosaminoglycans
 - 4.5.6.5. Pentosan
 - 4.5.6.6. Biological Therapies
 - 4.5.6.6.1. Autologous Conditioned Serum
 - 4.5.6.6.2. Platelet Rich Plasma
 - 4.5.6.6.3. Stem Cells
 - 4.5.6.7. Oral Supplements
- 4.6. Tendinitis, Desmitis and Adjacent Structures Pathologies
 - 4.6.1. Applied Anatomy and Tendon Damage Pathophysiology
 - 4.6.2. Alterations of Tendons, Ligaments and Associated Structures
 - 4.6.2.1. Soft Tissues of the Pastern
 - 4.6.2.2. Superficial Digital Flexor Tendon (SDFT)
 - 4.6.2.3. Deep Digital Flexor Tendon (DDFT)
 - 4.6.2.4. Inferior Accessory Ligament of the TFDSF
 - 4.6.2.5. Suspensory Ligament of the Fetlock (SL)
 - 4.6.2.5.1. Proximal part of the SL
 - 4.6.2.5.2. SL Body
 - 4.6.2.5.3. SL Branches
 - 4.6.2.6. Carpal Canal and Carpal Sheath
 - 4.6.2.7. Tarsal Sheath
 - 4.6.2.8. Plantar Fasciitis
 - 4.6.2.9. Bursitis
 - 4.6.3. Management of Tendon and Ligament Injuries
 - 4.6.3.1. Medical Therapy
 - 4.6.3.2. Regenerative Therapies
 - 4.6.3.2.1. Stem Cell and Bone Marrow Therapies
 - 4.6.3.2.2. Platelet-Rich Plasma Therapy
 - 4.6.3.3. Shock Waves and Other Physical Therapies
 - 4.6.3.4. Surgical Therapies
 - 4.6.3.5. Rehabilitation and Return to Work Guidelines
- 4.7. Fractures: Bone Sequestration
 - 4.7.1. First Approach to Fractures, General Considerations Bone Sequestration
 - 4.7.1.1. Introduction
 - 4.7.1.1.1. First Aid for Fractures in Horses
 - 4.7.1.1.2. Case Selection, General Considerations
 - 4.7.1.1.3. Immobilization of Fractures According to Location
 - 4.7.1.2. Transport
 - 4.7.1.2.1. Transporting an Equine Patient for Fracture Treatment
 - 4.7.1.3. Prognosis
 - 4.7.1.4. Bone Sequestration
 - 4.7.2. Rehabilitation and Return to Work Guidelines
 - 4.7.2.1. In Fractures
 - 4.7.2.2. In Bone Sequestration
- 4.8. Laminitis
 - 4.8.1. Pathophysiology of Laminitis
 - 4.8.2. Clinical of Laminitis
 - 4.8.3. Diagnosis of Laminitis
 - 4.8.3.1. Physical Examination
 - 4.8.3.2. Diagnostic Imaging
 - 4.8.3.3. Endocrine and Metabolic Assessment
 - 4.8.4. Medical Treatment of Laminitis
 - 4.8.4.1. Anti-Inflammatories
 - 4.8.4.2. Vasoactive Drugs
 - 4.8.4.3. Analgesia
 - 4.8.4.4. Hypothermia
 - 4.8.4.5. Sepsis
 - 4.8.4.6. Pituitary Pars Intermedia Dysfunction (PPID) and Equine Metabolic Syndrome (EMS)

- 4.8.5. Stabilization of the Third Phalanx
 - 4.8.5.1. Sole Support Techniques
 - 4.8.5.2. Therapeutic Horseshoeing
- 4.8.6. Treatment of Laminitis
 - 4.8.6.1. Use of Casts
 - 4.8.6.2. Flexor Digitorum Superficialis Tenotomy
 - 4.8.6.3. Dorsal Wall Resection
 - 4.8.6.4. Complications
- 4.8.7. Chronic Laminitis
- 4.8.8. Laminitis Prevention
- 4.9. Orthopedic Field Surgery
 - 4.9.1. Fractures of Rudimentary Metacarpals/Metatarsals
 - 4.9.1.1. Clinical History, Symptomatology and Different Presentations
 - 4.9.1.2. Diagnostic Techniques
 - 4.9.1.3. Decision-Making and Optimal Treatment
 - 4.9.1.4. Surgical Management
 - 4.9.1.5. Complications to Surgery
 - 4.9.1.6. Post-Operative Care
 - 4.9.1.7. Rehabilitation and Return to Work Guidelines
 - 4.9.2. Demotomies
 - 4.9.2.1. Medical History
 - 4.9.2.2. Decision Making
 - 4.9.2.3. Surgical Management
 - 4.9.2.4. Complications of Demotomies
 - 4.9.2.5. Post-Operative Care
 - 4.9.2.6. Rehabilitation and Return to Work Guidelines
 - 4.9.3. Neurectomies
 - 4.9.3.1. Indications
 - 4.9.3.2. Pre-Surgical Considerations and Implications
 - 4.9.3.3. Surgical Technique
 - 4.9.3.4. Complications
 - 4.9.3.5. Post-Operative Care
 - 4.9.3.7. Rehabilitation and Return to Work Guidelines

- 4.10. Myopathies in the Horse
 - 4.10.1. Genetic and Congenital Diseases
 - 4.10.1.1. Myotonia
 - 4.10.1.2. Myopathy due to Polysaccharide Storage
 - 4.10.1.3. Malignant Hyperthermia
 - 4.10.1.4. Hyperkalemic Periodic Paralysis
 - 4.10.2. Traumatic and Irritative Alterations
 - 4.10.2.1. Fibrotic Myopathy
 - 4.10.2.2. Bruises and Tears
 - 4.10.2.3. Intramuscular Irritant Injections
 - 4.10.3. Infectious Diseases
 - 4.10.3.1. Abscesses.
 - 4.10.3.2. Clostridial Myositis
 - 4.10.4. Ischemic Diseases
 - 4.10.4.1. Post-Anesthetic Myositis
 - 4.10.5. Nutritional Diseases
 - 4.10.5.1. Malnutrition
 - 4.10.5.2. Vitamin E and Selenium Alterations
 - 4.10.5.3. Cachectic Atrophy
 - 4.10.6. Pathologies Associated with Exercise
 - 4.10.6.1. Acute Exertional Rhabdomyolysis
 - 4.10.6.2. Recurrent Exertional Rhabdomyolysis
 - 4.10.6.3. Hypokinetic Atrophy

Module 5. Surgical Pathologies of the Skin and Related Structures

- 5.1. Exploration and Wound Types
 - 5.1.1. Anatomy
 - 5.1.2. Initial Assessment and Emergency Treatment
 - 5.1.3. Wound Classification
 - 5.1.4. Wound Healing Process
 - 5.1.5. Factors Influencing Wound Infection and Wound Healing
 - 5.1.6. Primary and Secondary Intention Wound Healing

- 5.2. Tissue Management, Hemostasis and Suture Techniques
 - 5.2.1. Incision and Tissue Dissection
 - 5.2.2. Hemostasis
 - 5.2.2.1. Mechanical Hemostasis
 - 5.2.2.2. Ligatures
 - 5.2.2.3. Tourniquet
 - 5.2.2.4. Electrocoagulation
 - 5.2.2.5. Chemical Hemostasis
 - 5.2.3. Tissue Management, Irrigation and Suctioning
 - 5.2.4. Suture Materials Used
 - 5.2.4.1. Instruments
 - 5.2.4.2. Suture Material Selection
 - 5.2.4.3. Needles
 - 5.2.4.4. Drainages
 - 5.2.5. Approaches to Wound Suturing
 - 5.2.6. Suture Patterns
- 5.3. Bandages
 - 5.3.1. Materials and Bandage Types
 - 5.3.2. Hull Bandage
 - 5.3.3. Distal Extremity Bandage
 - 5.3.4. Full Limb Bandage
 - 5.3.5. Fiberglass Cast: Application and Peculiarities in Young Animals
- 5.4. Acute Wound Repair
 - 5.4.1. Wound Treatment Medication
 - 5.4.2. Debriding
 - 5.4.3. Emphysema Secondary to Wounds
 - 5.4.4. Negative Pressure Therapy
 - 5.4.5. Topical Treatment Types
- 5.5. Repair and Management of Chronic and/or Infected Wounds
 - 5.5.1. Particularities of Chronic and Infected Wounds
 - 5.5.2. Causes of Chronic Wounds
 - 5.5.3. Management of Severely Contaminated Wounds
 - 5.5.4. Laser Benefits
 - 5.5.5. Larvotherapy
 - 5.5.6. Cutaneous Fistulas Treatment
- 5.6. Hoof Wound Treatment Regional and Intraosseous Perfusion of Antibiotics
 - 5.6.1. Hoof Wounds
 - 5.6.1.1. Coronary Buckle Wounds
 - 5.6.1.2. Heel Wounds
 - 5.6.1.3. Puncture Wounds on the Palm
 - 5.6.2. Antibiotic Perfusion
 - 5.6.2.1. Regional Perfusion
 - 5.6.2.2. Intraosseous Perfusion
- 5.7. Management and Repair of Synovial Wounds and Joint Lavage
 - 5.7.1. Pathophysiology of Synovial Infection
 - 5.7.2. Epidemiology and Diagnosis of Synovial Wound Infections
 - 5.7.3. Synovial Wound Treatment Joint Lavage
 - 5.7.4. Synovial Wound Prognosis
- 5.8. Tendon Lacerations Management and Repair
 - 5.8.1. Introduction, Anatomy, Anatomical Implications
 - 5.8.2. Primary Care, Examination of the Injury, Immobilization
 - 5.8.3. Case Selection: Surgical or Conservative Treatment
 - 5.8.4. Tendon Lacerations Surgical Repair
 - 5.8.5. Rehabilitation and Return to Work Guidelines after Tenorrhaphy
- 5.9. Reconstructive Surgery and Skin Grafting
 - 5.9.1. Principles of Basic and Reconstructive Surgery
 - 5.9.1.1. Skin Tension Lines
 - 5.9.1.2. Incision Orientation and Suture Patterns
 - 5.9.1.3. Tension Release Techniques and Plasties
 - 5.9.2. Closure of Skin Defects of Different Shapes
 - 5.9.3. Skin Grafts
- 5.10. Treatment of Exuberant Granulation Tissue Sarcoid Burns
 - 5.10.1. Causes of the Appearance of Exuberant Granulation Tissue
 - 5.10.2. Treatment of Exuberant Granulation Tissue
 - 5.10.3. Sarcoid Appearance in Wounds
 - 5.10.3.1. Wound Associated Sarcoid Type

Module 6. Medical Pathologies of the Skin Endocrine System

- 6.1. Clinical Approach and Diagnostic Tests in Equine Dermatology
 - 6.1.1. Medical History
 - 6.1.2. Sampling and Main Diagnostic Methods
 - 6.1.3. Other Specific Diagnostic Techniques
- 6.2. Bacterial and Viral Skin Diseases
 - 6.2.1. Bacterial Diseases
 - 6.2.2. Viral Diseases
- 6.3. Fungal and Parasitic Skin Diseases
 - 6.3.1. Fungal Diseases
 - 6.3.2. Parasitic Diseases
- 6.4. Allergic, Immune-Mediated and Irritative Skin Diseases
 - 6.4.1. Hypersensitivity: Types
 - 6.4.2. Insect Sting Allergy
 - 6.4.3. Vasculitis and other Immune-Mediated Reactions
 - 6.4.4. Other Skin Tumors
- 6.5. Congenital Diseases and Syndromes in Equine Dermatology
 - 6.5.1. Hereditary Equine Regional Dermal Asthenia (HERDA), Epidermolysis Bullosa, and Other Congenital Diseases
 - 6.5.2. Miscellaneous
- 6.6. Cutaneous Neoplasms
 - 6.6.1. Sarcoids
 - 6.6.2. Melanocytic Tumors
 - 6.6.3. Squamous Cell Carcinomas
 - 6.6.4. Mastocytomas
 - 6.6.5. Lymphomas
- 6.7. Alternatives in the Medical Treatment of Neoplasms
 - 6.7.1. Electroporation and Electrochemotherapy
 - 6.7.2. Immunotherapy
 - 6.7.3. Radiotherapy
 - 6.7.4. Dynamic Phototherapy
 - 6.7.5. Cryotherapy
 - 6.7.6. Other Therapies

- 6.8. Endocrine System I
 - 6.8.1. Dysfunction of the Intermediate Portion of the Pituitary Gland
 - 6.8.2. Equine Metabolic Syndrome
 - 6.8.3. Endocrine Pancreas
 - 6.8.4. Adrenal Insufficiency
- 6.9. Endocrine System II
 - 6.9.1. Thyroid Gland
 - 6.9.2. Calcium Disorders
 - 6.9.3. Magnesium Disorders
 - 6.9.4. Phosphorus Disorders
- 6.10. Nutritional Management of the Obese Horse
 - 6.10.1. Body Condition Assessment
 - 6.10.2. Weight Reduction and Caloric Restriction
 - 6.10.3. Pharmacological Intervention
 - 6.10.4. Exercise
 - 6.10.5. Maintenance

Module 7. Nervous System and Ophthalmology

- 7.1. Neuroanatomical Localization of Neurological Injuries in the Horse
 - 7.1.1. Neuroanatomical Peculiarities of the Horse
 - 7.1.2. Medical History
 - 7.1.3. Neurological Examination Protocol
 - 7.1.3.1. Head Assessment Behavior, Consciousness, Position and Cranial Nerves
 - 7.1.3.2. Posture and Motor Function Assessment Gradation of Alterations
 - 7.1.3.3. Neck and Thoracic Limb Evaluation
 - 7.1.3.4. Evaluation of the Trunk and Pelvic Limb
 - 7.1.3.5. Evaluation of Tail and Anus
 - 7.1.4. Complementary Methods of Diagnostic
- 7.2. Disorders Affecting the Cerebral Cortex and Brainstem
 - 7.2.1. Consciousness State Regulation
 - 7.2.2. Cranial Trauma
 - 7.2.2.1. Etiopathogenesis
 - 7.2.2.2. Symptoms and Syndromes
 - 7.2.2.3. Diagnosis

- 7.2.2.4. Treatment
- 7.2.2.5. Prognosis
- 7.2.3. Metabolic Encephalopathy
 - 7.2.3.1. Hepatic Encephalopathy
- 7.2.4. Seizures and Epilepsy
 - 7.2.4.1. Types of Seizure Disorders
 - 7.2.4.2. Types of Epilepsy (ILAE Classification) (*International League Against Epilepsy*)
 - 7.2.4.3. Treatment
- 7.2.5. Narcolepsy
- 7.3. Cerebellar or Vestibular Disturbances
 - 7.3.1. Coordination and Balance
 - 7.3.2. Cerebellar Syndrome
 - 7.3.2.1. Cerebellar Abiotrophy
 - 7.3.3. Vestibular Syndrome
 - 7.3.3.1. Peripheral Vestibular Syndrome
 - 7.3.3.2. Central Vestibular Syndrome
 - 7.3.3.3. Head Trauma and Vestibular Syndrome
 - 7.3.3.4. Temporohyoid Osteoarthropathy
- 7.4. Spinal Alterations
 - 7.4.1. Cervical Stenotic Myelopathy
 - 7.4.1.1. Etiopathogenesis.
 - 7.4.1.2. Symptomatology and Neurological Examination
 - 7.4.1.3. Diagnosis
 - 7.4.1.4. Radiology
 - 7.4.1.5. Myelography
 - 7.4.1.6. Magnetic Resonance Imaging, Computerized Axial Tomography, Gammagraphy
 - 7.4.1.7. Treatment
 - 7.4.2. Equine Degenerative Myeloencephalopathy (EDM)
 - 7.4.3. Spinal Trauma
- 7.5. Bacterial, Fungal and Parasitic Infections of the Nervous System
 - 7.5.1. Bacterial Encephalitis or Encephalomyelitis
 - 7.5.1.1. Etiological Agents
 - 7.5.1.2. Symptoms
 - 7.5.1.3. Diagnosis
 - 7.5.1.4. Treatment
 - 7.5.2. Fungal Encephalitis
 - 7.5.3. Equine Protozoal Encephalomyelitis (EPM)
 - 7.5.3.1. Etiopathogenesis.
 - 7.5.3.2. Symptoms
 - 7.5.3.3. Diagnosis
 - 7.5.3.4. Treatment
 - 7.5.4. Meningoencefalomyelitis Verminosa
 - 7.5.4.1. Etiopathogenesis.
 - 7.5.4.2. Symptoms
 - 7.5.4.3. Diagnosis and Treatment
- 7.6. Viral Infections of the Nervous System
 - 7.6.1. Equine Encephalomyelitis due to Herpesvirus Type -1 (EHV-1)
 - 7.6.1.1. Etiopathogenesis
 - 7.6.1.2. Clinical Picture
 - 7.6.1.3. Diagnosis
 - 7.6.1.4. Treatment
 - 7.6.2. West Nile Virus Encephalomyelitis
 - 7.6.2.1. Etiopathogenesis
 - 7.6.2.2. Clinical Picture
 - 7.6.2.3. Diagnosis
 - 7.6.2.4. Treatment
 - 7.6.3. Rabies
 - 7.6.3.1. Etiopathogenesis
 - 7.6.3.2. Clinical Picture
 - 7.6.3.3. Diagnosis
 - 7.6.3.4. Treatment
 - 7.6.4. Borna, Hendra and other Viral Encephalitis Viruses

- 7.7. Ocular Examination Ocular Nerve Blocks and Sub-palpebral Catheter Placement
 - 7.7.1. Anatomy and Physiology of the Eyeball
 - 7.7.2. Optic Nerve Blocks
 - 7.7.3. Ophthalmologic examination
 - 7.7.4. Basic Diagnostic Tests
 - 7.7.5. Advanced Diagnostic Tests
 - 7.7.6. Sub-Palpebral Catheter Placement
- 7.8. Palpebral Pathologies Ocular Perforations Entropion Correction
 - 7.8.1. Anatomy of Adnexal Tissues
 - 7.8.2. Eyelid Alterations
 - 7.8.3. Entropion Correction
 - 7.8.4. Ocular Perforations
- 7.9. Corneal Ulcers
 - 7.9.1. General Aspects and Classification of Corneal Ulcers
 - 7.9.2. Simple, Complex and Severe Ulcers
 - 7.9.3. Indolent Ulcer
 - 7.9.4. Infectious Keratitis
 - 7.9.5. Corneal Surgery
- 7.10. Uveitis and Ocular Medical Pathologies
 - 7.10.1. Immune-Mediated Keratitis
 - 7.10.2. Stromal Abscess
 - 7.10.3. Equine Recurrent Uveitis
 - 7.10.4. Crystalline Lens Alterations
 - 7.10.5. Posterior Segment Alterations and Glaucoma
 - 7.10.6. Neoplasms

Module 8. Reproductive and Urinary System

- 8.1. Urinary System Assessment
 - 8.1.1. Hematological and Biochemical Parameters Related to the Renal System
 - 8.1.2. Urinalysis
 - 8.1.3. Diagnostic Methods in the Urinary System
 - 8.1.3.1. Ultrasound of the Urinary System
 - 8.1.3.2. Endoscopy of the Urinary System
 - 8.1.3.3. Renal Biopsy.
 - 8.1.3.4. Water Deprivation Test

- 8.2. Urinary System Pathologies
 - 8.2.1. Acute Renal Failure
 - 8.2.1.1. Causes of Acute Renal Insufficiency
 - 8.2.1.2. Treatment of Acute Renal Insufficiency
 - 8.2.2. Chronic Renal Failure
 - 8.2.2.1. Causes of Chronic Renal Insufficiency
 - 8.2.2.2. Treatment of Chronic Renal Insufficiency
 - 8.2.3. Urinary Tract Infections
 - 8.2.3.1. Urethritis, Cystitis, Pyelonephritis and their Treatment
 - 8.2.3.2. Treatment of Urinary Tract Infections
 - 8.2.4. Obstructive Pathology of the Urinary Tract
 - 8.2.4.1. Obstructive Pathology Types
 - 8.2.4.2. Treatment
 - 8.2.5. Polyuria and Polydipsia
 - 8.2.6. Urinary Incontinence and Bladder Dysfunction
 - 8.2.7. Urinary Tract Tumors
- 8.3. Medical Pathologies of the Male Genitalia
 - 8.3.1. Introduction to the Medical Pathology of the Stallion
 - 8.3.2. Testicular Pathology in the Stallion
 - 8.3.2.1. Handling and Treatment of the Cryptorchid Stallion
 - 8.3.2.2. Testicular Inflammatory Disorders
 - 8.3.2.3. Management of Testicular Degeneration in the Stallion
 - 8.3.2.4. Hydrocele Management
 - 8.3.2.5. Testicular Neoplasms in the Stallion
 - 8.3.2.6. Testicular Torsion in the Stallion
 - 8.3.3. Penile Pathologies
 - 8.3.3.1. Penile Trauma Management
 - 8.3.3.2. Penile Tumor Developments
 - 8.3.3.3. Paraphimosis
 - 8.3.3.4. Priapism
 - 8.3.4. Pathology of Adnexal Glands
 - 8.3.4.1. Ultrasound and Assessment of Adnexal Glands
 - 8.3.4.2. Vesiculitis, Management and Treatment
 - 8.3.4.3. Adnexal Gland Obstruction

- 8.3.5. Ejaculate Alterations
 - 8.3.5.1. Seminal Assessment
 - 8.3.5.2. Factors Affecting Fertility
 - 8.3.5.3. Sub-fertile Semen Management
 - 8.3.5.3.1. Semen Centrifugation for Quality Improvement
 - 8.3.5.3.2. Seminal Plasma Substitution
 - 8.3.5.3.3. Semen Filtration to Improve Quality
 - 8.3.5.3.4. Low-Quality Semen Cooling Protocols
 - 8.3.6. Alterations in Stallion Behavior and Mating Management
 - 8.3.7. Advances in Assisted Reproduction in Stallions
 - 8.3.7.1. Seminal Freezing
 - 8.3.7.2. Epididymal Sperm Retrieval after Death or Castration
 - 8.4. Male Field Surgical Procedures
 - 8.4.1. Castration
 - 8.4.1.1. Introduction and Considerations of Castration in Males
 - 8.4.1.1.1. Patient Selection
 - 8.4.1.2. Castration Surgical Techniques
 - 8.4.1.2.1. Open Castration
 - 8.4.1.2.2. Closed Castration
 - 8.4.1.2.3. Semi-Closed or Semi-Open Castration
 - 8.4.1.3. Variations in Surgical Technique
 - 8.4.1.3.1. Different Hemostasis Options
 - 8.4.1.3.2. Primary Skin Closure
 - 8.4.1.4. On-Station Castration Considerations
 - 8.4.1.4.1. Sedation
 - 8.4.1.5. Considerations for Castration under General Anesthetic
 - 8.4.1.6. Inguinal Cryptorchidism
 - 8.4.1.6.1. Presurgical Diagnosis
 - 8.4.1.6.2. Surgical Technique
 - 8.4.2. Penile Amputation
 - 8.4.2.1. Indications
 - 8.4.2.2. Post-Surgical Procedure and Considerations
 - 8.5. Medical and Surgical Pathologies of the Female Genitalia I
 - 8.5.1. Medical Pathologies I
 - 8.5.1.1. Ovarian Pathology
 - 8.5.1.1.1. Ovulation Disorders
 - 8.5.1.1.2. Ovarian Tumors
 - 8.5.1.2. Fallopian Tubes Disorders
 - 8.5.1.3. Medical Uterine Pathology
 - 8.5.1.3.1. Preparation and Procedure for Sample Collection
 - 8.5.1.3.1.1. Cytology
 - 8.5.1.3.1.2. Biopsy
 - 8.5.1.3.2. Types of Endometritis
 - 8.5.1.3.3. Management of the Mare with Uterine Fluid
 - 8.5.1.3.4. Management of Mares with Uterine Cysts
 - 8.5.2. Surgical Pathologies of the Female Genitalia I
- 8.6. Medical and Surgical Genital Pathologies of the Mare II
 - 8.6.1. Medical Pathologies II
 - 8.6.1.1. Cervical Pathology
 - 8.6.1.1.1. Cervical Lacerations
 - 8.6.1.1.2. Cervical Adherences
 - 8.6.1.2. Medical Pathology of the Vagina
 - 8.6.1.3. Reproductive Management of the Geriatric Mare
 - 8.6.1.4. Update on Assisted Reproduction in the Mare
 - 8.6.2. Surgical Pathologies of the Mare
 - 8.6.2.1. Normal Vulvar Conformation of the Mare
 - 8.6.2.1.1. Vulvar Examination of the Mare
 - 8.6.2.1.2. Caslick Index
 - 8.6.2.2. Vulvoplasty
 - 8.6.2.2.1. Caslick Surgery Procedure
- 8.7. Pregnant Mare and Care at Foaling
 - 8.7.1. Mare Gestation
 - 8.7.1.1. Diagnosis of Pregnancy in the Mare
 - 8.7.1.2. Management of Early and Late Multiple Gestation New Techniques
 - 8.7.1.3. Embryo Sexing

- 8.7.2. Complications During Gestation in the Mare
 - 8.7.2.1. Abortion
 - 8.7.2.1.1. Early Abortion
 - 8.7.2.1.2. Late Abortion
 - 8.7.2.2. Uterine Torsion
 - 8.7.2.3. Management and Treatment of Placentitis
 - 8.7.2.4. Management of Placental Abruption
- 8.7.3. Nutritional Needs of the Pregnant Mare
- 8.7.4. Ultrasound Evaluation of the Fetus
 - 8.7.4.1. Ultrasound Evaluation at Different Stages of Gestation
 - 8.7.4.2. Fetal Biometry
- 8.7.5. Methods for Predicting Foaling in the Full-Term Mare
- 8.7.6. Euthyroid Labor and Delivery
 - 8.7.6.1. Phases of Euthyroid Labor and Delivery
- 8.8. Complications of Childbirth and Postpartum Care
 - 8.8.1. Dystocic Labor and Delivery
 - 8.8.1.1. Material Necessary for the Resolution of Dystocia
 - 8.8.1.2. Types of Dystocia and Management of Different Fetal Presentations
 - 8.8.2. Peripartum Surgical Emergencies
 - 8.8.2.1. Fetotomy
 - 8.8.2.1.1. Fetotome
 - 8.8.2.1.2. Preparation of the Mare for the Procedure
 - 8.8.2.1.3. Fetotomy in the Field Vs. In the Hospital
 - 8.8.2.2. Cesarean Section
 - 8.8.2.3. Hemorrhage of the Ankle Ligament
 - 8.8.2.4. Uterine Laceration
 - 8.8.2.5. Prepubic Tendon Rupture
 - 8.8.2.6. Rectovaginal Fistula
 - 8.8.3. Postpartum Care
 - 8.8.3.1. Control of Uterine Involution and Establishment of the Postpartum Cycle
 - 8.8.4. Postpartum Complications
 - 8.8.4.1. Placenta Retention
 - 8.8.4.2. 8.8.4.2 Vaginal Lacerations
 - 8.8.4.3. 8.8.4.3 Uterine Bleeding
 - 8.8.4.4. Uterine Prolapse
 - 8.8.4.5. Rectal Prolapse
 - 8.8.4.6. 8.8.4.6 Vulvar Hematoma
 - 8.8.4.7. Uterine Horn Invagination
- 8.9. Repair of Tears and Lacerations during Labor and Delivery
 - 8.9.1. Management of Vulvar Tears and Lacerations during Labor and Delivery
 - 8.9.2. Classification of Perineal Lacerations
 - 8.9.3. Reconstruction of the Perineal Body
 - 8.9.3.1. Surgical Preparation of the Mare
 - 8.9.3.2. Vaginal Vestibule Sphincter Insufficiency
 - 8.9.3.2.1. Perineal Body Reconstruction, Vestibuloplasty
 - 8.9.3.2.2. Perineal Body Transverse Section, Perineoplasty
 - 8.9.3.2.2.1. Pouret's Surgery
 - 8.9.3.3. Postoperative Care
 - 8.9.3.4. Complications of Perineal Surgery
 - 8.9.4. Surgical Management of Third-Degree Rectovaginal Tearing
 - 8.9.5. Surgical Management of Rectovaginal Fistulas
- 8.10. Infectious and Parasitic Diseases of the Reproductive System in Equines
 - 8.10.1. Introduction to Infectious and Parasitic Diseases of the Reproductive System in Equines
 - 8.10.2. Economic and Productive Significance of Infectious and Parasitic Diseases
 - 8.10.3. Infectious Diseases of the Reproductive Tract
 - 8.10.3.1. Mycoplasmas
 - 8.10.3.2. Contagious Equine Metritis Procedure of Sample Collection for the Determination of Contagious Equine Metritis
 - 8.10.3.3. Equine Viral Arteritis
 - 8.10.3.4. Equine Rhinopneumonitis
 - 8.10.3.5. Leptospirosis.
 - 8.10.3.6. Brucellosis
 - 8.10.4. Parasitic Diseases of the Reproductive Tract
 - 8.10.4.1. Habronemiasis
 - 8.10.4.2. Durina

Module 9. Foal Medicine and Surgery

- 9.1. Neonatal Screening
 - 9.1.1. Normal Clinical Parameters in the Foal during the First Days of Life
 - 9.1.2. Onset of Organ Systems Functioning at Birth and During the First Months of Life
 - 9.1.2.1. 9.1.2.1 Gastric System
 - 9.1.2.2. Respiratory System
 - 9.1.2.3. Endocrine System
 - 9.1.2.4. Muscular and Neurological System
 - 9.1.2.5. 9.1.2.5 Ophthalmic System
- 9.2. Immature Foal Failure in the Passive Transfer of Immunity Isoerythrolysis Septicemia
 - 9.2.1. The Premature, Immature and Stunted Foal
 - 9.2.2. Cardiopulmonary Resuscitation
 - 9.2.3. Failure of Passive Transfer of Immunity
 - 9.2.4. Isoerythrolysis
 - 9.2.5. Neonatal Sepsis
- 9.3. Neonatal Respiratory, Cardiac, Neurological and Musculoskeletal Pathologies
 - 9.3.1. Neonatal Respiratory Pathologies
 - 9.3.1.1. Respiratory Bacterial Pathologies
 - 9.3.1.2. Viral Respiratory Pathologies
 - 9.3.1.3. Rib Fractures
 - 9.3.2. Neonatal Cardiac Pathologies
 - 9.3.2.1. Patent Ductus Arteriosus
 - 9.3.2.2. Foramen Ovale
 - 9.3.2.3. Tetralogy of Fallot
 - 9.3.3. Neonatal Neurological Pathologies
 - 9.3.3.1. Hypoxic Ischemic Encephalopathy
 - 9.3.3.2. Septic Encephalitis, Meningitis and Metabolic Encephalopathies
 - 9.3.3.3. Congenital Neurological Pathologies
 - 9.3.4. Neonatal Musculoskeletal Pathologies
 - 9.3.4.1. Vitamin E and Selenium Deficiency
- 9.4. Neonatal Gastrointestinal, Genitourinary and Endocrine Pathologies
 - 9.4.1. Neonatal Gastrointestinal Pathologies
 - 9.4.1.1. Bacterial and Viral Diarrhea
 - 9.4.1.2. Meconium Impaction
 - 9.4.1.3. Congenital Gastrointestinal Pathologies
 - 9.4.1.4. Gastric and Duodenal Ulcers
 - 9.4.2. Neonatal Genitourinary Pathologies
 - 9.4.2.1. Omphalophlebitis and Omphaloarteritis
 - 9.4.2.2. Patent Urachus
 - 9.4.2.3. Bladder Rupture
 - 9.4.3. Neonatal Endocrine Pathologies
 - 9.4.3.1. Thyroid Alterations
 - 9.4.3.2. Hypoglycemia, Hyperglycemia and Lack of Maturation of the Endocrine System
- 9.5. Identification and Stabilization of the Patient with Ruptured Bladder or Persistent Urachus
 - 9.5.1. Omphalophlebitis, Omphaloarteritis and Patent Urachus
 - 9.5.2. Bladder Rupture
 - 9.5.3. Diagnostic Assessment and Stabilization Treatments
 - 9.5.4. Medical Treatment and Surgical Options
- 9.6. Diagnostic Imaging of the Chest and Abdominal Cavity of the Foal
 - 9.6.1. Diagnostic Imaging the Chest
 - 9.6.1.1. Technical Basis
 - 9.6.1.1.1. Radiology
 - 9.6.1.1.2. Ultrasound
 - 9.6.1.1.3. Computerized Tomography
 - 9.6.1.2. Thoracic Pathology
 - 9.6.2. Diagnostic Imaging of the Abdomen
 - 9.6.2.1. Technical Basis
 - 9.6.2.1.1. Radiology
 - 9.6.2.1.2. Ultrasound
 - 9.6.2.2. Abdominal Pathology

- 9.7. Treatment of Septic Arthritis Umbilical Herniorrhaphy
 - 9.7.1. Pathophysiology and Diagnosis of Synovial Infections in Foals
 - 9.7.2. Treatment of Septic Arthritis in the Foal
 - 9.7.3. Etiopathogenesis and Diagnosis of Umbilical Hernias
 - 9.7.4. Umbilical Herniorrhaphy: Surgical Techniques
- 9.8. Angular Deformities Treatment
 - 9.8.1. Etiopathogenesis.
 - 9.8.2. Diagnosis
 - 9.8.3. Conservative Treatment
 - 9.8.4. Surgical Management
- 9.9. Flexural Deformities Treatment
 - 9.9.1. Etiopathogenesis.
 - 9.9.2. Diagnosis
 - 9.9.3. Conservative Treatment
 - 9.9.4. Surgical Management
- 9.10. Diagnosis of Developmental Diseases in the Foal Treatment of Physitis, Epiphysitis and Hoof Management Guidelines for Healthy Foals
 - 9.10.1. Etiopathogenesis, Diagnosis and Treatment of different forms of Physitis, Epiphysitis, Osteochondrosis and Subchondral Cysts
 - 9.10.2. Evaluation of Poise in the Healthy Foal
 - 9.10.3. Hoof Trimming Guideline in the Healthy Foal

Module 10. Advanced Therapeutic Protocols and Toxicology

- 10.1. Sedation and Total Intravenous Anesthesia
 - 10.1.1. Total Intravenous Anesthesia
 - 10.1.1.1. General Considerations
 - 10.1.1.2. Patient and Procedure Preparation
 - 10.1.1.3. Pharmacology
 - 10.1.1.4. Total Intravenous Anesthesia in Short-Term Procedures
 - 10.1.1.5. Total Intravenous Anesthesia in Procedures of Medium Duration
 - 10.1.1.6. Total Intravenous Anesthesia in Long-Term Procedures
 - 10.1.2. Sedation for On-Station Procedures
 - 10.1.2.1. General Considerations
 - 10.1.2.2. Patient/Procedure Preparation

- 10.1.2.3. Technique: Bolus and Continuous Intravenous Infusions
- 10.1.2.4. Pharmacology
- 10.1.2.5. Drug Combinations
- 10.2. Pain Relief in Horses
 - 10.2.1. Detection of Pain in Hospitalized Patients and Multimodal Analgesia
 - 10.2.2. Types of NSAIDs
 - 10.2.3. Agonists and Opioids
 - 10.2.4. Local Anesthetics
 - 10.2.5. Other Drugs Used for Pain Control in Equines
 - 10.2.6. Complementary Therapies: Acupuncture, Shockwaves, Chiropractic, Laser
- 10.3. Correction of Water and Electrolyte Balance
 - 10.3.1. General Considerations on Fluid Therapy
 - 10.3.1.1. Objective and Key Concepts
 - 10.3.1.2. Organic Fluid Distribution
 - 10.3.1.3. Assessment of Patient Needs
 - 10.3.2. Types of Fluid
 - 10.3.2.1. Crystalloids
 - 10.3.2.2. Colloids
 - 10.3.2.3. Supplements
 - 10.3.3. Routes of Administration
 - 10.3.3.1. Intravenous
 - 10.3.3.2. Oral
 - 10.3.4. Practical Principles of Fluid Therapy Calculation
 - 10.3.5. Associated Complications
- 10.4. Specific Considerations of Acid-Base Equilibrium in Horses
 - 10.4.1. Specific Considerations of Acid-Base Equilibrium in Horses
 - 10.4.1.1. Assessment of the Patient's Acid-Base Status
 - 10.4.1.2. Role of Bicarbonate, Chloride and Anion Gap
 - 10.4.2. Metabolic Acidosis and Alkalosis
 - 10.4.3. Respiratory Acidosis and Alkalosis
 - 10.4.4. Compensatory Mechanisms
 - 10.4.5. Base Excess

- 10.5. Pharmacological Considerations in the Sport Horse
 - 10.5.1. Equestrian Sports Regulation
 - 10.5.2. Doping
 - 10.5.2.1. Definition
 - 10.5.2.2. Medication Control Objectives
 - 10.5.2.3. Sampling and Accredited Laboratories
 - 10.5.2.4. Classification of Substances
 - 10.5.3. Types of Doping
 - 10.5.4. Withdrawal Time
 - 10.5.4.1. Factors Affecting Withdrawal Time
 - 10.5.4.1.1. Detection Time
 - 10.5.4.1.2. Regulatory Policies
 - 10.5.4.1.3. Animal Disposal Rate
 - 10.5.4.2. Factors to Consider in Determining Withdrawal Time
 - 10.5.4.2.1. Dose Administered
 - 10.5.4.2.2. Formulation
 - 10.5.4.2.3. Route of Administration
 - 10.5.4.2.4. Individual Pharmacokinetics
 - 10.5.4.2.5. Sensitivity of Analytical Procedures
 - 10.5.4.2.6. Sample Behavior Matrix
 - 10.5.4.2.7. Environmental persistence of substances and environmental pollution
- 10.6. Intensive Care of the Neonatal Foal
 - 10.6.1. Types of Catheters, Infusion Sets, Nasogastric and Urinary Catheters for the Maintenance of Intensive Care in the Foal
 - 10.6.2. Types of Fluids, Colloids, Plasmotherapy and Hemotherapy
 - 10.6.3. Total and Partial Parenteral Feeding
 - 10.6.4. Antibiotic Therapy, Analgesia and Other Important Medications
 - 10.6.5. Cardiopulmonary Resuscitation
- 10.7. Adult Intensive Care
 - 10.7.1. General Intensive Care Considerations
 - 10.7.2. Intensive Care Procedures and Techniques
 - 10.7.2.1. Vascular Access: Maintenance and Care
 - 10.7.2.2. Arterial and Venous Pressure Monitoring
 - 10.7.3. Cardiovascular Support
 - 10.7.3.1. Shock
 - 10.7.3.2. Supportive Drugs: Inotropes and Vasopressors
 - 10.7.3.3. Support Strategies
 - 10.7.4. Respiratory Support
 - 10.7.4.1. Management of Respiratory Distress
 - 10.7.5. Critically Ill Patient Nutrition
 - 10.7.6. Neurological Patient Care
 - 10.7.6.1. Medical and Supportive Management of the Neurological Horse
 - 10.7.6.1.1. Trauma
 - 10.7.6.1.2. Encephalopathies and Myeloencephalopathies
 - 10.7.6.2. Specific Management of the Recumbent Horse
- 10.8. Toxicology I
 - 10.8.1. Digestive System Toxicology
 - 10.8.2. Liver Toxicology
 - 10.8.3. Toxicology Affecting the Central Nervous System
- 10.9. Toxicology II
 - 10.9.1. Toxicology Producing Clinical Signs Related to the Cardiovascular and Hemolymphatic Systems
 - 10.9.2. Toxicology Producing Clinical Signs related to the Skin, Musculoskeletal System and General Condition
 - 10.9.3. Toxicology Producing Clinical Signs Related to the Urinary System
 - 10.9.4. Toxicological Problems Causing Sudden Death
- 10.10. Euthanasia Procedures
 - 10.10.1. General Considerations
 - 10.10.1.1. Geriatric Horse
 - 10.10.2. Mechanisms of action for Hypothermia.
 - 10.10.3. Chemical Euthanasia Methods
 - 10.10.4. Physical Euthanasia Methods
 - 10.10.5. Euthanasia Protocol
 - 10.10.6. Confirmation of Death

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization”

At TECH, we use the Case Method

What should a professional do in a given situation? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a “case”, an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the actual conditions in a veterinarian’s professional practice.

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Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method.

The effectiveness of the method is justified by four fundamental achievements:

1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to assess real situations and knowledge application.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the program.



Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

Veterinarians will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology more than 65,000 veterinarians have been prepared with unprecedented success in all clinical specialties, regardless of the surgical load. Our teaching method is developed in a highly demanding environment, where the students have a high socio-economic profile and an average age of 43.5 years.

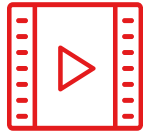
Relearning will allow you to learn with less effort and better performance, involving you more in your education, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then adapted in audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high-quality pieces in each and every one of the materials that are made available to the student.



Latest Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



Interactive Summaries

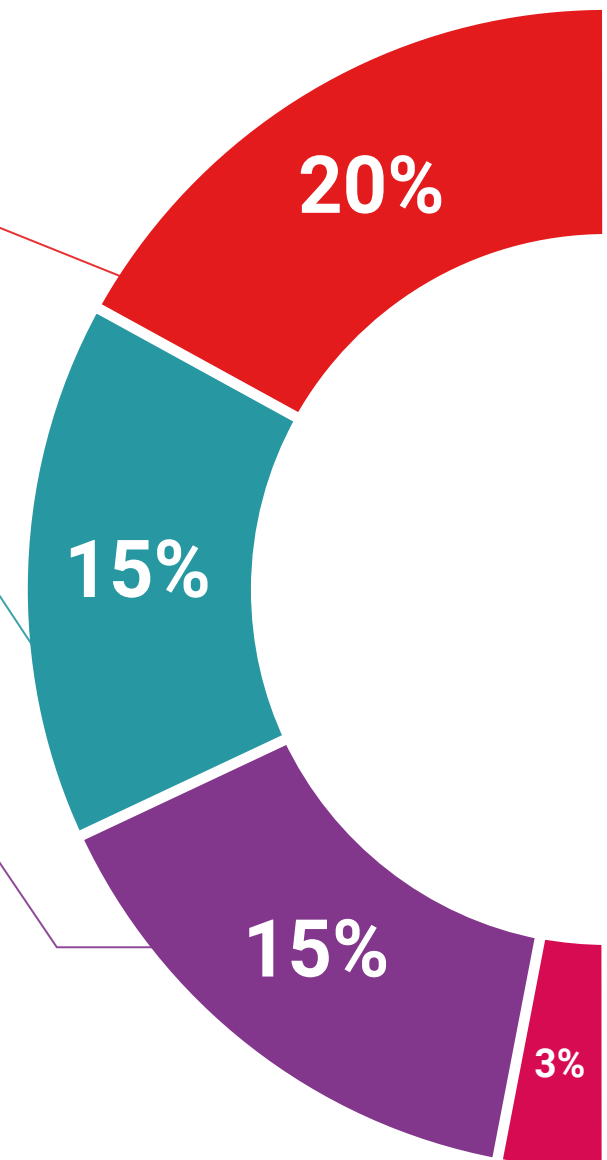
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

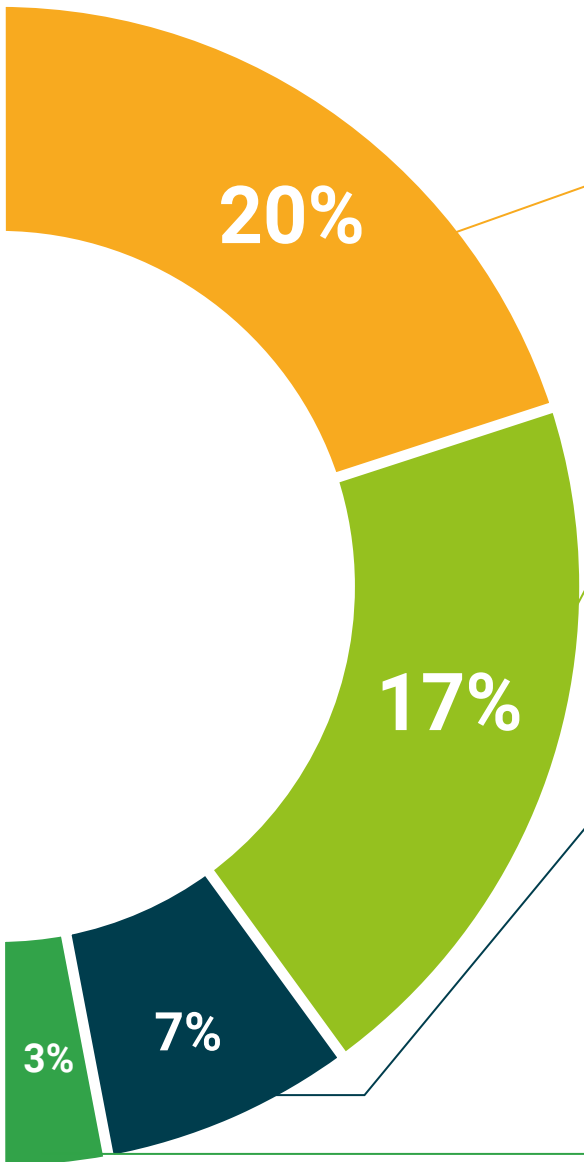
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Retesting

We periodically assess and re-assess students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



07 Certificate

The Professional Master's Degree in Equine Medicine and Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Technological University.



“

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”

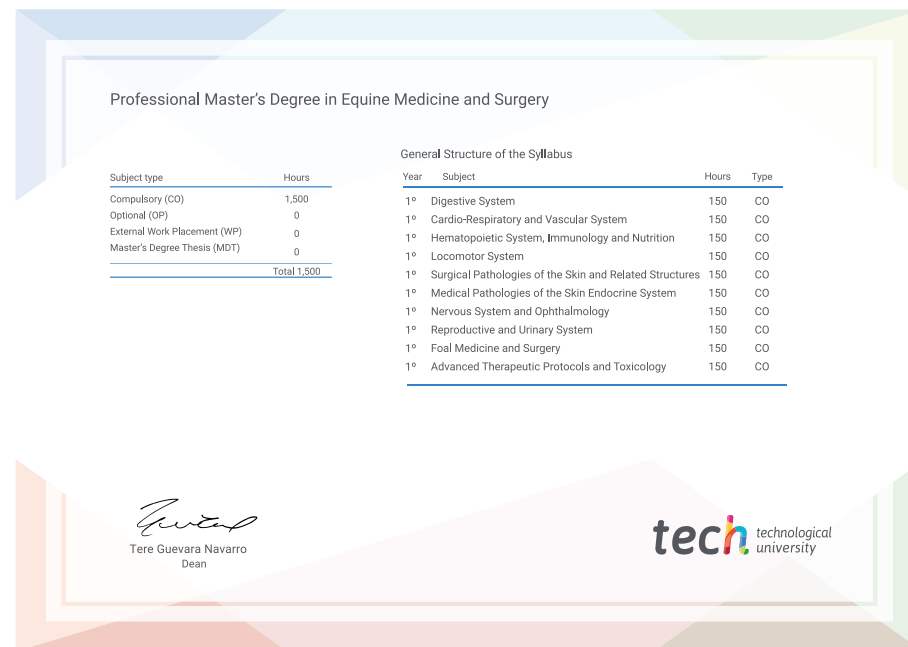
This **Professional Master's Degree in Equine Medicine and Surgery** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** diploma issued by **TECH Technological University** via tracked delivery.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by job exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Equine Medicine and Surgery**

Official N° of Hours: **1,500 hours.**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



Professional Master's Degree

Equine Medicine and Surgery

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Professional Master's Degree Equine Medicine and Surgery