Advanced Master's Degree
Equine Veterinary Medicine

tech technological university

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Advanced Master's Degree
Equine Veterinary Medicine

- Course Modality: **Online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Teaching Hours: **3,000 hours**

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

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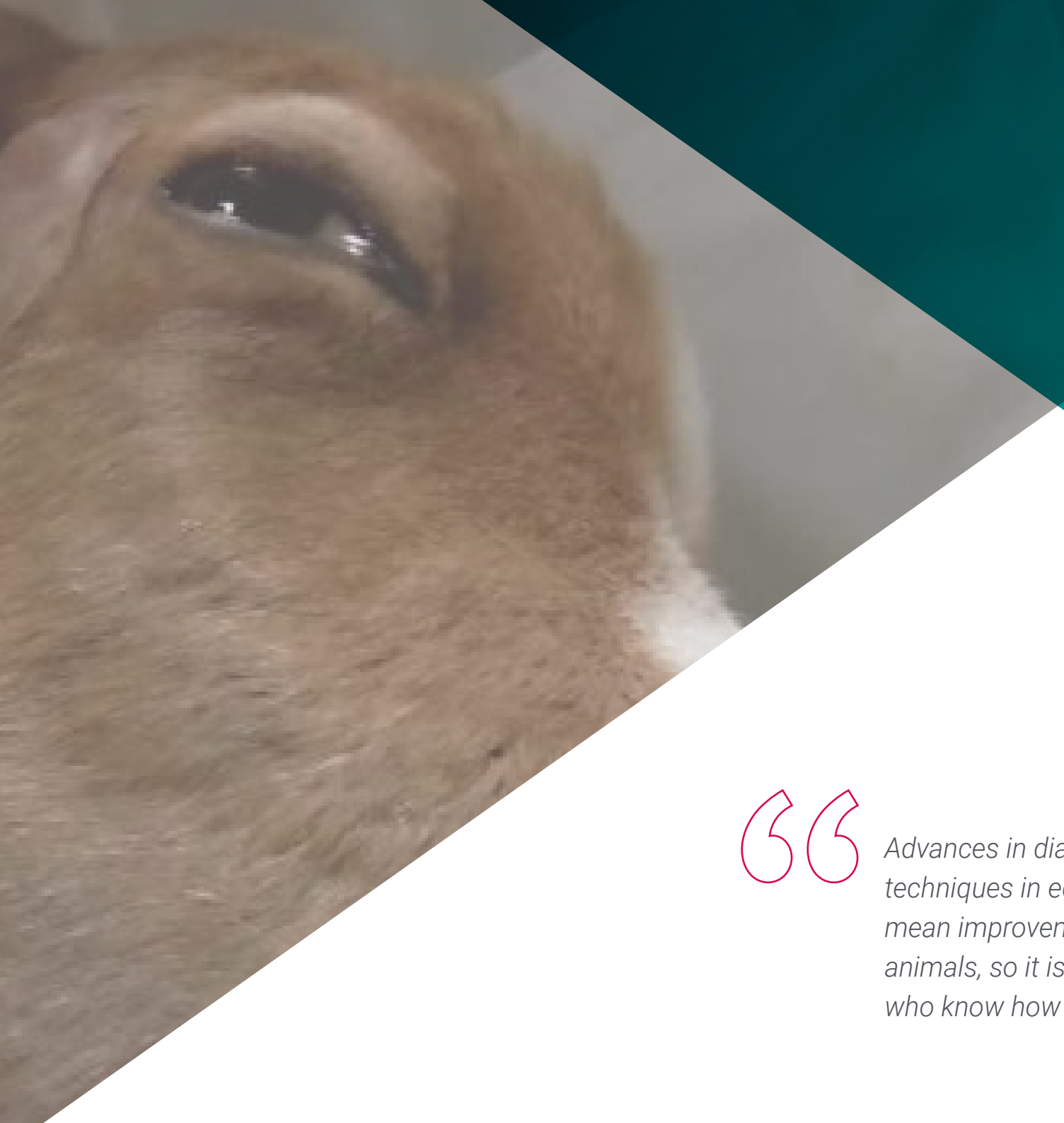
01

Introduction

Equine Veterinary Medicine covers numerous and complex specialties in continuous development that require constant updating of skills by the clinician. It is a highly competitive professional sector that quickly incorporates new scientific advances, so the veterinarian is faced with a labor market that requires a very high level of competence in all senses and a significant specialization in the diseases that affect these animals.



Advances in diagnostic and interventional techniques in equine veterinary medicine mean improvements in the health of these animals, so it is necessary to have specialists who know how to adapt to these changes"

Equine Veterinary Medicine puts into action a wide spectrum of interventions aimed at achieving the best possible prognosis and the best possible welfare indexes. Numerous techniques and tools are frequently developed in this field to improve the work of professionals and the results of treatments, for which it is necessary to have highly qualified and prepared veterinarians who are willing to constantly update their knowledge to maintain the highest levels of quality in their work.

In this Advanced Master's Degree, you will be able to go intensively through all aspects of equine hospitalization and learn how to intervene in the pathologies that require it. In this way, the foundations are laid for specialization in equine hospital medicine and the treatment of different pathologies, such as digestive, neurological, ophthalmological or cardiorespiratory, among others.

It must be taken into account that the work of the equine veterinarian, on many occasions, is an itinerant profession, with a high level of demand in terms of hours and volume of visits to be made. Therefore, it is necessary for these professionals to have training such as these, which are 100% online and with which you can freely organize the times in which to study. Moreover, the fact that it is an online program does not detract from the quality of the educational program or the teaching methods of the lessons, since this Advanced Master's Degree has a teaching team of the highest level, which has reflected in this program, through theoretical and practical lessons, all its knowledge in the field.

As such, throughout the course of this program, students will learn all the current approaches to the different challenges posed by their profession. A high-level step that will become a process of improvement, not only on a professional level, but also on a personal level. In addition, TECH assumes a social commitment: to help the specialization of highly qualified professionals and develop their personal, social and occupational skills during their development.

Not only does it lead through the theoretical knowledge offered, but it also shows another way of studying and learning, more organic, simple and efficient. We will work to keep you motivated and to create a passion for learning.
We will push you to think and develop critical thinking.

This **Advanced Master's Degree in Equine Veterinary Medicine** 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 remote training
- Continuous updating and retraining systems
- Self-organized learning which makes the course completely compatible with other commitments
- 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

A high-level scientific program, supported by an advanced technological development and the teaching experience of the best professionals"

An educational program created for professionals who aspire to excellence that will allow you to acquire new skills and strategies in a smooth and effective way".

Our teaching staff is made up of working professionals. In this way TECH ensures that it delivers the educational update objective it is aiming for. A multidisciplinary team of trained and experienced professionals in different environments, who will develop the theoretical knowledge efficiently, but, above all, will put at the service of the program the practical knowledge derived from their own experience.

This command of the subject is complemented by the effectiveness of the methodological design of this Grand Master. 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 comfortable and versatile multimedia tools that will give you the operability you need in your specialization.

The design of this program is based on Problem-Based Learning, an approach that conceives 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 facing the scenario you are currently learning. A concept that will make it possible to integrate and fix learning in a realistic and permanent way.

With a methodological design based on proven teaching techniques, this Advanced Master's Degree in Equine Veterinary Medicine will take you through different teaching approaches to allow you to learn in a dynamic and effective way.

TECH gives you the opportunity to take a deep and complete immersion in Equine Veterinary Medicine strategies and approaches.

02

Objectives

The objective is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping professionals reach a much higher level of expertise and control. A goal that you can take for granted, with a high-intensity and high-precision specialization.

If your goal is to improve in your profession, to acquire a qualification that will enable you to compete among the best, look no further: welcome to TECH"

General Objectives

- Organize and design an equine hospital for optimal clinical and logistical performance for patients of varying severity.
- Offer specialized knowledge on hospital pharmacology in detail, so that an equine hospital is properly equipped with the necessary drugs for medical therapies for common pathologies, ICU therapies, resuscitation therapies and supportive care therapies.
- Establish fluid therapy, plasmotherapy and nutrition in hospitalized patients
- Delve into the most common pathologies of the hematopoietic and immune systems that may arrive or develop in a hospital during the course of other primary pathologies.
- Examine analytical interpretation: blood count, serum biochemistry and blood gas analysis.
- Expand knowledge of diseases affecting the digestive tract from the stomach to the rectum, assessing the stage of the different presentations and delving into critical care needs.
- Specialize the clinician in the correct assessment of the animal's systemic status and the consequent severity of the pathology, as well as the tools available for its monitoring.
- Establish digestive and hepatic diagnostic protocols with the objective of generating optimized treatments and prognoses.
- Develop a global understanding of endotoxemia in the horse and therapeutic measures aimed at its clinical management.
- Expand knowledge of the pathophysiological mechanism of laminitis due to endotoxemia as well as carbohydrate overload.
- Generate specialized knowledge on enteral and parenteral nutrition available to the hospitalized patient.
- Establish an appropriate methodology for screening the horse with heart disease.
- Identify all clinical signs associated with cardiovascular disease and determine clinical relevance.
- Determine the specific clinical approach to the horse with a cardiovascular disorder.
- Generate specialized knowledge on the management of critical horses complicated by cardiovascular problems.
- Interpret the clinical signs shown by patients with respiratory pathology, learning to classify them according to their clinical relevance.
- Establish a protocol of specific diagnostic tests and deepen their interpretation to establish the exact location and severity of the pathologies.
- Analyze the advantages of diagnostic methods that can be performed in hospitals as opposed to field clinics.
- Present the latest advances in the treatment of both upper and lower airway pathologies.
- Compile guidelines for the management, monitoring and treatment of the hospitalized respiratory patient.
- Review the detailed neurological examination procedure to ensure anatomical localization of the lesion.
- Compile diagnostic methods specific to the neurological system.
- Fundamentals of assessment, monitoring and treatment of the hospitalized neurological patient.
- Describe the diagnosis and treatment of the main neurological pathologies most frequently seen in hospitalized horses.
- Describe the diagnosis and treatment of the main muscular pathologies that can be observed in hospitalized horses.
- Analyze and understand by organ systems all the differences between neonates and adult equids.
- Establish a methodology to identify all clinical signs associated with neonatal pathology

and existing diagnostic methods.

- Learn to treat and assess the severity of pathologies in the neonate, to establish the precise monitoring methods in the hospital, as well as the prognosis.
- Be familiar with all methods of stabilization and supportive therapy during established hospital treatments.
- Establish an appropriate methodology to assess genitourinary problems in equids.
- Identify all clinical signs associated with the urinary system, their severity and chronicity.
- Review all diagnostic methods used in the assessment of the genitourinary system.
- Generate specialized knowledge on how to treat and evaluate the severity of urinary system pathologies, combining clinical signs with the interpretation of specific diagnostic tests
- Get to know the most frequent endocrine disorders in the equine patient.
- Differentiate the existing diagnostic methods for the most common endocrine pathologies, addressing the fact that some of these methods are dynamic and require hospitalization for serial sampling
- 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.
- Determine the main causes of intoxication and their involvement in different systems.
- Establish an appropriate approach and methodology for ophthalmologic assessment.
- Identify the clinical signs of ocular pathologies.
- Provide an in-depth knowledge of parasitosis in equids.

- Differentiate a clinical approach in the geriatric patient and in donkeys.
- Generate specialized knowledge for the correct diagnosis, treatment and management of infectious and/or notifiable diseases.
- Develop specialized knowledge of the hospital care of the different surgical patients studied.
- Determine the surgical techniques applied and diagnostic imaging techniques for the treatment of inpatient emergencies.
- Establish medical and post-surgical treatment protocols for each hospitalized equine patient according to pathology.
- Identify complications during the evolution of the equine patient and substantiate appropriate therapies for them.
- 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.
- Train the clinician in the approach to the patient with advanced alterations in the hemogram, biochemistry or hematopoiesis disorders.
- Develop an innovative and up-to-date methodology for patients with immune-mediated disorders.
- Develop and expand knowledge 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 horse diets, as well as energy requirements according to sporting discipline, productive objective or domestic animal maintenance
- Assess the cachectic horse: history and nutritional status, possible differentials, knowledge of metabolic consequences and requirements for subsequent dietary adjustment.
- Generate specialized knowledge on new developments in antibiotic therapy and antibiotic resistance.
- 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 the horse.
- 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.
- Take a deeper look 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 for each pathology and determine the prognosis and the most appropriate 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 alterations in consciousness and behavior, and establish protocols for action.
- 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.
- 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 foals 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.
- Deepen in the fundamental medicinal and pharmacological considerations for high level sport horses.
- Delve into equine toxicology.
- Develop the application of humane euthanasia protocols.

Specific Objectives

Module 1. Introduction to Hospital Medicine

- Examine in detail the facilities needed in an equine hospital
- Define the protocols for action and disinfection in an equine hospital
- Establish the guidelines to be followed with infectious animals, as well as the different protocols depending on the degree of infection
- Develop specific pharmacological guidelines and protocols according to the most frequent pathologies in equines
- Establish multimodal analgesia protocols in equids and pain monitoring in the equine patient
- Classify patients according to their severity when they are hospitalized
- Analyze appropriate maintenance therapies in most hospitalized patients, with emphasis on fluid therapy and water and electrolyte imbalances that may arise during the course of these therapies
- Maintain the correct metabolic status of patients, through nutritional control according to their circumstances
- Develop the pathologies of the hematopoietic and immune systems by developing the existing diagnostic methods and appropriate therapies in each case
- Correct interpretation of blood analysis, serum biochemistry and blood gases in all types of pathologies and the most common alterations in each of them

Module 2. Digestive and Hepatic Problems in the Hospitalized Patient

- Advanced development of general examination procedures, as well as diagnostic tests such as abdominocentesis, glucose absorption test, endoscopy, interpretation of analytical tests and diagnostic imaging
- Expand knowledge of critical care patient monitoring
- Generate knowledge on the most advanced lines of treatment for the hospitalized patient with digestive pathology
- Examine in depth the infectious and parasitic diseases affecting the digestive tract, as well as their various treatments
- Specialize the clinician in the prevention of secondary complications derived from digestive pathology
- Identify clinical signs associated with endotoxemia and endotoxic shock in horses
- Establish the neoplastic diseases affecting the digestive tract, as well as their various treatments
- Develop liver and biliary tract diseases in the horse and their possible treatments
- Determine specific action protocols for patients with laminitis due to endotoxemia or carbohydrate overloading
- Establish protocols for enteral and parenteral feeding in the hospitalized patient

Module 3. Digestive System

- Define correct methods of anamnesis, evaluation and assessment of the patient with digestive pathology.
- Develop and advance in the most frequent procedures to solve oral cavity pathologies.
- 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 4. Cardiovascular Diseases in Hospitalized Patients

- Specify the information needed in the clinical examination of the hospitalized horse with heart disease.
- Propose a diagnostic methodology for the patient with murmur or arrhythmias.
- Delve into advanced critical patient monitoring techniques.
- Identify cardiac alterations requiring emergency treatment.
- Detail the mechanisms of action of cardiovascular drugs.
- Establish pulmonary resuscitation protocol.
- Examine in depth all the most frequent pathologies in horses.
- Identify cardiac complications in hospitalized horses in order to establish early treatment.
- Establish the clinical management of the critically ill patient due to heart failure or shock.
- Provide adequate management of vascular disorders.

Module 5. Respiratory Pathologies in Hospitalized Patients

- Specify the necessary and relevant information in the clinical examination of the respiratory patient.
- Develop in depth the complementary diagnostic methods available in a hospital and their clinical relevance.
- Perform an up-to-date review of upper airway pathologies, their diagnosis and treatment.
- Develop the usefulness of bronchoalveolar lavage, tracheal aspirate and stress test in the evaluation of lower airway inflammation and its clinical implications.
- Present an up-to-date review of infectious diseases of the respiratory system and their treatment.
- Provide guidelines for monitoring and treatment of the respiratory patient in the hospital.
- Detail the procedures to be performed in the assessment of a horse's sporting performance, associating them to their clinical relevance.

Module 6. Cardiorespiratory and Vascular System

- Specify the necessary information in the clinical examination of the horse with respiratory or cardiac pathology.
- Accurately recognize the normal respiratory and cardiac sounds found 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 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 7. Neurological and Muscular Problems in the Hospitalized Patient

- Describe all the components of the diagnostic process in neurological diseases, from the pertinent anamnesis and lesion localization to advanced imaging techniques
- Analyze available diagnostic techniques and discuss their uses and limitations.
- Update on new trends in the treatment of the neurological horse, from common strategies to the management of the recumbent horse.
- Detail the characteristics and prevalence of the different neurological diseases and their differential diagnoses.
- Describe all components of the diagnostic process, from physical examination to advanced pathological diagnostic techniques.
- Specify exercise-related muscle diseases and establish appropriate medical treatments and management therapies.
- Detail non-exercise related muscle diseases and establish appropriate medical treatments and management therapies

Module 8. 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 for the correct examination of the animal and a correct interpretation of the data obtained.
- Develop optimized work schemes and diagnostic protocols.
- Advanced diagnosis of joint, tendon, bone and muscle pathologies in horses.
- Master in depth the neural anesthetic blocks, their technique, main advantages and possible disadvantages. Develop proximal blocks 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.
- 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 the patient with corneal ulcers and/or infectious keratitis.
- Propose working methodologies for patients 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 a working methodology for patients with glaucoma and for horses with ocular neoplasia.

Module 9. Pathologies of the Genitourinary System in the Hospitalized Patient, Treatment and Monitoring.

- Clinically assess the genitourinary system and the different parameters that can be monitored systemically and at the urinary level.
- Analyze the physiology and pathophysiology of the genitourinary system.
- Recognize the most common pathologies of the urinary system, both at functional, infectious and obstructive levels.
- Identify the exact location of pathologies with common clinical symptomatology, which in many cases require hospitalization for the performance of dynamic diagnostic tests.
- Establish how to treat and assess the severity of urinary system pathologies and the advantages that hospitalization offers to many of these patients for monitoring and avoiding the chronicity of the processes.
- Assess male and female reproductive systems and, respectively, the most common pathologies.
- Identify sexually transmitted diseases in males and females and their consequences, as well as possible treatments.
- Monitor the pregnant mare and the possible problems that may arise during postpartum, as well as the advantages of hospitalization to avoid them.

Module 10. 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.
- Develop the predisposing factors that may condition the appearance of this type of pathologies, as well as to increase knowledge on the relevance of prevention.
- Develop treatment alternatives available to the ambulatory veterinary clinician.
- Study testicular, adnexal gland and penile pathology in depth, as well as their respective treatments
- Improve the productive management of the subfertile stallion and mare.
- Identify and evaluate 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 during the pre- and post-partum 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 11. Endocrine System Disorders. Hospitalization of Horses with Dermatological Problems

- Recognize the main endocrine problems, as well as the static and dynamic diagnostic methods for each of them.
- Establish the appropriate medical stabilization therapies for endocrine problems and how to adjust them according to the evolution of the disease.
- Determine adequate nutrition in patients with endocrine problems, as well as obesity control in animals with metabolic syndrome.
- Identify the main pathologies affecting the skin in equids.
- Examine the etiology, clinical and laboratory signs, and establish the prognosis of the main dermatological diseases in horses.
- Determine the symptoms of bacterial and viral skin diseases and propose therapeutic options.
- Identify the symptoms of skin diseases of fungal and parasitic origin and propose therapeutic options.
- Determine the symptoms of allergic and immune-mediated skin diseases and propose therapeutic options.
- Identify symptoms of other skin diseases such as vasculitis and nutritional disorders that are reflected in the skin.

Module 12. Surgical Pathologies of the Skin and Related Structures

- Specify the different types of wounds that can occur in the equine clinic. Identify and differentiate between acute and chronic pathologies, assess the degree of contamination and/or infection, if any, and recognize damaged adjoining 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, suture patterns 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 immobilization. Select the appropriate dressing or bandage for 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.
- Perform correct diagnosis and treatment of synovial and bone infections, and carry out 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 13. 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.
- 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 14. 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

- Deepen in 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 into the knowledge of antibiotic treatment alternatives, as well as the development of antibiotic resistance, with the aim of training the clinician in decision-making in situations where there is an important restriction of antibiotic use, either by the category of the patient or by the emergence of resistance.
- Update on prebiotics, probiotics, as well as the use of medicinal plants and their relevance as important tools in preventive medicine, as well as in the treatment of specific pathologies

Module 15. Medical Pathologies and Hospitalization in Foals

- To learn about neonatal care and stabilization, as well as minimum supportive care.
- Get to know all the differences between adult and new-born equids in the gastric, respiratory, endocrine, muscular, neurological and ophthalmic systems.
- Differentiate between premature, dysmature and stunted foals and what to do in each case, as well as how and when to perform cardiopulmonary resuscitation.
- Delve into the pathologies that have to do with the immune system such as failure of immuglobulin transfer, as well as understand the neonatal septicemia state and know how to treat it in a hospital.
- Gain knowledge about the neurological pathologies in neonates, differentiate them and treat them in the hospital, in order to be able to establish a prognosis during monitoring.
- Get to know the most important respiratory pathologies in neonates, the most commonly used diagnostic methods and the precise treatments in the hospital.
- Identify the main gastrointestinal and hepatic pathologies in neonates, how to establish the main differential diagnoses, as well as their treatment and monitoring in the hospital.
- Assess the different musculoskeletal pathologies that could affect the neonate, both congenital and acquired, and the possible treatments.
- Identify urinary and endocrine pathologies, their treatment and monitoring in the hospital.
- Learn how to establish the necessary support therapy in the neonate in terms of fluid therapy, feeding, antibiotherapy and analgesia during hospitalization.

Module 16. Intoxications. Ophthalmic Pathologies. Parasitosis in Equids. Donkey Medicine. Hospitalization and Medicine in Geriatric Patients

- Analyze the origin of intoxications and their involvement in the gastrointestinal, nervous, cardiovascular, lymphatic, hepatic and urinary systems.
- Recognize the clinical signs of intoxications related to body condition, skeletal system and epithelium.
- Establish a work and assessment methodology for patients with ophthalmic pathologies.
- Examine the methodology for implementing treatment systems and their management in hospitals

- Further study in ophthalmologic assessment, identification of ocular pathologies and their treatment and hospital management.
- Determine the parasites involved in respiratory and gastrointestinal pathologies.
- Establish the different treatments for equine parasites.
- Examine endocrine pathologies and their particularities in the treatment of donkeys.
- Establish an appropriate approach to the geriatric patient.
- Examine the most frequent notifiable diseases and their diagnosis, as well as the management and control of infectious diseases.

Module 17. 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 cardiorespiratory symptomatology, being able to issue prognoses that determine their viability.
- Develop field stabilization protocols for patients with bladder rupture or patent 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 18. 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
- Train 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 case 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 case of last necessity.

Module 19. Hospital Care of the Surgical Patient and Emergency Hospital Procedures

- Select, with up-to-date scientific criteria, the best treatments for wounds that heal by second intention, monitoring their evolution and considering the most serious complications of the healing process in order to elaborate adequate treatment plans.
- Demonstrate extensive use of new therapies such as laser or ozone in the wound healing process.
- Specialize in the technique of venography and demonstrate its mastery both for the diagnosis of hoof pathologies and for monitoring the evolution of laminitis.
- Demonstrate a thorough knowledge of techniques and medications for the management of chronic pain in laminitis and other pathologies.
- Determine when to use synovial needle cleansing and when to use arthroscopy, using up-to-date knowledge of synovial fluid monitoring and imaging methods.
- Develop optimal rehabilitation plans for angular deformities or flexural deformities.
- Demonstrate a biomechanical knowledge of the shoeing techniques used in the pathologies studied in this module.
- Determine how and when to perform an emergency tracheostomy, and how to perform aftercare.
- Examine how to adapt abdominal dressings and girdles to the status of the post-surgical incision for acute abdominal syndrome.
- Manage post-surgical incisions in closed and open castrations, proposing different rehabilitation plans according to the procedure.
- Manage the post-surgical incision of a phalloectomy and determine when to remove

the urethral catheter.

Quality specialized training for outstanding students. At TECH we have the perfect equation for high-level education"

03

Skills

Once all the contents have been studied and the objectives of the Advanced Master's Degree in Equine Veterinary Medicine have been achieved, the professional will have superior competence and performance in this area. A very complete approach, in a high-level Advanced Master's Degree, which makes the difference.

Achieving excellence in any profession requires effort and perseverance. But, above all, the support you will get from our professionals who will give you the boost you need with the necessary means and assistance. At TECH we offer you everything you need"

General Skills

- In-depth knowledge of the design and organization of an equine hospital.
- Have the specific knowledge necessary to intervene in the equine digestive area.
- Manage the horse with heart disease in all its approaches.
- Intervene in respiratory patients
- Address the care of neurological patients.
- Work with equine neonates
- Intervene in genitourinary problems in equines.
- Address endocrine disorders in equines.
- Work specifically with donkeys.
- Treat intoxications in equines.
- Work with less frequent pathologies that require hospitalization.
- Care for the geriatric patient.
- 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.

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 respiratory tract disease
- 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
- In-depth knowledge of the design and organization of an equine hospital.
- Have the specific knowledge necessary to intervene in the equine digestive area.
- Manage the horse with heart disease in all its approaches.
- Intervene in respiratory patients

- Address the care of neurological patients.
- Work with equine neonates
- Intervene in genitourinary problems in equines.
- Address endocrine disorders in equines.
- Work specifically with donkeys.
- Treat intoxications in equines.
- Work with less frequent pathologies that require hospitalization.
- Care for the geriatric patient.
- Move efficiently in equine hospital facilities
- Manage the protocols of action of an equine hospital
- Perform specific guidelines with infectious animals.
- Handle pharmacology in equine hospitalization.
- Choose between different maintenance therapies
- Execute advanced scanning techniques
- Monitor the critically ill patient
- Recognize diseases of the digestive system
- Guide forms of intervention in diseases of the digestive tract
- Examine the horse with heart disease and determine its state of health.
- Use advanced techniques for monitoring the critical patient
- Apply cardiovascular drugs
- Develop cardiopulmonary resuscitation
- Apply early treatment
- Intervene in vascular alterations
- Perform a thorough and complete examination of the respiratory patient.
- Use the most advanced diagnostic methods in respiratory conditions.
- Assess a horse's sporting performance
- Diagnose neurological diseases
- Choose advanced and appropriate diagnostic techniques in each case.
- Recognize exercise-related muscle diseases.
- Stabilize a neonatal foal
- Establish different approaches for premature, dysmature and stunted foals.
- Treat neonatal sepsis in the hospital
- Treat different pathologies in neonates.
- Prescribe supportive measures in neonates
- Diagnose the most common genitourinary pathologies.
- Distinguish urinary pathologies that have similar symptoms.
- Assess and treat genitourinary pathologies.
- Detect and treat reproductive problems in horses and mares.
- Recognize sexually transmitted diseases and prescribe appropriate treatments
- Monitor the pregnant mare
- Diagnose equine endocrine problems
- Stabilize patients with endocrine problems
- Guidelines for proper nutrition in cases of endocrine problems
- Identify skin diseases in equines
- Effective treatment of skin diseases in equines
- Distinguish viral and bacterial skin diseases

- Recognize skin conditions of allergic origin
- Recognize other conditions with skin symptoms
- Diagnose intoxications in equines
- Prescribe therapeutic intervention in cases of intoxication.
- Approach to ophthalmic pathologies in equines
- Identify parasites in respiratory and gastrointestinal diseases.
- Treatment guidelines for parasitic diseases
- Diagnose and address endocrine pathologies in donkeys in a specific way.
- Perform an adequate treatment and approach in case of geriatric patients.
- Recognize notifiable diseases and the protocol to follow.
- Treat wounds of second intention
- Manage the use of lasers and ozone in wound healing.
- Use of venography in the diagnosis of hoof pathologies and laminitis.
- Prescribe pain medication in cases of laminitis and other pathologies.
- Perform synovial needle lavage
- Perform rehabilitation in angular or flexural deformities.
- Know how to carry out a fitting in certain pathologies.
- Perform emergency tracheotomy and aftercare in appropriate cases.
- Perform bandages in acute abdominal syndromes.
- Care of post-surgical incisions in closed and open castrations
- Care of the phallectomy incision and proper urethral catheter removal
- Be highly competent in the diagnosis of diseases related to the hematopoietic 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

- 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 equine acular conditions
- 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
- 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
- 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

The objective is very simple: to offer you a quality program, with the best teaching system of the moment, so that you can achieve excellence in your profession"

04

Course Management

For our Advanced Master's Degree to be of the highest quality, TECH is proud to work with a teaching staff of the highest level, chosen for their proven track record in the field of education. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.

Our teachers will put their experience and teaching skills at your disposal to offer you a stimulating and creative education process"

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

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

Management

Dr. Aguirre Pascasio, Carla

- PhD in Veterinary Medicine from the University of Murcia. After obtaining the Diploma 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
- Associate, Manager and Executive Director of the Veterinary Center, Animalicos Veterinary Medicine and Surgery in Murcia, Spain
- Equine clinical veterinarian, in charge of the Equine Internal Medicine Service at the Clinical Veterinary Hospital of the University of Murcia, Spain
- Managing associate and clinical field veterinarian at Ekisur Equipo Veterinario
- Fellowship at Casal do Rio Equine Hospital
- Senior graduate, for TRAGSA for animal and farm inspection.

Ms. 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 U.CM. Veterinary Clinical Hospital
- Mobile equine clinic veterinarian hired by self-employed veterinarians
- Freelance equine ambulatory clinic veterinarian in Madrid
- Training stays in several hospitals in Kentucky (U.S) in the area of Equine Internal Medicine
- Associate Professor of the Faculty of Veterinary Medicine of the Alfonso X El Sabio University.

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 tribunal of different 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 area 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. Barba Recreo, Martha

- PhD in Biomedical Sciences, Auburn University, Alabama, USA
- Degree in Veterinary from the University of Zaragoza
- Diploma 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. 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)

Dr. Benito Bernáldez, Irene

- Degree in Veterinary Medicine. Extremadura University (UEX), Cáceres Veterinary School
- 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 La Glorieta Academy (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 training and refresher courses and seminars given by Spanish universities.

Dr. 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 Marcatili
- 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 Clinic (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 of the 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
- At 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
- Professor in Expert in Bases of Physiotherapy and Animal Rehabilitation. UCM.
- Co-director and Professor of the Master's Degree "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

- Degree in Veterinary Medicine from the University of Extremadura.
- PhD from University of Alfonso X el Sabio
- 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 training of professionals in the handling of racehorses.
- Professor in postgraduate courses in Veterinary Rehabilitation at the Equine Clinic. I.A.C.E.S., 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 Sanromán, Javier

- PhD in Specialist Veterinary Medicine in Large Animal Organisms
- Degree in Veterinary Medicine (Specializing in Medicine and Health)
- Degree in Veterinary Medicine Organism: Faculty of Veterinary Sciences. U.C.M.
- Doctorate Recognition of research proficiency. Surgery and Reproduction Program. Department of Animal Pathology II. Faculty of Veterinary Medicine, Complutense University of Madrid.

- Diplome from the 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, University Complutense of 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 at Murcia University.

Dr. Martín Cuervo, María

- Professor of the Master's Degree in Equine Therapy at Extremadura University.
- 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

- PhD in Specialist Veterinary Medicine in Large Animals
- 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 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 (U.S).
- 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 Equine Clinical Master's Degrees 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 practice and research, currently as a contract veterinarian in the large animal area of the Complutense Clinical Veterinary Hospital, Complutense University Madrid.
- Head of Equine Internal Medicine and member of the Anesthesia Service at the Complutense Veterinary Clinic Hospital of the Complutense University of Madrid.

Dr. Villalba Orero, María

- Scientific Advisor on 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 area of equine cardiology and anesthesia, as well as in the area of cardiovascular diseases in humans

Dr. Rodríguez Vizcaíno, María Jesús

- Positions: Degree in Veterinary Medicine from the University of Murcia.
- Veterinarian at the Equine Medicine and Surgery Service of the Veterinary Clinic, Foundation of the University of Murcia, Spain
- Associate Professor of the Department of Animal Medicine and Surgery of the University of Murcia and is accredited by ANECA for the position of Assistant Professor Doctor
- Certificate awarded by the Royal College of Veterinary Surgeons (RCVS)
- Expert in Equine Surgery-Orthopedics (Cert ES-Orth)
- Diploma in the American College of Veterinary Specialists in Sports Medicine

Dr. Criado, Raquel

- Equine veterinary specialist

- Sports Medicine Service in the Alfonso X El Sabio University Clinical Veterinary Hospital
- Associate Professor of the Faculty of Veterinary Medicine of the Alfonso X El Sabio University.
- Graduate in Veterinary Medicine from the CEU Cardenal-Herrera University of Valencia
- Residency in Sports Medicine and Equine Surgery at the Hospital Clínico Veterinario de la UAX
- Associate Professor of the Faculty of Veterinary Medicine of the Alfonso X El Sabio University
- Scientific publications in the field of Equine Medicine

Dr. Díez de Castro, Elisa

- Veterinary specialist in equine endocrinology
- Degree in Veterinary Medicine, University of Córdoba
- Post-graduate degree in equine specialization (T1-pro equine) at the Veterinary Faculty of Maisons Alfort (Paris).
- Veterinarian at the Equine Internal Medicine Service of the Clinical Veterinary Hospital of the University of Córdoba. P
- Professional Master's Degree in Animal Medicine, Improvement and Health.
- Professor of the Master-Internship in Companion Animal Medicine and Surgery at the University of Cáceres and in the Master's Degree in Equine Sports Medicine at the University of Córdoba since its creation.
- Associate Professor, Department of Animal Medicine and Surgery, University of Cordoba

Dr. Fuentes Romero, Beatriz

- Veterinarian hired by the Veterinary Clinical Hospital of the University of Extremadura.
- Degree in Veterinary Medicine from Alfonso X El Sabio University
- Veterinarian in the Department of Large Animals at the Veterinary Hospital of the Alfonso X el Sabio University.
- Master's degree in Equine Internal Medicine and residency of 3 years at the same hospital
- Freelance veterinary outpatient field clinic (24h emergency, internal medicine, anesthesia and reproduction)
- Professor of the Master-Internship, Hospital Clínico Veterinario de la Universidad de Extremadura.

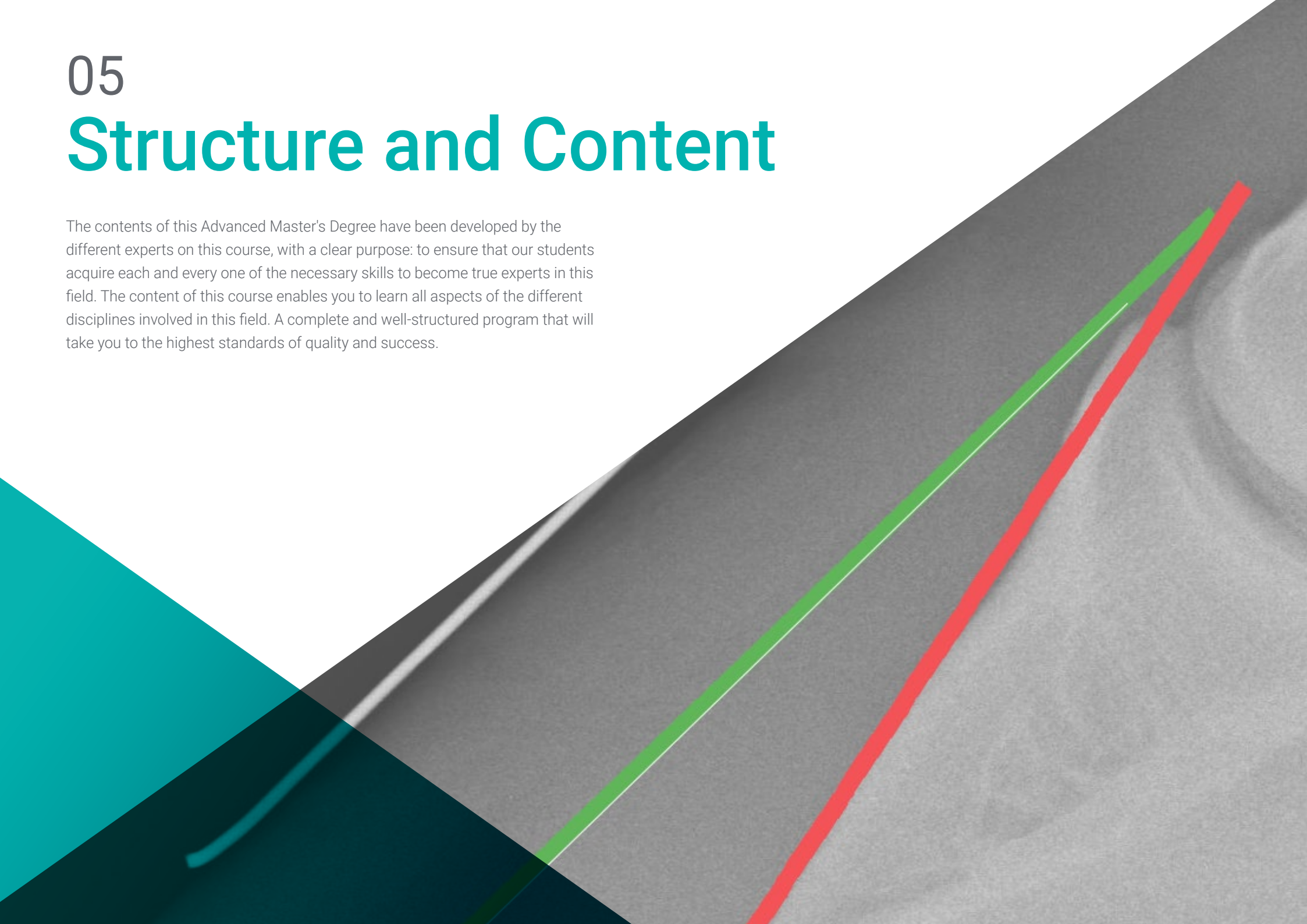
Ms. Martin Giménez, Tamara

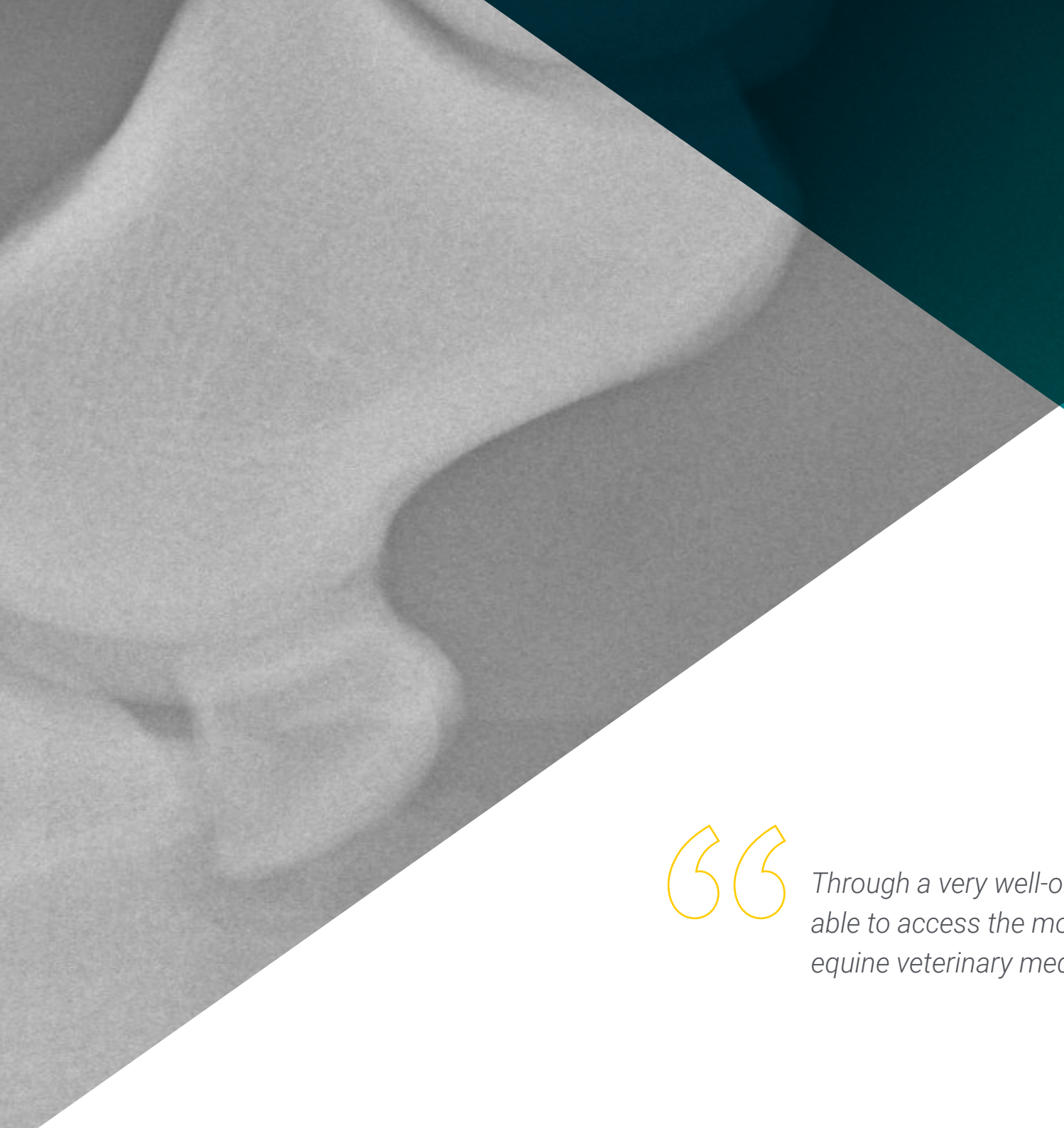
- Doctor of Veterinary Medicine and specialist in equine surgery
- Equine Surgery and Sports Medicine and Rehabilitation Service CEU Clinical Veterinary Hospital. Cardenal Herrera University, Valencia
- Tutor of the Master's Degree in Public Health University of Zaragoza
- Teacher of vocational training modules of equestrian technician and assistant Institut d'estudis aplicats S.L. Barcelona
- Postgraduate in Equine Clinic by the Autonomous University of Barcelona (UAB).

05

Structure and Content

The contents of this Advanced Master's Degree have been developed by the different experts on this course, 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. The content of this course enables you to learn all aspects of the different disciplines involved in this field. A complete and well-structured program that will take you to the highest standards of quality and success.





Through a very well-organized program, you will be able to access the most advanced knowledge in equine veterinary medicine".

Module 1. Introduction to Hospital Medicine

1.1. Organization of an Equine Hospital
- 1.1.1. Facilities
  - 1.1.1.1. Examination Rooms. Diagnostic Rooms. Operating Rooms. Induction and Recovery Boxes
  - 1.1.1.2. Types of Hospitalization Boxes According to Pathology
  - 1.1.1.3. Equipment Required per Box
- 1.1.2. Hospital Action and Disinfection Protocols

1.2. Pharmacological Principles in Hospital Clinic
- 1.2.1. Design of Management Guidelines
- 1.2.2. Monitoring of Plasma Concentrations
- 1.2.3. Dosage in Renal Failure

1.3. Rational Use of Antibiotics in Hospitalization
- 1.3.1. Prophylactic Use of Antibiotics
- 1.3.2. Therapeutics Use of Antibiotics
- 1.3.3. Frequent Bacterial Resistance in Hospitals and Protocols for Action

1.4. Treatment of Pain in Equids
- 1.4.1. Detection of Pain in Hospitalized Patients
- 1.4.2. Multimodal Analgesia
  - 1.4.2.1. NSAIDs
  - 1.4.2.2. Opioids
  - α2 Agonists Agents
  - 1.4.2.4. Local anesthetics
  - 1.4.2.5. Ketamine
  - 1.4.2.6. Others
- 1.4.3. Pain Management with Epidural and Perineural Catheters
- 1.4.4. Complementary Therapies
  - 1.4.4.1. Acupuncture
  - 1.4.4.2. Extracorporeal Shock Waves
  - 1.4.4.3. Chiropractic
  - 1.4.4.4. Laser Therapy

1.5. Clinical Approach to the Hospital Patient
- 1.5.1. Classification of the Patient According to the Severity of the Clinical Picture
- 1.5.2. Hospitalization Protocol According to the Severity of the Clinical Picture
- 1.5.3. Types of Intravenous Catheter and Uses in Hospitalization
- 1.5.4. Monitoring Techniques
  - 1.5.4.1. Clinical Review ICUs, TPRs
  - 1.5.4.2. Hematocrit-Proteins
  - 1.5.4.3. Urine Density

1.6. Fundamentals of Fluid Therapy in Hospitalization
- 1.6.1. Parenteral Fluid Therapy
  - 1.6.1.1. Types of Fluid
  - 1.6.1.2. Rate of Infusion
- 1.6.2. Enteral Rehydration
- 1.6.3. Synthetic and Natural Colloids
- 1.6.4. Hemotherapy.

1.7. Enteral and Parenteral Nutrition in Hospitalized Patients
- 1.7.1. Types of Feed
- 1.7.2. Types of Fodder
- 1.7.3. Dietary Supplements
- 1.7.4. Guidelines for Administration in Hospitalized Patients
- 1.7.5. Total and Partial Parenteral Nutrition

1.8. Hematopoietic System Pathologies
- 1.8.1. Hemolytic anemia
  - 1.8.1.1. Immune-Mediated Hemolytic Anemia
  - 1.8.1.2. Equine Infectious Anemia
  - 1.8.1.3. Piroplasmosis
  - 1.8.1.4. Other Causes
- 1.8.2. Hemorrhagic Anemia
  - 1.8.2.1. Hemoperitoneum and Hemothorax
  - 1.8.2.2. Gastrointestinal Losses
  - 1.8.2.3. Losses From Other Origin

1.8.3. Non-Regenerative Anemias
1.8.3.1. Iron Deficiency Anemia
1.8.3.2. Anemia due to Chronic Inflammation/Infection
1.8.3.3. Aplastic Anemia
1.8.4. Coagulation Alterations
1.8.4.1. Platelet Alterations
1.8.4.1.1. Thrombocytopenia.
1.8.4.1.2. Platelet Functional Alterations
1.8.4.2. Alterations of Secondary Hemostasis
1.8.4.2.1. Hereditary
1.8.4.2.2. Acquired
1.8.4.3. Thrombocytosis
1.8.4.4. Lymphoproliferative Disorders
1.8.4.5. Disseminated Intravascular Coagulation. Disseminated Intravascular Coagulation (DIC)
1.9. Blood Hemogram and Serum Biochemistry of the Hospitalized Patient. Gasometry
1.9.1. Red Blood Cells
1.9.2. White Blood Cells
1.9.3. Serum Biochemistry
1.9.4. Arterial Blood Gases
1.10. Pathologies of the Immune System in Hospitalized Patients
1.10.1. Hypersensitivity Types
1.10.2. Pathologies Associated with Hypersensitivity
1.10.2.1 Anaphylactic Reaction
1.10.2.2 Hemorrhagic Purpura
1.10.3. Autoimmunity
1.10.4. Most Important Immunodeficiencies in Equines
1.10.4.1. Diagnostic Tests
1.10.4.2. Primary Immunodeficiencies
1.10.4.3. Secondary Immunodeficiencies
1.10.5. Immunomodulators:
1.10.5.1. Immunostimulants
1.10.5.2. Immunosuppressants

Module 2. Digestive and Hepatic Problems in the Hospitalized Patient

2.1. Physical Examination and Diagnostic Methods in Gastrointestinal Pathologies
2.1.1. Examination of the Patient with Acute Abdominal Syndrome
2.1.2. Nasogastric Probing and Rectal Palpation
2.1.3. Blood Analysis, Abdominocentesis and Fecal Examination
2.1.4. Abdominal Ultrasound Protocol
2.1.5. Endoscopy
2.1.6. Absorption Test
2.1.7. Hospitalization of the Patient with Gastrointestinal Pathology and Monitoring
2.2. Pathophysiology of Gastrointestinal Inflammation
2.2.1. Onset of Inflammatory Reaction, Vascular Response, Cells Involved, Tissue Injury
2.2.2. Pathophysiology of Diarrhea
2.2.3. Pathophysiology of Paralytic Ileus
2.3. Oral Cavity, Esophagus and Stomach
2.3.1. Examination of the Oral Cavity and Esophagus
2.3.2. Dental Pathologies
2.3.3. Dysphagia
2.3.4. Esophageal Obstruction and Esophagitis
2.3.5. Gastroduodenal Ulcers
2.3.5.1. Pathophysiology
2.3.5.2. Clinical Signs and Diagnosis
2.3.5.3. Treatment
2.3.6. Stomach Impaction
2.3.7. Carbohydrate Overload Laminitis
2.4. Pathologies of the Small Intestine, Peritoneum and Mesentery
2.4.1. Inflammatory Diseases of the Small Intestine
2.4.1.1. Duodenitis and Proximal Jejunitis
2.4.1.2. Malabsorption and Maldigestion Syndrome
2.4.2. Obstructive Diseases of the Small Intestine
2.4.2.1. Impaction of Ileum

2.4.2.2. Strangulating Lesions of the Small Intestine
2.4.3. Peritonitis and Mesenteric Pathology
2.5. Cecum and Colon Pathologies
2.5.1. Inflammatory Diseases of the Colon and Cecum
2.5.1.1. Infectious: Salmonella, Potomac Fever, Clostridium, Strongyles, Cyathostomes, etc.
2.5.1.2. Toxic: Dysbiosis, NSAID's, Cantharidin, Arsenic
2.5.2. Treatment of Acute Diarrhea
2.5.3. Strangles and Vascular Diseases of the Colon
2.5.3.1. Colon Volvulus
2.5.3.2. Rectal Prolapse
2.5.3.3. Non-Strangulating Infarction by S. Vulgaris
2.5.4. Diseases with Simple Obstruction of the Colon
2.5.4.1. Cecum Impaction
2.5.4.2. Major Colon Impaction
2.5.4.3. Enteroliths, Fecaliths, Trichobezoars and Foreign Bodies
2.5.4.4. Impaction by Sand
2.5.4.5. Colon Displacements
2.5.4.6. Minor Colon Impaction
2.6. Neoplasms of the Gastrointestinal System
2.6.1. Intestinal Lymphoma
2.6.2. Squamous Cell Carcinoma
2.6.3. Leiomyoma
2.6.4. Hemangiosarcoma
2.6.5. Adenocarcinoma
2.6.6. Mesothelioma
2.7. Hepatic Pathologies in Hospitalized Patients
2.7.1. Specific Diagnostic Assessment of the Liver. Liver Damage and Hepatic Insufficiency. Analytics: Functionality Tests
2.7.2. Pathophysiology and Clinical Signs: Jaundice, Weight Loss, Photosensitivity, Signs of Gastrointestinal Disturbance, Hemorrhagic Diathesis, Hepatic Encephalopathy.
2.7.3. Ultrasound and Liver Biopsy
2.7.4. Specific Liver Diseases
2.7.4.1. Acute: Theiler's Disease, Hepaticivirus, Hepatitis caused by Clostridium,

Ascending Bacterial Hepatitis, Hyperlipemia and Hepatic Lipidosis.

2.7.4.2. Chronic: Chronic Active Hepatitis, Cholelithiasis, Abscesses and Hepatic Neoplasms.

2.7.5. Hospital Treatment of Liver Disease

2.8. Endotoxemia and its Consequences in the Hospitalized Patient

2.8.1. Causes and Pathophysiology of Endotoxemia

2.8.2. Clinical Signs and Diagnosis for Endotoxemia

2.8.3. Consequences: Laminitis and DIC

2.9. Hospitalization of the Patient with Gastrointestinal Problems. Specific Monitoring and Treatment

2.9.1. Monitoring: ICUs, Htc and Prot, Gastric Emptying, Leakage Control, Pain Monitoring

2.9.2. Rehydration and Maintenance of Oncotic Pressure

2.9.3. Treatment of Paralytic Ileus

2.9.4. Treatment for Endotoxemia

2.9.5. Treatment of DIC

2.9.6. Prevention and Treatment of Laminitis

2.9.6.1. Preventive Pharmacological Therapy

2.9.6.2. Cryotherapy

2.9.6.3. Palmar Support Therapy

2.10. Nutrition of the Patient with Digestive and Hepatic Pathology

2.10.1. Normal Enteral and Tube Nutrition.

2.10.2. Parenteral Nutrition

2.10.3. Nutritional Particularities of the Hepatic Patient

Module 3. Digestive System

3.1. Diagnostic Imaging of the Digestive System in the Field

3.1.1. Introduction to Diagnostic Imaging in the Field

3.1.2. Technical Basis

3.1.2.1. Radiology

3.1.2.2. Ultrasound

3.1.3. Oral Pathology

3.1.4. Esophageal Pathology

3.1.5. Abdominal Pathology

3.1.5.1. Digestive System

3.1.5.1.1. Stomach.

3.1.5.1.2. Small Intestine

3.1.5.1.3. Large Intestine

3.1.5.2. Peritoneal Cavity

3.2. Oral cavity Examination Exodontia

3.2.1. Exploration of the Head

3.2.2. Oral Cavity Examination

3.2.3. Regional Nerve Blocks for Surgery and Dental Extractions

3.2.3.1. Maxillary Nerve

3.2.3.2. Mandibular Nerve

3.2.3.3. Infraorbital Nerve

3.2.3.4. Mental Nerve

3.2.4. Exodontia Indications and Techniques

3.3. Malocclusions. Tumors. Maxillary and Mandibular Fractures Temporomandibular Joint Pathology

3.3.1. Malocclusions. Filing

3.3.1.1. Wear Alterations

3.3.2. Tumors. Classification

3.3.3. Maxillary and Mandibular Fractures Reparation

3.3.4. Temporomandibular Joint Pathology

3.3.4.1. Alterations and Clinical Signs

3.3.4.2. Examination and Diagnosis

3.3.4.3. Treatment and Prognosis

3.4. Treatment of Medical Colic in the Field

3.4.1. Management of the Patient with Colicky Pain

3.4.2. Pain Control in Colicky Patients

3.4.3. Fluid Therapy and Cardiovascular Support

3.4.4. Treatment for Endotoxemia

Module 4. Cardiovascular Diseases in Hospitalized Patients

4.1. Assessment of the Cardiovascular System

4.1.1. Anamnesis and Clinical Examination

4.1.2. Cardiac Auscultation

4.1.3. Cardiac Murmurs

4.1.3.1. Physiological Murmurs
4.1.3.2. Pathological Murmurs
4.1.4. Arterial and Venous System Assessment
4.2. Monitoring of the Hospitalized Patient I
4.2.1. Echocardiography
4.2.2. Vascular Ultrasound
4.3. Monitoring of the Hospitalized Patient I:
4.3.1. Electrocardiography
4.3.2. Continuous Telemetry
4.3.3. Cardiac Output
4.4. Most Common Structural Cardiac Pathologies in Admitted Horses
4.4.1. Congenital
4.4.2. Acquired
4.5. Most Common Arrhythmias in Admitted Horses
4.5.1. Non-Pathological
4.5.2. Pathological
4.6. Cardiac Complications in the Critically Ill Patient
4.6.1. Structural
4.6.1.1. Patent Ductus Arteriosus
4.6.1.2. Endocarditis, Myocarditis, Pericarditis
4.6.1.3. Cardiac Tamponade
4.6.2. Heart Rate
4.6.2.1. Atrial Stillness and Cardiac Arrest
4.6.2.2. Ventricular Rhythms
4.7. Cardiac Therapy
4.7.1. Cardiovascular Pharmacology
4.7.2. Cardiovascular Resuscitation
4.8. Management of Heart Failure and Shock
4.8.1. Heart Failure
4.8.2. Shock
4.9. Vascular Disorders in Hospitalized Horses
4.9.1. Aorto-Cardiac Fistula
4.9.2. Aorto-Pulmonary Fistulas
4.9.3. Vasculitis
4.9.4. Thrombophlebitis
4.9.5. Aorto-Iliac Thrombosis
4.10. Vascular Therapy
4.10.1. Pharmacological
4.10.2. Surgical

Module 5. Respiratory Pathologies in Hospitalized Patients

5.1. Clinical Assessment of the Respiratory System and Diagnostic Methods
5.1.1. Examination of the Respiratory System
5.1.2. Gasometry
5.1.3. Respiratory Tract Sampling
5.1.3.1. Samples from Nasal Cavity, Pharynx and Guttural Pouches
5.1.3.2. Tracheal Aspirate and Alveolar Lavage
5.1.3.3. Thoracentesis
5.1.3.4. Pulmonary Biopsy
5.1.4. Endoscopy
5.1.4.1. Static and Dynamic Endoscopy of Upper Airways
5.1.4.2. Sinuscopy
5.1.4.3. Thoracoscopy
5.1.5. Pulmonary Functional Test
5.1.6. Gammagraphy, CT
5.2. Radiology and Ultrasound of the Respiratory System
5.2.1. Radiology
5.2.1.1. Nasal Cavity, Sinuses and Guttural Pouches
5.2.1.2. Larynx and Trachea
5.2.1.3. Chest
5.2.2. Ultrasound
5.2.2.1. Ultrasound Techniques
5.2.2.2. Laryngeal Ultrasound
5.2.2.3. Pleural Effusion
5.2.2.4. Atelectasis, Consolidation and Masses
5.2.2.5. Pneumothorax
5.3. Upper Airway Pathologies

5.3.1. Pathologies of Nasal Cavity Sinuses and Guttural Pouches
5.3.2. Pharyngeal, Palatine and Laryngeal Pathology
5.3.3. Tracheal Pathologies
5.4. Specific Diagnostic Assessment of Lower Airways
5.4.1. Transtracheal Aspirate (T.T.A.)
5.4.2. Bronchoalveolar Lavage (B.A.L.)
5.4.3. Pulmonary Functional Test
5.4.4. Gasometry
5.4.5. Thoracic Ultrasound and Radiography
5.5. Inflammatory Pathologies of the Lower Airways
5.5.1. Equine Asthma
5.5.2. Exercise-Induced Pulmonary Hemorrhage
5.5.3. Pulmonary Edema
5.6. Bacterial and Fungal Infectious Diseases of the Respiratory Tract
5.6.1. Equine Mumps Streptococcus Equi Infection
5.6.2. Bacterial Pneumonia and Pleuropneumonia
5.6.3. Fungal Pneumonia
5.7. Pneumonias of Mixed Origin Viral Infectious Diseases of the Respiratory Tract and Tumors
5.7.1. Interstitial Pneumonia and Pulmonary Fibrosis
5.7.2. Equine Herpesvirus I, IV and V
5.7.3. Equine Influenza
5.7.4. Tumours of the Respiratory System
5.8. Alterations of the Thoracic Wall, Pleura, Mediastinum and Diaphragm
5.8.1. Fractured Ribs, Pneumothorax and Pneumomediastinum
5.8.2. Diaphragmatic Hernia
5.8.3. Pleural Effusion, Hemothorax and Chylothorax
5.8.4. Pleuropneumonia
5.9. Hospitalization of the Horse with Respiratory Diseases
5.9.1. Management and Monitoring
5.9.2. Respiratory Pharmacological Therapy
5.9.2.1. Systemic and Inhaled Antibiotherapy
5.9.2.2. Steroidal and Non-Steroidal Anti-inflammatory Drugs
5.9.2.3. Bronchodilators and Mucolytics
5.9.2.4. Drugs that Decrease Pulmonary Fibrosis and Pleural Adhesions
5.9.5. Oxygen Therapy
5.9.6. Fluid and Plasmotherapy
5.9.7. Permanent Pleural Drainage and Thoracotomy
5.10. Cardiorespiratory Assessment of Sports Performance
5.10.1. Cardiorespiratory Response to Exercise and Training
5.10.2. Parameters and Monitoring Techniques
5.10.3. Stress Test

Module 6. Cardiorespiratory and Vascular System

6.1. Diseases of the Upper Respiratory Tract I (Nose, Nasal Cavity and Paranasal Sinuses).
6.1.1. Diseases and Pathologies Affecting the Rostral/Larynxes Area
6.1.1.1. Clinical Introduction and Diagnosis
6.1.1.2. Atheroma - Epidermal Inclusion Cyst
6.1.1.2.1. Treatment
6.1.1.3. Redundant Wing Fold
6.1.1.3.1. Treatment
6.1.2. Diseases and Pathologies Affecting the Nasal Cavity
6.1.2.1. Diagnostic Techniques
6.1.2.2. Nasal Septum Pathologies
6.1.2.3. Ethmoidal Hematoma
6.1.3. Diseases and Pathologies Affecting the Paranasal Sinuses
6.1.3.1. Clinical Presentation and Diagnostic Techniques
6.1.3.2. Sinusitis
6.1.3.2.1. Primary Sinusitis
6.1.3.2.2. Secondary Sinusitis
6.1.3.3. Paranasal Sinus Cyst
6.1.3.4. Paranasal Sinus Neoplasia
6.1.4. Approaches to the Paranasal Sinus
6.1.4.1. Trepanation Anatomical References and Technique

6.1.4.2. Synocentesis
6.1.4.3. Sinuscopy
6.1.4.4. Flaps or Bone Flaps of the Paranasal Sinuses
6.1.4.5. Associated Complications

6.2. Diseases of the Upper Tract II (Larynx and Pharynx)
6.2.1. Diseases and Pathologies affecting the Pharynx - Nasopharynx
6.2.1.1. Anatomical Pathologies
6.2.1.1.1. Nasopharyngeal Scar Tissue
6.2.1.1.2. Nasopharyngeal Masses
6.2.1.1.3. Treatment
6.2.1.2. Functional Pathologies
6.2.1.2.1. Dorsal Displacement of the Soft Palate (DDSP)
6.2.1.2.1.1. Intermittent DDSP
6.2.1.2.1.2. Permanent DDSP
6.2.1.2.1.3. Surgical and Non-Surgical Treatments
6.2.1.2.2. Rostral Pharyngeal Collapse
6.2.1.2.3. Dorsal/Lateral Nasopharyngeal Collapse
6.2.1.3. Nasopharyngeal Pathologies in Foals
6.2.1.3.1. Choanal Atresia
6.2.1.3.2. Cleft Palate
6.2.1.3.3. Nasopharyngeal Dysfunction
6.2.2. Diseases and Pathologies Affecting the Larynx
6.2.2.1. Recurrent Laryngeal Neuropathy (Laryngeal Hemiplegia)
6.2.2.1.1. Diagnosis
6.2.2.1.2. Gradation
6.2.2.1.3. Treatment and Associated Complications
6.2.2.2. Vocal Cord Collapse
6.2.2.3. Bilateral Laryngeal Paralysis
6.2.2.4. Cricopharyngeal-Laryngeal Dysplasia (Fourth Branchial Arch Defects)

6.2.2.5. Collapse of the Apex of the Corniculate Process
6.2.2.6. Medial Deviation of the Aryepiglottic Folds
6.2.2.7. Chondropathy of the Arytenoid Cartilage
6.2.2.8. Pathologies in the Mucosa of the Arytenoid Cartilages
6.2.2.9. Pathologies Affecting the Epiglottis
6.2.2.9.1. Epiglottic Entrapment
6.2.2.9.2. Acute Epiglottitis
6.2.2.9.3. Subepiglottic Cyst
6.2.2.9.4. Subepiglottic Granuloma
6.2.2.9.5. Dorsal Epiglottic Abscess
6.2.2.9.6. Hypoplasia, Flaccidity, Deformity of Epiglottis
6.2.2.9.7. Epiglottic Retroversion

6.3. Diseases of Guttural Pouches and Trachea Tracheostomy
6.3.1. Diseases and Pathologies Affecting the Guttural Pouches
6.3.1.1. Tympanism
6.3.1.1.1. Functional Nasopharyngeal Obstruction in Adults
6.3.1.2. Empyema
6.3.1.3. Mycosis
6.3.1.4. Trauma - Ruptured Ventral Rectus Muscles
6.3.1.5. Osteoarthropathy of the Temporohyoid Joint
6.3.1.6. Other Pathologies
6.3.2. Diseases and Pathologies Affecting the Trachea
6.3.2.1. Trauma
6.3.2.2. Tracheal Collapse.
6.3.2.3. Tracheal Stenosis.
6.3.2.4. Foreign Bodies.
6.3.2.5. Intraluminal Masses
6.3.3. Tracheal Surgeries
6.3.3.1. Tracheostomy and Tracheostomy (Temporary)
6.3.3.2. Permanent Tracheostomy
6.3.3.3. Other Tracheal Surgeries

Module 7. Neurological and Muscular Problems in the Hospitalized Patient

7.1. Nervous System Assessment. Anatomical Location of the Lesion
7.1.1. On-station Neurological Examination
7.1.2. Examination in Motion
7.1.3. Location of the Lesion
7.2. Complementary Methods in Neurological Pathologies
7.2.1. Cerebrospinal Fluid - Collection and Analysis
7.2.2. Diagnostic Imaging; Radiology, Myelography and Magnetic Resonance Imaging (MRI)
7.2.3. Electromyography and Electroencephalography
7.2.4. Laboratory Determinations
7.3. Hospital Management of the Neurological Patient
7.3.1. Medical and Supportive Management of the Neurological Horse
7.3.2. Specific Management of the Recumbent Horse
7.4. Neurological Pathologies I. Cranial pathologies
7.4.1. Meningitis
7.4.2. Cranioencephalic Trauma
7.4.3. Cranial Nerve Disorders
7.4.4. Cerebellar Pathologies
7.4.5. Epilepsy
7.5. Neurological Pathology II. Spinal Pathologies
7.5.1. Cervical Stenotic Myelopathy
7.5.2. Atlanto-Occipital Malformation
7.5.3. Trauma / Dislocations
7.5.4. Cervical Osteomyelitis

7.5.5. Tetanus
7.6. Neurological Pathologies II - Peripheral Nerve and Neuromuscular Pathologies
7.6.1. Botulism
7.6.2. Motor Neuron Disease
7.6.7. Peripheral Neuropathies
7.7. Multifocal Neurological Pathologies
7.7.1. Myeloencephalopathy
7.7.2. Dysautonomia
7.7.3. Herpesvirus Myeloencephalopathy
7.7.4. Protozoal Myeloencephalopathy
7.7.5. Verminous Myeloencephalopathy
7.7.6. Polyneuritis or Cauda Equine Neuritis
7.7.7. Rabies
7.7.8. West Nile Virus
7.8. Assessment and Diagnostic Methods of Muscular Pathologies
7.8.1. Physical Examination
7.8.2. Analytical and Urinalysis Alterations
7.8.3. Muscle Biopsy
7.8.4. Electromyography
7.9. Muscular Pathologies Related to Exertion
7.9.1 Rhabdomyolysis
7.9.1.1 Sporadic Rhabdomyolysis
7.9.1.2. Recurrent Rhabdomyolysis
7.9.2. Traumatic Myopathies
7.9.3. Electrolyte Disorders
7.9.4. Mitochondrial Enzyme Deficiency
7.9.5. Deficiencies Associated with Glycogen Storage
7.10. Myopathies Not Associated with Exercise
7.10.1 Inflammatory, Infectious and Immune-Mediated Myopathies
7.10.2. Toxic and Hormonal Myopathies
7.10.3. Nutritional Myopathies
7.10.4. Circulatory Myopathies: Post-anesthetic and Thromboembolic.
7.10.5. Malignant Hyperthermia
7.10.6. Muscle Tone Disorders: Myotonias
7.10.6.1. Hyperkalemic Periodic Paralysis

Module 8. Locomotor System.

8.1. Examination and Diagnosis of Lameness
8.1.1. Introduction
8.1.1.1. Definition of Lameness
8.1.1.2. Causes and Types of Lameness
8.1.1.3 Symptoms of Lameness
8.1.2 Static Examination of Lameness
8.1.2.1 Clinical History
8.1.2.2 Approach to the Horse and General Examination
8.1.2.2.1 Visual Examination: General Condition and Conformation
8.1.2.2.2. Static Physical Examination, Palpation, Percussion and Flexion
8.1.3 Dynamic Examination of Lameness
8.1.3.1 Examination in Motion
8.1.3.2 Flexion Test
8.1.3.3 Assessment and Quantification of Lameness Objective and Subjective Methods
8.1.3.4 Introduction to Nerve Anesthetic Blocks
8.1.4 Introduction to Complementary Diagnostic Methods
8.2. Anesthetic Nerve Blocks
8.2.1. Diagnostic Loco-Regional Analgesia: Introduction
8.2.1.1. General Considerations and Pre-Diagnostic Requirements
8.2.1.2. Types of Blockages and Injection Techniques
8.2.1.3. Drugs to be Used
8.2.1.4. Election of Blockages
8.2.1.5. Approach to the Patient
8.2.1.4.1. Patient Management and Preparation
8.2.1.4.2. Chemical Containment
8.2.1.6. Evaluation of Results

8.2.1.5.1. Subjective Assessment
8.2.1.5.2. Objective Assessment
8.2.1.7. Complications
8.2.2. Perineural Anesthetic Blocks
8.2.2.1. Perineural Analgesia in the Forelimb
8.2.2.2. Perineural Analgesia in the Hindlimb
8.2.3. Regional Anesthetic Blocks
8.2.4. Intrasynovial Anesthetic Blocks
8.2.4.1. Intra-Articular Blocks
8.2.4.2. Bursa and Tendon Sheath Blocks
8.3. Diagnostic Imaging of Lameness
8.3.1. Introduction to Diagnostic Imaging in the Field
8.3.2. Technical Basis
8.3.2.1. Radiology
8.3.2.2. Ultrasound
8.3.2.3. Advanced Techniques.
8.3.2.3.1. Gammagraphy.
8.3.2.3.2. Magnetic Resonance
8.3.2.3.3. Computerized Tomography
8.3.3. Bone Pathology Diagnosis
8.3.4. Joint Pathology Diagnosis
8.3.5. Diagnosis of Tendon and Ligament Pathology
8.4. Pathologies of the Axial Skeleton Diagnosis and Treatment
8.4.1. Introduction to Axial Skeletal Pathology
8.4.2. Axial Skeleton Exploration
8.4.3. Cervical Spine Diagnosis
8.4.4. Diagnosis of the Thoracolumbar and Sacroiliac Spine
8.4.5. Axial Skeleton Pathology Treatment
8.5. Degenerative Joint Disease (DJD) Traumatic Arthritis and Post-Traumatic Osteoarthritis Etiology, Diagnosis and Treatment
8.5.1. Anatomy and Physiology of the Joints
8.5.2. Definition of EDA
8.5.3. Cartilage Lubrication and Repair
8.5.4. DJD Manifestations
8.5.4.1. Acute Injuries
8.5.4.2. Chronic Fatigue Injuries
8.5.5. DJD Diagnosis
8.5.5.1. Clinical Examination
8.5.5.2. Objective and Subjective Examination of Lameness
8.5.5.3. Diagnostic Anesthesia
8.5.5.4. Diagnostic Imaging
8.5.5.4.1. Radiology
8.5.5.4.2. Ultrasound
8.5.5.4.3. Magnetic Resonance Imaging and Computed Axial Tomography
8.5.5.4.4. New Technologies
8.5.6. Treatment of DJD
8.5.6.1. Nonsteroidal Anti-Inflammatories
8.5.6.2. Steroid Anti-Inflammatories
8.5.6.3. Hyaluronic Acid
8.5.6.4. Glucosaminoglycans
8.5.6.5. Pentosan
8.5.6.6. Biological Therapies
8.5.6.6.1. Autologous Conditioned Serum
8.5.6.6.2. Platelet-rich Plasma
8.5.6.6.3. Stem Cells
8.5.6.7. Oral Supplements
8.6. Tendinitis, Desmitis and Adjacent Structures Pathologies
8.6.1. Applied Anatomy and Tendon Damage Pathophysiology
8.6.2. Alterations of Tendons, Ligaments and Associated Structures
8.6.2.1. Soft Tissues of the Pastern
8.6.2.2. Superficial Digital Flexor Tendon (SDFT)

8.6.2.3. Deep Digital Flexor Tendon (DDFT)
8.6.2.4. Inferior Accessory Ligament of the TFDSP
8.6.2.5. Suspensory Ligament of the Fetlock (SL)
8.6.2.5.1. Proximal part of the SL
8.6.2.5.2. SL Body
8.6.2.5.3. SL Branches
8.6.2.6. Carpal Canal and Sheath
8.6.2.7. Tarsal Sheath
8.6.2.8. Plantar Fasciitis
8.6.2.9. Bursitis
8.6.3. Management of Tendon and Ligament Injuries
8.6.3.1. Medical Therapy
8.6.3.2. Regenerative Therapies
8.6.3.2.1. Stem Cell and Bone Marrow Therapies
8.6.3.2.2. Platelet-Rich Plasma Therapy
8.6.3.3. Shock Waves and Other Physical Therapies
8.6.3.4. Surgical Therapies
8.6.3.5. Rehabilitation and Return to Work Guidelines
8.7. Fractures. Bone Sequestration
8.7.1. First Approach to Fractures, General Considerations Bone Sequestration
8.7.1.1. Introduction
8.7.1.1.1. First Aid for Fractures in Horses
8.7.1.1.2. Case Selection, General Considerations
8.7.1.1.3. Immobilization of Fractures According to Location
8.7.1.2. Transport
8.7.1.2.1. Transporting an Equine Patient for Fracture Treatment
8.7.1.3. Prognosis
8.7.1.4. Bone Sequestration
8.7.2. Rehabilitation and Return to Work Guidelines
8.7.2.1. In Fractures
8.7.2.2. In Bone Sequestration
8.8. Laminitis

8.8.1. Pathophysiology of Laminitis
8.8.2. Clinical of Laminitis
8.8.3. Diagnosis of Laminitis
8.8.3.1. Physical Examination
8.8.3.2. Diagnostic Imaging
8.8.3.3. Endocrine and Metabolic Assessment
8.8.4. Medical Treatment of Laminitis
8.8.4.1. Anti-Inflammatory Drugs
8.8.4.2. Vasoactive Drugs
8.8.4.3. Analgesia:
8.8.4.4. Hypothermia.
8.8.4.5. Sepsis.
8.8.4.6. Pars Intermedia Pituitary Dysfunction (PPID) and Equine Metabolic Syndrome (EMS)
8.8.5. Stabilization of the Third Phalanx
8.8.5.1. Sole Support Techniques
8.8.5.2. Therapeutic Horseshoeing
8.8.6. Treatment of Laminitis
8.8.6.1. Use of Casts
8.8.6.2. Fexor Digitorum Superficialis Tenotomy
8.8.6.3. Dorsal Wall Resection
8.8.6.4. Complications
8.8.7. Chronic Laminitis
8.8.8. Laminitis Prevention
8.9. Orthopedic Field Surgery
8.9.1. Fractures of Rudimentary Metacarpals/Metatarsals
8.9.1.1. Clinical History, Symptomatology, Different Presentations
8.9.1.2. Diagnostic Techniques
8.9.1.3. Decision Making, Optimal Treatment
8.9.1.4. Surgical Management
8.9.1.5. Complications to Surgery
8.9.1.6. Postoperative Care
8.9.1.7. Rehabilitation and Return to Work Guidelines
8.9.2. Desmotomies

8.9.2.1. Medical History
8.9.2.2. Decision Making
8.9.2.3. Surgical Management
8.9.2.4. Complications to Desmotomies
8.9.2.5. Postoperative Care
8.9.2.6. Rehabilitation and Return to Work Guidelines
8.9.3. Neurectomies
8.9.3.1. Indications
8.9.3.2. Pre-Surgical Considerations and Implications
8.9.3.3. Surgical Technique
8.9.3.4. Complications
8.9.3.5. Postoperative Care
8.9.3.7. Rehabilitation and Return to Work Guidelines
8.10. Myopathies in the Horse
8.10.1. Genetic and Congenital Diseases
8.10.1.1. Myotonia
8.10.1.2. Myopathy due to Polysaccharide Storage
8.10.1.3. Malignant Hyperthermia
8.10.1.4. Hyperkalemic Periodic Paralysis
8.10.2. Traumatic and Irritative Alterations
8.10.2.1. Fibrotic Myopathy
8.10.2.2. Bruises and Tears
8.10.2.3. Intramuscular Irritant Injections
8.10.3. Infectious Diseases.
8.10.3.1. Abscesses.
8.10.3.2. Clostridial Myositis
8.10.4. Ischemic Diseases
8.10.4.1. Post-Anesthetic Myositis
8.10.5. Nutritional Diseases
8.10.5.1. Malnutrition
8.10.5.2. Vitamin E and Selenium Alterations
8.10.5.3. Cachectic Atrophy
8.10.6. Pathologies Associated with Exercise
8.10.6.1. Acute Exertional Rhabdomyolysis
8.10.6.2. Recurrent Exertional Rhabdomyolysis
8.10.6.3. Hypokinetic Atrophy

Module 9. Pathologies of the Genitourinary System in the Hospitalized Patient, Treatment and Monitoring

9.1. Urinary System Assessment
9.1.1. Hematological and Biochemical Parameters Related to the Renal System
9.1.2. Urianalysis and Fractional Excretion of Electrolytes
9.1.3. Diagnostic Methods in the Urinary System
9.1.3.1. Urinary System Ultrasound
9.1.3.2. Endoscopy of the Urinary System
9.1.3.3. Renal Biopsy.
9.1.3.4. Water Deprivation Test
9.2. Urinary Physiology and Pathophysiology
9.2.1. Renal Anatomy and Physiology
9.2.2. Pathophysiology of Renal Failure
9.3. Renal Failure
9.3.1. Acute Kidney Failure Treatment and Monitoring
9.3.2. Chronic Renal Failure. Treatment and Monitoring
9.3.3. Uremic Syndrome. Treatment and Monitoring
9.4. Urinary Tract Infections
9.4.1. Urethritis, Cystitis and Pyelonephritis
9.4.2. Therapies and Monitoring of Urinary Tract Infection
9.4.3. Obstructive Pathology of the Urinary Tract
9.4.4. Treatment of Obstructive Pathology of the Urinary Tract
9.5. Others Urinary Tract Infections
9.5.1. Pathologies with Polyuria/Polydipsia
9.5.2. Renal Tubular Acidosis
9 7.5.3. Urinary Tract Tumors
9.6. Urinary Incontinence and Bladder Dysfunction
9.7. Assessment of the Reproductive System

9.7.1. Assessment of the Male Reproductive System
9.7.2. Assessment of the Female Reproductive System
9.8. Pathologies of the Mare's Reproductive System
9.8.1. Vulvar, Vaginal, Cervical, Uterine and Ovarian Pathologies
9.8.2. Sexually Transmitted Diseases
9.9. The Pregnant Mare
9.9.1. Assessment and Monitoring of the Pregnant Mare
9.9.2. Pathologies Associated with Postpartum
9.10. Pathologies of the Stallion's Reproductive System
9.10.1. Genital Pathologies of the Male: Alterations of the Penis, Prepuce, Scrotum, Testicle, Epididymis and Accessory Glands.
9.10.2. Sexually Transmitted Diseases

Module 10. Reproductive and Urinary System

10.1. Medical Pathologies of the Male Genitalia
10.1.1. Introduction to the Medical Pathology of the Stallion
10.1.2. Testicular Pathology in the Stallion
10.1.2.1. Handling and Treatment of the Cryptorchid Stallion
10.1.2.2. Testicular Inflammatory Disorders
10.1.2.3. Management of Testicular Degeneration in the Stallion
10.1.2.4. Hydrocele Management
10.1.2.5. Testicular Neoplasms in the Stallion
10.1.2.6. Testicular Torsion in the Stallion
10.1.3. Penile Pathologies
10.1.3.1. Penile Trauma Management
10.1.3.2. Penile Tumor Developments
10.1.3.3. Paraphimosis
10.1.3.4. Priaprism
10.1.4. Pathology of Adnexal Glands
10.1.4.1. Ultrasound and Assessment of Appendages Glands
10.1.4.2. Vesiculitis, Management and Treatment
10.1.4.3. Obstruction of Adnexal Glands
10.1.5. Ejaculate Alterations
10.1.5.1. Seminal Assessment
10.1.5.2. Factors Affecting Fertility
10.1.5.3. Sub-fertile Semen Management
10.1.5.3.1. Semen Centrifugation for Quality Improvement
10.1.5.3.2. Seminal Plasma Substitution
10.1.5.3.3. Semen Filtration to Improve Quality
10.1.5.3.4. Low-Quality Semen Cooling Protocols
10.1.6. Alterations in Stallion Behavior and Mating Management
10.1.7. Advances in Assisted Reproduction in Stallions
10.1.7.1. Seminal Freezing
10.1.7.2. Epididymal Sperm Retrieval after Death or Castration
10.2. Male Field Surgical Procedures
10.2.1. Castration
10.2.1.1. Introduction and Considerations of Castration in Males
10.2.1.1.1. Patient Selection
10.2.1.2. Castration Surgical Techniques
10.2.1.2.1. Open Castration
10.2.1.2.2. Closed Castration
10.2.1.2.3. Semi-Closed or Semi-Open Castration
10.2.1.3. Variations in Surgical Technique
10.2.1.3.1. Different Hemostasis Options
10.2.1.3.2. Primary Skin Closure
10.2.1.4. On-Station Castration Considerations
10.2.1.4.1. Sedation
10.2.1.5. Considerations for Castration under General Anesthetic
10.2.1.6. Inguinal Cryptorchidism

10.2.1.6.1. Presurgical Diagnosis
10.2.1.6.2. Surgical Technique
10.2.2. Penile Amputation
10.2.2.1. Indications
10.2.2.2. Procedure and Post-surgical Considerations
10.3. Medical and Surgical Pathologies of the Female Genitalia I
10.3.1. Medical Pathologies I
10.3.1.1. Ovarian Pathology
10.3.1.1.1. Ovulation Disorders
10.3.1.1.2. Ovarian Tumors.
10.3.1.2. Fallopian Tubes Disorders
10.3.1.3. Medical Uterine Pathology
10.3.1.3.1. Preparation and Procedure for Sample Collection
10.3.1.3.1.1. Cytology
10.3.1.3.1.2. Biopsy
10.3.1.3.2. Types of Endometritis
10.3.1.3.3. Management of the Mare with Uterine Fluid
10.3.1.3.4. Management of Mares with Uterine Cysts
10.4. Medical and Surgical Genital Pathologies of the Mare II
10.4.1. Medical Pathologies II
10.4.1.1. Cervix Pathology
10.4.1.1.1. Cervical Lacerations
10.4.1.1.2. Cervical Adherences
10.4.1.2. Medical Pathology of the Vagina
10.4.1.3. Reproductive Management of the Geriatric Mare
10.4.1.4. Update on Assisted Reproduction in the Mare
10.4.2. Surgical Pathologies of the Mare
10.4.2.1. Normal Vulvar Conformation of the Mare
10.4.2.1.1. Vulvar Examination of the Mare
10.4.2.1.2. Caslick Index
10.4.2.2. Vulvoplasty
10.4.2.2.1. Caslick Surgery Procedure

10.5. Pregnant Mare and Care at Foaling
- 10.5.1. Mare Gestation
  - 10.5.1.1. Diagnosis of Pregnancy in the Mare
  - 10.5.1.2. Management of Early and Late Multiple Gestation New Techniques
  - 10.5.1.3. Embryo Sexing
- 10.5.2. Complications During Gestation in the Mare
  - 10.5.2.1. Abortion
    - 10.5.2.1.1. Early Abortion
    - 10.5.2.1.2. Late Abortion
  - 10.5.2.2. Uterine Torsion
  - 10.5.2.3. Management and Treatment of Placentitis
  - 10.5.2.4. Management of Placental Abruption
- 10.5.3. Nutritional Needs of the Pregnant Mare
- 10.5.4. Ultrasound Evaluation of the Fetus
  - 10.5.4.1. Ultrasound Evaluation at Different Stages of Gestation
  - 10.5.4.2. Fetal Biometry
- 10.5.5. Methods for Predicting Foaling in the Full-Term Mare
- 10.5.6. Euthyroid Labor and Delivery
  - 10.5.6.1. Phases of Euthyroid Labor and Delivery

10.6. Complications of Labor and Delivery and Postpartum Care
- 10.6.1. Dystocic Labor and Delivery
  - 10.6.1.1. Material Necessary for the Resolution of Dystocia
  - 10.6.1.2. Types of Dystocia and Management of Different Fetal Presentations
- 10.6.2. Peripartum Surgical Emergencies
  - 10.6.2.1. Fetotomy
    - 10.6.2.1.1. Fetotome
    - 10.6.2.1.2. Preparation of the Mare for the Procedure
    - 10.6.2.1.3. Fetotomy in the Field vs in the Hospital
  - 10.6.2.2. Cesarean Section
  - 10.6.2.3. Hemorrhage of the Ankle Ligament
  - 10.6.2.4. Uterine Laceration
  - 10.6.2.5. Prepubic Tendon Rupture
  - 10.6.2.6. Rectovaginal Fistula
- 10.6.3. Postpartum Care
  - 10.6.3.1. CControl of uterine Involution and Establishment of the Postpartum Cycle
- 10.6.4. Postpartum Complications
  - 10.6.4.1. Placenta Retention
  - 10.6.4.2. 8.8.4.2 Vaginal Lacerations
  - 10.6.4.3. 8.8.4.3 Uterine Bleeding
  - 10.6.4.4. Uterine Prolapse
  - 10.6.4.5. Rectal Prolapse
  - 10.6.4.6. 8.8.4.6 Vulvar Hematoma
  - 10.6.4.7. Uterine Horn Invagination

10.7. Repair of Tears and Lacerations during Labor and Delivery
- 10.7.1. Management of Vulvar Tears and Lacerations during Labor and Delivery
- 10.7.2. Classification of Perineal Lacerations
- 10.7.3. Reconstruction of the Perineal Body
  - 10.7.3.1. Surgical Preparation of the Mare
  - 10.7.3.2. Vaginal Vestibule Sphincter Insufficiency
    - 10.7.3.2.1. Perineal Body Reconstruction, Vestibuloplasty
    - 10.7.3.2.2. Perineal Body Transverse Section, Perineoplasty
      - 10.7.2.2.1. Pouret's Surgery
  - 10.7.3.3. Post-Operative Care
  - 10.7.3.4. Complications of Perineal Surgery
- 10.7.4. Surgical Management of Third-Degree Rectovaginal Tearing
- 10.7.5. Surgical Management of Rectovaginal Fistulas

10.8. Infectious and Parasitic Diseases of the Reproductive System in Equines
- 10.8.1. Introduction to Infectious and Parasitic Diseases of the Reproductive System in Equines
- 10.8.2. Economic and Productive Significance of Infectious and Parasitic Diseases
- 10.8.3. Infectious Diseases of the Reproductive Tract
  - 10.8.3.1. Mycoplasmas

10.8.3.2. Contagious Equine Metritis Procedure of Sample Collection for the Determination of Contagious Equine Metritis
10.8.3.3. Equine Viral Arteritis
10.8.3.4. Equine Rhinopneumonitis
10.8.3.5. Leptospirosis.
10.8.3.6. Brucellosis
10.8.4. Parasitic Diseases of the Reproductive Tract
10.8.4.1. Habronemiasis
10.8.4.2. Durina

Module 11. Endocrine System Alterations. Hospitalization of Horses with Dermatological Problems

11.1. Calcium, Phosphorus and Magnesium Disorders. Thyroid Gland Pathologies
11.1.1. Hypercalcemia Hypocalcemia
11.1.2. Hyperphosphatemia and Hypophosphatemia
11.1.3. Hypermagnesemia and Hypomagnesemia
11.1.4. Hyperthyroidism and Hypothyroidism
11.2. Hypoadrenocorticism, Pituitary Pars Intermedia Dysfunction and Anhidrosis
11.2.1. Hypoadrenocorticism, Treatment and Monitoring
11.2.2. Pituitary Pars Intermedia Dysfunction, Treatment and Monitoring
11.2.3. Anhidrosis, Diagnostic Tests and Treatment
11.3. Insulin Dysregulation and Equine Metabolic Syndrome
11.3.1. Pathophysiology
11.3.2. Static and Dynamic Diagnostic Tests
11.3.3. Treatment
11.4. Nutrition of the Endocrine Patient
11.4.1. Nutrition of the Patient with Metabolic Syndrome
11.4.2. Obesity Control and Monitoring
11.5. Assessment of the Skin
11.5.1. Cutaneous System Anatomy
11.5.2. Laboratory Assessment Methods
11.6. Infectious Skin Diseases
11.6.1. Bacterial Skin Diseases
11.6.2. Fungal Diseases
11.6.3. Diseases Caused by Parasites
11.7. Skin Disorders I
11.7.1. Hair Disorders
11.7.2. Keratinization Disorders
11.7.3. Collagen disorders
11.8. Skin Disorders II
11.8.1. Nutritional Alterations
11.8.2. Toxic Disorders
11.8.3. Immune-Mediated Disorders
11.9. Skin Disorders III
11.9.1. Necrotizing Disorders
11.9.2. Neoplastic Disorders
11.10. Therapy in Dermatological Problems
11.10.1. Skin Therapies
11.10.2. Systemic Therapies
11.10.3. Immunomodulatory Therapies

Module 12. Surgical Pathologies of the Skin and Related Structures

12.1. Exploration and Wound Types
12.1.1. Anatomy
12.1.2. Initial Assessment, Emergency Treatment
12.1.3. Wound Classification
12.1.4. Wound Healing Process
12.1.5. Factors Influencing Wound Infection and Wound Healing
12.1.6. Primary and Secondary Intention Wound Healing
12.2. Tissue Management, Hemostasis and Suture Techniques
12.2.1. Incision and Tissue Dissection
12.2.2. Hemostasis
12.2.2.1. Mechanical Hemostasis
12.2.2.2. Ligatures
12.2.2.3. Tourniquet
12.2.2.4. Electrocoagulation
12.2.2.5. Chemical Hemostasis

12.2.3. Tissue Management, Irrigation and Suctioning
12.2.4. Suture Materials Used
12.2.4.1. Instruments
12.2.4.2. Suture Material Selection
12.2.4.3. Needles
12.2.3.4. Drainages
12.2.5. Approaches to Wound Suturing
12.2.6. Suture Patterns
12.3. Bandages
12.3.1. Materials and Bandage Types
12.3.2. Hoof Bandage
12.3.3. Distal Extremity Bandage
12.3.4. Full Limb Bandage
12.3.5. Fiberglass Cast. Application and Peculiarities in Young Animals
12.4. Acute Wound Repair
12.4.1. Wound Treatment Medication
12.4.2. Debriding
12.4.3. Emphysema Secondary to Wounds
12.4.4. Negative Pressure Therapy
12.4.5. Topical Treatment Types
12.5. Repair and Management of Chronic and/or Infected Wounds
12.5.1. Particularities of Chronic and Infected Wounds
12.5.2. Causes of Chronic Wounds
12.5.3. Management of Severely Contaminated Wounds
12.5.4. Laser Benefits
12.5.5. Larvotherapy
12.5.6. Cutaneous Fistulas Treatment
12.6. Hoof Wound Treatment Regional and Intraosseous Perfusion of Antibiotics
12.6.1. Hoof Wounds
12.6.1.1. Coronary Buckle Wounds
12.6.1.2. Heel Wounds
12.6.1.3. Puncture Wounds on the Palm
12.6.2. Antibiotic Perfusion
12.6.2.1. Regional Perfusion
12.6.2.2. Intraosseous Perfusion
12.7. Management and Repair of Synovial Wounds and Joint Lavage
12.7.1. Pathophysiology of Synovial Infection
12.7.2. Epidemiology and Diagnosis of Synovial Wound Infections
12.7.3. Synovial Wound Treatment Joint Lavage
12.7.4. Synovial Wound Prognosis
12.8. Tendon Lacerations Management and Repair
12.8.1. Introduction, Anatomy, Anatomical Implications
12.8.2. Primary care, Examination of the Injury, Immobilization
12.8.3. Case Selection: Surgical or Conservative Treatment
12.8.4. Tendon Lacerations Surgical Repair
12.8.5. Rehabilitation and Return to Work Guidelines after Tenorrhaphy
12.9. Reconstructive Surgery and Skin Grafting
12.9.1. Principles of Basic and Reconstructive Surgery
12.9.1.1. Skin Tension Lines
12.9.1.2. Incision Orientation, Suture Patterns
12.9.1.3. Tension Release Techniques and Plasties
12.9.2. Closure of Skin Defects of Different Shapes
12.9.3. Skin Grafts
12.10. Treatment of Exuberant Granulation Tissue Sarcoid Burns
12.10.1. Causes of the Appearance of Exuberant Granulation Tissue
12.10.2. Treatment of Exuberant Granulation Tissue
12.10.3. Sarcoid Appearance in Wounds
12.10.3.1. Wound Associated Sarcoid Type

Module 13. Medical Pathologies of the Skin Endocrine System

13.1. Alternatives in the Medical Treatment of Neoplasms
13.7.1. Electroporation and Electrochemotherapy
13.7.2. Immunotherapy
13.7.3. Radiotherapy
13.7.4. Dynamic Phototherapy
13.7.5. Cryotherapy
13.7.6. Other Therapies

Module 14. Hematopoietic System, Immunology and Nutrition

14.1. Endotoxic Shock
- 14.1.1. Systemic Inflammation and Systemic Inflammatory Response Syndrome (SIRS)
- 14.1.2. Causes of Endotoxemia in Horses
- 14.1.3. Pathophysiological Mechanisms
- 14.1.4. Endotoxic Shock
  - 14.1.4.1. Hemodynamic Changes
  - 14.1.4.2. Multiorgan Dysfunction
- 14.1.5. Clinical Signs of Endotoxemia and Endotoxic Shock.
- 14.1.6. Diagnosis
- 14.1.7. Management
  - 14.1.7.1. Endotoxin Release Inhibitors
  - 14.1.7.2. Endotoxin Uptake and Inhibition
  - 14.1.7.3. Cell Activation Inhibition
  - 14.1.7.4. Inhibition of the Synthesis of Inflammatory Mediators
  - 14.1.7.5. Other specific therapies
  - 14.1.7.6. Support Treatments

14.2. Treatment of Hematopoietic Alterations Transfusion Therapy
- 14.2.1. Indications for Transfusion of Whole Blood
- 14.2.2. Indications for Plasma Transfusion
- 14.2.3. Indications for Transfusion of Platelet Products
- 14.2.4. Donor Selection and Compatibility Testing
- 14.2.5. Technique for Whole Blood Collection and Processing of Plasma
- 14.2.6. Administration of Blood Products
  - 14.2.6.1. Volume of Administration
  - 14.2.6.2. Administration Techniques
  - 14.2.6.3. Adverse Reaction Monitoring

14.3. Nutrition Basic Principles I
- 14.3.1. Physiology of Gastrointestinal Tract
  - 14.3.1.1. Oral cavity, Esophagus, Stomach
  - 14.3.1.2. Small Intestine
  - 14.3.1.3. Large Intestine
- 14.3.2. Diet Components, Nutrients
  - 14.3.2.1. Water
  - 14.3.2.2. Proteins and Amino Acids
  - 14.3.2.3. Carbohydrates
  - 14.3.2.4. Fats and Fatty Acids
  - 14.3.2.5. Minerals and Vitamins
- 14.3.3. Estimation of Horse Weight and Body Condition

14.4. Nutrition Basic Principles II
- 14.4.1. Energy and Available Energy Sources
  - 14.4.1.1. Forage
  - 14.4.1.2. Starches
  - 14.4.1.3. Fats
- 14.4.2. Metabolic Pathways of Energy Production
- 14.4.3. Energy Needs of the Horse
  - 14.4.3.1. In Maintenance
  - 14.4.3.2. For Breeding and Growth
  - 14.4.3.3. For the Show/Race Horse

14.5. Cachectic Horse Nutrition
- 14.5.1. Metabolic Response
- 14.5.2. Physical Examination and Clinical Signs
- 14.5.3. Blood Analysis
- 14.5.4. Differential Diagnoses
- 14.5.5. Nutritional Requirements

14.6. Use of Probiotics, Prebiotics and Medicinal Plants
- 14.6.1. Role of the Microbiota in the Large Intestine
- 14.6.2. Probiotics, Prebiotics, and Symbiotics
- 14.6.3. Medicinal Plants Use

Module 15. Medical Pathologies and Hospitalization in Foals

15.1. Newborn Examination and Monitoring
- 15.1.1. Neonatal Foal Care and Hospitalization
- 15.1.2. Normal Clinical Parameters in the Foal during the First Days of Life
- 15.1.2. Onset of Organ Systems Functioning at Birth and During the First Months of Life

15.1.2.1. 9.1.2.1 Gastric System
15.1.2.2. Respiratory System
15.1.2.3. Endocrine System
15.1.2.4. Muscular and Neurological System
15.1.2.5. 9.1.2.5 Ophthalmic System

15.2. Alteration of Gestational Age in the Foal
15.2.1. Premature, Dysmature and Stunted Foal
15.2.2. Cardiopulmonary Resuscitation

15.3. Failure of Immunity Transfer and Sepsis
15.3.1. Passive Immunity Transfer Failure. Causes
15.3.2. Neonatal Sepsis
15.3.3. Treatment, Management and Hospitalization of Septic Foals

15.4. Neurological Pathologies and Hospitalization of the Neurological Foal
15.4. 1 Hypoxic Ischemic Encephalopathy
15.4.2. Septic Encephalitis, Meningitis and Metabolic Encephalopathies
15.4.3. Congenital Neurological Pathologies
15.4.4. Hospitalization and Management of the Foal with Neurological Pathology

15.5. Respiratory Pathologies and Hospitalization of the Neonates Foal
15.5.1. Bacterial and Viral Pathologies
15.5.2. Rib Fractures
15.5.4. Acute Respiratory Distress
15.5.4. Diagnostic Imaging: Ultrasound and Radiology
15.5.5. Hospitalization and Monitoring of the Foal with Respiratory Pathology

15.6. Gastrointestinal and Hepatic Pathologies. Diagnosis and Monitoring
15.6.1. Bacterial and Viral Diarrhea
15.6.2. Meconium Impaction
15.6.3. Congenital Gastrointestinal Pathologies
15.6.4. Gastric Ulcers
15.6.5. Tyzzer's Disease
15.6.6. Equine Herpesvirus
15.6.7. Isoerythrolysis Neonatal

15.7. Musculoskeletal Pathologies in the Neonatal Foal
15.7.1. Vitamin E and Selenium Deficiency

15.7.2. Congenital Muscular Pathologies
15.8. Urinary and Endocrine Pathologies. Monitoring
15.8.1. Omphalophlebitis, Omphaloarteritis and Patent Urachus
15.8.2. Bladder Rupture
15.8.3. Monitoring of the Neonate with Urinary Pathologies.
15.8.4. Thyroid Alterations
15.8.4.1. Hypothyroidism
15.8.4.2. Systemic Disease Associated with Hypothyroidism
15.8.4.3. Monitoring of the Neonate with Thyroid Pathology
15.8.5. Somatotropic Axis Disorders
15.8.5.1. Hypoglycemia
15.8.5.2. Hyperglycemia
15.8.5.3. Monitoring of the Neonate with Lack of Maturation of the Endocrine System
15.9. Fluid Therapy and Nutrition Applicable to the Neonatal Foal
15.9.1. Types of Intravenous Catheters and Infusion Sets
15.9.2. Types of Fluid
15.9.3. Types of Colloids
15.9.4. Plasmotherapy and Hemotherapy
15.9.5. Total and Partial Parenteral Feeding
15.10. Pharmacology in Neonatology.
15.10.1. Antibiotherapy in Foals
15.10.2. Analgesia in Foals
15.10.3. Other Important Medications

Module 16. Intoxications. Ophthalmic Pathologies. Parasitosis in Equids. Donkey Medicine. Hospitalization and Medicine in Geriatric Patients

16.1. Intoxications, Treatment and Hospitalization I
16.1.1. Intoxications Causing Gastrointestinal Disorders
16.1.2. Intoxications Causing Alterations of the Central Nervous System
16.1.3. Intoxications Affecting the Cardiovascular and Lymphatic System
16.2. Intoxications, Treatment and Hospitalization II
16.2.1. Intoxications Leading to Liver Dysfunction
16.2.2. Intoxications Affecting the Urinary System
16.2.3. Intoxications that Cause Signs Related to the Epithelium
16.2.4. Intoxications that Cause Alterations of the Skeletal System and Body Condition
16.3. Ocular System I
16.3.1. Eye Examination
16.3.2. Alterations of the Eyelids, Nasolacrimal System and Orbit
16.3.3. Subpalpebral Catheter Placement
16.3.4. Hospitalization and Management of the Patients with Ocular Pathology
16.4. Ocular System II
16.4.1. Corneal Pathology
16.4.2. Medical and Surgical Therapies for Corneal Pathologies
16.5. Ocular System III
16.5.1. Uveal Pathologies
16.5.2. Crystalline Lens Pathologies
16.5.3. Retinal Pathologies
16.6. Parasitosis in Equids
16.6.1. Gastrointestinal Parasites
16.6.2. Respiratory Parasites
16.6.4. Antiparasitic Therapy
16.7. Donkey Pathologies
16.7.1. Hyperlipemia, Dysfunction of the Intermediate Part of the Pituitary, and Obesity
16.7.2. Pharmacological Differences with Equids
16.8. Most Frequent Pathologies in Geriatric Patients
16.8.1. Gastrointestinal Most Frequent Pathologies in Geriatric Patients
16.8.2. Cardiorespiratory Most Frequent Pathologies in Geriatric Patients
16.8.3. Endocrine Most Frequent Pathologies in Geriatric Patients
16.9. Notifiable Diseases
16.9.1. Most Common Notifiable Diseases Worldwide
16.9.2. Diagnostic Techniques
16.10. Methods of Control and Management of Infectious Diseases
16.10.1. Infectious Disease Management Facilities. Sanitary Barriers

16.10.2. Animal Isolation
16.10.3. Handling of Patients with Infectious Diseases and Personal Protective Equipment

Module 17. Foal Medicine and Surgery

17.1. Diagnostic Imaging of the Chest and Abdominal Cavity of the Foal
- 17.1.1. Diagnostic Imaging the Chest
  - 17.1.1.1. Technical Basis
    - 17.1.1.1.1. Radiology
    - 17.1.1.1.2. Ultrasound
    - 17.1.1.1.3. Computerized Tomography
  - 17.1.1.2. Thoracic Pathology
- 17.1.2. Diagnostic Imaging of the Abdomen
  - 17.1.2.1. Technical Basis
    - 17.1.2.1.1. Radiology
    - 17.1.2.1.2. Ultrasound
  - 17.1.2.2. Abdominal Pathology

17.2. Treatment of Septic Arthritis Umbilical Herniorrhaphy
- 17.2.1. Pathophysiology and Diagnosis of Synovial Infections in the Foal
- 17.2.2. Treatment of Septic Arthritis in the Foal
- 17.2.3. Etiopathogenesis and Diagnosis of Umbilical Hernias
- 17.2.4. Umbilical Herniorrhaphy: Surgical Techniques

17.3. Angular Deformities Treatment
- 17.3.1. Etiopathogenesis.
- 17.3.2. Diagnosis
- 17.3.3. Conservative Treatment
- 17.3.4. Surgical Treatment.

17.4. Flexural Deformities Treatment
- 17.4.1. Etiopathogenesis.
- 17.4.2. Diagnosis
- 17.4.3. Conservative Treatment
- 17.4.4. Surgical Management

17.5. Diagnosis of Developmental Diseases in the Foal Treatment of Epiphysitis and Hoof Management Guidelines for Healthy Foals
- 17.5.1. Etiopathogenesis, Diagnosis and Treatment of Different Forms of Epiphysitis, Osteochondrosis and Subchondral Cysts
- 17.5.2. Evaluation of Poise in the Healthy Foal
- 17.5.3. Hoof Trimming Guideline in the Healthy Foal

Module 18. Advanced Therapeutic Protocols and Toxicology

18.1. Sedation and Total Intravenous Anesthesia
- 18.1.1. Total Intravenous Anesthesia
  - 18.1.1.1. General Considerations
  - 18.1.1.2. Patient and Procedure Preparation
  - 18.1.1.3. Pharmacology
  - 18.1.1.4. Total Intravenous Anesthesia in Short-Term Procedures
  - 18.1.1.5. Total Intravenous Anesthesia in Procedures of Medium Duration
  - 18.1.1.6. Total Intravenous Anesthesia in Long-Term Procedures
- 18.1.2. Sedation for On-Station Procedures
  - 18.1.2.1. General Considerations
  - 18.1.2.2. Patient Preparation/Procedure
  - 18.1.2.3. Technique: Bolus and Continuous Intravenous Infusions
  - 18.1.2.4. Pharmacology
  - 18.1.2.5. Drug Combinations

18.2. Pharmacological Considerations in the Sport Horse
- 18.2.1. Equestrian Sports Regulation
- 18.2.2. Doping
  - 18.2.2.1. Definition
  - 18.2.2.2. Medication Control Objectives
  - 18.2.2.3. Sampling and Accredited Laboratories
  - 18.2.2.4. Classification of Substances
- 18.2.3. Types of Doping
- 18.2.4. Withdrawal Time

18.2.4.1. Factors Affecting Withdrawal Time
18.2.4.1.1. Detection Time
18.2.4.1.2. Regulatory Policies
18.2.4.1.3. Animal Disposal Rate
18.2.4.2. Factors to Consider in Determining Withdrawal Time
18.2.4.2.1. Dose Administered
18.2.4.2.2. Formulation
18.2.4.2.3. Route of Administration
18.2.4.2.4. Individual Pharmacokinetics
18.2.4.2.5. Sensitivity of Analytical Procedures
18.2.4.2.6. Sample Behavior Matrix
18.2.4.2.7. Environmental Persistence of Substances and Environmental Pollution

18.3. Adult Intensive Care
18.3.1. General Intensive Care Considerations
18.3.2. Intensive Care Procedures and Techniques
18.3.2.1. Vascular Access: Maintenance and Care
18.3.2.2. Arterial and Venous Pressure Monitoring
18.3.3. Cardiovascular Support
18.3.3.1. Shock
18.3.3.2. Supportive Drugs: Inotropes and Vasopressors
18.3.3.3. Support Strategies
18.3.4. Respiratory Support
18.3.4.1. Management of Respiratory Distress
18.3.5. Critically Ill Patient Nutrition
18.3.6. Neurological Patient Care
18.3.6.1. Medical and Supportive Management of the Neurological Horse
18.3.6.1.1. Trauma
18.3.6.1.2. Encephalopathies and Myeloencephalopathies
18.3.6.2. Specific Management of the Recumbent Horse

18.4. Euthanasia Procedures
18.4.1. General Considerations
18.4.1.1. Geriatric Horse
18.4.2. Mechanisms of action for Hypothermia.
18.4.3. Chemical Euthanasia Methods
18.4.4. Physical Euthanasia Methods
18.4.5. Euthanasia Protocol
18.4.6. Confirmation of Death

Module 19. Hospital Care of the Surgical Patient and Emergency Hospital Procedures

19.1. Care and Hospitalization of Patients with Wounds
19.1.1. Wounds Treated by First Intention
19.1.1.1. Complications
19.2.1. Wounds Treated by Second Intention
19.2.1.1. Complications
19.3.1. Topical Treatments, Dressings and Skin Grafts: What To Use? When?
19.4.1. New Therapies for Wound Healing: Laser, Cell Therapy, Radiofrequency, Ozone

19.2. Care and Hospitalization of Hoof Pathologies
19.2.1. Diagnostic Imaging Methods
19.2.1.1. Radiography and Ultrasound
19.2.1.2. Advanced Diagnostic Methods: CT, MRI
19.2.1.3. Venography
19.2.2. Footbaths, Poultices and Other Topical Medications
19.2.3. Fissures and Resections of Corneal Sheaths
19.2.4. Hospitalization of Horses with Laminitis
19.2.4.1. Management of Chronic Pain
19.2.4.2. Postoperative Care After Deep Digital Flexor Tendon Tenotomy
19.2.5. Most Common Horseshoes
19.2.6. Complications

19.3. Care and Hospitalization of Patients with Joint Pathologies. Fractures
19.3.1. Fundamentals of Immobilization of the Musculoskeletal System During Hospitalization.
19.3.2. Types of Bandages: Splints, Glass Fibers, etc.
19.3.3. Complications

19.4. Care and Hospitalization of Patients with Septic Synovial and Bone Structures
19.4.1. Synovial Fluid Collection and Monitoring
19.4.2. Monitoring by Imaging Techniques: Radiography and Ultrasound

19.4.3. Needle Washings. Washings with Arthroscopy
19.4.4. Regional Perfusion
19.4.5. Intrasynovial and Osseous Medication Update
19.5. Care and Hospitalization of Developmental Diseases in Foals
19.5.1. Angular Deformities
19.5.1.1. Radiological Monitoring by Angle Measurement
19.5.1.2. Rehabilitation Plans
19.5.1.3. Templates and Horseshoes
19.5.1.4. Post-Surgical Care: Bandages, Splints, Glass Fibers.
19.5.1.5. Complications
19.5.2. Flexural Deformities
19.5.2.1. Bandages and Monitoring
19.5.2.2. Rehabilitation Plans
19.5.2.3. Horseshoes

A comprehensive educational program, structured in well-developed didactic units, oriented to a learning process compatible with your personal and professional life"

06

Methodology

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

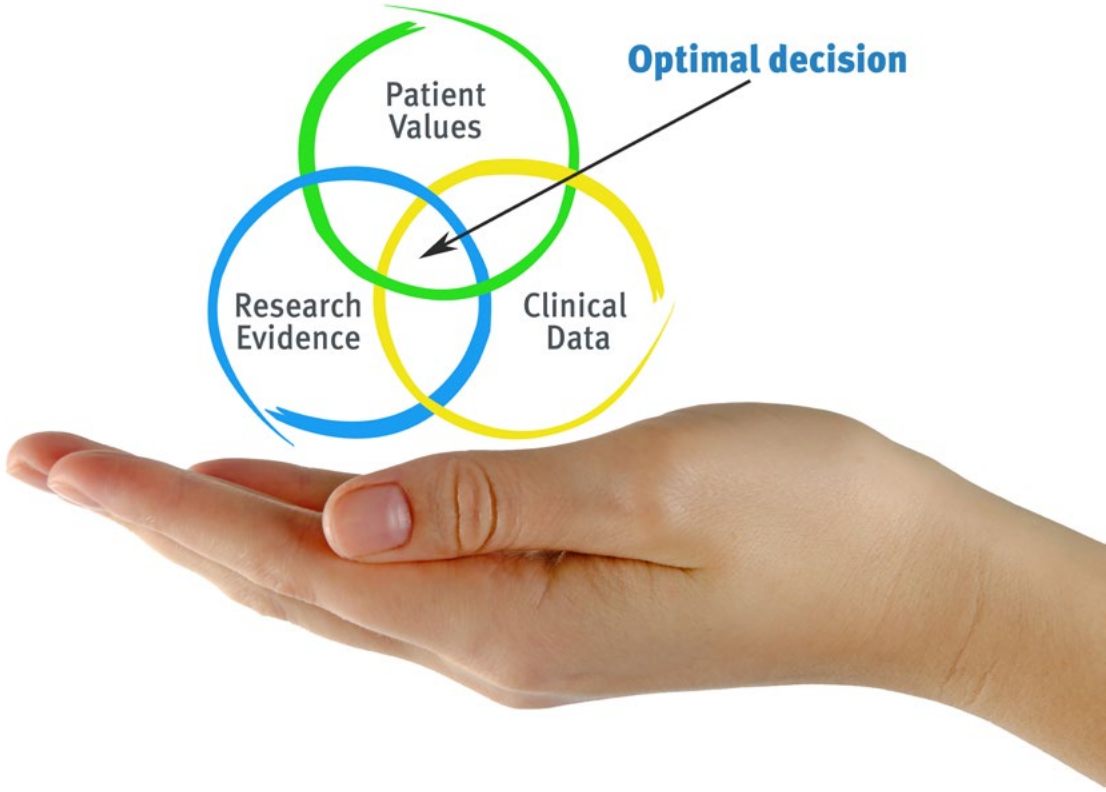
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.

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.

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:

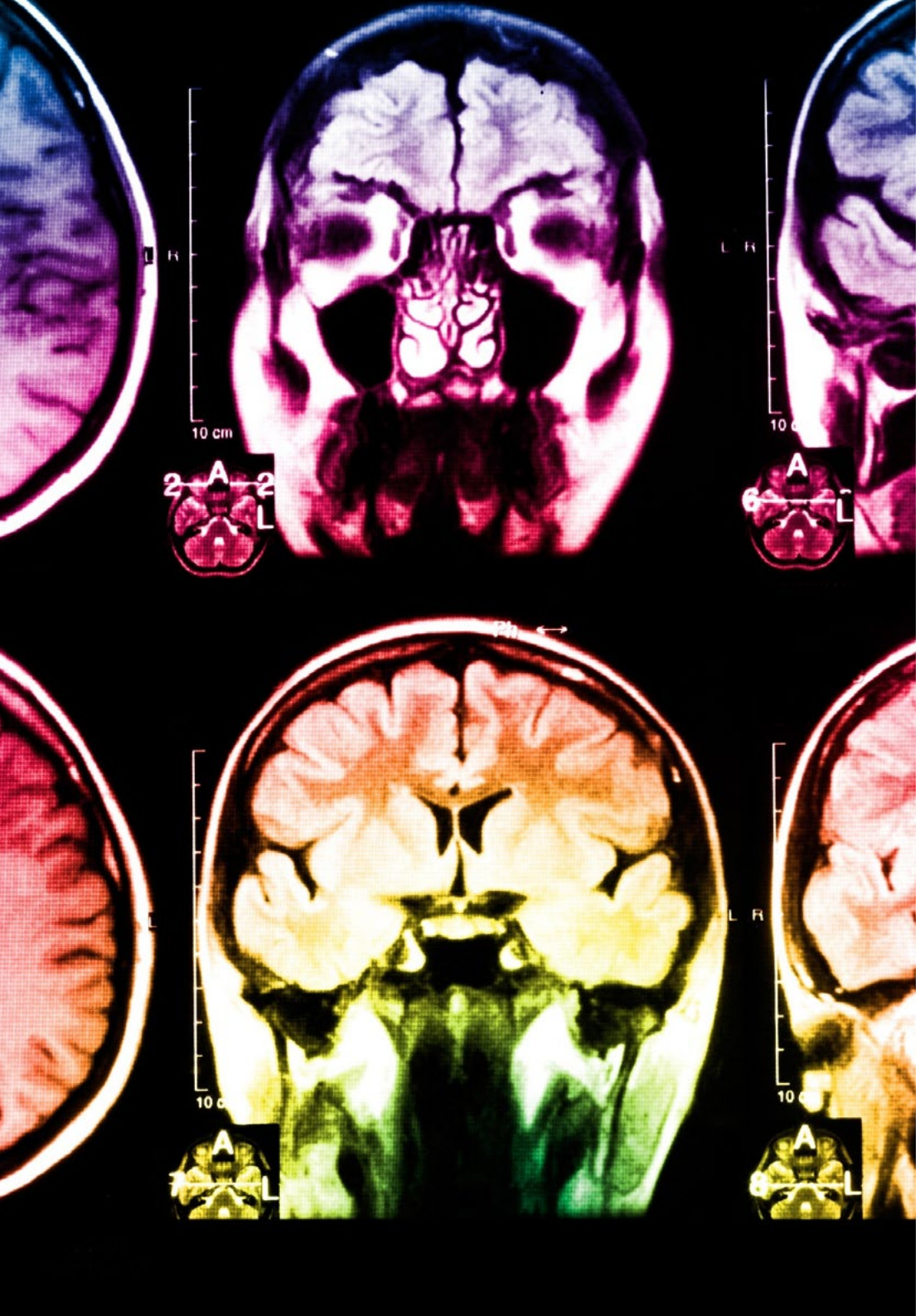
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to assess real situations and knowledge application.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real 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.

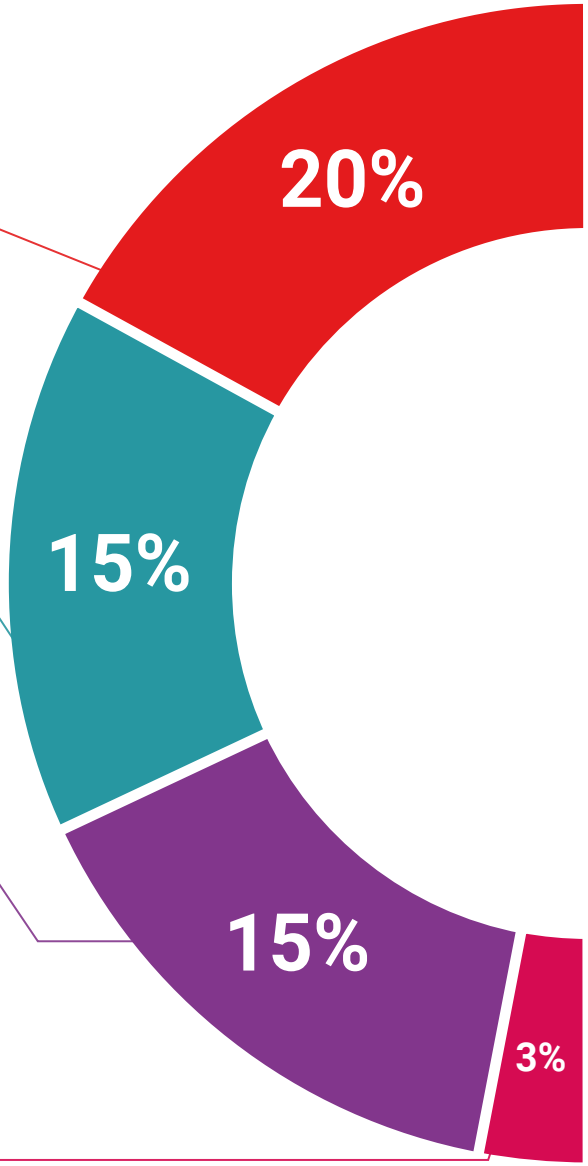
Interactive Summaries

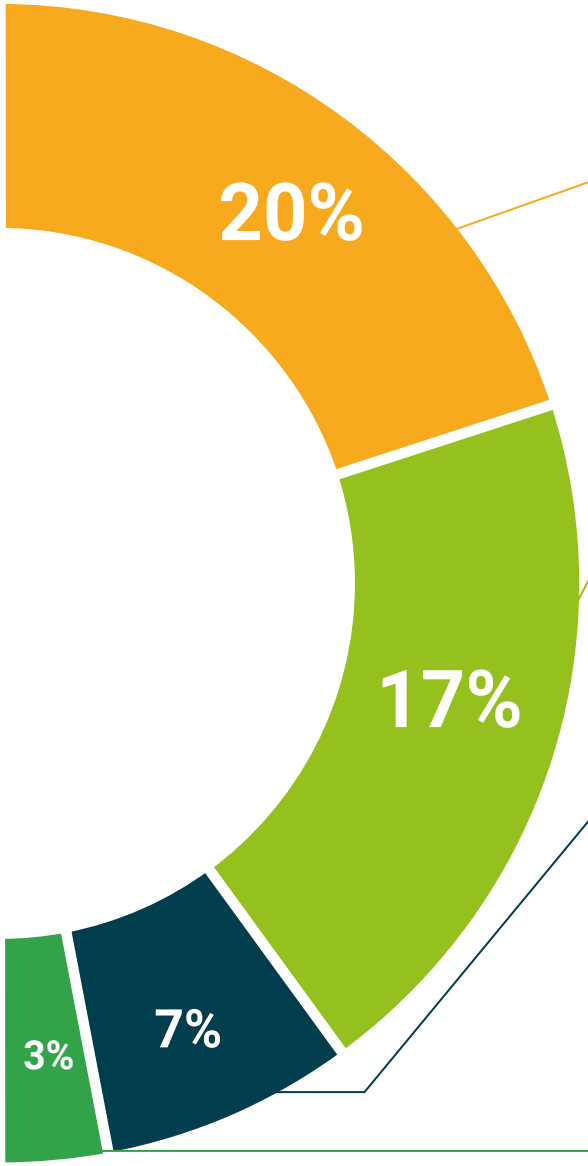
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Advanced Master's Degree in Equine Veterinary Medicine guarantees students, in addition to the most rigorous and up-to-date education, access to an Advanced Master's Degree's diploma issued by TECH Technological University.

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

This **Advanced Master's Degree in Equine Veterinary Medicine** 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 **Advanced 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 Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Advanced Master's Degree in Equine Veterinary Medicine**
Official N.º of Hours: **3,000 hours.**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C. _____, con documento de identificación nº_____

Por haber superado con éxito y acreditado el programa de

GRAND MASTER

en

Medicina Veterinaria Equina

Se trata de un título propio de esta Universidad con una duración de 3.000 horas, con fecha de inicio dd/mm/aaaa y fecha de finalización dd/mm/aaaa.

TECH es una Institución Particular de Educación Superior reconocida por la Secretaría de Educación Pública a partir del 28 de junio de 2018.

A 17 de junio de 2020

Mtra.Tere Guevara Navarro
Rectora

Este título propio se deberá acompañar siempre del título universitario habilitante expedido por la autoridad competente para ejercer profesionalmente en cada país. código único TECH: AFWOR23S techtitute.com/titulos


Grand Master en Medicina Veterinaria Equina

Distribución General del Plan de Estudios

Curso	Materia	Horas	Carácter
1º	introducción a la medicina hospitalaria	157	OB
1º	Problemas digestivos y hepáticos en el paciente hospitalizado	157	OB
1º	Aparato digestivo	157	OB
1º	Patologías cardiacas en pacientes hospitalizados	157	OB
1º	Patologías respiratorias en pacientes hospitalizados	157	OB
1º	Aparato cardio-respiratorio y vascular	157	OB
1º	Problemas neurológicos y musculares en el paciente hospitalizado	157	OB
1º	Aparato locomotor	157	OB
1º	Patologías del sistema genitourinario en el paciente hospitalizado, tratamiento y monitorización	157	OB
2º	Aparato reproductor y urinario	157	OB
2º	Alternaciones del sistema endocrino. Hospitalización de caballos con problemas dermatológicos	157	OB
2º	Patologías quirúrgicas de la piel y estructuras anejas	157	OB
2º	Patologías médicas de la piel. Sistema endocrino	157	OB
2º	Sistema hematopoyético, inmunología y nutrición	157	OB
2º	Patologías médicas y hospitalización en potros	157	OB
2º	Intoxicaciones. Patologías oftálmicas. Parasitosis en équidos. Medicina de burros. Hospitalización y medicina en pacientes geriátricos	161	OB
2º	Medicina y cirugía del potro	161	OB
2º	Protocolos terapéuticos avanzados y toxicología	161	OB
2º	Cuidados hospitalarios del paciente quirúrgico y procedimientos hospitalarios de urgencia	162	OB

Mtra.Tere Guevara Navarro
Rectora

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*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.

tech technological university

Advanced Master's Degree
Equine Veterinary Medicine

- Course Modality: **Online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Teaching Hours: **3,000 hours**

Advanced Master's Degree
Equine Veterinary Medicine

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