

# Hybrid Professional Master's Degree Equine Medicine and Surgery





## Hybrid Professional Master's Degree Equine Medicine and Surgery

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

Website: [www.techtute.com/us/veterinary-medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-equine-medicine-surgery](http://www.techtute.com/us/veterinary-medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-equine-medicine-surgery)

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# 01

# Introduction

Due to the large increase of equine owners in recent years, it is essential that the veterinarian specialized in Equine Medicine and Surgery is constantly updating their knowledge and skills, in order to provide quality patient care and to know and incorporate into daily practice the latest tools in the sector. For this reason, TECH offers this program so that the veterinary professional is trained in an increasingly demanded area in veterinary medicine: specialization in Equine Medicine and Surgery. Additionally, the student will have a training internship in a veterinary center in the field of horse health, which makes this hybrid learning syllabus a safe bet to boost the student's career.





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*A very complete specialization that will allow you to acquire advanced skills and knowledge in all areas of intervention of the veterinarian specialized in equines”*

Veterinarians face new challenges every day in treating their patients. Advances in this field bring with them new tools with which to diagnose and make the most accurate treatments in equids, so it is necessary that professionals are trained with programs like this Hybrid Professional Master's Degree.

The equine veterinary clinic encompasses numerous and complex specialties in continuous development that require a 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 skill in all respects.

The equine veterinarian's daily work is very demanding in terms of the number of working hours, both in terms of the volume of hours involved in ambulatory visits, the degree of personal dedication and the time required for the administrative management of their own company.

In today's labor market, obtaining an accredited qualification not only guarantees training as a specialist, but is also a source of prestige and recognition in the eyes of clients and colleagues.

In order to satisfy all these issues, the equine veterinarian needs a theoretical-practical program that is manageable and affordable to acquire.

For all these reasons, TECH presents this specialization that will allow you to develop, in a real patient and in a hospital setting with state-of-the-art resources, your maximum potential and growth in the area. You will approach real patients using the latest techniques based on scientific evidence and achieving results that would have been difficult to achieve before. Additionally, one of the main advantages of this program is the inclusion of a series of unique and exclusive Masterclasses, taught by an international figure of great relevance in the academic and clinical field of equine medicine. These will allow the student to delve into the most recent and important techniques at international level, taught by one of the most recognized experts in this field.

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

- ♦ Development of more than 120 clinical cases presented by experts in veterinary medicine and other specialties
- ♦ Its graphic, schematic and eminently practical contents are designed to provide scientific and health care information on those veterinary disciplines that are essential for professional practice
- ♦ Presentation of practical workshops on procedures and techniques
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Action protocols and clinical practice guidelines, which cover the most important latest developments in this specialist area
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ With a special emphasis on evidence-based veterinary and research methodologies in anesthesiology and pain management
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*Enrich your clinical practice in Equine Medicine and Surgery with the extensive Masterclass given by an international figure of great relevance”*

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*A specialization that will enable you to perform the activity of the veterinary surgeon, with the solvency of a high-level experienced professional”*

In this proposal of Master's degree, of professional character and hybrid mode, the program is aimed at updating veterinary professionals who develop their functions in the unit of Equine Medicine and Surgery, and that require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge in veterinary practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision making in patient management.

Thanks to its multimedia content elaborated with the latest educational technology, they will allow the veterinary professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Intensive Care units who also have extensive teaching experience.

*Join the veterinary elite with this high-level practical training and open new paths in your professional progress.*

*Specialize in Equine Medicine and Surgery to make more accurate diagnoses and perform successful surgical interventions.*



# 02

## Why Study this Hybrid Professional Master's Degree?

The veterinary sector demands more and more the preparation of professionals in terms of equine care, due to the high costs and difficult access to high quality processes and resources for the care of this animal population. For this reason, keeping up to date with the needs of the labor market and the reality of the social economy, TECH has designed this exclusive, innovative and dynamic program that offers the specialist the possibility to update their knowledge 100% online and then opt for practical training in a specific prestigious center, carefully chosen to provide the best possible teaching service. Thanks to this, the student will be guaranteed a high level of learning and usefulness for immediate application.





Why Study this Hybrid Professional | 09  
Master's Degree?

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*You will not find a program like it. You will specialize in Equine Medicine and Surgery from experts with an outstanding profile in the area and in a center of national or international prestige”*

### 1. Updating from the latest technology available

The area of Equine Medicine and Surgery has revolutionized the veterinary sector thanks to the latest advances in applied technology: MRI, laparoscopy or thoracoscopy, which came to improve the diagnosis of diseases that until now were very complicated for professionals. For this reason, and with the aim of bringing the specialist closer to this technology, TECH presents this program with which the professional will enter a cutting-edge clinical environment, accessing the latest technology in the field.

### 2. Gaining In-Depth Knowledge from the Experience of Top Specialists

The large team of professionals that will accompany the specialist throughout the entire practical period is a first-rate endorsement and a guarantee of unprecedented updating. With a specifically designated tutor, the student will be able to see real patients in a state-of-the-art environment, which will allow them to incorporate the most effective procedures and approaches in Equine Medicine and Surgery into their daily practice.

### 3. Entering First-Class Clinical Environments

TECH carefully selects all available centers for Internship Programs. Thanks to this, the specialist will have guaranteed access to a prestigious clinical environment in the area of Medicine and Equine Surgery. In this way, you will be able to see the day-to-day work of a demanding, rigorous and exhaustive sector, always applying the latest theses and scientific postulates in its work methodology.







#### 4. Combining the Best Theory with State-of-the-Art Practice

You will not find a program like it. TECH chooses the best content together with professional experts in the daily work of the specialist to develop an educational method that combines 100% online theory with a purely practical classroom space. Therefore, you will be put in front of state-of-the-art procedures in the field of Equine Medicine and Surgery for 3 weeks.

#### 5. Expanding the Boundaries of Knowledge

In different parts of the world you will find specialized centers with agreements established with TECH, to provide practical academic space in situ. This program breaks down educational boundaries because wherever you are, you can study 100% online and you can also choose where in the world you learn from the hands of the best professionals in a reference clinical veterinary center. An exclusive opportunity, only possible with this Hybrid Professional Master's Degree.

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*You will have full practical immersion  
at the center of your choice"*

# 03

## Objectives

Identify the applied anatomy and pathologies affecting the different structures of the horse is part of the objective of this program. Its design will allow students to update their knowledge and perfect their skills in Equine Medicine and Surgery. You will develop full powers in a field of animal medicine that is versatile, global and essential, guiding you towards the excellence of a sector in continuous technological adaptation. To this end, TECH establishes a series of general and specific objectives to fulfill future graduates' expectations.





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*You will learn to identify all the clinical signs associated with respiratory or cardiovascular disease in equids”*



## General Objective

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- The objective of this program is to update the professional in diagnostic and therapeutic procedures in general and digestive system surgery in an exclusively practical way, through a hospital stay designed with clinical and educational rigor, under the guidance of renowned professionals in a hospital center of the highest scientific quality and technological innovation

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*Through this program you will be able to do your internship in a hospital of the future, with the best technology and next to renowned professionals”*







## Specific Objectives

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### Module 1. 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 the infectious, infectious and parasitic diseases of the digestive tract and their and parasitic diseases of the digestive tract, as well as their various treatments
- ◆ Enhance knowledge, establish and develop the correct decision criteria to treat abdominal syndrome in the horse in the field or in case of requiring surgical treatment, to be able to correctly inform the owner and advise on the referral of cases to the hospital in case surgery is required

## Module 2. Cardio-Respiratory and Vascular System

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

## Module 3. Hematopoietic System, Immunology and Nutrition

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



**Module 4. Locomotor System**

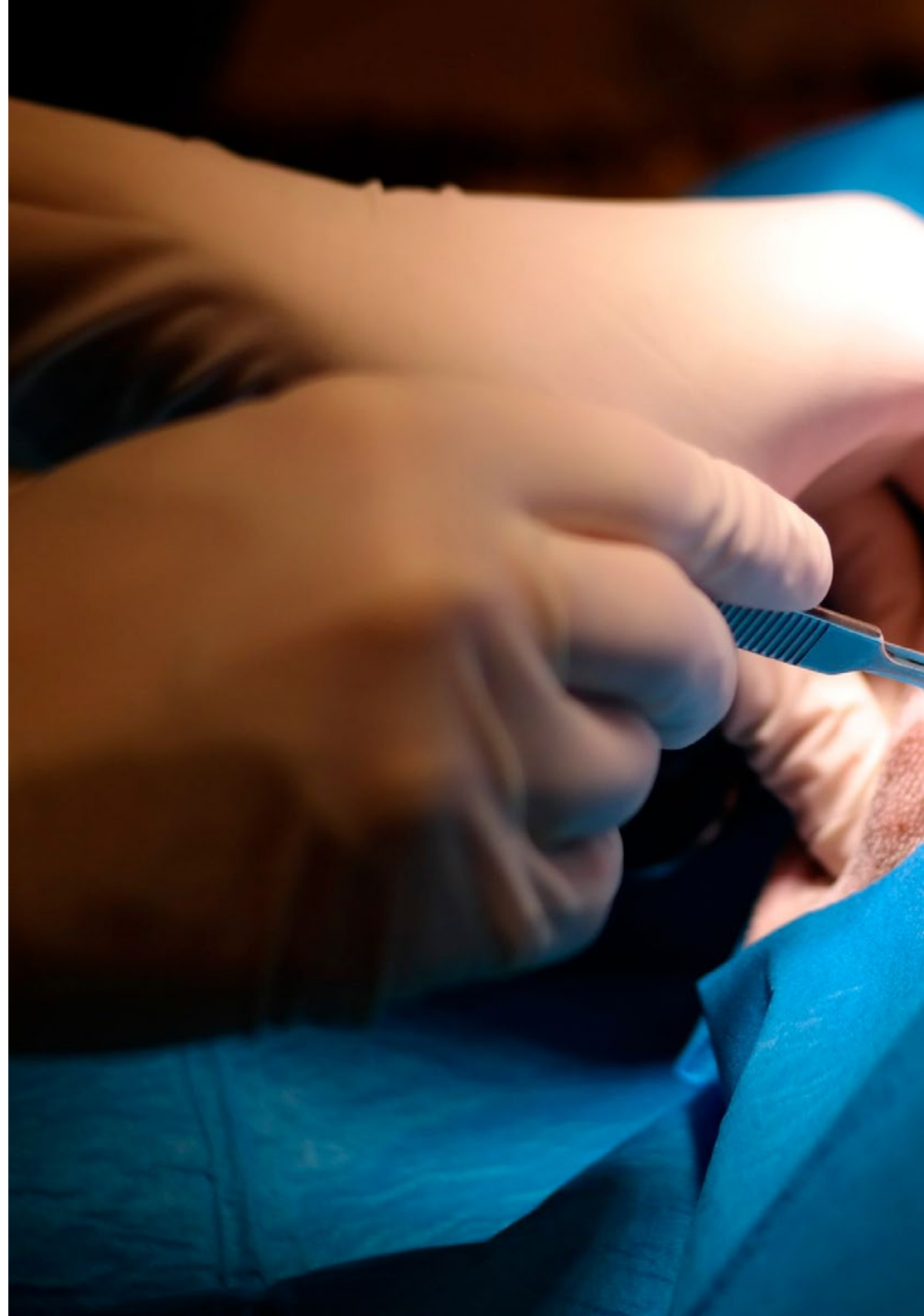
- ♦ Identify in depth the pathologies affecting the musculoskeletal system of the horse by types of pathologies of the different anatomical regions
- ♦ Master in depth the correct approach to the clinical case that may be presented
- ♦ Obtain and control the tools for the correct exploration of the animal 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

**Module 5. 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 and patterns of suture and needle and drainage models available to the clinician in the field
- ♦ Establish the different types and materials of bandages, both for wound treatment and immobilization. Select the appropriate dressing or bandage for each clinical situation
- ♦ Apply the different therapeutic guidelines and repair and other first aid procedures 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 perform joint lavage procedures and regional and intraosseous perfusion of antibiotics in the field
- ♦ Specify the use of the different tenorrhaphy techniques in order to treat damage and lacerations of tendon and/or ligament structures
- ♦ Present the different causes of exuberant granulation and its treatment
- ♦ Apply the different therapeutic guidelines in burns and abrasions of different types

### Module 6. Medical Pathologies of the Skin Endocrine System

- ◆ Identify the main pathologies affecting the skin
- ◆ Examine the origin of the problem and establish the prognosis of dermatitis
- ◆ Recognize the clinical and laboratory signs of the main dermatological diseases
- ◆ Identify the symptoms of bacterial and viral skin diseases and propose therapeutic options
- ◆ Determine the symptoms of skin diseases of fungal and parasitic origin and propose therapeutic options
- ◆ Establish the symptoms of allergic and immune-mediated skin diseases and propose therapeutic options
- ◆ Examine the symptoms of other skin diseases, as well as their prognosis and treatment options
- ◆ Identify and develop the clinical presentation, diagnosis and management of the main types of neoplasms affecting horses
- ◆ Generate advanced knowledge on the pathology, diagnosis and management of sarcoids, squamous cell carcinomas, melanocytic tumors, mastocytomas and lymphomas
- ◆ Examine recent developments in the therapy of cutaneous neoplasms in horses
- ◆ Develop advanced knowledge on the pathology, diagnosis and management of equine metabolic syndrome and dysfunction of the intermediate pituitary gland in horses
- ◆ Identify the processes that occur with alterations in thyroid hormone concentrations
- ◆ Determine the most common causes of alterations in calcium, phosphorus and magnesium levels in horses





## Module 7. Nervous System and Ophthalmology

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

### **Module 8. Reproductive and Urinary System**

- ♦ Increase knowledge of pathologies affecting the urinary system
- ♦ Recognize and establish protocols for the management of patients with acute renal failure and chronic renal failure
- ♦ Establish working protocols for patients with post-renal urinary tract pathology
- ♦ Develop the predisposing factors that may condition the appearance of these types of pathologies, as well as to increase knowledge on the relevance of prevention
- ♦ Develop treatment alternatives available to the ambulatory veterinary clinician
- ♦ Delve into the pathology of the testicles, adnexal glands and penis, as well as their respective treatments
- ♦ Improve the productive management of the subfertile stallion and mare
- ♦ Identify and assess possible anomalies in the horse's ejaculate, applying the necessary procedures to guarantee its quality
- ♦ Identify, treat and prevent parasitic and infectious pathologies of the equine reproductive system
- ♦ Develop the pathologies of the female during the mating period and their possible treatments
- ♦ Develop the pathologies that affect the female during the gestation period and their possible treatments
- ♦ Develop the pathologies that affect the female in the prepartum and postpartum period and their possible treatments
- ♦ Attend to the needs and demands of euthyroid delivery and placental assessment
- ♦ Develop the procedures involved in the care of dystocic labor and the performance of fetotomy
- ♦ Develop procedures that include the resolution of possible injuries associated with labor and delivery, such as correction of rectovestibular fistulas, reconstruction of external lacerations and repair of the perineal body

### **Module 9. Foal Medicine and Surgery**

- ♦ Identify the neonatal patient with abnormal behaviors indicative of disease
- ♦ Establish lines of action for neonatal patients with sepsis, based on severity
- ♦ Determine work protocols for patients with symptoms of neonatal asphyxia syndrome
- ♦ Recognize the patient with cardio-respiratory symptomatology, being able to issue prognoses that determine their viability
- ♦ Develop field stabilization protocols for patients with bladder rupture or persistent urachus
- ♦ Identify the difference in diagnostic test results between neonates and adults
- ♦ Determine the use of diagnostic imaging tools that can be used in the field to diagnose pathologies in the foal, both in the neonatal and pediatric period. Use these methods accurately to diagnose and assess the different pathologies that may occur in these stages
- ♦ Develop techniques for the examination, diagnosis and parenteral and local treatment by joint lavage of septic arthritis in the neonate
- ♦ Deploy techniques that could be performed in the field to solve surgical pathologies of the growing foal, such as umbilical hernia correction
- ♦ Compile knowledge of angular and flexural deformities of the foal
- ♦ Develop different treatments and establish specificities according to patient age and the anatomical region affected
- ♦ Detail the medical treatments and application of resins, splints and orthopedic hardware used in the treatment of angular and flexural deformities
- ♦ Specify the techniques for delaying and stimulating bone growth used in the surgical treatment of angular deformities
- ♦ Determine the desmotomy and tenotomy techniques used in the treatment of flexural deformities
- ♦ Establish an appropriate methodology for the identification, treatment and prognostication of osteochondral injuries and subchondral bone cysts



## Module 10. Advanced Therapeutic Protocols and Toxicology

- Analyze the new alternatives in terms of drugs used in sedation and anesthesia for outpatient use, as well as to delve into the most established protocols in order to optimize this type of procedures
- Prepare the clinician in effective and dynamic decision making when dealing with a patient with a serious systemic condition, in order to ensure diagnoses and treatments that ensure patient stabilization despite non-hospital conditions
- Enable the clinician in the correction of hydroelectrolyte and acid-base imbalances to ensure the reversal of hemodynamic alterations
- Ensure advanced knowledge of equine pain management with the latest medications
- Examine the characteristics and special considerations to be taken into account when applying pharmacological treatments in the sport horse, with special emphasis on avoiding problems in the face of possible positive results in control tests for biological substances in competitions
- Generate advanced knowledge on equine toxicology, ensuring education for the recognition of toxic symptoms, as well as the identification of plants and agents harmful to equids
- Analyze euthanasia procedures in depth. The clinician must be able to act correctly with patients in these last moments of their life trajectory, applying euthanasia in the most humane way possible in case of last necessity

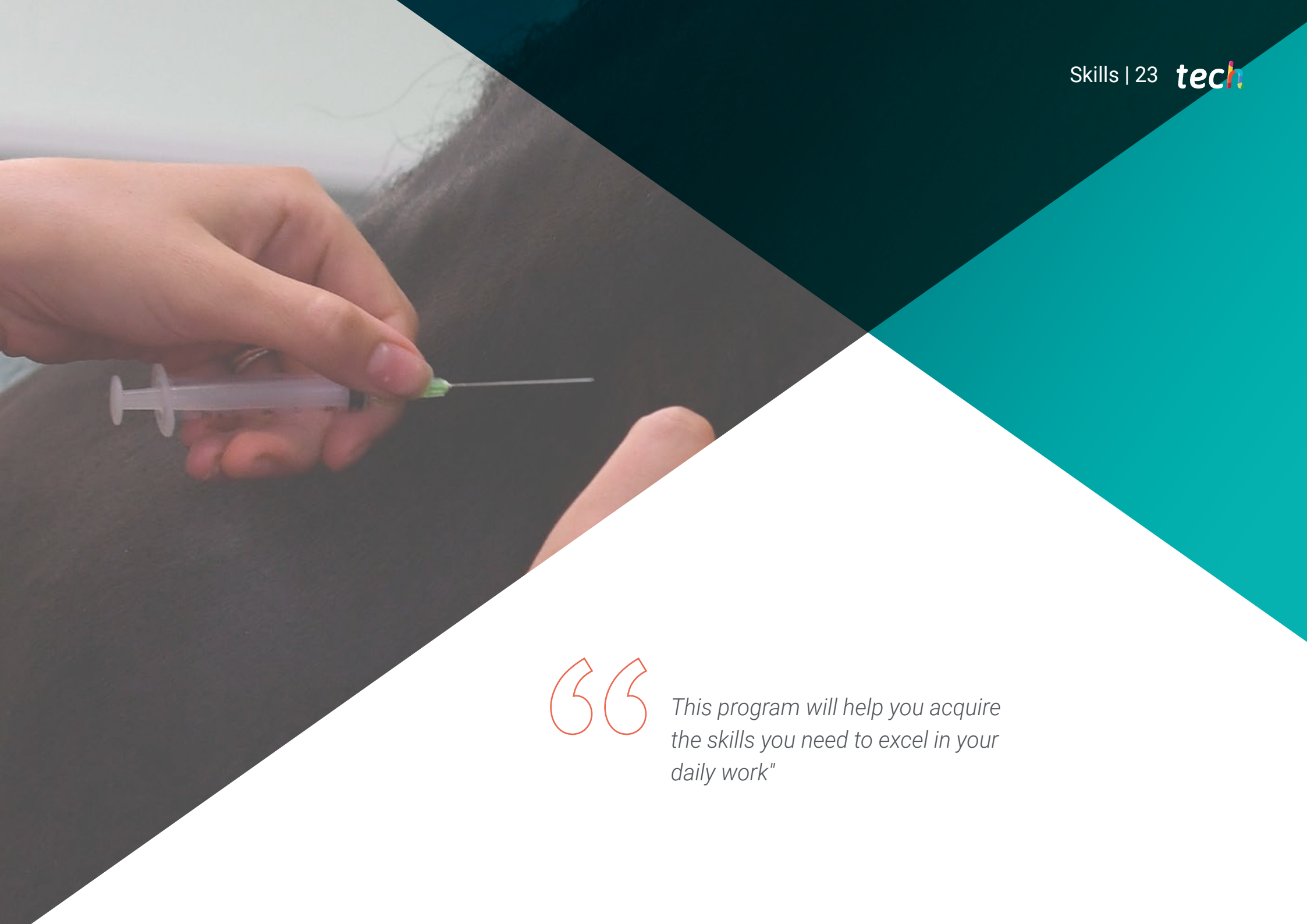


*Enroll now and advance in your field of work with a comprehensive program that will allow you to put into practice everything you have learned"*

# 04 Skills

By taking this Hybrid Professional Master's Degree in Equine Medicine and Surgery, the professional will be able to develop new skills and abilities in this area of specialization that will boost them professionally, due to their high level of knowledge. This complete program will prepare you to perform your career in the field of advanced diagnosis and pharmacological or surgical treatment according to each case. The most experienced teachers will accompany you and will pour their teachings in a practical way in the student so you will acquire much easier the necessary skills to achieve success in the sector.





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*This program will help you acquire the skills you need to excel in your daily work”*



## General Skills

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

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*This program is a unique opportunity to expand your talent as an expert in Equine Medicine and Surgery”*







## Specific Skills

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- ◆ 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
- ◆ 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





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



05

# Course Management

Within the concept of total quality of our course, we are proud to put at your disposal a teaching staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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*The most outstanding professionals will accompany you throughout the learning process, both in the virtual part and in the practical training”*

## International Guest Director

As one of the foremost veterinary surgeons caring for equine patients, **Doctor Andy Fiske-Jackson** holds the position of **Associate Director of the Royal Veterinary College Equine** in the United Kingdom. It is one of the leading institutions in the care of equine patients as well as in the development, education and innovation in the **veterinary field**. This has allowed him to develop in a privileged environment, even receiving the James Bee Educator Awards for excellence in educational work.

In fact, **Doctor Andy Fiske-Jackson** is also part of the surgical team at Equine Referral Hospital, focusing his work on **orthopedic and soft tissue surgery**. Therefore, his main areas of approach are the attention to cases of low performance, back pain, dental and sinus issues, tendinopathies of the digital flexor tendon and Regenerative Medicine.

In terms of **research**, his work focuses on diagnostic techniques of **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

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- ♦ 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 from the University of Liverpool
- ♦ Master's Degree in Veterinary Medicine from the Royal Veterinary College

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

## Management



### Dr. Varela del Arco, Marta

- Clinical Veterinarian Specialist in Equine Medicine, Surgery and Sports Medicine
- Head of the Large Animal Department at the Complutense Clinical Veterinary Hospital
- Associate Professor of the Department of Animal Medicine and Surgery at the Complutense University of Madrid
- Head of the Large Animal Department at the Complutense Clinical Veterinary Hospital
- Associate Professor of the Department of Animal Medicine and Surgery at the Complutense University of Madrid
- Teacher in different graduate and postgraduate courses, university specialization programs and master's degrees
- Director of TFG in the Veterinary Degree and as a member of the tribunal of different doctoral theses
- PhD in Veterinary from the Complutense University of Madrid
- Spanish Certificate from Equine Clinic (CertEspCEq)



### Dr. De la Cuesta Torrado, María

- Veterinarian with a Clinical Specialty in Equine Internal Medicine
- Associate Professor of the Department of Equine Medicine and Surgery at the CEU Cardenal Herrera University
- PhD in Advanced Studies from the Complutense University of Madrid
- Master's Degree in Equine Internal Medicine from the Alfonso X el Sabio University
- Founder of MC Veterinaria
- Members: Organizing Committee of the 12th European College of Equine Internal Medicine Congress, Board of Directors of the Spanish Society of Ozone Therapy, Commission of Equine Clinicians of the Official College of Veterinarians of Valencia, Spanish Association of Veterinarians Specialists in Equines (AVEE), Scientific Committee and Coordinator of courses and congresses in the area of Ozone Therapy, supported by continuing education credits granted by the National Health System of Spain



## Professors

### Dr. Aguirre Pascasio, Carla

- ♦ Veterinary specialist in equine clinical care and soft tissue surgery
- ♦ PhD in Veterinary Medicine from the University of Murcia
- ♦ Postgraduate degree in Equine Physiotherapy from the University of Barcelona
- ♦ Master's Degree in Business and Administration (MBA) from ENAE Business School, Murcia
- ♦ Certified in Internal Medicine by the Royal Veterinary College of London and the University of Liverpool
- ♦ Certified in Soft Tissue Surgery by the Royal Veterinary College of London and by the University of Liverpool
- ♦ Spanish Certificate in Equine Clinic by the Spanish Veterinary Council
- ♦ Board Eligible in the ECEIM (European College of Equine Internal Medicine)
- ♦ Fellowship at Casal do Rio Equine Hospital

### Dr. Alonso de Diego, María

- ♦ Specialist in the Equine Internal Medicine Service of the Clinical Veterinary Hospital of the Alfonso X El Sabio University
- ♦ Associate Professor of the Faculty of Veterinary Medicine of the Alfonso X El Sabio University
- ♦ Mobile equine clinic veterinarian
- ♦ Residency at the Veterinary Clinical Hospital of the Complutense University of Madrid
- ♦ Training stays in several hospitals in Kentucky in the area of Equine Internal Medicine
- ♦ Spanish Certificate in Equine Clinic
- ♦ Member of: Association of Equine Veterinarians, Spanish Society of Ozone Therapy

### Dr. Barba Recreo, Martha

- ♦ Head of the Equine Internal Medicine Service at the Clinical Veterinary Hospital of the CEU Cardenal Herrera University
- ♦ Mobile equine veterinary clinic in Gres-Hippo
- ♦ Associate Professor of the Department of Animal Medicine and Surgery of the Faculty of Veterinary Medicine of the CEU Cardenal Herrera University
- ♦ Professor and specialist veterinarian in the Equine Internal Medicine Service and research associate at the University of Glasgow
- ♦ Professor, researcher and clinical veterinarian in the Equine Internal Medicine Department Equine of the Faculty of Veterinary Medicine of the University CEU Cardenal Herrera
- ♦ Ph.D. in Biomedical Sciences from Auburn University
- ♦ Diploma of the American College of Internal Medicine in Large Animals
- ♦ Rotating internship in Equine Medicine and Surgery at the University of Lyon
- ♦ Residency in Equine Internal Medicine in Alabama

### Dr. Benito Bernáldez, Irene

- ♦ Veterinarian in charge of the Reproduction, Ophthalmology and Nutrition Service of MC Veterinaria
- ♦ Degree in Veterinary Medicine from the University of Extremadura
- ♦ Internship in Equine Medicine and Surgery at the Clinical Veterinary Hospital of the Autonomous University of Barcelona
- ♦ Professional internships through the Quercus Scholarship (Leonardo Da Vinci Program) for graduates of the University of Extremadura
- ♦ Erasmus Internship at the Equine Hospital of the University of Bristol
- ♦ Online training course on administrative activities in customer relations and administrative management given by La Glorieta Academy
- ♦ Attended the courses of Ozone Therapy in Equids coordinated by María de la Cuesta and organized by the SEOT (Spanish Society of Ozone Therapy)

**Dr. Carriches Romero, Lucía**

- ♦ Outpatient veterinary clinic specialist in equine Medicine, Surgery, Emergencies and Reproduction
- ♦ Collaborating Professor in Practical Teaching, Department of Animal Medicine and Surgery from the Complutense University of Madrid
- ♦ External collaborating veterinarian hired at the Clinical Veterinary Hospital
- ♦ Degree in Veterinary Medicine from Alfonso X El Sabio University
- ♦ Rotating and Advanced Internships for Equine Specialization at the Complutense Clinical Veterinary Hospital
- ♦ Attendance and publication of posters in national and international congresses

**Dr. Cervera Saiz, Álvaro**

- ♦ Equine clinical veterinarian in ambulatory service in MC Equine Veterinary
- ♦ Internship teacher during the internship at the University CEU Cardenal Herrera
- ♦ Scholarship Researcher in the laboratories of the Faculty of Veterinary and Experimental Sciences from the Catholic University of Valencia San Vicente Martir
- ♦ Graduate in Veterinary Medicine from the Catholic University of Valencia
- ♦ Attendance to specific courses and conferences in the equine area for HUMECO group
- ♦ Internship in Equine Medicine and Surgery at the Clinical Veterinary Hospital of the CEU Cardenal Herrera University

**Dr. Domínguez Gimbernat, Mónica**

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

**Dr. Forés Jackson, Paloma**

- ♦ Veterinarian specialized in Equine Clinic and Biopathology
- ♦ Specialist in the Department of Animal Pathology II of the Faculty of Veterinary Medicine at the Complutense University of Madrid
- ♦ Vice-Dean of Students and Professional Orientation of the Faculty of Veterinary Medicine at the Complutense University of Madrid
- ♦ Professor of the Department of Animal Medicine and Surgery at the Complutense University of Madrid
- ♦ Doctorate in Veterinary Medicine from the Complutense University of Madrid
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Stay in College of Veterinary Medicine, Department of Large Animal Sciences, Gainesville University Florida
- ♦ Member of the Equine Medicine Service of the Complutense Clinical Veterinary Hospital

**Dr. Gómez Lucas, Raquel**

- ♦ Head of the Sports Medicine and Diagnostic Imaging Service of the Large Animal Area of the Clinical Veterinary Hospital of Alfonso X el Sabio University
- ♦ Expert in Sports Medicine in Horses at the Veterinary Clinical Hospital of the Alfonso X el Sabio University
- ♦ Professor of the Veterinary Degree at the Alfonso X el Sabio University, with teaching experience in Diagnostic Imaging, Internal Medicine and Equine Applied Anatomy
- ♦ Professor of the Veterinary Degree at the Alfonso X el Sabio University, with teaching experience in Diagnostic Imaging, Internal Medicine and Equine Applied Anatomy
- ♦ Responsible for the Postgraduate Professional Master's Degree in Sports Medicine and Equine Surgery from the Alfonso X el Sabio University
- ♦ PhD in Pharmacodynamics. from CEU Cardenal Herrera University
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Diploma in Equine Sports Medicine and Rehabilitation from the American College

**Dr. Santiago Llorente, Isabel**

- ♦ Chief of Equine Internal Medicine at the Complutense Clinical Veterinary Hospital
- ♦ Member of the Anesthesia Department at the Complutense Clinical Veterinary Hospital from the Complutense University of Madrid
- ♦ Practical teaching at the Department of Animal Medicine and Surgery of the Complutense University of Madrid
- ♦ Doctorate in Veterinary from the Complutense University of Madrid
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Professor at Lusófona University Lisbon, Portugal
- ♦ Member of the Association of Equine Veterinary Specialists (AVE)

**Dr. Goyoaga Elizalde, Jaime**

- ♦ Head of the Equine Surgery Service of the Complutense Clinical Veterinary Hospital
- ♦ Director and Veterinarian at Jaime Goyoaga Equine Clinic SLP
- ♦ Professor in the Master's Degree in Animal Medicine, Health and Improvement: Diagnostic Imaging
- ♦ Professor in Expert in Bases of Physiotherapy and Animal Rehabilitation from UCM
- ♦ Co-director and Professor of the Master's Degree Equine Medicine and Surgery from Improve International
- ♦ Associate Professor in the Department of Animal Medicine and Surgery at the Faculty of Veterinary Medicine of the 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
- ♦ Accreditation Spanish Certificate in Equine Clinic (CertEspCEq)
- ♦ FE Veterinarian

**Dr. Iglesias García, Manuel**

- ♦ Clinical Veterinarian and Surgeon at the Veterinary Clinical Hospital of the University of Extremadura
- ♦ Director of TFG in the Veterinary Degree at the University of Extremadura
- ♦ Collaboration in the teaching of veterinary interns and undergraduate students during the Master's Degree in Equine Surgery in the University of Extremadura
- ♦ Professor of the Master's Degree in Large Animal Boarding at the University of Extremadura
- ♦ PhD in Veterinary Medicine from Alfonso X El Sabio University
- ♦ Master's Degree in Equine Surgery and obtained the title of General Practitioner in Equine Surgery from the European School of Veterinary Postgraduate Studies
- ♦ Master's Degree in Equine Surgery at the Veterinary Hospital of Alfonso X el Sabio University
- ♦ Spanish Certificate in Equine Clinic (CertEspCEq)

**Dr. León Marín, Rosa**

- Clinical veterinarian specialized in Equine Dentistry
- 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
- Professor in postgraduate courses in Veterinary Rehabilitation at the Equine Clinic
- Doctorate in Veterinary from the Complutense University of Madrid
- Course of Sports Technician in Equitation of the Equestrian Federation of Madrid
- Training Course for Professionals in the Handling of Racehorses
- Expert Course in Therapeutic Riding and Expert Course in the Basis of Physiotherapy and Animal Rehabilitation from the Faculty of Veterinary Medicine of the Complutense University of Madrid

**Dr. Rodríguez Hurtado, Isabel**

- Head of Service of Large Animals at the Veterinary Hospital of the Alfonso X el Sabio University
- Professor and Coordinator of the subject Medical Pathology and Nutrition of the Veterinary Medicine Degree at Alfonso X el Sabio University
- Professor of the Postgraduate Master's Degree in Equine Internal Medicine at the Alfonso X el Sabio University
- Responsible for area of large animals at the Clinical Veterinary Hospital
- PhD in Veterinary Medicine from Alfonso X El Sabio University
- Postgraduate Certificate from the American College of Veterinary Internal Medicine
- Internship and Residency in Equine Internal Medicine at Auburn University
- Master's Degree in Biomedical Sciences from Auburn University
- Master's Degree in Research Methodology in Health Sciences from the Alfonso X el Sabio University





**Dr. López San Román, Javier**

- ◆ Clinical member of the Equine Surgery Service of the Complutense Clinical Veterinary Hospital
- ◆ Professor of the Department of Animal Medicine and Surgery of the Complutense University of Madrid and deputy director of the Department
- ◆ Assistant Professor of LRU University School
- ◆ He has taught at national universities such as: Las Palmas de Gran Canaria, Córdoba and Extremadura, and international universities such as: Trás-os-Montes e Alto Douro University, National Veterinary Lyon, National University of Litoral from Argentina
- ◆ Professor in different undergraduate and postgraduate courses, programs and master's degrees, both national and international programs and masters of university specialization, both national and international, and Coordinator of different subjects and courses in the Veterinary Degree
- ◆ Reviewer of scientific articles in several journals indexed in the Journal Citation Report
- ◆ Deputy Director of the Department of Animal Medicine and Surgery, Complutense University of Madrid
- ◆ PhD in Veterinary from the Complutense University of Madrid
- ◆ Certified by the European College of Equine Veterinary Surgery

**Dr. Roquet Carne, Imma**

- ◆ Equine Veterinary Surgeon
- ◆ Veterinary Surgeon in private practice of Equine Medicine and Surgery
- ◆ Surgeon and Clinical Veterinarian in the Department of Large Animals at the Clinical Veterinary Hospital
- ◆ Surgeon in hospitals and horse clinics in Europe
- ◆ Author or co-author of several publications on Equine Surgery
- ◆ Teacher in undergraduate and postgraduate studies related to medicine
- ◆ Degree in Veterinary Medicine, Autonomous University of Barcelona
- ◆ Master's Degree in Veterinary Science from the University of Saskatchewan

**Dr. Manso Díaz, Gabriel**

- ◆ Clinical veterinarian, member of the Diagnostic Imaging Service at Complutense Veterinary Clinical Hospital
- ◆ Assistant Professor of the Department of Animal Medicine and Surgery at the Complutense University of Madrid
- ◆ Collaborator in practical teaching in the Department of Animal Medicine and Surgery at the Complutense University of Madrid
- ◆ Regular speaker at courses, workshops and congresses in the field of Equine Diagnostic Imaging
- ◆ PhD in Veterinary from the Complutense University of Madrid
- ◆ Degree in Veterinary Medicine from the Complutense University of Madrid
- ◆ Large Animal Diagnostic Imaging Resident (ECVDI) at the Royal Veterinary College Equine Practice and Referral Hospital
- ◆ Diploma by the European College of Veterinary Diagnostic Imaging (ECVDI) in the Specialty of Large Animals

**Dr. Villalba Orero, María**

- ◆ Scientific Advisor on cardiovascular and pulmonary ultrasound at the National Center for Cardiovascular Research
- ◆ Head and Founder of Equine Cardiology MVO
- ◆ Head of Equine Anesthesia Service at Asurvet Equidos
- ◆ 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 by the European School of Veterinary Postgraduate Studies (ESVPS)

**Dr. Marín Baldo Vink, Alexandra**

- ♦ Head of the Large Animal Hospitalization Service at the Clinical Veterinary Hospital of Alfonso X el Sabio University
- ♦ Professor at the Faculty of Veterinary Medicine, Alfonso X El Sabio University
- ♦ Theoretical and practical teaching related to the Equine Species of the subjects: Parasitic Diseases, Propaedeutics, Medical Pathology and supervised practices
- ♦ Clinical Propedeutics Course Coordinator
- ♦ Equine Hospitalization Service at the Clinical Veterinary Hospital of the University Alfonso X El Sabio
- ♦ Management of Final Degree Projects of students at the Alfonso X el Sabio University
- ♦ Training Stays in Several Area of Large Animals Hospitals in Spain
- ♦ Diploma of Advanced Studies in Animal Medicine and Reproduction from the University of Murcia
- ♦ Fellowship in the Department of Equine Surgery and Large Animals at the Veterinary Hospital from Murcia University
- ♦ Scientific Publications in the field of Equine Internal Medicine

**Dr. Martín Cuervo, María**

- ♦ Head of the Internal Medicine Department of the Clinical Veterinary Hospital at the University of Extremadura
- ♦ Major Species Researcher
- ♦ Associate Professor of the Department of Animal Medicine and Surgery, from the University of Extremadura
- ♦ PhD in Veterinary Medicine by the Extremadura University
- ♦ Degree in Veterinary Medicine from the University of Córdoba
- ♦ Veterinary FEI
- ♦ First prize in the IV edition of the awards of the Royal Academy of Veterinary Science and the Tomas Pascual Sanz Institute
- ♦ Foundation Prize of Obra Pía de los Pizarro of the XLVI Historical Colloquiums of Extremadura
- ♦ Member of European Board of Veterinary Specialization (EBVS)
- ♦ European College of Equine Internal Medicine (ECEIM)
- ♦ Spanish Association of Equine Veterinary Specialists (AVEE)

**Dr. Muñoz Morán, Juan Alberto**

- ♦ Head of Equine Surgery at the Sierra de Madrid Veterinary Hospital
- ♦ Editor of the journal of Equine Veterinary Medicine and Surgery, Equinus
- ♦ Equine surgery clinician at the Montreal Veterinary University
- ♦ Equine surgery clinician at the Veterinary University of Lyon
- ♦ Partner Surgeon at the Veterinary Clinic of Grand Renaud
- ♦ Surgeon at the Aznalcóllar Equine Hospital
- ♦ Professor and Coordinator of several university programs, both theoretical and practical, at the Pretoria Veterinary University and at the Alfonso X el Sabio University
- ♦ Responsible for the Postgraduate course of Sports Medicine and Equine Surgery at the Alfonso X el Sabio University
- ♦ PhD of Veterinary Science from the Complutense University of Madrid
- ♦ Graduate of the European College of Veterinary Surgeons
- ♦ Diploma in Experimental Animals Category C from the University of Lyon
- ♦ Master's Degree in Veterinary Medicine Sciences from the Alfonso X El Sabio University
- ♦ Residency in Large Animal Surgery at the Veterinary University of Lyon
- ♦ Internship in Equine Surgery at London Equine Hospital
- ♦ Internship in Equine Medicine and Surgery at the Veterinary University of Lyon
- ♦ Member of the Examination Committee of the European College of Veterinary Surgeons

**Dr. Gimeno Suarep, Sergio**

- ♦ Specialized Veterinarian in Sports Medicine and Rehabilitation
- ♦ Veterinarian in charge of the Sports Medicine Service in MC Veterinaria
- ♦ Associate Professor at the CEU Cardenal Herrera University
- ♦ Veterinary Intern at the Reference Hospital of La Equina
- ♦ Degree in Veterinary Medicine at CEU Cardenal Herrera University
- ♦ Endurance Veterinary Treating Official 2, Fédération Equestre Internationale (FEI)
- ♦ Official Veterinarian 2, Fédération Equestre Internationale (FEI)
- ♦ Spanish Certificate in Equine Clinic by the General Council of Veterinary Associations of Spain
- ♦ Radiodiagnostic Facility Manager at TÜV NORD GROUP
- ♦ Permitted Treating Veterinarian, Fédération Equestre Internationale (FEI)
- ♦ Function C in Animal Experimentation by CEU Cardenal Herrera University



*You will specialize with the elite in the veterinary field. You will be tutored by professionals specialized in Equine Medicine and Surgery with years of experience in the sector"*



# 06

## Educational Plan

This program is structured in 10 theoretical modules of the best content, designed by professionals in the field of Equine Medicine and Surgery, with extensive experience and recognized prestige in the profession. Its effectiveness is guaranteed by the volume of cases reviewed, studied and diagnosed, and with a wide mastery of new technologies applied to veterinary medicine. The student will enjoy an innovative, agile and dynamic method that will facilitate the assimilation of the concepts. Additionally, to complete the program, students will have a 100% face-to-face internship period, where they will verify everything they have learned from the first day of the course of this Hybrid Professional Master's Degree.





“

*The most modern study methodology is available in this program. Decide where, how and when to study with your favorite digital device and also enjoy a face-to-face internship at a nationally or internationally renowned center”*

## Module 1. Digestive System

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



- 1.6. Small Intestine Diseases
  - 1.6.1. Simple Obstruction
  - 1.6.2. Proximal Enteritis
  - 1.6.3. Inflammatory Bowel Disease
  - 1.6.4. Intestinal Lymphoma
  - 1.6.5. Strangulating Alterations
  - 1.6.6. Small Intestinal Alterations
- 1.7. Large Intestinal Diseases
  - 1.7.1. Impactions
    - 1.7.1.1. Large Colon
    - 1.7.1.2. Cecum
    - 1.7.1.3. Minor Colon
  - 1.7.2. Large Colon Displacement
  - 1.7.3. Colitis
  - 1.7.4. Peritonitis
  - 1.7.5. Enterolithiasis
  - 1.7.6. Other Large Intestinal Alterations
- 1.8. Liver and Biliary Tract Diseases
  - 1.8.1. Approach to the Patient with Liver Disease
  - 1.8.2. Acute Liver Failure
  - 1.8.3. Cholangiohepatitis
  - 1.8.4. Chronic Hepatitis
  - 1.8.5. Neoplasms
  - 1.8.6. Other Liver and Biliary Tract Alterations
- 1.9. Infectious and Parasitic Diseases of the Digestive Tract
  - 1.9.1. Infectious Diseases of the Digestive Tract
    - 1.9.1.1. Salmonellosis
    - 1.9.1.2. Proliferative Enteropathy
    - 1.9.1.3. Clostridiosis
    - 1.9.1.4. Rotavirus
    - 1.9.1.5. Potomac Equine Fever
    - 1.9.1.6. Equine Coronavirus

- 1.9.2. Parasitic Diseases of the Digestive Tract
  - 1.9.2.1. Gastrointestinal Myiasis
  - 1.9.2.2. Intestinal Protozoa
  - 1.9.2.3. Intestinal Cestodes
  - 1.9.2.4. Intestinal Nematodes

- 1.10. Treatment of Medical Colic in the Field
  - 1.10.1. Management of the Patient with Colicky Pain
  - 1.10.2. Pain Control in Colicky Patients
  - 1.10.3. Fluid Therapy and Cardiovascular Support
  - 1.10.4. Treatment for Endotoxemia

## Module 2. Cardio-Respiratory and Vascular System

- 2.1. Clinical Assessment of the Respiratory System and Diagnostic Methods
  - 2.1.1. Examination of the Respiratory System
  - 2.1.2. Respiratory Tract Sampling:
    - 2.1.2.1. Samples from Nasal Cavity, Pharynx and Guttural Pouches
    - 2.1.2.2. Tracheal Aspirate and Bronchoalveolar Lavage
    - 2.1.2.3. Thoracentesis
  - 2.1.3. Endoscopy
    - 2.1.3.1. Static and Dynamic Endoscopy of Upper Airways
    - 2.1.3.2. Sinuscopy
  - 2.1.4. Radiology
    - 2.1.4.1. Nasal Cavity, Sinuses and Guttural Pouches
    - 2.1.4.2. Larynx and Trachea
  - 2.1.5. Ultrasound
    - 2.1.5.1. Ultrasound Techniques
    - 2.1.5.2. Pleural Effusion
    - 2.1.5.3. Atelectasis, Consolidation and Masses
    - 2.1.5.4. Pneumothorax



- 2.2. Diseases of the Upper Respiratory Tract I (Nose, Nasal Cavity and Paranasal Sinuses)
  - 2.2.1. Diseases and Pathologies Affecting the Rostral/Larynx Area
    - 2.2.1.1. Clinical Presentation and Diagnosis
    - 2.2.1.2. Atheroma - Epidermal Inclusion Cyst
      - 2.2.1.2.1. Treatment
    - 2.2.1.3. Redundant Wing Fold
      - 2.2.1.3.1. Treatment
  - 2.2.2. Diseases and Pathologies Affecting the Nasal Cavity
    - 2.2.2.1. Diagnostic Techniques
    - 2.2.2.2. Nasal Septum Pathologies
    - 2.2.2.3. Ethmoidal Hematoma
  - 2.2.3. Diseases and Pathologies Affecting the Paranasal Sinuses
    - 2.2.3.1. Clinical Presentation and Diagnostic Techniques
    - 2.2.3.2. Sinusitis
      - 2.2.3.2.1. Primary Sinusitis
      - 2.2.3.2.2. Secondary Sinusitis
    - 2.2.3.3. Paranasal Sinus Cyst
    - 2.2.3.4. Paranasal Sinus Neoplasia
  - 2.2.4. Approaches to the Paranasal Sinus
    - 2.2.4.1. Trepanation Anatomical References and Technique
    - 2.2.4.2. Synocentesis
    - 2.2.4.3. Sinuscopy
    - 2.2.4.4. Flaps or Bone Flaps of the Paranasal Sinuses
    - 2.2.4.5. Associated Complications
- 2.3. Diseases of the Upper Tract II (Larynx and Pharynx)
  - 2.3.1. Diseases and Pathologies Affecting the Pharynx-Nasopharynx
    - 2.3.1.1. Anatomical Pathologies
      - 2.3.1.1.1. Nasopharyngeal Scar Tissue
      - 2.3.1.1.2. Nasopharyngeal Masses
      - 2.3.1.1.3. Treatment
    - 2.3.1.2. Functional Pathologies
      - 2.3.1.2.1. Dorsal Displacement of the Soft Palate (DDSP)
        - 2.3.1.2.1.1. Intermittent DDSP
        - 2.3.1.2.1.2. Permanent DDSP
        - 2.3.1.2.1.3. Surgical and Non-Surgical Treatments
      - 2.3.1.2.2. Rostral Pharyngeal Collapse
      - 2.3.1.2.3. Dorsal/Lateral Nasopharyngeal Collapse
    - 2.3.1.3. Nasopharyngeal Pathologies in Foals
      - 2.3.1.3.1. Choanal Atresia
      - 2.3.1.3.2. Cleft Palate
      - 2.3.1.3.3. Nasopharyngeal Dysfunction
  - 2.3.2. Diseases and Pathologies Affecting the Larynx
    - 2.3.2.1. Recurrent Laryngeal Neuropathy (Laryngeal Hemiplegia)
      - 2.3.2.1.1. Diagnosis
      - 2.3.2.1.2. Gradation
      - 2.3.2.1.3. Treatment and Associated Complications
    - 2.3.2.2. Vocal Cord Collapse
    - 2.3.2.3. Bilateral Laryngeal Paralysis
    - 2.3.2.4. Cricopharyngeal-Laryngeal Dysplasia (Fourth Branchial Arch Defects)
    - 2.3.2.5. Collapse of the Apex of the Corniculate Process
    - 2.3.2.6. Medial Deviation of the Aryepiglottic Folds
    - 2.3.2.7. Chondropathy of the Arytenoid Cartilage
    - 2.3.2.8. Pathologies in the Mucosa of the Arytenoid Cartilages
    - 2.3.2.9. Pathologies Affecting the Epiglottis
      - 2.3.2.9.1. Epiglottic Entrapment
      - 2.3.2.9.2. Acute Epiglottitis
      - 2.3.2.9.3. Subepiglottic Cyst
      - 2.3.2.9.4. Subepiglottic Granuloma
      - 2.3.2.9.5. Dorsal Epiglottic Abscess
      - 2.3.2.9.6. Hypoplasia, Flaccidity, Deformity of Epiglottis
      - 2.3.2.9.7. Epiglottic Retroversion

- 2.4. Diseases of Guttural Pouches and Trachea Tracheostomy
  - 2.4.1. Diseases and Pathologies Affecting the Guttural Pouches
    - 2.4.1.1. Tympanism
      - 2.4.1.1.1. Functional Nasopharyngeal Obstruction in Adults
    - 2.4.1.2. Empyema
    - 2.4.1.3. Mycosis
    - 2.4.1.4. Trauma - Ruptured Ventral Rectus Muscles
    - 2.4.1.5. Osteoarthropathy of the Temporohyoid Joint
    - 2.4.1.6. Other Pathologies
  - 2.4.2. Diseases and Pathologies Affecting the Trachea
    - 2.4.2.1. Trauma
    - 2.4.2.2. Tracheal Collapse
    - 2.4.2.3. Tracheal Stenosis
    - 2.4.2.4. Foreign Bodies
    - 2.4.2.5. Intraluminal Masses
  - 2.4.3. Tracheal Surgeries
    - 2.4.3.1. Tracheostomy and Tracheostomy (Temporary)
    - 2.4.3.2. Permanent Tracheostomy
    - 2.4.3.3. Other Tracheal Surgeries
- 2.5. Inflammatory Diseases of the Lower Respiratory Tract
  - 2.5.1. Introduction: Functionality of the Lower Respiratory Tract
  - 2.5.2. Equine Asthma
    - 2.5.2.1. Etiology and Classification
    - 2.5.2.2. Epidemiology
    - 2.5.2.3. Classification
    - 2.5.2.4. Pathophysiology
    - 2.5.2.5. Clinical Signs
    - 2.5.2.6. Diagnostic Techniques
    - 2.5.2.7. Therapy Options
    - 2.5.2.8. Prognosis
    - 2.5.2.9. Prevention
  - 2.5.3. Exercise-Induced Pulmonary Hemorrhage
    - 2.5.3.1. Etiology
    - 2.5.3.2. Epidemiology
    - 2.5.3.3. Pathophysiology
    - 2.5.3.4. Clinical Signs
    - 2.5.3.5. Diagnostic Techniques
    - 2.5.3.6. Therapy Options
    - 2.5.3.7. Prognosis
- 2.6. Bacterial and Fungal Infectious Diseases of the Respiratory Tract
  - 2.6.1. Equine Mumps Streptococcus Equi Equi Infection
  - 2.6.2. Bacterial Pneumonia and Pleuropneumonia
  - 2.6.3. Fungal Pneumonia
- 2.7. Pneumonias of Mixed Origin Viral Infectious Diseases of the Respiratory Tract and Tumors
  - 2.7.1. Interstitial Pneumonia and Pulmonary Fibrosis
  - 2.7.2. Equine Herpesvirus I, IV and V
  - 2.7.3. Equine Influenza
  - 2.7.4. Tumours of the Respiratory System
- 2.8. Exploration of the Cardiovascular System, Electrocardiography and Echocardiography
  - 2.8.1. Anamnesis and Clinical Examination
  - 2.8.2. Basic Principles of Electrocardiography
  - 2.8.3. Electrocardiography Types
  - 2.8.4. Electrocardiogram Interpretation
  - 2.8.5. Basic Principles of Echocardiography
  - 2.8.6. Echocardiographic Planes
- 2.9. Structural Cardiac Alterations
  - 2.9.1. Congenital
    - 2.9.1.1. Ventricular Septal Defect
  - 2.9.2. Acquired
    - 2.9.2.1. Aortic Insufficiency
    - 2.9.2.2. Mitral Insufficiency
    - 2.9.2.3. Tricuspid Regurgitation
    - 2.9.2.4. Aorto-Cardiac Fistula
- 2.10. Arrhythmias
  - 2.10.1. Supraventricular Arrhythmias
  - 2.10.2. Ventricular Arrhythmias
  - 2.10.3. Conduction Disturbances

### Module 3. Hematopoietic System, Immunology and Nutrition

- 3.1. Analytical Interpretation: Blood Count and Serum Biochemistry
  - 3.1.1. General Considerations for the Interpretation of Analytical Reports
    - 3.1.1.1. Essential Patient Data
    - 3.1.1.2. Sample Collection and Handling
  - 3.1.2. Interpretation of blood hemogram:
    - 3.1.2.1. Red Blood Cells
    - 3.1.2.2. White Blood Cells
    - 3.1.2.3. Platelet Cells
    - 3.1.2.4. Smears
  - 3.1.3. Interpretation of Serum or Plasma Biochemistry
    - 3.1.3.1. Electrolytes
    - 3.1.3.2. Bilirubin
    - 3.1.3.3. Creatinine, Blood Urea Nitrogen (BUN), Urea and Symmetrical Dimethylarginine (SDMA)
    - 3.1.3.4. Proteins: Albumin and Globulins
    - 3.1.3.5. Acute-Phase Proteins: Fibrinogen, Serum Amyloid A
    - 3.1.3.6. Enzymes
    - 3.1.3.7. Glucose
    - 3.1.3.8. Bicarbonate
    - 3.1.3.9. Lactate
    - 3.1.3.10. Triglycerides and Bile Acids
- 3.2. Hematopoietic System Pathologies
  - 3.2.1. Hemolytic anemia
    - 3.2.1.1. Immune-Mediated Hemolytic Anemia
    - 3.2.1.2. Equine Infectious Anemia
    - 3.2.1.3. Piroplasmiosis
    - 3.2.1.4. Other Causes
  - 3.2.2. Hemorrhagic Anemia
    - 3.2.2.1. Hemoperitoneum and Hemothorax
    - 3.2.2.2. Gastrointestinal Losses
    - 3.2.2.3. Losses From Other Origin
  - 3.2.3. Non-Regenerative Anemias
    - 3.2.3.1. Iron Deficiency Anemia
    - 3.2.3.2. Anemia due to Chronic Inflammation/Infection
    - 3.2.3.3. Aplastic Anemia
  - 3.2.4. Coagulation Alterations
    - 3.2.4.1. Platelet disorders:
      - 3.2.4.1.1. Thrombocytopenia
      - 3.2.4.1.2. Platelet Functional Alterations
    - 3.2.4.2. Alterations of Secondary Hemostasis
      - 3.2.4.2.1. Hereditary
      - 3.2.4.2.2. Acquired
    - 3.2.4.3. Thrombocytosis
    - 3.2.4.4. Lymphoproliferative Disorders
    - 3.2.4.5. Disseminated Intravascular Coagulation (DIC)
- 3.3. Endotoxic Shock
  - 3.3.1. Systemic Inflammation and Systemic Inflammatory Response Syndrome (SIRS)
  - 3.3.2. Causes of Endotoxemia in Horses
  - 3.3.3. Pathophysiological Mechanisms
  - 3.3.4. Endotoxic Shock
    - 3.3.4.1. Hemodynamic Changes
    - 3.3.4.2. Multiorgan Dysfunction
  - 3.3.5. Clinical Signs of Endotoxemia and Endotoxic Shock
  - 3.3.6. Diagnosis
  - 3.3.7. Management
    - 3.3.7.1. Endotoxin Release Inhibitors
    - 3.3.7.2. Endotoxin Uptake and Inhibition
    - 3.3.7.3. Cell Activation Inhibition
    - 3.3.7.4. Inhibition of the Synthesis of Inflammatory Mediators
    - 3.3.7.5. Other specific therapies
    - 3.3.7.6. Support Treatments

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



## Module 4. Locomotor System

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

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

- 4.8.4. Medical Treatment of Laminitis
  - 4.8.4.1. Anti-Inflammatories
  - 4.8.4.2. Vasoactive Drugs
  - 4.8.4.3. Analgesia
  - 4.8.4.4. Hypothermia
  - 4.8.4.5. Sepsis
  - 4.8.4.6. Pars Intermedia Pituitary Dysfunction (PPID) and Equine Metabolic Syndrome (EMS)
- 4.8.5. Stabilization of the Third Phalanx
  - 4.8.5.1. Sole Support Techniques
  - 4.8.5.2. Therapeutic Horseshoeing
- 4.8.6. Treatment of Laminitis
  - 4.8.6.1. Use of Casts
  - 4.8.6.2. Flexor Digitorum Superficialis Tenotomy
  - 4.8.6.3. Dorsal Wall Resection
  - 4.8.6.4. Complications
- 4.8.7. Chronic Laminitis
- 4.8.8. Laminitis Prevention
- 4.9. Orthopedic Field Surgery
  - 4.9.1. Fractures of Rudimentary Metacarpals/Metatarsals
    - 4.9.1.1. Clinical History, Symptomatology, Different Presentations
    - 4.9.1.2. Diagnostic Techniques
    - 4.9.1.3. Decision Making, Optimal Treatment
    - 4.9.1.4. Surgical Management
    - 4.9.1.5. Complications to Surgery
    - 4.9.1.6. Post-Operative Care
    - 4.9.1.7. Rehabilitation and Return to Work Guidelines
  - 4.9.2. Desmotomies
    - 4.9.2.1. Medical History
    - 4.9.2.2. Decision Making
    - 4.9.2.3. Surgical Management
    - 4.9.2.4. Complications to Desmotomies
    - 4.9.2.5. Post-Operative Care
    - 4.9.2.6. Rehabilitation and Return to Work Guidelines





- 4.9.3. Neurectomies
  - 4.9.3.1. Indications
  - 4.9.3.2. Pre-Surgical Considerations and Implications
  - 4.9.3.3. Surgical Technique
  - 4.9.3.4. Complications
  - 4.9.3.5. Post-Operative Care
  - 4.9.3.7. Rehabilitation and Return to Work Guidelines
- 4.10. Myopathies in the Horse
  - 4.10.1. Genetic and Congenital Diseases
    - 4.10.1.1. Myotonia
    - 4.10.1.2. Myopathy due to Polysaccharide Storage
    - 4.10.1.3. Malignant Hyperthermia
    - 4.10.1.4. Hyperkalemic Periodic Paralysis
  - 4.10.2. Traumatic and Irritative Alterations
    - 4.10.2.1. Fibrotic Myopathy
    - 4.10.2.2. Bruises and Tears
    - 4.10.2.3. Intramuscular Irritant Injections
  - 4.10.3. Infectious Diseases
    - 4.10.3.1. Abscesses
    - 4.10.3.2. Clostridial Myositis
  - 4.10.4. Ischemic Diseases
    - 4.10.4.1. Post-Anesthetic Myositis
  - 4.10.5. Nutritional Diseases
    - 4.10.5.1. Malnutrition
    - 4.10.5.2. Vitamin E and Selenium Alterations
    - 4.10.5.3. Cachectic Atrophy
  - 4.10.6. Pathologies Associated with Exercise
    - 4.10.6.1. Acute Exertional Rhabdomyolysis
    - 4.10.6.2. Recurrent Exertional Rhabdomyolysis
    - 4.10.6.3. Hypokinetic Atrophy



## Module 5. Surgical Pathologies of the Skin and Related Structures

- 5.1. Exploration and Wound Types
  - 5.1.1. Anatomy
  - 5.1.2. Initial Assessment, Emergency Treatment
  - 5.1.3. Wound Classification
  - 5.1.4. Wound Healing Process
  - 5.1.5. Factors Influencing Wound Infection and Wound Healing
  - 5.1.6. Primary and Secondary Intention Wound Healing
- 5.2. Tissue Management, Hemostasis and Suture Techniques
  - 5.2.1. Incision and Tissue Dissection
  - 5.2.2. Hemostasis
    - 5.2.2.1. Mechanical Hemostasis
    - 5.2.2.2. Ligatures
    - 5.2.2.3. Tourniquet
    - 5.2.2.4. Electrocoagulation
    - 5.2.2.5. Chemical Hemostasis
  - 5.2.3. Tissue Management, Irrigation and Suctioning
  - 5.2.4. Suture Materials Used
    - 5.2.4.1. Instruments
    - 5.2.4.2. Suture Material Selection
    - 5.2.4.3. Needles
    - 5.2.4.4. Drainages
  - 5.2.5. Approaches to Wound Suturing
  - 5.2.6. Suture Patterns
- 5.3. Bandages
  - 5.3.1. Materials and Bandage Types
  - 5.3.2. Hull Bandage
  - 5.3.3. Distal Extremity Bandage
  - 5.3.4. Full Limb Bandage
  - 5.3.5. Fiberglass Cast. Application and Peculiarities in Young Animals
- 5.4. Acute Wound Repair
  - 5.4.1. Wound Treatment Medication
  - 5.4.2. Debriding
  - 5.4.3. Emphysema Secondary to Wounds
  - 5.4.4. Negative Pressure Therapy
  - 5.4.5. Topical Treatment Types
- 5.5. Repair and Management of Chronic and/or Infected Wounds
  - 5.5.1. Particularities of Chronic and Infected Wounds
  - 5.5.2. Causes of Chronic Wounds
  - 5.5.3. Management of Severely Contaminated Wounds
  - 5.5.4. Laser Benefits
  - 5.5.5. Larvotherapy
  - 5.5.6. Cutaneous Fistulas Treatment
- 5.6. Hoof Wound Treatment Regional and Intraosseous Perfusion of Antibiotics
  - 5.6.1. Hoof Wounds
    - 5.6.1.1. Coronary Buckle Wounds
    - 5.6.1.2. Heel Wounds
    - 5.6.1.3. Puncture Wounds on the Palm
  - 5.6.2. Antibiotic Perfusion
    - 5.6.2.1. Regional Perfusion
    - 5.6.2.2. Intraosseous Perfusion
- 5.7. Management and Repair of Synovial Wounds and Joint Lavage
  - 5.7.1. Pathophysiology of Synovial Infection
  - 5.7.2. Epidemiology and Diagnosis of Synovial Wound Infections
  - 5.7.3. Synovial Wound Treatment Joint Lavage
  - 5.7.4. Synovial Wound Prognosis
- 5.8. Tendon Lacerations Management and Repair
  - 5.8.1. Introduction, Anatomy, Anatomical Implications
  - 5.8.2. Primary care, Examination of the Injury, Immobilization
  - 5.8.3. Case Selection: Surgical or Conservative Treatment
  - 5.8.4. Tendon Lacerations Surgical Repair
  - 5.8.5. Rehabilitation and Return to Work Guidelines after Tenorrhaphy

- 5.9. Reconstructive Surgery and Skin Grafting
  - 5.9.1. Principles of Basic and Reconstructive Surgery
    - 5.9.1.1. Skin Tension Lines
    - 5.9.1.2. Incision Orientation, Suture Patterns
    - 5.9.1.3. Tension Release Techniques and Plasties
  - 5.9.2. Closure of Skin Defects of Different Shapes
  - 5.9.3. Skin Grafts
- 5.10. Treatment of Exuberant Granulation Tissue Sarcoid Burns
  - 5.10.1. Causes of the Appearance of Exuberant Granulation Tissue
  - 5.10.2. Treatment of Exuberant Granulation Tissue
  - 5.10.3. Sarcoid Appearance in Wounds
    - 5.10.3.1. Wound Associated Sarcoid Type

## Module 6. Medical Pathologies of the Skin Endocrine System

- 6.1. Clinical Approach and Diagnostic Tests in Equine Dermatology
  - 6.1.1. Medical History
  - 6.1.2. Sampling and Main Diagnostic Methods
  - 6.1.3. Other Specific Diagnostic Techniques
- 6.2. Bacterial and Viral Skin Diseases
  - 6.2.1. Bacterial Diseases
  - 6.2.2. Viral Diseases
- 6.3. Fungal and Parasitic Skin Diseases
  - 6.3.1. Fungal Diseases
  - 6.3.2. Parasitic Diseases
- 6.4. Allergic, Immune-Mediated and Irritative Skin Diseases
  - 6.4.1. Hypersensitivity: Types
  - 6.4.2. Insect Sting Allergy
  - 6.4.3. Vasculitis and other Immune-Mediated Reactions
  - 6.4.4. Other Skin Tumors
- 6.5. Congenital Diseases and Syndromes in Equine Dermatology
  - 6.5.1. Hereditary Equine Regional Dermal Asthenia (HERDA), Epidermolysis Bullosa, and Other Congenital Diseases
  - 6.5.2. Miscellaneous
- 6.6. Cutaneous Neoplasms
  - 6.6.1. Sarcoids
  - 6.6.2. Melanocytic Tumors
  - 6.6.3. Squamous Cell Carcinomas
  - 6.6.4. Mastocytomas
  - 6.6.5. Lymphomas
- 6.7. Alternatives in the Medical Treatment of Neoplasms
  - 6.7.1. Electroporation and Electrochemotherapy
  - 6.7.2. Immunotherapy
  - 6.7.3. Radiotherapy
  - 6.7.4. Dynamic Phototherapy
  - 6.7.5. Cryotherapy
  - 6.7.6. Other Therapies
- 6.8. Endocrine System I
  - 6.8.1. Dysfunction of the Intermediate Portion of the Pituitary Gland
  - 6.8.2. Equine Metabolic Syndrome
  - 6.8.3. Endocrine Pancreas
  - 6.8.4. Adrenal Insufficiency
- 6.9. Endocrine System II
  - 6.9.1. Thyroid Gland
  - 6.9.2. Calcium Disorders
  - 6.9.3. Magnesium Disorders
  - 6.9.4. Phosphorus Disorders
- 6.10. Nutritional Management of the Obese Horse
  - 6.10.1. Body Condition Assessment
  - 6.10.2. Weight Reduction and Caloric Restriction
  - 6.10.3. Pharmacological Intervention
  - 6.10.4. Exercise
  - 6.10.5. Maintenance

## Module 7. Nervous System and Ophthalmology

- 7.1. Neuroanatomical Localization of Neurological Injuries in the Horse
  - 7.1.1. Neuroanatomical Peculiarities of the Horse
  - 7.1.2. Medical History
  - 7.1.3. Neurological Examination Protocol
    - 7.1.3.1. Head Assessment Behavior, Consciousness, Positioning and Cranial Nerves
    - 7.1.3.2. Posture and Motor Function Assessment Gradation of Alterations
    - 7.1.3.3. Neck and Thoracic Limb Evaluation
    - 7.1.3.4. Evaluation of the Trunk and Pelvic Limb
    - 7.1.3.5. Evaluation of Tail and Anus
  - 7.1.4. Complementary Methods of Diagnostic
- 7.2. Disorders Affecting the Cerebral Cortex and Brainstem
  - 7.2.1. Consciousness State Regulation
  - 7.2.2. Cranial Trauma
    - 7.2.2.1. Etiopathogenesis
    - 7.2.2.2. Symptoms and Syndromes
    - 7.2.2.3. Diagnosis
    - 7.2.2.4. Treatment
    - 7.2.2.5. Prognosis
  - 7.2.3. Metabolic Encephalopathy
    - 7.2.3.1. Hepatic Encephalopathy
  - 7.2.4. Seizures and Epilepsy
    - 7.2.4.1. Types of Seizure Disorders
    - 7.2.4.2. Types of Epilepsy (ILAE Classification) (International League Against Epilepsy)
    - 7.2.4.3. Treatment
  - 7.2.5. Narcolepsy
- 7.3. Cerebellar or Vestibular Alterations
  - 7.3.1. Coordination and Balance
  - 7.3.2. Cerebellar Syndrome
    - 7.3.2.1. Cerebellar Abiotrophy
  - 7.3.3. Vestibular Syndrome
    - 7.3.3.1. Peripheral Vestibular Syndrome
    - 7.3.3.2. Central Vestibular Syndrome
    - 7.3.3.3. Head Trauma and Vestibular Syndrome
    - 7.3.3.4. Osteoarthropathy Temporoioidia
- 7.4. Spinal Alterations
  - 7.4.1. Cervical Stenotic Myelopathy
    - 7.4.1.1. Etiopathogenesis
    - 7.4.1.2. Symptomatology and Neurological Examination
    - 7.4.1.3. Diagnosis
    - 7.4.1.4. Radiology
    - 7.4.1.5. Myelography
    - 7.4.1.6. Magnetic Resonance Imaging, Computerized Axial Tomography, Gammagraphy
    - 7.4.1.7. Treatment
  - 7.4.2. Equine Degenerative Myeloencephalopathy (EDM)
  - 7.4.3. Spinal Trauma
- 7.5. Bacterial, Fungal and Parasitic Infections of the Nervous System
  - 7.5.1. Bacterial Encephalitis or Encephalomyelitis
    - 7.5.1.1. Etiological Agents
    - 7.5.1.2. Symptomatology
    - 7.5.1.3. Diagnosis
    - 7.5.1.4. Treatment
  - 7.5.2. Fungal Encephalitis
  - 7.5.3. Equine Protozoal Encephalomyelitis (EPM)
    - 7.5.3.1. Etiopathogenesis
    - 7.5.3.2. Symptoms
    - 7.5.3.3. Diagnosis
    - 7.5.3.4. Treatment
  - 7.5.4. Meningoencefalomyelitis Verminosa
    - 7.5.4.1. Etiopathogenesis
    - 7.5.4.2. Symptoms
    - 7.5.4.3. Diagnosis and Treatment

- 7.6. Viral Infections of the Nervous System
  - 7.6.1. Equine Encephalomyelitis due to Herpesvirus Type -1 (EHV-1)
    - 7.6.1.1. Etiopathogenesis
    - 7.6.1.2. Clinical Picture
    - 7.6.1.3. Diagnosis
    - 7.6.1.4. Treatment
  - 7.6.2. West Nile Virus Encephalomyelitis
    - 7.6.2.1. Etiopathogenesis
    - 7.6.2.2. Clinical Picture
    - 7.6.2.3. Diagnosis
    - 7.6.2.4. Treatment
  - 7.6.3. Rabies
    - 7.6.3.1. Etiopathogenesis
    - 7.6.3.2. Clinical Picture
    - 7.6.3.3. Diagnosis
    - 7.6.3.4. Treatment
  - 7.6.4. Borna, Hendra and other Viral Encephalitis Viruses
- 7.7. Ocular Examination Ocular Nerve Blocks and Sub-palpebral Catheter Placement
  - 7.7.1. Anatomy and Physiology of the Eyeball
  - 7.7.2. Optic Nerve Blocks
  - 7.7.3. Ophthalmologic examination
  - 7.7.4. Basic Diagnostic Tests
  - 7.7.5. Advanced Diagnostic Tests
  - 7.7.6. Sub-palpebral Catheter Placement
- 7.8. Palpebral Pathologies Ocular Perforations Entropion Correction
  - 7.8.1. Anatomy of Adnexal Tissues
  - 7.8.2. Eyelid Alterations
  - 7.8.3. Entropion Correction
  - 7.8.4. Ocular Perforations

- 7.9. Corneal Ulcers
  - 7.9.1. General Aspects and Classification of Corneal Ulcers
  - 7.9.2. Simple, Complex and Severe Ulcers
  - 7.9.3. Indolent Ulcer
  - 7.9.4. Infectious Keratitis
  - 7.9.5. Corneal Surgery
- 7.10. Uveitis and Ocular Medical Pathologies
  - 7.10.1. Immune-Mediated Keratitis
  - 7.10.2. Stromal Abscess
  - 7.10.3. Equine Recurrent Uveitis
  - 7.10.4. Crystalline Lens Alterations
  - 7.10.5. Posterior Segment Alterations and Glaucoma
  - 7.10.6. Neoplasms

## Module 8. Reproductive and Urinary System

- 8.1. Urinary System Assessment
  - 8.1.1. Hematological and Biochemical Parameters Related to the Renal System
  - 8.1.2. Urinalysis
  - 8.1.3. Diagnostic Methods in the Urinary System
    - 8.1.3.1. Ultrasound of the Urinary System
    - 8.1.3.2. Endoscopy of the Urinary System
    - 8.1.3.3. Renal Biopsy
    - 8.1.3.4. Water Deprivation Test
- 8.2. Urinary System Pathologies
  - 8.2.1. Acute Renal Failure
    - 8.2.1.1. Causes of Acute Renal Insufficiency
    - 8.2.1.2. Treatment of Acute Renal Insufficiency
  - 8.2.2. Chronic Renal Failure
    - 8.2.2.1. Causes of Chronic Renal Insufficiency
    - 8.2.2.2. Treatment of Chronic Renal Insufficiency



- 8.2.3. Urinary Tract Infections
  - 8.2.3.1. Urethritis, Cystitis and Pyelonephritis and their Treatment
  - 8.2.3.2. Treatment of Urinary Tract Infections
- 8.2.4. Obstructive Pathology of the Urinary Tract
  - 8.2.4.1. Types of Obstructive Pathologies
  - 8.2.4.2. Treatment
- 8.2.5. Polyuria and Polydipsia
- 8.2.6. Urinary Incontinence and Bladder Dysfunction
- 8.2.7. Urinary Tract Tumors
- 8.3. Medical Pathologies of the Male Genitalia
  - 8.3.1. Introduction to the Medical Pathology of the Stallion
  - 8.3.2. Testicular Pathology in the Stallion
    - 8.3.2.1. Management and Treatment of the Cryptorchid Stallion
    - 8.3.2.2. Testicular Inflammatory Disorders
    - 8.3.2.3. Management of Testicular Degeneration in the Stallion
    - 8.3.2.4. Hydrocele Management
    - 8.3.2.5. Testicular Neoplasms in the Stallion
    - 8.3.2.6. Testicular Torsion in the Stallion
  - 8.3.3. Penile Pathologies
    - 8.3.3.1. Penile Trauma Management
    - 8.3.3.2. Penile Tumor Developments
    - 8.3.3.3. Paraphimosis
    - 8.3.3.4. Priapism
  - 8.3.4. Pathology of Adnexal Glands
    - 8.3.4.1. Ultrasound and Assessment of Adjoining Glands
    - 8.3.4.2. Vesiculitis, Management and Treatment
    - 8.3.4.3. Obstruction of Adnexal Glands
  - 8.3.5. Ejaculate Alterations
    - 8.3.5.1. Seminal Assessment
    - 8.3.5.2. Factors Affecting Fertility
    - 8.3.5.3. Sub-fertile Semen Management
      - 8.3.5.3.1. Semen Centrifugation for Quality Improvement
      - 8.3.5.3.2. Seminal Plasma Substitution
      - 8.3.5.3.3. Semen Filtration to Improve Quality
      - 8.3.5.3.4. Low-Quality Semen Cooling Protocols
  - 8.3.6. Alterations in Stallion Behavior and Mating Management
  - 8.3.7. Advances in Assisted Reproduction in Stallions
    - 8.3.7.1. Seminal Freezing
    - 8.3.7.2. Epididymal Sperm Retrieval after Death or Castration
- 8.4. Male Field Surgical Procedures
  - 8.4.1. Castration
    - 8.4.1.1. Introduction and Considerations of Castration in Males
      - 8.4.1.1.1. Patient Selection
    - 8.4.1.2. Castration Surgical Techniques
      - 8.4.1.2.1. Open Castration
      - 8.4.1.2.2. Closed Castration
      - 8.4.1.2.3. Semi-Closed or Semi-Open Castration
    - 8.4.1.3. Variations in Surgical Technique
      - 8.4.1.3.1. Different Hemostasis Options
      - 8.4.1.3.2. Primary Skin Closure
    - 8.4.1.4. On-Station Castration Considerations
      - 8.4.1.4.1. Sedation
    - 8.4.1.5. Considerations for Castration under General Anesthetic
    - 8.4.1.6. Inguinal Cryptorchidism
      - 8.4.1.6.1. Presurgical Diagnosis
      - 8.4.1.6.2. Surgical Technique
  - 8.4.2. Penile Amputation
    - 8.4.2.1. Indications
    - 8.4.2.2. Procedure and Post-surgical Considerations

- 8.5. Medical and Surgical Pathologies of the Female Genitalia I
  - 8.5.1. Medical Pathologies I
    - 8.5.1.1. Ovarian Pathology
      - 8.5.1.1.1. Ovulation Disorders
      - 8.5.1.1.2. Ovarian Tumors
    - 8.5.1.2. Fallopian Tubes Disorders
    - 8.5.1.3. Medical Uterine Pathology
      - 8.5.1.3.1. Preparation and Procedure for Sample Collection
        - 8.5.1.3.1.1. Cytology
        - 8.5.1.3.1.2. Biopsy
      - 8.5.1.3.2. Types of Endometritis
      - 8.5.1.3.3. Management of the Mare with Uterine Fluid
      - 8.5.1.3.4. Management of Mares with Uterine Cysts
- 8.6. Medical and Surgical Genital Pathologies of the Mare II
  - 8.6.1. Medical Pathologies II
    - 8.6.1.1. Cervical Pathology
      - 8.6.1.1.1. Cervical Lacerations
      - 8.6.1.1.2. Cervical Adherences
    - 8.6.1.2. Medical Pathology of the Vagina
    - 8.6.1.3. Reproductive Management of the Geriatric Mare
    - 8.6.1.4. Update on Assisted Reproduction in the Mare
  - 8.6.2. Surgical Pathologies of the Mare
    - 8.6.2.1. Normal Vulvar Conformation of the Mare
      - 8.6.2.1.1. Vulvar Examination of the Mare
      - 8.6.2.1.2. Caslick Index
    - 8.6.2.2. Vulvoplasty
      - 8.6.2.2.1. Caslick Surgery Procedure
- 8.7. Pregnant Mare and Care at Foaling
  - 8.7.1. Mare Gestation
    - 8.7.1.1. Diagnosis of Pregnancy in the Mare
    - 8.7.1.2. Management of Early and Late Multiple Gestation New Techniques
    - 8.7.1.3. Embryo Sexing
  - 8.7.2. Complications During Gestation in the Mare
    - 8.7.2.1. Abortion
      - 8.7.2.1.1. Early Abortion
      - 8.7.2.1.2. Late Abortion
    - 8.7.2.2. Uterine Torsion
    - 8.7.2.3. Management and Treatment of Placentitis
    - 8.7.2.4. Management of Placental Abruption
  - 8.7.3. Nutritional Needs of the Pregnant Mare
  - 8.7.4. Ultrasound Evaluation of the Fetus
    - 8.7.4.1. Ultrasound Evaluation at Different Stages of Gestation
    - 8.7.4.2. Fetal Biometry
  - 8.7.5. Methods for Predicting Foaling in the Full-Term Mare
  - 8.7.6. Euthyroid Labor and Delivery
    - 8.7.6.1. Phases of Euthyroid Labor and Delivery
- 8.8. Complications of Labor and Delivery and Postpartum Care
  - 8.8.1. Dystocic Labor and Delivery
    - 8.8.1.1. Material Necessary for the Resolution of Dystocia
    - 8.8.1.2. Types of Dystocia and Management of Different Fetal Presentations
  - 8.8.2. Peripartum Surgical Emergencies
    - 8.8.2.1. Fetotomy
      - 8.8.2.1.1. Fetotome
      - 8.8.2.1.2. Preparation of the Mare for the Procedure
      - 8.8.2.1.3. Fetotomy in the Field vs. in the Hospital
    - 8.8.2.2. Cesarean Section
    - 8.8.2.3. Hemorrhage of the Ankle Ligament
    - 8.8.2.4. Uterine Laceration
    - 8.8.2.5. Prepubic Tendon Rupture
    - 8.8.2.6. Rectovaginal Fistula
  - 8.8.3. Postpartum Care
    - 8.8.3.1. Control of uterine Involution and Establishment of the Postpartum Cycle

- 8.8.4. Postpartum Complications
  - 8.8.4.1. Placenta Retention
  - 8.8.4.2. Vaginal Lacerations
  - 8.8.4.3. Uterine Bleeding
  - 8.8.4.4. Uterine Prolapse
  - 8.8.4.5. Rectal Prolapse
  - 8.8.4.6. Vulvar Hematoma
  - 8.8.4.7. Uterine Horn Invagination
- 8.9. Repair of Tears and Lacerations during Labor and Delivery
  - 8.9.1. Management of Vulvar Tears and Lacerations during Labor and Delivery
  - 8.9.2. Classification of Perineal Lacerations
  - 8.9.3. Reconstruction of the Perineal Body
    - 8.9.3.1. Surgical Preparation of the Mare
    - 8.9.3.2. Vaginal Vestibule Sphincter Insufficiency
      - 8.9.3.2.1. Perineal Body Reconstruction, Vestibuloplasty
      - 8.9.3.2.2. Perineal Body Transverse Section, Perineoplasty
        - 8.9.3.2.2.1. Pouret's Surgery
    - 8.9.3.3. Post-Operative Care
    - 8.9.3.4. Complications of Perineal Surgery
  - 8.9.4. Surgical Management of Third-Degree Rectovaginal Tearing
  - 8.9.5. Surgical Management of Rectovaginal Fistulas
- 8.10. Infectious and Parasitic Diseases of the Reproductive System in Equines
  - 8.10.1. Introduction to Infectious and Parasitic Diseases of the Reproductive System in Equines
  - 8.10.2. Economic and Productive Significance of Infectious and Parasitic Diseases
  - 8.10.3. Infectious Diseases of the Reproductive Tract
    - 8.10.3.1. Mycoplasmas
    - 8.10.3.2. Contagious Equine Metritis Procedure of Sample Collection for the Determination of Contagious Equine Metritis
    - 8.10.3.3. Equine Viral Arteritis
    - 8.10.3.4. Equine Rhinopneumonitis
    - 8.10.3.5. Leptospirosis
    - 8.10.3.6. Brucellosis
  - 8.10.4. Parasitic Diseases of the Reproductive Tract
    - 8.10.4.1. Habronemiasis
    - 8.10.4.2. Durina

## Module 9. Foal Medicine and Surgery

- 9.1. Neonatal Screening
  - 9.1.1. Normal Clinical Parameters in the Foal during the First Days of Life
  - 9.1.2. Onset of Organ Systems Functioning at Birth and During the First Months of Life
    - 9.1.2.1. Gastric System
    - 9.1.2.2. Respiratory System
    - 9.1.2.3. Endocrine System
    - 9.1.2.4. Muscular and Neurological System
    - 9.1.2.5. Ophthalmic System
- 9.2. Immature Foal Failure in the Passive Transfer of Immunity Isoerythrolysis Septicemia
  - 9.2.1. The Premature, Immature and Stunted Foal
  - 9.2.2. Cardiopulmonary Resuscitation
  - 9.2.3. Failure of Passive Transfer of Immunity
  - 9.2.4. Isoerythrolysis
  - 9.2.5. Neonatal Sepsis
- 9.3. Neonatal Respiratory, Cardiac, Neurological and Musculoskeletal Pathologies
  - 9.3.1. Neonatal Respiratory Pathologies
    - 9.3.1.1. Respiratory Bacterial Pathologies
    - 9.3.1.2. Viral Respiratory Pathologies
    - 9.3.1.3. Rib Fractures
  - 9.3.2. Neonatal Cardiac Pathologies
    - 9.3.2.1. Patent Ductus Arteriosus
    - 9.3.2.2. Foramen Ovale
    - 9.3.2.3. Tetralogy of Fallot
  - 9.3.3. Neonatal Neurological Pathologies
    - 9.3.3.1. Hypoxic Ischemic Encephalopathy
    - 9.3.3.2. Septic Encephalitis, Meningitis and Metabolic Encephalopathies
    - 9.3.3.3. Congenital Neurological Pathologies
  - 9.3.4. Neonatal Musculoskeletal Pathologies
    - 9.3.4.1. Vitamin E and Selenium Deficiency

- 9.4. Neonatal Gastrointestinal, Genitourinary and Endocrine Pathologies
  - 9.4.1. Neonatal Gastrointestinal Pathologies
    - 9.4.1.1. Bacterial and Viral Diarrhea
    - 9.4.1.2. Meconium Impaction
    - 9.4.1.3. Congenital Gastrointestinal Pathologies
    - 9.4.1.4. Gastric and Duodenal Ulcers
  - 9.4.2. Neonatal Genitourinary Pathologies
    - 9.4.2.1. Omphalophlebitis and Omphaloarteritis
    - 9.4.2.2. Persistent Urachus
    - 9.4.2.3. Bladder Rupture
  - 9.4.3. Neonatal Endocrine Pathologies
    - 9.4.3.1. Thyroid Alterations
    - 9.4.3.2. Hypoglycemia, Hyperglycemia and Lack of Maturation of the Endocrine System
- 9.5. Identification and Stabilization of the Patient with Ruptured Bladder or Persistent Urachus
  - 9.5.1. Omphalophlebitis, Omphaloarteritis and Patent Urachus
  - 9.5.2. Bladder Rupture
  - 9.5.3. Diagnostic Assessment and Stabilization Treatments
  - 9.5.4. Medical Treatment and Surgical Options
- 9.6. Diagnostic Imaging of the Chest and Abdominal Cavity of the Foal
  - 9.6.1. Diagnostic Imaging of the Chest
    - 9.6.1.1. Technical Basis
      - 9.6.1.2.1. Radiology
      - 9.6.1.2.2. Ultrasound
      - 9.6.1.2.3. Computerized Tomography
    - 9.6.1.2. Thoracic Pathology
  - 9.6.2. Diagnostic Imaging of the Abdomen
    - 9.6.2.1. Technical Basis
      - 9.6.2.1.1. Radiology
      - 9.6.2.1.2. Ultrasound
    - 9.6.2.2. Abdominal Pathology
- 9.7. Treatment of Septic Arthritis Umbilical Herniorrhaphy
  - 9.7.1. Pathophysiology and Diagnosis of Synovial Infections in Foals
  - 9.7.2. Treatment of Septic Arthritis in the Foal
  - 9.7.3. Etiopathogenesis and Diagnosis of Umbilical Hernias
  - 9.7.4. Umbilical Herniorrhaphy Surgical Techniques
- 9.8. Angular Deformities Treatment
  - 9.8.1. Etiopathogenesis
  - 9.8.2. Diagnosis
  - 9.8.3. Conservative Treatment
  - 9.8.4. Surgical Management
- 9.9. Flexural Deformities Treatment
  - 9.9.1. Etiopathogenesis
  - 9.9.2. Diagnosis
  - 9.9.3. Conservative Treatment
  - 9.9.4. Surgical Management
- 9.10. Diagnosis of Developmental Diseases in the Foal Treatment of Physitis, Epiphysitis and Hoof Management Guidelines for Healthy Foals
  - 9.10.1. Etiopathogenesis, Diagnosis and Treatment of different forms of Physitis, Epiphysitis, Osteochondrosis and Subchondral Cysts
  - 9.10.2. Evaluation of Poise in the Healthy Foal
  - 9.10.3. Hoof Trimming Guideline in the Healthy Foal



## Module 10. Advanced Therapeutic Protocols and Toxicology

- 10.1. Sedation and Total Intravenous Anesthesia
  - 10.1.1. Total Intravenous Anesthesia
    - 10.1.1.1. General Considerations
    - 10.1.1.2. Patient and Procedure Preparation
    - 10.1.1.3. Pharmacology
    - 10.1.1.4. Total Intravenous Anesthesia in Short-Term Procedures
    - 10.1.1.5. Total Intravenous Anesthesia in Procedures of Medium Duration
    - 10.1.1.6. Total Intravenous Anesthesia in Long-Term Procedures
  - 10.1.2. Sedation for On-Station Procedures
    - 10.1.2.1. General Considerations
    - 10.1.2.2. Patient Preparation/Procedure
    - 10.1.2.3. Technique: Bolus and Continuous Intravenous Infusions
    - 10.1.2.4. Pharmacology
    - 10.1.2.5. Drug Combinations
- 10.2. Pain Relief in Horses
  - 10.2.1. Detection of Pain in Hospitalized Patients and Multimodal Analgesia
  - 10.2.2. Types of NSAIDs
  - 10.2.3.  $\alpha_2$  Agonists and Opioids
  - 10.2.4. Local anesthetics
  - 10.2.5. Other Drugs Used for Pain Control in Equines
  - 10.2.6. Complementary Therapies: Acupuncture, Shockwaves, Chiropractic, Laser
- 10.3. Correction of the Hydro-Electrolytic Balance
  - 10.3.1. General Considerations on Fluid Therapy
    - 10.3.1.1. Objective and Key Concepts
    - 10.3.1.2. Organic Fluid Distribution
    - 10.3.1.3. Assessment of Patient Needs
  - 10.3.2. Types of Fluid
    - 10.3.2.1. Crystalloids
    - 10.3.2.2. Colloids
    - 10.3.2.3. Supplements
  - 10.3.3. Routes of Administration
    - 10.3.3.1. Intravenous
    - 10.3.3.2. Oral
  - 10.3.4. Practical Principles of Fluid Therapy Calculation
  - 10.3.5. Associated Complications
- 10.4. Specific Considerations of Acid-Base Equilibrium in Horses
  - 10.4.1. Specific Considerations of Acid-Base Equilibrium in Horses
    - 10.4.1.1. Assessment of the Patient's Acid-Base Status
    - 10.4.1.2. Role of Bicarbonate, Chloride and Anion Gap
  - 10.4.2. Metabolic Acidosis and Alkalosis
  - 10.4.3. Respiratory Acidosis and Alkalosis
  - 10.4.4. Compensatory Mechanisms
  - 10.4.5. Base Excess
- 10.5. Pharmacological Considerations in the Sport Horse
  - 10.5.1. Equestrian Sports Regulation
  - 10.5.2. Doping
    - 10.5.2.1. Definition
    - 10.5.2.2. Medication Control Objectives
    - 10.5.2.3. Sampling and Accredited Laboratories
    - 10.5.2.4. Classification of Substances
  - 10.5.3. Types of Doping
  - 10.5.4. Withdrawal Time
    - 10.5.4.1. Factors Affecting Withdrawal Time
      - 10.5.4.1.1. Detection Time
      - 10.5.4.1.2. Regulatory Policies
      - 10.5.4.1.3. Animal Disposal Rate
    - 10.5.4.2. Factors to Consider in Determining Withdrawal Time
      - 10.5.4.2.1. Dose Administered
      - 10.5.4.2.2. Formulation
      - 10.5.4.2.3. Route of Administration
      - 10.5.4.2.4. Individual Pharmacokinetics
      - 10.5.4.2.5. Sensitivity of Analytical Procedures
      - 10.5.4.2.6. Sample Behavior Matrix
      - 10.5.4.2.7. Environmental Persistence of Substances and Environmental Pollution

- 10.6. Intensive Care of the Neonatal Foal
  - 10.6.1. Types of Catheters, Infusion Sets, Nasogastric and Urinary Probes for the Maintenance of Intensive Care in the Foal
  - 10.6.2. Types of Fluids, Colloids, Plasmotherapy and Hemotherapy
  - 10.6.3. Total and Partial Parenteral Feeding
  - 10.6.4. Antibiotic Therapy, Analgesia and Other Important Medications
  - 10.6.5. Cardiopulmonary Resuscitation
- 10.7. Adult Intensive Care
  - 10.7.1. General Intensive Care Considerations
  - 10.7.2. Intensive Care Procedures and Techniques
    - 10.7.2.1. Vascular Access: Maintenance and Care
    - 10.7.2.2. Arterial and Venous Pressure Monitoring
  - 10.7.3. Cardiovascular Support
    - 10.7.3.1. Shock
    - 10.7.3.2. Supportive Drugs: Inotropes and Vasopressors
    - 10.7.3.3. Support Strategies
  - 10.7.4. Respiratory Support
    - 10.7.4.1. Management of Respiratory Distress
  - 10.7.5. Critically Ill Patient Nutrition
  - 10.7.6. Neurological Patient Care
    - 10.7.6.1. Medical and Supportive Management of the Neurological Horse
      - 10.7.6.1.1. Trauma
      - 10.7.6.1.2. Encephalopathies and Myeloencephalopathies
    - 10.7.6.2. Specific Management of the Recumbent Horse
- 10.8. Toxicology I
  - 10.8.1. Digestive System Toxicology
  - 10.8.2. Liver Toxicology
  - 10.8.3. Toxicology Affecting the Central Nervous System
- 10.9. Toxicology II
  - 10.9.1. Toxicology Producing Clinical Signs Related to the Cardiovascular and Hemolymphatic Systems
  - 10.9.2. Toxicology Producing Clinical Signs related to the Skin, Musculoskeletal System and General Condition
  - 10.9.3. Toxicology Producing Clinical Signs Related to the Urinary System
  - 10.9.4. Toxicological Problems Causing Sudden Death
- 10.10. Euthanasia Procedures
  - 10.10.1. General Considerations
    - 10.10.1.1. Geriatric Horse
  - 10.10.2. Mechanisms of action for Hypothermia
  - 10.10.3. Chemical Euthanasia Methods
  - 10.10.4. Physical Euthanasia Methods
  - 10.10.5. Euthanasia Protocol
  - 10.10.6. Confirmation of Death



*Advance to the next level with  
the most advanced knowledge in  
Equine Medicine and Surgery*

07

# Clinical Internship

After passing the for online teaching period, the program includes an internship program period in a reference clinical center. The student will have at their disposal the support of a tutor who will accompany them during the whole process, both in the preparation and in the development of the clinical 120 hours of practice.



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*Through this program you will be able to do your internship in a hospital of the future, with the best veterinary technology and with renowned professors”*



The Internship of this program in Equine Medicine and Surgery consists of a practical stay of 3 weeks in a veterinary center of reference in the field of equine medicine. This stay will allow you to see real Cases alongside a team of leading professionals in the area of Veterinary, applying the most innovative state-of-the-art procedures.

In this training proposal, completely practical in nature, the activities are aimed at the development and improvement of the skills necessary for the provision of veterinary care in areas and conditions that require a high level of qualification, and which are oriented to the specific training for the exercise of the activity, in a safe environment and high professional performance.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of skill (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal skills for the practice of and Equine Surgery Medicine (learning to be and learning to relate).

The procedures described below will be the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its volume of work, the proposed activities being the following:



Module	Practical Activity
<b>Advanced diagnostic methods for diseases of the digestive system, musculoskeletal system, reproductive system, urinary system, cardio-respiratory system and vascular system</b>	Explore acute abdominal syndrome and apply medical colic treatment in the field
	Take samples through endoscopy, radiology and ultrasound in the field
	Explore through high-tech equipment each of the physiological zones of the equine
	Analyze all malformations, tumors, pathological signs in the team through specific diagnostic methods in the digestive, locomotor, reproductive, urinary, cardio-respiratory and vascular apparatus
	Perform examinations of rare and common diseases in the digestive, locomotor, reproductive, urinary, cardio-respiratory and vascular apparatus
<b>Therapeutic methods for diseases of the digestive system, locomotor system, reproductive system, urinary system, cardio-respiratory system and vascular system</b>	Verify advanced treatments in critical ambulatory cases such as Tracheotomy
	Perform the examination of congenital and acquired structural cardiac alterations
	Act in case of rudimentary metacarpal/metatarsal fractures, dismotomies and neurectomies, through the practice of field orthopedic surgery
<b>Advanced methods of evaluation of the urinary system, hematopoietic system, immunology and nutrition, nervous system and ophthalmology and endocrine system</b>	Analyze pathologies of the urinary system, hematopoietic system, immunology and nutrition, nervous system and ophthalmology and endocrine system
	Apply field surgical procedures in the male and female
	Care of the Pregnant Mare and Attention to the Foaling Examination of Complications of Birth and Postpartum Care
	Interpret Analytical Tests: Blood Count and Serum Biochemistry
	Address Treatment of Hematopoietic Alterations Transfusion Therapy
	Perform Test for Immune System Alterations Allergies
	Use of Probiotics, Prebiotics and Medicinal Plants
	Analysis of Bacterial, Fungal and Parasitic Infections of the Nervous System

Module	Practical Activity
<b>Approach of surgical pathologies of the skin</b>	Use tissue management techniques, hemostasis and suturing, wound exploration, repair of acute wounds, chronic and/or infected wounds, hoof wounds, and of tendon lacerations
	Apply advanced techniques for the management and repair of synovial wounds and joint lavage
	Participate in the Reconstructive Surgery and Skin Grafting Application of Bandages
	Perform Advanced Diagnostic Tests in Equine Dermatology
	Analyze Bacterial and Viral Skin Diseases, Fungal and Parasitic Skin Diseases, Allergic, Immune-mediated and Irritative Diseases of the Skin, Allergic, Congenital Diseases and Syndromes in Equine Dermatology
	Apply advanced treatments for skin neoplasms: electroporation and electrochemotherapy, immunotherapy, radiotherapy, dynamic phototherapy and cryotherapy
<b>Foal Medicine and Surgery</b>	Perform neonatal examination and examination of the immature foal Failure in the Passive Transfer of Immunity Isoerythrolysis Septicemia
	Analyze Neonatal Respiratory, Cardiac, Neurological and Musculoskeletal Pathologies
	Examine Neonatal Gastrointestinal, Genitourinary and Endocrine Pathologies
	Identify and Stabilization of the Patient with Ruptured Bladder or Persistent Urachus
	Use the Diagnostic Imaging Method of the Thorax and Abdominal Cavity of the Foal.
	Intervene in the Treatment of Septic Arthritis Umbilical Herniorrhaphy, Treatment of Angular Deformities and Flexural Deformities
	Diagnose Diseases in the Foal Treatment of Phisitis, Epiphysitis and Hoof Management Guidelines for Healthy Foals
<b>Advanced Therapeutic Protocols and Toxicology</b>	Apply Treatment of Medical Colic in the Field
	Practice the Sedation and Total Intravenous Anesthesia
	Analyze the treatment of pain in Horses
	Correct the Hydro-Electrolytic Balance
	Practice intensive care in the neonatal and adult foal
	Perform various toxicology analysis, especially those that produce clinical signs related to the urinary system and toxicological problems that cause sudden death
	Intervene in the euthanasia procedure



## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the Internship Program period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

**1. TUTOR:** During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.



# 08

## Where Can I Do the Clinical Internship?

In its maxim of offering quality education to its students, TECH provides the opportunity to put into practice the theoretical knowledge learned throughout this training in a veterinary center of reference in equine medicine and surgery. In this way, the student specializes alongside the best in this sector, propelling their career to the highest level in this specialized veterinary field that is increasingly in demand.








“

*Opt for this Internship Program and boost your job opportunities in the field of equine medicine and surgery with the best veterinarians specialized in horse health”*

## tech 70 | Where Can I Do the Clinical Internship?



The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:



**Veterinary-medicine**

### Horsepital

Country	City
Spain	Madrid

Address: Finca la Comarca, Camino del Castillo Sin Número, 28692 Villanueva de la Cañada

Center specialized in equine care

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**Related internship programs:**

- Equine Medicine and Surgery







Veterinary-medicine

### AGAR Veterinarios equinos

Country	City
Spain	Asturias

Address: Barrio Belmonte,  
33590 Boquerizo, Asturias

Equine Veterinary Services in Asturias and Cantabria

**Related internship programs:**  
-Internal Medicine in Major Species  
- Equine Medicine and Surgery





Veterinary-medicine

### Aztekan Hospital Veterinario - Roma

Country	City
Mexico	Mexico City

Address: San Luis 152 Col Roma C.P CDMX

24-hour Veterinary Hospital

**Related internship programs:**

- Veterinary Emergencies in Small Animals
- Veterinary Cardiology in Small Animals



Veterinary-medicine

### Aztekan Hospital Veterinario - Sur

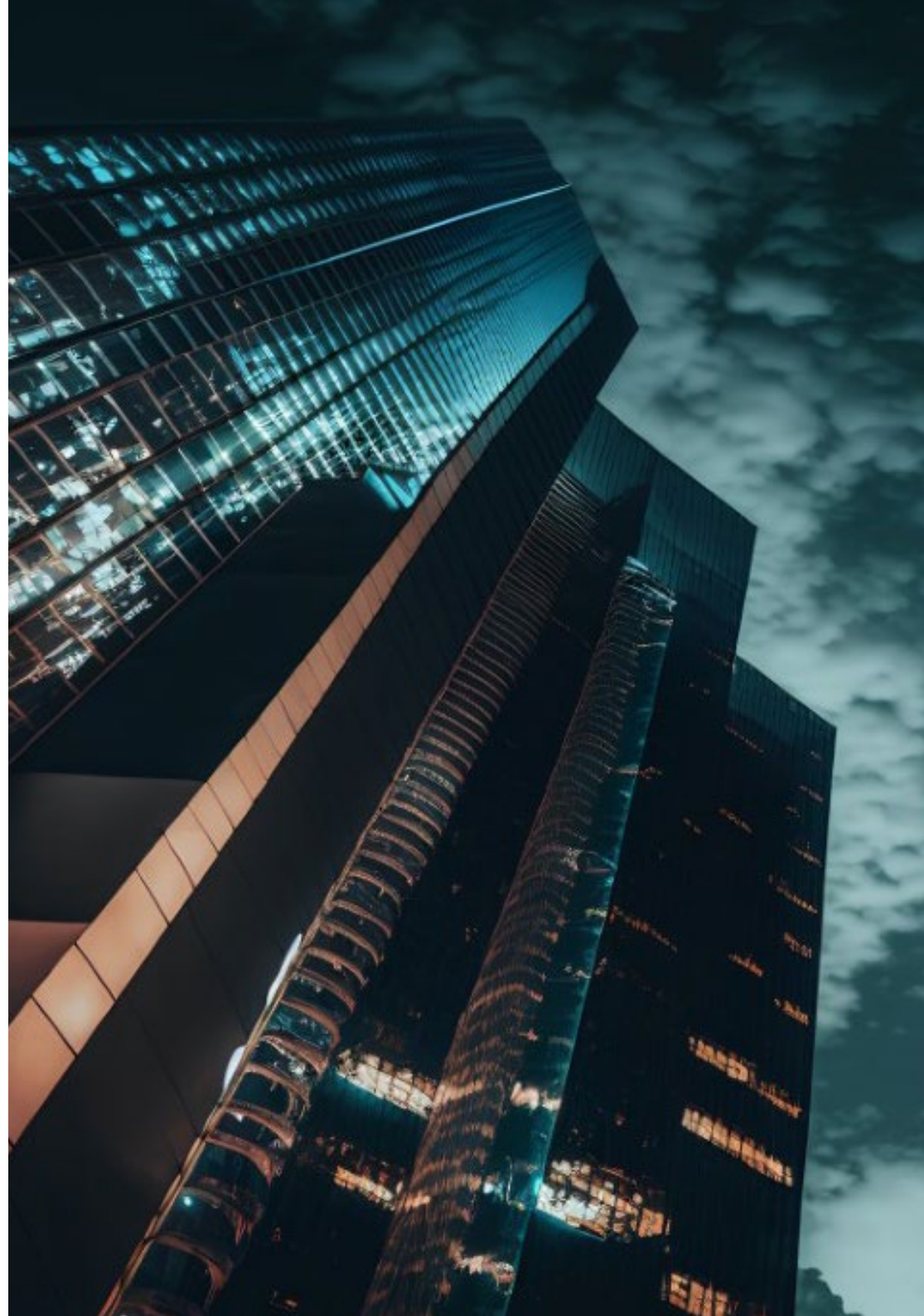
Country	City
Mexico	Mexico City


Address: Circuito Estadio Azteca #298  
Pedregal de Santa Ursula C.P 04600 CDMX

24-hour Veterinary Hospital

**Related internship programs:**

- Veterinary Emergencies in Small Animals
- Dermatology in Small Animals





**Veterinary-medicine**

**Aztekan Hospital Veterinario - Nápoles**

Country	City
Mexico	Mexico City

Address: Nebraska 151 Colonia Nápoles C.P  
03810 CDMX

24-hour Veterinary Hospital

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**Related internship programs:**

- Equine Medicine and Surgery
- Veterinary Emergencies in Small Animals



09

# 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 evaluate 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. The feeling that the effort invested is effective becomes a very important motivation for veterinarians, which translates into a greater interest in learning and an increase in the time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.



*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 trained 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 training, 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 applied to the 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.

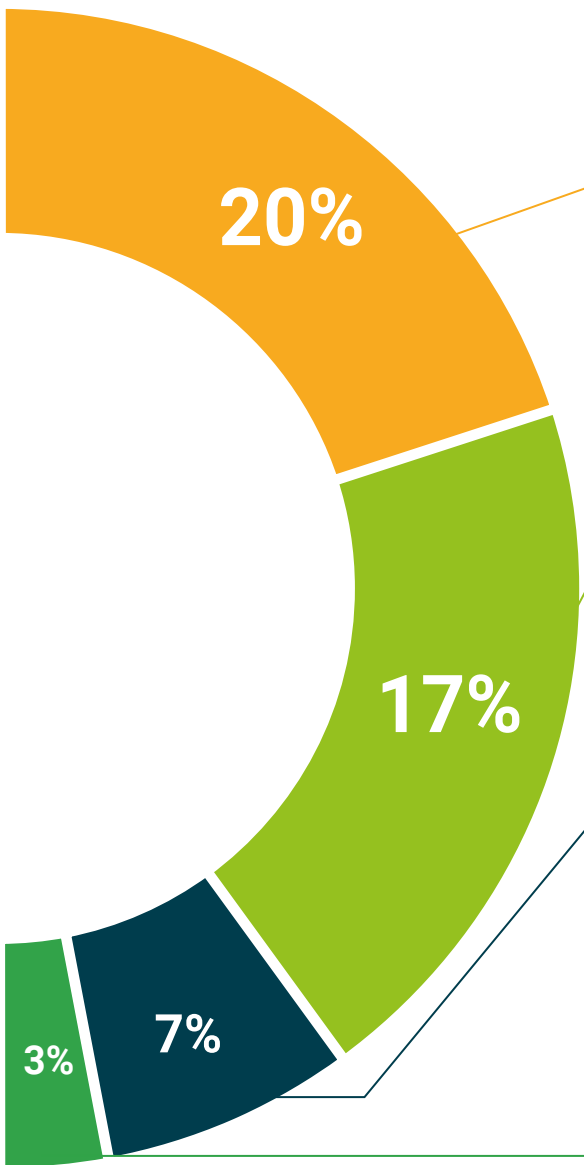
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 evaluate and re-evaluate 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.



# 10 Certificate

The Hybrid Professional Master's Degree in Equine Medicine and Surgery guarantees, in addition to the most rigorous and updated training, access to a Hybrid Professional Master's Degree issued by TECH Technological University.



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



This **Hybrid Professional Master's Degree in Equine Medicine** contains the most complete and up-to-date program on the professional and educational field.

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

In addition to the diploma, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

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

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 h.**



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

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service information  
knowledge present quality  
development languages  
virtual classroom



Hybrid Professional Master's  
Degree  
Equine Medicine and Surgery

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

# Hybrid Professional Master's Degree Equine Medicine and Surgery

