

Postgraduate Diploma

Equine Reproduction and Neonatology





Postgraduate Diploma Equine Reproduction and Neonatology

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-equine-reproduction-neonatology

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01

Introduction

This program will be dedicated to the study of the urinary system in parallel to the reproductive system, given that, on many occasions, due to their topographic proximity and the fact that they share anatomical structures, their study is approached as a whole. A study that will be completed with the most up-to-date learning in sedation and anesthesia in the field, intensive care and toxicology. It is a 100% online program, without pre-established schedules or journeys to on-site centers, enriched with audiovisual material and complementary readings.





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You will learn to recognize medical and surgical genital pathologies of the stallion and the mare dam, assess their extent and provide appropriate treatments for recovery and restoration of proper reproductive function"

First, the medical pathologies of the male and female will be presented, followed by the surgical pathologies. All these issues will be presented in the necessary breadth, increasing the student's skills in traditional practices as well as in novel procedures and the latest researched techniques. This program will also address the main alterations that can affect the urinary system; these can compromise the physical condition of the animal to the point of reducing its performance or even limiting the patient's life. Possible diagnostic tests will be reviewed and treatment alternatives will be extensively established.

This Postgraduate Diploma, especially dedicated to foals, will present the possible medical and surgical pathologies likely to appear during the neonatal and pediatric period of the equine, always presenting updated exploration and diagnostic techniques and modernized treatment protocols representative of the latest advances in this field of veterinary medicine.

In addition, students in this program will have the opportunity to participate in a series of exclusive Masterclasses given by a leading international expert in the equine field. These masterclasses will focus on the approach to various pathologies related to Reproduction and Neonatology, offering a complete and up-to-date vision of the most advanced therapeutic techniques and strategies. Students will thereby be able to broaden their knowledge and competencies according to the highest veterinary level, and apply them in their professional practice.

Finally, the student will receive specialized education on euthanasia procedures, essential in daily practice since this is a delicate assistance that must always be practiced with advanced knowledge to ensure the minimum suffering for patients. In this way, professionals will update their knowledge not only in reproduction but also in topics related to neonatology.

This **Postgraduate Diploma in Equine Reproduction and Neonatology** contains the most complete and up-to-date scientific program on the market. The most important features include:

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



The Masterclasses included in the educational program will allow you to gain an in-depth understanding of the latest equine diagnostic and approach techniques"

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Our innovative telepractice concept will give you the opportunity to learn through an immersive experience, which will provide you with a faster integration and a much more realistic view of the contents: “learning from an expert”

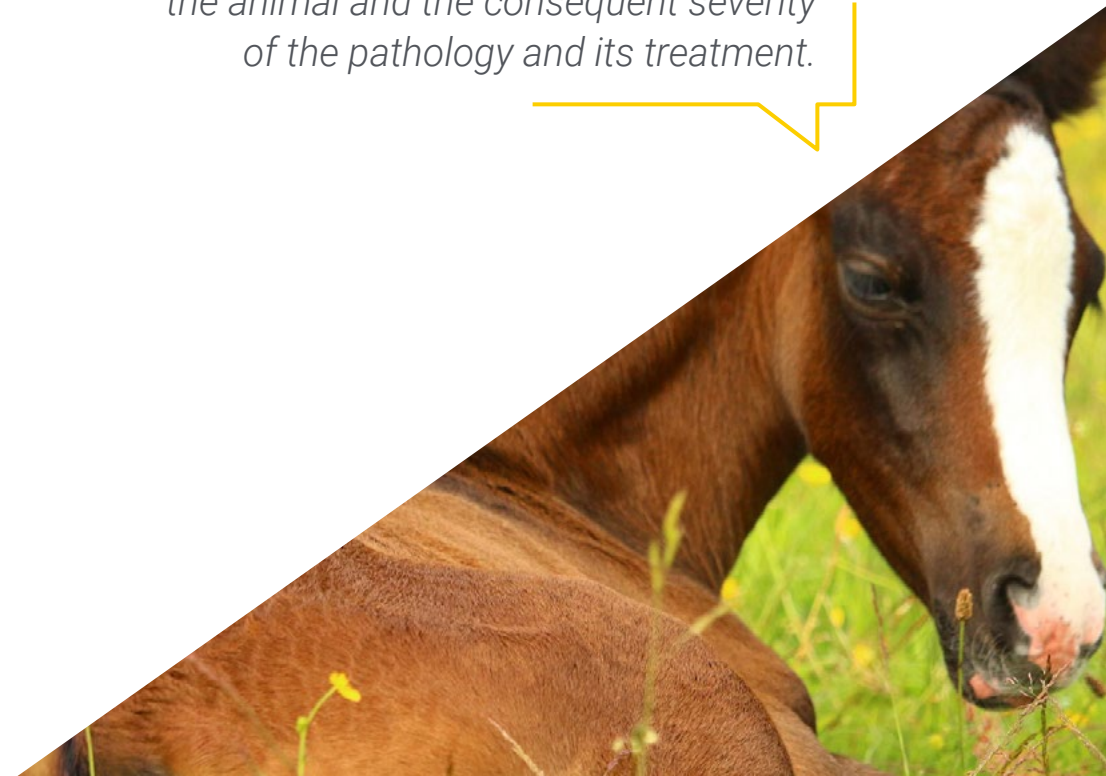
The program’s teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to prepare for real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

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

This program will enable the clinician to correctly assess the systemic status of the animal and the consequent severity of the pathology and its treatment.



02 Objectives

The objective is to enable highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is materialized in helping professionals to reach a much higher level of competence and control. A goal that, in just a few months you will be able to achieve, with a high intensity and effective specialization.





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Join the elite, with this highly effective educational program and open new paths to help you advance in your professional progress”



General Objectives

- ♦ Identify the different anatomical structures and pathologies of the digestive tract of the horse
- ♦ Develop and advance in the most frequent procedures to solve oral cavity pathologies
- ♦ Recognize the symptoms of digestive disorders
- ♦ Enable the clinician to correctly assess the systemic state of the animal and the consequent severity of the pathology
- ♦ Establish diagnostic protocols and generate optimized treatments and prognoses
- ♦ Establish optimal preventive medicine criteria and good management guidelines
- ♦ Establish an appropriate methodology for the examination of the horse with respiratory or cardiac problems
- ♦ Identify all clinical signs associated with respiratory or cardiovascular disease in equines
- ♦ Generate specialized knowledge of respiratory and cardiac auscultation
- ♦ Establish the specific clinical approach to the horse with a respiratory or cardiovascular disorder
- ♦ Identify the pathologies of the urinary system of the horse
- ♦ Establish diagnostic protocols to facilitate the recognition of patients with urinary pathology
- ♦ Expand the alternatives of possible treatments according to pathological situations
- ♦ Recognize the medical and surgical genital pathologies of the stallion and the dam mare, assess their extent and provide appropriate treatments for recovery and restoration of proper reproductive function
- ♦ Develop surgical techniques for the resolution of pathologies of the reproductive system that can be performed in the field





Specific Objectives

Module 1. Reproductive and Urinary System

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

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

Module 2. Foal Medicine and Surgery

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

- ♦ Develop techniques that can be performed in the field to solve surgical pathologies of the growing foal, such as umbilical hernia correction
- ♦ Compile knowledge of angular and flexural deformities of the foal. Develop different treatments and establish specificities according to patient age and the anatomical region affected
- ♦ Detail the medical treatments and application of resins, splints and orthopedic hardware used in the treatment of angular and flexural deformities
- ♦ Specify the techniques for delaying and stimulating bone growth used in the surgical treatment of angular deformities
- ♦ Determine the desmotomy and tenotomy techniques used in the treatment of flexural deformities
- ♦ Establish an appropriate methodology for the identification, treatment and prognostication of osteochondral injuries and subchondral bone cysts

Module 3. Advanced Therapeutic Protocols and Toxicology

- ♦ Analyze the new alternatives in terms of drugs used in sedation and anesthesia for outpatient use, as well as to delve into the most established protocols in order to optimize this type of procedures
- ♦ Prepare the clinician in effective and dynamic decision making when dealing with a patient with a serious systemic condition, in order to ensure diagnoses and treatments that ensure patient stabilization despite non-hospital conditions
- ♦ Enable the clinician in the correction of hydroelectrolyte and acid-base imbalances to ensure the reversal of hemodynamic alterations
- ♦ Ensure advanced knowledge of equine pain management with the latest medications

- ♦ Examine the characteristics and special considerations to be taken into account when applying pharmacological treatments in the sport horse, with special emphasis on avoiding problems in the face of possible positive results in control tests for biological substances in competitions
- ♦ Generate advanced knowledge on equine toxicology, ensuring education for the recognition of toxic symptoms, as well as the identification of plants and agents harmful to equids
- ♦ Analyze euthanasia procedures in depth; The clinician must be able to act correctly with patients in these last moments of their life trajectory, applying euthanasia in the most humane way possible in the worst case scenario

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A path to achieve specialization and professional growth that will propel you towards a greater level of competitiveness in the employment market”



03

Course Management

Within the concept of total quality of our program, 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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*Our team of teachers,
with expertise in Equine
Reproduction and Neonatology,
will help you achieve success
in your profession"*

International Guest Director

As one of the foremost **veterinary surgeons** in equine care, Dr. Andy Fiske-Jackson is the **Deputy Director** of the **Royal Veterinary College Equine** in the United Kingdom. It is one of the leading experts in both equine patient care and 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, Dr. Andy Fiske-Jackson is also part of the team of surgeons at the Equine Referral Hospital, focusing his work on orthopedic and soft tissue surgery. As such, his main areas of focus are low performance, back pain, dental and sinus issues, digital flexor tendinopathies and regenerative medicine.

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



Dr. Fiske-Jackson, Andy

- Deputy Director at the Royal Veterinary College Equine, Hertfordshire, UK
- Associate Professor of Equine Surgery at the Royal Veterinary College
- Equine Surgeon at the Equine Referral Hospital, Hertfordshire, UK
- Veterinarian at Axe Valley Veterinary
- Veterinarian at Liphook Equine Hospital
- Veterinarian at the Society for the Protection of Animals Overseas, Morocco
- Degree 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 specialized in Equine Surgery and Sports Medicine
- Head of the Large Animal Department at the Complutense Veterinary Clinical Hospital
- Associate Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid
- Teacher in different graduate and postgraduate courses, university specialization programs and master's degrees
- Director of Final Year Project in the Veterinary Degree and as a member of the tribunal of different doctoral theses
- PhD in Veterinary Medicine, Complutense University of Madrid
- Spanish Certificate of Equine Clinical Medicine (CertEspCEq)



Dr. De la Cuesta Torrado, María

- Veterinarian with clinical specialty in Equine Internal Medicine
- Associate Professor of the Department of Equine Medicine and Surgery at the CEU University Cardenal Herrera
- Doctorate in Advanced Studies from the Complutense University of Madrid
- Master's Degree in Equine Internal Medicine by Alfonso X el Sabio University
- Founder of MC Veterinaria
- Member of: Organizing Committee of the 12th European College of Equine Internal Medicine Congress, Board of Directors of the Spanish Society of Ozone Therapy, Equine Clinicians Commission of the Official College of Veterinarians of Valencia, Spanish Association of Equine Veterinarians (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

Professors

Dr. Aguirre Pascasio, Carla

- ♦ Doctor of Veterinary Medicine from the University of Murcia
- ♦ Postgraduate degree in equine physiotherapy from the University of Barcelona
- ♦ Master's Degree in Business and Administration by ENAE Business School, Murcia
- ♦ Certificate in Internal Medicine from the Royal Veterinary College of London and by 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 Clinical Practice from the Spanish Veterinary Council
- ♦ Board Eligible in the ECEIM (European College of Equine Internal Medicine)
- ♦ Fellowship at Casal do Rio Equine Hospital

Dr. Domínguez Gimbernat, Mónica

- ♦ Clinical Equine Veterinarian specializing in Internal Medicine and Reproduction
- ♦ Clinical Veterinarian of the Reproduction Service of the Complutense Clinical Veterinary Hospital
- ♦ PhD in Veterinary Medicine, Complutense University of Madrid
- ♦ Official Master's Degree in Veterinary Science
- ♦ Spanish Certificate in Equine Clinic
- ♦ Associate Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid
- ♦ Collaborating Professor in Practical Teaching, Department of Animal Medicine and Surgery, 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. Iglesias García, Manuel

- ♦ Clinical Veterinarian and Surgeon at the Veterinary Clinical Hospital of the University of Extremadura
- ♦ Director of Final Year Project in the Veterinary Degree at the University of Extremadura
- ♦ Collaboration in teaching interns and students of the Veterinary Degree during the Master's Degree in Equine Surgery at the University of Extremadura
- ♦ Professor of the Master's Degree in Large Animal Internship at the University of Extremadura
- ♦ Doctor 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 by 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 Clinical Medicine (CertEspCEq)

Dr. Rodríguez Hurtado, Isabel

- ♦ Head of the Department 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 Degree at the Alfonso X el Sabio University
- ♦ Professor of the Postgraduate Degree in Equine Internal Medicine at the Alfonso X el Sabio University.
- ♦ Head of the Large Animals Area of the Clinical Veterinary Hospital
- ♦ Doctor of Veterinary Medicine from Alfonso X El Sabio University
- ♦ Diplomate 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. Santiago Llorente, Isabel

- ♦ Head of the Equine Internal Medicine at the Complutense Veterinary Clinical Hospital
- ♦ Member of the Anesthesia Service at the Complutense Veterinary Clinical Hospital of the Complutense University of Madrid
- ♦ Collaborator in practical teaching in the Department of Animal Medicine and Surgery at the Complutense University of Madrid
- ♦ PhD in Veterinary Medicine, Complutense University of Madrid
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Professor at the Universidade Lusófona Lisbon, Portugal
- ♦ Vocal of the Association of Equine Veterinarians (AVE)

Dr. Manso Díaz, Gabriel

- ♦ Clinical veterinarian, member of the Diagnostic Imaging Service at the Complutense Veterinary Clinical Hospital
- ♦ Assistant Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid
- ♦ Collaborator in the practical teaching at 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
- ♦ Certified by the European College of Veterinary Diagnostic Imaging (ECVDI) in the Specialty of Large Animals

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
- ♦ Surgeon at Grand Renaud Veterinary Clinic
- ♦ Surgeon at the Equine Hospital Aznalcóllar
- ♦ Professor and coordinator of several university programs, both theoretical and practical, at the Veterinary University of Pretoria and at the Alfonso X El Sabio University
- ♦ Head of the Postgraduate Degree in Sports Medicine and Equine Surgery at Alfonso X El Sabio University
- ♦ Doctor of Veterinary Science from the Complutense University of Madrid
- ♦ Certified by the European College of Veterinary Surgeons
- ♦ Diploma in Experimental Animals Category C from the University of Lyon
- ♦ Master's Degree in Veterinary Science from the University Alfonso X el Sabio
- ♦ 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: Examination Committee of the European College of Veterinary Surgeons



Dr. López San Román, Javier

- ♦ Veterinarian 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 at the LRU University School
- ♦ Professor of Veterinary Medicine at national universities such as Las Palmas de Gran Canaria, Córdoba and Extremadura, and abroad Trás-os-Montes e Alto Douro, National Veterinary School of Lyon, National University of Litoral in Argentina
- ♦ Professor in different undergraduate and postgraduate courses, university specialization programs and masters, 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



A unique, key, and decisive educational experience to boost your professional development"

04

Structure and Content

The contents have been developed by its different experts, with a clear purpose: to ensure that our students acquire each and every one of the skills necessary to become a Postgraduate Diploma in this field. A complete and well-structured program that will take you to the highest standards of quality and success.





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

Module 1. Reproductive and Urinary System

- 1.1. Urinary System Assessment
 - 1.1.1. Hematological and Biochemical Parameters Related to the Renal System
 - 1.1.2. Urinalysis
 - 1.1.3. Diagnostic Methods in the Urinary System
 - 1.1.3.1. Ultrasound of the Urinary System
 - 1.1.3.2. Endoscopy of the Urinary System
 - 1.1.3.3. Renal Biopsy
 - 1.1.3.4. Water Deprivation Test
- 1.2. Urinary System Pathologies
 - 1.2.1. Acute Renal Failure
 - 1.2.1.1. Causes of Acute Renal Insufficiency
 - 1.2.1.2. Treatment of Acute Renal Insufficiency
 - 1.2.2. Chronic Renal Failure
 - 1.2.2.1. Causes of Chronic Renal Insufficiency
 - 1.2.2.2. Treatment of Chronic Renal Insufficiency
 - 1.2.3. Urinary Tract Infections
 - 1.2.3.1. Urethritis, Cystitis, Pyelonephritis and their Treatment
 - 1.2.3.2. Treatment of Urinary Tract Infections
 - 1.2.4. Obstructive Pathology of the Urinary Tract
 - 1.2.4.1. Obstructive Pathology Types
 - 1.2.4.2. Treatment
 - 1.2.5. Polyuria and Polydipsia
 - 1.2.6. Urinary Incontinence and Bladder Dysfunction
 - 1.2.7. Urinary Tract Tumors
- 1.3. Medical Pathologies of the Male Genitalia
 - 1.3.1. Introduction to the Medical Pathology of the Stallion
 - 1.3.2. Testicular Pathology in the Stallion
 - 1.3.2.1. Handling and Treatment of the Cryptorchid Stallion
 - 1.3.2.2. Testicular Inflammatory Disorders
 - 1.3.2.3. Management of Testicular Degeneration in the Stallion
 - 1.3.2.4. Hydrocele Management
 - 1.3.2.5. Testicular Neoplasms in the Stallion
 - 1.3.2.6. Testicular Torsion in the Stallion
 - 1.3.3. Penile Pathologies
 - 1.3.3.1. Penile Trauma Management
 - 1.3.3.2. Penile Tumor Developments
 - 1.3.3.3. Paraphimosis
 - 1.3.3.4. Priapism
 - 1.3.4. Pathology of Adnexal Glands
 - 1.3.4.1. Ultrasound and Assessment of Adnexal Glands
 - 1.3.4.2. Vesiculitis, Management and Treatment
 - 1.3.4.3. Adnexal Gland Obstruction
 - 1.3.5. Ejaculate Alterations
 - 1.3.5.1. Seminal Assessment
 - 1.3.5.2. Factors Affecting Fertility
 - 1.3.5.3. Sub-fertile Semen Management
 - 1.3.5.3.1. Semen Centrifugation for Quality Improvement
 - 1.3.5.3.2. Seminal Plasma Substitution
 - 1.3.5.3.3. Semen Filtration to Improve Quality
 - 1.3.5.3.4. Low-Quality Semen Cooling Protocols
 - 1.3.6. Alterations in Stallion Behavior and Mating Management
 - 1.3.7. Advances in Assisted Reproduction in Stallions
 - 1.3.7.1. Seminal Freezing
 - 1.3.7.2. Epididymal Sperm Retrieval after Death or Castration
- 1.4. Male Field Surgical Procedures
 - 1.4.1. Castration
 - 1.4.1.1. Introduction and Considerations of Castration in Males
 - 1.4.1.1.1. Patient Selection
 - 1.4.1.2. Castration Surgical Techniques
 - 1.4.1.2.1. Open Castration
 - 1.4.1.2.2. Closed Castration
 - 1.4.1.2.3. Semi-Closed or Semi-Open Castration
 - 1.4.1.3. Variations in Surgical Technique
 - 1.4.1.3.1. Different Hemostasis Options
 - 1.4.1.3.2. Primary Skin Closure



- 1.4.1.4. On-Station Castration Considerations
 - 1.4.1.4.1. Sedation
- 1.4.1.5. Considerations for Castration under General Anesthetic
- 1.4.1.6. Inguinal Cryptorchidism
 - 1.4.1.6.1. Presurgical Diagnosis
 - 1.4.1.6.2. Surgical Technique
- 1.4.2. Penile Amputation
 - 1.4.2.1. Indications
 - 1.4.2.2. Post-Surgical Procedure and Considerations
- 1.5. Medical and Surgical Pathologies of the Female Genitalia I
 - 1.5.1. Medical Pathologies I
 - 1.5.1.1. Ovarian Pathology
 - 1.5.1.1.1. Ovulation Disorders
 - 1.5.1.1.2. Ovarian Tumors
 - 1.5.1.2. Fallopian Tubes Disorders
 - 1.5.1.3. Medical Uterine Pathology
 - 1.5.1.3.1. Preparation and Procedure for Sample Collection
 - 1.5.1.3.1.1. Cytology
 - 1.5.1.3.1.2. Biopsy
 - 1.5.1.3.2. Types of Endometritis
 - 1.5.1.3.3. Management of the Mare with Uterine Fluid
 - 1.5.1.3.4. Management of Mares with Uterine Cysts
- 1.6. Medical and Surgical Genital Pathologies of the Mare II
 - 1.6.1. Medical Pathologies II
 - 1.6.1.1. Cervical Pathology
 - 1.6.1.1.1. Cervical Lacerations
 - 1.6.1.1.2. Cervical Adherences
 - 1.6.1.2. Medical Pathology of the Vagina
 - 1.6.1.3. Reproductive Management of the Geriatric Mare
 - 1.6.1.4. Update on Assisted Reproduction in the Mare

- 1.6.2. Surgical Pathologies of the Mare
 - 1.6.2.1. Normal Vulvar Conformation of the Mare
 - 1.6.2.1.1. Vulvar Examination of the Mare
 - 1.6.2.1.2. Caslick Index
 - 1.6.2.2. Vulvoplasty
 - 1.6.2.2.1. Caslick Surgery Procedure
- 1.7. Pregnant Mare and Care at Foaling
 - 1.7.1. Mare Gestation
 - 1.7.1.1. Diagnosis of Pregnancy in the Mare
 - 1.7.1.2. Management of Early and Late Multiple Gestation New Techniques
 - 1.7.1.3. Embryo Sexing
 - 1.7.2. Complications During Gestation in the Mare
 - 1.7.2.1. Abortion
 - 1.7.2.1.1. Early Abortion
 - 1.7.2.1.2. Late Miscarriage
 - 1.7.2.2. Uterine Torsion
 - 1.7.2.3. Management and Treatment of Placentitis
 - 1.7.2.4. Management of Placental Abruption
 - 1.7.3. Nutritional Needs of the Pregnant Mare
 - 1.7.4. Ultrasound Evaluation of the Fetus
 - 1.7.4.1. Ultrasound Evaluation at Different Stages of Gestation
 - 1.7.4.2. Fetal Biometry
 - 1.7.5. Methods for Predicting Foaling in the Full-Term Mare
 - 1.7.6. Euthyroid Labor and Delivery
 - 1.7.6.1. Phases of Euthyroid Labor and Delivery
- 1.8. Complications of Childbirth and Postpartum Care
 - 1.8.1. Dystocic Labor and Delivery
 - 1.8.1.1. Material Necessary for the Resolution of Dystocia
 - 1.8.1.2. Types of Dystocia and Management of Different Fetal Presentations
 - 1.8.2. Peripartum Surgical Emergencies
 - 1.8.2.1. Fetotomy
 - 1.8.2.1.1. Fetotome
 - 1.8.2.1.2. Preparation of the Mare for the Procedure
 - 1.8.2.1.3. Fetotomy in the Field Vs. In the Hospital
 - 1.8.2.2. Cesarean Section
 - 1.8.2.3. Hemorrhage of the Ankle Ligament
 - 1.8.2.4. Uterine Laceration
 - 1.8.2.5. Prepubic Tendon Rupture
 - 1.8.2.6. Rectovaginal Fistula
 - 1.8.3. Postpartum Care
 - 1.8.3.1. Control of Uterine Involution and Establishment of the Postpartum Cycle
 - 1.8.4. Postpartum Complications
 - 1.8.4.1. Placenta Retention
 - 1.8.4.2. Vaginal Lacerations
 - 1.8.4.3. Uterine Bleeding
 - 1.8.4.4. Uterine Prolapse
 - 1.8.4.5. Rectal Prolapse
 - 1.8.4.6. Vulvar Hematoma
 - 1.8.4.7. Uterine Horn Invagination
- 1.9. Repair of Tears and Lacerations during Labor and Delivery
 - 1.9.1. Management of Vulvar Tears and Lacerations during Labor and Delivery
 - 1.9.2. Classification of Perineal Lacerations
 - 1.9.3. Reconstruction of the Perineal Body
 - 1.9.3.1. Surgical Preparation of the Mare
 - 1.9.3.2. Vaginal Vestibule Sphincter Insufficiency
 - 1.9.3.2.1. Perineal Body Reconstruction, Vestibuloplasty
 - 1.9.3.2.2. Perineal Body Transverse Section, Perineoplasty
 - 1.9.3.2.2.1. Pouret's Surgery
 - 1.9.3.3. Postoperative Care
 - 1.9.3.4. Complications of Perineal Surgery
 - 1.9.4. Surgical Management of Third-Degree Rectovaginal Tearing
 - 1.9.5. Surgical Management of Rectovaginal Fistulas
- 1.10. Infectious and Parasitic Diseases of the Reproductive System in Equines
 - 1.10.1. Introduction to Infectious and Parasitic Diseases of the Reproductive System in Equines
 - 1.10.2. Economic and Productive Significance of Infectious and Parasitic Diseases

- 1.10.3. Infectious Diseases of the Reproductive Tract
 - 1.10.3.1. Mycoplasmas
 - 1.10.3.2. Contagious Equine Metritis Procedure of Sample Collection for the Determination of Contagious Equine Metritis
 - 1.10.3.3. Equine Viral Arteritis
 - 1.10.3.4. Equine Rhinopneumonitis
 - 1.10.3.5. Leptospirosis
 - 1.10.3.6. Brucellosis
- 1.10.4. Parasitic Diseases of the Reproductive Tract
 - 1.10.4.1. Habronemiasis
 - 1.10.4.2. Durina

Module 2. Foal Medicine and Surgery

- 2.1. Neonatal Screening
 - 2.1.1. Normal Clinical Parameters in the Foal during the First Days of Life
 - 2.1.2. Beginning of the Functioning of Organ Systems at Birth and During the First Months of Life
 - 2.1.2.1. Gastric System
 - 2.1.2.2. Respiratory System
 - 2.1.2.3. Endocrine System
 - 2.1.2.4. Muscular and Neurological System
 - 2.1.2.5. Ophthalmic System
- 2.2. Immature Foal Failure in the Passive Transfer of Immunity Isoerythrolysis Septicemia
 - 2.2.1. The Premature, Immature and Stunted Foal
 - 2.2.2. Cardiopulmonary Resuscitation
 - 2.2.3. Failure of Passive Transfer of Immunity
 - 2.2.4. Isoerythrolysis
 - 2.2.5. Neonatal Sepsis
- 2.3. Neonatal Respiratory, Cardiac, Neurological and Musculoskeletal Pathologies
 - 2.3.1. Neonatal Respiratory Pathologies
 - 2.3.1.1. Respiratory Bacterial Pathologies
 - 2.3.1.2. Viral Respiratory Pathologies
 - 2.3.1.3. Rib Fractures
- 2.3.2. Neonatal Cardiac Pathologies
 - 2.3.2.1. Patent Ductus Arteriosus
 - 2.3.2.2. Foramen Ovale
 - 2.3.2.3. Tetralogy of Fallot
- 2.3.3. Neonatal Neurological Pathologies
 - 2.3.3.1. Hypoxic Ischemic Encephalopathy
 - 2.3.3.2. Septic Encephalitis, Meningitis and Metabolic Encephalopathies
 - 2.3.3.3. Congenital Neurological Pathologies
- 2.3.4. Neonatal Musculoskeletal Pathologies
 - 2.3.4.1. Vitamin E and Selenium Deficiency
- 2.4. Neonatal Gastrointestinal, Genitourinary and Endocrine Pathologies
 - 2.4.1. Neonatal Gastrointestinal Pathologies
 - 2.4.1.1. Bacterial and Viral Diarrhea
 - 2.4.1.2. Meconium Impaction
 - 2.4.1.3. Congenital Gastrointestinal Pathologies
 - 2.4.1.4. Gastric and Duodenal Ulcers
 - 2.4.2. Neonatal Genitourinary Pathologies
 - 2.4.2.1. Omphalophlebitis and Omphaloarteritis
 - 2.4.2.2. Patent Urachus
 - 2.4.2.3. Bladder Rupture
 - 2.4.3. Neonatal Endocrine Pathologies
 - 2.4.3.1. Thyroid Alterations
 - 2.4.3.2. Hypoglycemia, Hyperglycemia and Lack of Maturation of the Endocrine System
- 2.5. Identification and Stabilization of the Patient with Ruptured Bladder or Persistent Urachus
 - 2.5.1. Omphalophlebitis, Omphaloarteritis and Patent Urachus
 - 2.5.2. Bladder Rupture
 - 2.5.3. Diagnostic Assessment and Stabilization Treatments
 - 2.5.4. Medical Treatment and Surgical Options
- 2.6. Diagnostic Imaging of the Chest and Abdominal Cavity of the Foal
 - 2.6.1. Diagnostic Imaging the Chest
 - 2.6.1.1. Technical Basis
 - 2.6.1.1.1. Radiology
 - 2.6.1.1.2. Ultrasound
 - 2.6.1.1.3. Computerized Tomography
 - 2.6.1.2. Thoracic Pathology

- 2.6.2. Diagnostic Imaging of the Abdomen
 - 2.6.2.1. Technical Basis
 - 2.6.2.1.1. Radiology
 - 2.6.2.1.2. Ultrasound
 - 2.6.2.2. Abdominal Pathology
- 2.7. Treatment of Septic Arthritis Umbilical Herniorrhaphy
 - 2.7.1. Pathophysiology and Diagnosis of Synovial Infections in Foals
 - 2.7.2. Treatment of Septic Arthritis in the Foal
 - 2.7.3. Etiopathogenesis and Diagnosis of Umbilical Hernias
 - 2.7.4. Umbilical Herniorrhaphy: Surgical Techniques
- 2.8. Angular Deformities Treatment
 - 2.8.1. Etiopathogenesis
 - 2.8.2. Diagnosis
 - 2.8.3. Conservative Treatment
 - 2.8.4. Surgical Management
- 2.9. Flexural Deformities Treatment
 - 2.9.1. Etiopathogenesis
 - 2.9.2. Diagnosis
 - 2.9.3. Conservative Treatment
 - 2.9.4. Surgical Management
- 2.10. Diagnosis of Developmental Diseases in the Foal Treatment of Physitis, Epiphysitis and Hoof Management Guidelines for Healthy Foals
 - 2.10.1. Etiopathogenesis, Diagnosis and Treatment of different forms of Physitis, Epiphysitis, Osteochondrosis and Subchondral Cysts
 - 2.10.2. Evaluation of Poise in the Healthy Foal
 - 2.10.3. Hoof Trimming Guideline in the Healthy Foal
- 3.1.2. Sedation for On-Station Procedures
 - 3.1.2.1. General Considerations
 - 3.1.2.2. Patient/Procedure Preparation
 - 3.1.2.3. Technique: Bolus and Continuous Intravenous Infusions
 - 3.1.2.4. Pharmacology
 - 3.1.2.5. Drug Combinations
- 3.2. Pain Relief in Horses
 - 3.2.1. Detection of Pain in Hospitalized Patients and Multimodal Analgesia
 - 3.2.2. Types of NSAIDs
 - 3.2.3. Agonists and Opioids
 - 3.2.4. Local anesthetics
 - 3.2.5. Other Drugs Used for Pain Control in Equines
 - 3.2.6. Complementary Therapies: Acupuncture, Shockwaves, Chiropractic, Laser
- 3.3. Correction of Water and Electrolyte Balance
 - 3.3.1. General Considerations on Fluid Therapy
 - 3.3.1.1. Objective and Key Concepts
 - 3.3.1.2. Organic Fluid Distribution
 - 3.3.1.3. Assessment of Patient Needs
 - 3.3.2. Types of Fluid
 - 3.3.2.1. Crystalloids
 - 3.3.2.2. Colloids
 - 3.3.2.3. Supplements
 - 3.3.3. Routes of Administration
 - 3.3.3.1. Intravenous
 - 3.3.3.2. Oral
 - 3.3.4. Practical Principles of Fluid Therapy Calculation
 - 3.3.5. Associated Complications
- 3.4. Specific Considerations of Acid-Base Equilibrium in Horses
 - 3.4.1. Specific Considerations of Acid-Base Equilibrium in Horses
 - 3.4.1.1. Assessment of the Patient's Acid-Base Status
 - 3.4.1.2. Role of Bicarbonate, Chloride and Anion Gap
 - 3.4.2. Metabolic Acidosis and Alkalosis
 - 3.4.3. Respiratory Acidosis and Alkalosis
 - 3.4.4. Compensatory Mechanisms
 - 3.4.5. Base Excess

Module 3. Advanced Therapeutic Protocols and Toxicology

- 3.1. Sedation and Total Intravenous Anesthesia
 - 3.1.1. Total Intravenous Anesthesia
 - 3.1.1.1. General Considerations
 - 3.1.1.2. Patient and Procedure Preparation
 - 3.1.1.3. Pharmacology
 - 3.1.1.4. Total Intravenous Anesthesia in Short-Term Procedures
 - 3.1.1.5. Total Intravenous Anesthesia in Procedures of Medium Duration
 - 3.1.1.6. Total Intravenous Anesthesia in Long-Term Procedures

- 3.5. Pharmacological Considerations in the Sport Horse
 - 3.5.1. Equestrian Sports Regulation
 - 3.5.2. Doping
 - 3.5.2.1. Definition
 - 3.5.2.2. Medication Control Objectives
 - 3.5.2.3. Sampling and Accredited Laboratories
 - 3.5.2.4. Classification of Substances
 - 3.5.3. Types of Doping
 - 3.5.4. Withdrawal Time
 - 3.5.4.1. Factors Affecting Withdrawal Time
 - 3.5.4.1.1. Detection Time
 - 3.5.4.1.2. Regulatory Policies
 - 3.5.4.1.3. Animal Disposal Rate
 - 3.5.4.2. Factors to Consider in Determining Withdrawal Time
 - 3.5.4.2.1. Dose Administered
 - 3.5.4.2.2. Formulation
 - 3.5.4.2.3. Route of Administration
 - 3.5.4.2.4. Individual Pharmacokinetics
 - 3.5.4.2.5. Sensitivity of Analytical Procedures
 - 3.5.4.2.6. Sample Behavior Matrix
 - 3.5.4.2.7. Environmental Persistence of Substances and Environmental Pollution
- 3.6. Intensive Care of the Neonatal Foal
 - 3.6.1. Types of Catheters, Infusion Sets, Nasogastric and Urinary Catheters for the Maintenance of Intensive Care in the Foal
 - 3.6.2. Types of Fluids, Colloids, Plasmotherapy and Hemotherapy
 - 3.6.3. Total and Partial Parenteral Feeding
 - 3.6.4. Antibiotic Therapy, Analgesia and Other Important Medications
 - 3.6.5. Cardiopulmonary Resuscitation
- 3.7. Adult Intensive Care
 - 3.7.1. General Intensive Care Considerations
 - 3.7.2. Intensive Care Procedures and Techniques
 - 3.7.2.1. Vascular Access: Maintenance and Care
 - 3.7.2.2. Arterial and Venous Pressure Monitoring
 - 3.7.3. Cardiovascular Support
 - 3.7.3.1. Shock
 - 3.7.3.2. Supportive Drugs: Inotropes and Vasopressors
 - 3.7.3.3. Support Strategies
 - 3.7.4. Respiratory Support
 - 3.7.4.1. Management of Respiratory Distress
 - 3.7.5. Critically Ill Patient Nutrition
 - 3.7.6. Neurological Patient Care
 - 3.7.6.1. Medical and Supportive Management of the Neurological Horse
 - 3.7.6.1.1. Trauma
 - 3.7.6.1.2. Encephalopathies and Myeloencephalopathies
 - 3.7.6.2. Specific Management of the Recumbent Horse
- 3.8. Toxicology I
 - 3.8.1. Digestive System Toxicology
 - 3.8.2. Liver Toxicology
 - 3.8.3. Toxicology Affecting the Central Nervous System
- 3.9. Toxicology II
 - 3.9.1. Toxicology Producing Clinical Signs Related to the Cardiovascular and Hemolymphatic Systems
 - 3.9.2. Toxicology Producing Clinical Signs related to the Skin, Musculoskeletal System and General Condition
 - 3.9.3. Toxicology Producing Clinical Signs Related to the Urinary System
 - 3.9.4. Toxicological Problems Causing Sudden Death
- 3.10. Euthanasia Procedures
 - 3.10.1. General Considerations
 - 3.10.1.1. Geriatric Horse
 - 3.10.2. Mechanisms of action for Hypothermia
 - 3.10.3. Chemical Euthanasia Methods
 - 3.10.4. Physical Euthanasia Methods
 - 3.10.5. Euthanasia Protocol
 - 3.10.6. Confirmation of Death

05 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.





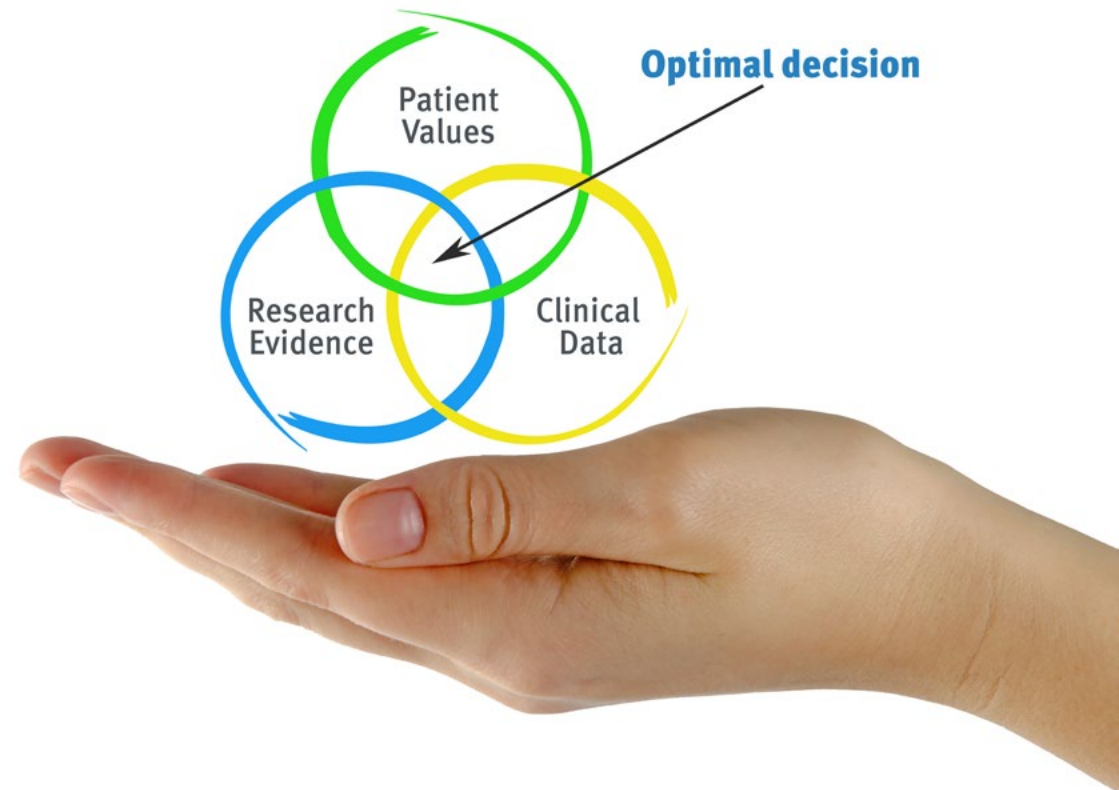
“

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

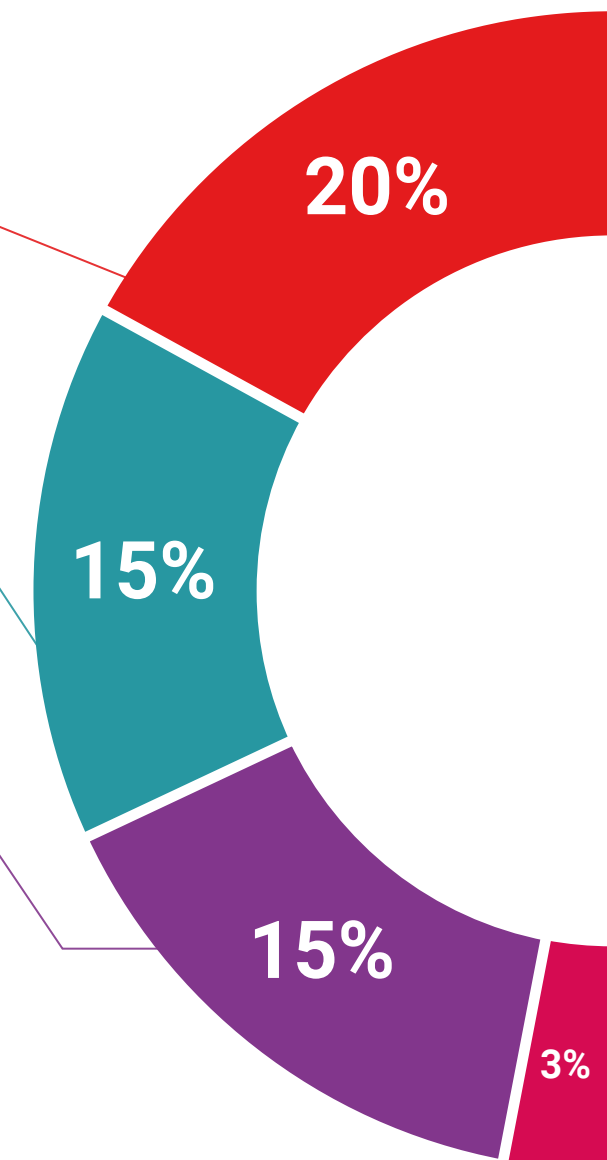
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

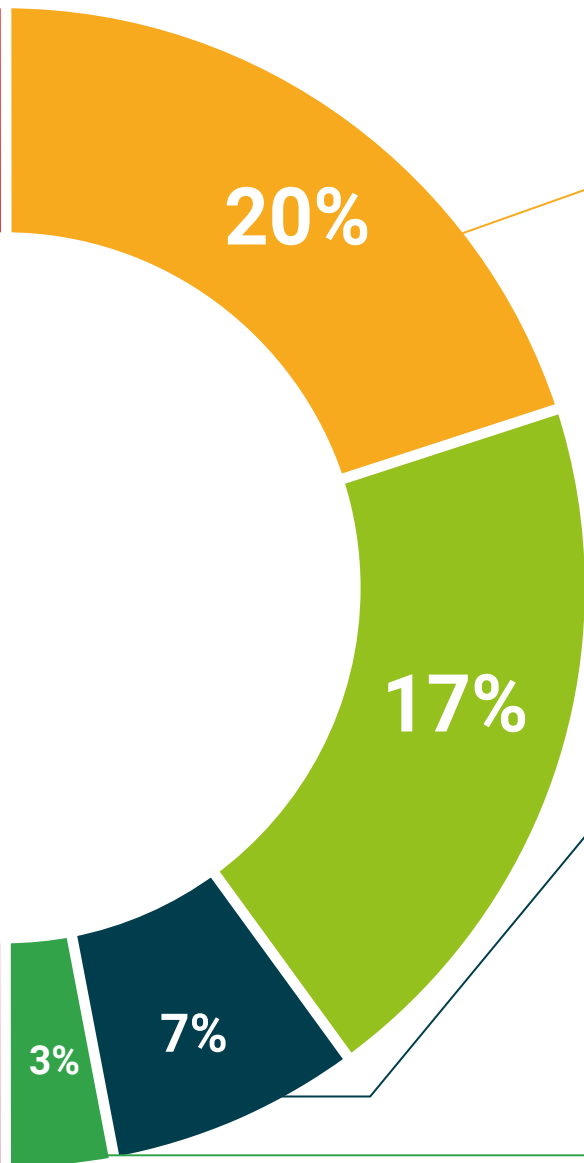
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.



06 Certificate

The Postgraduate Diploma in Equine Reproduction and Neonatology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.



“

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

This private qualification will allow you to obtain a **Postgraduate Diploma in Equine Reproduction and Neonatology** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

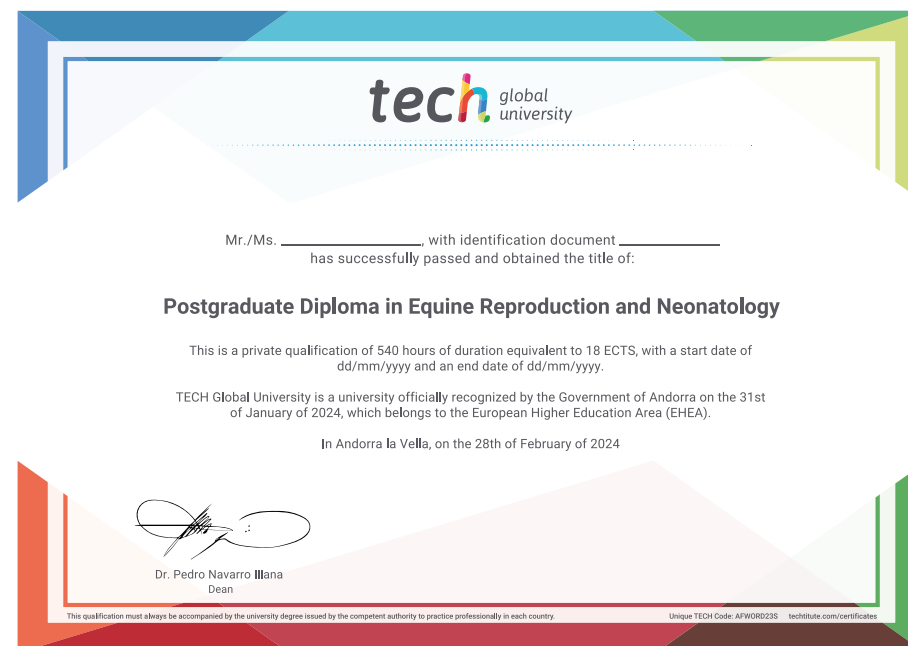
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Equine Reproduction and Neonatology**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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



Postgraduate Diploma Equine Reproduction and Neonatology

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Postgraduate Diploma Equine Reproduction and Neonatology

