

# Postgraduate Certificate

## Equine Reproduction and Neonatology





## Postgraduate Certificate Equine Reproduction and Neonatology

- » Modality: Online
- » Duration: 12 weeks
- » Certificate: TECH Technological University
- » Dedication: 8h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/pk/veterinaria/curso-universitario/reproduccion-neonatologia-equidos](http://www.techtitute.com/pk/veterinaria/curso-universitario/reproduccion-neonatologia-equidos)

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# 01

# Introduction

The equine veterinary professional needs special training in the entire reproductive area. This complete 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 jointly. A highly effective teaching and practical approach.







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*A complete and total update in Equine  
Reproduction and Neonatology with  
the most complete and effective online  
training program on the market"*

This Postgraduate Certificate aims to cover as much as possible all the responsibilities of the clinical veterinarian referred to the natural and routine procedures in healthy individuals (delivery and peripartum care, field surgeries such as castrations, etc.) as well as to the possible pathologies, diseases and disorders of the reproductive system of the male and female that may arise.

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.

As for the genital apparatus, it does not present the characteristic of being essential to maintain the life of the individual, but its function is indispensable for the perpetuation of the species. For horses, it is of great economic relevance, since one of the most important facets of the equestrian sector is the breeding and production of animals that will follow various paths; they may be again destined to reproduction for the improvement of the breed; they will go directly to auctions or sales of foals in private dealings, being destined for sports and leisure purposes; or, simply, they will be destined to the food channel and to obtain by-products.

This **Postgraduate Certificate in Equine Reproduction and Neonatology** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ◆ The latest technology in online teaching software
- ◆ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ◆ Practical cases presented by practising experts
- ◆ State-of-the-art interactive video systems
- ◆ Teaching supported by telepractice
- ◆ Continuous updating and recycling systems
- ◆ Autonomous learning: full compatibility with other occupations
- ◆ Practical exercises for self-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 the course



*A complete educational program that will allow you to acquire the most advanced knowledge in all the areas of intervention of the equine veterinarian"*

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*With a methodological design based on proven teaching techniques, this innovative course will use a range of teaching approaches to allow you to learn in a dynamic and effective way”*

Our teaching staff is made up of professionals from different fields related to this specialty. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of professionals with expertise and experience in different areas, will efficiently cover the theoretical knowledge, but above all, will bring practical knowledge from their own experience to the course: one of the factors, that makes this Postgraduate Certificate unique.

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

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

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

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





# 02 Objectives

Our objective is to prepare highly qualified professionals for the work environment. 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 education.







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*If your goal is to reorient your capabilities towards new paths of success and development, this is the place for you: an educational program that aspires to excellence.”*



## General Objectives

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- ♦ 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 equids
- ♦ 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

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- ♦ 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 during the pre- and post-partum period and their possible treatments
- ♦ Attend to the needs and demands of euthyroid delivery and placental assessment



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



*If your objective is to broaden your skill set to pave new ways toward success and development, this is the course for you: a program that aspires to excellence”*

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.





A close-up photograph of a horse's head, showing its eye and the texture of its coat. The image is partially obscured by a diagonal teal and white graphic overlay.

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*Leading professionals in the field have joined forces to teach you the latest advances in Equine Reproduction and Neonatology”*

## 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. This is one of the leading institutions in both equine patient care and veterinary development, education and innovation. This has allowed him to develop in a privileged environment, even receiving the James Bee Educator Awards for excellence in educational work.

In fact, Dr. Andy Fiske-Jackson is also part of the team of surgeons at the Equine Referral Hospital, focusing his work on orthopedic and soft tissue surgery. 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

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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 Humane Society International. 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 Large Animal Unit at the Complutense Clinical Veterinary Hospital of Madrid
- Associate Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid
- Head of Large Animal Unit at the Complutense Clinical Veterinary Hospital of Madrid
- Associate Professor of the Department of Animal Medicine and Surgery, UCM
- 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
- Doctorate in Veterinary from the Complutense University of Madrid
- Spanish Certificate from Equine Clinic (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 Cardenal Herrera CEU University of Valencia
- 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 the Organizing Committee of the 12th European College of Equine Internal Medicine Congress
- Member of the Board of Directors of Spanish Society of Ozone Therapy
- Member of the Equine Clinicians Commission of the Official College of Veterinarians of Valencia
- Member of the Spanish Association of Equine Veterinarians (AVEE)
- Member of the scientific committee and coordinator of courses and congresses in the field of ozone therapy, supported by continuing education credits (CEC) granted by the National Health System

## Professors

### Dr. Aguirre Pascasio, Carla

- ♦ Veterinary specialist in equine clinical care and soft tissue surgery
- ♦ Doctor in Veterinary Medicine from the University of Murcia
- ♦ Postgraduate degree in equine physiotherapy from the University of Barcelona
- ♦ Master 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 in the Equine Hospital Casal do Rio

### Dr. Iglesias García, Manuel

- ♦ Clinical veterinarian and surgeon at the University Hospital 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 Master's Degree in Equine Surgery and obtaining the title of General Practitioner in Equine Surgery by the European School of Veterinary Postgraduate Studies
- ♦ Professional Master's Degree in Equine Surgery at the Veterinary Hospital of Alfonso X el Sabio University  
Spanish Certificate in Clinical Equine (CertEspCEq)



**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 Grand Renaud Veterinary Clinic
- ◆ Surgeon at the Equine Hospital of 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 Program 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 the Examination Committee of the European College of Veterinary Surgeons



**Dr. Aguirre Pascasio, Carla**

- ♦ Veterinary specialist in equine clinical care and soft tissue surgery
- ♦ Doctor in Veterinary Medicine from the University of Murcia
- ♦ Postgraduate degree in equine physiotherapy from the University of Barcelona
- ♦ Master 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 in the Equine Hospital Casal do Rio

**Dr. Domínguez Gimbernat, Mónica**

- ♦ Clinical equine veterinarian specialized 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 (IDEA) and other courses in the COVECA center (Equine Reproduction Center, Toledo)



**Dr. Manso Díaz, Gabriel**

- ◆ Clinical veterinarian, member of the Diagnostic Imaging Service at Complutense Veterinary Clinical Hospital
- ◆ Assistant Professor, Department of Animal Medicine and Surgery, Complutense University of Madrid
- ◆ Collaborator in the 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) Equine Referral Hospital, Royal Veterinary College
- ◆ Certified by the European College of Veterinary Diagnostic Imaging (ECVDI) in the specialty of Large Animals

**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 (Las Palmas de Gran Canaria, Córdoba and Extremadura) and abroad (University of Trás-os-Montes e Alto Douro, National Veterinary School of Lyon, National University of Litoral in Argentina)

- ◆ Lecturer 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, UCM
- ◆ PhD in Veterinary from the Complutense University of Madrid
- ◆ Certified by the European College of Equine Veterinary Surgery



*Take the step to get up to date on the latest developments in Equine Reproduction and Neonatology"*

# 04

# Structure and Content

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







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

## Module 1. 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. 8.8.4.2 Vaginal Lacerations
  - 1.8.4.3. 8.8.4.3 Uterine Bleeding
  - 1.8.4.4. Uterine Prolapse
  - 1.8.4.5. Rectal Prolapse
  - 1.8.4.6. 8.8.4.6 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. 9.1.2.1 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. 9.1.2.5 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

# 05 Methodology

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

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







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

## At TECH, we use the Case Method

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

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



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



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

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

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





## Relearning Methodology

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

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

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



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

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

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

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

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



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



#### Study Material

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

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



#### Latest Techniques and Procedures on Video

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



#### Interactive Summaries

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

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

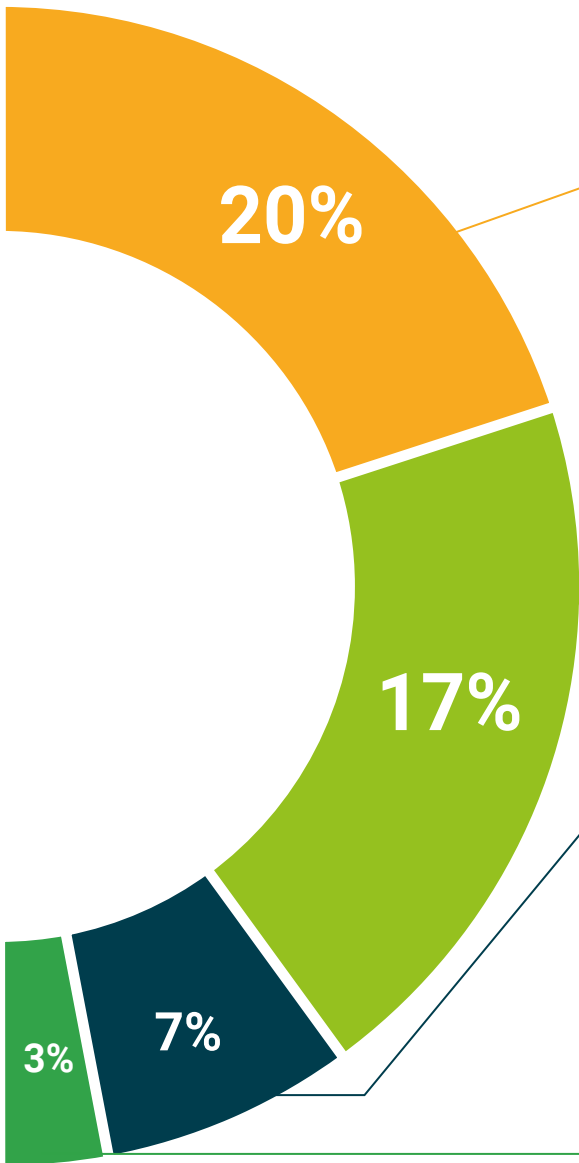


#### Additional Reading

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







#### Expert-Led Case Studies and Case Analysis

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



#### Testing & Retesting

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



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

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



06

# Certificate

The Postgraduate Certificate in Equine Reproduction and Neonatology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 **Postgraduate Certificate in Equine Reproduction and Neonatology** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

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

Official N° of Hours: **300 hours**.



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



**Postgraduate Certificate**  
Equine Reproduction and  
Neonatology

- » Modality: Online
- » Duration: 12 weeks
- » Certificate: TECH Technological University
- » Dedication: 8h/week
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate

## Equine Reproduction and Neonatology

