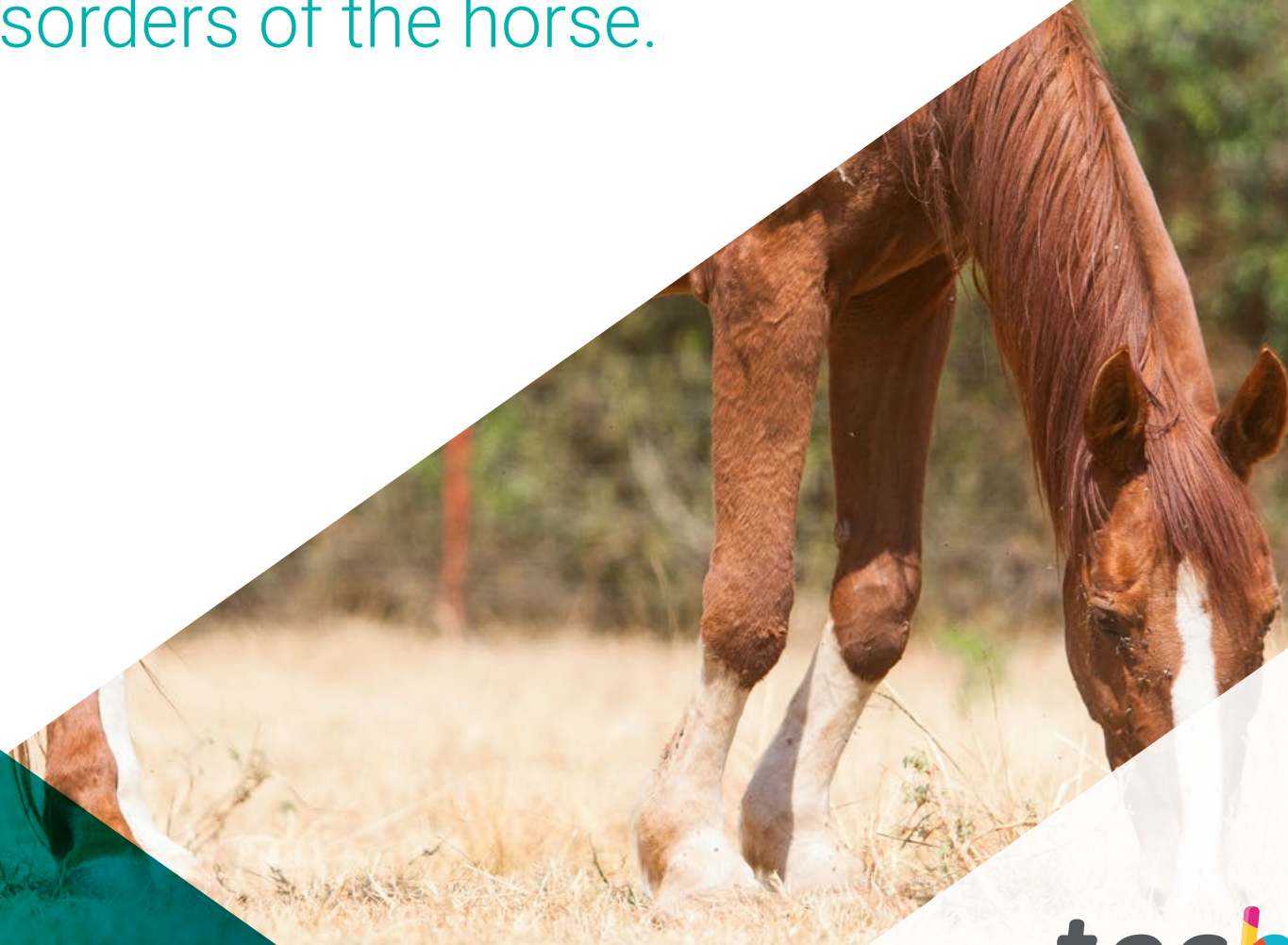


# Postgraduate Certificate

Dermatological, endocrine, blood and nutritional disorders of the horse.





## Postgraduate Certificate Dermatological, endocrine, blood and nutritional disorders of the horse

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

Website: [www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/postgraduate-certificate-dermatological-endocrine-blood-nutritional-disorders-horse](http://www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/postgraduate-certificate-dermatological-endocrine-blood-nutritional-disorders-horse)

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# 01

# Introduction

The equine veterinarian needs to master all the ways of presentation of the different ailments that horses can suffer from. Knowledge of the basic functioning of all its systems is necessary in order to understand the pathophysiological changes that occur during the disease and, in this way, to correctly approach the diagnosis and treatment of these processes. In this program, TECH provides its students with an extensive tour through dermatological, endocrine and blood disorders and new nutritional recommendations.

A high quality program that will propel veterinarians to the highest levels of competence in the industry.





“

*A complete and total update in Equine Dermatology, Neurology, Ophthalmology and Endocrinology with the most complete and effective academic program in the online teaching market"*

This Postgraduate Certificate will review the most important aspects of dermatological, neurological, ophthalmological and endocrinological pathologies.

Due to the frequency of these pathologies, it is important to know in depth the different therapeutic options available. In the case of a skin laceration, the objective to be achieved, whenever possible, is the primary healing of the injured tissue. The prognosis of each case will depend on the structure involved, its location and degree of involvement: the worst prognosis traumas are injuries affecting anatomical territories such as joints and tendons; joint injuries are relatively frequent and have a poor prognosis; tendon lacerations show a lower incidence, being injuries affecting flexor tendons those with a severe prognosis. These last two types of incidents, in the case of the sport horse, can mean the end of its sporting career and can even have a reserved vital prognosis. Good perioperative management and the use of an appropriate surgical technique will make it possible to preserve the patient's life and, in some cases, his or her return to sports practice at the previous level, since appropriate treatment will make it possible for the affected anatomical region to maintain normal functionality and for the esthetic results to be optimal.

However, there are other interventions that can be challenging for the veterinarian, such as musculoskeletal infections in general and those of bone and synovial structures in particular. In addition, viral and bacterial diseases encompass numerous pathologies that the equine veterinary clinician must know how to recognize and establish treatment guidelines. Fungal and parasitic diseases are the most frequent causes of skin disorders, and in many cases they are highly contagious between individuals, so it is important not only to identify these problems but also to establish appropriate management guidelines to prevent their spread.

In the field of equine dermatology, one of the most common skin problems currently being observed is the allergy caused by mosquito bites, which will be studied in depth in this Postgraduate Certificate, in addition to skin neoplasms or relatively frequent pathologies in equines, which must be treated very differently depending on the definitive diagnosis, so a detailed and advanced work methodology will be established for the patient with this type of pathology, with special emphasis on the most advanced techniques for treatment.

This **Postgraduate Certificate in Dermatological, endocrine, blood and nutritional disorders of the horse** includes the most complete and up-to-date Educational program on the market. The most important features include:

- ♦ The development of case studies presented by experts in equine medicine.
- ♦ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ Practical exercises where self-assessment can be used to improve learning.
- ♦ Special emphasis on innovative methodologies in dermatological, endocrine, blood and nutritional disorders of the horse.
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



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

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

Its teaching staff includes professionals from the veterinary field, who contribute their work experience to this program, in addition to renowned specialists from prestigious reference societies and universities.

Its multimedia content, developed with the latest educational technology, will provide professionals with situated and contextualized learning, that is, a simulated environment that will provide immersive study set up to train them in real-life situations.

This program is designed around Problem Based Learning, whereby the specialist must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system developed by renowned and experienced experts in orthopedic diseases.

*With a methodological design based on proven teaching techniques, this innovative program will take you through different teaching approaches to allow you to learn in a dynamic and effective way.*

*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”.*



# 02 Objectives

TECH's objective is to orient 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 program.







“

*If your goal is to reorient your skills towards new paths of success and development, this is your place: a Postgraduate Certificate 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 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 broodmare, 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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- ◆ To be highly competent in the diagnosis of diseases related to the hemotopoietic and immune system.  
diseases related to the hemotopoietic and immune system.
- ◆ Prescribe and Interpret Laboratorial Studies of Blood Components
- ◆ Recognize and Deal with Endotoxic Shock
- ◆ Stabilize the patient quickly and effectively, especially in life-threatening situations.
- ◆ Proper Feeding and Teaching the Owner How to Do It
- ◆ Perform Advanced Nutritional Counseling in Special Cases
- ◆ Know the Latest Advances in Equine Antibiotic Therapy
- ◆ Know Which Medicinal Plants are Useful in Equine Treatment
- ◆ Recognize Cutaneous Neoplasms
- ◆ Early Diagnosis of the Same
- ◆ Detect, diagnose and treat endocrine diseases.
- ◆ Recognize Equine Metabolic Syndromes
- ◆ Recognize Cushing's Syndrome in Equines
- ◆ To know which are the geographic locations with the highest prevalence of these syndromes.
- ◆ Recognize the Most Affected Breeds
- ◆ Prescribe the Appropriate Diagnostic Tests
- ◆ Using Conventional and Advanced Techniques in the Approach

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.



“

*Leading professionals in the field have joined forces to teach you the latest advances in Dermatological, Endocrine, Blood and Nutritional disorders of the horse"*

## International Guest Director

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

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

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



## Dr. Fiske-Jackson, Andy

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

“

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

## Management



### Dr. Varela del Arco, Marta

- Clinical Veterinarian in Equine Medicine, Surgery and Sports Medicine
- Head of the Large Animals Area of the Complutense Veterinary Clinic Hospital of Madrid (UCM).
- Associate Professor of the Department of Animal Medicine and Surgery, UCM
- Head of Large Animal Unit at Complutense Clinical Veterinary Hospital of Madrid
- Assistant Professor in the Department of Animal Medicine and Surgery at UCM in 2007, she has been an Associate Professor in that Department from 2015 to the present.
- She teaches in different undergraduate and graduate courses, university specialization programs and Professional Master's Degrees.
- She actively participates as director of final projects in the Veterinary Degree and as a member of the tribunal of different doctoral theses.



### Dr. De la Cuesta Torrado, María

- Veterinarian with clinical specialty in Equine Internal Medicine
- Associate Professor, Department of Equine Medicine and Surgery, Cardenal Herrera Ceu University of Valencia since 2012.
- Member of the Organizing Committee of the "12th European College of Equine Internal Medicine Congress 2019 (ECEIM)".
- Member of the Board of Directors of Spanish Society of Ozone Therapy
- Member of the Equine Clinicians Commission of the Official College of Veterinarians of Valencia.
- Member of the Spanish Association of Equine Veterinarians (AVEE).
- Member of the scientific committee and coordinator of courses and congresses in the area of ozone therapy, supported by continuing education credits (CEC) granted by the National Health System.



## Professors

### Dr. Alonso de Diego, María

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

### Dr. Rodríguez Hurtado, Isabel

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

### Dr. Benito, Irene

- ♦ Degree in Veterinary Medicine (2011). Extremadura University (UEX), Cáceres Veterinary School
- ♦ Completion of an internship in Equine Medicine and Surgery at the Clinical Veterinary Hospital of the UAB (Autonomous University of Barcelona) during the year 2013-2014.
- ♦ (2012) Professional internship through the Quercus Scholarship (Leonardo Da Vinci Program) for graduates of the University of Extremadura, lasting half a year, at Hippiatrica Equine Medical Center, Lisbon (Portugal), under the coordination of Dr. Manuel Torrealba (clinical director).
- ♦ Completion of the Erasmus Practical Scholarship to work abroad in the Equine Hospital at Bristol University, Referral Equine Hospital (directed by Prof. Alistair Barr ) in Langford, (North Somerset), United Kingdom, under the supervision and coordination of Mr. Alistair Barr. Henry Tremaine (2011)
- ♦ Online training course on administrative activities in customer relations and administrative management given by Academia La Glorieta (Denia).
- ♦ Attendance to the courses of Ozone Therapy in Equids coordinated by María de la Cuesta and organized by the SEOT (Spanish Society of Ozone Therapy) in Valencia.
- ♦ Attendance at training and refresher courses and seminars given by Spanish universities.

**Dr. Marín Baldo Vink, Alexandra**

- ♦ Head of the large animal hospitalization service at the Clinical Veterinary Hospital of Alfonso X el Sabio University.
- ♦ Professor at the Faculty of Veterinary Medicine, Alfonso X El Sabio University.
- ♦ Teaching of the theoretical and practical teaching related to the equine species of the subjects: Parasitic diseases, propaedeutics and supervised practice.
- ♦ Practical teaching related to the equine species in the subject of Medical Pathology.
- ♦ Clinical Propedeutics course coordination
- ♦ Equine Hospitalization Service of the Clinical Veterinary Hospital of the University Alfonso X El Sabio
- ♦ Degree in Veterinary Medicine by Murcia University.
- ♦ Advanced Studies Certificate. Animal Medicine and Reproduction. University of Murcia.
- ♦ Training stays in several hospitals in Spain in the area of large animals.
- ♦ Fellowship in the Department of Equine Surgery and Large Animals Veterinary Hospital at Murcia University.
- ♦ Publications in the field of Equine Internal Medicine
- ♦ Direction of Final Degree Projects of U.A.X. students.





**Dr. Martín Cuervo, María**

- ◆ Associate Professor of the Department of Animal Medicine and Surgery at Extremadura University, teaching Equine Internal Medicine.
- ◆ Professor of advanced courses at the UEx: "Theoretical-practical course of clinical analysis in veterinary medicine". Methodology and interpretation
- ◆ Professor of the Master-Internship in Medicine and Surgery of Horses at Extremadura University.
- ◆ Professor of the International Master "Equine Reproduction" at Extremadura University.
- ◆ Professor of the Master's Degree in Equine Therapy at Extremadura University.
- ◆ Professor of the Master's Degree in Equine Therapy at Extremadura University.
- ◆ Associate Professor of the Department of Animal Medicine and Surgery, Extremadura University
- ◆ Professor of the Master's Degree in Companion Animal Medicine and Surgery (Equidae) at Extremadura University.
- ◆ PhD in Veterinary Medicine by the Extremadura University.
- ◆ Degree in Veterinary Medicine from the University of Córdoba.
- ◆ Master's Degree in Veterinary Science from the University of Extremadura.
- ◆ Graduate of the European College of Equine Internal Medicine (ECEIM).

# 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.





“

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

## Module 1. Hematopoietic System, Immunology and Nutrition

- 1.1. Analytical Interpretation: Blood Count and Serum Biochemistry
  - 1.1.1. General Considerations for the Interpretation of Analytical Reports
    - 1.1.1.1. Essential Patient Data
    - 1.1.1.2. Sample Collection and Handling
  - 1.1.2. Interpretation of Blood Count
    - 1.1.2.1. Red Blood Cells
    - 1.1.2.2. White Blood Cells
    - 1.1.2.3. Platelet Cells
    - 1.1.2.4. Smears
  - 1.1.3. Interpretation of Serum or Plasma Biochemistry
    - 1.1.3.1. Electrolytes
    - 1.1.3.2. Bilirubin
    - 1.1.3.3. Creatinine, Blood Urea Nitrogen (BUN), Urea and Symmetrical Dimethylarginine (SDMA)
    - 1.1.3.4. Proteins: Albumin and Globulins
    - 1.1.3.5. Acute-Phase Proteins: Fibrinogen, Serum Amyloid A
    - 1.1.3.6. Enzymes
    - 1.1.3.7. Glucose
    - 1.1.3.8. Bicarbonate
    - 1.1.3.9. Lactate
    - 1.1.3.10. Triglycerides and Bile Acids
- 1.2. Hematopoietic System Pathologies
  - 1.2.1. Hemolytic anemia
    - 1.2.1.1. Immune-Mediated Hemolytic Anemia
    - 1.2.1.2. Equine Infectious Anemia
    - 1.2.1.3. Piroplasmiosis
    - 1.2.1.4. Other Causes
  - 1.2.2. Hemorrhagic Anemia
    - 1.2.2.1. Hemoperitoneum and Hemothorax
    - 1.2.2.2. Gastrointestinal Losses
    - 1.2.2.3. Losses From Other Origin
  - 1.2.3. Non-Regenerative Anemias
    - 1.2.3.1. Iron Deficiency Anemia
    - 1.2.3.2. Anemia due to Chronic Inflammation/Infection
    - 1.2.3.3. Aplastic Anemia
  - 1.2.4. Coagulation Alterations
    - 1.2.4.1. Platelet Alterations
      - 1.2.4.1.1. Thrombocytopenia
      - 1.2.4.1.2. Platelet Functional Alterations
    - 1.2.4.2. Alterations of Secondary Hemostasis
      - 1.2.4.2.1. Hereditary
      - 1.2.4.2.2. Acquired
    - 1.2.4.3. Thrombocytosis
    - 1.2.4.4. Lymphoproliferative Disorders
    - 1.2.4.5. Disseminated Intravascular Coagulation (DIC)
- 1.3. Endotoxic Shock
  - 1.3.1. Systemic Inflammation and Systemic Inflammatory Response Syndrome (SIRS)
  - 1.3.2. Causes of Endotoxemia in Horses
  - 1.3.3. Pathophysiological Mechanisms
  - 1.3.4. Endotoxic Shock
    - 1.3.4.1. Hemodynamic Changes
    - 1.3.4.2. Multiorgan Dysfunction
  - 1.3.5. Clinical Signs of Endotoxemia and Endotoxic Shock.
  - 1.3.6. Diagnosis
  - 1.3.7. Management
    - 1.3.7.1. Endotoxin Release Inhibitors
    - 1.3.7.2. Endotoxin Uptake and Inhibition
    - 1.3.7.3. Cell Activation Inhibition
    - 1.3.7.4. Inhibition of the Synthesis of Inflammatory Mediators
    - 1.3.7.5. Other specific therapies
    - 1.3.7.6. Support Treatments

- 1.4. Treatment of Hematopoietic Alterations Transfusion Therapy
  - 1.4.1. Indications for Transfusion of Whole Blood
  - 1.4.2. Indications for Plasma Transfusion
  - 1.4.3. Indications for Transfusion of Platelet Products
  - 1.4.4. Donor Selection and Compatibility Testing
  - 1.4.5. Technique for Whole Blood Collection and Processing of Plasma
  - 1.4.6. Administration of Blood Products
    - 1.4.6.1. Volume of Administration
    - 1.4.6.2. Administration Techniques
    - 1.4.6.3. Adverse Reaction Monitoring
- 1.5. Immune System Alterations Allergies.
  - 1.5.1. Hypersensitivity Types
  - 1.5.2. Pathologies Associated with Hypersensitivity
    - 1.5.2.1. Anaphylactic Reaction
    - 1.5.2.2. Hemorrhagic Purpura
  - 1.5.3. Autoimmunity
  - 1.5.4. Most Important Immunodeficiencies in Equines
    - 1.5.4.1. Diagnostic Tests
    - 1.5.4.2. Primary Immunodeficiencies
    - 1.5.4.3. Secondary Immunodeficiencies
  - 1.5.5. Immunomodulators:
    - 1.5.5.1. Immunostimulants
    - 1.5.5.2. Immunosuppressants
- 1.6. Nutrition Basic Principles I
  - 1.6.1. Physiology of Gastrointestinal Tract
    - 1.6.1.1. Oral cavity, Esophagus, Stomach
    - 1.6.1.2. Small Intestine
    - 1.6.1.3. Large Intestine
  - 1.6.2. Diet Components, Nutrients
    - 1.6.2.1. Water
    - 1.6.2.2. Proteins and Amino Acids
    - 1.6.2.3. Carbohydrates
    - 1.6.2.4. Fats and Fatty Acids
    - 1.6.2.5. Minerals and Vitamins
  - 1.6.3. Estimation of Horse Weight and Body Condition
- 1.7. Nutrition Basic Principles II()
  - 1.7.1. Energy and Available Energy Sources
    - 1.7.1.1. Forage
    - 1.7.1.2. Starches
    - 1.7.1.3. Fats
  - 1.7.2. Metabolic Pathways of Energy Production
  - 1.7.3. Energy Needs of the Horse
    - 1.7.3.1. In Maintenance
    - 1.7.3.2. For Breeding and Growth
    - 1.7.3.3. For the Show/Race Horse
- 1.8. Cachectic Horse Nutrition()
  - 1.8.1. Metabolic Response
  - 1.8.2. Physical Examination and Clinical Signs
  - 1.8.3. Blood Analysis
  - 1.8.4. Differential Diagnoses
  - 1.8.5. Nutritional Requirements
- 1.9. Use of Probiotics, Prebiotics and Medicinal Plants()
  - 1.9.1. Role of the Microbiota in the Large Intestine
  - 1.9.2. Probiotics, Prebiotics, and Symbiotics
  - 1.9.3. Medicinal Plants Use
- 1.10. Rational Use of Antibiotics. Bacterial Resistance
  - 1.10.1. Responsible Antibiotic Use
  - 1.10.2. New Antibiotic Therapies
  - 1.10.3. Resistance Mechanisms
  - 1.10.4. Main Multi-resistant Pathogens

## Module 2. Medical Pathologies of the Skin Endocrine System

- 2.1. Clinical Approach and Diagnostic Tests in Equine Dermatology
  - 2.1.1. Medical History
  - 2.1.2. Sampling and Main Diagnostic Methods
  - 2.1.3. Other Specific Diagnostic Techniques
- 2.2. Bacterial and Viral Skin Diseases
  - 2.2.1. Bacterial diseases
  - 2.2.2. Viral Diseases
- 2.3. Fungal and Parasitic Skin Diseases
  - 2.3.1. Fungal Diseases
  - 2.3.2. Parasitic diseases
- 2.4. Allergic, Immune-Mediated and Irritative Skin Diseases
  - 2.4.1. Hypersensitivity: Types
  - 2.4.2. Insect Sting Allergy
  - 2.4.3. Vasculitis and other Immune-Mediated Reactions
  - 2.4.4. Other Skin Tumors
- 2.5. Congenital Diseases and Syndromes in Equine Dermatology
  - 2.5.1. Hereditary Equine Regional Dermal Asthenia (HERDA), Epidermolysis Bullosa, and Other Congenital Diseases
  - 2.5.2. Miscellaneous
- 2.6. Cutaneous Neoplasms
  - 2.6.1. Sarcoids
  - 2.6.2. Melanocytic Tumors
  - 2.6.3. Squamous Cell Carcinomas
  - 2.6.4. Mastocytomas
  - 2.6.5. Lymphomas
- 2.7. Alternatives in the Medical Treatment of Neoplasms
  - 2.7.1. Electroporation and Electrochemotherapy
  - 2.7.2. Immunotherapy
  - 2.7.3. Radiotherapy
  - 2.7.4. Dynamic Phototherapy
  - 2.7.5. Cryotherapy
  - 2.7.6. Other Therapies





- 2.8. Endocrine System I
  - 2.8.1. Dysfunction of the Intermediate Portion of the Pituitary Gland
  - 2.8.2. Equine Metabolic Syndrome
  - 2.8.3. Endocrine Pancreas
  - 2.8.4. Adrenal Insufficiency
- 2.9. Endocrine System II
  - 2.9.1. Thyroid Gland
  - 2.9.2. Calcium Disorders
  - 2.9.3. Magnesium Disorders
  - 2.9.4. Phosphorus Disorders
- 2.10. Nutritional Management of the Obese Horse
  - 2.10.1. Body Condition Assessment
  - 2.10.2. Weight Reduction and Caloric Restriction
  - 2.10.3. Pharmacological Intervention
  - 2.10.4. Exercise
  - 2.10.5. Maintenance

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



# 05 Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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.





“

*Learn about Relearning, a system from Harvard 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

In a given clinical situation, what would you do? 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 abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can 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 potential or because of its uniqueness or rarity. It is essential that the case be based on current professional life, trying to recreate the real conditions in the 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 achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
2. The learning process has a clear focus on 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.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 65,000 veterinarians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning 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 to success.*

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

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



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### Latest Techniques and Procedures on Video

We bring you closer to the latest Techniques, to the latest Educational Advances, to the forefront of current Veterinary Techniques and Procedures. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

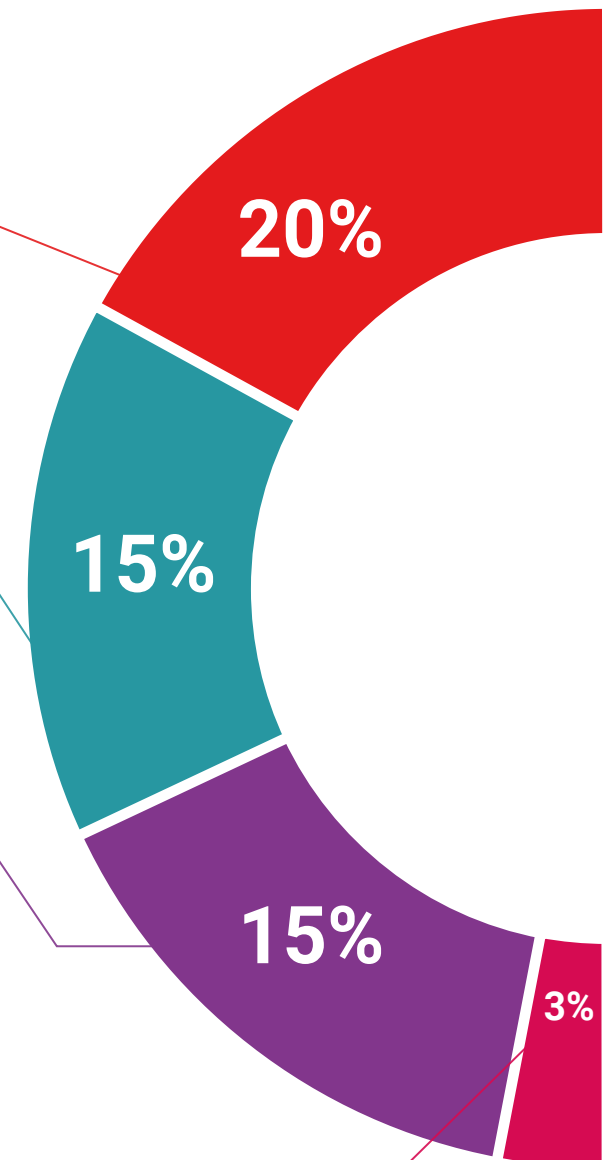
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".

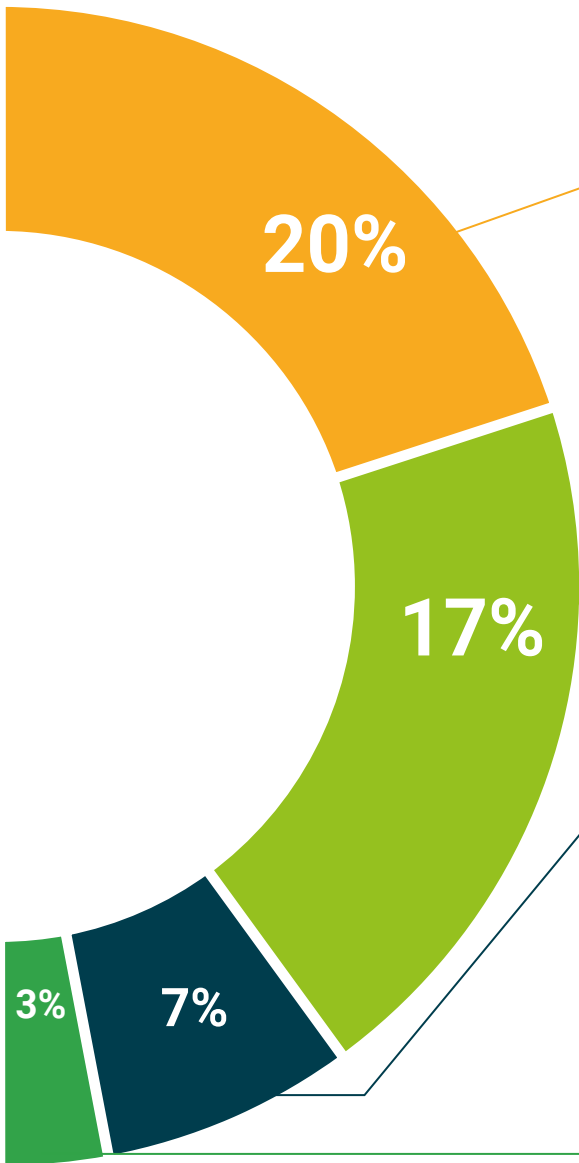


### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.







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

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your 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 our future difficult decisions.



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

This Postgraduate Certificate in Dermatological, endocrine, blood and nutritional disorders of the horses guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.





*Successfully complete this training program and receive your university certificate without travel or laborious paperwork"*

This **Postgraduate Certificate in Dermatological, Endocrine, Blood and Nutritional Disorders of the Horse** includes the most complete and up-to-date program on the market.

After passing the evaluations, the student will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** with acknowledgement of receipt.

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

Title: **Postgraduate Certificate on Dermatological, Endocrine, Sanguine and Nutritional Alterations in Horses**

ECTS: 12

Official N° of Hours: 300 h.





**Postgraduate Certificate**  
Dermatological, endocrine,  
blood and nutritional  
disorders of the horse

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

# Postgraduate Certificate

Dermatological, endocrine, blood and nutritional disorders of the horse.