Postgraduate Certificate
Infectious and Parasitic Diseases in Ruminants

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Postgraduate Certificate
Infectious and Parasitic Diseases in Ruminants

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/in/veterinary-medicine/postgraduate-certificate/infectious-parasitic-diseases-ruminants**

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01

Introduction

Infectious and parasitic diseases are very frequent in ruminants and have a very important implication regarding the management of the rest of the animals in the same farm or even regarding Public Health if they are zoonoses. In-depth knowledge about the diagnosis, treatment and prevention of these diseases is essential for the clinical veterinarian and is the objective that we propose in this course. A huge leap for the best in the industry.

Advanced knowledge on the diagnosis, treatment and prevention of infectious and parasitic diseases affecting bovines and small ruminants in a high intensity and flexible course"

This Postgraduate Certificate addresses general considerations for the prevention and treatment of infectious diseases in general, including laboratory diagnostic tests available for their diagnosis, antimicrobial treatments and the development of resistance, the use of vaccines and the application of biosecurity and control measures. Additionally, the main notifiable and highly contagious, emerging and re-emerging infectious diseases, including those of viral, bacterial, fungal and prion etiology, are reviewed. The topics are organized by the species they affect, bovine or small ruminants, where specific considerations for their treatment and prevention are also included.

In the second part of the module, the main parasites affecting ruminants are analyzed, detailed according to the species they affect. Additionally, it addresses the prevention and treatment of the main parasitic diseases including diagnostic techniques, therapeutic principles, development of resistance, and management and control programs.

Essential yet rare specialization for the specialist veterinary clinician that will set you apart as a specialist in this field of work"

This **Postgraduate Certificate in Infectious and Parasitic Diseases in Ruminants** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- The latest technology in *Online* teaching software
- Intensely visual teaching system, supported by graphic and schematic contents, 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
- Availability of content from any fixed or portable device with internet connection
- Supplementary documentation databases are permanently available, even after the course

The clinical, specialized and advanced fundamentals, based on veterinary evidence, that will allow you to face the daily intervention in cattle and ruminants"

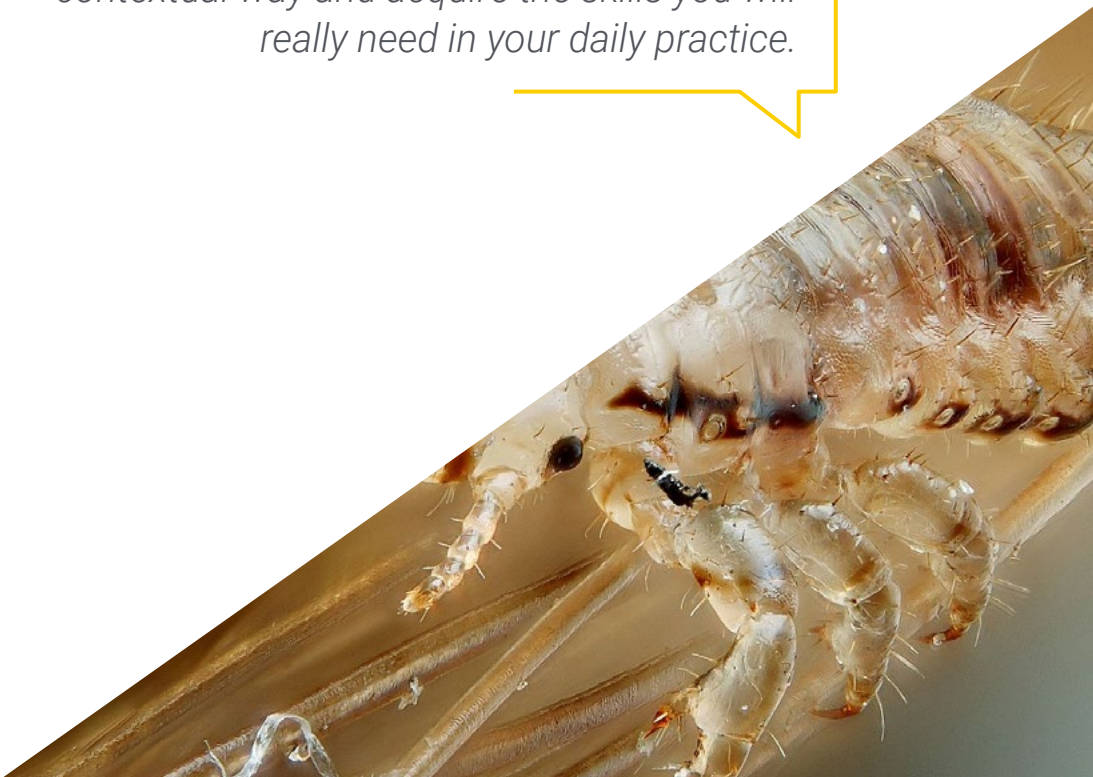
Our teaching staff is made up of professionals from different fields related to this specialty. In this way, TECH makes sure to offer professionals the up-to-date objective it intends. A multidisciplinary team of professionals trained and experienced in different environments who will develop theoretical knowledge efficiently, but, above all, will provide students with practical knowledge derived from their teaching experience: one of the differential qualities of this program.

This mastery of the subject 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. In this way, the student will be able to study with comfortable and versatile multimedia tools that will give them the operability they need in their training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely telepractice will be used: with the help of an innovative system of interactive videos and *learning from an expert* they will be able to acquire the knowledge as if they were facing the case you are learning at that moment. A concept that will make it possible to integrate and fix learning in a more realistic and permanent way.

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

Supported by evidence, the approach of this program will allow you to learn in a contextual way and acquire the skills you will really need in your daily practice.



02

Objectives

The completion of this Postgraduate Certificate provides the veterinary professional with specialized and advanced clinical fundamentals, based on evidence to face the daily clinical practice in cattle and ruminants.

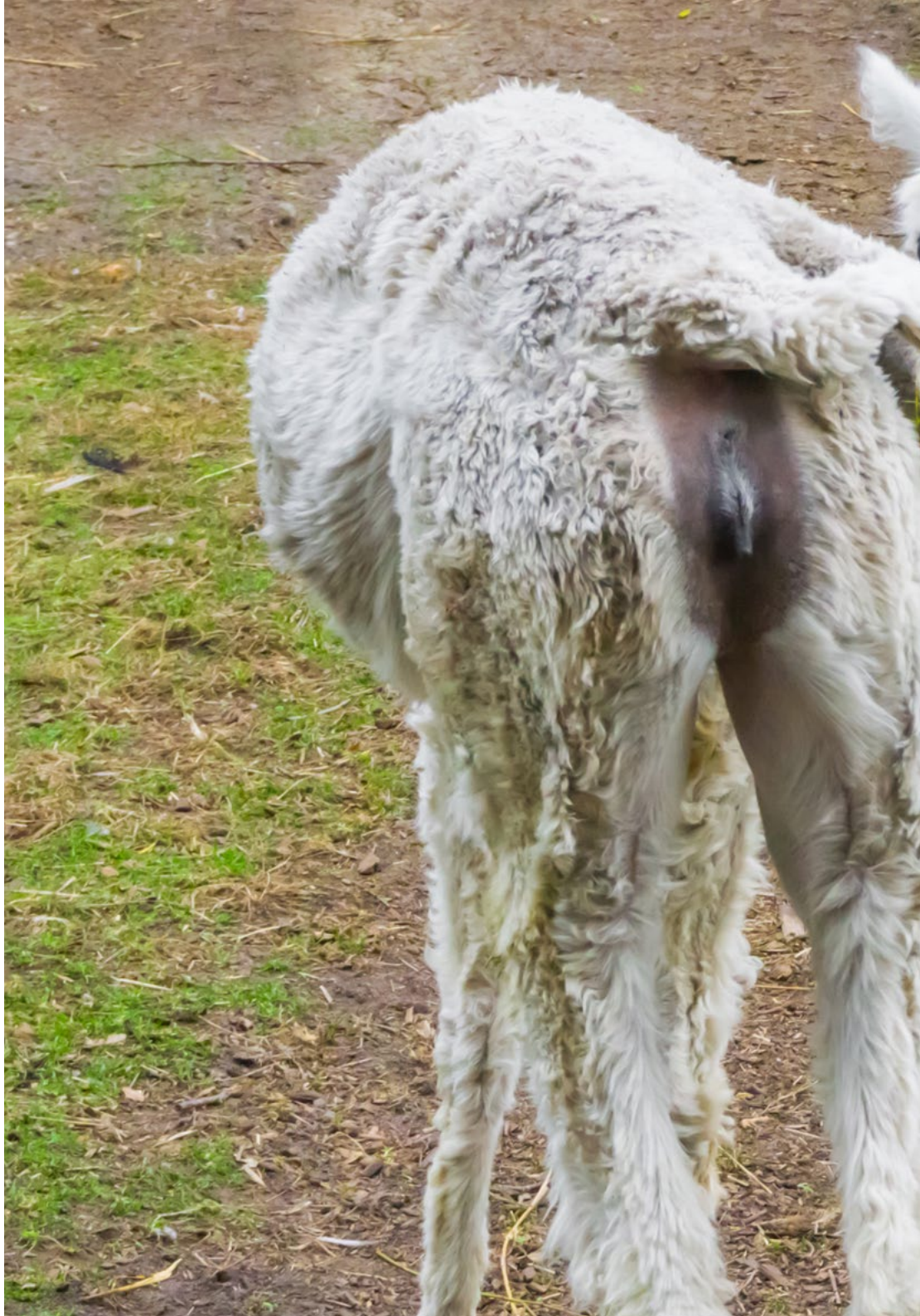
Additionally, this up-to-date approach to the problems encountered in daily clinical practice, the bibliography provided, and the structuring of the topics will allow you to keep this knowledge up to date.

The Postgraduate Certificate in Infectious and Parasitic Diseases in Ruminants will allow the veterinary clinicians to update and broaden their knowledge and skills in Ruminant Medicine and Surgery. With the quality of the world's largest online university"

General Objectives

- Examine the clinical approach to the different infectious and parasitic diseases in ruminants
- Compile the complementary methods available to diagnose the main infectious and parasitic pathologies
- Determine the general and specific treatment of the main infectious and parasitic pathologies
- Generate advanced knowledge on the prevention of the main infectious and parasitic diseases

A very complete program that will boost your ability to work in prevention, management and cost reduction in animal production, giving you greater competitiveness in the labor market"



Specific Objectives

- Identify the main infectious diseases affecting ruminants
- Establish the differential diagnosis of the clinical signs of the main infectious and contagious pathologies in ruminants
- Propose a work methodology for patients with infectious and contagious disorders
- Provide specialized knowledge to treat and prevent the main infectious and contagious pathologies in ruminants
- Understand and identify the different realities and challenges faced by ruminants according to the type of production system in which they are involved
- Be able to identify the technical differences, advantages and disadvantages of vaccines available on the market
- Be able to, depending on the infectious challenge faced by ruminants, develop an effective, efficient and economically justifiable vaccination plan adapted to the reality of each farm
- Identify the clinical signs of parasitic diseases affecting ruminants
- Specify the diagnostic procedures used in parasitology and their interpretation
- Determine a theoretical-practical methodology for the patient with parasitic diseases
- Provide specialized knowledge to establish programs for the control and management of parasites in ruminants

03

Course Management

Within the concept of total quality of this Postgraduate Certificate, TECH is proud to offer students 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.

An impressive teaching staff, made up of professionals of the highest level, will be the professors throughout the program providing the most real, close and current learning experience"

Management

Dr. Ezquerra Calvo, Luis Javier

- PhD in Veterinary Medicine from the University of Extremadura
- Degree in Veterinary from the University of Zaragoza
- Specialist in Applied and Experimental Animal Surgery University of Zaragoza
- Specialist in Animal Reproduction and Artificial Insemination University of Zaragoza
- Diploma of the European College of Veterinary Surgeons in Large Animals
- Presents 6 five-year teacher evaluation periods

Professors

Dr. Medina Torres, Carlos E

- Veterinarian from the National University of Colombia
- Assistant Professor and Internal Medicine Specialist, School of Veterinary Medicine, Faculty of Science, University of Queensland
- D. in Veterinary Science from the University of Guelph, Ontario
- Master's Degree of Science, University of Liverpool, England
- Diploma of the American College of Internal Medicine in the specialty of Large Animals and of the European College of Internal Medicine
- Certificate in University Teaching Practice (CUTP) from The University of Queensland
- PhD at the University of Queensland
- Assistant and Clinical Professor of Large Animal Internal Medicine at the Large Animal Clinic, Faculty of Veterinary Medicine and Animal Husbandry, National University of Colombia
- Research Associate in Sports Physiology at the Department of Morphology, Anatomy, Physiology and Pathology of the University of Messina, Italy
- Tutor, Teaching Assistant and Professor in Anatomy, Physiology, Internal Medicine of Production Animals and Internal Medicine and Surgery of Companion Animals
- Assistant Professor, Research Associate and Director of the Equine Herpesvirus Research Laboratory at the University of California, Berkeley, USA
- Equivalent to Senior Lecturer and Clinical Specialist in Internal Medicine at the University of Queensland, Australia

D. Delpón, Héctor Santo-Tomás

- Degree in Veterinary from the University of Zaragoza
- Degree in Veterinary Medicine from the University of Zaragoza with specializations in Clinical and Animal Production
- Postgraduate studies at the University of Liverpool, UK for the Certificate in Advanced Veterinary Practice (CertAVP)
- Volunteer in Mozambique to train local livestock farmers in milk production

Dr. Barba Recreo, Martha

- Veterinary Outpatient Equine Clinic, Gres-Hippo, St. Vincent de Mercuze, France
- Professor, researcher and clinical veterinarian in the Equine Internal Medicine Service, Faculty of Veterinary Medicine, CEU Cardenal Herrera University, Valencia
- Degree in Veterinary from the University of Zaragoza
- D. in Biomedical Sciences, Auburn University, Alabama, USA
- Diploma of the American College of Internal Medicine, Large Animals
- Rotating internship in Equine Medicine and Surgery at the University of Lyon, VetAgro-Sup, France
- Residency in Equine Internal Medicine, *J.T. Vaughan Large Animal Teaching Hospital, Auburn University,* Alabama, U.S
- Assistant Professor, Department of Animal Medicine and Surgery, Faculty of Veterinary Medicine, CEU Cardenal Herrera University, Valencia
- Professor and veterinary specialist in Equine Internal Medicine and research associate, *Weipers* Centre Equine Hospital, University of Glasgow, Scotland, United Kingdom

"The leading professionals in the field have come together to offer you the most comprehensive knowledge in this field, so that you can develop with total guarantees of success"

04

Structure and Content

The contents have been developed by the different experts of this Postgraduate Certificate, with a clear purpose: to ensure that 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 toward learning that is compatible with your personal and professional life"

Module 1. Infectious and Parasitic Diseases in Ruminants

1.1. Prevention and Control of Infectious Diseases
- 1.1.1. Laboratory Diagnostic Tests
- 1.1.2. Antimicrobial Treatments and Resistance
- 1.1.3. Use of Vaccines
- 1.1.4. Biosecurity and Control Measures

1.2. Bovine Vaccination Plan
- 1.2.1. There is No Single Vaccination Plan. Premises to Consider
- 1.2.2. Considerations to Be Taken Into Account When Choosing a Vaccine
- 1.2.3. Vaccination Plans by Production System or Age Group
  - 1.2.3.1. Vaccination Plan for Dairy and Heifer Rearing
  - 1.2.3.2. Vaccination Plan for Sucklers
  - 1.2.3.3. Vaccination Plan for Meat and Heifer Rearing
  - 1.2.3.4. Vaccination Plan for Grazing Fattening Cattle
  - 1.2.3.5. Vaccination Plan for Dairy Cows
  - 1.2.3.6. Vaccination Plan for Meat Cows
  - 1.2.3.7. Stallion Vaccination Plan (Artificial Insemination Center)

1.3. Vaccination Plan for Small Ruminants
- 1.3.1. There is No Single Vaccination Plan. Premises to Consider
- 1.3.2. Considerations to Be Taken Into Account When Choosing a Vaccine
- 1.3.3. Vaccination Plans by Production System or Age Group
  - 1.3.3.1. Vaccination Plan for Rebreeding Dairy Ewe Lambs/Goats
  - 1.3.3.2. Vaccination Plan for Rebreeding Meat Ewe Lambs/Goats
  - 1.3.3.3. Vaccination plan for Fattening Ewe Lambs/Goats
  - 1.3.3.4. Vaccination Plan for Dairy Sheep/Goats
  - 1.3.3.5. Vaccination Plan for Meat Sheep/Goats

1.4. Main Infectious and Contagious Diseases in Bovines I
- 1.3.1. Notifiable Diseases
- 1.3.2. Diseases Caused by Bacteria
- 1.3.3. Diseases caused by Fungi

1.5. Main Infectious and Contagious Diseases in Bovines II
- 1.5.1. Viral Diseases
- 1.5.2. Diseases Caused by Prions

1.6. Main Infectious and Contagious Diseases in Small Ruminants I
- 1.6.1. Notifiable Diseases
- 1.6.2. Diseases Caused by Bacteria
- 1.6.3. Diseases caused by Fungi

1.7. Main Infectious and Contagious Diseases in Small Ruminants II
- 1.7.1. Viral Diseases
- 1.7.2. Diseases Caused by Prions

1.8. Main Parasites Affecting Bovines
- 1.8.1. Hemoparasites
- 1.8.2. Gastrointestinal Nematodes
- 1.8.3. Nematodes Affecting the Respiratory Tract
- 1.8.4. Cestodes
- 1.8.5. Trematodes
- 1.8.6. Coccidia

1.9. Main Parasites Affecting Small Ruminants
- 1.9.1. Hemoparasites
- 1.9.2. Gastrointestinal Nematodes
- 1.9.3. Nematodes Affecting the Respiratory Tract
- 1.9.4. Cestodes
- 1.9.5. Trematodes
- 1.9.6. Resistance to Anthelmintic Resistance in Small Ruminants
- 1.9.7. Management, Treatment and Control Programs (FAMACHA)

1.10. Prevention and Treatment of Parasitic Diseases
- 1.10.1. Diagnostic Techniques
- 1.10.2. Therapeutic Principles
- 1.10.2. Resistance Development
- 1.10.3. Management and Control Programs

05

Methodology

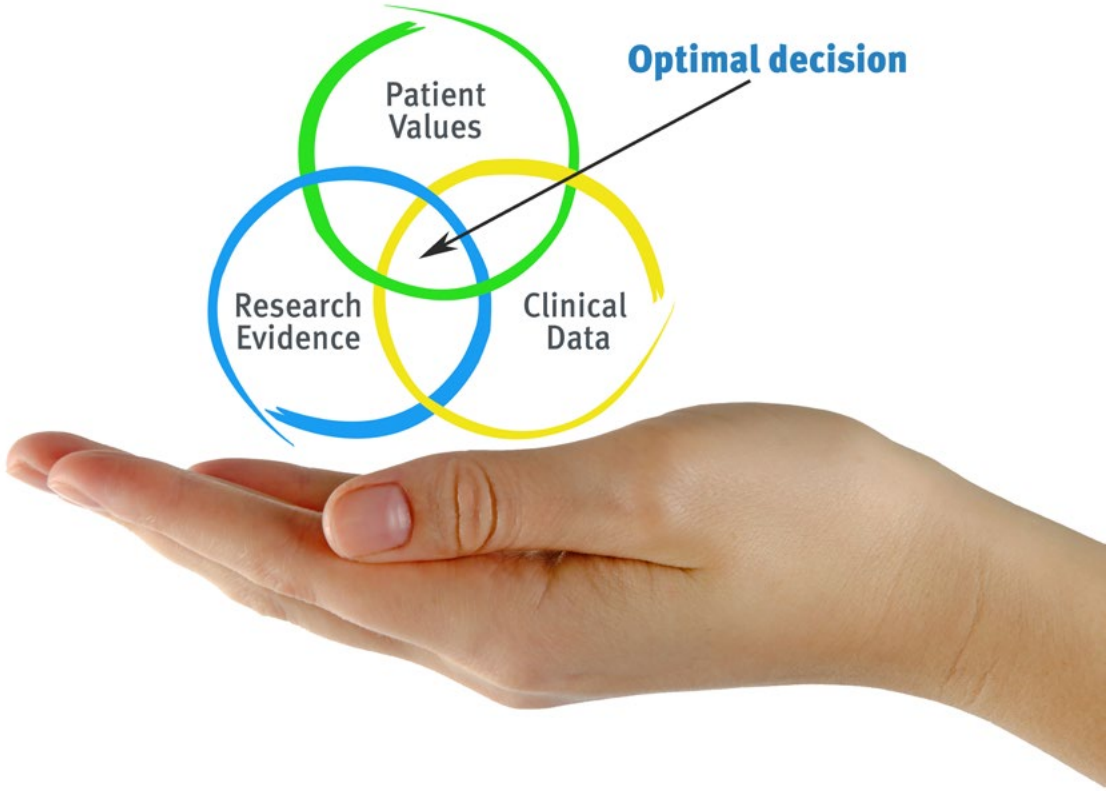
This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** 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:

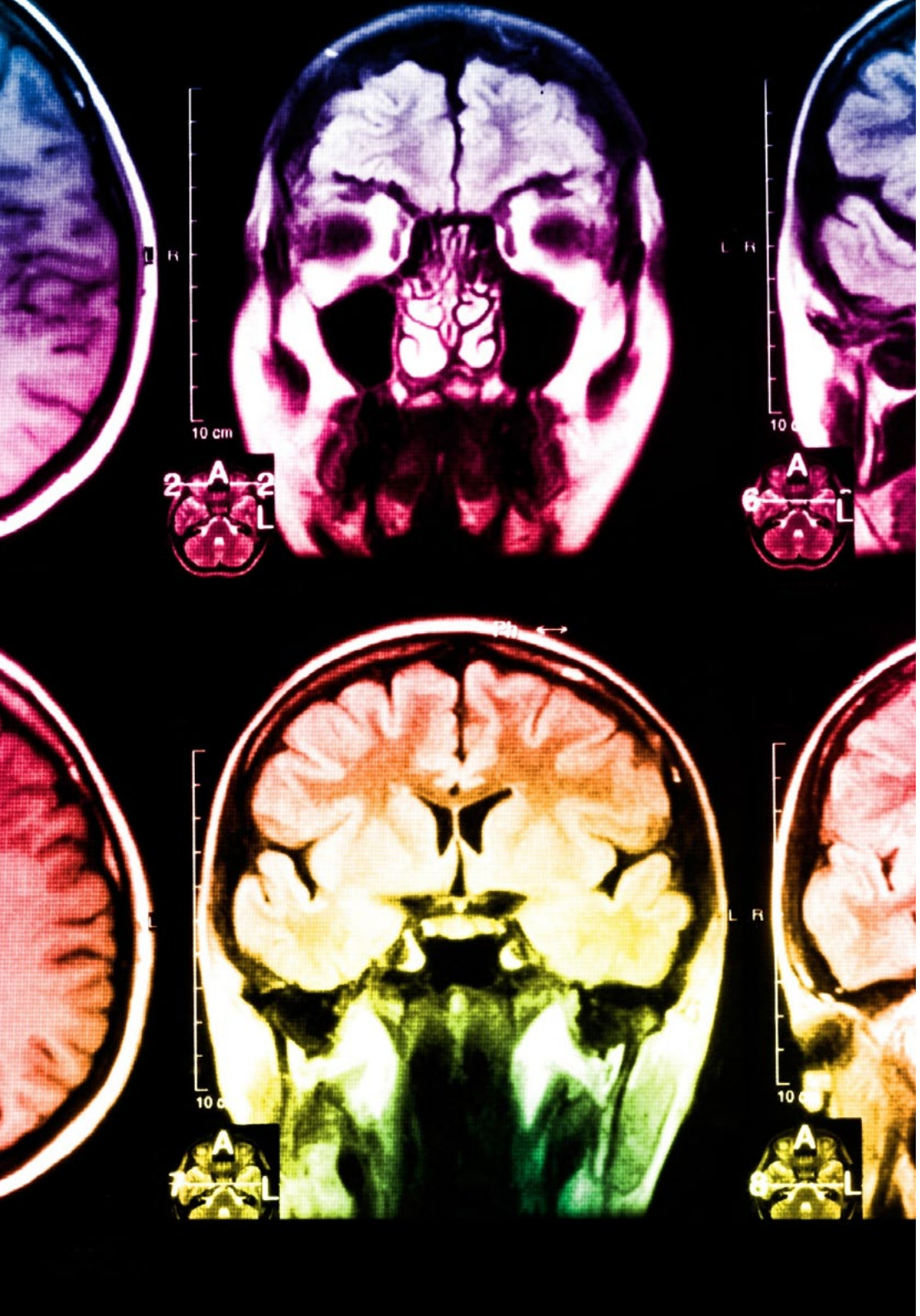
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real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

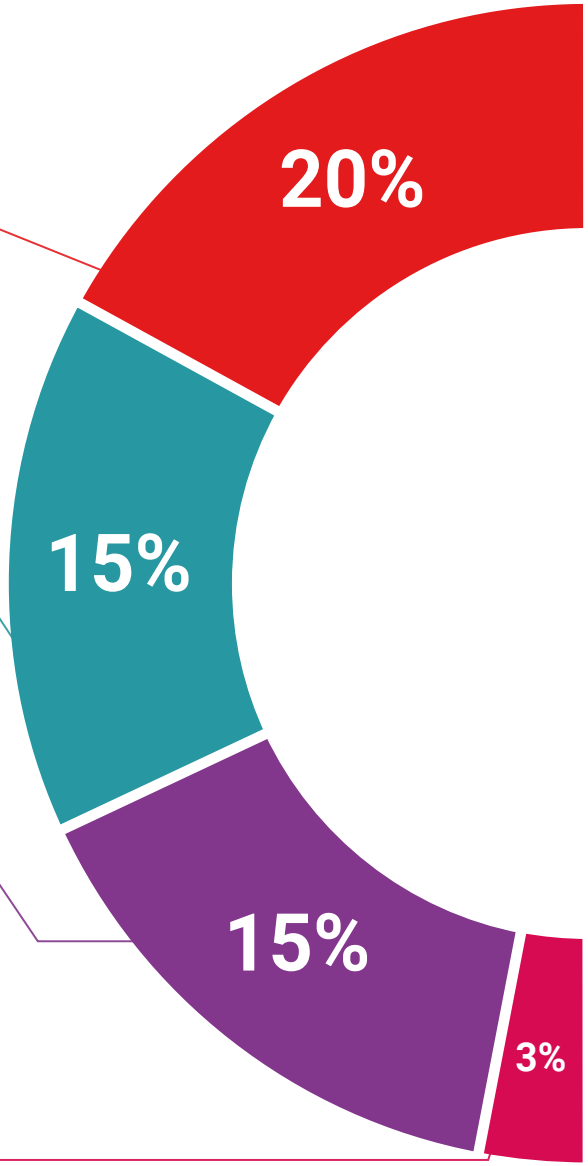
Interactive Summaries

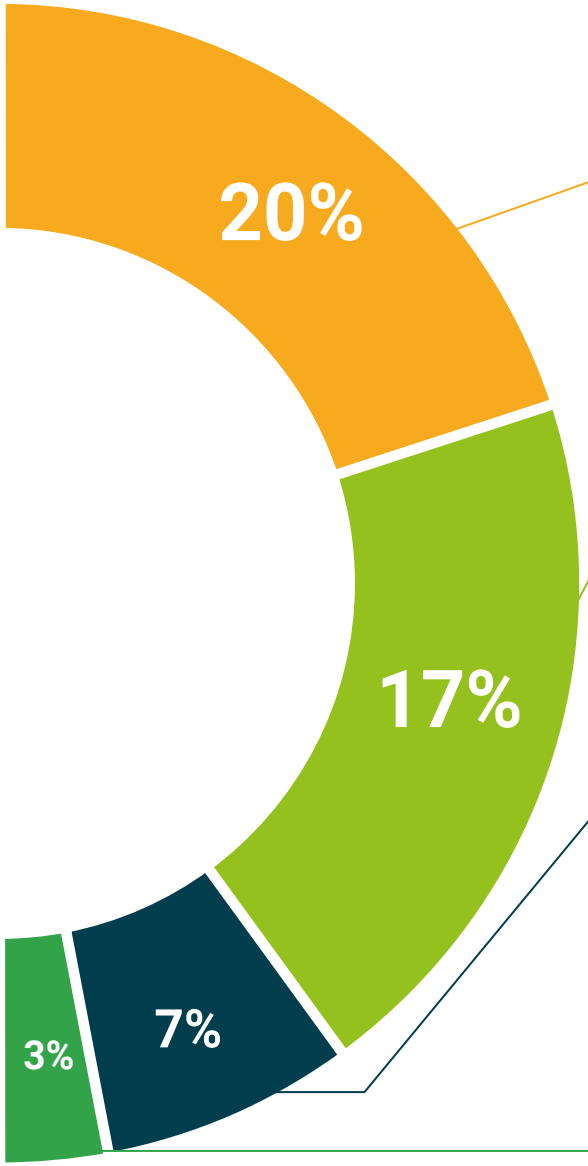
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Certificate in Infectious and Parasitic Diseases in Ruminants guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

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

This **Postgraduate Certificate in Infectious and Parasitic Diseases in Ruminants** 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 Infectious and Parasitic Diseases in Ruminants**

Official Nº of Hours: **150 h.**

tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Infectious and Parasitic Diseases in Ruminants

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.

Unique TECH Code: AFWORD235 techtitute.com/certificates

*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.

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