

# Postgraduate Certificate

Ruminant and Equine  
Production and Health





## Postgraduate Certificate Ruminant and Equine Production and Health

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

Website: [www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/ruminant-equine-production-health](http://www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/ruminant-equine-production-health)

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# 01

# Introduction

During this program, students will be able to explore the concept of "One Health", how veterinarians contribute towards this concept and its importance in an increasingly globalized world. At the same time, this program addresses the main strategies for dealing with any infectious or contagious diseases in equine species and ruminants, enhancing knowledge and skills to diagnose, prevent and combat the main diseases of veterinary interest.







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*A comprehensive update on Ruminant and Equine Production and Health with the most complete and effective educational program on the online market”*

Recent globalization and its impact on animal health and, therefore, public health, is a topic of worldwide interest. The increase in international trade and structural changes in nation states have led to the emergence and spread of global health phenomena that represent risks, challenges and opportunities for producers and consumers. This in turn has posed serious challenges for health agencies, professionals and educational institutions.

In line with the concept of One Health, the professionals will be able to identify issues arising in veterinary medicine that also impact public health (such as zoonotic diseases and antibiotic resistance) and food safety.

Students will develop specialist knowledge of the documentation to notify competent authorities and the procedure for sample collection and the operation of reference laboratories. Lastly, they will analyze the latest challenges and advances in animal health.

The Postgraduate Certificate in on Ruminant and Equine Production and Health aims to provide advanced and multidisciplinary professional development in the field of Ruminant and Equine Health.

This program addresses the main strategies for dealing with any infectious or contagious diseases in equine species and ruminants, enhancing expertise and skills to diagnose, prevent and combat the main diseases of veterinary interest.

It provides an all-important multidisciplinary view of epidemiology, clinical practice and pathology, allowing students to develop a wide range of skills, insights and abilities that allow them to understand and apply theoretical knowledge in practice.

This Postgraduate Certificate analyzes the concepts, definitions and tools that allow the professional to explore the main diseases that affect ruminants and equines through differential diagnosis, proper sampling for diagnosis, diagnostic techniques outlined for each infectious process and control measures to be applied for each disease.

This **Postgraduate Certificate in Ruminant and Equine Production and Health** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The latest technology in the form of online teaching software
- ◆ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ◆ Case studies 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 commitments
- ◆ 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 work for individual reflection
- ◆ Content that is accessible from any fixed or portable device with an Internet connection
- ◆ Supplementary documentation banks that are permanently available, even after finishing the course



*Join the elite, with this highly effective educational program and open up new paths to career advancement"*



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*A complete educational program that will allow you to acquire the most advanced knowledge in all areas of veterinary care for equines”*

Our teaching staff is made up of professionals from different fields related to Ruminant and Equine Production and Health. In this way we ensure that we deliver an educational update in line with objectives. A multidisciplinary team of professionals trained and experienced in different areas, will cover the theoretical knowledge in an efficient way, but above all, will bring practical knowledge from their own experience to the course: one of the factors that makes this program 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 specialization.

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, 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.

*Benefit from the experience of practising professionals and the analysis of actual success stories, in this high-impact program.*

*With a methodological design based on proven teaching techniques, this innovative program uses a range of teaching approaches to allow you to learn in a dynamic and effective way.*



# 02 Objectives

Our objective is to equip highly qualified professionals with the skills they need for professional practice. An objective that is further complemented, in a holistic 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 you will be able to achieve in just a few months with a high-intensity and effective program.





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*If your objective is to broaden your skills set to open up new paths to success and development, this is Postgraduate Certificate for you: a program that aspires to excellence”*



## General objectives

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- ♦ Analyze the main aspects of ruminant and equine production to obtain healthy and profitable products while respecting the environment and animal welfare
- ♦ Describe the infectious-contagious diseases of major interest in ruminants and equids, emphasizing epidemiological, pathogenic, clinical, diagnostic, and control aspects
- ♦ Develop methodological skills to detect (diagnose), prevent, and treat the main diseases in these species
- ♦ Examine the main infectious and contagious diseases in ruminants and equines, highlighting the unique aspects and progression of each
- ♦ Develop expertise in Animal Production and Health
- ♦ Analyze the impact of livestock production on public health
- ♦ Examine the concept of Globalization
- ♦ Explain the term "One Health" and its relationship with veterinary medicine
- ♦ Specify the competent authorities that veterinarians must liaise with
- ♦ Specify the communications that should be sent to the competent authorities



*A professional growth and development path that will boost your competitiveness in the labor market"*







## Specific objectives

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- ◆ Determine biosecurity measures in livestock production
- ◆ Analyze veterinary controls to be carried out at border control
- ◆ Identify zoonotic diseases and communicate them to the authorities
- ◆ Classify antibiotics according to their use group in animals, paying attention to antibiotic resistance
- ◆ Determine the competent bodies in the field of animal health
- ◆ Specify which notifications should be made to the competent authority and in what manner
- ◆ Analyze the different animal identification systems depending on the species in question
- ◆ Develop specialized knowledge of livestock diseases whose declaration is mandatory
- ◆ Examine the latest innovations and views on animal health
- ◆ Analyze the different aspects involved in the production and management of ruminants and equines, and their influence on health, animal welfare, quality of the final product, and production process efficiency
- ◆ Develop expertise on the performance of ruminant and equine necropsies, interpretation of lesions, reporting, and sample collection
- ◆ Analyze the main diseases in ruminants and equids, highlighting epidemiological and control approaches
- ◆ Examine the unique pathological aspects of each disease progression to establish a differential diagnosis
- ◆ Establish control strategies to combat main diseases of veterinary relevance in ruminants and equids

03

# Course Management

In line with a commitment to excellence, we are proud to offer students a faculty of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.







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*Leading professionals in the field have come together to teach you the latest advances in Ruminant and Equine Production and Health”*

## Management



### Dr. Ruiz Fons, José Francisco

- Member of the Spanish Society for the Conservation and Study of Mammals (SECEM) and the Wildlife Disease Association (WDA)
- CSIC Senior Scientist at the Institute for Research in Hunting Resources IREC
- Researcher in the Health Research Fund at The Macaulay Land Use/James Hutton Research Institute and the Carlos III Health Institute
- Degree in Veterinary Medicine from the University of Murcia
- PhD in Biology and Technology of Hunting Resources from the University of Castilla La Mancha

## Professors

### Dr. García Bocanegra, Ignacio

- PhD in Veterinary Science
- Graduate of the European College of Zoological Medicine (ECZM) (Wildlife Population Health)
- Degree in Veterinary Medicine and in Food Science and Technology
- Master's Degree in Animal Medicine, Health, and Breeding
- Full Professor of the Department of Animal Health, University of Cordoba
- Study of the Epidemiology and Control of Infectious Diseases affecting Wild Animals and their interaction with Domestic species in the context of the research group AGR-149 of the University of Cordoba

### Dr. Molina Hernández, Verónica

- Phd from the University of Córdoba in the Biosciences and Agroalimentary Sciences Program
- Degree in Biology from the University of Córdoba
- Researcher of the Juan de la Cierva National Program. Incorporation in the Department of Comparative Anatomy and Pathology of the University of Cordoba
- Lecturer in the subjects of Cytology and Histology, General Pathological Anatomy, and Systematic Pathological Anatomy of the Veterinary Degree at the University of Cordoba
- Codirector of doctoral theses



## Professors

### Dr. Cano Terriza, David

- ◆ PhD in Veterinary Science (Excellent Cum Laude) from the University of Cordoba (Spain)
- ◆ Degree in Veterinary Medicine
- ◆ Official Master's Degree in Animal Medicine, Health and Improvement from the University of Cordoba (Spain) with Extraordinary Awards upon completion of the Degree and Master's Degree, respectively
- ◆ Qualified for animal experimentation (B accreditation according to the applicable standards for the protection of animals used for experimental and other scientific purposes, including teaching)

### Dr. Díaz Gaona, Cipriano

- ◆ Doctorate in Veterinary from the University of Córdoba
- ◆ Degree in Veterinary Medicine, specializing in Animal Production and Economics
- ◆ Andrés Núñez de Prado National Prize for Research in Organic Agriculture and Livestock
- ◆ Doctoral Courses carried out in the Department of Animal Production ("Organic Livestock: Management of Farms in Disadvantaged Areas")
- ◆ Specialization in Animal Genetics and Reproduction (Master's Degree in Equine Technology)
- ◆ Honorary collaborator of the Department of Animal Production for 7 academic years

### Dr. Sarmiento García, Ainhoa

- ◆ Veterinarian. Head of the Nutrition Department. Casaseca Livestock, SLU
- ◆ Responsible for the Antibiotic Reduction Program and Animal Welfare. Management of Productive Data of Fattening and Mothers (Pigchamp)
- ◆ Elaboration of Projects. R+D+I Management

### Dr. Risalde Moya, María Ángeles

- ◆ PhD from the University of Cordoba with International Mention and Extraordinary Doctorate Award
- ◆ Degree in Veterinary Medicine with Extraordinary Award at the University of Cordoba
- ◆ Collaborator in 16 European, National, or Regional Research Projects (2 as Main Investigator) and 3 R&D contracts with companies (1 as Main Investigator)
- ◆ Author of 122 Communications to Congresses with up to 8 awards for the Best Communication
- ◆ Incorporation in the Department of Comparative Anatomy and Pathology at the University of Cordoba



*An impressive teaching faculty, made up of professionals from different areas of expertise, will guide you through the program: a unique opportunity not to be missed"*

04

# Structure and Content

The contents have been developed by different specialists in the area, 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 program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life”*

## Module 1. Important Animal Production and Health Aspects

- 1.1. Animal Production
  - 1.1.1. Introduction
  - 1.1.2. Current Situation of the Sector
  - 1.1.3. Role of the Veterinarian
- 1.2. Animal Production Systems
  - 1.2.1. Intensive
  - 1.2.2. Alternative Systems
    - 1.2.2.1. Extensive Production
    - 1.2.2.2. Ecological Production
- 1.3. Livestock Production
  - 1.3.1. Biosecurity Measures
  - 1.3.2. Vaccination and Treatment Plans
- 1.4. Health in the Livestock Sector
  - 1.4.1. Concept of Animal Health
  - 1.4.2. Animal Identification Systems
  - 1.4.3. Movements of Animals For Slaughter
- 1.5. Animal Welfare
  - 1.5.1. Current Situation
  - 1.5.2. Animal Welfare Measures
- 1.6. Impacts of Livestock Production on Public Health
  - 1.6.1. Concept of One Health
  - 1.6.2. Zoonotic Diseases
    - 1.6.2.1. Main Zoonotic Diseases
    - 1.6.2.2. Declaration to the Competent Authority
  - 1.6.3. Resistance to Antibiotics
    - 1.6.3.1. Importance of Antibiotic Resistance
    - 1.6.3.2. Categorization of Antibiotics Based on their Use in Animals
- 1.7. Impact of Animal Production on Food Safety
  - 1.7.1. Food Safety
  - 1.7.2. Major Foodborne Diseases
  - 1.7.3. Declaration

- 1.8. Notifiable Diseases of Livestock
  - 1.8.1. Introduction
  - 1.8.2. Main Diseases
  - 1.8.3. Notification
- 1.9. Competent Veterinary Medicine and Animal Health Authorities
  - 1.9.1. Introduction
  - 1.9.2. National Veterinary Corps
  - 1.9.3. Regional Offices and Veterinary Units
- 1.10. Reference Laboratories
  - 1.10.1. Introduction
  - 1.10.2. Sensitivity and Specificity
  - 1.10.3. Sample Collection Tables

## Module 2. Ruminant and Equine Production and Health

- 2.1. Main Ruminant Production Systems
  - 2.1.1. Cattle and Small Ruminants
  - 2.1.2. Production Systems: Intensive and Extensive
  - 2.1.3. Main Breeds and Productions: Meat and Milk
  - 2.1.4. Reproduction, Management, and Feeding
  - 2.1.5. Facilities and Equipment
  - 2.1.6. Animal Hygiene and Welfare
- 2.2. Main Equine Production Systems
  - 2.2.1. The Equine Sector
  - 2.2.2. Production Systems
  - 2.2.3. Main Breeds and Productions: Meat and Sport
  - 2.2.4. Reproduction, Management, and Feeding
  - 2.2.5. Facilities and Equipment
  - 2.2.6. Animal Hygiene and Welfare

- 2.3. Ruminant and Equine Necropsy
  - 2.3.1. Equipment and Instruments
  - 2.3.2. Medical History
  - 2.3.3. External Examination
  - 2.3.4. Orderly and Systematic Necropsy
  - 2.3.5. Sample Collection
  - 2.3.6. Completion of the Necropsy Report
  - 2.3.7. Disposal of the Corpse and Disinfection of Instruments
- 2.4. Main General Infectious and Contagious Diseases in Ruminants
  - 2.4.1. Foot and Mouth Disease
  - 2.4.2. Bovine Viral Diarrhea
  - 2.4.3. Bluetongue
  - 2.4.4. Mammitis
  - 2.4.5. Contagious Agalactia of Small Ruminants
  - 2.4.6. Piroplasmiasis
- 2.5. Main Respiratory Processes in Ruminants
  - 2.5.1. TB
  - 2.5.2. Infectious Bovine Rhinotracheitis
  - 2.5.3. Pasteurellosis: Bovine Hemorrhagic Septicemia
  - 2.5.4. Ovine Osteoarthritis
  - 2.5.5. Bronchopulmonary Nematodiasis
- 2.6. Main Digestive Processes in Ruminants
  - 2.6.1. Neonatal Diarrhea Syndrome
  - 2.6.2. Enterotoxemias
  - 2.6.3. Paratuberculosis
  - 2.6.4. Protozoosis
  - 2.6.5. Helminthiasis
- 2.7. Main Reproductive Processes in Ruminants
  - 2.7.1. Bovine Brucellosis and Small Ruminant Brucellosis
  - 2.7.2. Ovine Enzootic Abortion
  - 2.7.3. Q fever
  - 2.7.4. Toxoplasmosis
  - 2.7.5. Neosporosis

- 2.8. Main Cutaneous Processes in Ruminants
  - 2.8.1. Pediculi
  - 2.8.2. Bovine Hypodermosis
  - 2.8.3. Ruminant Mange
  - 2.8.4. Miasis
  - 2.8.5. Tick Infestation
- 2.9. Main Nervous Processes in Ruminants
  - 2.9.1. Maedi-visna and Arthritis-encephalitis Caprinae
  - 2.9.2. Transmissible Spongiform Encephalopathies
  - 2.9.3. Histotoxic and Neurotoxic Clostridiosis
  - 2.9.4. Listeriosis
  - 2.9.5. Cerebellar Degeneration
- 2.10. Main Equine Diseases
  - 2.10.1. Equine Rhinopneumonitis
  - 2.10.2. Equine Influenza
  - 2.10.3. Equine Mumps
  - 2.10.4. Equine Rhodococcosis
  - 2.10.5. Infectious Endometritis
  - 2.10.6. Equine Encephalitis
  - 2.10.7. Strongylosis



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



# 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.





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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 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 Ruminant and Equine Production and Health guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Technological University.







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*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This **Postgraduate Certificate in Ruminant and Equine Production and Health** contains the most complete and up-to-date 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 Ruminant and Equine Production and Health**

Official N° of hours: **300 h.**



\*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.

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



**Postgraduate Certificate**  
Ruminant and Equine  
Production and Health

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



# Postgraduate Certificate

## Ruminant and Equine Production and Health

