Postgraduate Certificate

Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System

tech global university

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Postgraduate Certificate

Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System

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

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/veterinary-pharmacology-cardiorespiratory-renal-hemostatic-system

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01

Introduction

This comprehensive program examines the main pharmacological properties of drug groups that act on the cardiovascular, respiratory, renal and blood systems. A high-quality and highly relevant program for the veterinary professional, which offers the most advanced resources in online education, to guarantee the student an effective, real and practical learning that boosts their competencies to the highest level in this area of work.

A complete update on the mechanisms of action, pharmacokinetics, and therapeutic and toxic effects in the Cardiovascular, Respiratory, Renal and Hemostatic system"

This Postgraduate Certificate is a complete review of the most up-to-date knowledge in this field. With a multidisciplinary vision and a complete update that includes advances in this field of action, it will allow you to learn everything you need to intervene as a specialist.

You will learn to classify the different drugs that act at the vascular level, such as coagulation and cardiac modifiers and you will examine the different drugs that act as respiratory stimulants, bronchodilators, expectorants and antitussives.

This **Postgraduate Certificate in Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Innovative and up-to-date diagnostic techniques in infectious diseases and their application in daily clinical practice, including the use of cytology as a diagnostic tool in these diseases
- The most frequent and not so frequent pathologies of infectious origin in dogs from a practical and completely up-to-date point of view
- Infectious Pathologies oriented to the feline species, dealing extensively with all those of this species
- "One Health" vision, in which Zoonoses and their implications for public health will be reviewed
- Prevention and management of all infectious diseases, including clinical, home and community settings

An innovative learning format that offers you the best training in this field with the convenience of a program that is fully adaptable to your needs"

Revolutionary training that reconciles TECH's high-quality standards with today's best online preparation tools"

A great opportunity for the veterinary medicine professionals to expand their competencies and catch up on all the latest developments in pharmacological approaches.

Learn in an efficient way, with a real qualification objective, with this unique Postgraduate Certificate for its quality and price, in the online teaching market.

Its teaching staff includes professionals belonging to the field of Veterinary Medicine, who bring to this program the experience of their work, as well as renowned specialists from reference societies and prestigious universities.

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

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

02

Objectives

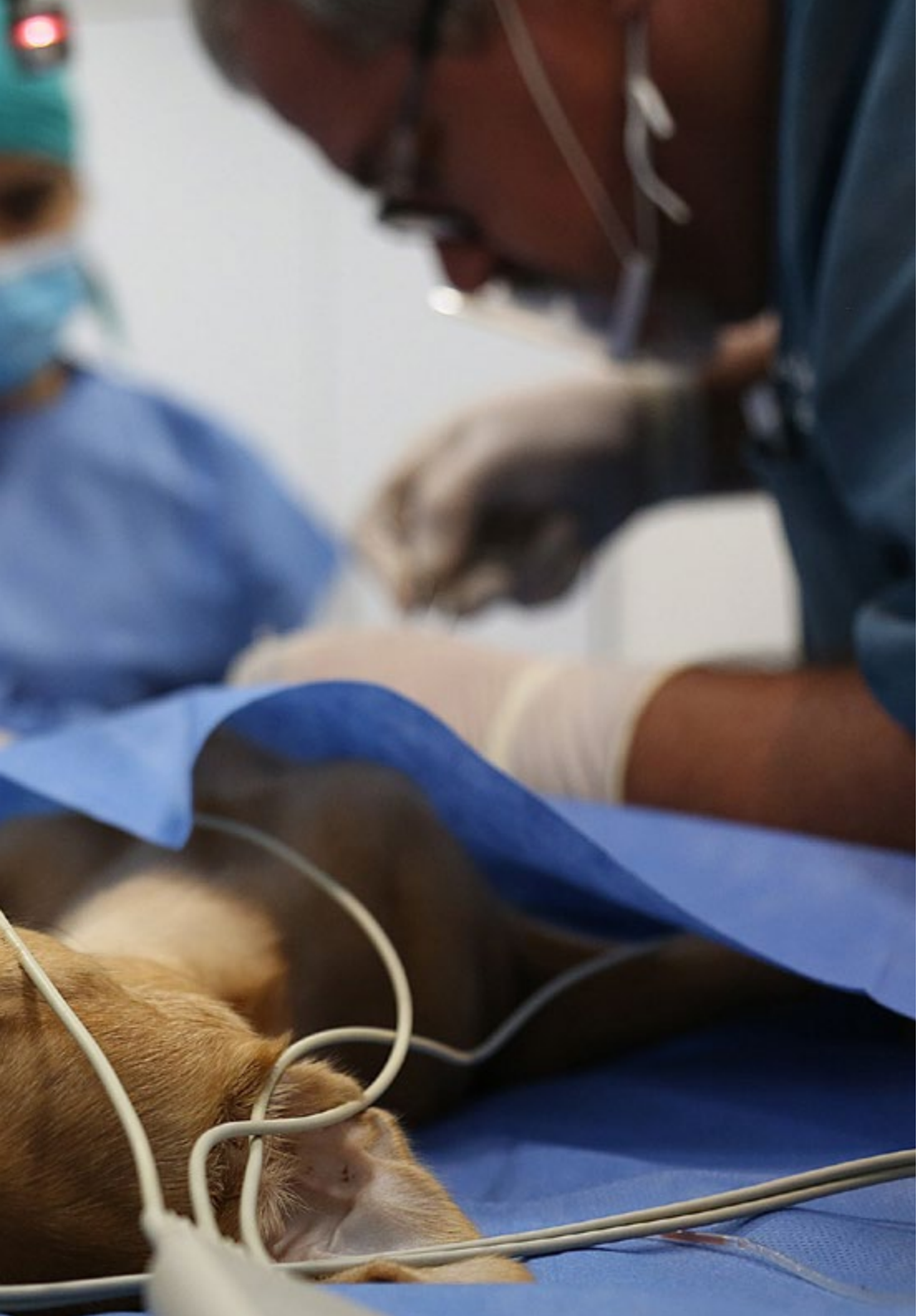
The objective of the Postgraduate Certificate is to provide the students with the required competencies in relation to preclinical or clinical research of drugs used in veterinary medicine, and their application in the therapeutic use of drugs so that they can be integrated into the professional field.

Acquire the most comprehensive knowledge in cardiorespiratory, renal and hemostatic medication, and the skills and attitudes for its practical application in a training created for excellence"

General Objectives

- Examine the pharmacological basis of cardiorespiratory system therapy and homeostasis.
- Identify the main therapeutic groups and their indications
- Determine the mechanisms of action of different drug groups, properties and pharmacokinetics
- Develop the student's critical and analytical skills through the resolution of clinical cases

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



Specific Objectives

- Describe the mechanisms of action of drugs used to treat heart failure, hypertension or arrhythmias
- Examine antianemic drugs and growth factors, as well as mechanisms of action, adverse reactions and pharmacokinetics
- Determine the main routes of administration of drugs used in the cardiorespiratory system and homeostasis
- Present the drugs used against cough, mucolytics and expectorants and their mechanisms of action, adverse reactions, pharmacokinetics and side effects
- Solve problems and clinical cases related to the cardiorespiratory system
- Associate the correct drug to the main symptoms and pathologies of the cardiorespiratory system
- Safe and effective use of pharmaceuticals

03

Course Management

The teaching staff of this Postgraduate Certificate is prepared by professionals specialized in the study of Pharmacology, both human and veterinary, with clinical experience in small and large animals. They have extensive and recognized teaching and research experience, with officially recognized six-year research periods, participation in numerous research projects and dissemination of their research both nationally and internationally in high impact journals, books and conferences.

A unique opportunity to learn from internationally renowned professors, with teaching, clinical and research experience"

Management

Dr. Santander Ballestín, Sonia

- Teaching Coordinator, Department of Pharmacology, University of Zaragoza, Spain
- Lecturer in the university course: "Introduction to Pharmacology: Principles for the Rational Use of Drugs" Basic Program of the University of Experience of Zaragoza
- Evaluation professor in: objective-structured clinical evaluation of the Degree in Medicine
- Degree in Biology and Biochemistry, specializing in the area of Pharmacology
- PhD with the European Degree from the University of Zaragoza
- Master's Degree in Environment and Water Management. Andalusia Business School
- Title of the doctoral program: Biochemistry and Molecular and Cellular Biology

Professors

Ms. Lomba, Laura

- Professor of Pharmacokinetics and Physiochemistry at San Jorge University
- Degree in Chemistry from the University of Zaragoza
- Degree in Pharmacy and PhD from the San Jorge University
- Predoctoral stay at the Cancer Therapy Institute (Bradford)
- She has ANECA accreditation in the positions of Assistant Professor Doctor, Hired Professor Doctor and Professor of Private University
- 1 six-year period recognized 2012-2017 by CNAI
- She has directed 10 grants for collaboration and initiation to research, 12 graduate theses and a doctoral thesis. She is currently supervising 3 doctoral theses
- In the teaching field, she has 6 scientific articles, 24 communications in congresses and 6 research projects

Ms. Luesma Bartolomé, María José

- Veterinarian. Study Group on Prion Diseases, Vectorial Diseases and Emerging Zoonoses at the University of Zaragoza
- University Research Institute Study Group
- Professor of Film and Anatomy. University degree: Complementary Academic Activities
- Professor of Anatomy and Histology University degree: Graduate in Optics and Optometry University of Zaragoza
- Professor of Final Degree Project University Degree, Bachelor's Degree in Medicine
- Professor of Morphology. Development Biology University degree: Professional Master's Degree in Initiation to Research in Medicine. University of Zaragoza
- Doctor of Veterinary Medicine. Official Doctorate Program in Veterinary Sciences. University of Zaragoza
- Degree in Veterinary Medicine. University of Zaragoza

04

Structure and Content

This Postgraduate Certificate provides all the necessary knowledge to be able to perform Pharmacology in Veterinary Medicine in the best possible way. It is important to take into account that the contents allow the student to obtain specialized knowledge of pharmacology, as well as the ability to deal with different solutions for veterinary pathologies. A complete and accessible journey that will make a difference in your career progression.

A complete program that will take you to the exhaustive training necessary to intervene as a specialist in the theoretical and practical aspects of Veterinary Pharmacokinetics and Pharmacodynamics"

Module 1. Pharmacology of the Cardiovascular, Renal and Respiratory System. Hemostasis

1.1. Pharmacology of the Cardiovascular System I
- 1.1.1. Positive Inotropic and Inodilator Drugs
- 1.1.2. Sympathomimetic Amines
- 1.1.3. Glycosides

1.2. Pharmacology of the Cardiovascular System II
- 1.2.1. Diuretic Drugs

1.3. Pharmacology of the Cardiovascular System III
- 1.3.1. Drugs Acting on the Renin-Angiotensin System
- 1.3.2. Beta-Adrenergic Antagonist Drugs

1.4. Pharmacology of the Cardiovascular System IV
- 1.4.1. Vasodilator Drugs
- 1.4.2. Calcium Channel Antagonists

1.5. Pharmacology of the Cardiovascular System V
- 1.5.1. Antiarrhythmic Drugs

1.6. Pharmacology of the Cardiovascular System VI
- 1.6.1. Antianginal Drugs
- 1.6.2. Lipid-Lowering Drugs

1.7. Blood Pharmacology I
- 1.7.1. Anti-Anemia Drugs
  - 1.7.1.1. Iron
  - 1.7.1.2. Folic Acid
  - 1.7.1.3. Vitamin b12
- 1.7.2. Hematopoietic Growth Factors
  - 1.7.2.1. Erythropoietin
  - 1.7.2.2. Granulocyte Colony Stimulating Factors

1.8. Blood Pharmacology II
- 1.8.1. Antithrombotic Drugs
- 1.8.2. Anti-Aggregation Drugs
- 1.8.3. Anticoagulants
- 1.8.4. Fibrinolytic Drugs

1.9. Pharmacology of the Respiratory System I
- 1.9.1. Antitussives
- 1.9.2. Expectorants
- 1.9.3. Mucolytics

1.10. Pharmacology of the Respiratory System II
- 1.10.1. Bronchodilators (Methylxanthines, Sympathomimetics, Antimuscarinics)
- 1.10.2. Anti-Inflammatory Drugs used in Asthma
- 1.10.3. Anti-inflammatory Drugs Used in Chronic Obstructive Pulmonary Disease (Corticosteroids, Mediator Release Inhibitors, Leukotriene Inhibitors)

It advances towards excellence with the help of the best professionals and teaching resources of the moment"

05

Methodology

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

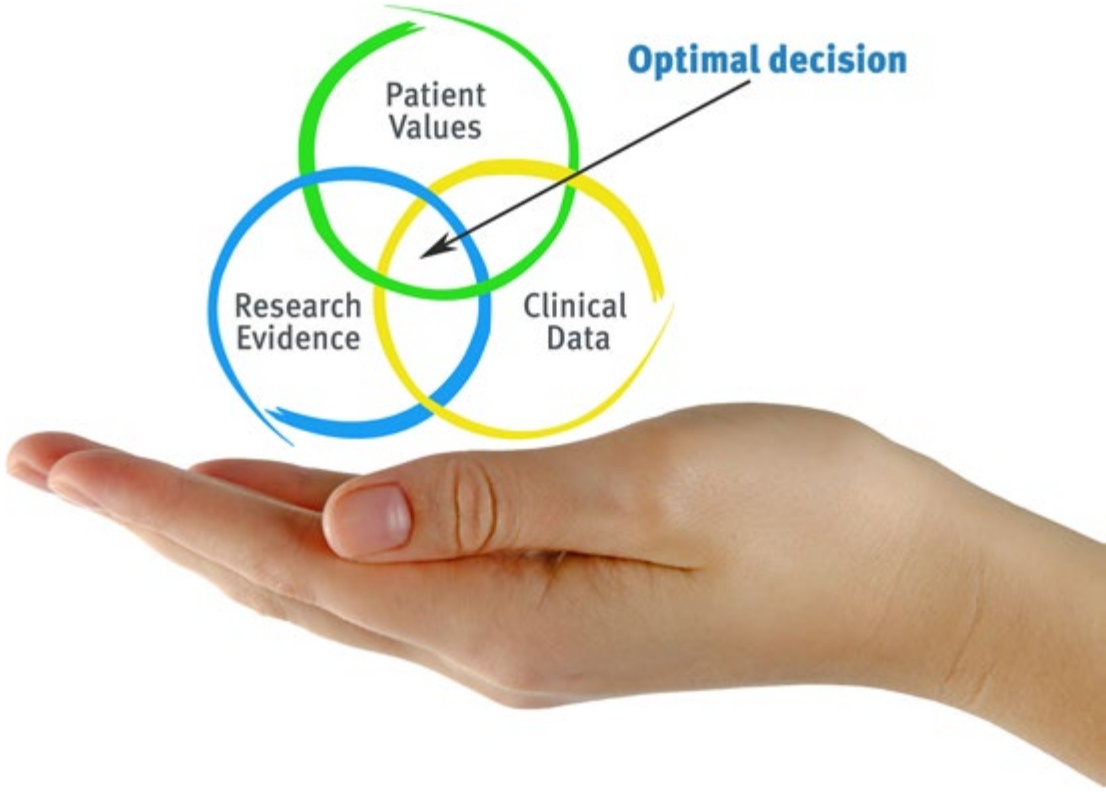
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

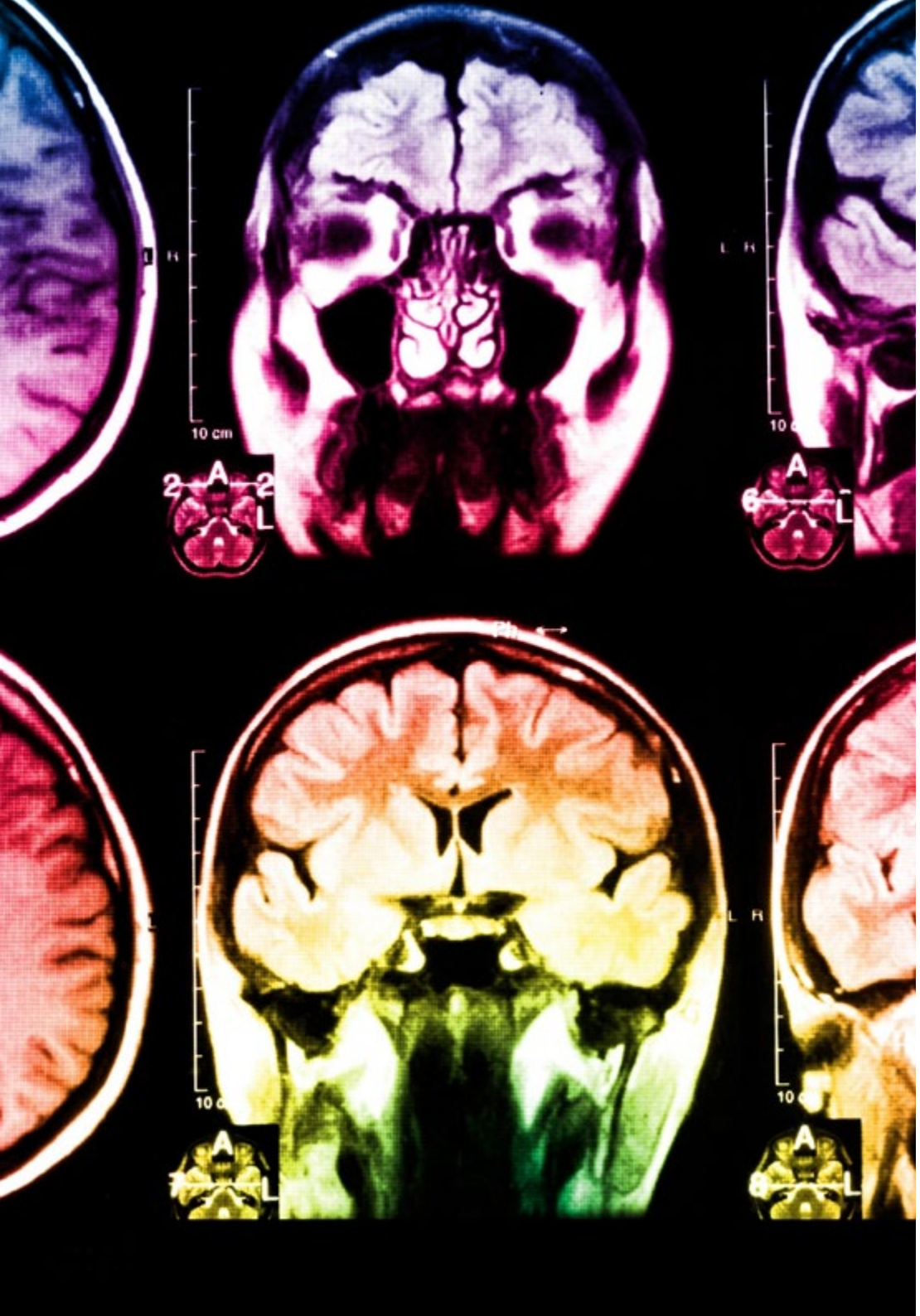
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real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

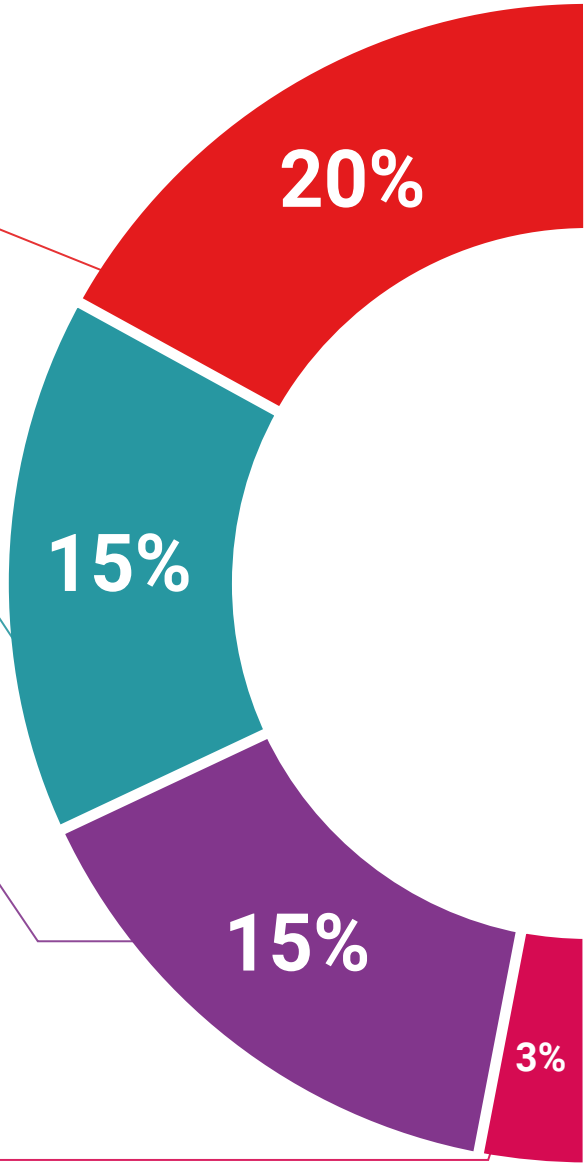
Interactive Summaries

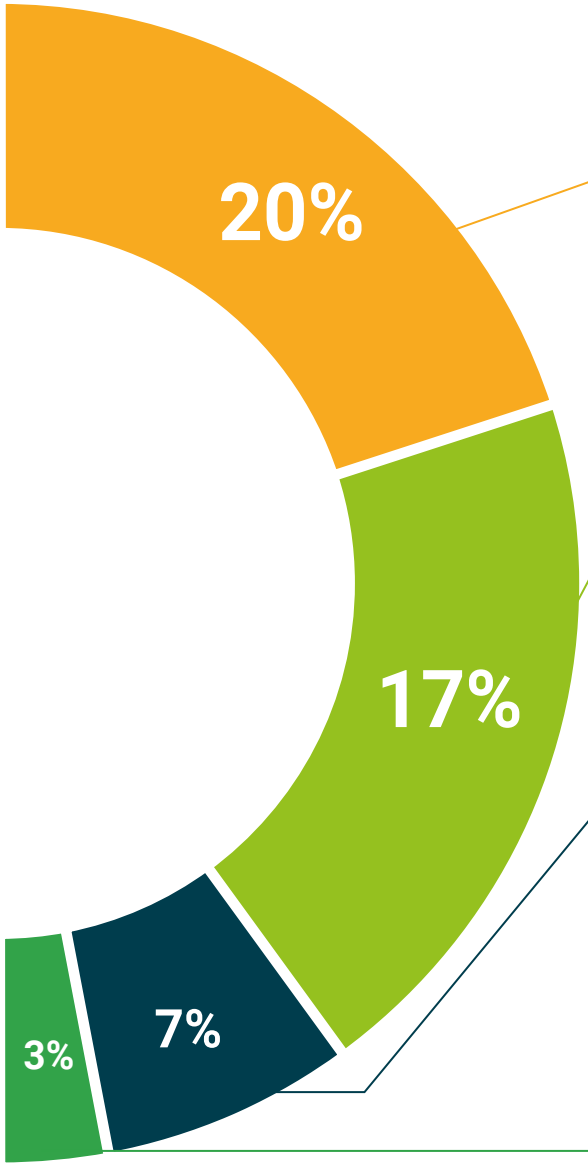
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Certificate in Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System** endorsed by **TECH Global University**, the world's largest online university.

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

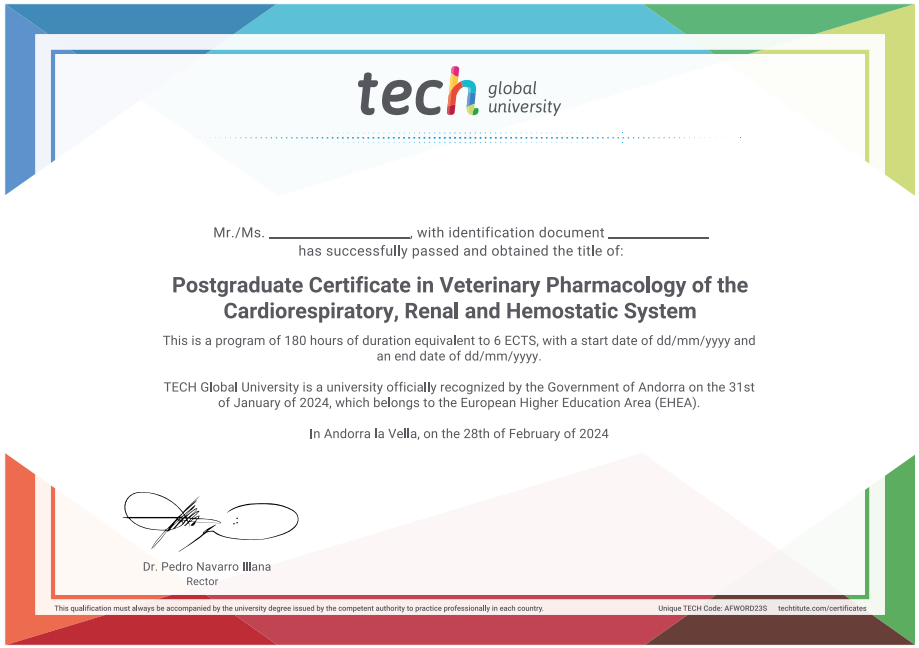
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**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Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Certificate in Veterinary Pharmacology of the Cardiorespiratory, Renal and Hemostatic System

This is a program of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

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

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Postgraduate Certificate

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