Postgraduate Certificate
General Cardiology in Large Animals

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Postgraduate Certificate
General Cardiology in Large Animals

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

Website: **www.techtitute.com/in/veterinary-medicine/postgraduate-certificate/general-cardiology-large-animals**

Index

01

Introduction

The prevalence of cardiac pathologies in Large Animals such as Ruminants, Swine, Camelids in general, and specifically in Equidae, is lower than in other animal species. However, the fact that they are slaughter animals for food or sporting use, which exacerbates the pathological cardiac phenotype present, accentuates the importance of detailed knowledge of structural cardiac pathologies, especially their clinical relevance and prognosis.

Give your career the boost it needs by specializing in General Cardiology in Large Animals, with the best teaching staff and the most up-to-date teaching resources on the market.

Veterinarians must continue their training to adapt to new developments in this field"

Cardiovascular disorders in animals are highly significant because they can affect their quality of life and life expectancy. Advanced knowledge of cardiology is indispensable for large animal veterinarians: ruminants (cattle, sheep, goats), camelids (alpacas, camels and llamas), swine (pigs, wild boars) and equidae (donkeys and mules).

Cardiology in ruminants and swine has been limited, for a long time, due to the limited literature and diagnostic limitations, especially in advanced therapeutic procedures.

Regarding Equidae, a high number of horses are used for sporting purposes and cardiac pathologies limit their capacity and even force the animal to withdraw from competition. This is more evident the more demanding the equine is in terms of sport and cardiovascular effort. The management of food species differs, but it also affects their production capacity.

In recent years, there has been a boom in the development of novel diagnostic and therapeutic techniques, such as intracardiac electrocardiograms, electrophysiological mapping in arrhythmias, pacemaker implantation and other intracardiac devices that can be implemented in larger species. These advances, which are necessary for an adequate clinical approach, are not available in books.

Therefore, this Postgraduate Certificate offers a comprehensive and well-developed syllabus that addresses advanced cardiology topics, providing detailed descriptions of the different procedures performed depending on the species, as well as a guide for clinical decision-making and patient selection.

This program covers the basics of Cardiology and delves into the most up-to-date and advanced techniques currently available, offering extensive and in-depth content.

The Postgraduate Certificate in General Cardiology in Large Animals brings together all the detailed information in the different areas of Cardiology at a high and advanced level of specialization and is taught by renowned professors in the field of internal medicine, cardiology and minimally invasive surgery in veterinary medicine.

This **Postgraduate Certificate in General Cardiology in Large Animals** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- Development of practical cases presented by experts in General Cardiology in Large Animals
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Latest developments in General Cardiology in Large Animals
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in General Cardiology in Large Animals
- 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

Don't miss the opportunity to study this Postgraduate Certificate with us. It's the perfect opportunity to advance your career and stand out in an industry with high demand for professionals"

This Postgraduate Certificate is the best investment you can make in the selection of a refresher program to update your knowledge in General Cardiology in Large Animals"

This training comes with the best didactic material, providing you with a contextual approach that will facilitate your learning.

This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work while increasing your knowledge in this field.

Its 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 an immersive education programmed to train 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 during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in General Cardiology in Large Animals.

02

Objectives

The Postgraduate Certificate in General Cardiology in Large Animals is designed to facilitate the performance of veterinary professionals with the latest advances and the most innovative treatments in the sector.

Learn about the latest advances in the field from the comfort of your home, thanks to the online mode on which this program is based"

General Objectives

- Examine the main aspects involved in the development of congenital heart disease and its progression after birth
- Analyze the anatomical-ecocardiographic relationship of complex congenital heart diseases in order to make a simple diagnosis
- Develop the etiology, progression and prognosis of acquired structural heart disorders
- Establish a diagnostic methodology to address acquired structural cardiac disorders and select the appropriate therapeutic management for each of them
- Proper identification of sinus rhythm
- Establish an appropriate methodology for the interpretation of arrhythmias
- Generate specialized knowledge of resting and stress electrocardiograms
- Establish the specific clinical approach to animals with arrhythmia

Specific Objectives

- Generate specific knowledge of the underlying pathophysiology of congenital heart disease
- Specify the appropriate diagnostic and therapeutic protocol for each of them
- Propose a standardized protocol for evaluating the heart when there is a congenital anomaly
- Analyze the etiology and pathophysiology of acquired cardiac disorders in order to understand their evolution, treatment and progression
- Identify clinical, echocardiographic and electrocardiographic markers that provide information to establish the clinical relevance of structural pathologies
- Update knowledge with the latest therapeutic advances in congenital and acquired pathologies of the heart
- Generate knowledge about the genesis of the electrocardiogram
- Accurate recognition of sinus rhythm and pathological rhythm
- Differentiate all arrhythmias from each other
- Establish differential diagnoses for physiological and pathological arrhythmias
- Know the clinical relevance of arrhythmias
- Establish therapeutic protocols for arrhythmias

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

03

Course Management

The program's teaching staff includes leading experts in General Cardiology in Large Animals who contribute their vast work experience to this academic program. They are world-renowned veterinarians from different countries with proven theoretical and practical professional experience.

Our teaching faculty, experts in General Cardiology in Large Animals, will help you achieve success in your profession"

International Guest Director

Dr. Brian Scansen is a professor and chief of cardiology and cardiac surgery Pharmacodynamics. at Colorado State University. In addition, he is a member of the editorial board of the Journal of Veterinary Cardiology and gives international conferences on heart diseases in animals. His clinical and research interests focus on**congenital heart disease, advanced cardiac imaging, and minimally invasive therapies.**

Recently **has led several sessions on cardiac disease in dogs and cats.** at veterinary conferences. In these sessions, Scansen addressed mitral valve disease in dogs and presented new therapies and strategies in development to treat heart disease and heart failure in dogs. He shared information about the progression of the disease and highlighted the importance of identifying dogs at risk for heart failure.

Regarding his academic career, Scansen **graduated from veterinary school at Michigan State University, where he graduated with Doctor of Veterinary Medicine and Master of Science degrees..** He subsequently completed a fellowship in Interventional Radiology and Endoscopy at the University of Pennsylvania and Animal Medical center, New York.

He has published more than 200 original journal articles, book chapters, proceedings and scientific abstracts related to heart diseases in animals. Moreover, he is **a member of the Editorial Committee of the Journal of Veterinary Cardiology and Founding Member of the Society of Veterinary Interventional Radiology and Interventional Endoscopy.**

Dr. Scansen, Brian

- Chief of the cardiology and cardiac surgery service at Colorado State University
- PhD in Medicine from the University of Michigan
- Doctor of Science, University of Michigan
- Member of the editorial board of the Journal of Veterinary Cardiology
- Author of more than 200 original articles in magazines, book chapters, minutes and scientific summaries related to heart disease in animals

Thanks to TECH you will be able to learn with the best professionals in the world"

Management

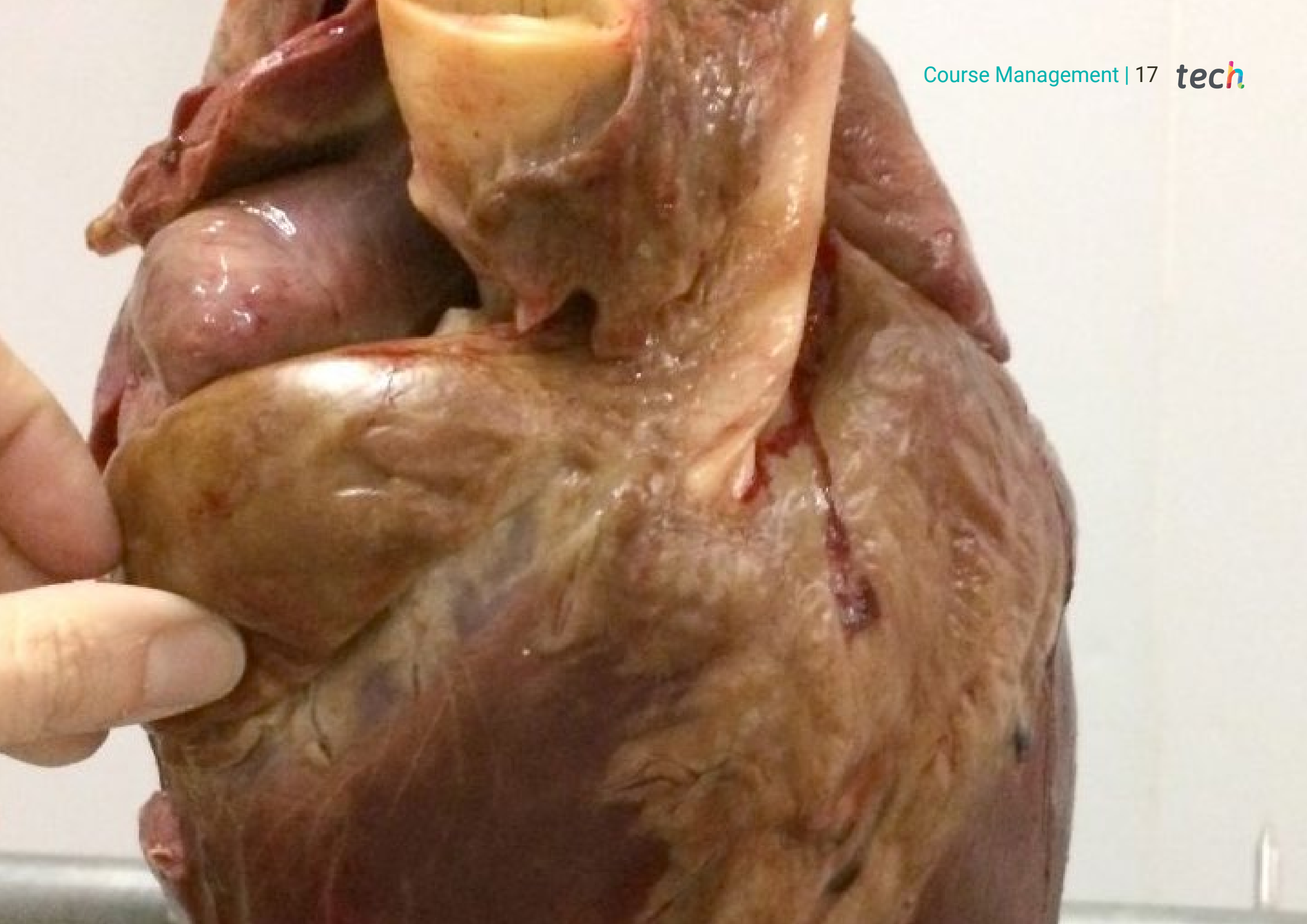
Dr. María Villalba Orero

- Scientific Advisor on cardiovascular and pulmonary ultrasound at the National Center for Cardiovascular Research
- Head and Founder of MVO Equine Cardiology
- Head of the Equine Anesthesia Service at Asurvet Equidos
- Doctor of Veterinary Medicine, Complutense University of Madrid.
- Degree in Veterinary Medicine from the Complutense University Madrid
- Master's Degree in Veterinary Sciences from the Complutense University of Madrid
- Master's Degree in Veterinary Cardiology
- Certificate European Certificate in Veterinary Cardiology by the European School of Veterinary Postgraduate Studies (ESVPS)

Professors

Ms. Criado García, Guadalupe

- Equine Veterinary
- Veterinarian at the Juma's Team Horse Center
- Freelance Veterinary Specialist in Equine Medicine
- Graduate in Veterinary Medicine from the University of Extremadura
- Master of Internship in Surgery and Internal Medicine in Large Animals from the University from Extremadura
- Speaker at several congresses and seminars on Equine Veterinary Medicine
- Member of the Association of Equine Veterinarians of Catalonia



04

Structure and Content

The structure of the contents has been designed by leading professionals in the field of General Cardiology in Large Animals, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied and diagnosed, and with extensive knowledge of new technologies applied to veterinary medicine.

This Postgraduate Certificate contains the most complete and up-to-date scientific program on the market"

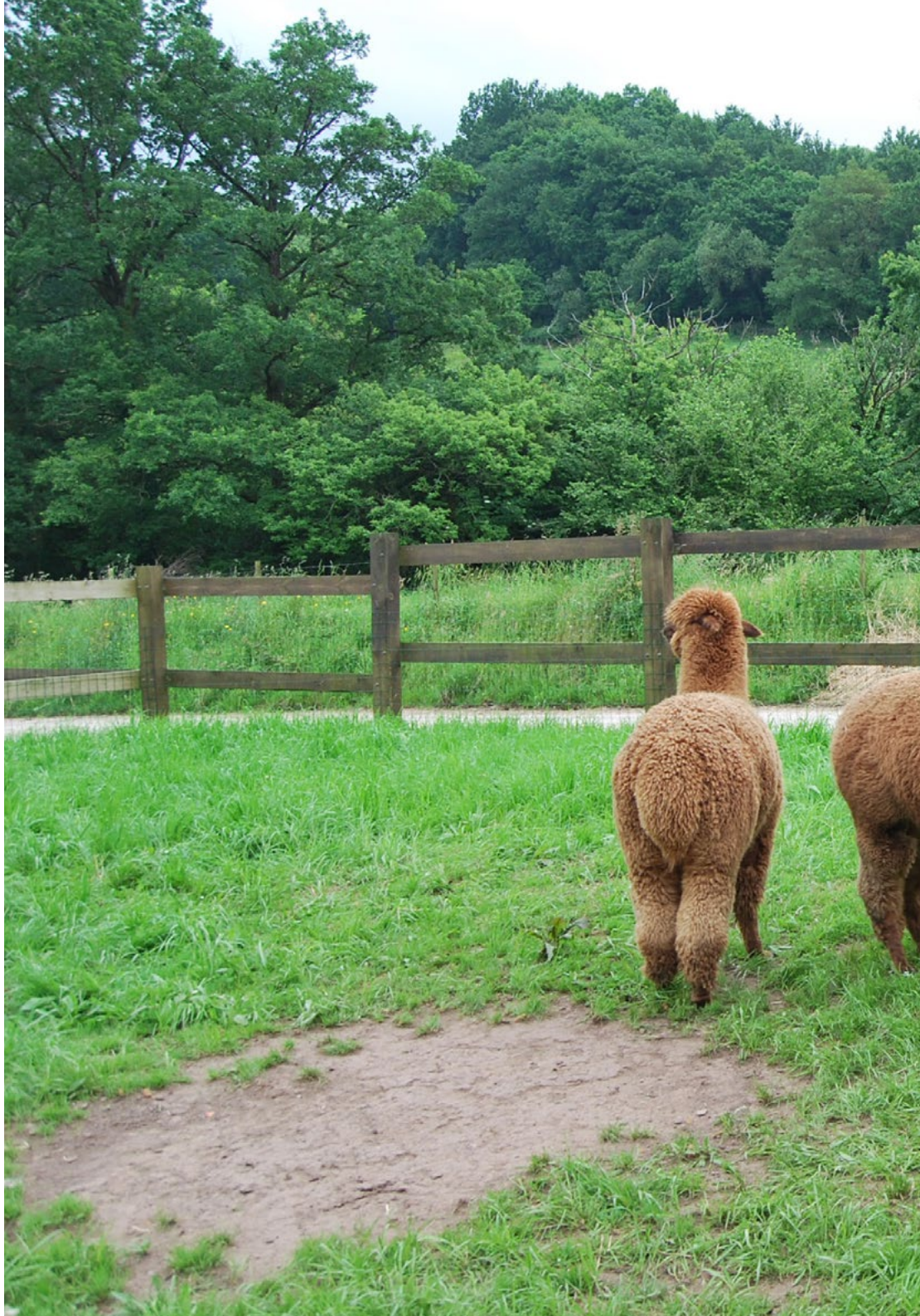
Module 1. Structural Cardiac Pathologies in Large Animals: Equidae, Ruminants and Swine

1.1. Congenital Cardiac Alterations I. Ventricular Septal Defect
- 1.1.1. Definition, Prevalence and Etiology
- 1.1.2. Pathophysiology
- 1.1.3. Diagnosis
- 1.1.4. Necessary Complementary Tests
- 1.1.5. Treatment
- 1.1.6. Clinical and Prognostic Relevance

1.2. Congenital Cardiac Disorders II. Tetralogy/Pentalogy of Fallot
- 1.2.1. Definition, Prevalence and Etiology
- 1.2.2. Pathophysiology
- 1.2.3. Diagnosis
- 1.2.4. Necessary Complementary Tests
- 1.2.5. Treatment
- 1.2.6. Clinical and Prognostic Relevance

1.3. Congenital Cardiac Disorders III. Patent Ductus Arteriosus
- 1.3.1. Definition, Prevalence and Etiology
- 1.3.2. Pathophysiology
- 1.3.3. Diagnosis
- 1.3.4. Necessary Complementary Tests
- 1.3.5. Treatment
- 1.3.6. Clinical and Prognostic Relevance

1.4. Congenital Cardiac Disorders IV. Rare Abnormalities
- 1.4.1. Patent Ductus Arteriosus
- 1.4.2. Atrial Septal Defect
- 1.4.3. Atrioventricular Valve Dysplasia
- 1.4.4. Pulmonary Stenosis.



1.5. Acquired Cardiac Diseases I. Aortic Insufficiency
- 1.5.1. Definition, Prevalence and Etiology
- 1.5.2. Pathophysiology
- 1.5.3. Diagnosis
- 1.5.4. Necessary Complementary Tests
- 1.5.5. Treatment
- 1.5.6. Clinical and Prognostic Relevance

1.6. Acquired Cardiac Diseases II. Mitral Insufficiency
- 1.6.1. Definition, Prevalence and Etiology
- 1.6.2. Pathophysiology
- 1.6.3. Diagnosis
- 1.6.4. Necessary Complementary Tests
- 1.6.5. Treatment
- 1.6.6. Clinical and Prognostic Relevance

1.7. Acquired Cardiac Diseases III. Tricuspid Regurgitation
- 1.7.1. Definition, Prevalence and Etiology
- 1.7.2. Pathophysiology
- 1.7.3. Diagnosis
- 1.7.4. Necessary Complementary Tests
- 1.7.5. Treatment
- 1.7.6. Clinical and Prognostic Relevance

1.8. Acquired Cardiac Diseases IV. Pulmonary Insufficiency and Pulmonary Hypertension
- 1.8.1. Definition, Prevalence and Etiology
- 1.8.2. Pathophysiology
- 1.8.3. Diagnosis
- 1.8.4. Necessary Complementary Tests
- 1.8.5. Treatment
- 1.8.6. Clinical and Prognostic Relevance

1.9. Acquired Cardiac Alterations V. Aorto-Cardiac and Aorto-Pulmonary Fistulas
- 1.9.1. Definition, Prevalence and Etiology
- 1.9.2. Pathophysiology
- 1.9.3. Diagnosis
- 1.9.4. Necessary Complementary Tests
- 1.9.5. Treatment
- 1.9.6. Clinical and Prognostic Relevance

1.10. Heart Failure
- 1.10.1. Definition, Prevalence and Etiology
- 1.10.2. Pathophysiology
- 1.10.3. Diagnosis
- 1.10.4. Treatment
- 1.10.5. Clinical and Prognostic Relevance

Module 2. Arrhythmias in Large Animals: Equidae, Ruminants and Swine

2.1. Sinus Rhythm
- 2.1.1. Features
- 2.1.2. EKG Recognition

2.2. Respiratory Sinus Arrhythmia, Bradycardia and Tachycardia Sinus Arrhythmias
- 2.2.1. Definition, Prevalence and Etiology
- 2.2.2. Pathophysiology
- 2.2.3. Diagnosis
- 2.2.4. Necessary Complementary Tests
- 2.2.5. Treatment
- 2.2.6. Clinical and Prognostic Relevance

2.3. Premature Supraventricular Complexes and Atrial Tachycardia
- 2.3.1. Definition, Prevalence and Etiology
- 2.3.2. Pathophysiology
- 2.3.3. Diagnosis
- 2.3.4. Necessary Complementary Tests
- 2.3.5. Treatment
- 2.3.6. Clinical and Prognostic Relevance

2.4. Atrial Fibrillation
- 2.4.1. Definition, Prevalence and Etiology
- 2.4.2. Pathophysiology
- 2.4.3. Diagnosis
- 2.4.4. Necessary Complementary Tests
- 2.4.5. Treatment
- 2.4.6. Clinical and Prognostic Relevance

2.5. Premature Ventricular Complexes and Ventricular Tachycardia
- 2.5.1. Definition, Prevalence and Etiology
- 2.5.2. Pathophysiology
- 2.5.3. Diagnosis
- 2.5.4. Necessary Complementary Tests
- 2.5.5. Treatment
- 2.5.6. Clinical and Prognostic Relevance

2.6. Non-Pathological Conduction Disorders
- 2.6.1. Sinus Block and Second Degree Atrioventricular Block
  - 2.6.1.1. Definition, Prevalence and Etiology
  - 2.6.1.2. Pathophysiology
  - 2.6.1.3. Diagnosis
  - 2.6.1.4. Necessary Complementary Tests
  - 2.6.1.5. Treatment
  - 2.6.1.6. Clinical and Prognostic Relevance

2.7. Pathological Conduction Disorders
- 2.7.1. Advanced Second Degree and Third Degree Atrioventricular Block
  - 2.7.1.1. Definition, Prevalence and Etiology
  - 2.7.1.2. Pathophysiology
  - 2.7.1.3. Diagnosis
  - 2.7.1.4. Necessary Complementary Tests
  - 2.7.1.5. Treatment
  - 2.7.1.6. Clinical and Prognostic Relevance

2.7.2. Sick Sinus Syndrome
2.7.2.1. Definition, Prevalence and Etiology
2.7.2.2. Pathophysiology
2.7.2.3. Diagnosis
2.7.2.4. Necessary Complementary Tests
2.7.2.5. Treatment
2.7.2.6. Clinical and Prognostic Relevance

2.8. Supraventricular Beats and Escape Rhythms
2.8.1. Definition, Prevalence and Etiology
2.8.2. Pathophysiology
2.8.3. Diagnosis
2.8.4. Necessary Complementary Tests
2.8.5. Treatment
2.8.6. Clinical and Prognostic Relevance

2.9. Ventricular Beats and Escape Rhythms
2.9.1. Definition, Prevalence and Etiology
2.9.2. Pathophysiology
2.9.3. Diagnosis
2.9.4. Necessary Complementary Tests
2.9.5. Treatment
2.9.6. Clinical and Prognostic Relevance

2.10. Accelerated Idioventricular Rhythm and Ventricular Preexcitation Syndrome
2.10.1. Definition, Prevalence and Etiology
2.10.2. Pathophysiology
2.10.3. Diagnosis
2.10.4. Necessary Complementary Tests
2.10.5. Treatment
2.10.6. Clinical and Prognostic Relevance

This program will allow you to comfortably advance in your career"

05

Methodology

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

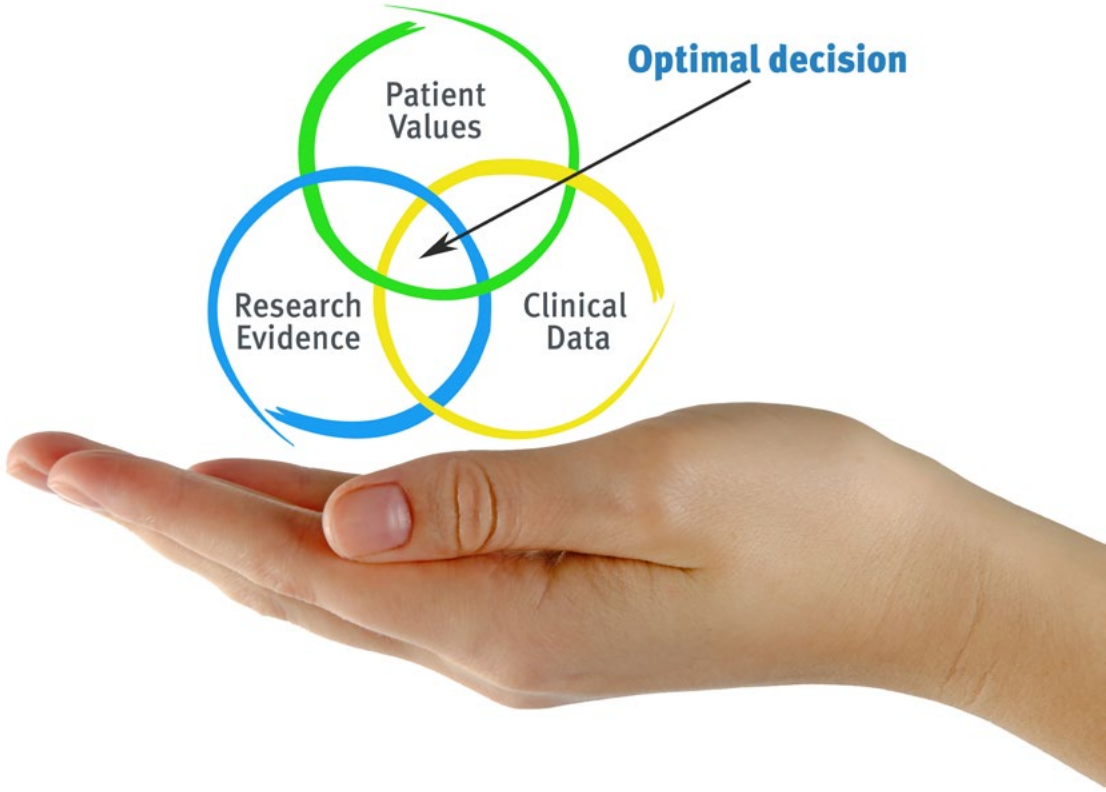
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

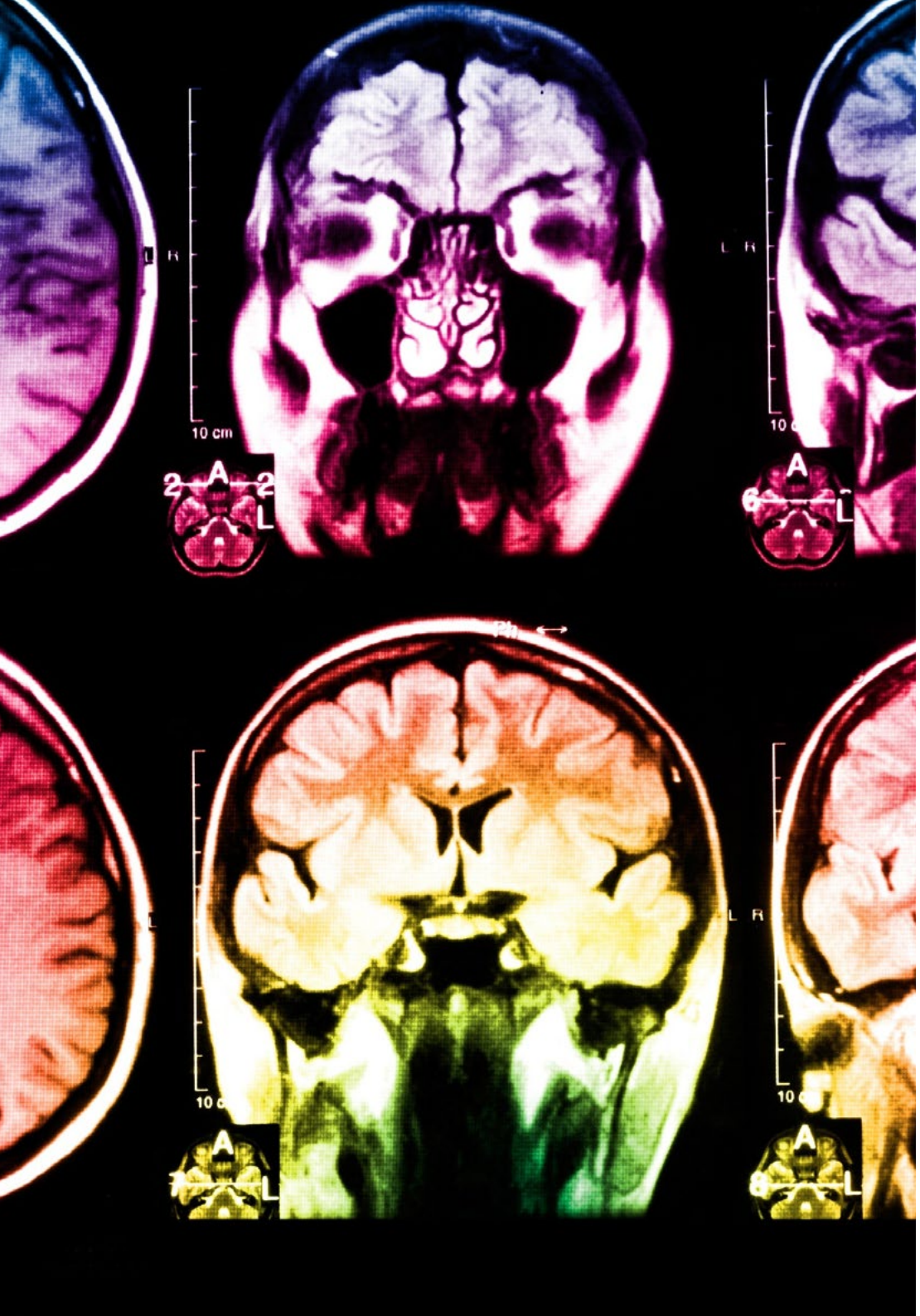
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real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

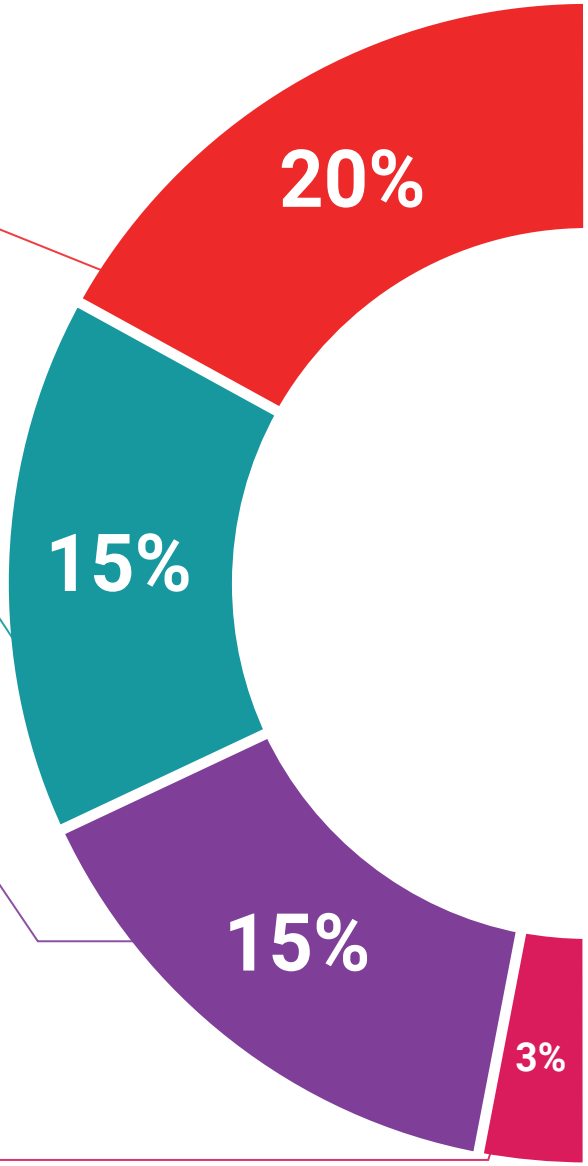
Interactive Summaries

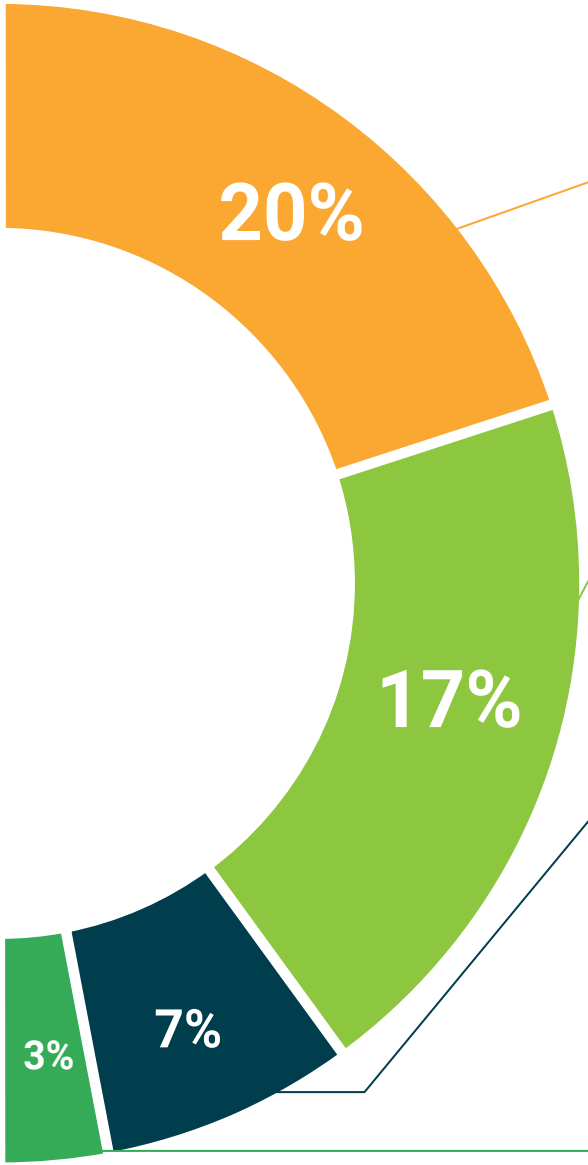
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 General Cardiology in Large Animals 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 training and receive your university degree without travel or laborious paperwork"

This **Postgraduate Certificate in General Cardiology in Large Animals** 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** diploma 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 General Cardiology in Large Animals**

Official Nº of hours: **300 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

General Cardiology in Large Animals

This is a qualification awarded by this University, equivalent to 300 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: AFWORD23S 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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