Postgraduate Certificate
Radiological Diagnosis of Orthopedic Diseases in Small Animals

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Postgraduate Certificate

Radiological Diagnosis of Orthopedic Diseases in Small Animals

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

Website: www.techtitute.com/pk/veterinary-medicine/postgraduate-certificate/radiological-diagnosis-orthopedic-diseases-small-animals

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01

Introduction

Bone is a complex tissue and requires specialized knowledge to understand the fundamental activities it performs, whether physiological or mechanical, and a knowledge of the various structures it presents. For this reason, this program provides veterinarians with superior training to develop, through the radiological method, a specialized knowledge of the different pathologies that can affect them.

Know the particularities of Orthopedic Diseases and the most common radiological methods for each case"

The veterinarians, in order to achieve their specialization in bone diseases due to malformations, functional degeneration and alterations due to forces causing fractures or orthopedic pathologies, must see in the radiological tool an irreplaceable and absolutely necessary instrument, both in the diagnosis and in the treatment and evolution of their cases.

To this end, this Postgraduate Certificate addresses the different complications that veterinarians face in their daily practice, recognizing them, anticipating them and following up with the tools available to them. Finally, we will learn the different surgical techniques, recognizing and differentiating them in each case, diversifying our knowledge and updating our learning.

In short, it is a program based on scientific evidence and daily practice, with all the nuances that each professional can contribute, so that the student can keep it in mind and compare it with the bibliography and enriched by the critical evaluation that every professional must have in mind.

Throughout this course, the student will learn about all the current approaches to the different challenges posed by his or her profession. A high-level step that will become a process of improvement, not only on a professional level, but also on a personal level. In addition, TECH assumes a social commitment: to help the updating of highly qualified professionals and to develop their personal, social and labor skills during the development of the same. And, to do so, it will not only take you through the theoretical knowledge offered, but will show you another way of studying and learning, more organic, simpler and more efficient. It works to maintain motivation and to create passion for learning; it encourages thinking and the development of critical thinking.

This **Postgraduate Certificate in Radiological Diagnosis of Orthopedic Diseases in Small Animals** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- The development of case studies presented by experts in Veterinary Radiology
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Latest developments in Veterinary Radiology
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in Veterinary Radiology
- 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

Make a deep and complete study on this subject thanks to the learning proposal offered by TECH"

Our 100% online format offers you the possibility to study from wherever you choose, without the need to travel to a physical center"

Its teaching staff includes professionals belonging to the veterinary field, who contribute their work experience to this training, 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 an immersive training program designed 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 system of interactive videos made by renowned and experienced experts in Veterinary Radiology.

Thanks to the multitude of practical cases that we propose, you will be able to specialize in a simple way.

Our didactic methodology will allow you to train with simulated cases as if you were facing real situations.

02

Objectives

TECH's main objective when offering training in the veterinary field is that professionals are able to care for animals with full guarantees of success. For this reason, we offer a program with fully up-to-date information and in which you can find the latest practices.

We put all our resources at your disposal so that you can achieve your goal of specialization with a high quality renovation"

General Objectives

- Examine the specific anatomy in order to extrapolate the different orthopedic pathologies at the radiological level
- Analyze the functioning of the growth plate in order to have an adequate perception of the radiological evolution of the bone
- Develop the radiological evolution of the bone after a fracture
- Radiological visualization of bone healing
- Generate specialized knowledge to prevent complications in our clinical/surgical practice
- Determine the importance of arthritis/arthrosis in our daily clinical practice
- Be able to make a clinical prognosis through an orthopedic radiological study
- Determine the limitations of certain radiological studies to diagnose certain orthopedic pathologies and the different types of surgical techniques in traumatology and orthopedics
- Extrapolate the knowledge of these techniques in vivo to visualize the evolution

Advance in your profession by paving your way in what is shaping up to be one of the most exciting fields in medicine today and in the future"

Specific Objectives

- Determine the organization of the growth plate to understand its impact on radiological imaging
- Examine the blood supply to the bone in order to extrapolate radiologically to the bone and its cicatricial evolution
- Visualize bone and fibrocartilaginous components radiologically
- Determine the stages of fracture repair and identify them radiographically in order to be able to apply this knowledge during a postoperative recovery period
- Anticipate possible complications in the bone healing phase by means of radiological monitoring
- Correctly visualize the different types of complications and differentiate between them
- Examine radiographically a case understanding its clinical significance, as well as the evolution of the arthritis/arthrosis
- Differentiate the various orthopedic diseases through radiographic study
- Correctly diagnose and classify orthopedic diseases associated with the knee, hip and elbow
- Recognize radiographically the different types of surgical procedures of choice to treat these diseases

03

Course Management

The teaching team, formed by professionals of reference in the veterinary field and with years of experience both in consultation and teaching, will provide detailed information on veterinary radiology in small animals. A unique opportunity that will help you grow professionally.

We have a team of highly qualified teachers so that you can specialize with the best"

Management

Dr. Gómez Poveda, Bárbara

- Parque Grande Veterinary Clinic. General veterinary
- Veterinary emergencies Las Rozas, Madrid. Emergency and hospitalization service
- Barvet – Veterinary at home Mobile Veterinary Director. Madrid
- Parla Sur Veterinary Hospital. Emergency and hospitalization service
- Veterinary Degree. Complutense University of Madrid
- Postgraduate in Small Animal Surgery (GPCert SAS). Madrid Improve International
- Online postgraduate course in Small Animal Clinic. Autonomous University of Barcelona

Professors

Dr. García Montero, Javier

- In Charge of Trauma and Orthopedics, Surgery and Anesthesia. Veterinary Hospital Cruz Verde (Alcazar de San Juan). Since 2019
- Degree in Veterinary, Faculty of Veterinary Medicine, Córdoba 2009 -2015
- Studying the Postgraduate Course in Soft Tissue Surgery and Anesthesia in Small Animals by the Autonomous University of Barcelona
- Certificate of Treatment of Fractures in Toy Dogs and Cats. UCM Online University, 2019
- Tibial Plateau Leveling Workshop
- Theoretical and practical sessions on fracture management in the feline patient
- Theoretical and practical seminar on carpal and tarsal arthrodesis
- Joint Instability Workshop

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

04

Structure and Content

The contents of this Postgraduate Certificate in Radiological Diagnosis of Orthopedic Diseases in Small Animals have been designed by a team of university experts, backed by their years of experience. In this way, they have been in charge of programming a totally up-to-date syllabus aimed at the professional of the 21st century, who demands high educational quality and knowledge of the main innovations in the field.

A fully up-to-date academic program that will guide you through the advanced study of this specialty"

Module 1. Orthopedic Radiological Diagnosis I

1.1. The Growth Plate
- 1.1.1. Organization of the Growth Plate and its Impact on Radiological Imaging
- 1.1.2. Blood Supply of the Growth Plate
- 1.1.3. Structure and Function of the Growth Plate Cartilaginous Components
  - 1.1.3.1. Reserve Zone
  - 1.1.3.2. Proliferative Zone
  - 1.1.3.3. Hypertrophic Zone
- 1.1.4. Bone Components (Metaphysis)
- 1.1.5. Fibrous and Fibrocartilaginous Components
- 1.1.6. Radiological Imaging of the Growth Plate at Different Stages of Growth
  - 1.1.6.1. Epiphysiolysis
  - 1.1.6.2. Other Growth Disorders

1.2. Fracture Repair
- 1.2.1. Radiological Response of Traumatized Bone
- 1.2.2. Phased Fracture Repair
  - 1.2.2.1. Inflammatory Phase
  - 1.2.2.2. Repair Phase
  - 1.2.2.3. Remodelling Phase
  - 1.2.2.4. Callus formation
  - 1.2.2.5. Fracture Healing
  - 1.2.2.6. First Intention Repair
  - 1.2.2.7. Second Intention Repair
  - 1.2.2.8. Clinical Union
  - 1.2.2.9. Clinical Union Ranges

1.3. Fracture Complications
- 1.3.1. Delayed Union
- 1.3.2. Non-union
- 1.3.3. Bad Union
- 1.3.4. Osteomyelitis

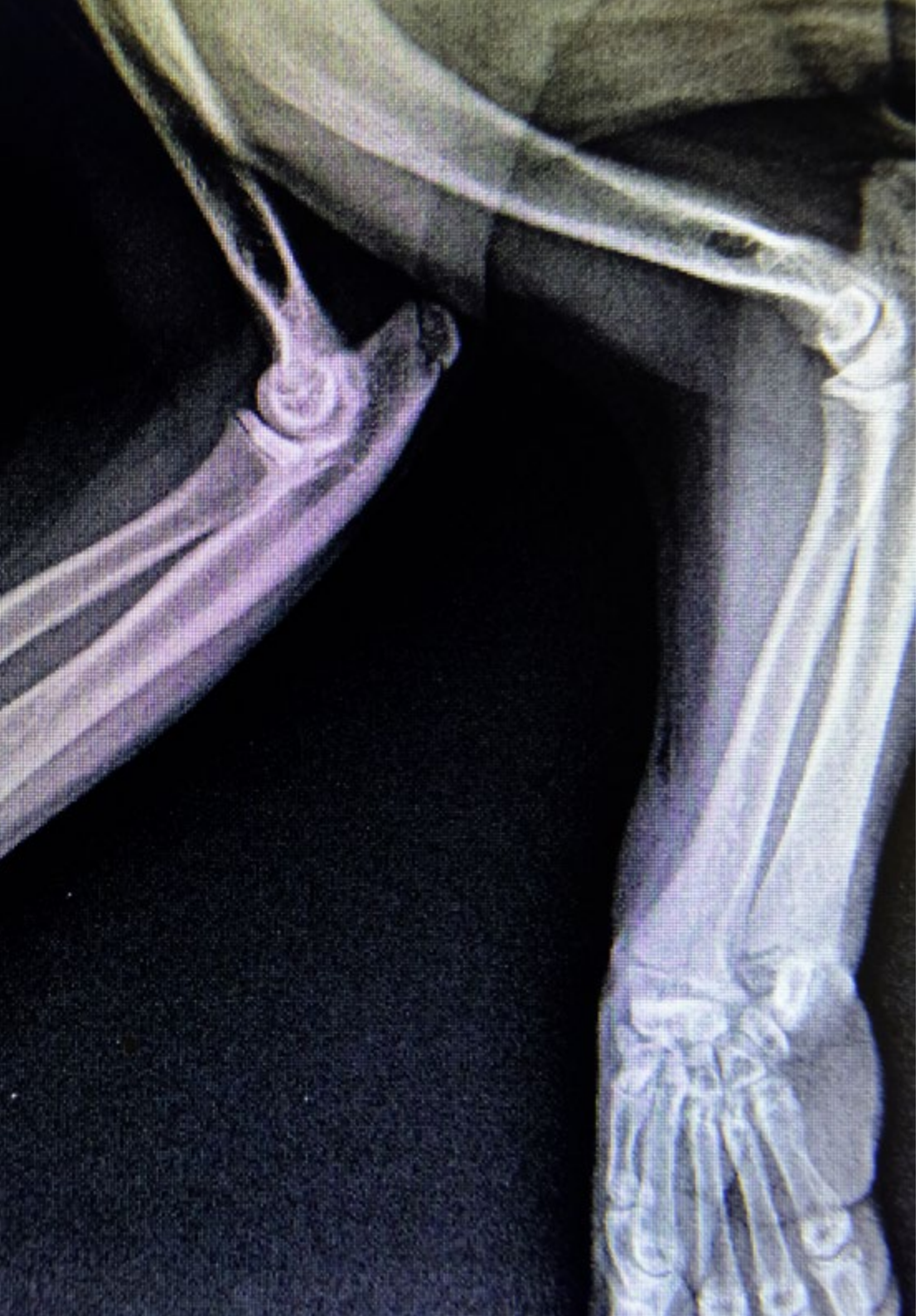
1.4. Radiologic Imaging of Arthritis and Polyarthritis
- 1.4.1. Types of Arthritis and Polyarthritis
- 1.4.2. Clinical Diagnosis
- 1.4.3. Differential Diagnosis Radiology

1.5. Radiological Imaging of Osteoarthritis
- 1.5.1. Etiology
- 1.5.2. Radiological Diagnosis
- 1.5.3. Prognosis According to Radiological Imaging

1.6. Decision-making in Traumatology and Orthopedics Based on Radiologic Diagnosis
- 1.6.1. Fulfilled Clinical Function
- 1.6.2. Implant Ruptures
- 1.6.3. Implant Bends
- 1.6.4. Implant Migrates
- 1.6.5. Rejection
- 1.6.6. Infections
- 1.6.7. Thermal Interference

1.7. Radiology of Orthopedic Diseases
- 1.7.1. Radiology of Osteochondritis Dissecans
- 1.7.2. Panosteitis
- 1.7.3. Retained Cartilaginous Nucleus
- 1.7.4. Hypertrophic Osteodystrophy
- 1.7.5. Craniomandibular Osteopathy
- 1.7.6. Bone Tumors
- 1.7.7. Other Bone Diseases

1.8. Radiology of Hip Dysplasia
- 1.8.1. Physiological Hip Radiology
- 1.8.2. Pathological Hip Radiology
- 1.8.3. Gradation of Hip Dysplasia
- 1.8.4. Surgical Treatments for Hip Dysplasia
- 1.8.5. Clinical/Radiographic Progression of Hip Dysplasia



1.9. Radiology of Elbow Dysplasia
- 1.9.1. Physiological Elbow Radiology
- 1.9.2. Pathological Elbow Radiology
- 1.9.3. Types of Elbow Dysplasia
- 1.9.4. Surgical Treatments for Elbow Dysplasia
- 1.9.5. Clinical/Radiographic Progression of Elbow Dysplasia

1.10. Radiology of the Knee
- 1.10.1. Radiology of Anterior Cruciate Ligament Rupture
  - 1.10.1.1. Surgical Treatment of Anterior Cruciate Ligament Rupture
- 1.10.2. Radiology of Patellar Dislocation
  - 1.10.2.1. Gradation of Patellar Dislocation
  - 1.10.2.2. Surgical Treatment of Patellar Dislocation

Don't miss this opportunity to study at the leading online university: TECH"

05

Methodology

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

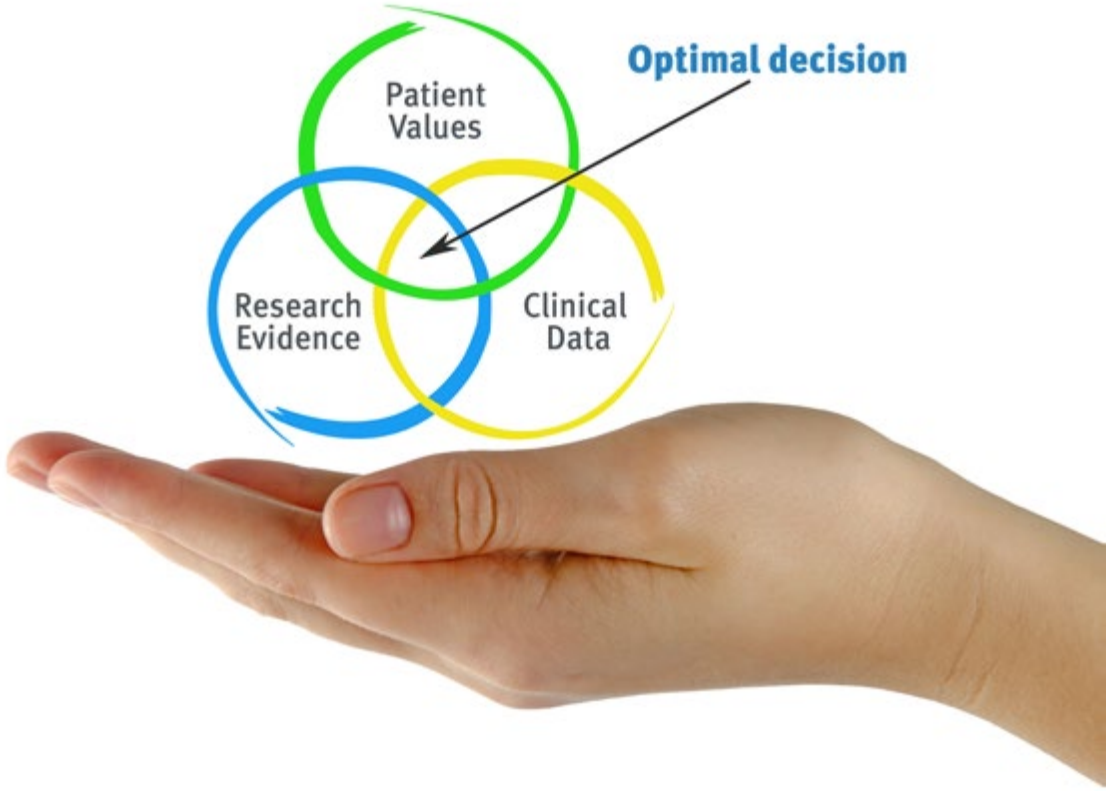
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

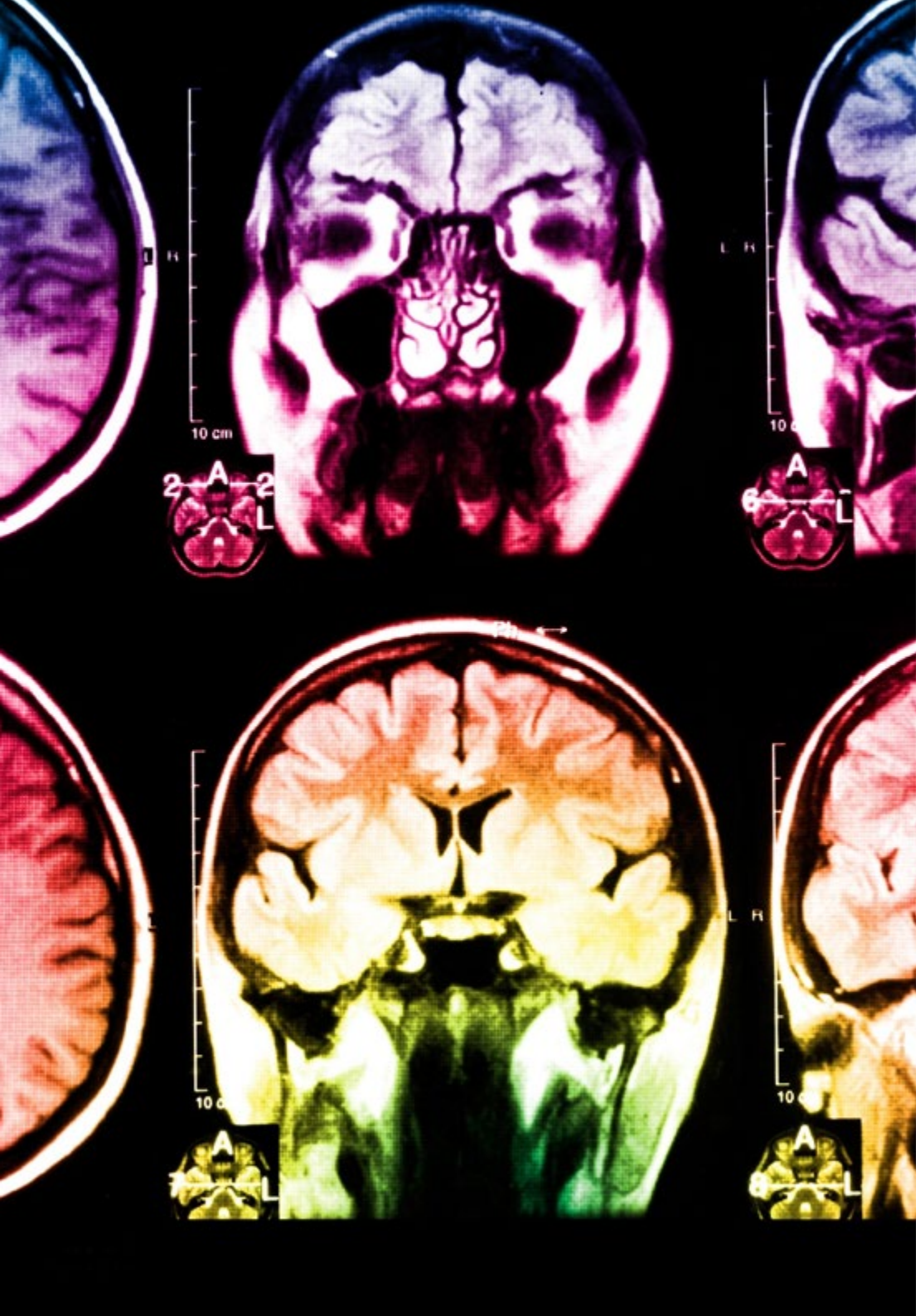
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real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

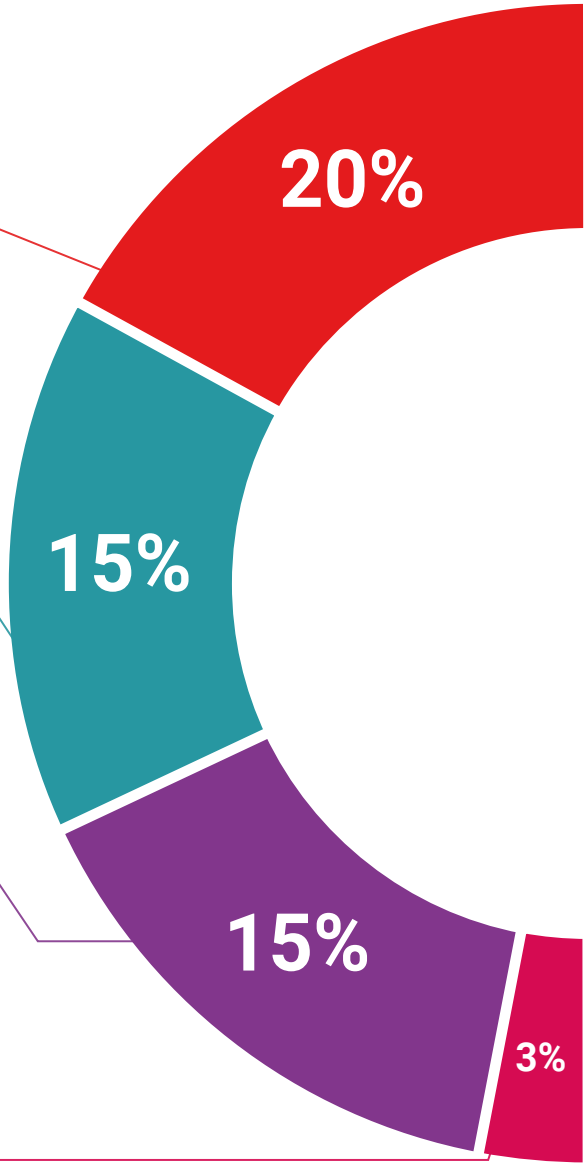
Interactive Summaries

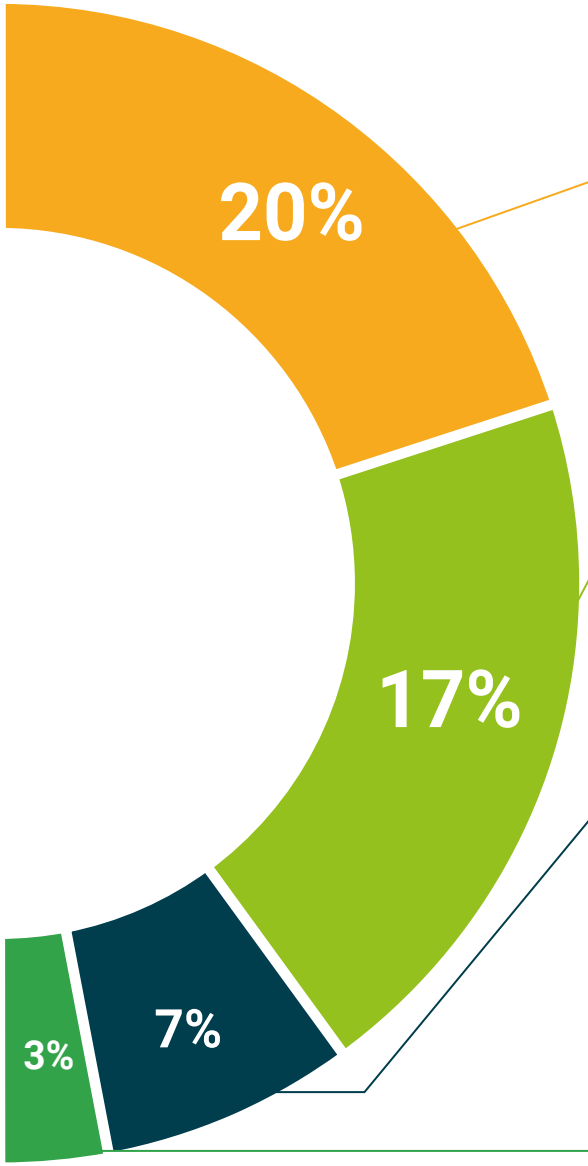
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive multimedia content presentation training Exclusive system 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 your goals.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in 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 Radiological Diagnosis of Orthopedic Diseases in Small Animals guarantees, in addition to the most rigorous and update training, 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 Radiological Diagnosis of Orthopedic Diseases in Small Animals** contains the scientific most complete and update program on the market.

After you have passed the evaluations, you will receive your corresponding by **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 from career evaluation committees.

Title: **Postgraduate Certificate in Radiological Diagnosis of Orthopedic Diseases in Small Animals**

Official N° of hours: **150 h.**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Awards the following

CERTIFICATE

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Radiological Diagnosis of Orthopedic Diseases in Small Animals

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: 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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