Postgraduate Certificate

Other Diagnostic Imaging Methods in Small Animals

tech technological university

tech technological university

Postgraduate Certificate

Other Diagnostic Imaging Methods 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/in/veterinary-medicine/postgraduate-certificate/other-diagnostic-imaging-methods-small-animals**

Index

01

Introduction

Diagnostic imaging methods are part of everyday veterinary practice. Their use has advanced considerably in recent years, achieving notable benefits in the diagnosis of certain pathologies. in addition, these techniques are very useful when dealing with exotic species. Therefore, on this occasion TECH wants to offer a complete training on the existing diagnostic imaging methods beyond radiology, which will also focus on the use of these devices in exotic animals.

Superior training in diagnostic imaging techniques will allow you to make more accurate diagnoses for pets that come to the veterinarian's office"

In the last 15 years, veterinary clinics have incorporated other methods in diagnostic imaging, beyond radiology. Nowadays, almost all clinics include an ultrasound scanner in their basic equipment, and more and more hospitals are incorporating CT or MRI, opening up a more accurate way to make diagnoses.

With ultrasound, great advances were incorporated for the live visualization of organs and vessels in a simple and harmless way for the patient, becoming an essential tool in the practice of small animal clinics. The use of CT, on the other hand, was a more modern step in the use of radiology, being a combination of the use of X rays with computerized image acquisition. The equipment obtains tomographic images of the patient (sections) that later, by means of a computer system, allow a higher resolution of the images and even make volumetric models of them. The advantages of CT equipment over conventional radiology include obtaining images free of superimposition, better information on the anatomical distribution of lesions and discrimination between different tissues in terms of contrast.

Nuclear magnetic resonance was developed with the aim of obtaining information about the structure and composition of the body to be analyzed through the use of magnetic fields. This technique has made its way into neurology, being the method of choice when studying the brain and spinal cord, reaching to assess the total of these parts of the body when other traditional methods could not.

But, in addition, the increase in recent years of more exotic species in households has led to the need for many diagnostic tests that until recently were not considered applicable to these animals to become available and routinely used. The role of conventional radiology in avian, small mammal and reptile medicine is becoming increasingly important as it has established itself as a fundamental diagnostic test in veterinary medicine. Thus, this program includes a wide range of tests that can be used on a daily basis in veterinary practices, with the most relevant information on the market and adapted to the needs of our patients.

This **Postgraduate Certificate in Other Diagnostic Imaging Methods 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

Learn about the main methods of diagnostic imaging in small animals and apply them to your daily practice"

Train with us and you will find the best didactic material, with a multitude of practical cases"

Thanks to our teaching system based on repetition, you will be able to consolidate your knowledge in a short period of time.

The online training offered by TECH will give you the opportunity to manage your study time yourself.

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 immersive training 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 system of interactive videos made by renowned and experienced experts in Veterinary Radiology

02

Objectives

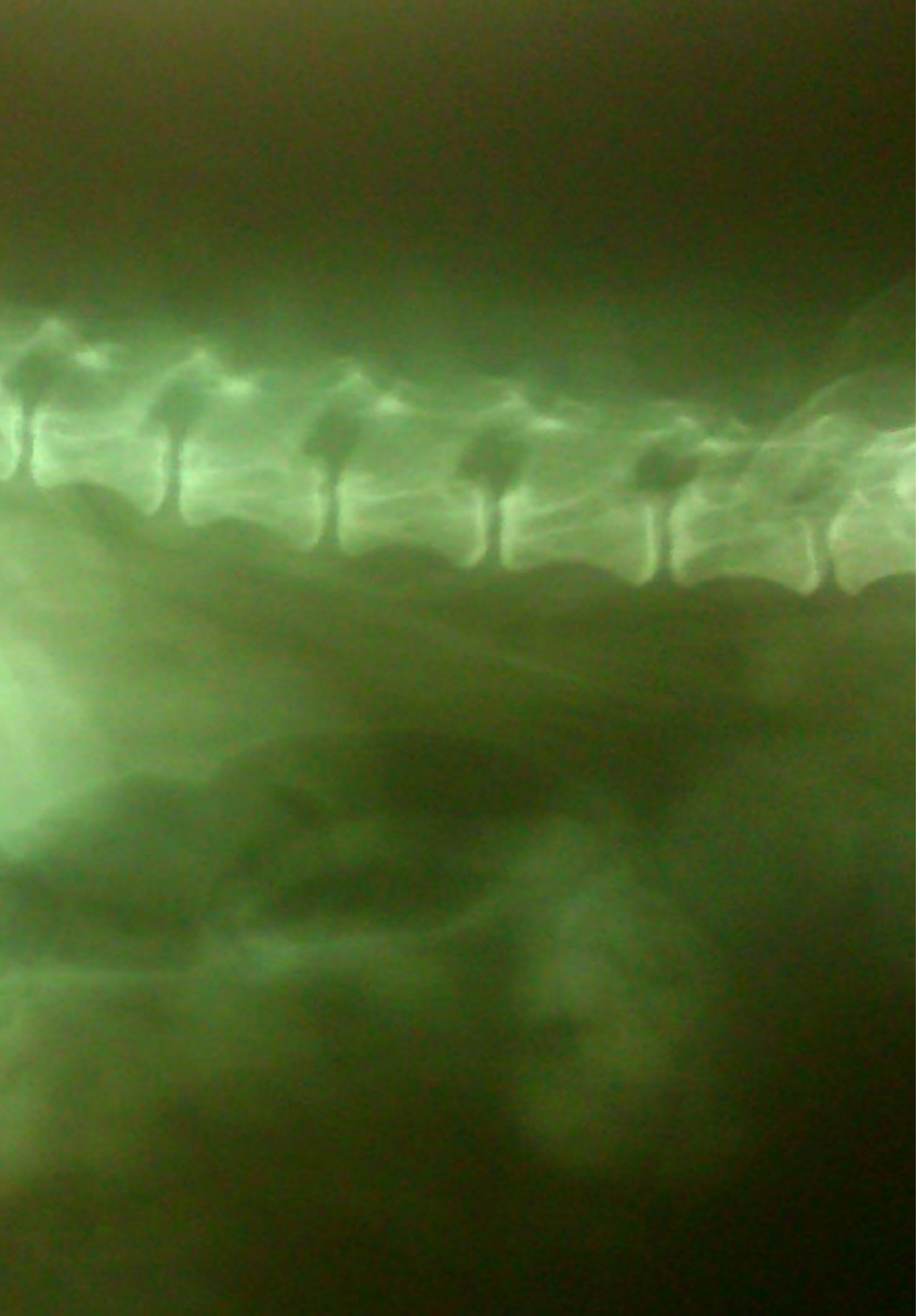
TECH's main objective in offering specific training in the veterinary field is that professionals are able to care for animals with full guarantees of success. For this reason, we offer a program with fully up to date information and in which you can find the latest practices.

If you are looking for academic excellence, don't think twice and join TECH"

General Objectives

- Examine other diagnostic methods: Diagnostic Imaging
- Develop specialized knowledge for the correct identification of ultrasound, CT and MRI (Magnetic Resonance Imaging)
- Identify when our patient needs advanced imaging studies
- Determine in which specific cases imaging techniques can help us in clinical diagnosis
- Examine the peculiarities of the positioning of exotic animals
- Perform radiography in an appropriate manner, according to the species and physiological anatomy
- Distinguish between pathologic findings and physiologic findings

A path to achieve training and professional growth that will propel you towards a greater level of competitiveness in the employment market".



Specific Objectives

- Develop specialized knowledge to perform ultrasound scans quickly, identifying the main pathologies
- Examine the ecofast technique in the emergency department
- Determine the performance and image acquisition of a CT scanner and how that helps me in my daily work
- Identify which pathologies are more recommendable studies for MRI (Magnetic Resonance Imaging)
- Diagnose the pathologies of the cranium, celomic and thoracic cavity, orthopedic and abdominal pathologies in birds, small mammals and reptiles common in the small animal clinic

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 in Veterinary Radiology in Small Animals. A unique opportunity that will help you grow professionally.

We have the best teaching team to help you to specialize in a highly demanded field"

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. Conde Torrente, María Isabel

- Head of the Diagnostic Imaging and Cardiology Service at Alcor Veterinary Hospital. Currently
- Degree in Veterinary Medicine from the University of Santiago de Compostela in 2012 with a certified European degree
- Advanced Postgraduate Course in Diagnostic Imaging (Computerized Axial Tomography). TCESMD. 2019
- Postgraduate in Diagnostic Imaging (GPCert- DI) 2016
- Training courses on clinical and laboratory analysis for veterinarians at the Alberto Alcocer Veterinary Hospital
- Medical Director and head of the Advanced Diagnostic Imaging Service at Grupo Peñagrande. 2017-2019
- Head of the Diagnostic Imaging Service at Centro Veterinario Mejorada. 2016-2017
- Responsible for diagnostic services at Hospital Veterinario Alberto Alcocer. 2013-2016

Dr. Guerrero Campuzano, María Luisa

- Director, veterinarian of exotic animals and small animals at the Petiberia Veterinary Clinic. Since 2010
- Degree in Veterinary Medicine from the University of Alfonso X el Sabio (2009).
- Specialist degree in exotic and wild animals: management, clinic and breeding in captivity by the Complutense University of Madrid
- Postgraduate Diploma in Surgery and Anesthesia from the Autonomous University of Barcelona 2014
- Seminar on anesthesia applied to the clinic of Oasis Wildlife Fuerteventura
- Co-author of the interactive clinical case on "Metabolic bone disease in reptiles" in the specialty of new companion animals, in the learning platform of AVEPA Elearning
- Co-author of the scientific knowledge pill "Feeding in psittacine birds", of the AVEPA Elearning scientific knowledge platform
- Teacher of the course "Management and Clinic of Exotic Animals for Veterinary Technical Assistants", AMVET training
- Member of AVEPA and in the process of accreditation as an exotic animal specialist of the GMCAE

04

Structure and Content

The contents of this **Postgraduate Certificate in Other Diagnostic Imaging Methods 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 quality training and knowledge of the main innovations in the field.

We have the best content of the moment, developed according to the current teaching quality criteria"

Module 1. Other Diagnostic Imaging Methods. Diagnosis in Other Species. Exotic Animals

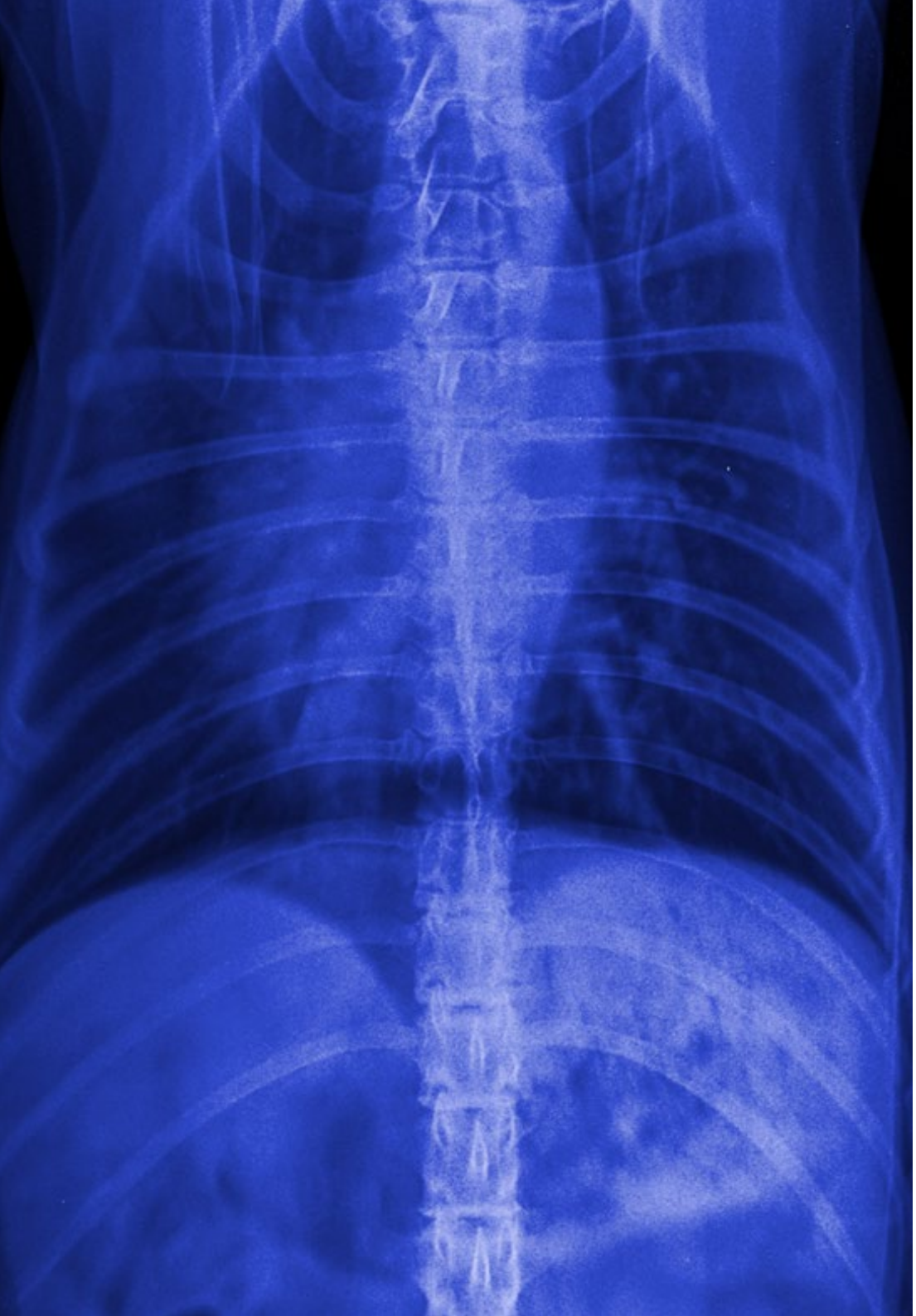
1.1. Ultrasound Diagnosis
- 1.1.1. Abdominal Cavity Ultrasound
  - 1.1.1.1. Introduction to The Ultrasound Method
  - 1.1.1.2. Examination Routine and Protocol for Performing the Ultrasound Examination
  - 1.1.1.3. Identification of the Main Abdominal Structures
  - 1.1.1.4. ECOFAST Technique
  - 1.1.1.5. Abdominal Cavity Pathologies
- 1.1.2. Cardiac Ultrasound
  - 1.1.2.1. Introduction to Cardiac Study Doppler Ultrasound
  - 1.1.2.2. Examination Protocol
  - 1.1.2.3. B Mode and M Mode
  - 1.1.2.4. Acquired Cardiac Diseases
  - 1.1.2.5. Congenital Cardiac Diseases
  - 1.1.2.6. Pericardium
- 1.1.3. Ultrasound of the Musculoskeletal System
  - 1.1.3.1. Scanning Technique
  - 1.1.3.2. Assessment of Muscle Fibers and Tendons
  - 1.1.3.3. Ultrasound Assessment of the Bone
  - 1.1.3.4. Ultrasound Assessment of Joints
  - 1.1.3.5. Ultrasound Assessment of the Neck
- 1.1.4. Thoracic Cavity Ultrasound
  - 1.1.4.1. Introduction
  - 1.1.4.2. Thoracic Wall
  - 1.1.4.3. Pulmonary Parenchymal Diseases
  - 1.1.4.4. Diaphragm Diseases
  - 1.1.4.5. Mediastinal Diseases
- 1.1.5. Fistulous Tracts and Ultrasound of Masses of Unknown Origin

1.2. Computerised Axial Tomography
- 1.2.1. Introduction.
- 1.2.2 CT Equipment
- 1.2.3. Nomenclature Hounsfield Units
- 1.2.4. Diagnosis in Neurology
  - 1.2.4.1. Head
  - 1.2.4.2. Nasal Cavity and Cranial Cavity
  - 1.2.4.3. Spinal Column Myelo CT
- 1.2.5. Orthopedic Diagnosis
  - 1.2.5.1. Skeletal System
  - 1.2.5.2. Joint Diseases
  - 1.2.5.3. Developmental Disorders
- 1.2.6. Oncology
  - 1.2.6.1. Masses Assessment
  - 1.2.6.2. Pulmonary Metastases
  - 1.2.6.3. Lymphatic System Assessment
- 1.2.7. Abdominal Diagnosis
  - 1.2.7.1. Abdominal Cavity
  - 1.2.7.2. Urinary System
  - 1.2.7.3. Pancreas
  - 1.2.7.4. Vascularization
- 1.2.8. Thoracic Diagnosis
  - 1.2.8.1. Lung and Respiratory Tract
  - 1.2.8.2. Thoracic Wall
  - 1.2.8.3. Pleural Space
  - 1.2.8.4. Mediastinum, Heart and Great Vessels

1.3. Nuclear Magnetic Resonance Imaging
- 1.3.1. Introduction
- 1.3.2. Advantages Inconveniences
- 1.3.3. Nuclear Magnetic Resonance Imaging Equipment Interpretation Principles
- 1.3.4. Diagnosis in Neurology
  - 1.3.4.1 Central Nervous System
  - 1.3.4.2. Peripheral Nervous System
  - 1.3.4.3. Spinal Column
- 1.3.5. Orthopedic Diagnosis
  - 1.3.5.1. Developmental Disorders
  - 1.3.5.2. Joint Diseases
  - 1.3.5.3. Bone Infections and Neoplasms
- 1.3.6. Oncology
  - 1.3.6.1. Abdominal Masses
  - 1.3.6.2. Lymphonodes
  - 1.3.6.3. Vascularization
- 1.3.7. Abdominal Diagnosis
  - 1.3.7.1. Abdominal Cavity
  - 1.3.7.2. Main Pathologies

1.4. Diagnosis by Minimally Invasive and Interventional Techniques
- 1.4.1. Endoscopy
  - 1.4.1.1. Introduction
  - 1.4.1.2. Equipment
  - 1.4.1.3. Patient Preparation
  - 1.4.1.4. Examination Routine
  - 1.4.1.5. Identifiable Pathologies
- 1.4.2. Arthroscopy
  - 1.4.2.1. Introduction
  - 1.4.2.2. Patient Preparation
  - 1.4.2.3. Identifiable Pathologies
- 1.4.3. Laparoscopy
  - 1.4.3.1. Introduction
  - 1.4.3.2. Patient Preparation
  - 1.4.3.3. Identifiable Pathologies

1.4.4. Catheterization
1.4.4.1. Introduction
1.4.4.2. Technique and Equipment
1.4.4.3. Diagnostic Uses
1.5. Radiographic Examination of Exotic Animals
1.5.1. Positioning and Projections
1.5.1.1. Birds
1.5.1.2. Small Mammals
1.5.1.3. Reptiles
1. 6. Radiographic Pathological Findings of the Skull and Axial Skeleton in Exotic Animals:
1.6.1. Radiographic Pathological Findings of the Skull
1.6.1.1. Birds
1.6.1.2. Small Mammals
1.6.1.3. Reptiles
1.6.2. Pathological Findings of the Axial Skeleton
1.6.2.1. Birds
1.6.2.2. Small Mammals
1.6.2.3. Reptiles
1.7. Radiographic Pathological Findings of the Thorax in Exotic Animals:
1.7.1. Birds
1.7.1.1. Nasal Passages and Sinuses
1.7.1.2. Trachea and Syrinx
1.7.1.3. Lungs
1.7.1.4. Air Sacs
1.7.1.5. Heart and Blood Vessels
1.7.2. Small Mammals
1.7.2.1. Pleural Cavity
1.7.2.2. Trachea
1.7.2.3. Oesophageal
1.7.2.4. Lungs
1.7.2.5. Heart and Blood Vessels
1.7.3. Reptiles
1.7.3.1. Respiratory Tract
1.7.3.2. Heart
1.8. Radiographic Pathological Findings of the Abdomen in Exotic Animals:
1.8.1. Birds
1.8.1.1. Proventricle, Ventricle and Intestine
1.8.1.2. Liver, Gallbladder and Spleen
1.8.1.3. Urogenital Tract
1.8.2. Small Mammals
1.8.2.1. Stomach, Appendix, Small and Large Intestines
1.8.2.2. Pancreas, Liver and Spleen
1.8.2.3. Urogenital Tract
1.8.3. Reptiles
1.8.3.1. Gastrointestinal Tract and Liver
1.8.3.2. Urinary Tract
1.8.3.3. Genital Tract
1.9. Radiographic Pathological Findings in Fore and Hind Limbs in Exotic Animals
1.9.1. Forelimbs
1.9.1.1. Birds
1.9.1.2. Small Mammals
1.9.1.3. Reptiles
1.9.2. Hind Limbs
1.9.9.1. Birds
1.9.9.2. Small Mammals
1.9.9.3. Reptiles



1.10. Other Diagnostic Processes in Exotic Animals
- 1.10.1. Ultrasound
  - 1.10.1.1. Birds
  - 1.10.1.2. Small Mammals
  - 1.10.1.3. Reptiles
- 1.10.2. Computed Tomography (CT)
  - 1.10.2.1. Birds
  - 1.10.2.2. Small Mammals
  - 1.10.2.3. Reptiles
- 1.10.3. Magnetic Resonance Imaging (MRI)
  - 1.10.3.1. Birds
  - 1.10.3.2. in Small Animals
  - 1.10.3.3. Reptiles

We are a leading online university and we have achieved this thanks to the high level of our programs"

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:

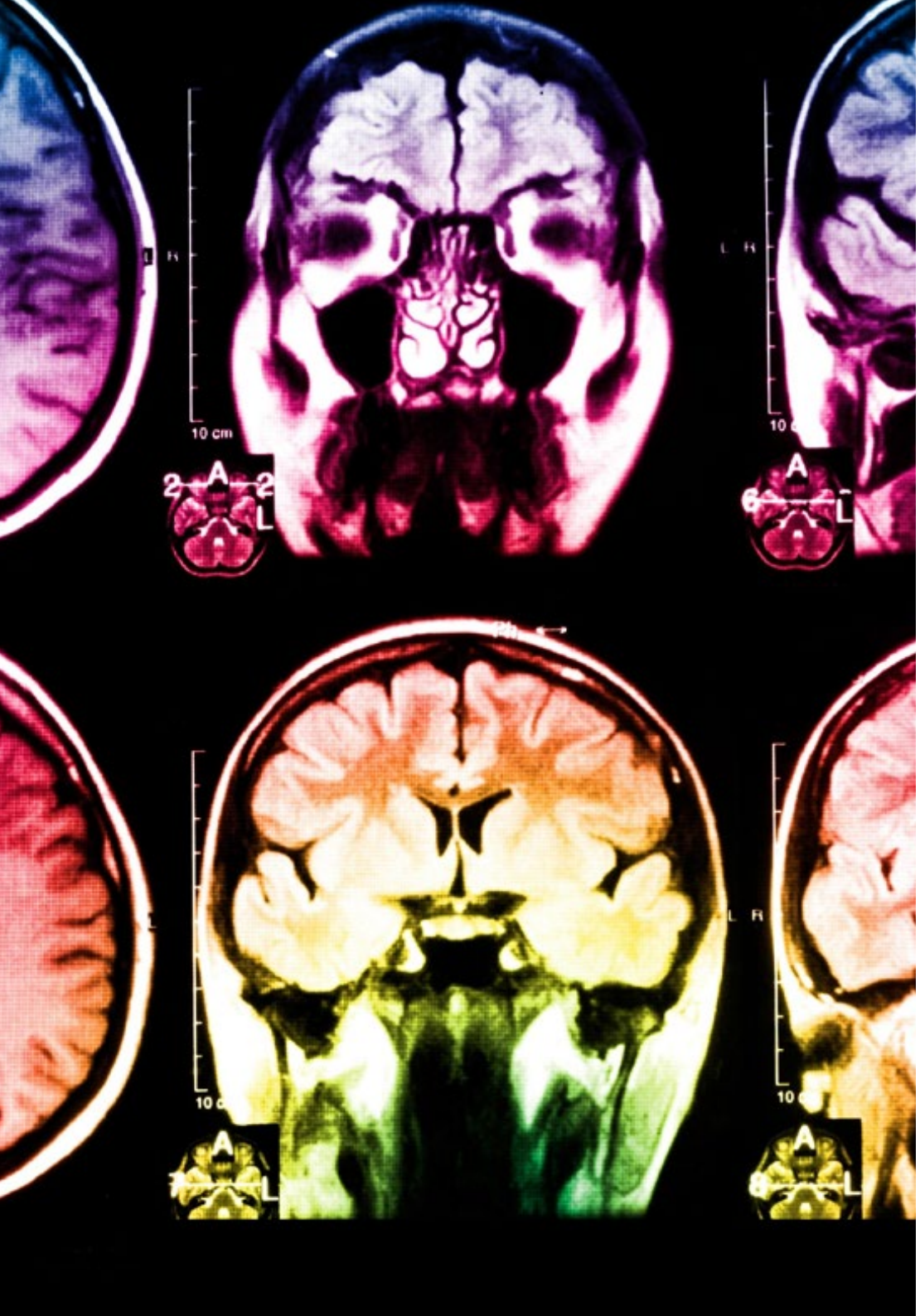
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real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

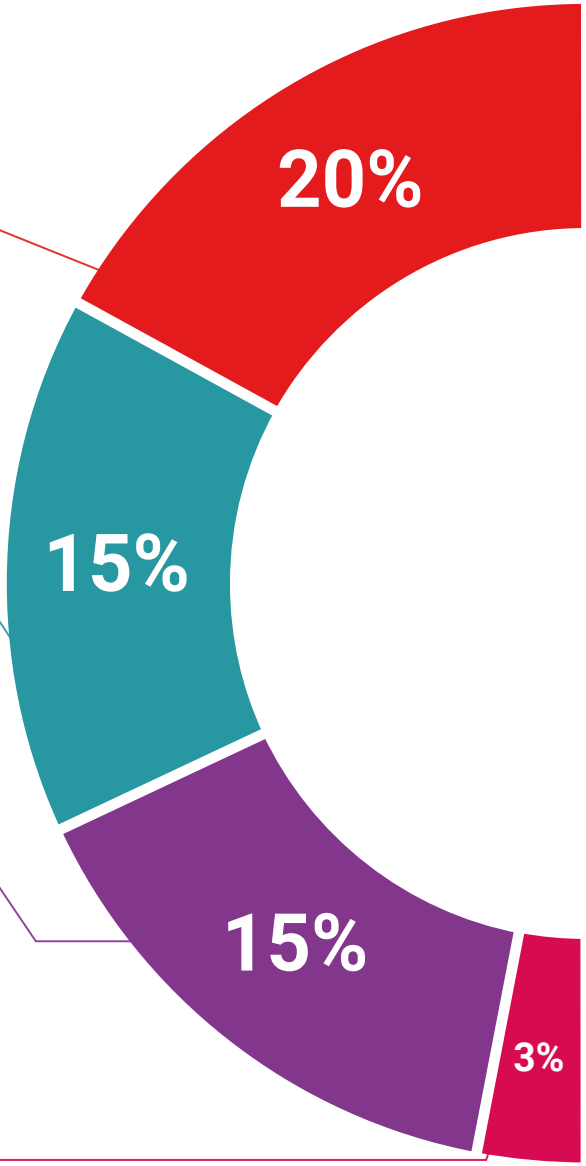
Interactive Summaries

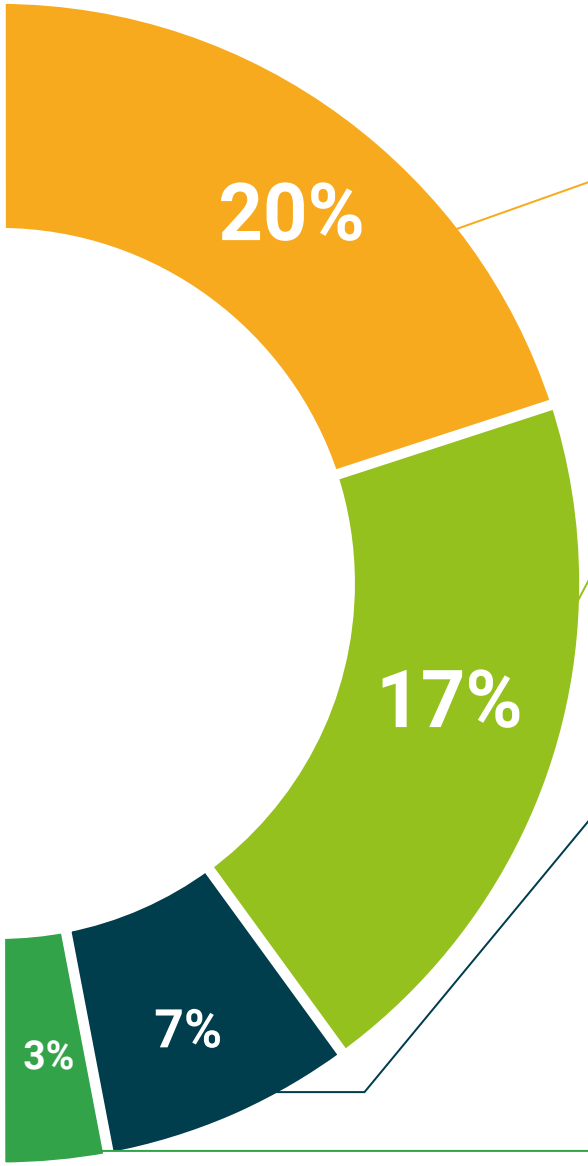
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Other Diagnostic Imaging Methods in Small Animals, guarantees in addition to the most rigorous and up to date training, access to a certificate issued by TECH Technological University.

Include in your training a Postgraduate Certificate in Other Diagnostic Imaging Methods in Small Animals: a highly qualified added value for any professional in this area"

This **Postgraduate Certificate in Other Diagnostic Imaging Methods in Small 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** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will specify the qualification obtained though the Postgraduate Certificate , and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Other Diagnostic Imaging Methods in Small Animals**

Official Nº of hours: **150 h.**


tech technological university

Awards the following

CERTIFICATE

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Other Diagnostic Imaging Methods 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.

tech technological university

Postgraduate Certificate

Other Diagnostic Imaging Methods in Small Animals

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

Postgraduate Certificate

Other Diagnostic Imaging Methods in Small Animals

tech technological university