

# Postgraduate Certificate Radiological Diagnosis in Neurology in Small Animals





## Postgraduate Certificate Radiological Diagnosis in Neurology in Small Animals

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

Website: [www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/radiological-diagnosis-neurology-small-animals](http://www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/radiological-diagnosis-neurology-small-animals)

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# 01

# Introduction

Definitive diagnosis of central nervous system diseases in animals requires advanced imaging tests (CT and MRI), cerebrospinal fluid analysis and histopathological study, among others. However, in some pathologies it is possible to make an approximation to the diagnosis and, sometimes, a definitive diagnosis in the clinic through the use of simple radiography and myelography, complementing the rest of the diagnostic tests. To enhance the training of veterinarians, TECH has designed this specific academic program on Radiological Diagnosis in Neurology in Small Animals. A unique opportunity to advance your career.





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*Specialize in Radiological Diagnosis  
in Neurology and improve the  
health of pets”*

The quality of radiological imaging in neurology is essential for a comprehensive assessment of the neurological system. Therefore, special attention must be paid to both the radiographic technique and the positioning of the animal. For these cases, it is recommended to perform the radiographs to assess the neurological system under sedation, using appropriate positioning accessories.

In addition, by means of spinal radiology we can diagnose a large number of pathologies, both congenital and acquired. Myelography is a contrast technique used for the evaluation of the spine. In this program TECH wants to perfect the technique, both for cisternal and lumbar myelography, and we will define the cases in which it should be performed, the risks involved and the pathological alterations that can be observed.

Regarding the skull, it should be taken into account that it is a very complex structure and its radiological assessment can be complicated. Therefore, radiographs provide valuable information on the bony structures of the head.

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 specialization 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 a passion for learning; it encourages thinking and the development of critical thinking.

This **Postgraduate Certificate in Radiological Diagnosis in Neurology 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



*We offer you the perfect combination of theory and practice so that you have all the necessary resources at your disposal to allow you a deep and exhaustive study of the subject"*

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

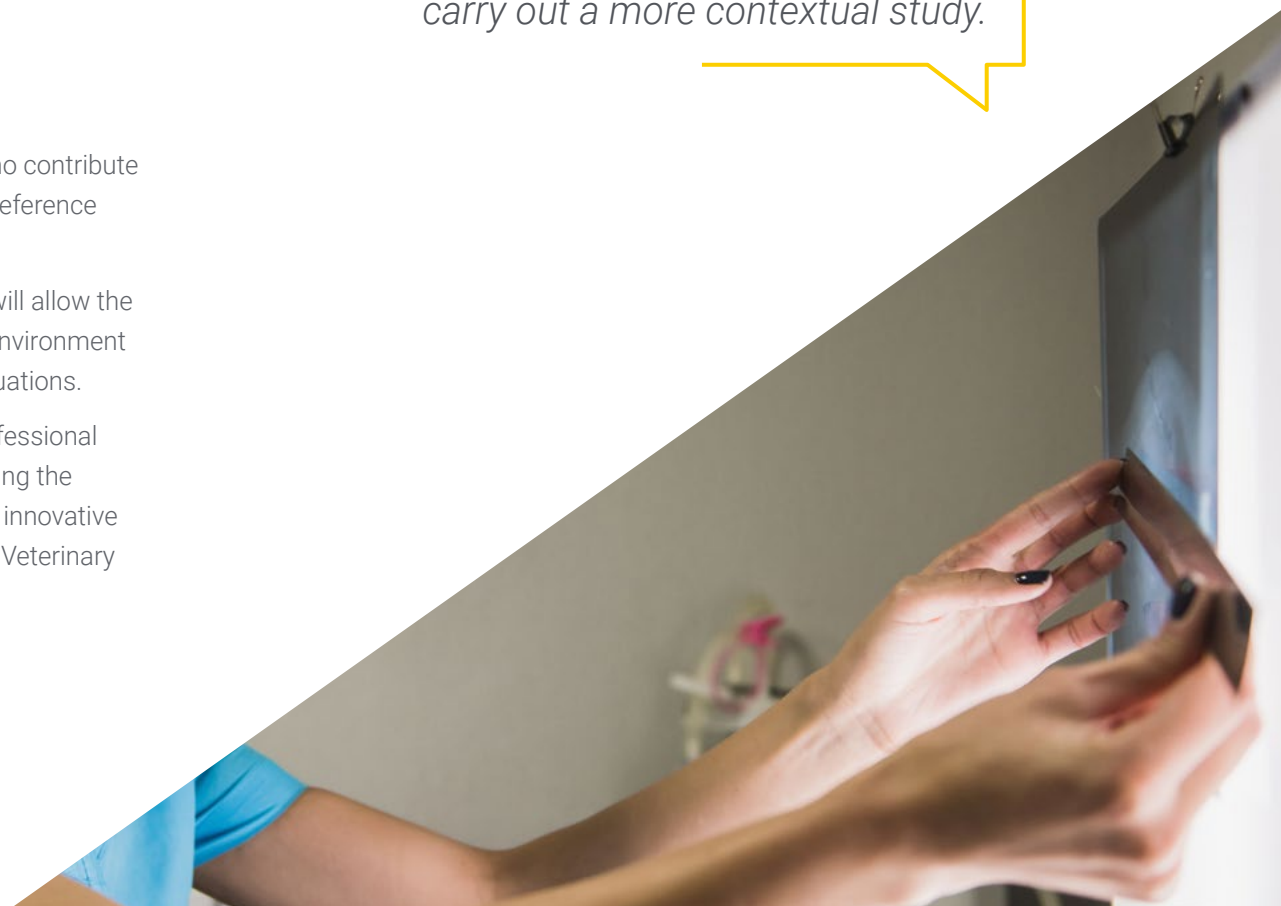
Its teaching staff includes professionals belonging to the veterinary field, who contribute their work experience to this training, as well as renowned specialists from reference societies and prestigious universities.

Its Multimedia Content, elaborated with the latest Educational Technology, will allow the Professional a situated and contextual learning, that is to say, a Simulated Environment that will provide an immersive specialization programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic program. For this purpose, the professional will be assisted by an innovative system of interactive videos made by renowned and experienced experts in Veterinary Radiology.

*We give you the opportunity to study with the most didactic methodology in the market. A unique opportunity that will move you forward in a short time.*

*We offer you an innovative program in which you will find real case studies that will allow you to carry out a more contextual study.*



# 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 you a program with completely up-to-date information and in which you can find the latest practices.





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*At TECH we put all our resources at your disposal so that you can acquire superior training in a short period of time"*



## General Objectives

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- Identify the normal radiographic anatomy of the central nervous system as a basis for good interpretation
- Analyze the radiological signs of the main diseases affecting the nervous system
- Develop a systematic approach to the assessment of radiological imaging of the nervous system and obtain the maximum diagnostic information
- Present the most frequent diagnostic errors in the interpretation of radiological images during the study of the central nervous system
- Determine the normal anatomical picture of the structures forming the neurological system, mainly the spine and skull
- Define the main pathological alterations that can be observed in radiographs
- Examine the myelography technique



*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

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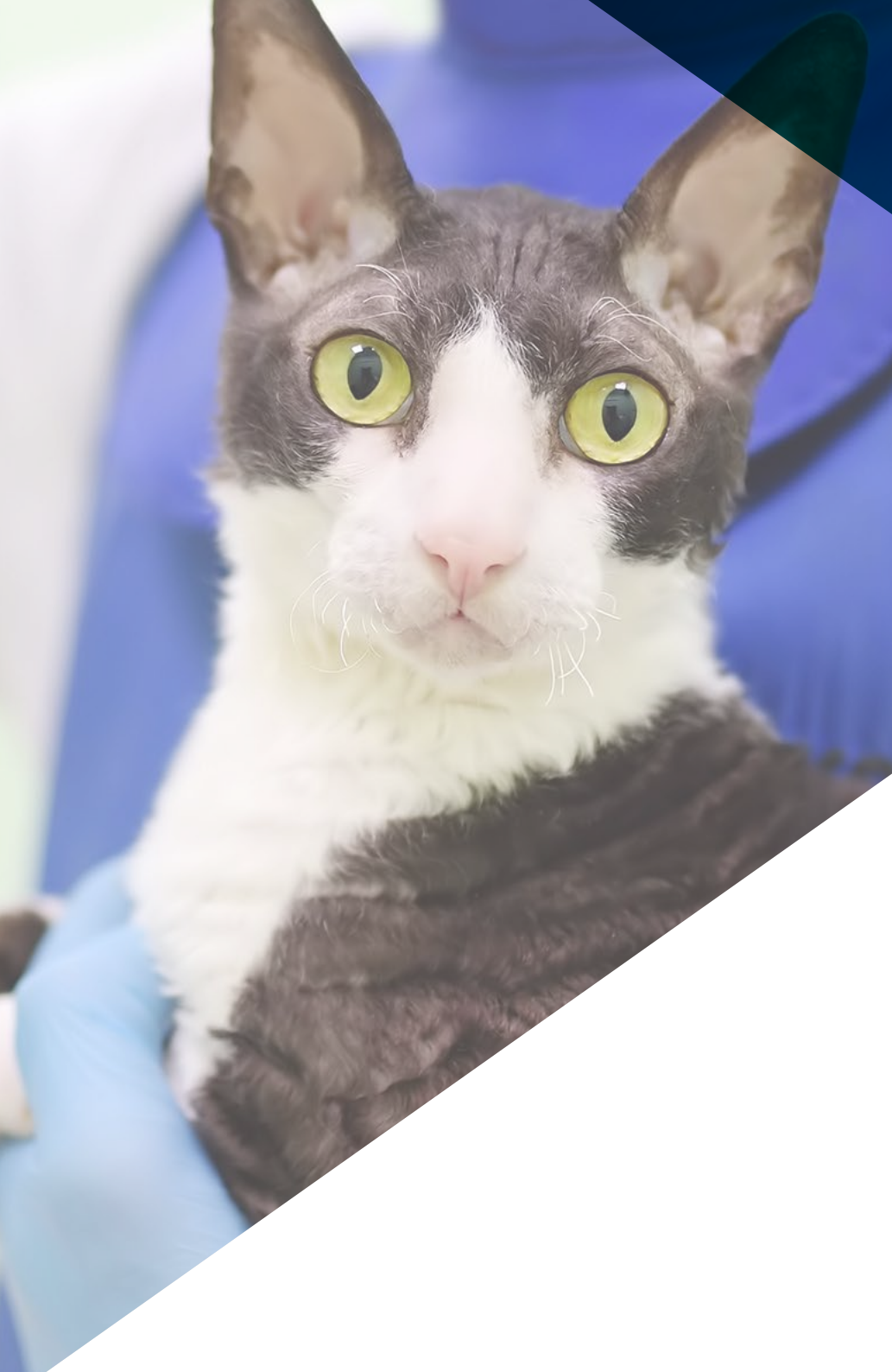
- ♦ Propose the use of plain radiography and contrast radiological studies for the approach to the diagnosis of some inflammatory diseases of the central nervous system: infectious and non-infectious
- ♦ Establish radiological signs compatible with herniated discs and other degenerative diseases
- ♦ Justify the use of radiography as a diagnostic tool for the initial evaluation of the patient with spinal cord trauma
- ♦ Define the radiological patterns of myelography for the diagnosis of intradural (meningioma) and extradural (ependymoma and astrocytoma) tumors
- ♦ Identify radiologic signs secondary to metabolic and nutritional pathologies that cause encephalopathy
- ♦ Present the congenital anomalies of the central nervous system and surrounding bony structures that can be identified by radiographic study
- ♦ Examine the normal anatomical image of each spinal segment and the skull
- ♦ Improve the radiographic technique and positioning of the animal for the assessment of the neurological system
- ♦ Identify the congenital pathologies that can be observed in the spine
- ♦ Determine the different limitations encountered when assessing the skull
- ♦ Examine the cranial pathologies that can be observed by radiography
- ♦ Define the normal anatomical image of each spinal segment and the skull

03

# Course Management

The teaching team, trained by leading professionals in the veterinary field and with years of experience both in consultation and teaching, will provide detailed information on Small Animals Veterinary Radiology. A unique opportunity that will help you grow professionally.





“

*Train with our teaching team and  
learn from 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. Moreno, Lorena

- ♦ Graduated in Veterinary Medicine from the Complutense University of Madrid in 2012.
- ♦ Postgraduate Course in Small Animal Surgery and Anesthesia at the UAB
- ♦ Currently taking a postgraduate course in Neurology for veterinarians on the web.
- ♦ Senior Veterinarian, as Head Clinician, at Momo Veterinary Hospital from Madrid since 2015
- ♦ Veterinarian at the Veterinary Hospital "Sierra Oeste" in San Martín de Valdeiglesias (Madrid). 2014-2015

### Dr. Moliní Aguiar, Gabriela

- ♦ Head of the Radiology Department of the Petiberia Veterinary Clinic. Since 2018
- ♦ Responsible for the anesthesia service at Petiberia Veterinary Clinic. Since 2017
- ♦ Graduated in Veterinary Medicine from the Complutense University of Madrid in 2014
- ♦ Neurology in the Feline and Canine patient. Novotech. November 2020
- ♦ Internal medicine in the feline patient. Novotech. November 2020
- ♦ Course of radiological interpretation in small animals of the Veterinary College of Madrid June 2020
- ♦ Master in Microbiology and Parasitology: research and development. September 2015



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



# 04

## Structure and Content

The contents of this Postgraduate Certificate in Radiological Diagnosis in Neurology 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.







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

## Module 1. Radiological Diagnosis in Neurology

- 1.1. Radiological Anatomy
  - 1.1.1. Structures Assessable by Radiology
  - 1.1.2. Normal Radiological Anatomy of the Spine
  - 1.1.3. Normal Radiological Anatomy of the Skull and its Structures
- 1.2. Radiological Examination of the Spine
  - 1.2.1. C1-C6
  - 1.2.2. T1-T13
  - 1.2.3. L1-L7
  - 1.2.4. S1-Cd
- 1.3. Contrast Examination
  - 1.3.1. Cisternal Myelography
  - 1.3.2. Lumbar Myelography
  - 1.3.3. Pathological Alterations Observed by Myelography
- 1.4. Diagnosis of Vascular Pathologies
  - 1.4.1. Vascular Pathologies: How Far Can We Go with Conventional Radiology
  - 1.4.2. Assessment of Vascular Pathologies by Contrast Techniques
  - 1.4.3. Assessment of Vascular Pathologies by Other Imaging Techniques
- 1.5. Cerebral and Meningeal Malformations
  - 1.5.1. Hydrocephalus
  - 1.5.2. Meningocele
- 1.6. Inflammatory Pathology
  - 1.6.1. Infectious
  - 1.6.2. Non-infectious
  - 1.6.3. Disc Spondylitis





- 1.7. Degenerative Pathologies
  - 1.7.1. Degenerative Disc Disease
  - 1.7.2. Wobbler Syndrome
  - 1.7.3. Lumbosacral Instability, Cauda Equina Syndrome
- 1.8. Spiral Trauma
  - 1.8.1. Pathophysiology
  - 1.8.2. Fractures
- 1.9. Oncology
  - 1.9.1. Primary Neoplastic Diseases
  - 1.9.2. Secondary Metastatic Diseases
- 1.10. Other Neurological Diseases
  - 1.10.1. Metabolic
  - 1.10.2. Nutritional
  - 1.10.3. Congenital

“ Give a boost to your career thanks to the opportunity offered by TECH with this high academic level Postgraduate Certificate”

# 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.





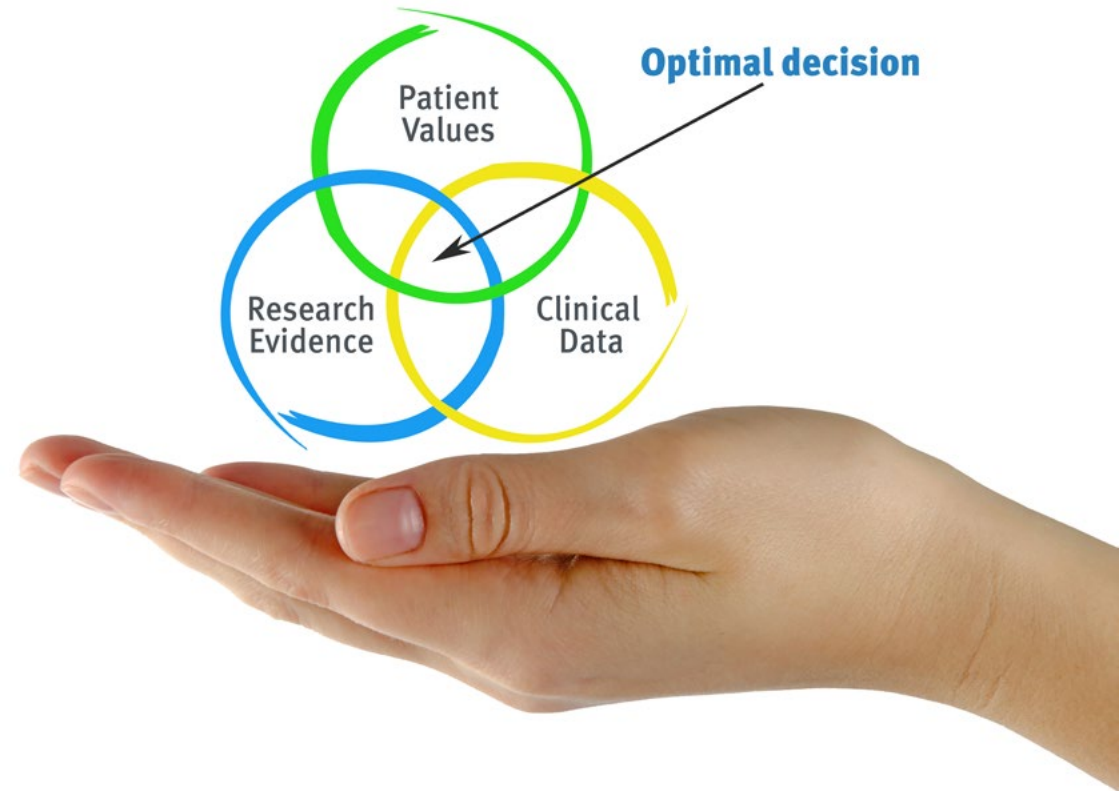
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the actual conditions in a veterinarian's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method.*

The effectiveness of the method is justified by four fundamental achievements:

1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. The feeling that the effort invested is effective becomes a very important motivation for veterinarians, which translates into a greater interest in learning and an increase in the time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the 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

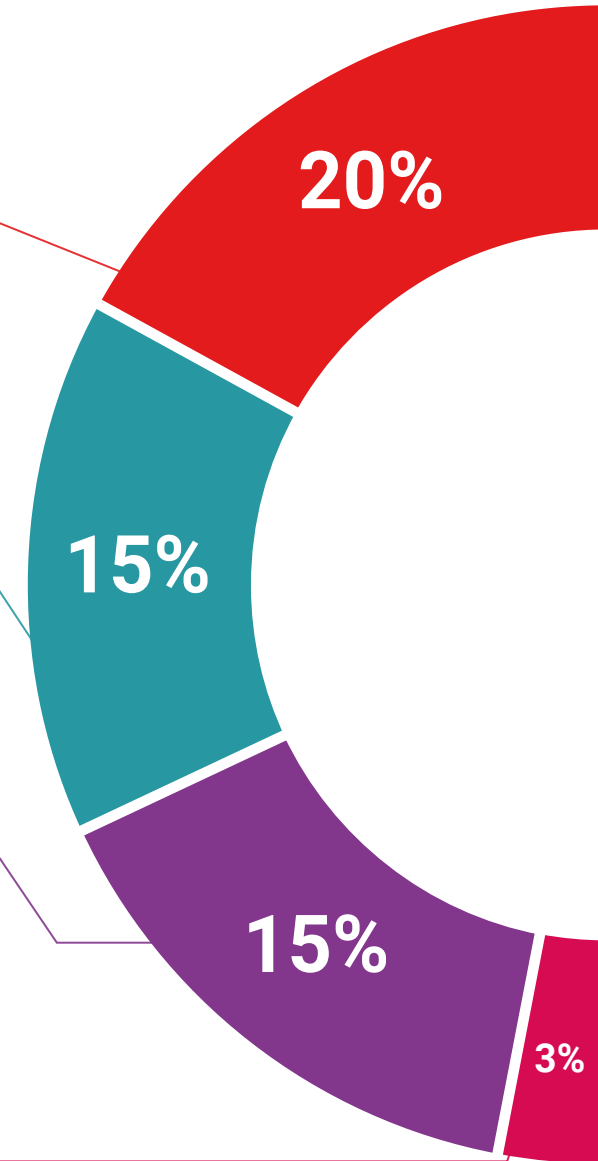
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

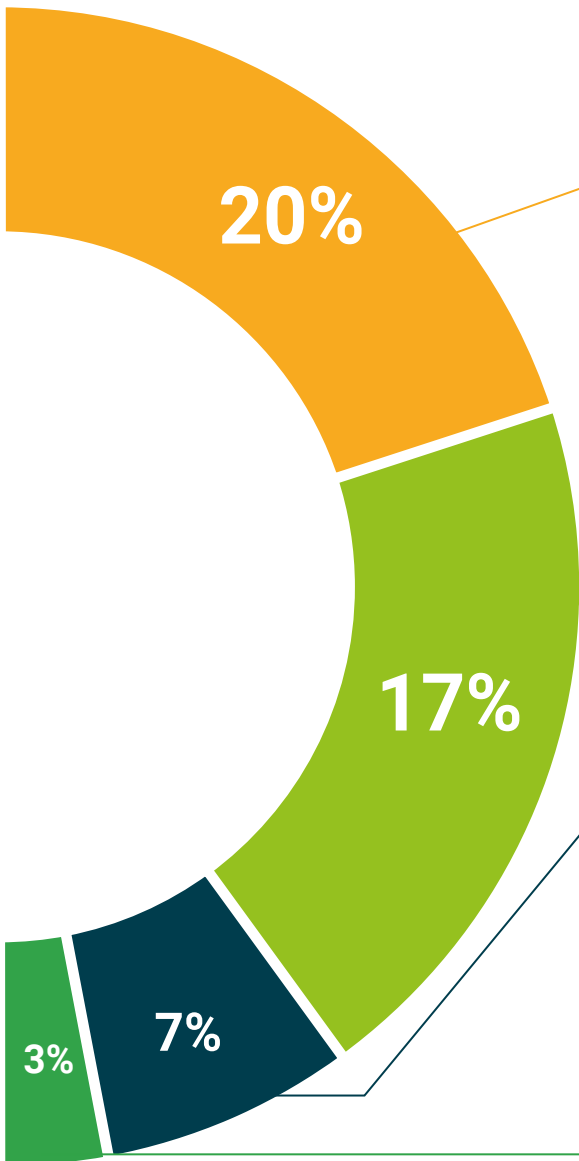
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



### 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

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.



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*Include in your training the Postgraduate Certificate in Radiological Diagnosis in Neurology in Small Animals, a highly qualified added value for any professional in this field"*

This **Postgraduate Certificate in Radiological Diagnosis in Neurology 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 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 Radiological Diagnosis in Neurology in Small Animals**

**Official N° of Hours: 150 h.**



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

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



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