

**Postgraduate Certificate**  
Medicine and Surgery of Lagomorphs  
and Rodents





## Postgraduate Certificate Medicine and Surgery of Lagomorphs and Rodents

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

Website: [www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/medicine-surgery-lagomorphs-rodents](http://www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/medicine-surgery-lagomorphs-rodents)

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01

# Introduction

The exotic animal clinic has advanced significantly in recent years thanks to an increase in the number of exotic pets and the public's demand for a more specialized service, making it necessary for clinics specializing in these animals to appear all over the world.



A close-up photograph of a rabbit's chest with a stethoscope resting on it. The rabbit's fur is a light brown color. The stethoscope is silver and black. The image is partially obscured by a teal diagonal graphic element.

“

*Rabbit and rodent owners are looking for specialized professionals capable of correctly caring for their animals in the event of possible pathologies”*

The rise in popularity of rabbits and rodents as pets is due, in part, to the gentle and intelligent nature of these animals, as well as the low demand for attention required by owners who, despite this, are rewarded with affection comparable to that which they would receive from traditional pets such as dogs and cats.

The great diversity of species included in this group requires advanced specialization. The objective of this Postgraduate Certificate is to lay the foundations to be able to work with exotic animals in a specialized clinic.

Rabbits and rodents are the third most frequently seen pets in veterinary clinics for various health problems. The most common diseases of these animals acquired as pets are intestinal and dental, as well as parasitic, dermatological and cardiorespiratory diseases. Many of these pathologies are a consequence of the owners' lack of knowledge about the needs of these mammals with respect to diet, basic care or deworming.

As it is an online Postgraduate Certificate, the student is not constrained by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life as they wish.

Don't hesitate any longer and join the world's leading private Spanish-speaking online university, where we offer you the best trained program accompanied by the best teaching methodology in the educational panorama, which will help you acquire the necessary knowledge in an agile and simple way.

The **Postgraduate Certificate in Medicine and Surgery of Lagomorphs and Rodents** contains the scientific most complete and up-to-date Educational program on the market. The most important features of the program include:

- ♦ Developing practical cases presented by experts in exotic animal medicine and surgery
- ♦ 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.
- ♦ The latest news on medicine and surgery of lagomorphs and rodents
- ♦ Practical exercises where self-assessment can be used to improve learning.
- ♦ A special emphasis on innovative methodologies in the field of medicine and surgery of lagomorphs and rodents
- ♦ 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



*Do not miss the opportunity to do this Postgraduate Certificate in Medicine and Surgery of Lagomorphs and Rodents with us. It's the perfect opportunity to advance your career"*

“

*This Postgraduate Certificate is the best investment you can make when choosing a refresher programme to update your existing knowledge on Medicine and Surgery of Lagomorphs and Rodents”*

Its teaching staff includes professionals from the veterinary field, who bring the experience of their work to this training, as well as recognised specialists from leading 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 Postgraduate Certificate. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in exotic animal medicine and surgery with extensive experience.

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

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



02

# Objectives

The Postgraduate Certificate in Medicine and Surgery of Lagomorphs and Rodents is oriented to facilitate the performance of the veterinary professional with the latest advances and most innovative treatments in the sector.







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*Our main objective is to offer you quality training that allows you to keep up to date with the main advances in the field"*



## General Objective

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- ♦ Identify the most important biological traits of these species in order to obtain general knowledge and a reinforced base
- ♦ Examine each species separately to highlight the main particularities to keep in mind
- ♦ Establish the bases for attending to these species in practice.
- ♦ Analyze their pathologies to identify them
- ♦ List of the most common diseases of exotic mammals
- ♦ Classify and examine the most common diseases according to their origin: bacterial, fungal, viral, parasitic, hereditary and other health problems
- ♦ Prevent the vast majority of common diseases and problems, establishing, as veterinary specialists, preventive medicine, vaccination and deworming schedules applied to each species
- ♦ Make the veterinarian responsible for the importance of providing information to the owner so that they carry out adequate hygiene practices with the animal, a healthy diet and exercise as well as rest, ensuring that the animal is free of stress, following the guidelines for examination and physical examination of the animal during the consultation
- ♦ Examine diseases from a practical and applicable point of view
- ♦ Attend to the health status of exotic mammals as a priority for the veterinary specialist
- ♦ Develop advanced knowledge on performing the most common operation in rabbits: castration, both in females and males, in addition to other basic interventions such as oral surgical techniques.





## Specific Objectives

### Module 1

- ◆ Examine the different species and their taxonomic classification
- ◆ Determine the different clinical management in each clinical situation
- ◆ Analyze the most frequent questions asked by animal owners in practice.
- ◆ Establish a prevention protocol and guidelines for the correct maintenance of rabbits or rodents
- ◆ List the most common pathologies in lagomorphs and rodents
- ◆ Develop a list of problems, with their differential diagnoses to achieve a correct work plan.
- ◆ Finally achieve the definitive diagnosis and find the cause of the pathology

### Module 2

- ◆ Visualize the anatomy and physiological functioning of the oral cavity
- ◆ Examine the dental malocclusion disease of lagomorphs
- ◆ Identify all the diseases with zoonotic potential that we will encounter after handling or accidental ingestion
- ◆ Provide advanced knowledge related to the sedation of an exotic mammal, including up-to-date anesthetic protocols for performing surgical treatments.
- ◆ Compile the ocular pathologies they present, their causes and the currently available treatments
- ◆ Analyze the reason why not all medications currently used in the dog and cat clinic can be used and cite the most commonly used medications used and their dosage
- ◆ Develop specialized knowledge about routine surgical techniques such as sterilization and when it should be performed, as well as more advanced surgical techniques such as cystotomy or enterotomy

03

# Course Management

The program's teaching staff includes leading experts in Exotic Animal Medicine and Surgery who contribute their vast work experience to this training program. Professionals of recognized prestige have joined forces to offer you this high-level training.



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*Train with the best professionals in the treatment of exotic animals. You will receive a superior and fully updated specialization"*

Director



**Dr. Trigo García, María Soledad**

- ♦ Veterinarian in charge of the Internal Medicine and Exotic Animal Surgery Service at the Clinical Veterinary Hospital of the Alfonso X El Sabio University in Madrid
- ♦ Degree in Veterinary Medicine from the Alfonso X el Sabio University (2012)
- ♦ Postgraduate degree in General Practitioner Certificate Programme in Exotic Animals, Improve International
- ♦ Postgraduate degree in Food Safety from the Complutense University of Madrid
- ♦ Coordinator and Professor of the subject of Exotic Animal Symptoms and Therapeutics at the Faculty of Veterinary Medicine, Alfonso X El Sabio University of Madrid
- ♦ Lecturer in Food Science and Technology, Alfonso X El Sabio University.
- ♦ Veterinary consultant at the José Peña Wildlife Center, and various veterinary clinics in Madrid
- ♦ Director of the Exotic Animal Service at the PRADO DE BOADILLA veterinarian center
- ♦ Tutor of the Final Degree Dissertations of the Exotic and Wild Animal Medicine and Surgery at the Alfonso X El Sabio University
- ♦ External expert evaluator and member of the tribunal of different Final Degree Dissertations



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*Expand your training with the best specialists in the field”*

# 04

# Structure and Content

The structure of the content has been designed by the best professionals in the Exotic Animal Medicine and Surgery sector, 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 studies.







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*We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"*

## Module 1. Relevant Aspects of Lagomorphs and Rodents

- 1.1. Taxonomic Classification: Is a Lagomorph a Rodent?
  - 1.1.1. Lagomorphs.
  - 1.1.2. Histricomorph Rodents.
  - 1.1.3. Myomorph Rodents.
  - 1.1.4. Visible Differences Between the Different Species
- 1.2. Technical Requirements: The Importance of Adapting the Facilities to Each Species
  - 1.2.1. Types of Accommodation
  - 1.2.2. Absorbent Hygienic Bedding.
  - 1.2.3. Accommodation During the Hospitalization of the Patients
- 1.3. Nutritional Aspects: Nutritional Specifications in the Diets
  - 1.3.1. Specific Feeding Pattern in Lagomorphs and Histricomorph Rodents
  - 1.3.2. Nutritional Program for Myomorph Rodents
  - 1.3.3. Nutritional Care in Special Situations
- 1.4. Anatomic Reminder: Different Species, Different Anatomies
  - 1.4.1. The Domestic Rabbit
  - 1.4.2. Histricomorph Rodents
  - 1.4.3. Myomorph Rodents
- 1.5. Clinical Handling and Preventive Medicine: The Key Factor for Excellence in the Eyes of the Owner
  - 1.5.1. Holding.
    - 1.5.1.1. Handling Techniques in the Practice for Examination
  - 1.5.2. Physical Examination
    - 1.5.2.1. Sexing: Sexual Dimorphism:
  - 1.5.3. Preventative Medicine.
    - 1.5.3.1. Current Legislation and Animal Identification System
    - 1.5.3.2. Vaccination Protocol
    - 1.5.3.3. Deworming Guidelines
    - 1.5.3.4. Information on Sterilization
- 1.6. Sampling for Diagnosis and Pathways for Drug Administration
  - 1.6.1. Venipuncture.
  - 1.6.2. Administering Drugs
  - 1.6.3. Urine Collection
  - 1.6.4. Radiographic Images Necessary to Reach the Correct Diagnosis and How to Perform Them.
- 1.7. Diagnostic Techniques
  - 1.7.1. Sample Analysis: Key Factor for a Reliable Diagnosis
    - 1.7.1.1. Urine Sample. Interpretation of Results
    - 1.7.1.2. Blood Sample. Different Results.
  - 1.7.2. The X-ray as a Basic Tool
    - 1.7.2.1. Radiographic Interpretation and Diagnostic Imaging
  - 1.7.3. Ultrasound to Diagnose Specific Pathologies
    - 1.7.3.1. Main Approaches.
  - 1.7.4. Other Diagnostic Techniques
- 1.8. Skin and Gastrointestinal Pathologies: Listing the Most Frequent Pathologies
  - 1.8.1. External Parasites.
  - 1.8.2. Fungal Infections.
  - 1.8.3. Bacterial Infections
  - 1.8.4. Viral Infections.
  - 1.8.5. Dermal Neoplasms:
  - 1.8.6. Other Dermal Alterations
  - 1.8.7. Dental Problems.
  - 1.8.8. Mucocele
  - 1.8.9. Foreign Bodies and Impaction
  - 1.8.10. Internal Parasites:
  - 1.8.11. Bacterial Enteritis.
  - 1.8.12. Ileum
- 1.9. Respiratory and Genitourinary Disorders
  - 1.9.1. Respiratory Diseases of Rabbits and Rodents
  - 1.9.2. Cystitis and Urolithiasis
  - 1.9.3. Dystocia.
  - 1.9.4. Hyperestrogenism.
  - 1.9.5. Mammary Tumors.
  - 1.9.6. Gestational Toxemia
  - 1.9.7. Ovarian Cysts.
  - 1.9.8. Paraphimosis
  - 1.9.9. Pyometra and Hemometra



- 1.10. Other Less Frequent Pathologies of Interest, But of Equal Importance
  - 1.10.1 Musculoskeletal Alterations
    - 1.10.1.1. Vitamin C Deficit.
    - 1.10.1.2. Fractures and Dislocation of the Rachis in Rabbits
  - 1.10.2. Neurological Alterations:
    - 1.10.2.1. Vestibular Syndrome in Rabbits
    - 1.10.2.2. Epilepsy in Gerbils
  - 1.10.3. Other Pathologies
    - 1.10.3.1. Viral Hemorrhagic Disease
    - 1.10.3.2. Mixomatosis.
    - 1.10.3.3. Lymphomas

## Module 2: Advanced Criteria in Rabbits and Rodents

- 2.1. Anatomo-Physiological Reminder of the Oral Cavity
  - 2.1.1. Anatomy of the Oral Cavity
    - 2.1.1.1. Dental Formula.
    - 2.1.1.2. Types of Dentition
    - 2.1.1.3. Types of Mastication
  - 2.1.2. Origin of Dental Pathologies
    - 2.1.2.1. Genetic Origin.
    - 2.1.2.2. Traumatic Origin.
    - 2.1.2.3. Systemic Origin.
    - 2.1.2.4. Dietary Origin.
  - 2.1.3. Types of Oral Pathologies
    - 2.1.3.1. Malocclusion of Incisors
    - 2.1.3.2. Malocclusion of Premolars and Molars
- 2.2. Oral Pathologies.
  - 2.2.1. Symptoms Associated With Dental Pathologies. Early Diagnosis.
    - 2.2.1.1. Symptoms According to the Location
    - 2.2.1.2. Presumptive Diagnosis and Work Plan
    - 2.2.1.3. Complementary Diagnostic Tests
    - 2.2.1.4. Firm Diagnosis

- 2.2.2. Prevention, Treatment and Prognosis of Patients With Oral Pathologies
  - 2.2.2.1. Medical Treatment
  - 2.2.2.2. Surgical Treatment: New Advances in the Treatment of Oral Abscesses
- 2.3. Fundamental Zoonoses in Lagomorphs and Rodents
  - 2.3.1. Basic Aspects of Prevention and Protection of the Veterinary Professional
  - 2.3.2. Diseases of Bacterial Origin
    - 2.3.2.1. Francisella Tularensis.
    - 2.3.2.2. Pasteurellosis
    - 2.3.2.3. Salmonellosis
    - 2.3.2.4. Bordetella Sp.
    - 2.3.2.5. Brucellosis
    - 2.3.2.6. Yersinia Pestis.
    - 2.3.2.7. Q fever
  - 2.3.3. Parasitic diseases
    - 2.3.3.1. Internal Parasites:
    - 2.3.3.2. External Parasites.
- 2.4. Advanced Zoonoses in Lagomorphs and Rodents
  - 2.4.1. Diseases Caused by Protozoos
    - 2.4.1.1. Encephalytozoonosis.
    - 2.4.1.2. Toxoplasmosis
    - 2.4.1.3. Giardiasis
  - 2.4.2. Viral Diseases
    - 2.4.2.1. Herpesvirus.
  - 2.4.3. Diseases of Fungal Origin
    - 2.4.3.1. Dermatofitosis.
    - 2.4.3.2. Microsporium sp.
    - 2.4.3.3. Trichophyton Mentagrophytes.
- 2.5. Most commonly Used Anesthesia Techniques in Rodent and Lagomorph Clinics
  - 2.5.1. Basic Concepts
  - 2.5.2. Anaesthesia -Analgesia Epidural
  - 2.5.3. Sedation and General Anaesthesia





- 2.6. Updates Anesthesia Techniques
  - 2.6.1. Anatomic Reminder of the Facial Nerves
  - 2.6.2. Local Anesthesia and Cranial Nerve Block
  - 2.6.3. Jaw Nerve Blockade
  - 2.6.4. Infraorbital Nerve Block
  - 2.6.5. Palatine Nerve Block
  - 2.6.6. Mandibular Nerve Block
  - 2.6.7. Mental Nerve Block
  - 2.6.8. Anesthesia in the Emergency Department: Cardiopulmonary Resuscitation.
- 2.7. Ophthalmology in Lagomorphs and Rodents
  - 2.7.1. Common Ocular Infections
  - 2.7.2. Corneal Ulcers. Diagnosis and Treatment
  - 2.7.3. Protusion of the Nictitating Membrane
  - 2.7.4. Pseudoterigion.
  - 2.7.5. Naso-Lacrimal Duct Catheterization in Rabbits
- 2.8. Updated Medical Treatments
  - 2.8.1. Relevant Aspects.
  - 2.8.2. Safe Drugs and Suitable Dosage
  - 2.8.3. Common Drugs in Other Species, But Banned For Lagomorphs and Rodents
- 2.9. Basic Surgical Techniques
  - 2.9.1. Pre-Surgery Factors
  - 2.9.2. Surgery Factors.
  - 2.9.3. Post-Surgery Factors.
  - 2.9.4. Lagomorph and Rodent Sterilization Techniques
- 2.10. Advanced Surgical Techniques
  - 2.10.1. Cystotomy in Rabbits and Guinea Pigs
  - 2.10.2. Urethrotomy and Perineal Urethrostomy in Rabbits
  - 2.10.3. Gastrotomy in Lagomorphs and Rodents
  - 2.10.4. Enterotomy and Enterectomy in Lagomorphs and Rodents

05

# Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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.





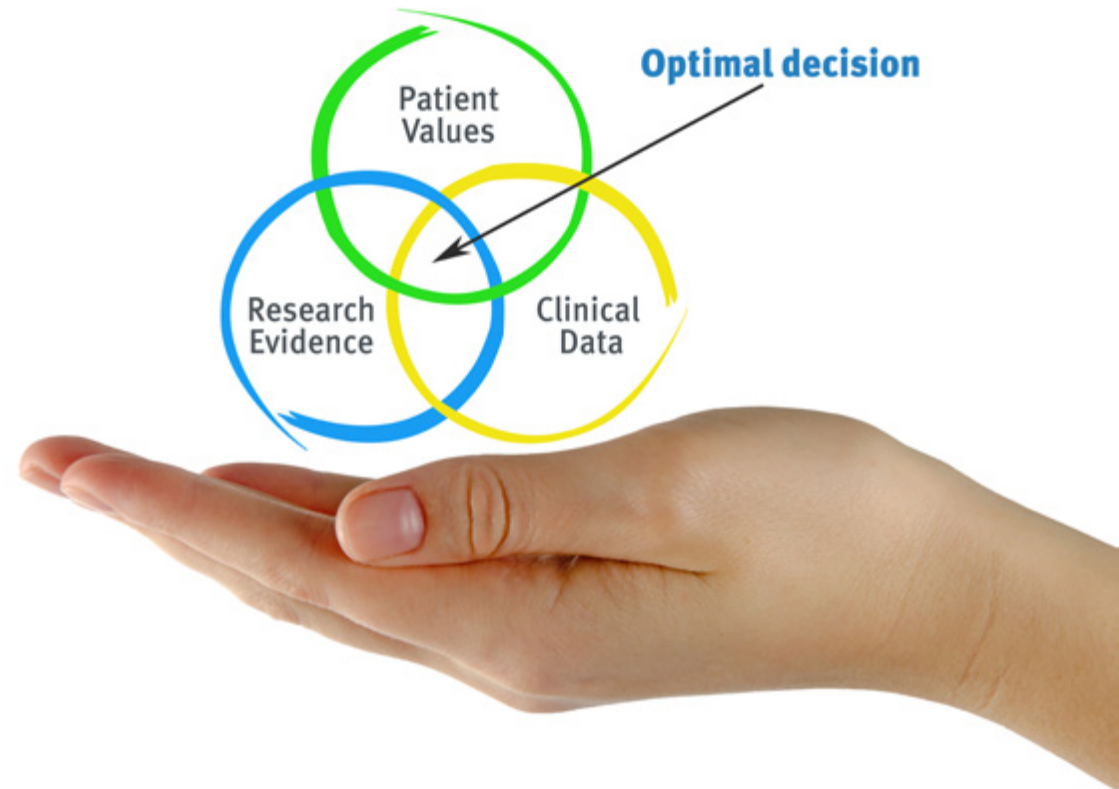
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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

In a given clinical situation, what would you do? 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 abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can 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 potential or because of its uniqueness or rarity. It is essential that the case be based on current professional life, trying to recreate the real conditions in the 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 achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
2. The learning process has a clear focus on 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.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 65,000 veterinarians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning 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 to success.*

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### Latest Techniques and Procedures on Video

We bring you closer to the latest Techniques, to the latest Educational Advances, to the forefront of current Veterinary Techniques and Procedures. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

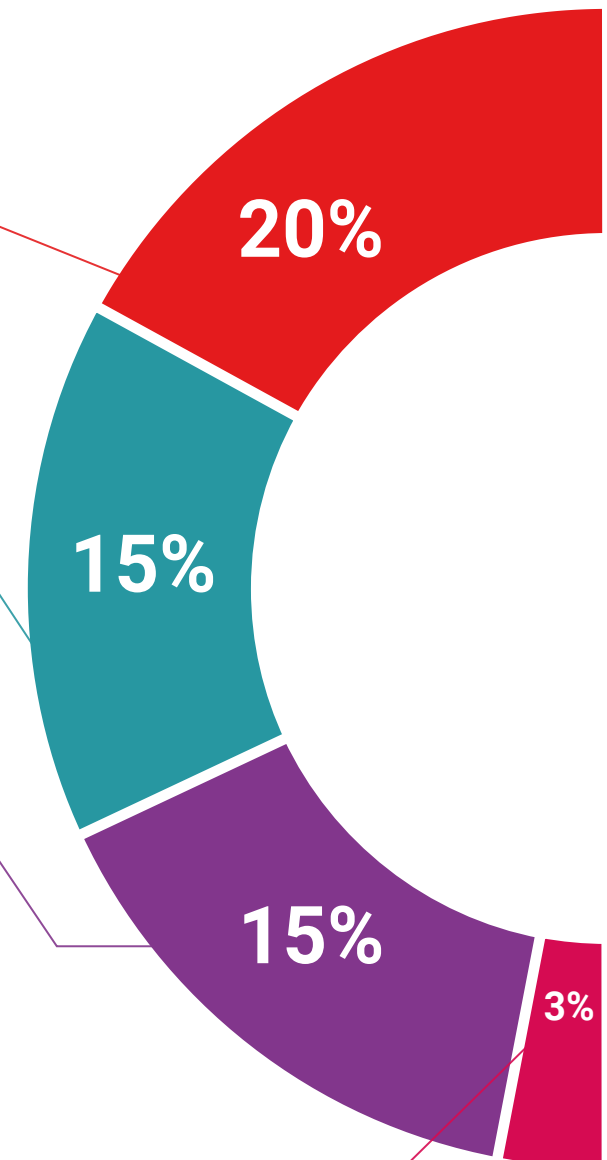
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

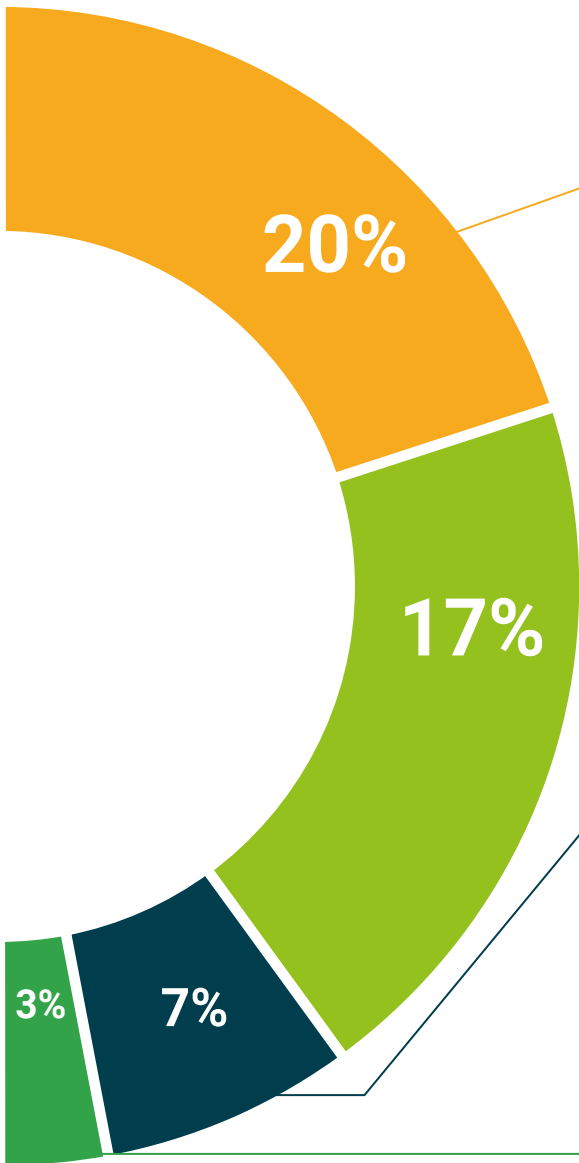
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





**Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



**Testing & Re-testing**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you 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 our future difficult decisions.



**Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

The Postgraduate Certificate in Medicine and Surgery of Lagomorphs and Rodents  
access to a Postgraduate Certificate issued by TECH - Technological University.



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*Successfully complete this training and receive your university degree without travel or laborious paperwork"*

The **Postgraduate Certificate in Medicine and Surgery of Lagomorphs and Rodents** contains the scientific most complete and up-to-date program on the market.

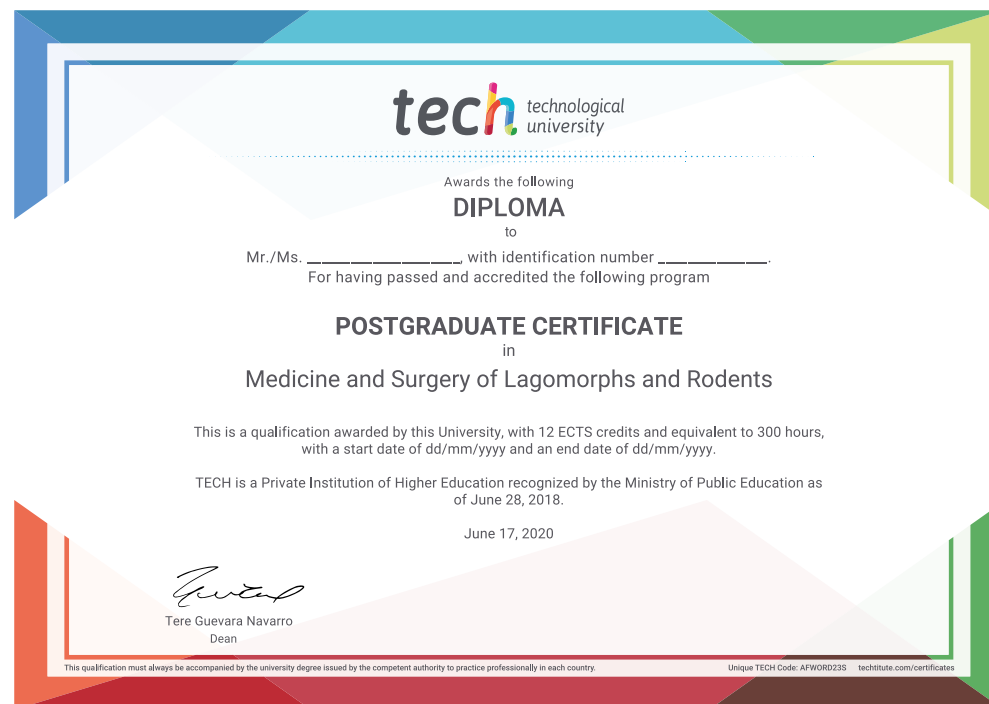
Once the student has passed the evaluations, they will receive their corresponding **Postgraduate Certificate** issued by **TECH - Technological University via tracked delivery**.

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

Title: **Postgraduate Certificate in Medicine and Surgery of Lagomorphs and Rodents**

ECTS: **12**

Official Number of Hours: **300**



\*Apostille Convention. In the event that the student wishes to have their paper diploma 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



## Postgraduate Certificate Medicine and Surgery of Lagomorphs and Rodents

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