

# Postgraduate Certificate

Conjunctival, Nictitating Membrane  
and Orbital Diseases and Surgery  
in Small Animals



## Postgraduate Certificate

### Conjunctival, Nictitating Membrane and Orbital Diseases and Surgery 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/in/veterinary-medicine/postgraduate-certificate/conjunctival-nictitating-membrane-orbital-diseases-surgery-small-animals](http://www.techtute.com/in/veterinary-medicine/postgraduate-certificate/conjunctival-nictitating-membrane-orbital-diseases-surgery-small-animals)

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01

# Introduction

In the small animal clinic, diseases or lesions affecting the conjunctiva, nictitating membranes or the ocular orbit require very specific attention from the practitioner that cannot be safely provided without the most complete preparation and updating. This high-intensity program aims to develop the ability of its students to provide an adequate response to ophthalmologic conditions in these areas of small animal clinics. A professional growth process that you can confidently follow with the quality and assurance that TECH offers.







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*A high-intensity Postgraduate Certificate that will allow you to acquire the most advanced ways of working on medical and surgical approaches to pathologies involving the nictitating membrane, the conjunctiva and the orbit in small animals"*

The purpose of the Postgraduate Certificate in Conjunctival, Nictitating Membrane and Orbital

Diseases and Surgery in Small Animals is for the veterinary professional to develop knowledge and clinical skills for identifying pathologies of the conjunctiva and lacrimal system.

For this, the most advanced diagnostic methods used to identify alterations and pathologies are examined, while frequent clinical signs are also addressed, and diagnostic protocols are established to allow professionals to accurately detect problems and establish a work protocol.

Due to the increase in pathologies related to the tear film, clinical veterinarians must specialize in relevant examination procedures as well as in the identification of clinical signs and the latest treatments available for its restoration.

This program is an exceptional opportunity to get up to speed in this field through quality and efficiency, in order to combine flexibility, speed and quality.

This **Postgraduate Diploma in Conjunctival, Nictitating Membrane and Orbital Diseases and Surgery in Small Animals** contains the most complete and up-to-date scientific program on the market. Its most important features include:

- » Case studies presented and developed by experts in Veterinary Ophthalmology
- » Graphic, schematic, and practical contents created to provide scientific and practical information on the disciplines that are essential for professional practice
- » Practical exercises where self-assessment can be used to improve learning
- » Its special emphasis on innovative methodologies
- » 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



*The learning and enhancement of veterinary skills in this specialized field will allow students to approach ophthalmologic conditions safely and efficiently"*

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*Acquire the ability to apply the most advanced techniques and knowledge through high-intensity study”*

The program's teaching staff includes professionals from the sector who contribute their work experience to this training program, as well as renowned 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 immersion training 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 throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*With the efficiency of a study system created for online teaching, this Postgraduate Certificate is the best option to boost your professional growth.*

*Studies that will offer you the knowledge from a unique and highly effective perspective.*



# 02 Objectives

Acquire specialized and up-to-date knowledge in ophthalmology of the conjunctiva, nictitating membrane and orbit with TECH, through the most comprehensive and innovative academic program on the market. After completing the 150 hours of study included in the program, professionals will be able to practice in this exciting field with total success and from a perspective based on maximum scientific rigor, the greatest relevance and the latest advances.







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*A unique opportunity to grow professionally with a program that will help you place your skills at the forefront of ophthalmological intervention"*



## General Objectives

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- » Develop specialized knowledge in the diagnosis and medical-surgical treatment of conjunctiva and the lacrimal system
- » Learn about the latest advances in the diagnosis of different conjunctival pathologies
- » Review existing surgical techniques
- » Establish diagnostic protocols to help identify the different pathologies affecting the conjunctiva and the lacrimal system



*Designed with high efficiency in mind, this Postgraduate Certificate will allow you to learn in a continuous way and develop new practical skills from the very beginning of the program"*







## Specific Objectives

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- » Examine normal anatomy and function of conjunctiva and the lacrimal system
- » Identify the most frequent clinical signs
- » Analyze different diagnostic methods and establish protocols
- » Generate diagnostic knowledge to examine tear film
- » Study the different pathologies related to alterations of the tear film
- » Introduce the latest surgical techniques for resolution of pathologies affecting the nictitating membrane
- » Generate specialized knowledge of the different medical and surgical treatments of the lacrimal system

03

# Course Management

TECH provides you with professionals in veterinary ophthalmology and online teaching, so that you can acquire solid knowledge in this specialty. For this purpose, the Postgraduate Certificate has a highly qualified team with extensive experience in the sector, who will offer the best possible resources to students so that they can develop their skills during the program. This way, veterinarians will have all that is required to specialize at an international level in a booming sector that will catapult them to professional success.







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*Your professors are professionals of recognized trajectory that offer you their close and focused view of the reality of this sector"*



## International Guest Director

Dr. Caryn Plummer is a true international reference in the field of Veterinary Medicine. Her research interests include corneal wound healing, glaucoma and other aspects of clinical ophthalmology in animals. She has also developed different models of diseases that afflict the eyesight of pets.

The lectures of this expert are widely recognized and expected in the academic framework, developing many of these in the United States, the University of Copenhagen and other parts of the world. She is also a member of the School of Veterinary Medicine at the University of Florida.

Other lines in which this expert has completed her professional development are Pharmacology and the use of medical devices through administration and ocular penetration. In the same way, she has deepened her knowledge in Equine Corneal Disease, Primary Open Angle Glaucoma in the Dog and other immune-mediated pathologies. In turn, Plummer has ventured into the application of new surgical techniques for the healing of corneal wounds, facial reconstruction of animal eyelids and the prolapse of nictitating glands. On these topics he has published a large number of articles in leading journals such as Veterinary ophthalmology and American journal of veterinary research.

Dr. Plummer's professional development has also been intensive and regular. Her specialization in Veterinary Ophthalmology was developed at the University of Florida. She also completed her advanced education in Small Animal Medicine and Surgery at Michigan State University.

On the other hand, this scientist has received several awards, among them the Clinical Researcher of the Year Award, granted by the Florida Veterinary Medical Association. She is also the author of Gelatt's classic textbook Veterinary Ophthalmology and an associate editor.



## Dr. Plummer, Caryn

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- Research Fellow in Veterinary Ophthalmology at the University of Florida
- Veterinary Ophthalmologist specialized in Glaucoma and Corneal Disease in Small Animals.
- Founder and Secretary/Treasurer of the International Consortium for Equine Ophthalmology
- Treasurer of the Consortium for Animal Vision Foundation
- Author of the classic Gelatt textbook Veterinary Ophthalmology
- Diplomate of the American College of Veterinary Ophthalmology
- Residency in Comparative Ophthalmology at the University of Florida
- Practical Instruction in Veterinary Medicine at the University of Michigan
- BA degree from Yale University
- Member of the Florida Veterinary Medical Association



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

## Management



### Dr. Fernández Más, Uxue

- ♦ Veterinary Ophthalmology in the IVO
- ♦ Responsable for Ophtalmology at Vidavet
- ♦ Bachelor's Degree in Veterinary from the University of Zaragoza
- ♦ Postgraduate in Ophthalmology Veterinary Medicine, Autonomous University of Barcelona
- ♦ Lecturer in Introductory Courses in Veterinary Ophthalmology for the Vidavet group
- ♦ Member of SEOVET and AVEPA Ophthalmology group
- ♦ Presentations at SEOVET, ECVO and GTA of AVEPA Congresses
- ♦ Junior Resident at Oftalvet Mexico



## Professors

### **Dr. Martín Gassent, María**

- » Clinical Ophthalmology Service Anicura Ars Veterinaria, Barcelona, Spain
- » Specialty Internship at the Ophthalmology Service Ars Veterinaria, Barcelona
- » Self-employed, creator and general veterinarian at Itinerant Veterinarian Clinic Nomavet, Valencia
- » Collaborator Professor of Pharmacology at the CEU Cardenal Herrera University
- » Bachelor's Degree in Veterinary Medicine, CEU Cardenal Herrera University, Valencia
- » Postgraduate Diploma in Small Animal Surgery and Anaesthesia by the Autonomous University of Barcelona
- » Postgraduate Diploma in Small Animal Surgery and Ocular Pathology by the Autonomous University of Barcelona
- » Basic Science Course in Veterinary Ophthalmology at the University of North Carolina



# 04

## Structure and Content

The most comprehensive and innovative content compendium of the academic market at your fingertips, in an exhaustive and highly interesting program. After enrolling in this program, students will be provided with multimedia materials and will gain a practical and theoretical insight that will help them learn everything they need to become successful veterinary ophthalmologists. A unique academic opportunity based on the best teaching methodology that will elevate professionals to the top of their careers.







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*A learning pathway of maximum interest for veterinarians who wish to enhance their care and professional competitiveness”*

## Module 1. Conjunctival, Nictitating Membrane and Orbital Diseases and Surgery

- 1.1. Conjunctiva Physiology
  - 1.1.1. Conjunctiva Anatomy and Physiology
  - 1.1.2. Disease Response
  - 1.1.3. Infectious Conjunctivitis
    - 1.1.3.1. Bacterial Conjunctivitis
    - 1.1.3.2. Viral Conjunctivitis
    - 1.1.3.3. Fungal Conjunctivitis
    - 1.1.3.4. Rickettsial Conjunctivitis
    - 1.1.3.5. Parasitic Conjunctivitis
- 1.2. Conjunctivitis Classification
  - 1.2.1. Non-Infectious Conjunctivitis
    - 1.2.1.1. Allergic Conjunctivitis
    - 1.2.1.2. Follicular Conjunctivitis
    - 1.2.1.3. Ligneous Conjunctivitis
    - 1.2.1.4. Lipogranulomatous Conjunctivitis
    - 1.2.1.5. Conjunctivitis Associated with Lacrimal Deficiency
    - 1.2.1.6. Conjunctivitis Associated with Anatomical Alterations
  - 1.2.2. Conjunctival Neoplasms
- 1.3. Non-Neoplastic Mass Conjunctivitis
  - 1.3.1. Non-Neoplastic Masses
    - 1.3.1.1. Inflammatory
    - 1.3.1.2. Dermoid
    - 1.3.1.3. Parasitic
    - 1.3.1.4. Fat Prolapse
    - 1.3.1.5. Cysts



- 1.4. Conjunctival Surgery
  - 1.4.1. Instruments
  - 1.4.2. Lacerations
  - 1.4.3. Conjunctival Tissue
  - 1.4.4. Symblepharon
  - 1.4.5. Conjunctival Masses
- 1.5. Nictitating Membrane Anatomical Variation
  - 1.5.1. Anatomy and Physiology
  - 1.5.2. Exploration
  - 1.5.3. Anatomical Variation
    - 1.5.3.1. Pigmentation Variation
    - 1.5.3.2. Ercycling
- 1.6. Nictitating Membrane Acquired Diseases
  - 1.6.1. Congenital or Developmental Abnormalities
    - 1.6.1.1. Cartilage Eversion
    - 1.6.1.2. Nictitating Gland Prolapse
  - 1.6.2. Acquired Diseases
    - 1.6.2.1. Lacerations
    - 1.6.2.2. Foreign Bodies
    - 1.6.2.3. Inflammatory Diseases
    - 1.6.2.4. Nictitating Membrane Protrusion
    - 1.6.2.5. Neoplasms
- 1.7. Nictitating Membrane Surgery
  - 1.7.1. Cartilage Eversion
  - 1.7.2. Gland Prolapse
  - 1.7.3. Third Eyelid Flap
- 1.8. Orbit Orbital Diseases
  - 1.8.1. Anatomy
  - 1.8.2. Pathological Mechanisms

- 1.8.3. Orbital Diseases
  - 1.8.3.1. Orbital Cellulitis Retrobulbar Abscess
  - 1.8.3.2. Orbital Cystic Lesions
  - 1.8.3.3. Vascular Anomalies
  - 1.8.3.4. Myositis
  - 1.8.3.5. Neoplasms
  - 1.8.3.6. Trauma
    - 1.8.3.6.1. Fractures
    - 1.8.3.6.2. Emphysema
    - 1.8.3.6.3. Ocular Proptosis
  - 1.8.3.7. Fat Prolapse
- 1.9. Ocular Globe and Orbit
  - 1.9.1. Preparation
  - 1.9.2. Anesthesia
  - 1.9.3. Enucleation
  - 1.9.4. Exanteration
- 1.10. Orbitotomy and Orbitectomy
  - 1.10.1. Orbital Prosthesis
  - 1.10.2. Evisceration and Intrascleral Prosthesis
  - 1.10.3. Orbitotomy and Orbitectomy



*A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"*



# 05 Methodology

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

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





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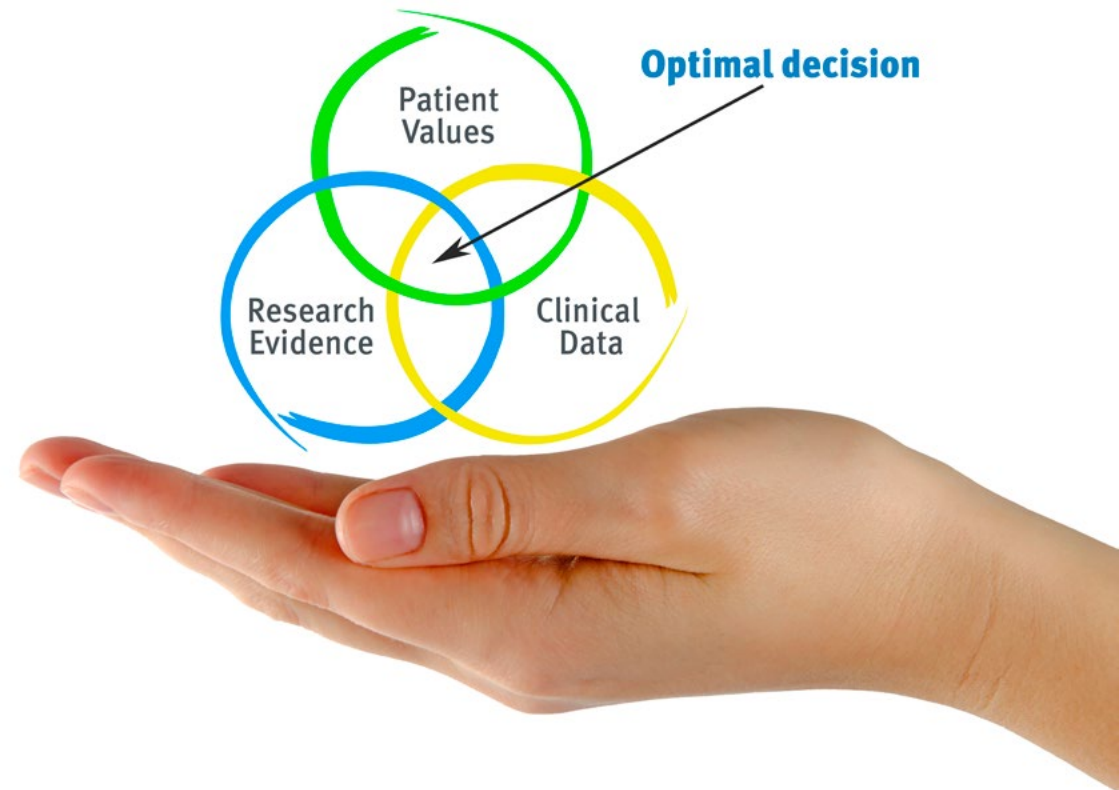
*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*



## 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 case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.



*Veterinarians will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

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

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

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

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



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Latest Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



### Interactive Summaries

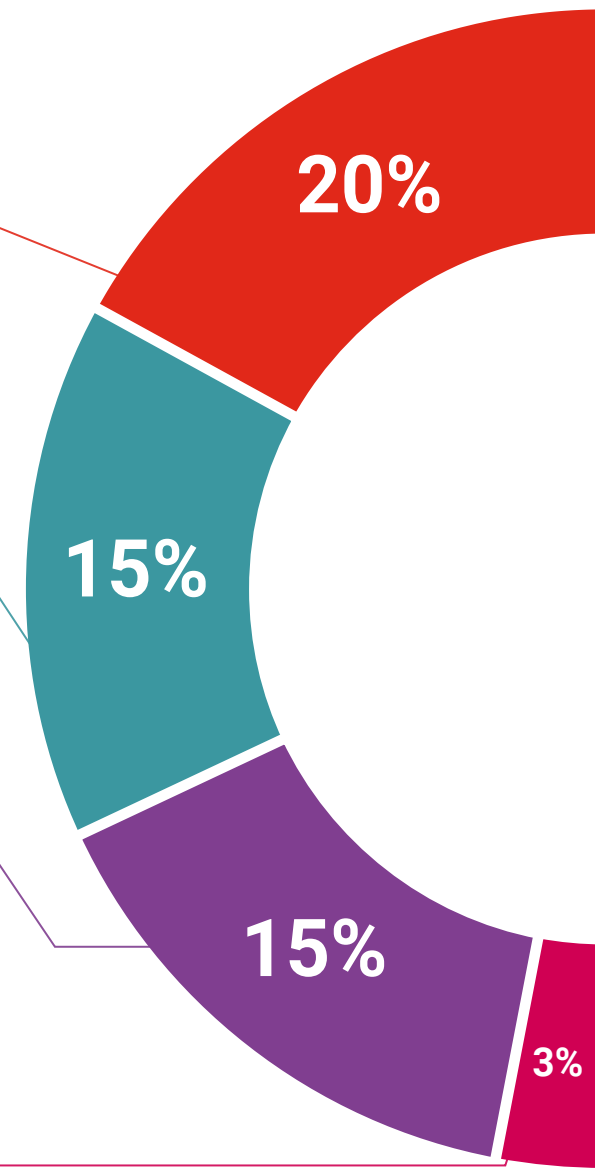
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

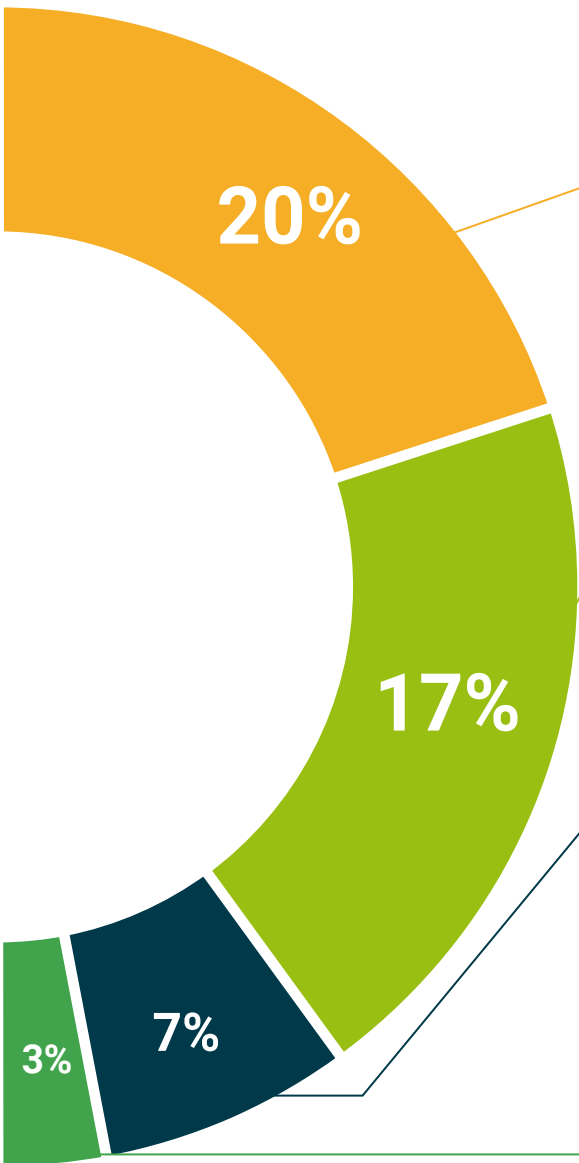


### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.







#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

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

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06

# Certificate

The Postgraduate Certificate in Conjunctival, Nictitating Membrane and Orbital Diseases and Surgery in Small Animals guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*



This **Postgraduate Diploma in Conjunctival, Nictitating Membrane and Orbit Diseases and Surgery in Small Animals** contains the most complete and up-to-date scientific program on the market.

After student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** diploma issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Conjunctival, Nictitating Membrane and Orbital Diseases and Surgery 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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