

# Postgraduate Certificate

## Ophthalmologic Examination in Equines





## Postgraduate Certificate Ophthalmologic Examination in Equines

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/veterinary-medicine/postgraduate-certificate/ophthalmologic-examination-equines](http://www.techtute.com/us/veterinary-medicine/postgraduate-certificate/ophthalmologic-examination-equines)

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# 01

# Introduction

Eye health in equids is a crucial aspect of their well-being and performance in various equestrian disciplines. According to the American Association of Equine Practitioners (AAEP), eye disease is one of the leading causes of dysfunction in sport horses, with prevalences ranging from 10-15% of the global equine population. Considering the impact and relevance of this discipline, TECH presents this comprehensive program, which will provide the knowledge and skills necessary to effectively diagnose and treat the main ocular pathologies in these animals. Through a 100% online methodology, professionals will learn the most advanced techniques of Ophthalmological Exploration, ranging from the evaluation of the cornea, to the detection of intraocular diseases.



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*Do you want to take a significant step in your professional career? With TECH you will train in a key area for equine health, ensuring your success in the veterinary field”*

The Ophthalmologic Examination in Equines is an essential component to guarantee the welfare and functionality of these animals, especially in those that participate in sports, work or recreational disciplines. For this reason, this process, performed routinely and with advanced techniques, allows identifying and treating these conditions before they significantly compromise the animal's health. Consequently, this has consolidated it as an indispensable practice to preserve ocular health, prevent serious complications and ensure general welfare.

This program in Ophthalmologic Examination in Equines at TECH will offer professionals a unique opportunity to acquire specialized knowledge and practical tools in this field. Through a comprehensive and multidisciplinary training, it will cover from the anatomy and ocular physiology of the horse, to the most advanced techniques for diagnosis and management of ophthalmologic diseases. Therefore, students will learn how to perform detailed examinations, identify pathologies such as corneal ulcers, conjunctivitis or uveitis and apply appropriate treatments. All this under the guidance of experts with extensive experience, who share the latest advances and best practices in the field.

In the long run, the knowledge acquired in this degree will not only increase a veterinarian's confidence in treating complex eye conditions, but will also contribute to strengthening their reputation as an expert trained to provide specialized and comprehensive care. In this way, they will be able to differentiate themselves in a competitive marketplace, expanding their career opportunities and professional development. In addition, they will be ready to face the challenges posed by equine eye health, positioning themselves as leaders in an essential area of Veterinary Medicine.

Thanks to the 100% online modality, specialists will live a high-level academic experience that will be adapted to their needs. They will have access to updated and specialized content from anywhere in the world, with no time or travel restrictions. A key aspect that differentiates this postgraduate course is the use of the innovative Relearning methodology, which focuses on the progressive consolidation of learning, natural assimilation and the elimination of long hours of traditional memorization.

This **Postgraduate Certificate in Ophthalmologic Examination in Equines** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts with a deep mastery of Ophthalmologic Examination in Equines
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out 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 TECH approach offers you the convenience and excellence you need to advance your career, while transforming the way you acquire knowledge. Upgrading has never been so accessible or efficient!"*

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*Your future in Equine Medicine starts here: You'll master equine ophthalmic screening and make a difference in the care of these animals. An exclusive program designed just for you!”*

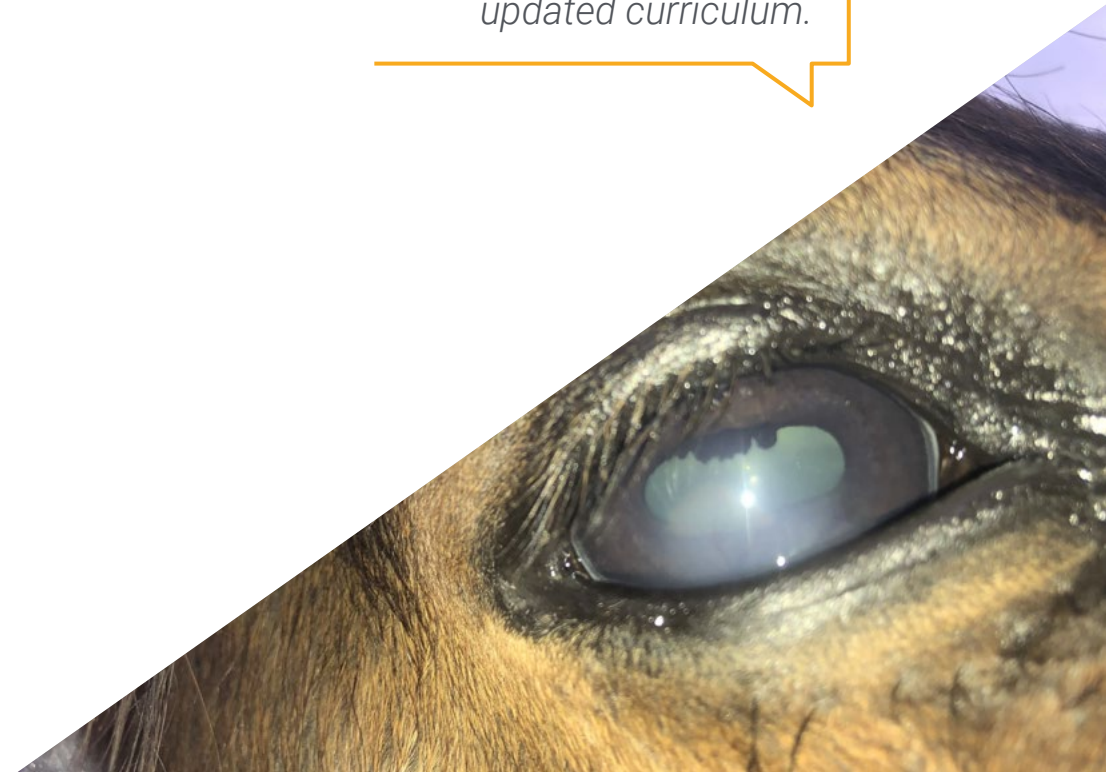
The program's teaching staff includes professionals from the industry who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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 immersive education programmed to learn 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned experts.

*You'll explore a new vision in veterinary medicine! You'll become an expert in equine eye health with this program, taking your career to the next level. You'll diagnose and treat pathologies with precision.*

*Want to specialize in Equine Ophthalmology? TECH will push you to fulfill your professional goals through an innovative online methodology and an updated curriculum.*



# 02 Syllabus

The curriculum, designed with a high-level comprehensive approach, will cover key aspects such as equine ocular anatomy and physiology, the use of advanced diagnostic tools and the most accurate ophthalmologic examination techniques. As a result, professionals will know how to identify common pathologies such as Corneal Ulcers, Keratitis and Conjunctivitis, as well as develop skills to implement clinical management protocols adapted to each case. Likewise, topics related to the interpretation of complementary tests, such as tonometry, slit lamp and ocular cytology, essential for an accurate diagnosis, will be addressed.





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*TECH's pedagogical model will allow you to acquire competencies in Ophthalmologic Exploration in Equids from the analysis of real cases and simulation”*

## Module 1. Ophthalmologic Examination in Equines

- 1.1. Ocular Embryology and Physiology in Equids
  - 1.1.1. Development of the Eyeball and Appendages
    - 1.1.1.1. Eyelids and Nasolacrimal System
    - 1.1.1.2. Conjunctiva and Nictitating Membrane
    - 1.1.1.3. Extraocular Muscles
  - 1.1.2. Anterior Segment Development
    - 1.1.2.1. Cornea
    - 1.1.2.2. Iridocorneal Angle
    - 1.1.2.3. Iris
    - 1.1.2.4. Lens
  - 1.1.3. Posterior Segment Development
    - 1.1.3.1. Sclera
    - 1.1.3.2. Choroid
    - 1.1.3.3. Vitreous Humor
    - 1.1.3.4. Retina
    - 1.1.3.5. Optic Nerve
    - 1.1.3.6. Tapetum Lucidum
- 1.2. Developmental Ocular Abnormalities in Equids
  - 1.2.1. Developmental Ocular Abnormalities
  - 1.2.2. Microphthalmos
  - 1.2.3. Congenital Glaucoma
  - 1.2.4. Orbital Dermoids
  - 1.2.5. Vascular Anomalies
  - 1.2.6. Megalocornea/Cornea Globosa
  - 1.2.7. Microcornea
  - 1.2.8. Corneal Dermoids
    - 1.2.8.1. Aniridia
    - 1.2.8.2. Anterior Segment Dysgenesis
    - 1.2.8.3. Anterior Uveal Cysts
    - 1.2.8.4. Iris Hypoplasia



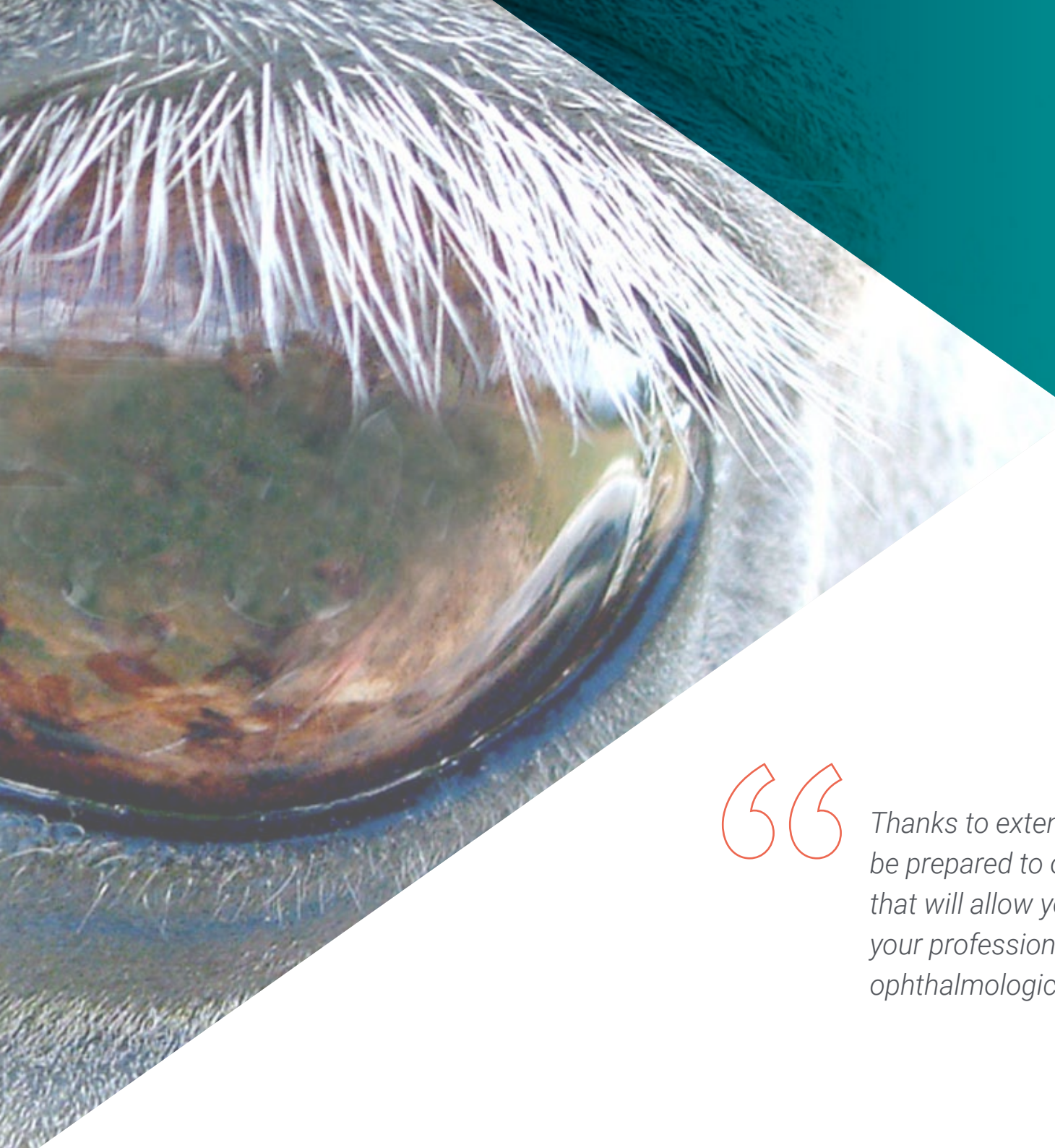
- 1.3. The Equine Eye
  - 1.3.1. Orbit
  - 1.3.2. Extraocular Muscles and Orbital Fat
  - 1.3.3. Eyeball
- 1.4. Ocular Physiology
  - 1.4.1. Lacrimal Film
  - 1.4.2. Aqueous Humor Physiology
  - 1.4.3. Blood-Aqueous Barrier
  - 1.4.4. Intraocular Pressure
- 1.5. Physiology of Vision in Equids
  - 1.5.1. Light Sensitivity
  - 1.5.2. Motion Sensitivity
  - 1.5.3. Field of Vision
  - 1.5.4. Visual Acuity
  - 1.5.5. Color Vision in Horses
- 1.6. Ophthalmological Examination
  - 1.6.1. Remote Ophthalmological Examination
  - 1.6.2. Medical History
  - 1.6.3. Instruments for Ophthalmological Examination
- 1.7. Neuro-Ophthalmology
  - 1.7.1. Neuro-Ophthalmology
  - 1.7.2. Palpebral Reflex
  - 1.7.3. Threat Response
  - 1.7.4. Dazzle Reflex
  - 1.7.5. Pupillary Light Reflex
  - 1.7.6. Corneal Reflex
- 1.8. Close Ophthalmologic Examination
  - 1.8.1. Biomicroscopy
  - 1.8.2. Direct Ophthalmoscopy
  - 1.8.3. Indirect Ophthalmoscopy
    - 1.8.3.1. Monocular Indirect Ophthalmoscopy
  - 1.8.4. Ophthalmical Examination Tests
    - 1.8.4.1. Schirmer Test
    - 1.8.4.2. Phenol Red Test
    - 1.8.4.3. Fluorescein Test
    - 1.8.4.4. Break Up Time (BUT)
    - 1.8.4.5. Jones Test
    - 1.8.4.6. Seidel Test
    - 1.8.4.7. Rose Bengal
    - 1.8.4.8. Lissamine Green
  - 1.8.5. Tonometry
    - 1.8.5.1. Applanation Tonometry
    - 1.8.5.2. Rebound Tonometry
  - 1.8.6. Iridocorneal Angle Examination
- 1.9. Cytology, Biopsy and Imaging in Equids
  - 1.9.1. Cytology Sampling
    - 1.9.1.1. Conjunctival Cytology
    - 1.9.1.2. Corneal Cytology
    - 1.9.1.3. Aqueous Humor Cytology
  - 1.9.2. Biopsy Sampling
  - 1.9.3. Ocular Ultrasound
    - 1.9.3.1. Anterior Segment Ultrasound
    - 1.9.3.2. Posterior Segment Ultrasound
    - 1.9.3.3. Orbit Ultrasound
    - 1.9.3.4. Ultrasound Biomicroscopy (UBM)
- 1.10. Electroretinography in Equids
  - 1.10.1. Electroretinography
  - 1.10.2. Placement of Electrodes in Horses
  - 1.10.3. Interpretation of Electroretinography (ERG)

03

# Teaching Objectives

The main goal of this program is to train veterinarians in the most advanced and accurate techniques to evaluate the ocular health of horses. Therefore, the program will address one of the most critical aspects of Equine Medicine: the early detection and diagnosis of ocular pathologies that can compromise the welfare and performance of these animals. Likewise, TECH's main goal is the development of practical skills in the use of the slit lamp, tonometry and ophthalmoscopy. Therefore, graduates will know how to perform a complete examination of the equine eye, identifying common conditions and anomalies.





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*Thanks to extensive study material, you will be prepared to offer a specialized service that will allow you to differentiate yourself in your professional field, ensuring high quality ophthalmologic care for patients”*



## General Objectives

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- ♦ Acquire knowledge of equine ocular anatomy and its specific characteristics
- ♦ Develop skills in performing complete ophthalmologic examinations in equines
- ♦ Learn to use diagnostic tools such as slit lamp and tonometry
- ♦ Identify and diagnose common ocular pathologies in horses using clinical tests
- ♦ Improve ability to interpret the results of complementary ophthalmologic tests
- ♦ Implement treatment and management protocols for equine ocular conditions
- ♦ Acquire skills in the prevention of ocular disease through periodic evaluations
- ♦ Encourage clinical decision making based on equine ophthalmologic diagnosis





## Specific Objectives

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- ◆ Perform accurate ophthalmologic examination techniques to identify ocular alterations
- ◆ Analyze the results of advanced diagnostic tests to evaluate ocular health in equids
- ◆ Implement standardized protocols for early detection of ophthalmologic diseases
- ◆ Utilize specialized tools and equipment to ensure a comprehensive ocular evaluation

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*Take advantage of the flexibility of online learning while immersing yourself in a rigorous curriculum tailored to the demands of the modern working world in Equine Ophthalmology”*

# 04

# Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.





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*TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”*

## The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes  
(which you might not be able to attend)”*



### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

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*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”*

## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”*

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

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
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. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

## The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### 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.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



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

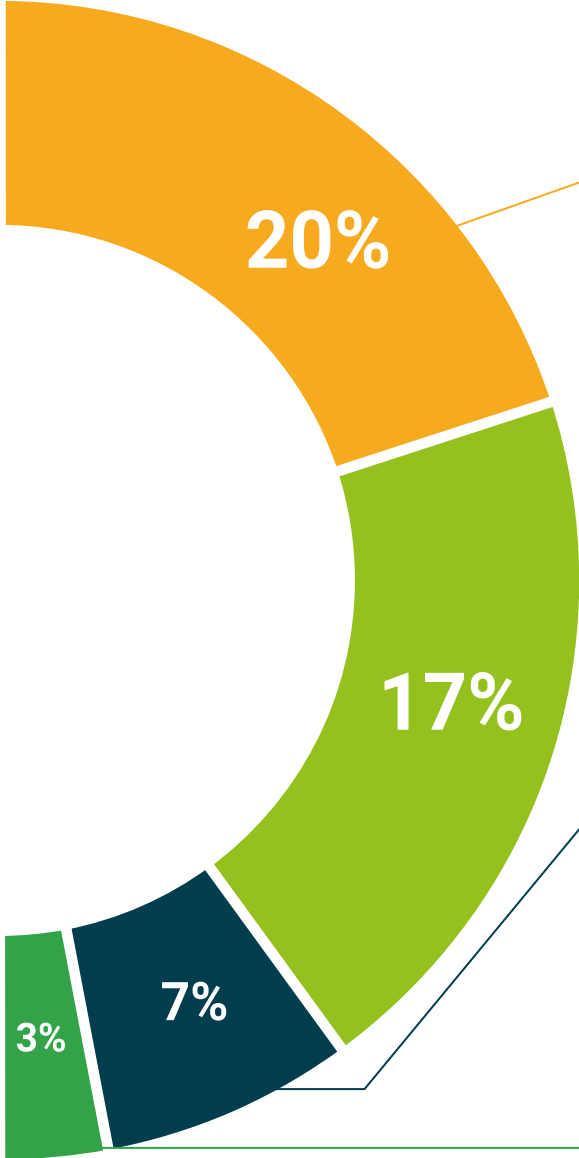


#### Additional Reading

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







**Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



**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 for 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.



05

# Teaching Staff

The teaching staff is made up of top level professionals with extensive experience in Equine Ophthalmology. These experts, with a solid background in veterinary clinics, specialized hospitals and research centers, offer training based on real cases and advanced ocular diagnostic techniques in horses. Thanks to their practical experience and up-to-date knowledge, students will not only acquire skills in the handling of specialized equipment, but will also develop a deep understanding of the most common ocular pathologies in equines. In this way, graduates will be prepared to apply their knowledge with confidence in the professional environment.





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*TECH will provide you with an excellent teaching team, capable of efficiently guiding you to assimilate all the contents proposed in this curriculum”*

## Management



### Dr. Arteaga Sancho, Kevin

- ♦ Senior Ophthalmologist at CityU VMC
- ♦ Expert in Basic Sciences in Ophthalmology from the University of California
- ♦ Specialist in Veterinary Ophthalmology from the University of Barcelona
- ♦ Master's Degree in Small Animal Medicine from the University of Murcia
- ♦ Degree in Veterinary Medicine from the CEU University of Valencia

## Professors

### Dr. Laguna Sanz, Fernando

- ♦ Head of Ophthalmology Service at Puchol Veterinary Hospital
- ♦ Expert in Ophthalmology from the Veterinary School of Maisons-Alfort
- ♦ Specialist in Veterinary Ophthalmology by the European Specialist in Veterinary Ophthalmology (ECVO)
- ♦ Degree in Veterinary Medicine from the Complutense University of Madrid



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*All teachers in this program accumulate extensive experience, offering you an innovative perspective on the main advances in this field of study”*

# 06 Certificate

The Postgraduate Certificate in Ophthalmologic Examination in Equines guarantees, in addition to the most accurate and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This private qualification will allow you to obtain a **Postgraduate Certificate in Ophthalmologic Examination in Equines** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University**, is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

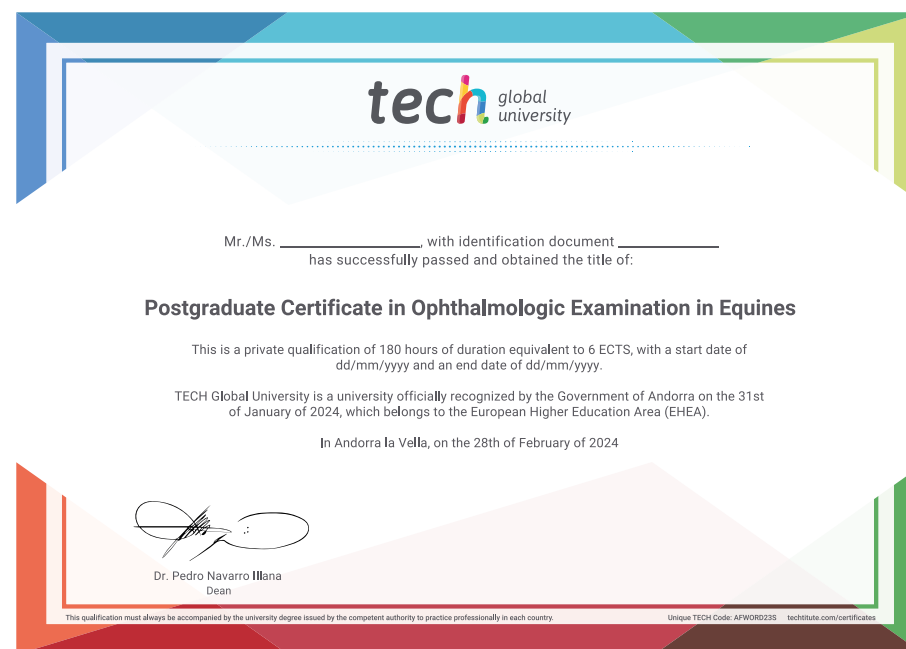
This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Ophthalmologic Examination in Equines**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**







## Postgraduate Certificate Ophthalmologic Examination in Equines

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# Postgraduate Certificate

## Ophthalmologic Examination in Equines

