

Master's Degree

Equine Veterinary Ophthalmology





Master's Degree Equine Veterinary Ophthalmology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 90 ECTS
- » Schedule: at your own pace
- » Exams: online

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01

Introduction to the Program

Equine Veterinary Ophthalmology is a field of growing relevance, given the impact that vision diseases have on the welfare, performance and longevity of these animals. According to the American College of Veterinary Ophthalmologists (ACVO), up to 80% of horses present some type of ocular abnormality during their lifetime, with conditions such as Equine Recurrent Uveitis and Corneal Ulcers being the most prevalent. Under this premise, TECH presents this innovative program that offers advanced training in the diagnosis, treatment and management of related pathologies. This program, taught in 100% online mode, will address the pathologies that affect vision, ranging from the most common disorders to complex conditions such as Glaucoma.





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Would you like to prevent complications that can lead to loss of vision or even the need for euthanasia in severe cases of equines? This 100% online Master's Degree is ideal for you”

Equine Veterinary Ophthalmology is a crucial specialty due to the particular vulnerability of these animals to develop eye problems. In this sense, horses and other equids are highly dependent on their vision to perceive their environment, maintain their balance and respond to possible threats, given their flight instinct. In fact, vision problems, if not treated in a timely and appropriate manner, can affect their well-being, limit their ability to perform and, in extreme cases, even lead to ocular loss or chronic stress conditions.

This Master's Degree in Equine Veterinary Ophthalmology from TECH will provide advanced and specialized training in the diagnosis, treatment and management of ocular diseases. Through a comprehensive approach, the program will provide essential knowledge to understand equine ocular anatomy, physiology and pathology, addressing from the basic fundamentals of Ophthalmology, to the most advanced surgical techniques. Likewise, the academic itinerary allows professionals to acquire a deep understanding of the most common ocular diseases in equines, as well as their effective treatments.

Accordingly, this postgraduate program offers a unique opportunity for veterinarians to broaden their knowledge in a highly specialized area that is in increasing demand. At the employment level, this academic pathway opens doors to multiple opportunities. Graduates specialized in Equine Ophthalmology will position themselves as experts in a discipline that is increasingly valued in specialized clinics, veterinary hospitals and equestrian centers. In addition, having a specialization of this level increases competitiveness in the market, facilitating access to leadership and consulting roles, as well as the possibility of establishing a renowned veterinary practice.

The 100% online modality will offer experts high quality training with the flexibility they need to combine the flexibility they need to combine their training with their professional practice. In turn, this curriculum is structured under the innovative Relearning methodology, an educational technique that allows the assimilation of knowledge in a progressive and natural way through the repetition of key concepts in different contexts, favoring a solid and lasting understanding.

This **Master's Degree in Equine Veterinary Ophthalmology** 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 extensive background in Equine Medicine represents a unique opportunity for those veterinarians who seek to differentiate themselves in a highly demanded field
- ♦ The graphic, schematic and eminently practical content of the book provides scientific and practical information on those disciplines that are essential for professional practice
- ♦ Practical exercises where the process of 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



Through the most innovative methodology in the market, you will approach the contents of Veterinary Ophthalmology in Equines in a dynamic and interactive way, by means of updated and high quality materials"

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Do you want to improve the welfare and quality of life of your equine patients? Join this academic itinerary that will push you to apply the knowledge acquired in diverse environments”

The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing 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.

Thanks to this very complete Master's Degree, you will contribute to the welfare and visual care of equines through professional and specialized attention.

You will be able to identify and treat eye diseases in time, helping to reduce suffering and ensuring that animals can lead a full and healthy life.



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.



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*Study at the world's largest online university
and guarantee your professional success.
The future starts at TECH”*

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

The curriculum of this academic pathway is designed to provide veterinarians with a comprehensive preparation in the diagnosis, treatment and management of ocular diseases in horses and other equids. This program addresses in depth the anatomical, physiological and pathological aspects of the equine eye, allowing the professional to acquire a specialized and practical understanding of the most common conditions in this species. Throughout each module, experts will address from the basic fundamentals of Veterinary Ophthalmology to the most advanced surgical techniques, with a focus on the development of clinical skills applicable to daily practice.



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With an innovative methodology, the syllabus will allow you to advance in your specialization and respond to the visual health needs of equines, both in the clinical and sporting context”

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)

Module 2. Ocular Pathologies in Foals

- 2.1. Ocular Examination in Foals
 - 2.1.1. Vision in Newborn Foals
 - 2.1.2. Neuro-Ophthalmology
 - 2.1.3. Ocular Appendages
 - 2.1.4. Anterior Segment
 - 2.1.5. Tonometry
 - 2.1.6. Funduscopy Examination
 - 2.1.7. Other Complementary Tests
- 2.2. Alterations of the Ocular Appendages in Foals
 - 2.2.1. Congenital Diseases of the Eyelids
 - 2.2.2. Acquired Diseases of the Eyelids
 - 2.2.3. Alterations of the Third Eyelid
 - 2.2.4. Alterations of the Nasolacrimal Duct
- 2.3. Alterations of the Conjunctiva in Foals
 - 2.3.1. Congenital Disorders
 - 2.3.2. Acquired Alterations: Conjunctival Hemorrhage
 - 2.3.3. Acquired Alterations: Conjunctivitis
- 2.4. Congenital Alterations of the Cornea in Foals
 - 2.4.1. Megalocornea
 - 2.4.2. Microcornea
 - 2.4.3. Corneal Dermoids
 - 2.4.4. Corneal Vascularization
- 2.5. Acquired Corneal Alterations in Foals
 - 2.5.1. Ulcerative Keratitis
 - 2.5.2. Corneal Dystrophies
 - 2.5.3. Non-Ulcerative Keratopathies
- 2.6. Congenital Alterations of the Uvea in Foals
 - 2.6.1. Iridial Hypoplasia
 - 2.6.2. Aniridia
 - 2.6.3. Iridial Coloboma
 - 2.6.4. Congenital Myosis
 - 2.6.5. Pigmentary Variations
 - 2.6.6. Anterior Segment Dysgenesis
 - 2.6.7. Persistent Pupillary Membrane
 - 2.6.8. Anterior Iridial Cysts
 - 2.6.9. Other Congenital Alterations
- 2.7. Acquired Alterations of the Uvea in Foals
 - 2.7.1. Anterior Uveitis
 - 2.7.2. Uveitis Secondary to Septicemia
 - 2.7.3. Uveitis due to *Rhodococcus equi*
 - 2.7.4. Uveitis due to Equine Mumps
 - 2.7.5. Uveitis Secondary to Viral Diseases
- 2.8. Alterations of the Crystalline Lens and Glaucoma in Foals
 - 2.8.1. Cataracts
 - 2.8.2. Congenital Lens Dislocation and Ectopic Lens
 - 2.8.3. Coloboma of the Crystalline Lens
 - 2.8.4. Lenticonus and Lentiglobus
 - 2.8.5. Microphakia
 - 2.8.6. Acquired Alterations
- 2.9. Alterations of the Retina and the Optic Nerve in Foals
 - 2.9.1. Retinal Hemorrhages
 - 2.9.2. Coloboma of the Posterior Segment
 - 2.9.3. Hypoplasia of the Optic Nerve
 - 2.9.4. Retinal Dysplasia
 - 2.9.5. Retinal Detachment
 - 2.9.6. Congenital Stationary Congenital Night Blindness
 - 2.9.7. Persistent Hyaline Artery
 - 2.9.8. Acquired Fundus Diseases
- 2.10. Congenital Alterations of the Eyeball and Orbit in Foals
 - 2.10.1. Congenital Glaucoma
 - 2.10.2. Microphthalmia and Anophthalmia
 - 2.10.3. Strabismus
 - 2.10.4. Other Congenital Diseases of the Eyeball
 - 2.10.5. Other Congenital Diseases of the Orbit

Module 3. Diseases and Surgery of the Globe and Orbit in Equids

- 3.1. Clinical Physiology of the Orbit and the Globe in Equids
 - 3.1.1. The Skull, Foramen and Periorbit
 - 3.1.2. Physiology of the Globe
 - 3.1.3. The Vascular Supply of the Orbit
 - 3.1.4. Anatomical Structures Adjacent to the Orbit
- 3.2. Methods for Diagnosis of the Orbit and the Globe in Equids
 - 3.2.1. Oculokinetic Reflexes and Forced Duction Tests
 - 3.2.2. Diagnostic Imaging of the Orbit and Fine Needle Aspiration
 - 3.2.3. Impact of Orbital and Eyeball Pathologies in the Equine Industry
- 3.3. Clinical Symptoms of Orbital Pathologies in Equids
 - 3.3.1. Strabismus and Nystagmus
 - 3.3.2. Abnormalities of the Position and Size of the Globe
 - 3.3.3. Compilation of Additional Symptoms Related to Orbital Pathologies
- 3.4. Congenital Pathologies in Equids
 - 3.4.1. Microphthalmos
 - 3.4.2. Orbital Dermoids
 - 3.4.3. Orbital and Globe Vascular Anomalies
- 3.5. Acquired Traumatic Pathologies in Equids
 - 3.5.1. Exophthalmia and Ocular Proptosis
 - 3.5.2. Perforation of the Globe
 - 3.5.3. Ocular Injuries Associated with Facial Trauma
 - 3.5.4. Penetration of Foreign Bodies into the Orbit
 - 3.5.5. Orbital Fat Prolapse
- 3.6. Acquired Infectious and Inflammatory Pathologies in Equids
 - 3.6.1. Orbital Velutitis
 - 3.6.2. Parasitic Orbital Diseases
 - 3.6.3. Periostitis
 - 3.6.4. Nutritional Myopathy
 - 3.6.5. Pseudotumor
- 3.7. Orbital Tumors in Equids
 - 3.7.1. Diagnosis, Treatment and Prognosis
 - 3.7.2. Nasal and Orbital Adenocarcinomas
 - 3.7.3. Angiosarcomas and Hemangiosarcomas
 - 3.7.4. Malignant Rhabdoid Tumors
 - 3.7.5. Medulloepitheliomas and Meningiomas

- 3.8. Periorbital Pathologies in Equids
 - 3.8.1. Sinusitis
 - 3.8.2. Nasal and Sinus Cysts
 - 3.8.3. Nasal and Sinus Neoplasms
 - 3.8.4. Guttural Pouch Pathologies
- 3.9. Treatment of Orbital Pathologies in Equids
 - 3.9.1. Medical Treatment
 - 3.9.2. Tarsorrhaphy
 - 3.9.3. Soft Tissue Injuries
 - 3.9.4. Orbital Fractures
- 3.10. Orbital Surgery in Equids
 - 3.10.1. Orbital Examination
 - 3.10.2. Enucleation
 - 3.10.3. Exenteration
 - 3.10.4. Radical Eyelid Resection, Grafting and Expansion of Adjacent Skin
 - 3.10.5. Orbital Implants, Evisceration with Intrasccleral Implant and Prosthesis
 - 3.10.6. Retrobulbar Block and Surgeries under Sedation with Local Anesthesia
 - 3.10.7. Related Surgeries: Sinus Trepanations and Dental Surgeries

Module 4. Diseases and Surgery of Ocular Appendages and Lacrimal Apparatus in Equids

- 4.1. Physiology of the Ocular Appendages in Equids
 - 4.1.1. Upper and Lower Eyelid
 - 4.1.2. Histological Structure of the Eyelids
 - 4.1.3. Conjunctiva and Nictitating Membrane: Anatomy and Functions
 - 4.1.4. Innervation and Vascularization of the Eyelids and Conjunctiva
 - 4.1.5. Anatomical Variations in Different Breeds of Horses
- 4.2. Nasolacrimal System in Equids
 - 4.2.1. Nasolacrimal System
 - 4.2.2. Role of the Nasolacrimal System in Tear Drainage
 - 4.2.3. Main Lacrimal Gland and Accessory Glands
 - 4.2.4. Structure of the Nasolacrimal Duct

- 4.3. Physiology of Lacrimal Production and the Tear Film in Equids
 - 4.3.1. Basal and Reflex Tear Production
 - 4.3.2. Function of the Tear Film
 - 4.3.3. Composition of the Tear Film: Aqueous, Lipid and Mucous Layer
 - 4.3.4. Role of the Tear Film in Corneal Protection
 - 4.3.5. Relationship between Blinking and Tear Distribution
- 4.4. Congenital Pathologies of the Appendages in Equids
 - 4.4.1. Congenital Entropion and Management
 - 4.4.2. Ankyloblepharon: Diagnosis and Treatment
 - 4.4.3. Coloboma: Clinical Presentation and Correction
 - 4.4.4. Dermoid: Identification and Therapeutic Approach
 - 4.4.5. Subconjunctival Hemorrhages: Diagnosis and Management
- 4.5. Pathologies of the Eyelids in Equids
 - 4.5.1. Blepharitis: Types and Treatment
 - 4.5.2. Chalazion, Ditchiasis, Dystrichiasis, Ectopic Cilia and Sty
 - 4.5.3. Entropion in Adults and Ectropion: Causes and Correction
 - 4.5.4. Traumatic Eyelid Lacerations
 - 4.5.5. Palpebral Neoplasms: Diagnosis and Surgical Management
- 4.6. Pathologies of the Conjunctiva and Nictitating Membrane in Equids
 - 4.6.1. Infectious Conjunctivitis
 - 4.6.2. Allergic and Autoimmune Conjunctivitis
 - 4.6.3. Neoplasms of the Conjunctiva and Nictitating Membrane
 - 4.6.4. Conjunctival Pseudotumors in Horses
 - 4.6.5. Complications of Chronic Conjunctivitis
- 4.7. Pathologies of the Nasolacrimal System in Equids
 - 4.7.1. Congenital Diseases of the Nasolacrimal System
 - 4.7.1.1. Epiphora: Differential Diagnosis
 - 4.7.1.2. Atresia of the Nasolacrimal Duct
 - 4.7.1.3. Lacrimal Punctal Malformations
 - 4.7.1.4. Nasolacrimal Obstructions in Foals
 - 4.7.2. Inflammatory Diseases of the Nasolacrimal System
 - 4.7.2.1. Acquired Obstructions of the Nasolacrimal Duct
 - 4.7.2.2. Dacryocystitis: Causes and Management
 - 4.7.2.3. Chronic Inflammation of the Nasolacrimal System
 - 4.7.3. Quantitative and Qualitative Keratoconjunctivitis Sicca

- 4.8. Diagnosis of Diseases of the Nasolacrimal System and Eyelids in Equids
 - 4.8.1. Schirmer's Test and Its Use in Lacrimal Evaluation
 - 4.8.2. Dacryocystography Other Imaging Techniques
 - 4.8.3. Microbiological and Immunological Evaluation of Lacrimal Pathologies
 - 4.8.4. Advanced Methods for the Diagnosis of Keratoconjunctivitis Sicca
- 4.9. Surgical Treatments of Pathologies of the Nasolacrimal System and Eyelids in Equids
 - 4.9.1. Surgical Correction of Entropion and Ectropion
 - 4.9.2. Reconstructive Eyelid Surgery
 - 4.9.3. Nasolacrimal Duct Probing
 - 4.9.4. Dacryocystorhinostomy: Indications and Surgical Techniques
 - 4.9.5. Post-Surgical Complications and Management
- 4.10. Complex Cases in Pathology of the Ocular Appendages and the Nasolacrimal System in Equids
 - 4.10.1. Complex Cases of Blepharitis
 - 4.10.2. Surgical Treatment of Palpebral Neoplasms
 - 4.10.3. Management of Chronic Epiphora in Sport Horses
 - 4.10.4. Case of Qualitative Keratoconjunctivitis Sicca
 - 4.10.5. Postoperative Follow-Up in Lacrimal Surgery

Module 5. Diseases and Surgery of the Cornea and Sclera in Equids

- 5.1. Histology of the Cornea in Equids
 - 5.1.1. Conformation
 - 5.1.2. Histological Structure
 - 5.1.3. Scleral-Corneal Limbus
 - 5.1.4. Vascularization and Innervation
- 5.2. Physiology of the Cornea in Equids
 - 5.2.1. Biochemical Composition
 - 5.2.2. Corneal Transparency
 - 5.2.3. Nutrition
 - 5.2.4. Epithelial, Stromal and Endothelial Scarring
 - 5.2.5. Practical Considerations
- 5.3. Sclera and Limbus in Equids
 - 5.3.1. Examination of the Sclera
 - 5.3.2. Malformations: Scleral Coloboma
 - 5.3.3. Scleral Inflammation and Lacerations
 - 5.3.4. Thinning and Sclerectasia of the Sclera
 - 5.3.5. Neoplasms of the Sclera and Limbus
 - 5.3.6. Orbital Fat Prolapse and Parasitic Diseases of Scleral Localization

- 5.4. Pharmacological Principles of Ocular Therapy in Equids
 - 5.4.1. Routes of Administration
 - 5.4.2. Penetration through the Cornea
 - 5.4.3. Penetration through the Limbus-Sclera
 - 5.4.4. Periocular or Intraocular Injections
 - 5.4.5. Anti-Infectives, Anti-Inflammatories and Immunomodulators
- 5.5. Semiology of Corneal Modifications in Equids except for Ulcers
 - 5.5.1. Semiology of Corneal Modifications in Equids
 - 5.5.2. Functional Manifestations
 - 5.5.3. Physical Modifications
 - 5.5.3.1. Dimensional and Curvature Anomalies
 - 5.5.3.2. Corneal Edema
 - 5.5.3.3. Corneal Neovascularization
 - 5.5.3.4. Corneal Pigmentation
 - 5.5.3.5. Other Alterations of Corneal Transparency
- 5.6. Conditions of the Cornea of the Horse: Congenital Conditions, Non-Infectious Ulcerative Keratitis and Corneal Lesions
 - 5.6.1. Congenital Conditions
 - 5.6.2. Non-Infectious Ulcerative Keratitis
 - 5.6.3. Corneal Lesions
- 5.7. Conditions of the Cornea of the Horse: Bacterial, Viral, and Immune-Mediated Ulcerative Keratitis and Stromal Abscesses
 - 5.7.1. Bacterial and Mycotic Ulcerative Keratitis
 - 5.7.2. Stromal Abscesses
 - 5.7.3. Viral Keratitis
 - 5.7.4. Immune-Mediated Keratitis
- 5.8. Conditions of the Cornea of the Horse: Parasitic Keratitis, Corneal Degenerations and Corneal Neoplasms
 - 5.8.1. Parasitic Keratitis
 - 5.8.2. Corneal Degeneration
 - 5.8.3. Corneal Neoplasms
- 5.9. Therapeutic Strategy for Corneal Ulcer in Equids
 - 5.9.1. Acute Epithelial Ulcer
 - 5.9.2. Chronic or Recurrent Epithelial Ulcer
 - 5.9.3. Stromal Ulcer
 - 5.9.4. Pre-Descemetocidal Ulcer or Descemetocoele and Corneal Perforation

- 5.10. Surgical Treatment of Corneal Ulcers in Equids
 - 5.10.1. Surgical Aspects of Etiologic Treatment
 - 5.10.2. Surgical Aspects of Symptomatic Treatment
 - 5.10.3. Surgical Techniques
 - 5.10.4. Other Techniques

Module 6. Diseases and Surgery of the Anterior Uvea in Equids

- 6.1. Ocular Physiology and Exploration Applied to the Equine Anterior Uvea
 - 6.1.1. Anterior Uvea
 - 6.1.2. Physiology of the Anterior Uvea
 - 6.1.2.1. Aqueous Humor Formation
 - 6.1.2.2. Accommodation of the Crystalline Lens
 - 6.1.2.3. Blood-Aqueous Barrier
 - 6.1.3. Ocular Examination Related to the Anterior Uvea
 - 6.1.3.1. Biomicroscopy
 - 6.1.3.2. Tonometry
 - 6.1.3.3. Ocular Ultrasound
- 6.2. Congenital and Developmental Abnormalities of the Anterior Uvea in Equids
 - 6.2.1. Embryonic Development of the Anterior Uvea
 - 6.2.2. Congenital Abnormalities
 - 6.2.2.1. Aniridia
 - 6.2.2.2. Iris Heterochromia
 - 6.2.2.3. Persistent Pupillary Membranes
 - 6.2.2.4. Hypoplasia vs. Coloboma
 - 6.2.2.5. Peter's Anomaly
 - 6.2.2.6. Uveal Cysts
 - 6.2.3. Rocky Mountain Multiple Congenital Anomalies Syndrome
- 6.3. Inflammatory Diseases of the Uvea in Equids
 - 6.3.1. Inflammatory Diseases of the Uvea
 - 6.3.2. Clinical Signs of Acute Anterior Uveitis
 - 6.3.3. Differential Diagnosis of Acute Anterior Uveitis
- 6.4. Inflammatory Diseases of the Uvea in Equids. Protocol, Treatment and Sequelae
 - 6.4.1. Diagnostic Protocol of Acute Anterior Uveitis
 - 6.4.2. Medical Treatment of Acute Anterior Uveitis
 - 6.4.3. Sequelae of Acute Anterior Uveitis: When Uveitis Becomes Chronic

- 6.5. Equine Recurrent Uveitis (ERU)
 - 6.5.1. Significance of Equine Recurrent Uveitis (ERU)
 - 6.5.2. ERU Classification
 - 6.5.2.1. Classical Presentation
 - 6.5.2.2. Insidious Presentation
 - 6.5.2.3. Posterior Presentation
- 6.6. Equine Recurrent Uveitis (ERU). Pathophysiology and Histopathology
 - 6.6.1. Pathophysiology and Histopathology of Equine Recurrent Uveitis (ERU)
 - 6.6.2. Pathophysiology of ERU
 - 6.6.3. Histopathology in ERU
- 6.7. Equine Recurrent Uveitis (ERU). Treatment and Prognosis
 - 6.7.1. Medical Treatment of ERU
 - 6.7.2. Surgical Treatment of ERU
 - 6.7.3. Prognosis of ERU
- 6.8. Equine Heterochromic Iridocyclitis with Secondary Keratitis (HIK)
 - 6.8.1. Clinical Signs of HIK
 - 6.8.2. Pathophysiology of HIK
 - 6.8.3. Treatment of HIK
 - 6.8.4. Prognosis of HIK
- 6.9. Uveal Trauma in Equids
 - 6.9.1. Clinical Signs
 - 6.9.2. Pathophysiology of Acute Trauma
 - 6.9.3. Medical Treatment of Uveal Trauma
 - 6.9.4. Prognosis of Uveal Trauma
- 6.10. Neoplastic Diseases of the Equine Uvea
 - 6.10.1. Primary Tumors of the Neuroectoderm
 - 6.10.2. Melanocytic Tumors
 - 6.10.3. Non-Melanocytic Tumors
 - 6.10.4. Metastatic Tumors

Module 7. Glaucoma in Equids

- 7.1. Glaucoma in Equids
 - 7.1.1. Glaucoma as a Neurodegenerative Disease
 - 7.1.2. Pressure as a Main Risk Factor
 - 7.1.3. Socioeconomic Implication of Glaucoma in the Equine Species
- 7.2. Pathophysiology of Aqueous Humor in Equids
 - 7.2.1. Goldmann Equation
 - 7.2.2. Formation of Aqueous Humor
 - 7.2.3. Drainage of Aqueous Humor
- 7.3. Keys to Ophthalmologic Examination in Equids
 - 7.3.1. Tonometry
 - 7.3.2. Gonioscopy
 - 7.3.3. Ophthalmoscopy (Direct and Indirect)
 - 7.3.4. HRUS, UBM and OCT
- 7.4. Classification of Glaucoma in Equids
 - 7.4.1. Congenital Glaucoma
 - 7.4.2. Primary Glaucoma
 - 7.4.3. Secondary Glaucoma
- 7.5. Clinical Signs of Glaucoma in Equids
 - 7.5.1. Nonspecific
 - 7.5.2. Specific
 - 7.5.3. Sequelae
- 7.6. Therapeutic Objectives in the Treatment of Glaucoma in Equids
 - 7.6.1. Proposed Therapy
 - 7.6.2. Medical Treatment Objectives
 - 7.6.3. Surgical Treatment Objectives
- 7.7. Antiglaucomatous Drugs in Equids
 - 7.7.1. Parasympathomimetics: Cholinergic Agonists
 - 7.7.2. Adrenergic Agonists and Antagonists
 - 7.7.3. Carbonic Anhydrase Inhibitors



- 7.8. Glaucoma Surgery in Equids: Visual Eye
 - 7.8.1. Acuocentesis
 - 7.8.2. Cyclocryoablation
 - 7.8.3. Gonioimplants (Valved and Non-Valved)
 - 7.8.4. Diode Laser Photocoagulation (Transscleral and Endoscopic)
- 7.9. Glaucoma Surgery in Equids: Blind Eye
 - 7.9.1. Chemical Cycloablation
 - 7.9.2. Enucleation
 - 7.9.3. Evisceration
- 7.10. Prognosis of Glaucoma Surgery in Equids
 - 7.10.1. Explanation of the Prognosis at the First Visit
 - 7.10.2. Prognosis in the Short, Medium and Long Term
 - 7.10.3. Recommendations for Monitoring

Module 8. Diseases and Surgery in the Crystalline Lens in Equids

- 8.1. Embryology of the Crystalline Lens in Equids
 - 8.1.1. Embryology of the Crystalline Lens in Equids
 - 8.1.2. Histology of the Lens
 - 8.1.3. Alterations in Lenticular Development
- 8.2. Physiology of the Crystalline Lens in Equids
 - 8.2.1. Metabolism of the Crystalline Lens
 - 8.2.2. Alterations in Crystalline Lens Metabolism
 - 8.2.3. Transparency and Refraction of the Lens
- 8.3. Examination of the Crystalline Lens in Equids
 - 8.3.1. Limits of Examinations in the Field
 - 8.3.2. Pupillary Dilation, Pharmacology of Iris Dilators and Cycloplegics
 - 8.3.3. Slit-Lamp Evaluation of the Lens
 - 8.3.4. Lens Dilation with Direct Use of Retroillumination
 - 8.3.5. Peculiarities of the Examinations in Newborns

- 8.4. Alterations of Lenticular Transparency in Equids
 - 8.4.1. Congenital Disorders
 - 8.4.2. Hereditary Disorders
 - 8.4.3. Acquired Disorders
- 8.5. Alterations of Lenticular Transparency in Equids: Cataracts
 - 8.5.1. Extralenticular
 - 8.5.2. Capsulolenticulars
 - 8.5.3. Lenticulars
 - 8.5.3.1. Focal Cataracts
 - 8.5.3.2. Suture Line Cataracts
 - 8.5.3.3. Axial Cataracts
 - 8.5.3.4. Traumatic Cataracts
 - 8.5.3.5. Complete Cataracts
- 8.6. Anatomical Alterations of the Crystalline Lens, Dislocation and Subluxation of the Lens in Equids
 - 8.6.1. Congenital Disorders
 - 8.6.2. Hereditary Disorders
 - 8.6.3. Acquired Disorders
- 8.7. Other Lenticular Changes in Equids
 - 8.7.1. Rupture of the Lenticular Capsule
 - 8.7.2. Anterior Subcapsular Vacuoles
 - 8.7.3. Concentric Cortical Lamination
 - 8.7.4. Age-Associated Physiological Findings
 - 8.7.5. Evaluation of Lesions during Pre-Purchase Examination
- 8.8. Cataract Surgery in Equids
 - 8.8.1. Indications
 - 8.8.2. Previous Diagnostic Tests
 - 8.8.3. Surgical Procedure
 - 8.8.4. Complications
 - 8.8.5. Post Surgical Management

- 8.9. Anterior Lens Luxation Surgery in Equids
 - 8.9.1. Indications
 - 8.9.2. Surgical Procedure
 - 8.9.3. Complications and Post Surgical Management
- 8.10. Medical Management of Patients with Non-Operable Cataracts in Equids
 - 8.10.1. Phacolytic Uveitis
 - 8.10.2. Glaucoma Secondary to Cataracts
 - 8.10.3. Pharmacology of Phacolytic Uveitis

Module 9. Diseases and Surgery of the Vitreous and Retina in Equids

- 9.1. Physiology of the Vitreous and Retina in Equids
 - 9.1.1. Retina and Vitreous
 - 9.1.2. Optic Nerve
 - 9.1.3. Vascularization of the Posterior Segment
 - 9.1.4. Vitreous Structure
 - 9.1.5. The Choroid
- 9.2. Diagnostic Methods of the Posterior Segment in Equids
 - 9.2.1. Slit-Lamp Exam
 - 9.2.2. Direct and Indirect Ophthalmoscopy
 - 9.2.3. Retinography
 - 9.2.4. Fluorescein Angiography
 - 9.2.5. Ocular Ultrasonography to Evaluate the Vitreous and Retina
 - 9.2.6. Optical Coherence Tomography (OCT)
 - 9.2.7. Computerized Axial Tomography (CAT), Magnetic Resonance Imaging (MRI)
 - 9.2.8. Ocular Electrophysiology Studies. Electroretinography, Visual Evoked Potentials
- 9.3. Congenital Diseases of the Posterior Segment in Equids
 - 9.3.1. Retinal Dysplasia
 - 9.3.2. Colobomas of the Retina and Optic Nerve
 - 9.3.3. Persistence of the Hyaloid Artery
 - 9.3.4. Subretinal Hemorrhages in Newborns
 - 9.3.5. Congenital Retinal Detachment
 - 9.3.6. Congenital Stationary Night Blindness (CSNB)
 - 9.3.7. Anterior Segment Dysgenesis and Its Relationship to Posterior Segment Anomalies

- 9.4. Chorioretinitis and Retinal Detachment in Equines
 - 9.4.1. Chorioretinitis: Causes, Diagnosis and Treatment
 - 9.4.2. Retinal Detachment: Types, Diagnosis and Therapeutic Options
 - 9.4.3. Changes Associated with Equine Recurrent Uveitis (ERU)
 - 9.4.4. Chorioretinitis and Detachment Sequelae
- 9.5. Retinal and Vitreous Degenerations in Equids
 - 9.5.1. Age-Related Retinal Degeneration (Senile Retinopathy)
 - 9.5.2. Retinal Degeneration Associated with ERU
 - 9.5.3. Retinal Degeneration due to Nutritional Deficiencies
 - 9.5.4. Retinal Degeneration Associated with Equine Motor Neurone Disease
 - 9.5.5. Degenerative Changes Associated with Systemic Diseases
 - 9.5.6. Vitreous Degeneration in Geriatric Horses
 - 9.5.7. Photic Head Shaking and Its Possible Relationship to the Retina
- 9.6. Inflammatory Diseases of the Posterior Segment and Vitreous in Equids
 - 9.6.1. Chorioretinitis: Causes and Diagnosis
 - 9.6.2. Vitritis: Causes, Diagnosis and Treatment
 - 9.6.3. Inflammatory Optic Neuritis
 - 9.6.4. Chorioretinal Inflammation in Equine Recurrent Uveitis (ERU)
 - 9.6.5. Inflammatory Changes of the Vitreous
- 9.7. Traumatic Injuries and Neoplasms of the Posterior Segment in Equids
 - 9.7.1. Diagnosis of Trauma in the Posterior Segment
 - 9.7.2. Post-Traumatic Retinal Detachment
 - 9.7.3. Evaluation of Intraocular Hemorrhages
 - 9.7.4. Diagnosis and Treatment of Ocular Rupture
 - 9.7.5. Neoplasms of the Posterior Segment
- 9.8. Optic Nerve Diseases in Equids
 - 9.8.1. Optic Neuropathies in Equids
 - 9.8.2. Exudative Optic Neuritis
 - 9.8.3. Optic Neuritis
 - 9.8.4. Atrophy of the Optic Nerve
 - 9.8.5. Proliferative Optic Neuropathy
 - 9.8.6. Ischemic Optic Neuropathy
 - 9.8.7. Traumatic Optic Neuropathy

- 9.9. Hereditary Diseases of the Posterior Segment in Equids
 - 9.9.1. Hereditary Retinal Diseases
 - 9.9.2. Hereditary Disorders of the Vitreous
 - 9.9.3. Diagnosis and Prevention of Hereditary Disorders
- 9.10. Management of Blind Horses
 - 9.10.1. Adaptation of Blind Horses
 - 9.10.2. Training and Rehabilitation Techniques
 - 9.10.3. Specific Care and Safety for Horses with Loss of Vision

Module 10. Ocular Manifestations of Systemic Diseases in Equids

- 10.1. Neuro-Ophthalmologic Diseases in Equids
 - 10.1.1. Equine Motor Neuron Disease
 - 10.1.2. Septic Meningoencephalitis
 - 10.1.3. Thiamine Deficiency
 - 10.1.4. Vestibular Disease
 - 10.1.5. Horner's Syndrome
 - 10.1.6. Tetanus
 - 10.1.7. Butulism
 - 10.1.8. Ischemic Neuropathy
 - 10.1.9. Intracranial Neoplasms
 - 10.1.10. Equine Polyneuritis
- 10.2. Viral Diseases in in Equids
 - 10.2.1. Equine Viral Arteritis
 - 10.2.2. Equine Infectious Anemia
 - 10.2.3. Rabies
 - 10.2.4. Equine Herpesvirus
 - 10.2.5. Adenovirus
 - 10.2.6. Equine Influenza
 - 10.2.7. West Nile Virus

- 10.3. Bacterial and Rickettsial Diseases in Equids
 - 10.3.1. Neonatal Septicemia
 - 10.3.2. Equine Infectious Anemia
 - 10.3.3. Mumps
 - 10.3.4. *Rhodococcus equi*
 - 10.3.5. Lyme Disease
 - 10.3.6. Brucellosis
 - 10.3.7. Leptospirosis
 - 10.3.8. Ehrlichiosis
- 10.4. Protozoal Diseases in Equids
 - 10.4.1. Babesiosis (Piroplasmosis)
 - 10.4.2. Toxoplasmosis
 - 10.4.3. Leishmaniasis
- 10.5. Fungal Diseases in Equids
 - 10.5.1. Cryptococcosis
 - 10.5.2. Epizootic Lymphangitis
 - 10.5.3. Aspergillosis
- 10.6. Parasitic Diseases in Equids
 - 10.6.1. Onchocerciasis
 - 10.6.2. Habronemiasis
 - 10.6.3. Echinococcus
- 10.7. Neoplasms in Equids
 - 10.7.1. Primary versus Metastatic Neoplasms
 - 10.7.2. Primary Periocular Neoplasms
 - 10.7.3. Neoplasms surrounding the Eye
- 10.8. Metabolic Diseases in Equids
 - 10.8.1. Metabolic Diseases in Equids
 - 10.8.2. Cushing's Disease
 - 10.8.3. Hypothyroidism





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Through fully updated modules, you will enhance your knowledge to apply immunomodulatory treatments such as surgically implanted cyclosporine”

04

Teaching Objectives

This Master's Degree is aimed at training veterinarians in the diagnosis and specialized treatment of ocular diseases in horses and other equids, strengthening their knowledge and practical skills in this area. The program seeks to provide experts with a deep understanding of the anatomy and physiology of the equine ocular system, as well as the most prevalent pathologies, including Corneal Ulcers, Cataracts and Recurrent Uveitis, which considerably affect the quality of life of these animals.





“

Thanks to the most complete Master's Degree in the market, you will develop advanced skills in the use of specialized diagnostic tools, including ophthalmoscopy, ocular ultrasound and tonometry”



General Objectives

- ♦ Acquire advanced knowledge of the specific ocular anatomy and physiology of equids
- ♦ Effectively diagnose common and complex ocular diseases in horses (corneal ulcers and recurrent uveitis)
- ♦ Develop skills in the use of specialized diagnostic tools, such as ophthalmoscopy, tonometry and ocular ultrasound
- ♦ Learn ophthalmologic surgical techniques to accurately treat ocular injuries and pathologies in equids
- ♦ Implement preventative management protocols to reduce the risk of recurrent ocular disease in horses
- ♦ Apply modern and effective medical and surgical treatments to improve equine eye health
- ♦ Develop skills in the postoperative management and follow-up of equine ophthalmic patients
- ♦ Improve the ability to analyze and solve clinical ophthalmologic cases in the veterinary field



TECH offers you the most complete academic content and unparalleled time flexibility, allowing you to adapt your learning to your daily needs"





Specific Objectives

Module 1. Ophthalmologic Examination in Equines

- ♦ Manage the anatomical and physiological fundamentals of the equine ocular system to properly interpret the findings in the ophthalmologic examination
- ♦ Learn to perform a complete ophthalmologic examination in equids, using basic and advanced eye examination techniques and procedures
- ♦ Master the use of diagnostic tools, such as direct and indirect ophthalmoscopy, biomicroscopy and tonometry, to evaluate ocular health in horses
- ♦ Identify and analyze the initial clinical signs of ocular pathologies in equids, differentiating between common diseases and more complex conditions

Module 2. Ocular Pathologies in Foals

- ♦ Identify the most common ocular pathologies in foals, such as corneal ulcers, conjunctivitis and traumatic lesions, and understand their clinical characteristics
- ♦ Diagnose ocular diseases in foals through the observation of early signs and the use of specialized diagnostic techniques
- ♦ Understand the particularities of the ocular system in foals as compared to adult horses, focusing on neonatal and juvenile diseases
- ♦ Implement prevention strategies and postoperative follow-up to minimize the risk of complications and ensure ocular recovery in foals

Module 3. Diseases and Surgery in the Eyeball and Orbit in Equids

- ♦ Understand the major diseases affecting the eyeball and orbit in equids, including traumatic, infectious, and neoplastic disorders
- ♦ Develop skills to diagnose complex pathologies of the eyeball and orbit with ocular ultrasonography and tomography
- ♦ Evaluate the prognosis of orbital and eyeball diseases, determining treatments to preserve visual function and quality of life
- ♦ Implement appropriate post-surgical follow-up plans to prevent complications and ensure optimal patient recovery

Module 4. Diseases and Surgery of Ocular Appendages and Lacrimal Apparatus in Equids

- ♦ Identify the most common diseases affecting the ocular adnexa and lacrimal apparatus in equids
- ♦ Diagnose disorders of the ocular adnexa and lacrimal apparatus through the use of specialized clinical techniques and diagnostic tools
- ♦ Understand the indications and appropriate surgical techniques to treat conditions of the ocular adnexa and lacrimal apparatus in equids
- ♦ Apply effective medical and surgical treatments for conditions of the ocular adnexa and lacrimal apparatus

Module 5. Diseases and Surgery of the Cornea and Sclera in Equids

- ♦ Identify the most common diseases of the cornea and sclera in equids, such as corneal ulcers, keratitis and scleritis
- ♦ Develop skills in the diagnosis of corneal and scleral conditions through the use of advanced techniques such as fluorescein and biomicroscopy
- ♦ Understand the specific surgical indications and techniques for treating corneal and scleral diseases, such as corneal grafting and keratectomy
- ♦ Apply effective medical and surgical treatments for corneal and scleral pathologies, with a focus on restoring vision and preventing long-term complications

Module 6. Diseases and Surgery in the Anterior Uvea in Equids

- ♦ Identify the most common pathologies of the anterior uvea in equids, such as anterior uveitis, glaucoma and recurrent uveitis syndrome
- ♦ Develop skills in the early diagnosis of diseases of the anterior uvea using screening techniques such as tonometry and anterior chamber assessment
- ♦ Understand the appropriate surgical indications and techniques for treating anterior uveal conditions, such as iridectomy and surgical cleaning in cases of severe uveitis
- ♦ Apply effective medical and surgical treatments for the control and management of anterior uveitis, minimizing the risk of blindness and preserving ocular function

Module 7. Glaucoma in Equids

- ♦ Identify the causes and types of glaucoma in equids, understanding its pathophysiology and the risk factors associated with this ocular disease
- ♦ Diagnose early glaucoma in equids using techniques such as tonometry, corneal thickness measurement and observation of clinical signs
- ♦ Acquire knowledge of medical and surgical treatment options for the management of equine glaucoma, including the use of antihypertensive drugs and surgical techniques such as anterior chamber decompression
- ♦ Understand how to evaluate the progression of patients with glaucoma and make clinical decisions to prevent disease progression and vision loss

Module 8. Diseases and Surgery in the Crystalline Lens in Equids

- ♦ Identify the most common diseases of the lens in equids, such as cataracts and subluxations, understanding their pathophysiology and predisposing factors
- ♦ Develop skills in the diagnosis of lens pathology using specialized techniques such as ophthalmoscopy and ocular ultrasonography
- ♦ Manage treatment options for lens disease, including indications for surgery and the use of intraocular lenses in cases of cataracts
- ♦ Understand the indications and surgical techniques for removal of the affected lens and implantation of intraocular lenses, optimizing the equine's visual recovery

Module 9. Diseases and Surgery of the Vitreous and Retina in Equids

- ♦ Identify the most common diseases of the vitreous and retina in equids, such as vitreous hemorrhage, retinal detachment and posterior uveitis
- ♦ Diagnose pathologies of the vitreous and retina using advanced techniques such as fundus ophthalmoscopy and ocular ultrasonography
- ♦ Manage medical and surgical treatment options for disorders of the vitreous and retina, including vitrectomy and retinal photocoagulation
- ♦ Understand the indications for surgical intervention in cases of severe vitreous and retinal conditions

Module 10. Ocular Manifestations of Systemic Diseases in Equids

- ♦ Identify ocular manifestations associated with systemic diseases in equids, such as diabetes, infectious equinosis and leptospirosis
- ♦ Diagnose ocular alterations secondary to systemic diseases using clinical examination techniques and additional diagnostic tests
- ♦ Understand how systemic diseases affect ocular health and recognize early signs of ocular complications in these cases
- ♦ Apply medical treatments to manage ocular manifestations in systemic diseases, addressing the underlying cause and ocular symptoms

05

Career Opportunities

This academic pathway opens up a range of career opportunities for those who wish to specialize in the ocular care of horses and other equids. With a comprehensive approach, this program provides veterinarians with the knowledge and skills necessary to diagnose, treat and prevent a wide range of ocular pathologies in these animals. In this sense, the professional opportunities are diverse, allowing graduates to work in specialized veterinary clinics, research centers, high-level hospitals and high-performance teams in the equestrian field. In addition, graduates will be able to advise on the prevention and treatment of eye diseases in equines in various areas.



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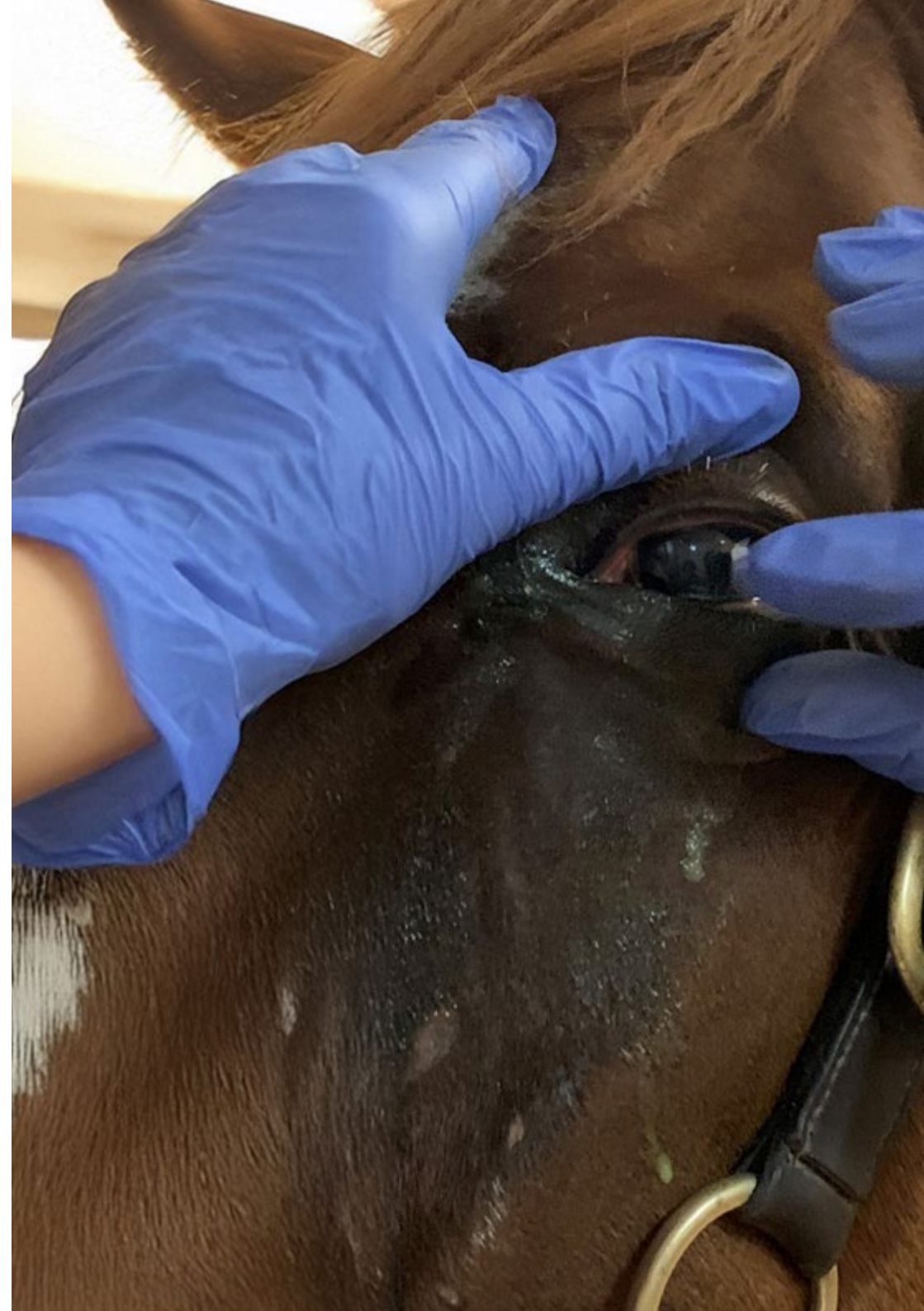
*100% online, without rigid schedules and
with contents available 24 hours a day:
this is the Master's Degree with which
you will boost your career”*

Graduate Profile

The graduate of this Master's Degree from TECH will be a highly trained professional specialized in equine ocular health. They will also have advanced knowledge in anatomy, physiology and ocular pathology of horses, as well as in diagnostic techniques and specific surgical procedures for this species. In addition, you will acquire skills to identify and treat complex diseases affecting the eyeball, adnexa and lacrimal apparatus in equids, applying up-to-date medical and surgical treatments.

With state-of-the-art preparation, you will be prepared to lead in clinics, hospitals and equestrian centers, making a difference in equine welfare and performance.

- ♦ **Clinical Diagnostic and Analytical Skills:** Evaluate and diagnose ocular conditions in equids by interpreting clinical signs and specific tests
- ♦ **Problem-Solving and Decision Making:** Make effective and quick decisions in complex situations, especially in cases of ocular pathologies requiring immediate intervention
- ♦ **Effective Communication and Teamwork:** Communicate clearly and accurately with other veterinary professionals, owners and caregivers, promoting collaborative and multidisciplinary work
- ♦ **Commitment to Continuous Learning:** Constantly update on new techniques, treatments and advances in veterinary ophthalmology to always offer the best care to your patients





After completing the program, you will be able to use your knowledge and skills in the following positions:

- 1. Specialist in Veterinary Ophthalmology for Equines:** In charge of diagnosing and treating eye diseases in horses, applying advanced medical and surgical procedures.
- 2. Veterinarian in Specialized Equine Hospitals:** Provides comprehensive ophthalmic care in hospitals that care for complex vision pathologies in equids.
- 3. Equine Ocular Health Consultant:** Advises clinics and owners on prevention, diagnosis and treatment of ocular problems in competition or working horses.
- 4. Researcher in Equine Ophthalmology:** Develops and participates in research projects on ocular diseases in equids, contributing to scientific advancement in this area. .
- 5. Advisor in Veterinary Training Centers:** Teaches classes and workshops in veterinary training programs, specializing in ophthalmology applied to equids.
- 6. Director of Ophthalmology Services in Veterinary Clinics:** Leads and coordinates the areas of ocular diagnosis and treatment in clinics, ensuring specialized care.
- 7. Field Veterinarian in Large Stables or Farms:** Performs preventive and curative eye evaluations and treatments in high performance or breeding horses.
- 8. Specialist in Visual Health and Wellness for Equestrian Competitions:** Collaborates with competition teams, ensuring the ocular health of equids in order to optimize their performance in sporting events.
- 9. Director of Veterinary Research and Development:** Leads projects focused on innovation for the diagnosis and treatment of equine ocular diseases.
- 10. Technical Advisor in Animal Health Companies:** Collaborate in the development and promotion of products related to equine ophthalmology.

06

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

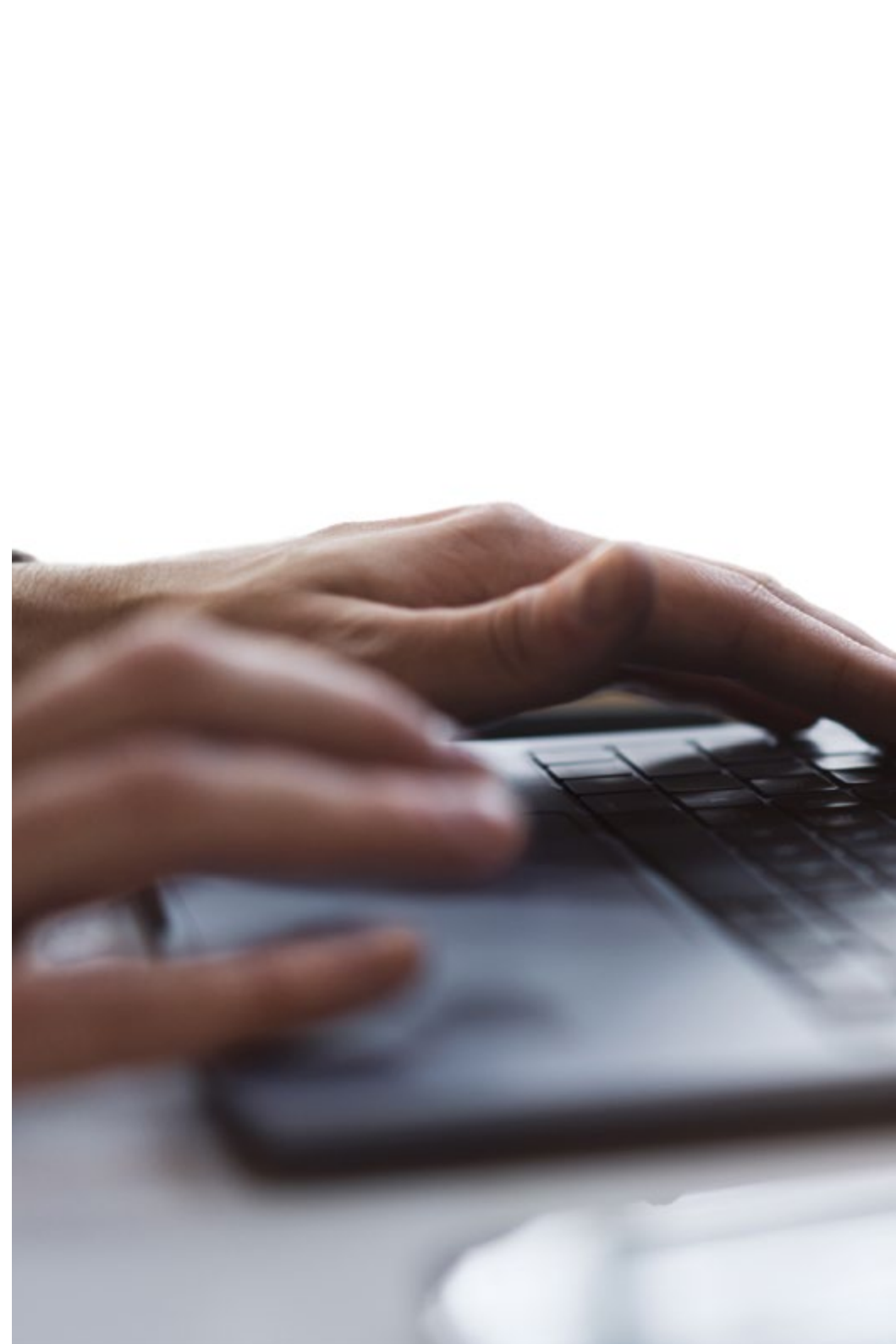
In TECH's study methodology, the student is the main protagonist.

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.

“*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

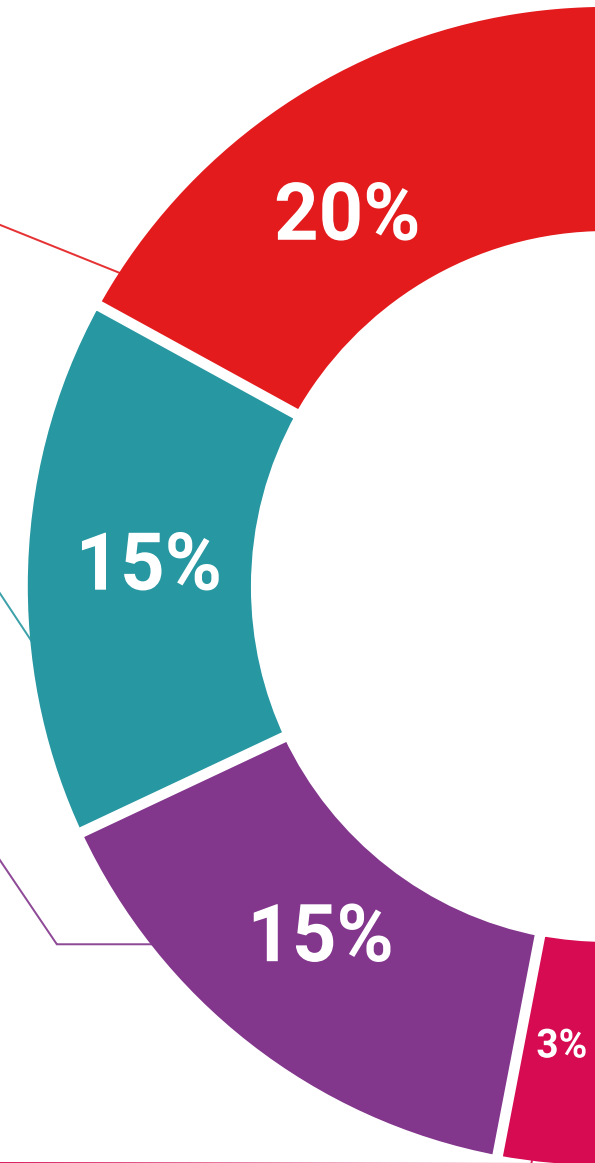
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

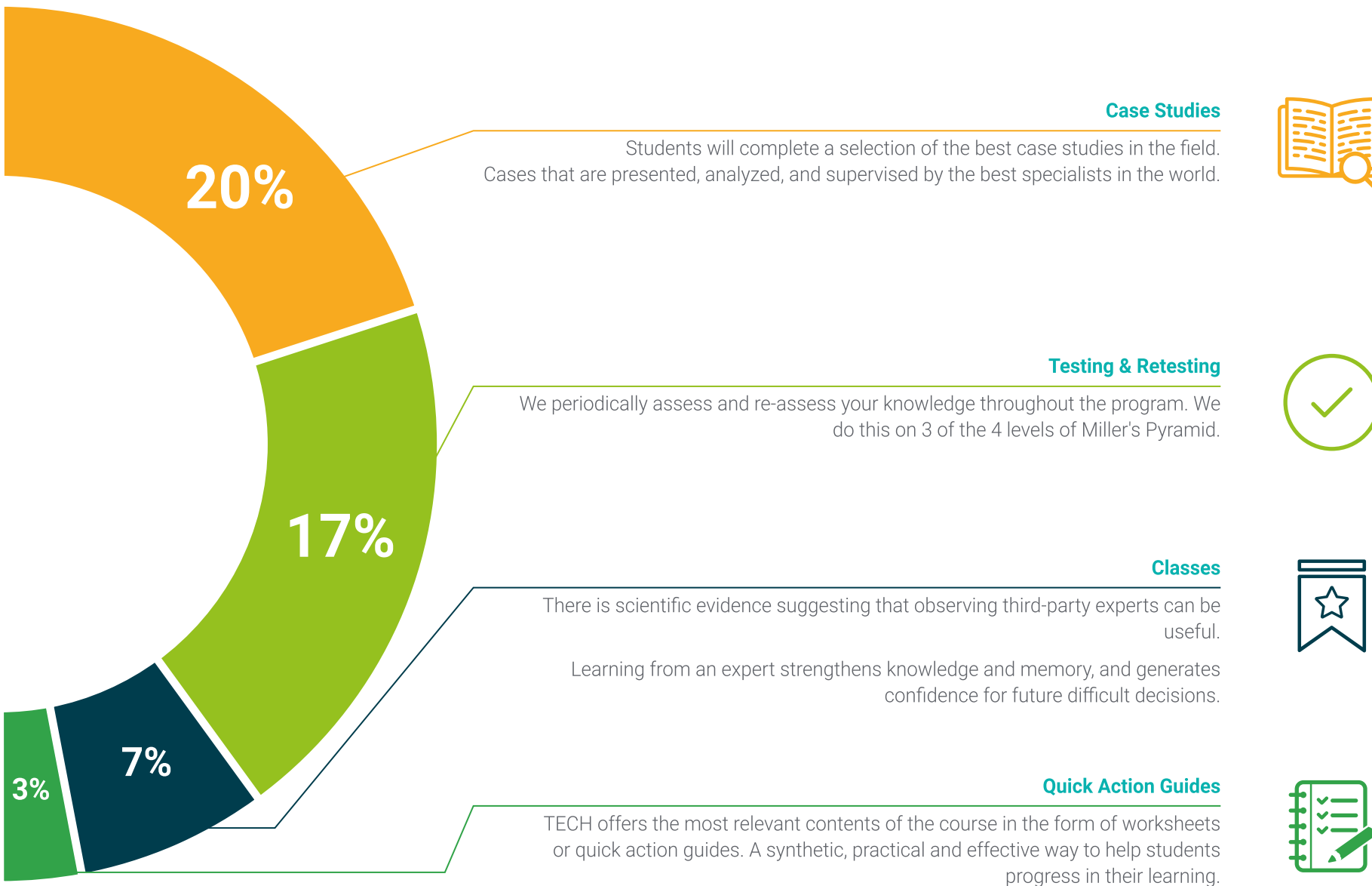
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





07

Teaching Staff

The teaching staff of this university program is composed of highly qualified and recognized experts in the field of Veterinary Medicine and Equine Ophthalmology. In this sense, this team includes professionals with extensive clinical and surgical experience, as well as researchers who contribute to the advancement of knowledge about ocular pathologies in equines. Likewise, the specialists have a solid academic preparation and are constantly updated, which guarantees that they can transmit to the graduates the most advanced knowledge, as well as the most effective diagnostic and therapeutic techniques.



“

The TECH faculty will prepare you and guide you to success in Equine Veterinary Ophthalmology, boosting your career path to improve the quality of the veterinary services you offer”

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. Cantero, Francisco

- ♦ Veterinary Ophthalmologist in AniCura Ars and AniCura Glòries Veterinary Hospitals
- ♦ Expert in Posterior Segment Alterations by the UAB
- ♦ Expert in Ocular Ultrasonography and UBM by the SEOVET
- ♦ Expert in Equine Ophthalmologic Diagnosis by the Ocularvet
- ♦ Specialist in Veterinary Ophthalmology by the European Board of Veterinary Specialization (EBVS)
- ♦ Degree in Veterinary Medicine from the University of Santiago de Compostela

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

Dr. Simó Domenech, Francisco José

- ♦ Medical Director and Founder at the Ophthalmologic Veterinary Institute (IVO)
- ♦ Veterinary Ophthalmologist at Long Island Veterinary Specialists. New York
- ♦ Collaboration with the R&D Department of Alcon Laboratories. El Masnou, Spain
- ♦ Collaborations in the experimental center of Harlan Laboratories
- ♦ Degree in Veterinary Medicine from the University of Zaragoza
- ♦ Postgraduate Degree in Veterinary Ophthalmology from the Autonomous University of Barcelona
- ♦ Residencies at the Veterinary Faculty of Toulouse, with Dr. Marc Simon in Paris and at the Ophthalmology Service of Long Island Veterinary Specialists in New York
- ♦ Accredited by the Association of Spanish Veterinarians Specialists in Small Animals (AVEPA) as a Specialist in Veterinary Ophthalmology
- ♦ Member of: Spanish Society of Veterinary Ophthalmology (SEOVET)

Dr. Orillés Gonzalo, Ángel

- ♦ Head of Ophthalmology Service at AniCura Valencia Sur Veterinary Hospital
- ♦ Doctor of Veterinary Medicine: Doctoral Program in Animal Medicine and Health from the University of Zaragoza
- ♦ Master's Degree in Initiation to Research in Veterinary Sciences from the University of Zaragoza
- ♦ Master's Degree in Small Animal Clinic from the University of Zaragoza
- ♦ Expert in Basic Sciences in Veterinary and Comparative Ophthalmology from the American College of Veterinary Ophthalmologists (ACVO)
- ♦ Specialist in Veterinary Ophthalmology from the Complutense University of Madrid
- ♦ Degree in Veterinary Medicine, specializing in Intensification in Medicine and Surgery of Companion Animals from the University of Zaragoza

Dr. Martín Cuervo, María

- ♦ Head of the Internal Medicine Service of the Clinical Veterinary Hospital of the University of Extremadura
- ♦ Researcher specialized in Large Animals
- ♦ Associate Professor of the Department of Animal Medicine and Surgery, Extremadura University
- ♦ Doctor in Veterinary Medicine from the University of Extremadura
- ♦ Degree in Veterinary Medicine from the University of Córdoba
- ♦ Specialist Veterinarian
- ♦ First prize in the IV edition of the awards of the Royal Academy of Veterinary Sciences and the Tomas Pascual Sanz Institute
- ♦ Pizarro Pious Work Foundation Award of the XLVI Historical Colloquiums of Extremadura
- ♦ Member of: European Board of Veterinary Specialization (EBVS), European College of Equine Internal Medicine (ECEIM) and Spanish Association of Equine Veterinarians (AVEE)

Dr. Herb, Verena

- ♦ Head of Ophthalmology Service in a Multidisciplinary Clinic
- ♦ Doctor of Veterinary Medicine from the Veterinary University of Vienna
- ♦ Certified by the European College of Veterinary Ophthalmology (ECVO)
- ♦ Degree in Veterinary Medicine from the Ludwig-Maximilians-University of Vienna
- ♦ Erasmus at the Faculty of Veterinary Medicine by the Complutense University
- ♦ Member of: Spanish Society of Ophthalmology Veterinarian and International Consortium of Equine Ophthalmology

Dr. Matas Riera, Màrian

- ♦ Administrator-Founding Partner of Memvet - Itinerant Equine Ophthalmology Services Mallorca
- ♦ Specialist in Veterinary Education from the Royal Veterinary College
- ♦ Specialist in Veterinary Ophthalmology by the UAB
- ♦ Certified by the European College of Veterinary Ophthalmology
- ♦ Degree in Veterinary Medicine and Science from the Autonomous University of Barcelona (UAB)
- ♦ Editor of the Journal of AVEPA (Veterinary Association of Small Animal Specialists)

Dr. Molina Choclán, Maribel

- ♦ Founding Partner of El Passeig Veterinary Center
- ♦ Specialist in Veterinary Ophthalmology by the UAB
- ♦ Specialist in Small Animal Veterinary Surgery by the UAB (Modules: Anesthesia and Basic General Surgery)
- ♦ Expert in Alterations of the Posterior Segment (CASP) by the UAB
- ♦ Degree in Veterinary Medicine from the Autonomous University of Barcelona
- ♦ Itinerant Ophthalmologist in Veterinary Clinics
- ♦ Member of: SEOVET and AVEPA - Working Group Ophthalmology

Dr. Jiménez Heras, Laura

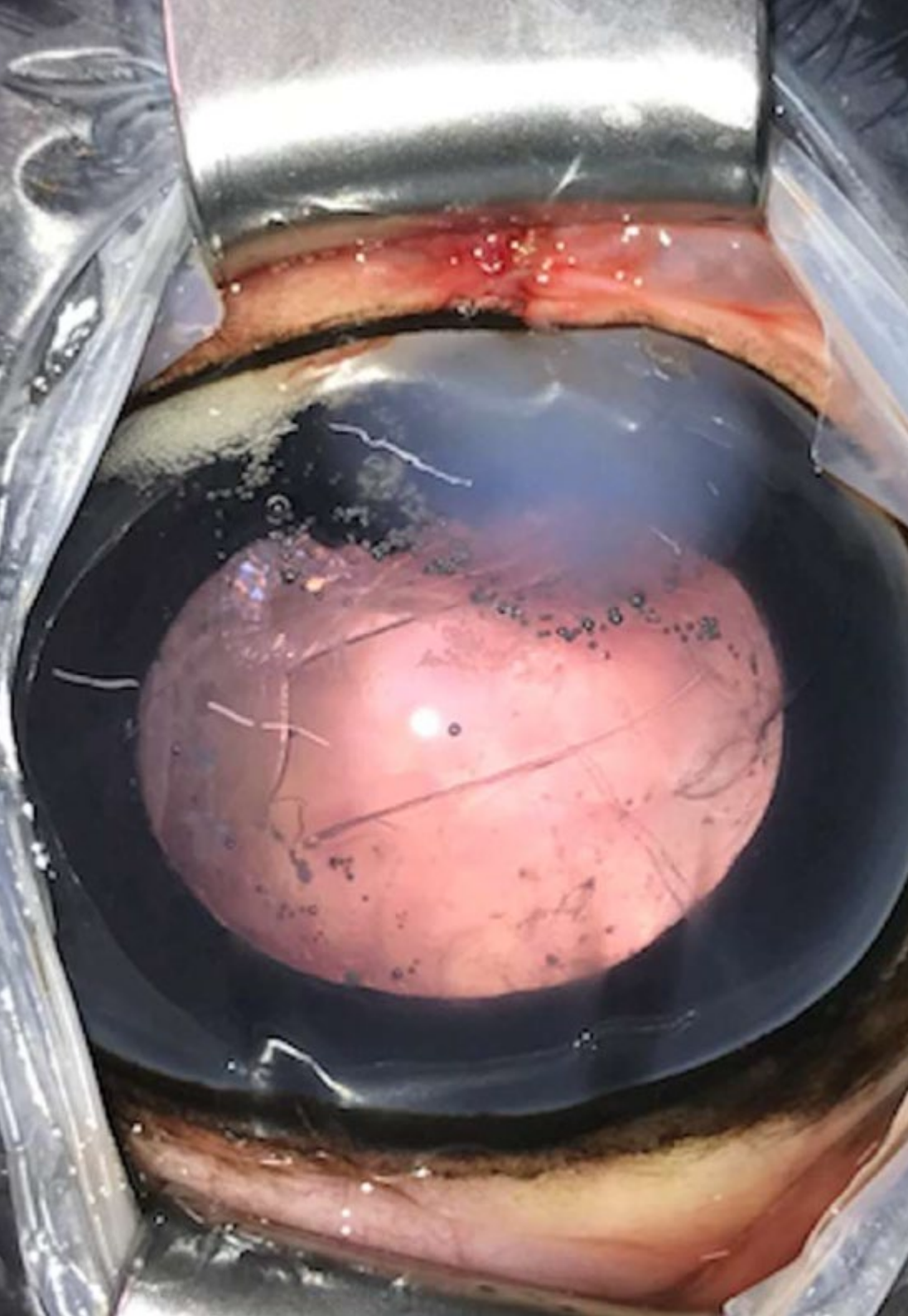
- ♦ Leader of the Ophthalmology and Surgery Service at Eurocan Veterinary Center
- ♦ Specialist in Basic and Advanced Surgery by the Autonomous University of Barcelona
- ♦ Degree in Veterinary Medicine from Alfonso X El Sabio University
- ♦ Certificate of Advanced Studies (CES) in Veterinary Ophthalmology by L'École Nationale Vétérinaire de Toulouse
- ♦ In charge of the Equine Ophthalmology Specialized Consultations

Dr. Simó Vesperinas, María

- ♦ Emergency Veterinarian at Vets Now Emergency Hospital. Manchester
- ♦ Veterinarian in General Medicine at Canis Veterinary Hospital. Girona, Spain
- ♦ Stays at the Texas A&M Veterinary Medical Teaching Hospital
- ♦ Degree in Veterinary Medicine from the Autonomous University of Barcelona
- ♦ Practical program of Microsurgery in Corneal Pathology at the Institute of Ocular Microsurgery (IMO)
- ♦ Veterinary Ophthalmology Congress: "Ocular manifestations of systemic diseases", held at the Institute of Ocular Microsurgery (IMO)
- ♦ Postgraduate in Veterinary Ophthalmology by British Small Animal Veterinary Association

Dr. Castilla Rey, Laura

- ♦ Veterinarian in the Ophthalmology and Support Service at MEMVET
- ♦ Expert in Corneal Microsurgery and Gonioimplant by SEOVET
- ♦ Expert in Basic Abdominal Ultrasound in Small Animals by Quadam Institute
- ♦ Degree in Veterinary Medicine from the University of Córdoba
- ♦ Certified in Veterinary Ophthalmology (CCOV) by the Autonomous University of Barcelona
- ♦ Member of: Spanish Association of Veterinary Ophthalmology (SEOVET)



Dr. Guarnizo Barrionuevo, Carla Pamela

- ♦ Veterinary Technical Assistant (VTA) at the Ophthalmologic Veterinary Institute (IVO)
- ♦ Expert in Ocular Ultrasonography at Oftalmovet Center
- ♦ Expert in Laboratory Analysis at CONCERVET Veterinary Clinic
- ♦ Expert in Ocular Ultrasonography in GENOV
- ♦ Specialist in Neurology, Ophthalmology and Reproduction of Small Animals at the Autonomous University of Barcelona
- ♦ Specialist in Intensive Care and Dermatology at the Autonomous University of Barcelona
- ♦ Specialist in Advanced Veterinary Ophthalmology
- ♦ Diploma in Veterinary Ophthalmology from the Catholic University of Salta
- ♦ Degree in Veterinary and Zootechnics from the Cayetano Heredia Peruvian University



Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"

08 Certificate

The Advanced Master's Degree in Equine Veterinary Ophthalmology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

*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 **Master's Degree in Equine Veterinary Ophthalmology** 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.

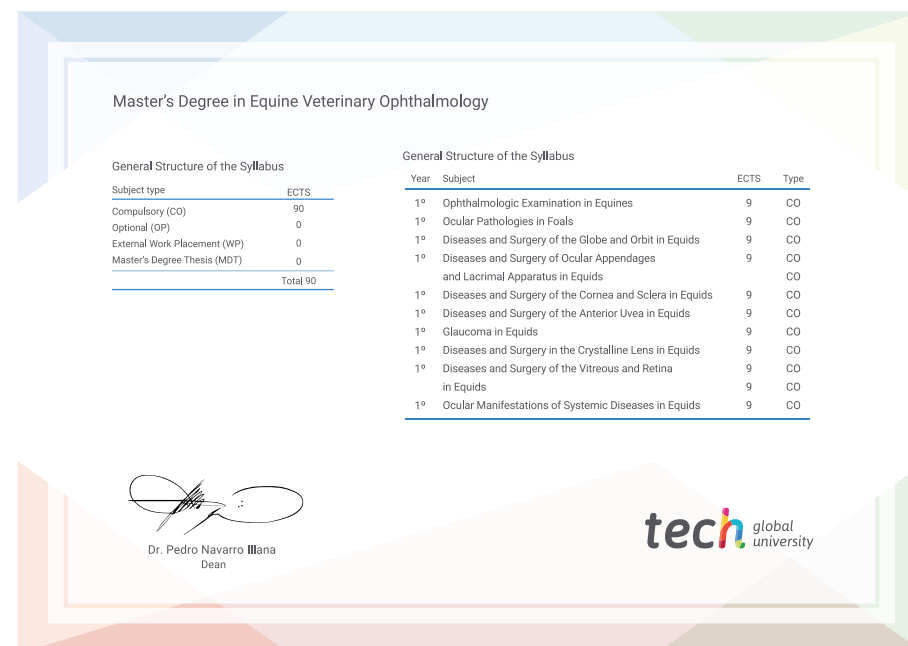
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Master's Degree in Equine Veterinary Ophthalmology**

Modality: **online**

Duration: **12 months**

Accreditation: **90 ECTS**





Master's Degree Equine Veterinary Ophthalmology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Accreditation: 90 ECTS
- » Schedule: at your own pace
- » Exams: online

Master's Degree

Equine Veterinary Ophthalmology

