

# Hybrid Professional Master's Degree

## Small Animal Neurology





## Hybrid Professional Master's Degree

### Small Animal Neurology

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

Website: [www.techtute.com/us/veterinary-medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-small-animal-neurology](http://www.techtute.com/us/veterinary-medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-small-animal-neurology)

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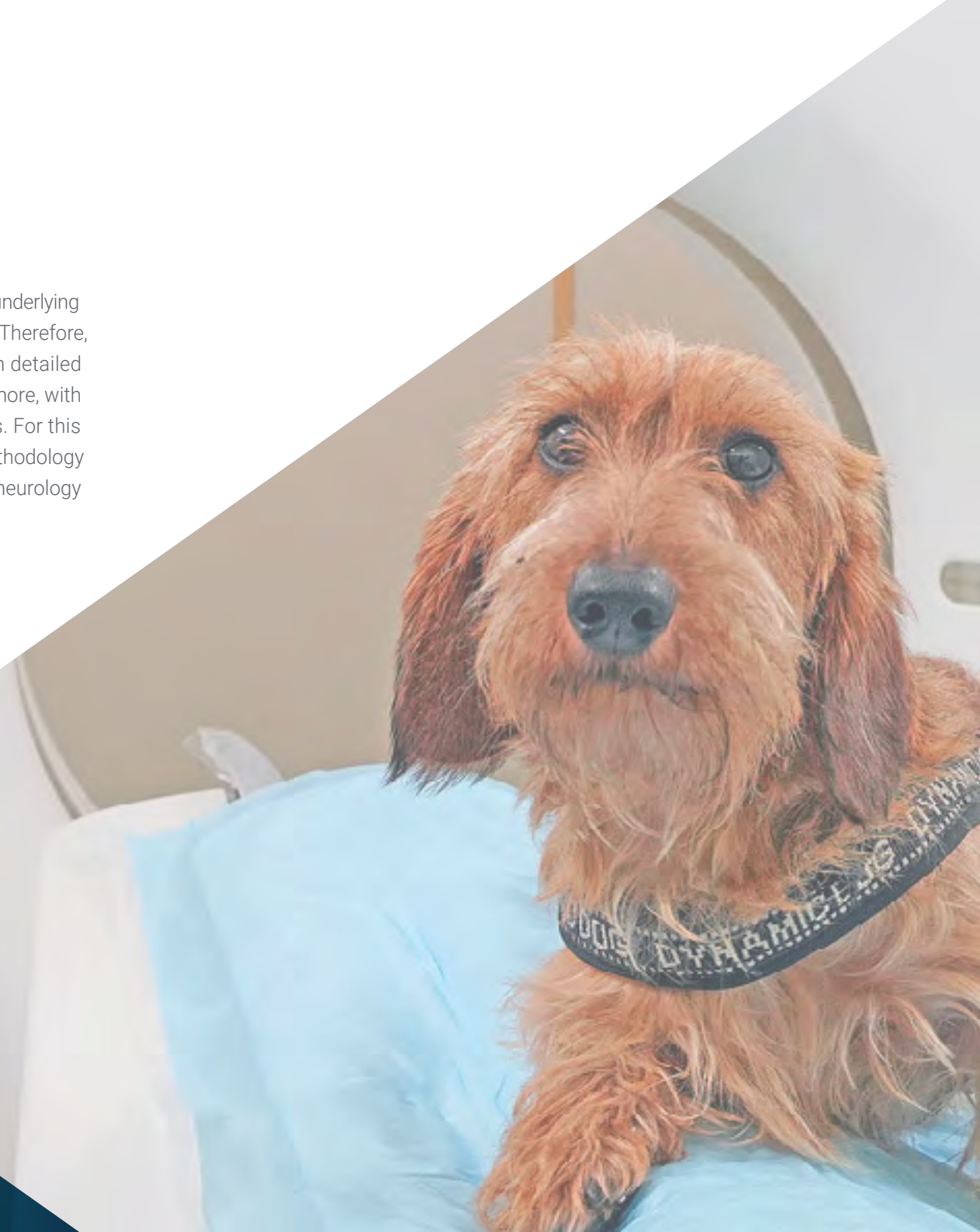
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# 01

# Introduction

Neurological disorders in animals can present a wide variety of symptoms and underlying causes, making it challenging, in some cases, to achieve an accurate diagnosis. Therefore, it is important that the veterinarian has all the required expertise to perform detailed examinations and advanced tests to arrive at a correct assessment. Furthermore, with the advent of new technologies, it is vital to implement the latest techniques. For this reason, TECH has developed this program, offering a theoretical-practical methodology that will allow veterinarians to stay up-to-date on the latest trends in veterinary neurology and its application. An opportunity to enhance their skills in real cases of various difficulties.





SOMATOM go.Now

“

*Through this certificate, you will receive an up-to-date on embryonic development, the anatomy, and physiology of the nervous system in small animals”*

The implementation of advanced techniques and technologies in the assessment of neurological disorders is of utmost importance today to achieve much more accurate differential diagnoses. In this regard, the enhancement of equipment such as magnetic resonance imaging and computerized tomography has allowed for the provision of detailed images of the brain and spinal cord, facilitating the detection of various pathologies.

For this reason, veterinary professionals need to continuously up-to-date their skills to address the challenges in the field of veterinary neurology. In this context, TECH has developed this Hybrid Professional Master's Degree, which provides graduates with the latest innovations related to diagnostic tests and various diseases through a pedagogical framework characterized by high-quality 100% online theory and an in-person practical stay at a top-tier veterinary center.

This way, you will achieve a comprehensive update on embryology, the latest techniques for conducting neurological examinations and neurolocalization, the most significant syndromes, as well as the most effective specific treatments, among other highly relevant topics. All of this, in addition, comes with cutting-edge content and top-tier interactive resources.

Undoubtedly, one of the distinguishing features of this program is the 3-week practical experience in a renowned veterinary center in this field. In this environment, you will be able to apply the knowledge covered during the theoretical phase to real animals with a variety of neurological diseases. Furthermore, you will have the guidance of a specialized tutor from the same center, who will be responsible for providing the necessary assistance in both your progress and participation in various veterinary professionals with recognized experience and expertise in this field.

This **Hybrid Professional Master's Degree in Small Animal Neurology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ Development of over 100 clinical cases presented by veterinary professionals who are experts in neurological care and university professors with extensive experience in small animals
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Assessment and monitoring of animals in critical condition, the latest recommendations in neurological and neurolocalization examinations, critical care for animals with neurological disorders, care for animals requiring anesthesia, analgesia, and surgery, etc
- ◆ Comprehensive systematic action plans for major neurological disorders
- ◆ Presentation of practical workshops on procedures, diagnosis, and treatment techniques] in critical animals
- ◆ Algorithm-based interactive learning system for decision-making in the presented veterinary situations
- ◆ Veterinary practice guidelines on approaching different pathologies
- ◆ With a special emphasis on evidence-based veterinary medicine and research methodologies in Neurology
- ◆ All of this will be complemented by 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
- ◆ Furthermore, you will have the opportunity to complete a veterinary internship at one of the best veterinary centers

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*Thanks to this program, you will be up to date with the most current techniques for performing the most innovative diagnostic exams in the field of Neurology in Small Animals”*

This Master's program, which has a professionalizing nature and a blended learning modality, is aimed at updating veterinary professionals who perform their functions in areas of neurological diagnosis and treatment, and who require a high level of qualification. The contents are based on the latest scientific evidence and are didactically oriented to integrate theoretical knowledge into veterinary practice, and the theoretical-practical elements will facilitate knowledge updates and enable relevant decision-making in small animal care.

Thanks to its multimedia content created with the latest educational technology, it will enable Veterinary professional to achieve situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train for real-life situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*With this Hybrid Professional Master's Degree, you will update your knowledge in the field of anesthesia, analgesia, and neurosurgery, expanding your understanding of their applications and risk considerations.*

*Delve into the most common brain pathologies and treat them effectively by applying the latest scientific evidence.*



# 02

## Why Study this Hybrid Professional Master's Degree?

This TECH program presents itself as an academic option of excellence for professionals who wish to up-to-date their knowledge and skills in the field of Small Animal Neurology. Through its theoretical-practical approach, professionals have the opportunity to enhance their skills and stay up to date with the latest advancements and care procedures in this field. Additionally, the combination of 100% online learning with a 3-week practical experience allows them to grasp concepts and subsequently apply them to real patients. All under the guidance of top-tier experts throughout this updating process.







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*With TECH, you will delve into the management of spinal cord conditions in small animals and apply the most effective treatments in your professional practice”*

### 1. Updating from the Latest Technology Available

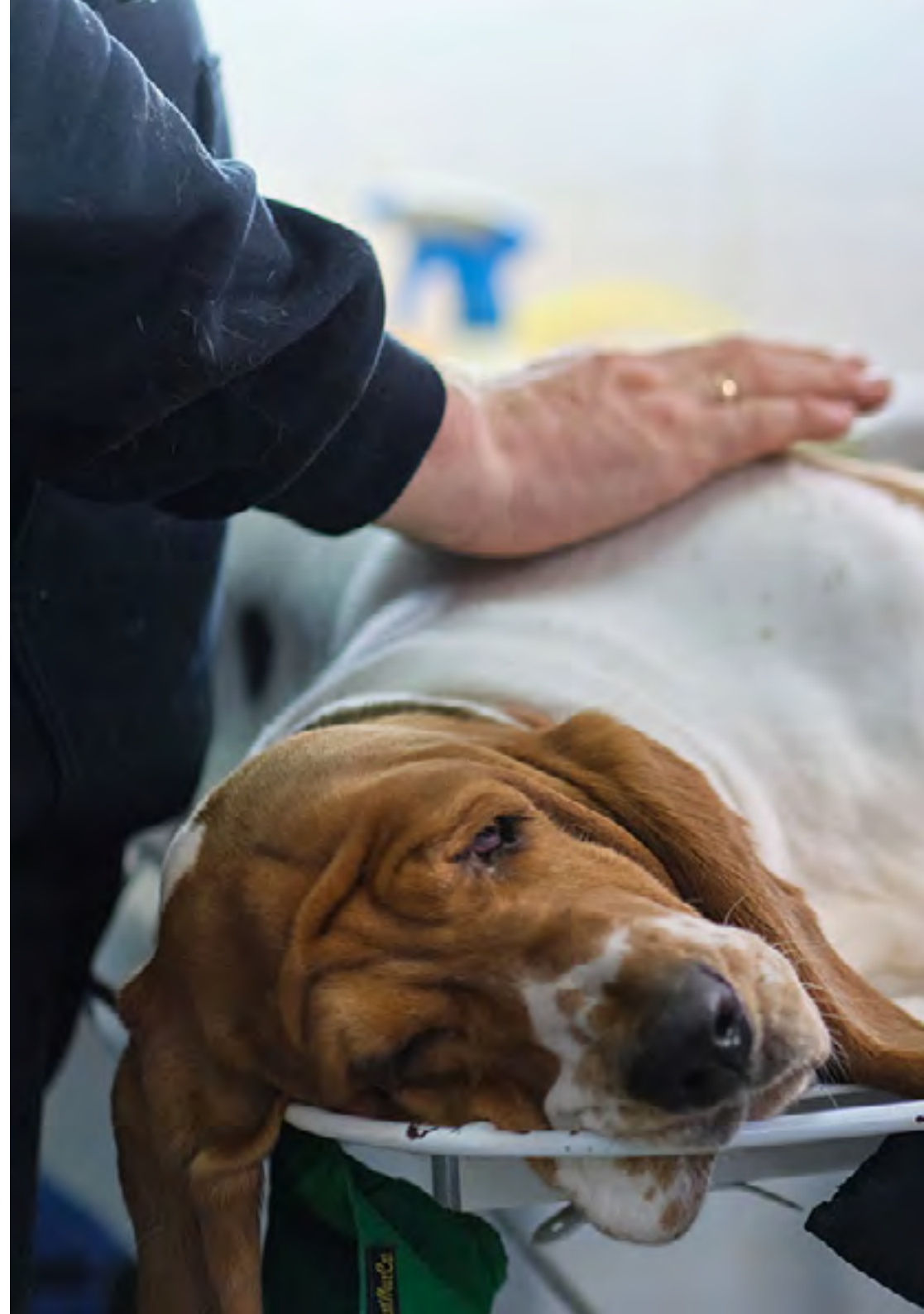
This Hybrid Professional Master's Degree explores the latest implementations and innovative techniques that can be performed in the field of Veterinary Neurology. Through this program, veterinarians will delve into practices such as Serology, Radiodiagnostics, Tomography, and Magnetic Resonance Imaging. In this way, they will be able to perform thorough and detailed examinations, carefully evaluating the results obtained. All using the latest technologies available in this field.

### 2. Gaining In-depth Knowledge from the Experience of Top Specialists

Throughout this program, veterinarians will have the support of experienced and highly qualified professionals. Firstly, they will have access to a top-level teaching staff, and later, during the practical stage, they will collaborate directly with veterinarians specialized in Neurology who put into practice the contents of this program in prestigious centers. Additionally, they will have a tutor who will provide personalized guidance in their process.

### 3. Entering first-class Veterinary environments

TECH carefully selects from all the centers available for practical internships. Thanks to this process, the specialist will have the assurance of accessing a renowned veterinary environment in the field of Neurology, especially focused on small animals. In this way, they will firsthand witness the day-to-day of a demanding, meticulous, and thorough work environment, always applying the latest scientific advancements and methodological approaches in their professional practice.





#### 4. Combining the Best Theory with State-of-the-Art Practice

Veterinarians who choose this Hybrid Professional Master's Degree will have the opportunity to develop both theoretical and practical skills. On one hand, the program covers all the content in a 100% online format, and on the other hand, it includes an intensive in-person internship lasting 3 weeks. An unparalleled academic experience that only TECH, the world's largest digital university, offers.

#### 5. Expanding the Boundaries of Knowledge

To carry out the practical experience in this program, TECH provides internationally renowned facilities. This way, the specialist can broaden their horizons and stay up to date with leading experts in the field of veterinary neurology, who have extensive experience in addressing various species from around the world. A unique and high-quality academic opportunity.

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*You will have full practical immersion at the center of your choice”*

# 03

## Objectives

The Hybrid Professional Master's Degree in Small Animal Neurology aims to provide professionals with an updated knowledge base of the latest techniques for addressing species with neurological disorders. In this way, they will be able to examine the embryonic development of the nervous system, analyze the physiology and functioning of the central nervous system, conduct a medical history, and identify clinical signs based on the location of the lesion.





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*With this certificate, you will obtain the theoretical and practical insights you need to stay up-to-date with the advancements in Small Animal Neurology care”*



## General Objective

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- The objective of this program is to keep the veterinarian updated on the latest diagnostic procedures used to identify neurological abnormalities and to examine the most prominent syndromes within the field of Neurology. Likewise, the syllabus will stimulate the graduate's interest in expanding their skills and applying the knowledge acquired in their daily practice by exploring new assessment indications based on the latest research





## Specific Objectives

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### Module 1. Embryology, Anatomy, Physiology of The Nervous System

- ♦ Identify the nervous system
- ♦ Present, in a clear and concise manner, the anatomy and physiology of the brain and the anatomy and physiology of the spinal cord
- ♦ Develop the mechanisms of nerve impulse transmission
- ♦ Determine the different bones and joints that protect the brain and spinal cord
- ♦ Examine the characteristics of the arterial and venous blood supply to the brain and spinal cord

### Module 2. Neurological Examination and Neurolocalization

- ♦ Structure the steps to follow for a correct neurological evaluation
- ♦ Analyze the different differential diagnoses depending on each case
- ♦ Identify the characteristic clinical signs of a lesion in the forebrain, brainstem and cerebellum
- ♦ Identify the clinical signs characteristic of a lesion in the different segments of the spinal cord and of a peripheral nervous system involvement

### Module 3. Diagnostic tests

- ♦ Interpret the various parameters in blood and CSF tests that are of clinical significance
- ♦ Structuring the correct performance and interpretation of myelography, CT and MRI scans
- ♦ Fundamentals of the different electrophysiological tests and their interpretation
- ♦ Present the performance of muscle and nerve biopsy and its interpretation
- ♦ Identify the different genetic tests in dogs and cats

### Module 4. Anesthesia, analgesia. Neurosurgery

- ♦ Define types and protocols of the different procedures in neurosurgery
- ♦ Determine the types and indications for analgesia in neurological patients
- ♦ Examine the basic principles of neurosurgery
- ♦ Address the techniques necessary to perform surgery for herniated discs, vertebral fractures and dislocations
- ♦ Present and discuss the concepts and techniques of intracranial surgery and oncologic surgery
- ♦ Structuring a correct physiotherapy plan for neurological patients

### Module 5. Pathologies of the Brain

- ♦ Define, develop and classify vascular accidents affecting the brain
- ♦ Examine the different inflammatory pathologies of the brain and the different infectious pathologies affecting the brain
- ♦ Analyze and classify neoplasms of the brain
- ♦ Determine the different metabolic and degenerative diseases of the brain
- ♦ Present congenital anomalies and identify them
- ♦ Structuring and defining toxic diseases

### Module 6. Spinal Cord Pathologies

- ♦ Determine the management of different therapeutics for various spinal cord pathologies
- ♦ Develop vascular, inflammatory and infectious diseases of the spinal cord
- ♦ Outlining the management of spinal trauma
- ♦ Analyze metabolic and degenerative diseases of the spinal cord
- ♦ Identify the different types of herniated discs and their management
- ♦ Examine congenital anomalies affecting the spinal cord, pathogenesis and treatment of caudal cervical spondylomyelopathy and atlantoaxial dislocation

### Module 7. Neuromuscular Diseases

- ♦ Specify the basic principles and classification of neuromuscular diseases
- ♦ Define the mechanisms of nerve impulse generation and transmission
- ♦ Describe the types, diagnosis and treatment of the different neuropathies, polyneuropathies and myopathies
- ♦ Examine the types of neuromuscular junction diseases
- ♦ Analyze myasthenia gravis as an important clinical entity in the neurology consultation
- ♦ Establish the different prognoses of neuromuscular diseases

### Module 8. Alterations in Cranial Nerves, Vestibular Syndrome and Canine and Feline Epilepsy. Involuntary Disorder Movements

- ♦ Identify the alterations of cranial nerves
- ♦ Develop the causes, diagnosis and treatment of vestibular syndrome and facial paralysis and facial paralysis
- ♦ Analyze neuro-ophthalmology as a fundamental basis of neurology
- ♦ Define and identify the causes of laryngeal and megaesophageal paralysis
- ♦ Developing canine and feline epilepsy
- ♦ Examine the different types of movement disorders







### Module 9. Important Syndromes and Specific Treatments

- ♦ Examine cognitive dysfunction syndrome, Horner's syndrome and cauda equina syndrome
- ♦ Analyze the correct application of antibiotics in neurology
- ♦ Present the different micturition disorders
- ♦ Establish the use of chemotherapy in oncology of neurological processes and the use of radiotherapy in oncology of oncological processes

### Module 10. Neurological Emergencies

- ♦ Specify the types of anesthesia and protocols most commonly used in the anesthesia of patients with neurological emergencies
- ♦ Determine the management and prognosis of traumatic brain injury and spinal cord injury
- ♦ Examine the most common metabolic emergencies
- ♦ Analyze the diagnostic picture and management of weakness and collapse, botulism and tetanus, as well as their diagnosis



*In a period of just 12 months, you will be up to date with the scientific literature regarding cranial nerve disorders, vestibular syndrome, and epilepsy in dogs and cats”*

# 04 Skills

Once both stages of this Hybrid Professional Master's Degree are completed, the veterinarian will have honed a wide range of skills in Small Animal Neurology. In this regard, they will enhance their ability to conduct assessments that encompass the observation of reflexes, mobility, balance, coordination, and sensory responses in animals. Moreover, they will employ advanced imaging diagnostic techniques that will enable them to establish the most precise therapy.





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*With this program, you will be informed about the cutting-edge equipment used to detect neurological disorders in Small Animals”*



## General Skills

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- Perform a complete neurological examination of small animals
- Locate the possible neurological lesion
- Schedule relevant tests
- Establish the corresponding treatments for each pathology or case
- Working in centers specializing in Small Animal Neurology
- Develop a methodical approach according to evidence-based medicine
- Optimize the performance of intervention in Small Animal Neurology
- Establish a forecast
- Perform differential diagnosis



*A unique academic experience with which you will implement updated strategies to address Neuromuscular diseases”*





## Specific Skills

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- ◆ Recognize the embryology, anatomy, physiology of the nervous system in small animals
- ◆ Know how to perform a complete neurological examination and locate the existing lesion in the patient
- ◆ Prescribe appropriate diagnostic tests
- ◆ Master the different types of anesthesia applicable in each case
- ◆ Work with analgesia according to the latest international recommendations
- ◆ Intervening in neurosurgery
- ◆ know the pathologies of the brain
- ◆ Perform diagnosis of spinal cord pathologies
- ◆ Diagnosis of neuromuscular diseases
- ◆ Prescribe the appropriate treatment for each case
- ◆ Identify alterations in cranial nerves
- ◆ Addressing canine and feline vestibular syndrome
- ◆ Treating canine and feline epilepsy
- ◆ Treatment of movement disorders
- ◆ Deal quickly and efficiently with neurological emergencies in small animals

05

# Course Management

The teachers who teach this Hybrid Professional Master's Degree have been meticulously selected for their solid academic background and extensive experience in neurological care applied to small animals. This team implements an innovative and effective methodology that combines theory and practice to provide a comprehensive up-to-date to veterinary professionals. Additionally, these specialists provide continuous guidance to students during the theoretical phase of the program, supporting them in the analysis of concepts and trends.



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*You will have a renowned teaching team and a comprehensive curriculum that will allow you to thoroughly explore the clinical signs associated with prosencephalic injuries in small animals”*

## International Guest Director

Doctor Steven De Decker's interest in the field of **Veterinary Neurology** has made him one of the most prominent figures in this area worldwide. He has participated in several international congresses, including the Singapore Vet Show, the largest veterinary conference on the Asian continent.

Such is his relevance that he has become **president of the British Veterinary Neurology Society**. He is also a senior lecturer and head of the Neurology and Neurosurgery service at the Royal Veterinary College, considered one of the best veterinary institutions in the world.

His main research area is spinal disorders and neurosurgery, with a focus on the diagnosis and treatment of cervical spondylomyelopathy associated with disc or Wobbler syndrome in dogs. His most cited studies concern the prevalence of thoracic vertebral malformations, meningoencephalomyelitis of unknown origin, and spinal arachnoid diverticula in dogs.





## Dr. De Decker, Steven

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- Head and Professor of the Department of Neurology and Neurosurgery Service at the Royal Veterinary College – Hertfordshire, United Kingdom
- Former President of the British Veterinary Neurological Society
- PhD in Veterinary Neurology and Neurosurgery from the University of Ghent, Belgium
- Graduate from the University of Ghent, Belgium

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

## Management



### Dr. Moya García, Sergio

- Asistance Director of the Vetorsalud Dr. Moya Day Hospital
- Head of the Neurology Service at AnimalH Bluecare Hospital
- Head of the Neurology Departments of the SOS Animal Veterinary Hospital
- Responsible for ATV (Veterinarian Assistant Training) by AVEPA
- Postgraduate in Neurology by the European School of Veterinary Studies
- Master in Clinical and Therapeutic Research from the University of Las Palmas de Gran Canaria
- Veterinary Specialist in Endoscopy and Minimally Invasive Surgery by the University of Cáceres
- Member of the Royal College of Veterinary Surgeons (MRCVS), Endoscopy Group (GEA), the Association of Specialists in Small Animals (GEA-AVEPA), the Association of Specialists in Minimal Invasive Surgery (AEVMI), and the Neurology Group of AVEPA

## Professors

### Dr. Gómez Álvarez, Christian Mauricio

- ♦ Founder of VetCam Specialist
- ♦ Head of Neurology at Nedivet
- ♦ Head of the Neurology Service at Anicura Valencia Sur Veterinary Hospital
- ♦ Coordinator of Scientific Direction at Heel Colombia
- ♦ Doctor of Veterinary Medicine from La Salle University (ULS)
- ♦ Master's Degree in Physiology from UNAL
- ♦ Master's Degree in Advanced Clinical Neurology from UCASAL

### Dr. Mangas Ballester, Teresa

- ♦ Head of the Anesthesia Service at AniCura Valencia Sur Veterinary Hospital
- ♦ Researcher in the Anesthesiology Unit at the Minimally Invasive Surgery Center Jesús Usón
- ♦ Degree in Veterinary Medicine from the University of Extremadura
- ♦ Master's Degree in Clinic at Complutense University

### Dr. Ródenas González, Sergio

- ♦ Head of Neurology and Neurosurgery at Bluecare Hospital in Málaga
- ♦ Neurologist in hospital centers in Canada and England
- ♦ Clinical Instructor in Neurology and Neurosurgery at the Faculty of Veterinary Medicine at the University of Montreal, Canada
- ♦ Specialized Researcher in Veterinary Neurology and Neurosurgery
- ♦ Ph.D. in Neurology from the Faculty of Veterinary Medicine in Maisons Alfort
- ♦ Graduated from the Faculty of Veterinary Medicine in Cáceres at the University of Extremadura
- ♦ ECVN Diplomate and European Specialist in Veterinary Neurology

### Dr. Cartagena Albertus, Juan Carlos

- ♦ Veterinarian Specialized in Oncology and Surgery of Soft Tissue
- ♦ Director of Second Vets Veterinary Clinic
- ♦ General veterinary at Vets4Pets Elgar Group in London
- ♦ Veterinarian Specialized in Ophthalmology at Broadway Veterinary Hospital in London
- ♦ Manager at JCC Consultancy Services in London
- ♦ Veterinarian specialized at Animal Bluecare
- ♦ Author of several specialized books in veterinary medicine and oncology
- ♦ Doctor in Veterinary Oncology from the University of Las Palmas de Gran Canaria
- ♦ Degree in Veterinary from the University of Zaragoza
- ♦ Accredited Specialist in Soft Tissue Surgery by AVEPA
- ♦ Accredited Specialist in Oncology by AVEPA
- ♦ University Expert in Endoscopy and Minimally Invasive Surgery
- ♦ Member of the Royal College of Veterinary Surgeons in London, European Society of Veterinary Oncology, Veterinary Society of Surgical Oncology, AVEPA Oncology Group, AVEPA Soft Tissue Surgery Group

**Dr. Luque Garrido, Jorge Antonio**

- Owner and Co-owner Veterinarian at El Dogo Azul Veterinary Clinics
- Medical Director of the Rehavet Sport veterinary rehabilitation center
- Collaborating Professor at the Complutense University of Madrid
- Collaborating Professor in Rehabilitation Courses for Veterinarians at FORVET
- Collaborating Professor in the Acupuncture Diploma Courses at IVAS
- Diploma in Acupuncture and Traditional Chinese Medicine at IVAS, Barcelona
- Training in Rehabilitation and Physiotherapy at FORVET
- Certificate in Rehabilitation and Physiotherapy at ESAVS in Vienna
- Certificate in Chiropractic at AIQA
- Specialist in Sports Veterinary Medicine at CRI in Zurich
- Member of the International Sled Dog Veterinary Medical Association (ISDVMA), Veterinary European Physical Therapy and Rehabilitation Association (VEORA), Spanish Association of Veterinary Specialists in Small Animals, Malaga Association of Veterinary Specialists in Companion Animals, American Association of Rehabilitation Veterinarians (AARV)

**Dr. Maeso Ordás, Christian**

- Clinical Veterinarian in the Neurology Service at Anicura Ars Veterinaria
- General Veterinarian in different private clinics in Spain
- Postgraduate Studies for General Veterinarian in Neurology by Improve International
- General Training Stays at Rof Codina Veterinary Hospitals in Lugo (University of Santiago de Compostela) and Ars Veterinaria (Barcelona)
- Specialization Internship in Neurology and Neurosurgery at Anicura Valencia Sur Veterinary Hospital
- ECVN European Residency at Ars Veterinaria
- Degree in Veterinary Medicine from the University of Extremadura
- Member of the Spanish Association of Veterinary Specialists in Small Animals and the European College of Veterinary Neurology (ECVN)



*The most renowned experts in the field of veterinary neurology will provide you with the latest technological and scientific advancements of utmost importance in this discipline”*



# 06

## Educational Plan

The syllabus of this certificate encompasses the most up-to-date and innovative concepts in the field of Small Animal Neurology. In this regard, the veterinarian will delve into neurological emergencies, Horner's Syndrome, and Immunoneurology. Additionally, they will have the opportunity to delve into cranial nerve disorders, neuromuscular diseases, and spinal cord pathologies. In this updating process, graduates will benefit from innovative teaching methods such as Relearning, which allows for the rapid assimilation of complex content in less time.





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*With this program, you will identify the causes of epilepsy in dogs and cats, using the most advanced neurological technologies and examinations available today”*

## Module 1. Embryology, Anatomy, Physiology of The Nervous System

- 1.1. Embryology of the Nervous System
  - 1.1.1. Embryology of the Brain
  - 1.1.2. Spinal Cord Embryology
- 1.2. Basic and Functional Anatomy of the Brain
  - 1.2.1. Anatomy of the Prosencephalon
  - 1.2.2. Anatomy of the Brain Stem
  - 1.2.3. Anatomy of the Cerebellum
- 1.3. Basic and Functional Spinal Cord Anatomy
  - 1.3.1. Spinal Cord Anatomy
  - 1.3.2. Main Spinal Cord Pathways
- 1.4. Anatomy of the Peripheral Nerves I
  - 1.4.1. Cranial Nerves
  - 1.4.2. Spinal nerves
- 1.5. Anatomy of the Peripheral Nerves II
  - 1.5.1. Autonomic Nervous System: Sympathetic and Parasympathetic
- 1.6. Sensory and Motor Nervous System
  - 1.6.1. Sensitive Pathways
  - 1.6.2. Motor Pathways
- 1.7. Anatomy and Physiology of the Motor Unit
  - 1.7.1. Anatomy
  - 1.7.2. Physiology
- 1.8. Vascular Anatomy of the Encephalon
  - 1.8.1. Arterial Irrigation
  - 1.8.2. Venous Irrigation
- 1.9. Vascular Anatomy of the Spinal Cord
  - 1.9.1. Arterial Irrigation
  - 1.9.2. Venous Irrigation
- 1.10. Skeletal System
  - 1.10.1. Cranial Bones, Joints and Cranial Nerve Outlets
  - 1.10.2. Vertebrae, Joints and Intervertebral Discs

## Module 2. Neurological Examination and Neurolocalization

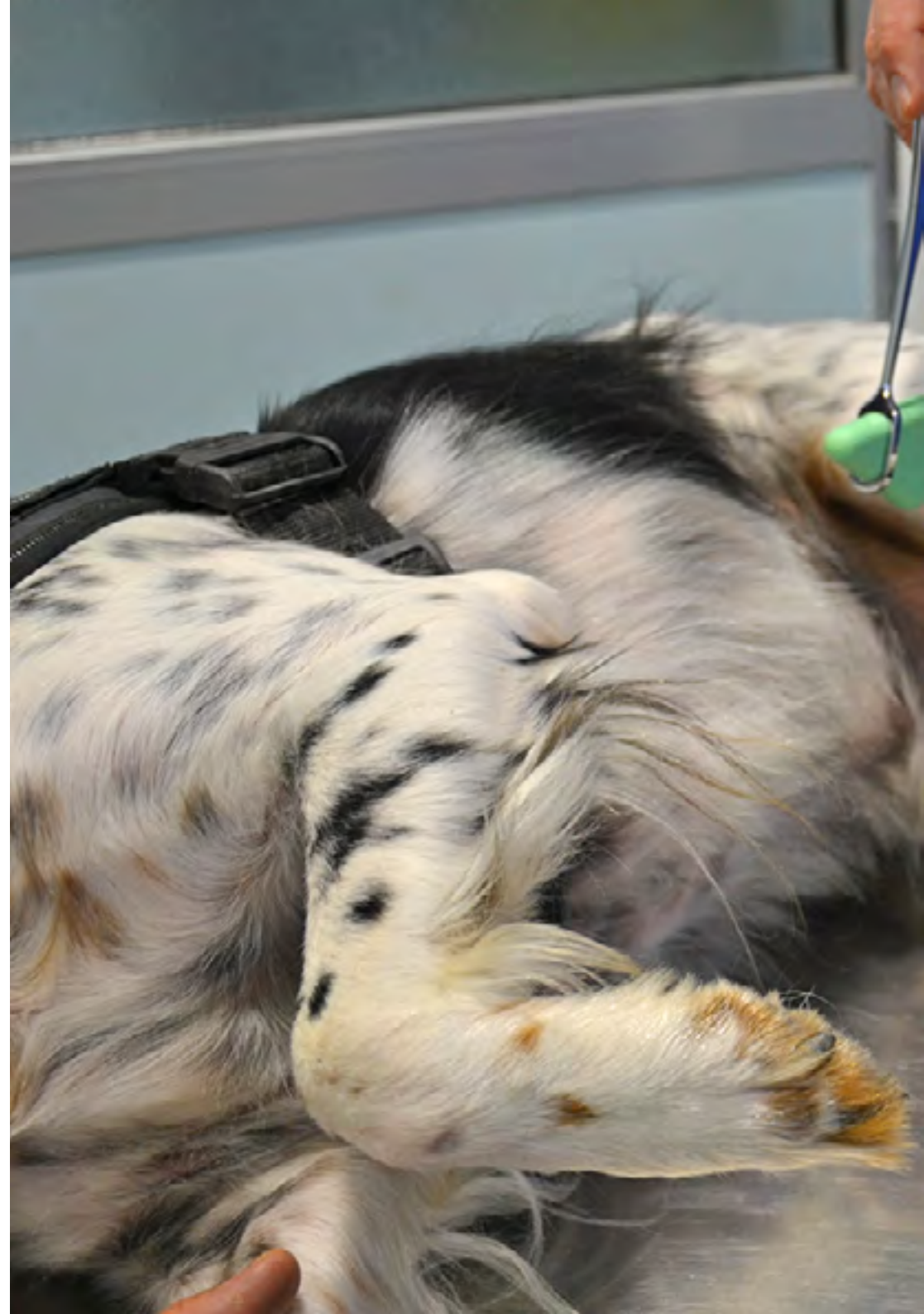
- 2.1. Review and Anamnesis
  - 2.1.1. Necessary Tools for a Correct Neurological Examination
  - 2.1.2. Medical History. The Importance of a Correct Anamnesis
  - 2.1.3. List of Problems
- 2.2. Neurological Examination Part I
  - 2.2.1. State of Mind
  - 2.2.2. March
  - 2.2.3. Posture
- 2.3. Neurological Examination Part II
  - 2.3.1. Cranial Nerve Pairs
  - 2.3.2. Postural Reactions
  - 2.3.3. Spinal Reflexes
  - 2.3.4. Sensitivity
- 2.4. Clinical Signs Associated with Prosencephalon Lesion
  - 2.4.1. Blindness with Absence of Threat Response
  - 2.4.2. Facial Sensitivity Deficits
  - 2.4.3. Postural Reaction Deficits
  - 2.4.4. Alterations in Behavior or Mental Status
  - 2.4.5. Cerebral Seizures
  - 2.4.6. Wandering and Walking in Circles
  - 2.4.7. Head Torsion
  - 2.4.8. Head Preassing
  - 2.4.9. Decerebration Stiffness
- 2.5. Clinical Signs Associated with Brain Stem Injury
  - 2.5.1. Deficiency of the Cranial Nerves from III to XII
  - 2.5.2. Postural Reaction Deficits
  - 2.5.3. Alterations of the Mental State
  - 2.5.4. Cardiorespiratory Disorders
  - 2.5.5. Narcolepsy/Cataplexy
  - 2.5.6. Eye Movement Abnormalities
  - 2.5.7. Alterations of the Central Vestibular System (Metencephalon)



- 2.6. Associated Clinical Signs in Cerebellum
    - 2.6.2. Ataxia and Increase of Sustentation Base
    - 2.6.3. Dysmetria
    - 2.6.4. Tremors of Intention
    - 2.6.5. Nystagmus
    - 2.6.6. Deficiency or Absence of Threat Response
    - 2.6.7. Decerebration Stiffness
  - 2.7. Associated Clinical Signs in the Spinal Cord
    - 2.7.1. Spinal Cord Segment Injury C1-C5
    - 2.7.2. Spinal Cord Segment Injury C6-T2
    - 2.7.3. Spinal Cord Segment Injury T3-L3
    - 2.7.4. Spinal Cord Segment Injury L4-S3
  - 2.8. Clinical Signs Associated with Neuropathies
    - 2.8.1. Common Clinical Signs
    - 2.8.2. Clinical Signs According to the Different Neuropathies
  - 2.9. Clinical Signs Associated with Neuromuscular Junction
    - 2.9.1. Common Clinical Signs
    - 2.9.2. Clinical Signs According to the Different Neuropathies
  - 2.10. Clinical Signs Associated with Myopathies
    - 2.10.1. Common Clinical Signs
    - 2.10.2. Clinical Signs According to the Different Neuropathies
- Module 3. Diagnostic tests**
- 3.1. Blood Laboratory Tests
    - 3.1.1. Alterations in the Cellular Count Responsible for Neurological Conditions
    - 3.1.2. Biochemical Alterations Responsible for Neurological Conditions
    - 3.1.3. Hormonal Alterations Responsible for Neurological Disorders
    - 3.1.4. Serology and Rapid Tests
  - 3.2. Radiography
    - 3.2.1. Indications
    - 3.2.2. Patient Positioning to Assess Skull and Head Structural Anomalies
  - 3.3. Myelography
    - 3.3.1. Indications
    - 3.3.2. How to Perform a Correct Myelography
    - 3.3.3. Interpretation
  - 3.4. Computerized Axial Tomography
    - 3.4.1. CT in Encephalon
    - 3.4.2. CT in Spine
  - 3.5. Nuclear Magnetic Resonance Imaging
    - 3.5.1. Sequences
    - 3.5.2. MRI in the Brain
    - 3.5.3. Spine MRI
  - 3.6. Electrophysiology I
    - 3.6.1. Electromyography
    - 3.6.2. Motor Driving Speeds
    - 3.6.3. Sensitive Driving Speeds
  - 3.7. Electrophysiology II
    - 3.7.1. F-Wave Analysis
    - 3.7.2. Cord Dorsum Potentials
  - 3.8. Repetitive Stimulation
    - 3.8.1. BAER
    - 3.8.2. Muscle, Nerve, and CNS biopsy
      - 3.8.2.1. Muscle Biopsy
      - 3.8.2.2. Nerve Biopsy
      - 3.8.2.3. CNS Biopsy
  - 3.9. Genetic Testing
    - 3.9.1. Types of Genetic Tests in Dogs
    - 3.9.2. Types of Genetic Testing in Cats
  - 3.10. CSF Analysis
    - 3.10.1. Extraction
    - 3.10.2. Counting Chamber
    - 3.10.3. Types of Pleocytosis, Cytology
    - 3.10.4. Protein Levels

#### Module 4. Anesthesia, analgesia. Neurosurgery

- 4.1. Anesthesia in Neurological Patients
  - 4.1.1. Types of Anesthetic Agents
  - 4.1.2. Protocols of the Different Procedures
- 4.2. Analgesia in Neurological Patients
  - 4.2.1. Types
  - 4.2.2. Indications
- 4.3. Neurosurgery
  - 4.3.1. Patient Preparation
  - 4.3.2. Material
- 4.4. Herniated Cervical Disc
  - 4.4.1. Surgical Approach and Technique
- 4.5. Thoracolumbar Disc Herniation
  - 4.5.1. Approach and Surgical Techniques
- 4.6. Atlantoaxial Dislocation and Caudal Cervical Spondylomyelopathy
  - 4.6.1. Atlantoaxial Dislocation. Surgical Approach and Technique
  - 4.6.2. Caudal Cervical Spondylomyelopathy. Surgical Approach and Technique
- 4.7. Fractures, Vertebral Dislocations, Vertebral Diverticulum and Vertebral Malformations
  - 4.7.1. Vertebral Fractures, Surgical Approach and Resolution
  - 4.7.2. Vertebral Dislocations, Surgical Approach and Resolution
  - 4.7.3. Arachnoid Diverticulum, Surgical Approach and Resolution
  - 4.7.4. Vertebral Malformations, Types and Medical Management
- 4.8. Principles of Intracranial Surgery
  - 4.8.1. Indications
  - 4.8.2. Approach
  - 4.8.3. Surgical Technique





- 4.9. Surgery in Spinal and Intracranial Neoplasia
  - 4.9.1. Approach
  - 4.9.2. Surgical Technique
- 4.10. Rehabilitation
  - 4.10.1. Practical Application in Neurological Patients
  - 4.10.2. Kinesiotherapy
  - 4.10.3. Laser Therapy
  - 4.10.4. Hydrotherapy
  - 4.10.5. Electrostimulation

### Module 5. Pathologies of the Brain

- 5.1. Basic Location
  - 5.1.1. Alterations in Mental Status
- 5.2. Vascular Diseases
  - 5.2.1. Types
  - 5.2.2. Pathogenesis
- 5.3. Inflammatory and Infectious Diseases of the Brain
  - 5.3.1. Types
  - 5.3.2. Pathophysiology
- 5.4. Traumatic Diseases
  - 5.4.1. Types
  - 5.4.2. Pathophysiology
- 5.5. Congenital Brain Abnormalities
  - 5.5.1. Types
  - 5.5.2. Pathophysiology
- 5.6. Metabolic Acquired Diseases
  - 5.6.1. Types
  - 5.6.2. Pathophysiology
- 5.7. Primary Metabolic Diseases (Organic Aciduria, Mitochondrial)
  - 5.7.1. Types
  - 5.7.2. Pathophysiology

- 5.8. Neoplasms of the Brain
  - 5.8.1. Types
  - 5.8.2. Histopathology
  - 5.8.3. Prognosis
- 5.9. Degenerative Diseases
  - 5.9.1. Types and Clinical Signs
- 5.10. Toxic Diseases
  - 5.10.1. Types and Clinical Signs

## Module 6. Spinal Cord Pathologies

- 6.1. Basic Localization, Gait Disturbances, Spinal Shock
  - 6.1.1. Clinical Signs Depending on Localization
  - 6.1.2. *Spinal Shock* and *Schiff Sherrington*
- 6.2. Vascular Diseases of the Spinal Cord
  - 6.2.1. Fibrocartilaginous Embolism
  - 6.2.2. Myelopathies due to bleeding or hemorrhage
- 6.3. Inflammatory Diseases
  - 6.3.1. Meningomyelitis Granulomatosa
  - 6.3.2. Steroid-Responsive Meningitis-Arteritis
- 6.4. Infectious Diseases
  - 6.4.1. Viral Diseases
  - 6.4.2. Bacterial Diseases
  - 6.4.3. Protozoan Diseases
  - 6.4.4. Fungal Diseases
- 6.5. Spinal Trauma
  - 6.5.1. Important Aspects
  - 6.5.2. Pathophysiology
  - 6.5.3. Congenital Anomalies of the Spinal Cord
    - 6.5.3.1. Hemivertebra
    - 6.5.3.2. Arachnoid Diverticula and other Congenital Diseases
- 6.6. Metabolic Diseases
  - 6.6.1. Primary
  - 6.6.2. Acquired

- 6.7. Spinal Cord Neoplasms
  - 6.7.1. Types of Neoplasia
- 6.8. Degenerative myelopathy and other degenerative abnormalities
  - 6.8.1. Degenerative myelopathy
  - 6.8.2. Other Degenerative Abnormalities
- 6.9. Herniated Disc
  - 6.9.1. Hansen I
  - 6.9.2. Hansen II
  - 6.9.3. ANNPE, HNPE
- 6.10. Cervical Spondylomyelopathy and Atlantoaxial Dislocation
  - 6.10.1. Etiology
  - 6.10.2. Pathogenesis and Clinical Signs

## Module 7. Neuromuscular Diseases

- 7.1. Classification and Diagnostic methods in neuromuscular diseases
  - 7.1.1. Classification
  - 7.1.2. Diagnosis
- 7.2. Nerve Impulse Generation and Transmission
  - 7.2.1. Physiological Mechanisms
- 7.3. The Neuronal Membrane
  - 7.3.1. Composition and Structure
- 7.4. Mononeuropathies I
  - 7.4.1. Congenital
- 7.5. Mononeuropathies II
  - 7.5.1. Acquired
- 7.6. Acute Polyneuropathies
  - 7.6.1. Types, Diagnosis and Treatment
- 7.7. Chronic Polyneuropathies
  - 7.7.1. Congenital
  - 7.7.2. Degenerative

- 7.8. Acquired Polyneuropathies
  - 7.8.1. Types, Diagnosis and Treatment
- 7.9. Myopathies
  - 7.9.1. Types, Diagnosis and Treatment
- 7.10. Neuromuscular Junction Diseases
  - 7.10.1. Myasthenia Gravis

### Module 8. Alterations in Cranial Nerves, Vestibular Syndrome and Canine and Feline Epilepsy. Involuntary Disorder Movements

- 8.1. Neuro-Ophthalmology
  - 8.1.1. Anatomy
  - 8.2.2. Clinical Examination and Tests
- 8.2. Disorders in NC III, IV and VI
  - 8.2.1. Anatomy
  - 8.2.2. Clinical Examination and Tests
- 8.3. Chewing and Swallowing Disorders
  - 8.3.1. Implicated paired cranial anatomies
  - 8.3.2. Clinical Examination and Tests
- 8.4. Laryngeal Paralysis and Megaesophagus
  - 8.4.1. Implicated paired cranial anatomies
  - 8.4.2. Physical Examination and Tests
- 8.5. Facial Paralysis
  - 8.5.1. Anatomy and function of the facial nerve
  - 8.5.2. Physical Examination and Tests
  - 8.5.3. Causes of Facial Paralysis
- 8.6. Vestibular Syndrome I
  - 8.6.1. Vestibular System Anatomy
  - 8.6.2. Causes of Peripheral Vestibular Syndrome
  - 8.6.3. Causes of Central Vestibular Syndrome
- 8.7. Vestibular Syndrome II
  - 8.7.1. Diagnosis
  - 8.7.2. Treatment

- 8.8. Canine Epilepsy
  - 8.8.1. Etiology and Pathophysiology
  - 8.8.2. Classification
  - 8.8.3. Treatment
- 8.9. Feline Epilepsy
  - 8.9.1. Etiology and Pathophysiology
  - 8.9.2. Classification
  - 8.9.3. Treatment
- 8.10. Involuntary Movement Disorders
  - 8.10.1. Etiology and Classification
  - 8.10.2. Treatment

### Module 9. Important Syndromes and Specific Treatments

- 9.1. Cognitive Dysfunction Syndrome
  - 9.1.1. Clinical Signs
  - 9.1.2. Diagnosis, Treatment and Prevention
- 9.2. Horner Syndrome
  - 9.2.1. Anatomy and Sympathetic Nerve Tracts
  - 9.2.2. Functional Tests
  - 9.2.3. Causes and Diagnosis
  - 9.2.4. Treatment
- 9.3. Cauda Equina Syndrome
  - 9.3.1. Neurology Examination and Clinical Signs
  - 9.3.2. Diagnostic tests
  - 9.3.3. Main Causes
    - 9.3.3.1. Lumbosacral Degenerative Stenosis and Foraminal Stenosis
    - 9.3.3.2. Neoplasms
    - 9.3.3.3. Vascular
    - 9.3.3.4. Disc Spondylitis and Empyema
- 9.4. Alterations in Urination
  - 9.4.1. Anatomy and Physiology of Urination
  - 9.4.2. Alterations in Urination

- 9.5. Immunoneurology
  - 9.5.1. Important Aspects
  - 9.5.2. Main Pathologies, Diagnoses and Treatments
- 9.6. Alternative Therapies for Neurological Patients
  - 9.6.1. New Trends
  - 9.6.2. Treatments and Applications
- 9.7. Antibiotherapy for Neurological Patients
  - 9.7.1. Pharmacodynamics Blood-Brain Barrier
  - 9.7.2. Most Frequently Used Antibiotics. Types and Indications
  - 9.7.3. Protocol of Use
- 9.8. Use of Corticosteroids in Veterinary Neurology
  - 9.8.1. Use in Spinal Cord Diseases
  - 9.8.2. Use in Diseases of the Brain
  - 9.8.3. Use in Diseases of the Neuromuscular System
- 9.9. Oncological treatments for the nervous system I. Chemotherapy
  - 9.9.1. Main Chemotherapeutic Agents
  - 9.9.2. Indications and Protocols
- 9.10. Oncological Treatments of the Nervous System II. Radiotherapy
  - 9.10.1. Radiotherapy Basic Principles
  - 9.10.2. Radiotherapy Main Indications

## Module 10. Neurological Emergencies

- 10.1. Anesthesia and Management in Patients with Neurological Emergencies
  - 10.1.1. Active Ingredients Used in Urgent Anesthetic Procedures
  - 10.1.2. Monitoring
- 10.2. Traumatic Brain Injury I
  - 10.2.1. Medical History
  - 10.2.2. Pathophysiology
  - 10.2.3. Glasgow Scale
- 10.3. Cranial Encephalic Trauma II
  - 10.3.1. Treatment Levels of Action
  - 10.3.2. Surgery
- 10.4. Spinal Trauma I
  - 10.4.1. Causes
  - 10.4.2. Pathophysiology



- 10.5. Spinal Trauma II
  - 10.5.1. Diagnosis
  - 10.5.2. Treatment
- 10.6. Clusters and Status Epilepticus
  - 10.6.1. Pathophysiology and Causes
  - 10.6.2. Treatment and Stabilization
- 10.7. CNS Neurotoxicity
  - 10.7.1. Main Toxins Affecting the Nervous System
  - 10.7.2. Action to Be Taken in the Event of Poisoning
- 10.8. Metabolic Emergencies
  - 10.8.1. Hypoglycemia
  - 10.8.2. Uremic Crisis
  - 10.8.3. Hepatic Encephalopathy
- 10.9. Tetanus and Botulism
  - 10.9.1. Tetanus
  - 10.9.2. Botulism
- 10.10. Exercise Intolerance and Collapse
  - 10.10.1. Diagnostic Algorithm
  - 10.10.2. Management and Treatments

“*This Hybrid Professional Master’s Degree offers you the opportunity to update your knowledge as a veterinarian in a comfortable and flexible manner*”



07

# Clinical Internship

After completing the 100% online theoretical phase, the program includes a practical training period at a prominent veterinary establishment specialized in this field. Participants will have the support of a tutor who will oversee their academic progress and present challenging and dynamic activities for the practical application of the concepts learned.





A close-up photograph of a dog's face, showing its eyes and nose. The dog has white fur with dark patches around its eyes. The image is partially obscured by a teal diagonal graphic element.

“

*From renowned veterinary centers, you will have the opportunity to interpret and make the most of the most innovative diagnostic tests, applying them effectively”*

The practical stage of this Hybrid Professional Master's Degree in Small Animal Neurology consists of 120 hours of training at a renowned veterinary center specialized in this field. In this program, the professional will work 8-hour days from Monday to Friday under the supervision of a tutor who will assign specific responsibilities and tasks for addressing real cases that come to the center.

Additionally, the graduate will have the opportunity to interact with other professionals, sharing experiences and skills. They will also have access to state-of-the-art equipment and advanced technology to conduct diagnostic tests, X-rays, and tomographies more efficiently. In this way, upon completion of this classroom phase, the specialists will have obtained a theoretical and practical update on the latest developments in his field of action, preparing them to apply what they have observed in their work practice.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for veterinary practice (learning to be and learning to relate).

The procedures described below will form the basis of the practical part of the internship, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:



Module	Practical Activity
<b>Diagnostic Examination Techniques</b>	Conduct a comprehensive neurological assessment in the animal, includes the observation of reflexes, mobility, balance, and coordination
	Implement neuroimaging tests such as X-rays, CT scans, or magnetic resonance imaging to accurately visualize brain and spinal cord structures
	Conduct laboratory tests such as blood or cerebrospinal fluid analysis to detect possible biochemical alterations or infections that may affect the nervous system
	Perform electroencephalography to assess electrical brain activity and detect possible abnormalities
<b>Administration of Anesthesia, Analgesia, and Neurosurgery</b>	Administer anesthesia and analgesia safely and effectively in neurosurgical procedures in small animals
	Conduct preoperative assessments and select the most suitable anesthetic protocols for each neurological case
	Apply advanced monitoring techniques during surgery and maintain anesthetic stability in animals with neurological conditions
	Handle and use specific neurosurgery equipment and tools, such as microscopes, forceps, and electrosurgical units, appropriately and efficiently
<b>Diagnostic Techniques in Alterations in Cranial Nerves, Vestibular Syndrome and Canine and Feline Epilepsy. Involuntary Disorder Movements</b>	Conduct a comprehensive clinical assessment of cranial nerve abnormalities in small animals, identifying and distinguishing between different cranial neuropathies
	Apply advanced diagnostic techniques, such as electrodiagnostics and imaging, to confirm and locate cranial nerve abnormalities
	Execute specific treatment plans for each cranial nerve disorder, using medical therapies or surgical interventions as needed
	Implement appropriate therapeutic measures for the management of vestibular syndrome in small animals, such as administering medications to control symptoms and providing physiotherapy to improve balance and coordination

Module	Practical Activity
<b>Techniques for Syndrome Detection</b>	Conduct a precise clinical assessment of important neurological syndromes in small animals, identifying characteristic clinical signs, and gathering relevant medical history
	Apply advanced diagnostic techniques such as magnetic resonance imaging and laboratory analyses to confirm and classify neurological syndromes based on their etiology
	Execute specific treatment plans for each neurological syndrome, using medical therapies, surgical interventions, or other therapeutic approaches as appropriate
	Implement rehabilitation and physiotherapy therapies to improve neurological function and the quality of life in animals affected by neurological syndromes
<b>Emergency Neurological Procedures</b>	Perform stabilization and initial management procedures in cases of neurological emergencies in animals, such as administering drugs to control seizures or managing elevated intracranial pressure
	Implement specific treatments for neurological emergencies in animals, such as decompressing disc herniations or reducing brain herniations, following appropriate care protocols and principles
	Continuously and regularly monitor vital signs and the neurological response of animals with neurological emergencies, adjusting treatment as needed and ensuring constant care
	Provide information and support to pet owners in cases of neurological emergencies, educating them about their animal's condition, the treatments performed, and post procedure care measures to ensure optimal recovery



*You will acquire the necessary skills to perform neurological surgeries and provide optimal care to the animal”*

## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

**1. TUTOR:** During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

# 08

## Where Can I Do the Clinical Internship?

This Hybrid Professional Master's Degree includes a practical application phase in a renowned veterinary establishment, where the specialist will have the opportunity to put into practice all the knowledge acquired during a 3-week period in the field of Small Animal Neurology. In this context, TECH offers students the possibility to carry out this experience in various centers located in different geographic locations. In this way, the institution reaffirms its commitment to excellence and accessible to all education.




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*Consolidate your theoretical knowledge of Neurology through an intensive 3-week practical experience in the most renowned veterinary centers”*

## tech 48 | Where Can I Do the Clinical Internship?



The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:



Veterinary Medicine

### Hospital Veterinario Imagen

Country	City
Mexico	Mexico City

Address: Sur 24 #54 Agricola Oriental  
Iztacalco C.P. 08500

Veterinary Hospital Specializing in Neurology and Diagnostic Imaging

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**Related internship programs:**

- Physiotherapy and Rehabilitation of Small Animals
- Small Animal Neurology







**Veterinary Medicine**

### Neuropets Veterinaria

Country	City
Mexico	Mexico City

Address: Laguna Tamiahua #61, Anáhuac I Secc, Miguel Hidalgo, 11320 Del. Miguel Hidalgo, CDMX

Group of veterinary physician with more than 10 years of experience in specialized veterinary medicine

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**Related internship programs:**

- Management and Direction of Veterinary Centers
- Physiotherapy and Rehabilitation of Small Animals



*Seize this opportunity to surround yourself with expert professionals and benefit from their working methodology"*

09

# Methodology

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

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





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

## At TECH we use the Case Method

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

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



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

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

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

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



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

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



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

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

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

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

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

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



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



### Study Material

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

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



### Latest Techniques and Procedures on Video

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



### Interactive Summaries

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

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



### Additional Reading

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







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

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



#### Testing & Retesting

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



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.  
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

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



# 10 Certificate

The Hybrid Professional Master's Degree in Neurology in Small Animals guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma issued by TECH Technological University.



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

This **Hybrid Professional Master's Degree in Clinical Ultrasound for Emergencies and Critical Care** contains the most complete and up-to-date program on the professional and educational field.

After the student has passed the assessments, they will receive their corresponding Hybrid Professional Master's Degree diploma issued by TECH Technological University via tracked delivery\*

In addition to the diploma, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

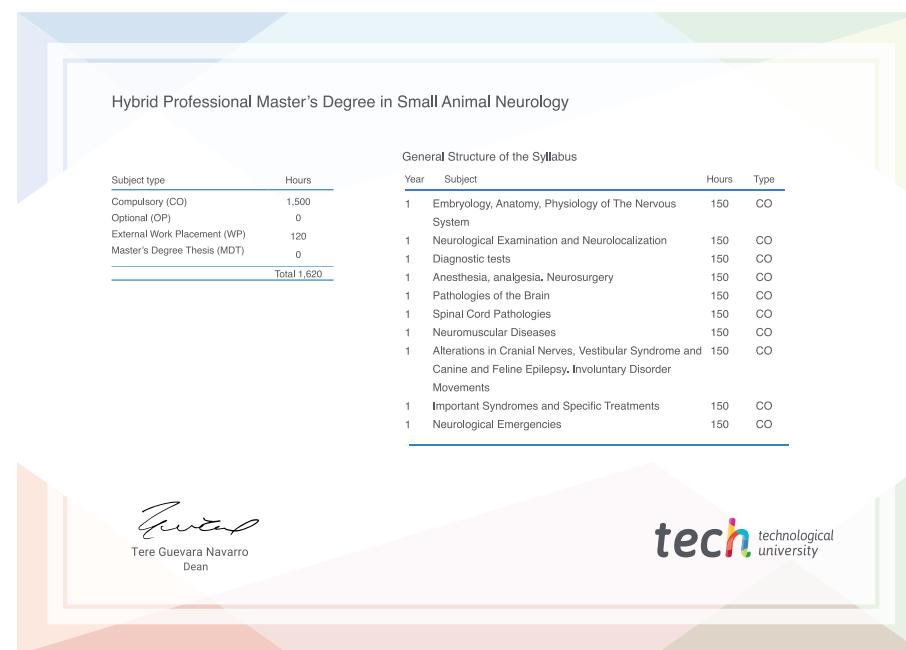
Title: **Hybrid Professional Master's Degree in Clinical Ultrasound for Emergencies and Critical Care**

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 h.**



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



## Hybrid Professional Master's Degree Small Animal Neurology

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h.

# Hybrid Professional Master's Degree

## Small Animal Neurology

