

Hybrid Professional Master's Degree

Small Animal Internal Medicine



Hybrid Professional Master's Degree Small Animal Internal Medicine

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

Website: www.techtute.com/us/veterinary-medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-small-animal-internal-medicine

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01

Introduction

Small Animal Internal Medicine addresses all aspects related to veterinary care. Currently, there have been significant advancements in the monitoring of primary and secondary conditions, leading to a higher success rate. Therefore, this program is created in response to the need for clinical specialists to deepen their specific knowledge in the field to achieve an effective and early diagnosis of these processes, as well as the stabilization and control of patients. TECH offers this qualification with a 100% online theoretical period, complemented by a 3-week Internship Program in veterinary hospital centers of reference, allowing graduates to put into practice all the knowledge acquired previously.





Advance your professional career and be part of the veterinary clinical development to enhance patient care through Internship Program in prestigious centers"

The growing need for veterinary clinics to have specialists who are experts in the specificities of Internal Medicine has led to a higher level of education for veterinary graduates to become more competitive in the labor market. These specialists must be aware of the latest technological advances in medicine to optimize veterinary services and increase the longevity of patients.

For this reason, TECH offers a comprehensive and rigorous program aimed at bringing all the latest developments in Small Animal Internal Medicine to specialists. Thanks to this, students will delve into procedures in different clinical situations, complete ophthalmological examination techniques, the structure and physiology of the skin and its appendages, the overall training of animals in animal-assisted interventions (AAI), as well as the assessment of animals as co-therapists, in addition to small animal-assisted therapy and its effective application.

This qualification will not only provide specialists with all the tools for an optimal and dynamic understanding of the subject but also offer them a 3-week Internship Program in prestigious centers. Firstly, the theoretical period consists of 100% online learning, allowing professionals to adapt their study to the time and place they need. It is also supported by downloadable audiovisual content to make the study a dynamic process based on innovative pedagogical techniques such as the Relearning methodology, which exempts specialists from long hours of memorization, as it is a progressive and straightforward study method.

The Internship Program consists of a 3-week veterinary hospital stay where specialists will benefit from individualized tutoring by associate veterinarians. Both the veterinary center staff and the teaching team providing the theoretical content will be available to guide students effectively. Additionally, they will share their work experience to advance the careers of veterinarians who prepare intellectually and practically with this Hybrid Professional Master's Degree.

This **Hybrid Professional Master's Degree in Small Animal Internal Medicine** 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 small animal care and experienced university professors in critical patient care
- ◆ Its graphic, schematic, and highly practical content, are designed to provide scientific and healthcare information on essential medical disciplines for professional practice
- ◆ Analysis of digestive and respiratory parasitic diseases, as well as assay of Leishmania and assessment of filaria and parasitic diseases
- ◆ Hematological practice, analysis of biochemical markers, and electrolyte assessment
- ◆ 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 clinical internship at one of the best veterinary centers



Increase your ability to recognize pathologies associated with the biological cycle and transmission of infectious diseases in felines and canines"

“

This Hybrid Professional Master's Degree will complement your knowledge in internal medicine and with it you will learn the development of protocols for monitoring and management of stable and critical patients"

This Master's Degree program, which has a professionalizing nature and a hybrid learning modality, is aimed at updating veterinary professionals who perform their functions in aesthetic units, and who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in an educational way to integrate theoretical knowledge into veterinary internship, and the theoretical-practical elements will facilitate the up-to-date knowledge and will allow decision-making in patient management.

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

Expand your knowledge in animal oncology and learn through case studies with this Hybrid Professional Master's Degree, which will provide you with essential knowledge to apply in your daily practice.

Increase the longevity of small animals by projecting your clinical intervention skills through an intensive 3-week internship in a prestigious center.



02

Why Study this Hybrid Professional Master's Degree?

To achieve optimal professional development, it is essential for the professional not only to acquire theoretical knowledge but also to delve into how to approach and apply all the techniques learned in various clinical scenarios. For this reason, TECH has designed a pioneering program that combines the latest updates in areas such as ophthalmology, cardiology, dermatology, and oncology, among others, with a practical placement in a highly prestigious veterinary hospital. This allows the student to gain a comprehensive understanding of the present and future of Small Animal Internal Medicine, preparing them to face any clinical challenge that arises in their daily work.



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Entering real clinical environments will enable you to update your knowledge of internal medicine, allowing you to provide optimal, quality, and effective service in your daily work”

1. Updating from the Latest Technology Available

Internal medicine is a field where different health branches converge. This means that specialists must have an in-depth knowledge of each of them to provide quality care to their patients. To bring the latest technological advances in these areas closer to professionals, TECH offers this Hybrid Professional Master's Degree with included internships. With it, veterinarians will have access to a state-of-the-art clinical environment with the latest technologies for the diagnosis and treatment of small animals.

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

Throughout the entire practical period, a team of experts in the field will accompany the veterinarian, ensuring a safe and high-quality update. Additionally, thanks to having a specifically designated tutor, the veterinarian will be able to see real patients in a cutting-edge working environment, allowing them to incorporate all the latest developments into their daily practice.

3. Entering First-Class Clinical Environments

TECH has carefully selected all the available centers for the internships in this Hybrid Professional Master's Degree. The goal is to provide specialists with safe access to a prestigious clinical environment in the field of veterinary internal medicine. This way, they can delve into the day-to-day operations of a working clinic and acquire the most up-to-date knowledge from top industry experts.





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

To allow professionals to balance their personal responsibilities with professional activity and learning, TECH offers a disruptive and innovative pedagogical model. It stands out for being 100% online, combining theory and practice so that students not only acquire all the latest empirical knowledge but also learn how to apply it in their daily work, thus providing their patients with cutting-edge care.

5. Expanding the Boundaries of Knowledge

With the aim of expanding the professionals horizons, TECH offers the opportunity to complete internships for this qualification not only in national centers but also internationally. In this way, the veterinarian can update their skills with the best professionals, who are located on different continents and work in top-tier clinics.



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

03

Objectives

This program offers advanced training to veterinarians interested in expanding their knowledge in the clinical care of small animals. It provides a didactic education that broadens the specialists' field of vision by applying innovative tools in the field of internal medicine, enabling them to address the pathophysiological mechanisms of different animal diseases, determine the management of patients with heart failure or acute dyspnea, propose a methodology for treating various cardiorespiratory pathologies, and interpret echocardiographic images, among other competencies.





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This program provides you with the opportunity to identify the most common cytostatics and how to manage them when administering chemotherapy”



General Objective

- This qualification aims to expand and update the knowledge of Veterinary graduates in diagnostic and therapeutic procedures within the specialty, in a theoretical-practical manner, through a rigorously clinical and academic-designed hospital stay. In this way, the specialist will delve into the selection of tests in different clinical situations, complete ophthalmologic examination techniques from ocular adnexa to the fundus of the eye, the structure and physiology of the skin and cutaneous appendages, global training processes for animal-assisted interventions (AAI), animal evaluation as a co-therapist, as well as small animal-assisted therapies and their effective application, among other matters



This program will enhance your responsiveness in surgical interventions and refine your skills as a small animal professional using the latest technologies in the field of Internal Medicine"





Specific Objectives



Module 1. Cardiorespiratory Disorders

- ♦ Analyze and describe pathophysiological mechanisms of different diseases
- ♦ Identify the different diagnostic tests available for these two organ systems
- ♦ Adapt pharmacological therapy to specific condition of cardiorespiratory patient
- ♦ Identify clinical symptomatology of different cardiorespiratory diseases
- ♦ Accurately recognize different pulmonary radiographic patterns
- ♦ Interpret echocardiographic images
- ♦ Propose a methodology for the treatment of different cardiorespiratory pathologies
- ♦ Establish management procedure for patient with heart failure or acute dyspnea

Module 2. Abnormalities in the Digestive System

- ♦ Establish anamnesis and general physical examination of patients with vomiting and diarrhea
- ♦ Identify common alterations in blood tests, X-rays and abdominal ultrasounds
- ♦ Generate therapeutic plan for patients with vomiting
- ♦ Propose a therapeutic plan for patients with diarrhea and for icteric patients
- ♦ Examine hereditary and predisposed breed-associated diseases
- ♦ Demonstrate knowledge in management of dehydrated patients and/or those in septic condition
- ♦ Address commonly used drugs
- ♦ Identify the secondary pathophysiological consequences of digestive diseases on the rest of the organism
- ♦ Provide dietary recommendations

Module 3. Abnormalities in the Genitourinary System

- ♦ Select and interpret tests and results
- ♦ Draw up correct therapeutic guidelines
- ♦ Establish correct follow-up approach with chronic problems

Module 4. Neurology

- ♦ Determine whether lesion is intracranial or extracranial, based on neurological examination
- ♦ Examine main differences between central and peripheral SNs
- ♦ Establish a diagnostic protocol for seizure disorders
- ♦ Recognize a status epilepticus and know how to proceed with treatment
- ♦ Identify typical signs of upper and lower motor neuron syndrome
- ♦ Follow correct treatment guidelines for head injuries and establish prognosis
- ♦ Know basics of neuro-ophthalmology and know how to apply clinically

Module 5. Endocrine System Disorders

- ♦ Address the most common endocrinopathies
- ♦ Identify clinical signs of systemic pathologies
- ♦ Propose and perform different laboratory diagnostic techniques to diagnose these pathologies
- ♦ Elaborate a complete differential diagnosis to reach a definitive diagnosis of endocrinopathies
- ♦ Generate appropriate therapeutic, monitoring and follow-up plans according to pathology

Module 6. Infectious Diseases

- ♦ Determine biological cycle, propensity for transmission and incubation period of infectious diseases

- ◆ Analyze the most appropriate laboratory diagnostic techniques for each event
- ◆ Generate specialized knowledge to monitor and manage stable and critically ill patients
- ◆ Detect pathologies associated with these diseases

Module 7. Ophthalmology

- ◆ Address most common ophthalmologic alterations
- ◆ Diagnosis of several, more advanced ocular pathologies
- ◆ Establish treatments for different ophthalmologic pathologies
- ◆ Effective management of ophthalmologic emergencies
- ◆ Perform anesthesia for ophthalmological surgeries or on patients with ophthalmological pathologies

Module 8. Oncology

- ◆ Recognize the main oncological emergencies
- ◆ Identify main differences between mammary tumors in bitches and female cats
- ◆ Become familiar with the most common cytostatics and their management when administering chemotherapy
- ◆ Know how to manage an initial oncology consultation with owners
- ◆ Identify and know how to approach situations involving a paraneoplastic syndrome
- ◆ Assess different therapeutic options depending on type of neoplasm
- ◆ Propose diagnostic protocol that allows for adequate tumor staging
- ◆ Establish best therapeutic option(s) once the stage of the tumor is determined

Module 9. Dermatology

- ◆ Address the most common dermatological alterations
- ◆ Propose and perform different dermatological diagnostic techniques
- ◆ Elaborate a complete differential diagnosis to reach a definitive diagnosis of dermatosis
- ◆ Identify clinical, dermatological signs of systemic pathologies
- ◆ Generate an appropriate therapeutic plan according to dermatosis



04 Competencies

After successfully completing the Professional Master's Degree in Small Animal Internal Medicine, the veterinary specialist will possess the most rigorous professional competencies to carry out their work with the utmost skills and even surpass the set goals for updating and deepening their knowledge. Therefore, they will be a veterinarian focused on the latest therapies for small animals, applying the most recent technologies and scientific foundations for their rehabilitation.





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Through this program, you can expand your knowledge of the structure of the nictitating membrane, delving into the analysis of the anatomy and physiology of the animal eye"



General Skills

- ◆ Identify and classify the most common infectious diseases
- ◆ Identify the most common clinical signs and the most likely organ(s) involved
- ◆ Examine the basic anatomy and physiology of the eye
- ◆ Identify main cell lines at the cytological level
- ◆ Understand the physiology of the cardiorespiratory system
- ◆ Establish a list of differential diagnoses of animals with vomiting and diarrhea
- ◆ Elaborate a differential diagnosis according to the history, anamnesis and neurological examination
- ◆ Perform a correct and complete dermatological examination
- ◆ Identify parameters that make up a blood analysis
- ◆ Make correct choice of tests in different clinical situations





Specific Skills

- ◆ Identify the most common clinical signs and the most likely organ(s) involved
- ◆ To have decision-making skills in pharmacological therapeutics applied to these organ systems
- ◆ Identify patients with non-specific abdominal pain and/or dehydration
- ◆ Compile all clinical signs related to diseases in the digestive tract
- ◆ Establish a list of differential diagnoses of animals with vomiting and diarrhea
- ◆ Be familiar with specific diagnostic laboratory and imaging tests used for the digestive system
- ◆ Recognize pathologies associated with the urinary and reproductive systems
- ◆ Be able to perform a complete neurological examination and, based on the findings, localize the injury
- ◆ Gain in-depth understanding of the pathophysiology of endocrinopathies
- ◆ Establish therapeutic bases for each group of pathologies according to the affected glandular function
- ◆ Recognize most frequent neoplasms in pet animals
- ◆ Identify main cell lines at the cytological level
- ◆ Differentiate types of dermatological lesions
- ◆ Substantiate importance of a comprehensive training process for animals collaborating in animal-assisted interventions (AAI)
- ◆ Define the legal rights and obligations of entities specializing in Assisted Therapies

05

Course Management

TECH has assembled a team of specialists well-versed in surgery, anesthesia, oncology, ophthalmology, and veterinary electrochemotherapy, among other specialties, to deliver the program's content. Thanks to their contributions, the content is scientifically rigorous and enriched with the practical experience of industry experts. Additionally, this teaching team will guide the students throughout the theoretical process and provide personalized tutoring to help them address all study-related queries.





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You have the support of a professional team grounded in internal medicine and with skills in other veterinary fields to help you become an experienced specialist”

Management



Mr. Usabiaga Alfaro, Javier

- Director of Symbiosis Center for Veterinary Specialties
- Responsible for Diagnostic Imaging and Endoscopy Services, actively involved in the Cardiology and Internal Medicine Services at Symbiosis Center for Veterinary Specialties
- Graduated in Veterinary from the Alfonso X el Sabio University (UAX)
- Postgraduate in Diagnostic Imaging from Improve International
- Postgraduate course in Small Animal Surgery offered by the I-Vet Veterinary Institute
- Master's Degree in Small Animal Medicine and Emergencies by AEVA
- Master's Degree in Small Animal Medicine and Master's in Clinical Small Animal Ultrasound from Improve International
- General Practitioner Degree in Small Animal Medicine (GPCert SAM) awarded by the International School of Veterinary Postgraduate Studies (ISVPS)
- Obtaining the GPCert in Ultrasound specialist certificate by the ISVPS
- Postgraduate Diploma in Small Animal Surgery and Anesthesia from the Autonomous University of Barcelona (UAB)



Dr. Pérez-Aranda Redondo, María

- Veterinary Expert in Dermatology at SKINPET
- Veterinarian at SKINPET at the Veterinary Center for Dermatology and Allergy Specialization
- Degree in Veterinary Medicine from the University of Córdoba.
- Doctor in Pharmacy from the Faculty of Pharmacy at the University of Seville Her research on the Assessment of the Antimicrobial Activity of Unconventional Chemical Entities for Veterinary Dermatology received a distinction of Summa Cum Laude
- General Practitioner Certificate in Dermatology from ISVPS
- Author and co-author of numerous publications and presentations at national and international congresses, as well as book chapters
- Member of: GEDA of AVEPA In the process of accreditation in Dermatology by the European Society of Veterinary Dermatology (ESVD)

Professors

Dr. Monge Utrilla, Óscar

- ♦ Head of the Cardiology Service at Kitican Veterinary Group. Madrid, Spain
- ♦ Head of the Veterinary Cardiology Service in the Diagnostic Imaging and Anesthesia Services at various Veterinary Clinics
- ♦ Degree in Veterinary Medicine, Complutense University Madrid
- ♦ Postgraduate Diploma in Hospital Veterinary Clinic from the University of León
- ♦ Professional Master's Degree in Veterinary Anesthesiology by TECH University CEU-UCH. 2021
- ♦ Creator of the Veterinary Cardiology podcast "Cardio Podvet," with over 4,000 downloads in 40 different countries (source: Anchor Podcast), primarily in Europe and the Americas
- ♦ Member of the European Society of Veterinary Cardiology (ESVC), Spanish Society of Cardiac Imaging (SEIC)

Dr. Martín Santander, Víctor

- ♦ Veterinary Expert in Hospitalization, ICU, and Emergency Medicine
- ♦ Head of the Hospitalization, ICU, and Emergency Medicine Service at Simbiosis Veterinary Specialty Center
- ♦ Generalist and Emergency Veterinarian, member of the Ultrasound and Radiology team at La Chopera Veterinary Hospital
- ♦ Anesthetist and Surgeon at the Veterinary Clinical Center of the University of Zaragoza
- ♦ Author of numerous publications about veterinary
- ♦ Graduated in Veterinary Medicine from the University of Zaragoza
- ♦ Graduated in Biology with a specialization in Zoology and Animal Biology from the Autonomous University of Barcelona
- ♦ Master's Degree in Small Animal Clinic at the University of Zaragoza





Dr. Moise, Antoaneta

- ◆ Emergency Veterinarian at Northlands Veterinary Hospital in Kettering
- ◆ Head of the Animal Health Department at the National Sanitary Directorate of Veterinary and Food Safety in Ialomita, Romania
- ◆ Director of Private Farms and Forests in Slobozia, Romania
- ◆ Veterinary Surgeon at SC Lactilrom
- ◆ Graduate in Veterinary Medicine from the University of Bucharest
- ◆ Member of the Royal College of Veterinary Surgeons in London

Dr. Olmo López, José Antonio

- ◆ Veterinary Specialist in Diagnostic Imaging
- ◆ Head of Hospitalization at San Vicente Veterinary Hospital
- ◆ Veterinarian at El Cabo Veterinary Clinic
- ◆ Veterinarian at the Benjamín Mehnert Foundation
- ◆ Author and co-author of various articles in national specialized journals
- ◆ Bachelor of Veterinary Medicine from the University of Córdoba
- ◆ Postgraduate Advanced Course (CSP) in Medium and Advanced Imaging Diagnosis in Small Animals from the University Cardenal Herrera
- ◆ Member of the Working Groups for Internal Medicine and Diagnostic Imaging of AVEPA

Dr. Morata Francisco, Sandra

- ◆ Emergency Medicine and Internal Medicine Veterinarian at Madrid Este Veterinary Hospital
- ◆ Veterinarian in the Internal Medicine and Emergency Services at CV Sada Zaragoza
- ◆ Graduada en Veterinaria por la Universidad de Zaragoza
- ◆ Postgraduate in Small Animal Cardiology
- ◆ Master's Degree in Small Animal Clinic I and II by the University of Zaragoza
- ◆ Member of the Association of Small Animal Veterinary Specialists

Ms. Sánchez Gárriza, María

- ◆ Founder and Director of Simbiosis Veterinary Specialty Center
- ◆ Co-founder of the Veterinary Specialists Association (ASESVET & HEALTH) and responsible for Internal Medicine and Oncology Services
- ◆ Head of Internal Medicine and Diagnostic Imaging Services at various centers in Pamplona
- ◆ Degree in Veterinary from the University of Zaragoza
- ◆ Postgraduate Degree in Small Animal Medicine by Improve International
- ◆ General Practitioner Degree in Small Animal Medicine (GPCert SAM) awarded by the ISVPS (International School of Veterinary Postgraduate Studies)
- ◆ Master's Degree in Clinical Veterinary Oncology by AEVA
- ◆ Postgraduate in Small Animal Medicine from the Autonomous University of Barcelona

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. Pérez Palacios, Sergio

- ♦ Veterinarian specializing in Oncology, Cytology, Emergency Care, and Internal Medicine for small animals
- ♦ Co-responsible for the Oncology and Cytology Service at Symbiosis Center for Veterinary Specialties
- ♦ Graduated in Veterinary Medicine from the University of Zaragoza
- ♦ Master's Degree in Small Animal Clinical Practice I and II at the Veterinary Hospital of the University of Zaragoza
- ♦ Master's Degree in Small Animal Clinic II at the Veterinary Hospital of the University of Zaragoza
- ♦ International Course in Oncology for canine and feline patient
- ♦ Online Course on Oncology in the canine and feline patient
- ♦ Online Course on Neurology in the canine and feline patient
- ♦ Poster with the title Complete Remission and Prolonged Survival in a Case of canine atrial hemangiosarcoma at the SEVC AVEPA

Mr. Recio Monescillo, Julián

- ♦ Veterinarian at the Symbiosis Center for Veterinary Specialties
- ♦ Head of the Ophthalmology and Ophthalmic Surgery Service at Symbiosis Center for Veterinary Specialties
- ♦ Specialized Ambulatory Ophthalmology Service
- ♦ Collaborations in Minimally Invasive Surgery with Ambulatory Service at Ciruvet
- ♦ Volunteer at various animal shelters
- ♦ Graduated in Veterinary Medicine from the Alfonso X El Sabio University from Madrid
- ♦ Master's Degree in Clinical Practice and Emergency Care for Small Animals accredited by the Spanish Association of Applied Veterinary by AEVA
- ♦ Master's degree in Soft Tissue Surgery from the Autonomous University of Barcelona
- ♦ Diploma in Veterinary Ophthalmology from the Complutense University of Madrid
- ♦ El Trébol Veterinary Clinic. Illescas
- ♦ Member of the Spanish Society of Veterinary Ophthalmology (SEOVET)



Thanks to the fact that this teaching team is currently active, they will teach you all the ins and outs of Small Animal Internal Medicine, preparing you to face any clinical challenge that may arise"

06

Educational Plan

The syllabus of this Hybrid Professional Master's Degree in Small Animal Internal Medicine has been designed so that learning is progressive and tailored to the needs of the students. From the first theoretical module, specialists will be able to delve into the physiology of the cardiovascular system, the respiratory system, and the physiology of heart failure, as well as physical examination and pulmonary auscultation. And through the practical period, students will enhance their skills in the work area in order to apply their clinical abilities in their own veterinary center.





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It is part of the clinical development of dogs and cats with a total update of veterinary care techniques, implementing innovative emergency protocols”

Module 1. Cardiorespiratory Disorders

- 1.1. Cardiorespiratory Physiology
 - 1.1.1. Cardiovascular System Physiology
 - 1.1.2. Physiology of the Respiratory System
 - 1.1.3. Pathophysiology of Cardiac Failure
- 1.2. Cardiorespiratory System Examination
 - 1.2.1. Anamnesis and Physical Examination
 - 1.2.2. Femoral Pulse Palpation
 - 1.2.3. Respiratory Pattern
 - 1.2.4. Cardiac Auscultation
 - 1.2.5. Pulmonary auscultation
- 1.3. Thoracic Radiography
 - 1.3.1. Basics of Thoracic Radiology
 - 1.3.2. Interstitial Pattern
 - 1.3.3. Alveolar Pattern
 - 1.3.4. Bronchial Pattern
 - 1.3.5. Vascular and Mixed Pattern
 - 1.3.6. Cardiac Silhouette Assessment
 - 1.3.7. VHS, VLAS and other Cardiac Measurements in Thoracic Radiography
- 1.4. Electrocardiography
 - 1.4.1. Guidelines for Electrocardiographic Interpretation
 - 1.4.2. Tachyarrhythmias
 - 1.4.3. Bradyarrhythmias and Conduction Disturbances
- 1.5. Echocardiography
 - 1.5.1. Fundamentals of Echocardiography
 - 1.5.2. Echocardiographic Anatomy (B-mode and M-mode)
 - 1.5.3. Pulsed, Continuous, Color, and Tissue Doppler
- 1.6. Diagnostic Tests of the Respiratory System
 - 1.6.1. Rhinoscopy and Pharyngoscopy
 - 1.6.2. Bronchoscopy
 - 1.6.3. Pulmonary CT
- 1.7. Cardiovascular Diseases I
 - 1.7.1. Chronic Degenerative Mitral and Tricuspid Valve Disease
 - 1.7.2. Canine and Feline Dilated Cardiomyopathy
 - 1.7.3. Canine and Feline Hypertrophic Cardiomyopathy
 - 1.7.4. Restrictive Cardiomyopathy
 - 1.7.5. Arrhythmogenic Right Ventricular Cardiomyopathy
- 1.8. Cardiovascular Diseases II
 - 1.8.1. Pulmonary Stenosis
 - 1.8.2. Subaortic Stenosis
 - 1.8.3. Patent Ductus Arteriosus
 - 1.8.4. Valvular Dysplasia
 - 1.8.5. Tetralogy of Fallot
 - 1.8.6. Systemic and Pulmonary Hypertension
 - 1.8.7. Management of Congestive Heart Failure
- 1.9. Respiratory Diseases I
 - 1.9.1. Rhinitis and Brachiocephalic Syndrome
 - 1.9.2. Tracheal Stenosis
 - 1.9.3. Chronic Bronchitis and Feline Asthma
 - 1.9.4. Pneumonia
 - 1.9.5. Pulmonary Fibrosis
 - 1.9.6. Pulmonary Neoplasms
- 1.10. Respiratory Diseases II
 - 1.10.1. Diseases of the Pleura and Pleural Space
 - 1.10.2. Dirofilaria and Pulmonary Thromboembolism
 - 1.10.3. Management Dyspneic Patients

Module 2. Abnormalities in the Digestive System

- 2.1. Approach to Patients with Vomiting
 - 2.1.1. Pathophysiology of Vomiting
 - 2.1.2. Etiology
 - 2.1.3. Clinical Symptoms
 - 2.1.4. Alterations in Blood Count and Serum Biochemistry
 - 2.1.5. Diagnostic Protocol
 - 2.1.6. Treatment for Vomiting
 - 2.1.6.1. Commercial Diets
 - 2.1.6.2. Antiemetics
 - 2.1.6.3. Gastric Acid Suppressants and Antacids
 - 2.1.6.4. Stomach Mucosal Protectors
- 2.2. Approach to Patients with Diarrhea
 - 2.2.1. Pathophysiology of Diarrhea
 - 2.2.2. Classification and Etiology
 - 2.2.3. Clinical Symptoms
 - 2.2.4. Differential Diagnosis
 - 2.2.4.1. Acute Diarrhea
 - 2.2.4.2. Chronic Diarrhea
- 2.3. Common Pathologies of the Oral Cavity and Esophagus
 - 2.3.1. Dysphagia
 - 2.3.2. Cricopharyngeal Dysfunction
 - 2.3.2.1. Cricopharyngeal Achalasia
 - 2.3.2.2. Asynchronous Cricopharyngeal
 - 2.3.3. Regurgitation
 - 2.3.4. Esophageal Pathologies
 - 2.3.4.1. Megaesophagus
 - 2.3.4.2. Oesophagitis
 - 2.3.4.3. Oesophageal Stricture
 - 2.3.4.4. Vascular Anomaly
 - 2.3.4.5. Hiatal Hernia
- 2.4. Gastric Disorders
 - 2.4.1. Acute Gastritis
 - 2.4.2. Chronic Gastritis
 - 2.4.3. Gastric Ulcers
 - 2.4.4. Foreign Body Obstruction
 - 2.4.5. Neoplasty
- 2.5. Small Intestine Diseases
 - 2.5.1. Acute Enteritis
 - 2.5.2. Chronic Intestinal Disease
 - 2.5.3. Protein-Losing Enteropathy
 - 2.5.4. Intestinal Bacterial Overgrowth
 - 2.5.5. Neoplasms
- 2.6. Large Intestinal Diseases
 - 2.6.1. Chronic Diarrhea
 - 2.6.2. Infection by *Tritrichomonas Foetus*
 - 2.6.3. Constipation in Cats
 - 2.6.4. Ulcerative Histiocytic Colitis
 - 2.6.5. Neoplasms
- 2.7. Principles of Ultrasound and Gastrointestinal Endoscopy
 - 2.7.1. Two-Dimensional Description of Normal Digestive Structures
 - 2.7.2. Gastroduodenoscopy
 - 2.7.2.1. Patient Preparation
 - 2.7.2.2. Preparation of Material
 - 2.7.2.3. Procedure
 - 2.7.3. Colonoscopy
 - 2.7.3.1. Patient Preparation
 - 2.7.3.2. Procedure

- 2.8. Hepatobiliary Diseases I. Hepatopathies in Dogs
 - 2.8.1. Differences in Cats and Dogs
 - 2.8.2. Diagnosis
 - 2.8.3. Supportive therapy
 - 2.8.4. Hepatopathies in Dogs
 - 2.8.4.1. Chronic Hepatitis
 - 2.8.4.2. Leptospirosis
 - 2.8.4.3. Drug-Associated Hepatopathy or Liver Disease
 - 2.8.4.4. Portal Vein Hypoplasia
 - 2.8.4.5. Portosystemic Shunt
 - 2.8.4.5.1. Congenital SPS
 - 2.8.4.5.2. Acquired SPS
- 2.9. Hepatobiliary Diseases II
 - 9.9.1. Hepatopathies in Cats
 - 2.9.1.1. Hepatic Lipidosis
 - 2.9.1.2. Acute Hepatitis
 - 2.9.1.3. Chronic Hepatitis
 - 2.9.1.4. Inmunodeficiencia Felina
 - 2.9.1.5. Hepatic Amyloidosis
 - 2.9.1.6. Drug-Associated Hepatopathy or Liver Disease
 - 2.9.2. Hepatic Neoplasia
 - 2.9.3. Biliary Diseases
 - 2.9.3.1. Biliary Mucocele
 - 2.9.3.2. Neutrophilic Cholangitis
 - 2.9.3.3. Lymphocytic Cholangitis
 - 2.9.3.4. Chronic Cholangitis Associated with Trematodes
 - 2.9.4. Neoplasms of the Gallbladder and Bile Ducts
- 2.10. Diseases of the Exocrine Pancreas
 - 2.10.1. Pathophysiology
 - 2.10.2. Diagnosis
 - 2.10.3. Acute Pancreatitis
 - 2.10.4. Necrotizing Pancreatitis
 - 2.10.5. Exocrine Pancreatic Insufficiency
 - 2.10.6. Neoplasms

Module 3. Abnormalities in the Genitourinary System

- 3.1. Urinary Physiology and Clinical Manifestations
 - 3.1.1. Physiology of the Kidney
 - 3.1.2. Polyuria
 - 3.1.3. Stranguria and Dysuria
 - 3.1.4. Incontinence and Urinary Retention
 - 3.1.5. Systemic Hypertension
- 3.2. Functional Urinary Disorders
 - 3.2.1. Urinalysis
 - 3.2.2. Creatinine and Urea
 - 3.2.3. SDMA
 - 3.2.4. UPC
 - 3.2.5. Urinary Sediments
- 3.3. Disorders of Upper Tract
 - 3.3.1. Glomerulonephritis
 - 3.3.2. Tubular Disorders
 - 3.3.3. Congenital Kidney Diseases
 - 3.3.4. Ureteral Disorders
- 3.4. Disorders of Lower Tract
 - 3.4.1. Cystitis
 - 3.4.2. Urolithiasis
 - 3.4.3. Prostate and Urethral Disorders
- 3.5. Chronic Kidney Disease
 - 3.5.1. Diagnostic Approximation
 - 3.5.2. Treatment
 - 3.5.3. Monitoring and Follow-Up
- 3.6. Acute Kidney Failure
 - 3.6.1. Diagnostic Approximation
 - 3.6.2. Oliguric, Anuric or Polyuric? How do I differentiate it?
 - 3.6.3. Treatment, Monitoring and Follow-Up

- 3.7. Physiology and Clinical Manifestations of Reproductive System
 - 3.7.1. Physiology of Genital Apparatus
 - 3.7.2. Clinical Signs Associated with Reproductive System
- 3.8. Male Genital Apparatus
 - 3.8.1. Genital Examination
 - 3.8.2. Differential of Male Reproductive Diseases
 - 3.8.3. Therapeutic Options and Guidelines
- 3.9. Females Genital Apparatus
 - 3.9.1. Genital Examination
 - 3.9.2. Differential of Female Reproductive Diseases
 - 3.9.3. Follow-Up of Gestation
 - 3.9.4. Therapeutic Options and Guidelines
- 3.10. Genitourinary Emergencies
 - 3.10.1. Urinary Obstruction
 - 3.10.2. Uroabdomen
 - 3.10.3. Pyometra
 - 3.10.4. Prolapse and Paraphimosis
- 4.4. Location of the Lesion (Neurolocalization)
 - 4.4.1. Where is the Lesion?
 - 4.4.2. Intracranial vs. Extracranial
 - 4.4.3. Intracranial: Anterior Encephalon, Brainstem, Vestibular System and Cerebellum
 - 4.4.4. Extracranial: Spinal Cord, PNS and Muscle
- 4.5. Differential Diagnosis (Vitamin D)
 - 4.5.1. Vascular
 - 4.5.2. Inflammatory/Infectious
 - 4.5.3. Traumatological/Toxic
 - 4.5.4. Congenital Abnormalities
 - 4.5.5. Metabolic
 - 4.5.6. Idiopathic
 - 4.5.7. Neoplastic
 - 4.5.8. Degenerative
- 4.6. Diagnostic Techniques
 - 4.6.1. Blood and Urine Tests
 - 4.6.2. Serum Titrations
 - 4.6.3. LCR
 - 4.6.4. Imaging Tests: CXR, CT and MR
 - 4.6.5. Electrodiagnostic Tests
- 4.7. Epilepsy and Seizures
 - 4.7.1. Introduction and Pathophysiology
 - 4.7.2. Clinical Signs and Classification
 - 4.7.3. Diagnostic Protocol
 - 4.7.4. Crisis Treatment
 - 4.7.5. Status Epilepticus

Module 4. Neurology

- 4.1. Neuroanatomy
 - 4.1.1. CNS
 - 4.1.2. PNS
- 4.2. Neurological Examination I
 - 4.2.1. State of Mind
 - 4.2.2. Posture and Gait
 - 4.2.3. Cranial Nerve Pairs
 - 4.2.4. Postural Reactions
 - 4.2.5. Spinal Reflexes
- 4.3. Neurological Examination II
 - 4.3.1. Lower and Upper Motor Neurons
 - 4.3.2. Paresis and Ataxia
 - 4.3.3. Reflex vs. Reaction
 - 4.3.4. Neuro-Ophthalmology I
 - 4.3.5. Neuro-Ophthalmology II

- 4.8. Cranioencephalic Trauma
 - 4.8.1. Pathophysiology
 - 4.8.2. Clinical Symptoms
 - 4.8.3. Diagnostic Protocol
 - 4.8.4. Treatment
 - 4.8.5. Prognosis
- 4.9. Neuromuscular Debility
 - 4.9.1. Botulism
 - 4.9.2. Myasthenia Gravis
 - 4.9.3. Polyradiculoneuritis
- 4.10. Vestibular Syndrome
 - 4.10.1. Anatomy
 - 4.10.2. Clinical Signs (Central vs. Peripheral)
 - 4.10.3. Vestibular System Pathologies
 - 4.10.4. Diagnosis
 - 4.10.5. Treatment

Module 5. Endocrine System Disorders

- 5.1. Approach to the Endocrine Patient
 - 5.1.1. Obesity
 - 5.1.2. Polyuria/Polydipsia
 - 5.1.3. Alopecia
 - 5.1.4. Weaknesses
 - 5.1.5. Hyperlipemia
- 5.2. Pituitary Disorders
 - 5.2.1. Pituitary Dwarfism
 - 5.2.2. Acromegaly
 - 5.2.3. Diabetes Insipidus
- 5.3. Thyroid Disorders
 - 5.3.1. Canine Hypothyroidism
 - 5.3.2. Feline Hypothyroidism
 - 5.3.3. Canine Hyperthyroidism
 - 5.3.4. Feline Hyperthyroidism

- 5.4. Parathyroid Disorders
 - 5.4.1. Canine Hypoparathyroidism and Hypocalcemia
 - 5.4.2. Feline Hypoparathyroidism and Hypocalcemia
 - 5.4.3. Canine Hyperparathyroidism and Hypercalcemia
 - 5.4.4. Feline Hyperparathyroidism and Hypercalcemia
- 5.5. Pancreatic Disorders
 - 5.5.1. Canine Diabetes *Mellitus*
 - 5.5.2. Feline Diabetes *Mellitus*
 - 5.5.3. Insulinoma
 - 5.5.4. Glucagonoma
- 5.6. Adrenal Gland Disorders
 - 5.6.1. Hyperadrenocorticism
 - 5.6.2. Hypoadrenocorticism
 - 5.6.3. Hyperaldosteronism
 - 5.6.4. Pheochromocytoma
- 5.7. Sex Hormone Disorders
 - 5.7.1. Hyperestrogenism in Females
 - 5.7.2. Hyperestrogenism in Males
 - 5.7.3. Other Sex Hormone Disorders
- 5.8. Diagnostic Approach to Endocrinopathies
 - 5.8.1. Laboratory Tests
 - 5.8.2. Diagnostic Imaging Techniques
 - 5.8.3. Other Tests
- 5.9. Monitoring and Follow-Up of Endocrinopathies
 - 5.9.1. Diabetic Patient Monitoring
 - 5.9.2. Hypothyroid Patient Monitoring
 - 5.9.3. Hyperthyroid Patient Monitoring
 - 5.9.4. Monitoring of Patients with Hyperadrenocorticism
 - 5.9.5. Monitoring of Patients with Hypoadrenocorticism
 - 5.9.6. Caring for Patients with Parathyroid Alterations



- 5.10. Emergencies
 - 5.10.1. Diabetic ketoacidosis
 - 5.10.2. Addisonian Crisis
 - 5.10.3. Thyroid Storm

Module 6. Infectious Diseases

- 6.1. Digestive and Respiratory Parasitic Diseases I
 - 6.1.1. Protozoa
 - 6.1.1.1. Giardiasis
 - 6.1.1.2. *Trichomonads*
 - 6.1.1.3. Coccidia
 - 6.1.1.4. Toxoplasma
- 6.2. Digestive and Respiratory Parasitic Diseases II
 - 6.2.1. Nematodes
 - 6.2.2. Cestodes
- 6.3. *Leishmania*
 - 6.3.1. Cycle
 - 6.3.2. Diagnosis
 - 6.3.3. Treatment
- 6.4. Filaria
 - 6.4.1. Cycle
 - 6.4.2. Diagnosis
 - 6.4.3. Treatment
- 6.5. Parasitic Diseases Transmitted by Ticks
 - 6.5.1. Ehrlichia and Anaplasma
 - 6.5.2. Babesia
 - 6.5.3. Borrelia
 - 6.5.4. Rickettsia
- 6.6. Viral Diseases in Canines
 - 6.6.1. Parvovirus
 - 6.6.2. Coronavirus
 - 6.6.3. Distemper

- 6.7. Canine and Feline Bacterial Diseases
 - 6.7.1. Leptospira
 - 6.7.2. Helicobacter and Other Digestive Bacteria
 - 6.7.3. Chlamydia
 - 6.7.4. Mycoplasmas
 - 6.7.5. Bordetella
- 6.8. Viral Diseases in Felines I
 - 6.8.1. Leukemia
 - 6.8.2. Immunodeficiencies
- 6.9. Viral Diseases in Felines II
 - 6.9.1. Panleukopenia
 - 6.9.2. Inmunodeficiencia Felina
 - 6.9.3. Calicivirus
 - 6.9.4. Herpesvirus
- 6.10. External Parasitic Diseases and Emerging Infectious Diseases
 - 6.10.1. External Parasites and Dermatophytes
 - 6.10.1.1. Scabies
 - 6.10.1.2. Fleas
 - 6.10.1.3. Fúngicas
 - 6.10.2. NON-endemic infectious diseases in Spain

Module 7. Ophthalmology

- 7.1. Anatomy, Physiology and Ophthalmologic Examination
 - 7.1.1. Basic Ocular Anatomy
 - 7.1.2. Physiology of Vision
 - 7.1.3. Ophthalmologic examination
- 7.2. Associated Ocular Diseases
 - 7.2.1. Orbit
 - 7.2.2. Eyelids
 - 7.2.3. Conjunctiva
 - 7.2.4. Nictitating Membrane
 - 7.2.5. Lacrimal System
- 7.3. Keratitis
 - 7.3.1. Ulcerative Keratitis
 - 7.3.1.1. Superficial Ulceration
 - 7.3.1.2. Deep Ulceration
 - 7.3.1.3. Descemet Ulcer
 - 7.3.1.4. Corneal Perforation
 - 7.3.1.5. Indolent Ulcer
 - 7.3.1.6. Medical Treatment
 - 7.3.1.7. Surgical Resolution
 - 7.3.2. Non-Ulcerative Keratitis
 - 7.3.2.1. Superficial Keratitis
 - 7.3.2.2. Pigmentary Keratitis
 - 7.3.2.3. Keratoconjunctivitis Sicca
 - 7.3.2.4. Feline Eosinophilic Keratitis
- 7.4. Uveitis I
 - 7.4.1. Pathophysiology of Uveitis
 - 7.4.2. Causes of Uveitis in the Canine Species
 - 7.4.3. Causes of Uveitis in the Feline Species
- 7.5. Uveitis II
 - 7.5.1. Diagnostic Protocol for Uveitis
 - 7.5.2. Other Systemic Disorders Associated with Uveitis
 - 7.5.3. Treatment for Uveitis
- 7.6. Diseases of the Crystalline Lens
 - 7.6.1. Anterior Lens Luxation
 - 7.6.2. Posterior Lens Luxation
 - 7.6.3. Cataracts
- 7.7. Glaucoma
 - 7.7.1. Introduction
 - 7.7.2. Classification of Glaucoma
 - 7.7.3. Treatment for Glaucoma

- 7.8. Posterior Segment
 - 7.8.1. Vitreous humor
 - 7.8.2. Retina
 - 7.8.3. Optic Nerve
- 7.9. Emergencies
 - 7.9.1. Classification
 - 7.9.2. Diagnosis
 - 7.9.3. Treatment
- 7.10. Therapeutics, Anesthesia and Ocular Ultrasonography
 - 7.10.1. Therapeutics
 - 7.10.2. Anesthesia
 - 7.10.3. Ultrasound

Module 8. Oncology

- 8.1. Approach to Patients with Cancer
 - 8.1.1. Oncology Patient and Owner
 - 8.1.2. Paraneoplastic Syndromes
 - 8.1.3. Types of Treatment Response
- 8.2. Diagnosis and Staging of Cancer Patients
 - 8.2.1. Diagnostic Methods
 - 8.2.2. Clinical Staging
- 8.3. Diagnostic Cytology and Biopsy Collection
 - 8.3.1. Obtaining and Handling Cytological Sample
 - 8.3.2. Cytological Interpretation
 - 8.3.3. Cytology of Inflammatory and Hyperplastic Lesions
 - 8.3.4. Cytology of Neoplasms and Criteria for Malignancy
 - 8.3.5. Tumors of Epithelial Origin
 - 8.3.6. Tumors of Conjunctival Origin
 - 8.3.7. Round Cell Tumours
 - 8.3.8. Biopsy Techniques
- 8.4. Principles of Anti-Tumor Therapy
 - 8.4.1. Surgery
 - 8.4.2. Indications and Uses of the Chemotherapy
 - 8.4.3. Main Chemotherapeutic Drugs
 - 8.4.4. Dosage, Administration Rates and Development of Resistance
 - 8.4.5. Toxicity for the Patient
 - 8.4.6. Management of Cytotoxic Agents
 - 8.4.7. Metronomic Chemotherapy
 - 8.4.8. Electrochemotherapy
 - 8.4.9. Other Treatment Options I: Radiotherapy
 - 8.4.10. Other Treatment Options II: Immunotherapy
- 8.5. Soft Tissue Sarcomas: Hemangiosarcoma, VAS
 - 8.5.1. Major Clinical and Pathological Aspects of Hemangiosarcoma
 - 8.5.2. Diagnosis and Treatment Guidelines for Hemangiosarcoma
 - 8.5.3. Feline Hemangiosarcoma
 - 8.5.4. Major Clinical and Pathological Aspects of VAS
 - 8.5.5. Diagnosis and Treatment Guidelines for VAS
- 8.6. Skin Neoplasms: Mastocytoma
 - 8.6.1. Major Clinical and Pathological Aspects of Mastocytoma
 - 8.6.2. Histological Grades
 - 8.6.3. Keys to Mastocytoma Diagnosis and Treatment
 - 8.6.4. Feline Mastocytoma
- 8.7. Breast Neoplasia
 - 8.7.1. Major Clinical and Pathological Aspects in Bitches
 - 8.7.2. Major Clinical and Pathological Aspects in Female Cats
 - 8.7.3. Diagnostic Protocol and Clinical Staging in Bitches
 - 8.7.4. Diagnostic Protocol and Clinical Staging in Female Cats
 - 8.7.5. Treatment Guidelines for Bitches
 - 8.7.6. Treatment Guidelines for Female Cats
 - 8.7.7. Inflammatory Carcinoma

- 8.8. Hemolymphoid Neoplasms: Leukemia and Lymphoma
 - 8.8.1. Major Clinical and Pathological Aspects of Canine Lymphoma
 - 8.8.2. Diagnosis and Treatment Guidelines for Canine Lymphoma
 - 8.8.3. Major Clinical and Pathological Aspects of Feline Lymphoma
 - 8.8.4. Diagnosis and Treatment Guidelines for Feline Lymphoma
 - 8.8.5. Acute Leukemia: Diagnosis and Treatment
 - 8.8.6. Chronic Leukemia: Diagnosis and Treatment
- 8.9. Other Major Neoplasms in Dogs and Cats
 - 8.9.1. Osteosarcoma
 - 8.9.2. Squamous Cell Carcinoma (SCC)
 - 8.9.3. Melanoma
 - 8.9.4. Gastrointestinal Tumors
- 8.10. Oncologic Emergencies
 - 8.10.1. Hypercalcemia
 - 8.10.2. Hypoglycemia
 - 8.10.3. Febrile Neutropenia
 - 8.10.4. Tumor Lysis Syndrome
 - 8.10.5. Hyperviscosity Syndrome

Module 9. Dermatology

- 9.1. Structure and Physiology of the Skin
 - 9.1.1. Functions of the Skin
 - 9.1.2. Skin Anatomy
 - 9.1.3. Skin Appendages
- 9.2. Dermatologic Lesions
 - 9.2.1. Primary Skin Lesions
 - 9.2.2. Secondary Lesions
 - 9.2.3. Primary and Secondary Injuries
- 9.3. Diagnostic Testing Based on Type of Lesion
 - 9.3.1. Immediate Interpretation Tests
 - 9.3.2. Late Onset Interpretation Tests
 - 9.3.3. Complementary Tests in Dermatoses with Systemic Involvement

- 9.4. Lesion Patterns and Differential Diagnosis
 - 9.4.1. Erythematous Pattern
 - 9.4.2. Purpuric Pattern
 - 9.4.3. Macular Pattern
 - 9.4.4. Vesicular Pattern
 - 9.4.5. Pustular Pattern
 - 9.4.6. Papular Pattern
 - 9.4.7. Nodular Pattern
 - 9.4.8. Erosive-Ulcerative Pattern
 - 9.4.9. Alopecic Pattern
 - 9.4.10. Flaking Pattern
 - 9.4.11. Scab Pattern
- 9.5. Cutaneous Hypersensitivity
 - 9.5.1. Canine Atopic Dermatitis
 - 9.5.2. Feline Atopic Dermatitis
 - 9.5.3. Contact Dermatitis
- 9.6. Otitis Externa
 - 9.6.1. Pathophysiology of the Otitis Process
 - 9.6.2. Factors Affecting the Otitis Process
 - 9.6.3. Diagnostic Protocol
 - 9.6.4. Therapeutic Approach
- 9.7. Pododermatitis
 - 9.7.1. Pododermatitis in Canine Patients
 - 9.7.2. Pododermatitis in Feline Patients
 - 9.7.3. Therapeutic Approach to Pododermatitis
- 9.8. Skin Infections Caused by Multi-Resistant Microorganisms
 - 9.8.1. Mechanisms for the Development of Multiresistance
 - 9.8.2. Diagnostic Approach to Multi-Resistant Infections
 - 9.8.3. Therapeutic Approach to Multi-Resistant Infections
- 9.9. Immune-Mediated Dermatoses
 - 9.9.1. Immune-Mediated Dermatoses in Canine Patients
 - 9.9.2. Immune-Mediated Dermatoses in Feline Patients
 - 9.9.3. Diagnostic Protocol
 - 9.9.4. Therapeutic Approach to Immune-Mediated Dermatoses

- 9.10. Nutritional Dermatoses and Hereditary or Congenital Dermatoses
 - 9.10.1. Nutritional Dermatoses
 - 9.10.2. Hereditary or Congenital Dermatoses
 - 9.10.3. Diagnostic Protocol
 - 9.10.4. Therapeutic Approach

Module 10. Diagnostic Techniques in Internal Medicine

- 10.1. Hematology
 - 10.1.1. Introduction to the Hematology
 - 10.1.2. Red Series: Anemia and Polycythemia
 - 10.1.3. White Series: Anomalous Leucograms
 - 10.1.4. Platelets
- 10.2. Coagulation Alterations
 - 10.2.1. Thrombocytopenia and Thrombosis
 - 10.2.2. Thrombasthenia and Von Willebrand's Disease
 - 10.2.3. Coagulation Rates
 - 10.2.4. Fibrinogen and Dimer-D
- 10.3. Biochemical Markers
 - 10.3.1. Hepatocellular Damage Markers
 - 10.3.2. Cholestasis Markers
 - 10.3.3. Renal Markers
 - 10.3.4. Digestive Pathology Markers
 - 10.3.5. Albumin and Plasma Protein
- 10.4. Electrolytic Assessment
 - 10.4.1. Potassium Alterations
 - 10.4.2. Sodium and Chlorine Alterations
 - 10.4.3. Phosphorus and Calcium Alterations
 - 10.4.4. Other Ions
- 10.5. Acid-Base Balance
 - 10.5.1. Introduction to Acid-Base Analysis
 - 10.5.2. Types of Acidosis
 - 10.5.3. Types of Alkalosis
 - 10.5.4. Hyperlactatemia
- 10.6. Analysis of Urine and Cavitary Fluids
 - 10.6.1. Obtaining Samples
 - 10.6.2. Urinalysis
 - 10.6.3. Urinary Sediment Assessment
 - 10.6.4. Cavitary Fluid Assessment and Categorization
- 10.7. Thoracic Radiology
 - 10.7.1. Principles of Thoracic Radiology
 - 10.7.2. Mediastinal Structures
 - 10.7.3. Lungs
 - 10.7.4. Heart
- 10.8. Abdominal X-Ray
 - 10.8.1. Principles of Abdomen Radiology
 - 10.8.2. Cranial Abdomen
 - 10.8.3. Mid-Abdomen
 - 10.8.4. Caudal Abdomen
- 10.9. Abdominal ultrasound
 - 10.9.1. Principles of Abdomen Ultrasound
 - 10.9.2. Genitourinary Examination
 - 10.9.3. Digestive Examination
 - 10.9.4. Hepatic, Splenic and Mesenteric Examination
- 10.10. Non-Cardiac Thoracic Ultrasound and Other Applications
 - 10.10.1. Principles of Thoracic and Superficial Structure Ultrasound
 - 10.10.2. Thoracic Ultrasound Scan
 - 10.10.3. Cervical Ultrasonography
 - 10.10.4. Other Ultrasound Applications

07

Clinical Internship

After completing the online theoretical period, the program offers 120 hours of Internship in a reference clinical center. During this practical phase, the specialist will have the support of a tutor who will guide them throughout the clinical process, both in diagnosing pathologies and in interventions with small animals.





“

Carry out your internships at a prestigious veterinary center that applies advanced technology and has an extensive portfolio of services in radiology and oncology”

The Internship Program period of this program takes place in 3 weeks of thorough preparation, from Monday to Friday, with full-day sessions and 8 consecutive hours under the guidance of an associate veterinarian. This in-person phase of the Master's will allow specialists to develop their skills in the real scenario in which they will operate in the near future.

This practical internship proposal arises from the need to have veterinary graduates who can respond to the various pathologies presented by small animals. Moreover, they will be supported by a team of experts who will guide their practical instruction and assist them in interventions with different species. Thanks to this, specialists will delve into the cardiorespiratory system, alterations in the digestive system, possible pathologies in the genitourinary system, the neurological state of animals, as well as infectious diseases and many techniques recently incorporated into internal medicine.

Veterinarians will be able to deepen their knowledge to not only diagnose conditions in small animals but also to intervene with them and offer alternative therapies to improve their health. All of this is based on rigorous and detailed theoretical knowledge, ensuring that when put into practice, specialists act with confidence and can optimize clinical service. This is what the practical component of this qualification will achieve, providing students with a high level of professional performance.

The methodology applied to the practice will make the stay in the health center a unique experience, with multidisciplinary training that will be enriching for the professional market. Teachers at the center will ensure that students go through different departments of care for felines and canines, addressing action protocols for each individual case. TECH has consciously chosen the center to ensure that students have access to an organization that offers the latest clinical technologies and provides comprehensive training for their practical application.

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 the clinic 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:



Develop yourself as a veterinarian in a prestigious clinical center where you will deal with various pathologies in small animals"

Module	Practical Activity
Approach to cardiorespiratory, digestive, genitourinary, and endocrine system disorders	Perform thoracic radiographs as a diagnostic method for cardiorespiratory pathologies
	Conduct an electrocardiogram
	Perform an echocardiogram
	Develop diagnostic tests for the respiratory system
	Address patients with vomiting, emphasizing diagnosis and treatment
	Address patients with diarrhea, emphasizing diagnosis and treatment
	Perform gastrointestinal ultrasounds and endoscopies as diagnostic methods for digestive system pathologies
	Analyze urinary laboratory abnormalities
	Analyze upper respiratory abnormalities
	Examine lower respiratory abnormalities
	Analyze pituitary abnormalities
	Assess thyroid disorders
	Examine parathyroid abnormalities
	Analyze pancreatic abnormalities
	Examine adrenal gland abnormalities
	Perform assessments of sex hormone alterations
	Approach patients with infectious diseases
Assess and diagnose <i>Leishmania</i>	
Conduct filaria exams	
Evaluate and perform diagnostic tests for parasitic diseases	
Conduct viral disease analysis	
Evaluate and perform diagnostic tests for bacterial diseases	

Techniques applied to neurological, ophthalmological, oncological, and dermatological pathologies	Neurologically examine a patient
	Develop neurolocalization of the lesion through diagnostic tests and techniques
	Analyze associated ocular diseases
	Evaluate and diagnose keratitis
	Uveitis assessment
	Conduct examinations of crystalline lens diseases
	Analyze and assess glaucoma
	Diagnose and stage cancer patients
	Practice diagnostic cytology and perform biopsies
	Analyze soft tissue sarcomas
	Analyze dermatological lesions
	Perform diagnostic tests based on the type of lesion
	Diagnostic Techniques in Internal Medicine
Conduct biochemical marker analysis	
Develop an electrolyte assessment	
Conduct acid-base balance analysis	
Analyze urine and body fluid	
Practice thoracic and abdominal radiology	
Practice abdominal and non-cardiac thoracic ultrasound	

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 achieving 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 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, and five 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 do 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 has scheduled an internship program in prominent health centers that will prepare students with real cases for comprehensive practical training. In this way, TECH brings the qualification closer to the students, but, above all, prepares them to face various pathologies in small animals directly in a real-world setting. Additionally, students will become familiar with the knowledge and can become experts in the field by developing their veterinary skills.






“

*Complete your theoretical instruction
by putting all the knowledge into practice
through the real care of small animals”*



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



Pharmacodynamics.

Arroyovet


Country	City
Spain	Madrid

Address: Av. de la Unión Europea, 47, 28939 Arroyomolinos, Madrid

Veterinary clinical center with a wide range of clinical services

Related internship programs:

- Small Animal Internal Medicine
- Feline Medicine and Surgery



Pharmacodynamics.

Hospital Veterinario Menes


Country	City
Spain	Asturias

Address: Calle Daniel Palacio Fernández, 15, 33204 Gijón, Asturias

Veterinary clinic exclusively dedicated to companion animals

Related internship programs:

- Small Animal Internal Medicine
- Veterinary Ophthalmology in Small Animals



Pharmacodynamics.

Clínica Veterinaria Unzeta


Country	City
Spain	Madrid

Address: C. de Ferraz, 28, 28008 Madrid

Center for Veterinary Clinical Care for Domestic Animals

Related internship programs:

- Small Animal Internal Medicine
- Veterinary Oncology in Small Animals



Pharmacodynamics.

Clínica Veterinaria Rosa Luxemburgo


Country	City
Spain	Madrid

Address: Calle Seis de Diciembre SN, Local 29, Madrid Aravaca

Health Care Center for Animals

Related internship programs:

- Management and Direction of Veterinary Centers
- Small Animal Internal Medicine



Pharmacodynamics.

Centro Veterinario Animal-Vetx El Saladillo

Country	City
Spain	Huelva

Address: Cam. del Saladillo, 3, 21007 Huelva

The AnimalVetx El Saladillo Veterinary Center in Huelva is a comprehensive and innovative veterinary center since 2014

Related internship programs:

- Relevant practical training:
- Ultrasound for Small Animals



Pharmacodynamics.

Centro Integral Veterinario Del Alto

Country: Argentina
City: Buenos Aires

Address: Guise 1870

Specialized veterinary clinic in small animal surgery

Related internship programs:
- Small Animal Internal Medicine



Pharmacodynamics.

Clínica Veterinaria Panda

Country: Argentina
City: Autonomous City of Buenos Aires

Address: Ruiz Huidobro 4771 Saavedra, Ciudad de Buenos Aires

Panda Veterinary Clinic with 25 years of experience and five branches located in the City of Buenos Aires

Related internship programs:
- Small Animal Internal Medicine
- Veterinary Emergencies in Small Animals



Pharmacodynamics.

Hospital Veterinario Reynoso

Country	City
Mexico	Mexico

Address: Guillermo roja No.201 Col. Federal Toluca Edomex

High Specialty Veterinary Hospital

Related internship programs:

- Anesthesiology and Veterinary
- Management and Direction of Veterinary Centers



Pharmacodynamics.

Centro Veterinario CIMA

Country	City
Mexico	Mexico City

Address: Av. Vía Adolfo López Mateos 70, Jardines de San Mateo, 53240 Naucalpan de Juárez, CDMX, Méx.

Pet Care Clinical Center

Related internship programs:

- Small Animal Internal Medicine
- Veterinary Oncology in Small Animals



Pharmacodynamics.

Clínica Veterinaria Luifran

Country	City
Mexico	Mexico City

Address: Nte. 7-A 4634, Defensores de la República, Gustavo A. Madero, 28001 Ciudad de México, CDMX

Veterinary Care Center specialized in dogs and cats

Related internship programs:

- Veterinary Anesthesiology
- Infectious Diseases in Small Animals



Pharmacodynamics.

Dog City Pet Hospital

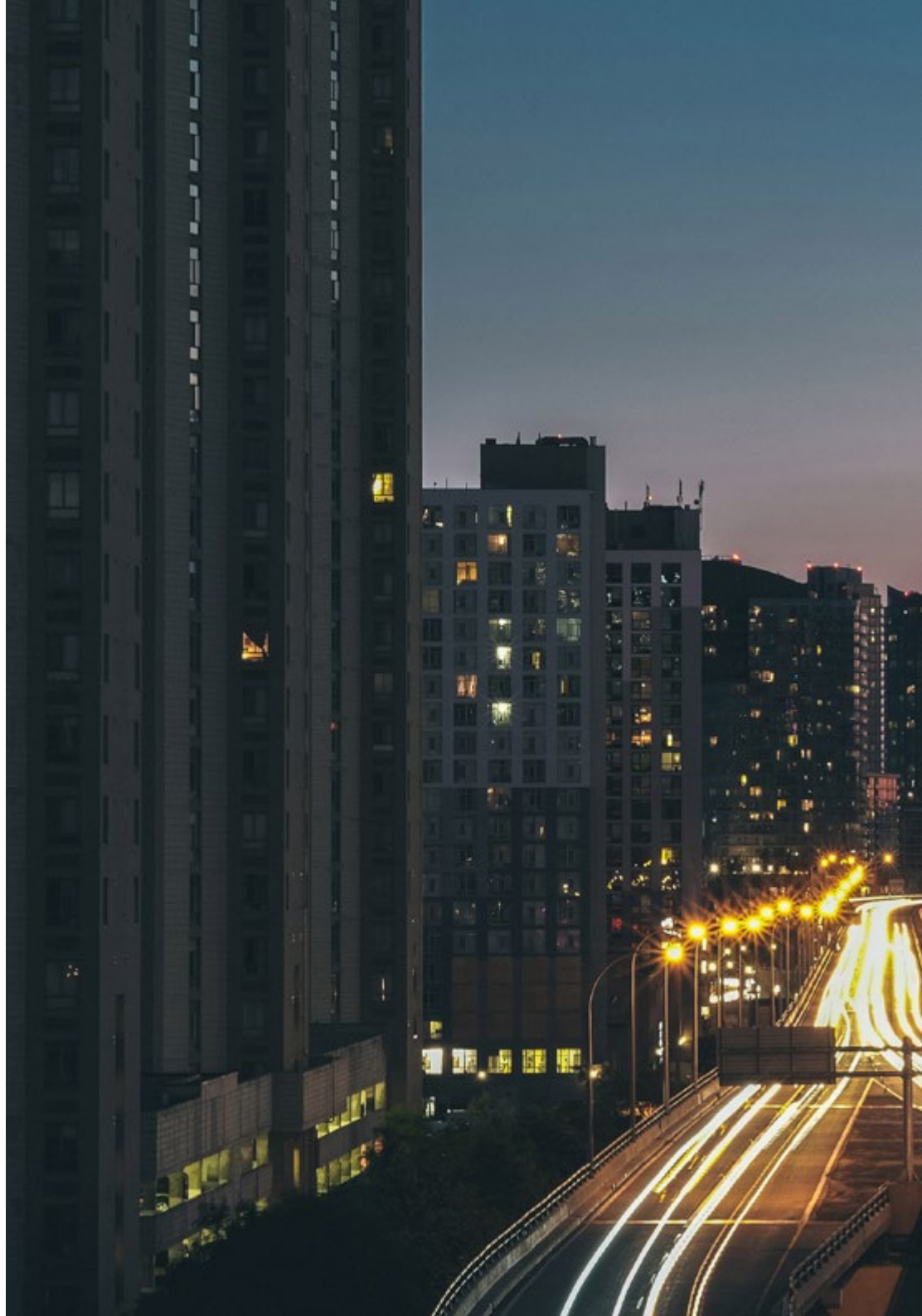
Country	City
Mexico	Mexico City

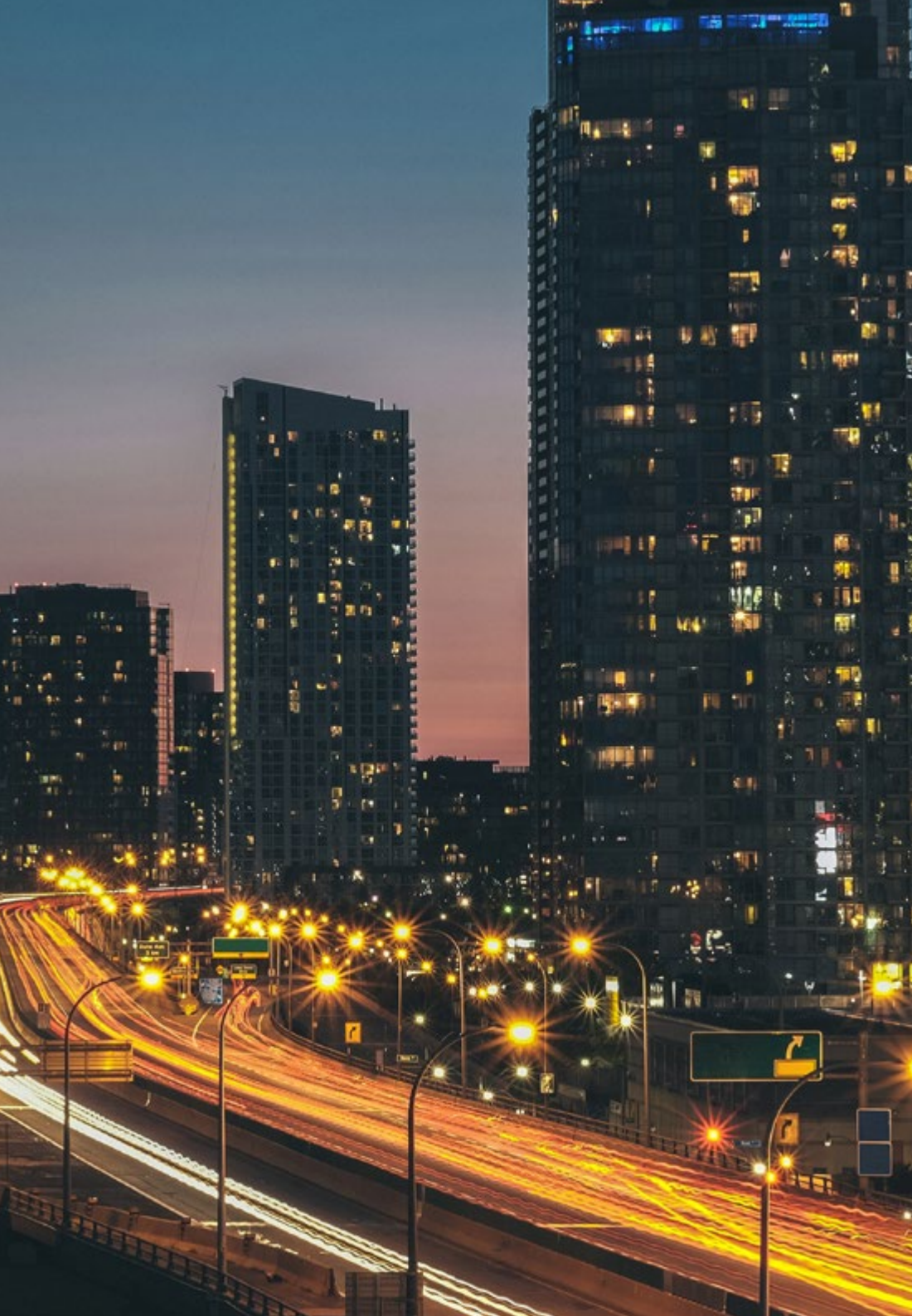
Address: Lago Ginebra 145, Pensil Sur, Miguel Hidalgo, CP 11490

Specialized veterinary clinic for dog care.

Related internship programs:

- Veterinary Anesthesiology
- Veterinary Emergencies in Small Animals





Pharmacodynamics.

Veterinaria Palo Verde

Country	City
Mexico	Mexico City

Address: Cerro del Otate 20, Romero de Terreros, Coyoacán, 04310 Ciudad de México, CDMX

Veterinary clinic with more than 30 years of experience in animals care

Related internship programs:

- Small Animal Internal Medicine
- Animal Welfare



Make the most of this opportunity to surround yourself with expert professionals and learn from their work methodology"

05 Methodology

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

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





“

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

At TECH we use the Case Method

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

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



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

“

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 Small Animal Internal Medicine guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Global University.



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

This program will allow you to obtain your **Hybrid Professional Master's Degree diploma in Small Animal Internal Medicine** 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** title 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.

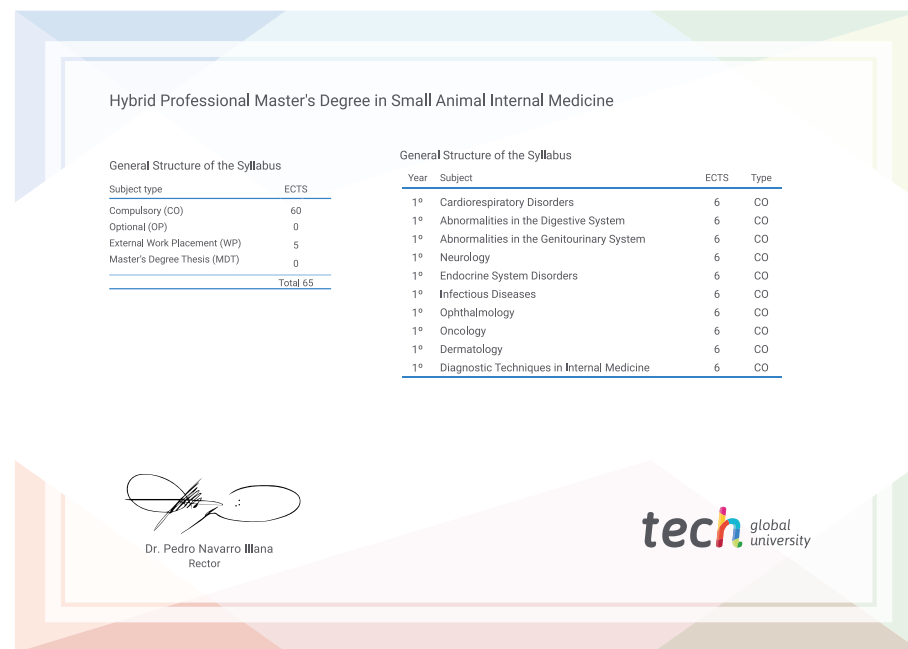
Title: **Hybrid Professional Master's Degree in Small Animal Internal Medicine**

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

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**



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

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development languages
virtual classroom



Hybrid Professional Master's Degree

Small Animal Internal Medicine

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

Hybrid Professional Master's Degree Small Animal Internal Medicine

