

# Hybrid Professional Master's Degree Veterinary Dentistry





## Hybrid Professional Master's Degree Veterinary Dentistry

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

Website: [www.techitute.com/us/veterinaria/hybrid-professional-master-degree/hybrid-professional-master-degree-veterinary-dentistry](http://www.techitute.com/us/veterinaria/hybrid-professional-master-degree/hybrid-professional-master-degree-veterinary-dentistry)

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# 01

# Introduction

Veterinary dentistry is a relatively new specialty compared to others. Even so, the demand for professionals dedicated to this field is increasing, as pet owners have become aware of the importance of maintaining the oral hygiene of their pets. Therefore, there is a need for veterinarians who know the procedures and are up to date with the latest advances, allowing them to perform a quality praxis. This program will provide the opportunity to take a theoretical course and an on-site stay in a veterinary clinic specialized in dentistry. Therefore, allowing the student to acquire the necessary skills and abilities to enter this sector.





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*Every day, Veterinary Dentistry services are more and more in demand. With this program you will be at the forefront of the specialty"*



Some years ago, at least until the middle of the 19th century, dental procedures performed on animals were exclusively limited to horses, which were used for transportation, military maneuvers and agricultural tasks. It was not until the last century that dental therapies began to be applied to small companion animals.

At first, the procedures were relegated to cleanings, corrections of functional abnormalities and extractions. Over the years, the treatments offered in the specialty have expanded, taking reference, in some cases, to the techniques used in human dentistry.

Currently, Veterinary Dentistry has become a clinical sector with a great demand, since many pet owners have become aware of the importance of maintaining the oral health of animals. Even so, the prevention and treatment of oral pathologies are skills that the veterinarian has yet to develop and exploit.

For this reason, it is necessary to have professionals specialized in Veterinary Dentistry who have all the tools and knowledge to detect, prevent and treat any oral pathology in domestic and exotic animals. That is why this area demands the incorporation of new veterinary experts in the field who can join the centers or who undertake a private practice.

Taking into account all of the above, this program has been developed with a hybrid mode, which will cover the entire theoretical spectrum necessary to address the practice of the profession in a veterinary center of international prestige.

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

- ◆ Development of more than 100 clinical cases presented by veterinary professionals focused on dentistry.
- ◆ 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 with dental pathologies
- ◆ Presentation of practical workshops on diagnostic and therapeutic techniques in the veterinary patient.
- ◆ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ◆ 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
- ◆ Additionally, students will be able to carry out a clinical internship in one of the best hospitals in an international level



*The hybrid program of this Professional Master's Degree will help you to train in Veterinary Dentistry, doing your internship in a center of national prestige"*

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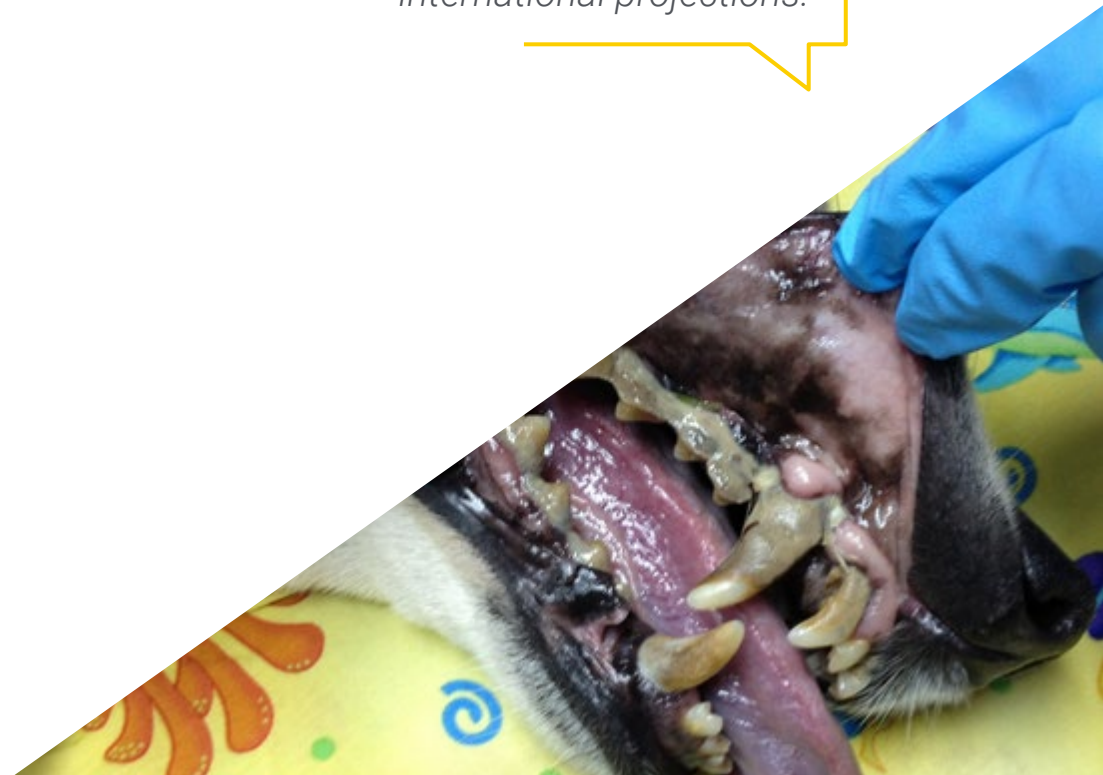
*Enroll now and advance  
your professional career  
with a unique experience”*

In this proposal for a Professional Master's Degree, of a professionalizing nature and hybrid learning modality, the program is aimed at updating professionals who perform their functions in small animal units and which require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate the theoretical knowledge in veterinary practice, and the theoretical-practical elements will facilitate the updating of knowledge and will enable the decision making in the management of the patients.

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

*Choose the most appropriate  
dental treatments based on  
the imaging tests that you will  
learn in this program.*

*Updating your knowledge in  
Veterinary Dentistry means  
having the opportunity to embark  
on a new professional path with  
international projections.*



02

# Why Study this Hybrid Professional Master's Degree?

In many fields of work and knowledge, theory is not enough to achieve real development or progress. In the field of Veterinary Dentistry, especially, it is as relevant to know the latest techniques and medical approaches as how to implement them in different clinical settings. For this reason TECH has created this pioneering program, which combines the most recent update in areas such as dental anatomy, imaging procedures, surgery of the oral cavity with an internship program in a veterinary clinic of great prestige. Therefore, the student will get a complete vision of the most current panorama in Veterinary Dentistry, being guided throughout the whole process by real experts in the field of veterinary dentistry.







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*TECH is the only university that offers you the possibility of going into real cases and maximum demand to deepen, with the help of the best specialists, in the latest advances in Veterinary Dentistry"*

### 1. Updating from the latest technology available

The field of veterinary dentistry has been revolutionized in recent years thanks to advances such as anesthesia and analgesia, as well as the management of clinical images. For this reason, and with the aim of bringing the specialist closer to these new practices, TECH presents this Hybrid Professional Master's Degree with which the professional will enter a cutting-edge veterinary environment, accessing the latest technology in the field of Veterinary Dentistry.

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

The large team of professionals that will accompany the specialist throughout the entire practical period is a first-rate endorsement and a guarantee of unprecedented updating. With a specifically designated tutor, the student will be able to see real canine and feline patients in a state-of-the-art environment, which will allow them to incorporate the most effective procedures and approaches of Veterinary Dentistry into their daily practice.

### 3. Entering Top-notch psychotherapeutic environments

TECH carefully selects all available centers for Internship Programs. Thanks to this, the specialist will have guaranteed access to a prestigious clinical environment in the area of Veterinary Dentistry. In this way, you will be able to see the day-to-day work of a demanding, rigorous and exhaustive sector, always applying the latest theses and scientific postulates in its work methodology.





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

The academic market is plagued by teaching programs that are poorly adapted to the daily work of the specialist and that require long teaching hours, often not very compatible with personal and professional life. TECH offers a new 100% practical learning model, that allows you to get in front of state-of-the-art procedures in the field of Veterinary Dentistry and, best of all, to professional practice, and it in only 3 weeks.

#### 5. Expanding the Boundaries of Knowledge

TECH offers the possibility of doing this Internship Program, not only in national, but also in international centers. In this way, the specialist will be able to expand his frontiers and catch up with the best professionals, who practice in first class veterinary clinics in different continents. A unique opportunity that only TECH, the largest online university in the world, could offer.



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



# 03 Objectives

This hybrid program will help students to perform more fluently in their profession as veterinary dentists. To this end, they will have a theoretical and a practical modality, in which they will be able to demonstrate all their knowledge, skills and aptitudes for this field. All this will be achieved, thanks to the support of a qualified teaching team in the sector and the best veterinary center of reference in this field.







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*This program will be the best opportunity to update your knowledge and perfect your technique to attend future patients"*



## General Objective

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- The general objective of this Hybrid Professional Master's Degree in Veterinary Dentistry is, firstly, that students update their knowledge in terms of diagnostic procedures and treatments in this field. And then, secondly, to apply what they have learned in a specialized center. It will be here that the main interventions of the specialist will be approached, allowing them to perfect their techniques and skills for the care of their future patients







## Specific Objectives

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### Module 1. Dental and oral cavity anatomy in small animals

- ◆ Determine the stages of tooth development
- ◆ Generate specialized knowledge to differentiate normal occlusion from malocclusion.
- ◆ Analyse the dental anatomy in the canine and feline species
- ◆ Examine periodontal anatomy in the canine and feline species
- ◆ Develop specialized knowledge of the bone and joint anatomy of the head, muscular anatomy, neurovascular anatomy and glandular anatomy

### Module 2. Anesthesia and Analgesia in Small Animal Veterinary Dentistry

- ◆ Specify the phases involved in an anesthetic procedure
- ◆ Recognise the key points of pre-consideration in the dental patient
- ◆ Establish a working methodology for the pre-medication phase, the induction phase, the maintenance phase and the recovery phase
- ◆ Generate specialized knowledge in the assessment and anesthetic particularities of the dental patient
- ◆ Rationale for the use of local blocks for analgesic management of the patient
- ◆ Propose commonly used anesthetic protocols

### **Module 3. Equipment and Instruments in Small Animal Veterinary Dentistry**

- ♦ Provide the means of exploration of the oral cavity, and of surgical material
- ♦ Gain specialized knowledge of periodontal, endodontic and orthodontic materials
- ♦ Develop advanced knowledge on the implantation of dental caps and dentures
- ♦ Analyse the types of diagnostic imaging equipment
- ♦ Explain to the owner "the importance" of dental care for our pets

### **Module 4. Imaging Procedures in Veterinary Dentistry**

- ♦ Provide specialised knowledge to carry out a correct dental or oral cavity examination of each patient
- ♦ Determine and differentiate between pathological and physiological images in Veterinary Dentistry
- ♦ Establish differential diagnoses based on the imaging tests performed
- ♦ Propose a working methodology for the dental patient based on imaging tests
- ♦ Generate specialised knowledge on the functioning and development of dental radiography
- ♦ Generate advanced knowledge on the dynamics of computed tomography applied to Veterinary Dentistry
- ♦ Analyze the usefulness of magnetic resonance imaging applied to this sector of veterinary medicine

### **Module 5. Dentistry in Canine Veterinary**

- ♦ Establish routine oral examination guidelines and records
- ♦ Carry out preventive dentistry
- ♦ Carry out an in-depth analysis of the dog's oral pathologies.
- ♦ Determine instrumentation and general equipment
- ♦ Establish differential diagnoses
- ♦ Generate specialized knowledge on antibiotics and antiseptics
- ♦ Prescribe specific and advanced treatments

### **Module 6. Dentistry in Feline Veterinary**

- ♦ Establish routine guidelines for conducting an oral examination and records
- ♦ Determine preventive dentistry
- ♦ Carry out an in-depth analysis of the cat's oral pathologies.
- ♦ Develop specialized knowledge on Instrumentation and general equipment
- ♦ Determine differential diagnoses
- ♦ Generate advanced knowledge on antibiotics and antiseptic prescriptions
- ♦ Examine the specific and advanced treatments currently available



**Module 7. Veterinary Dentistry in Exotic Animals**

- ♦ Determine the anatomical differences between different species of mammals, birds and reptiles
- ♦ Establish scanning and restraint methods according to the species to be treated
- ♦ Provide as much information as possible before a dental or oral cavity examination of each patient according to their species
- ♦ Determine the dental instruments and materials needed for exotic species
- ♦ Analyze the different therapeutic possibilities when faced with a dental problem
- ♦ Identify cases requiring surgical treatment
- ♦ Establish the anesthetic and analgesic basis for oral cavity surgery in different exotic species

**Module 8. Equine Veterinary Dentistry**

- ♦ Provide specific, advanced knowledge of the anatomy of the head and the physiology of mastication in horses
- ♦ Establish action protocols for good routine dental examination
- ♦ Identify the main oral pathologies affecting the equine patient
- ♦ Establish protocols for action and treatment for each specific pathology.
- ♦ Assess the different dental needs according to each type of patient and discipline
- ♦ Demonstrate the importance of dental prophylaxis in horses
- ♦ Analyse the different diagnostic methods available in equine dentistry
- ♦ Examine the different perineural blocks for performing on-site oral procedures

**Module 9. Oncology in Small Animal Dentistry**

- ♦ Determine the management of canine oral melanoma
- ♦ Specialize in the management of canine oral squamous cell carcinoma and in the management of canine oral fibrosarcoma
- ♦ Address in depth the management of feline oral squamous cell carcinoma
- ♦ Examine other less common oral tumours in dogs and cats
- ♦ Develop expertise to establish a correct diagnosis, treatment and prognosis specific to each type of oral neoplasia in dogs and cats

**Module 10. Oral Cavity Surgery in Small Animals**

- ♦ Develop specialist knowledge in the field of cheek and lip surgery
- ♦ Recognize any pathology affecting the oral cavity and decide which diagnostic tests and treatment are most suitable
- ♦ Determine how to deal surgically with the most common tumors of the oral cavity
- ♦ Review the most common salivary gland surgery
- ♦ Precisely determine the surgical technique to be used for different mandibular/maxillary fractures
- ♦ Examine the temporomandibular joint and the pathologies that most frequently affect it



*Gain experience and develop your full potential by enrolling in this Hybrid Professional Master's Degree in Veterinary Dentistry"*

# 04 Skills

After passing the activities of this Hybrid Professional Master's Degree in Veterinary Dentistry, the professional will have acquired a series of skills that will allow them to improve their diagnostic and treatment technique, which will be decisive when it comes to advance in the labor market in this area.





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*Become the expert that veterinary dental centers are looking for to work with them"*





## General Skills

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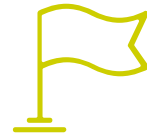
- Analyze clinical cases objectively and precisely
- Generate specialized knowledge to examine, diagnose and treat oral pathologies correctly based on the latest advances in the specialty
- Know and know how to use the necessary tools effectively
- Be familiar with and know how to implement existing protocols
- Know how to develop preoperative, operative and postoperative management

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*Enroll now and advance in your field of work with a comprehensive program that will allow you to put into practice everything you have learned”*







## Specific Skills

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- ◆ Provide specialized knowledge of dental and periodontal anatomical structures
- ◆ Examine the main points of interest in the anesthetic management of the dental patient.
- ◆ Identify the instruments necessary for each procedure to be carried out in the oral cavity
- ◆ Choose the most appropriate dental treatments based on imaging tests
- ◆ Analyze the possible dental treatments to be implemented depending on the diagnosed pathology
- ◆ Analyse the dental particularities and management of the equine patient
- ◆ Examine the types of oral tumours
- ◆ Develop specialized and advanced knowledge in order to carry out medical-surgical treatment in each case in an individualized manner

05

# Course Management

The teachers in charge of the theoretical modality of this Hybrid Professional Master's Degree are professionals with a program in veterinary medicine and with many years of experience in the dental field. Therefore, they have developed their careers in different centers, knowing perfectly the demands of the sector and the skills that future graduates must have to succeed in the area.





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*Boost your professional career with a holistic teaching, which allows you to advance both theoretically and practically”*



## Management



### Dr. Saura Alfonseda, José María

- ♦ Head of the Veterinary Dentistry and Maxillofacial Surgery Service of the Veterinary Hospital of the Alfonso X El Sabio University
- ♦ Senior Veterinarian of the Internal Medicine Service of the Alfonso X El Sabio University Veterinary Hospital
- ♦ Veterinarian of the Outpatient Service of Veterinary Dentistry and Maxillofacial Surgery (SAURAODONVET)
- ♦ Teacher at the Faculty of Veterinary Medicine, from the Alfonso X El Sabio University
- ♦ Degree in Veterinary Medicine from the University of Murcia.
- ♦ Master's Degree in Veterinarian Dentistry and Maxillofacial Surgery from the UCM
- ♦ Member and speaker at different SEOVE congresses

## Professors

### Dr. González González, Laura

- ♦ Veterinary doctor at Porto Veterinary Clinic
- ♦ Veterinary Degree from Alfonso X El Sabio University
- ♦ Master's Degree in Feline Clinical Practice from Improve Veterinary Education
- ♦ Master's Degree in Small Animal Clinical Practice and Emergencies from AEVA Veterinary Education

### Dr. Carrillo Segura, Manuel

- ♦ Specialist in Veterinary Surgery
- ♦ Outpatient Veterinarian in different clinics in the Community of Madrid
- ♦ Rotational Veterinary Internship at the 24 hour Veterinary Hospital in Majadahonda
- ♦ Professor of Veterinary Degree Practices at the Alfonso X El Sabio University
- ♦ Veterinary Degree at Alfonso X el Sabio University, Madrid
- ♦ Master's Degree of Rotational Internship at the UAX Clinical Veterinary Hospital
- ♦ Master's Degree in Soft Tissue Surgery and Traumatology at the UAX Clinical Veterinary Hospital

**Dr. Plaza del Castaño, Enrique**

- ◆ Specialist in Anesthesia and Analgesia in Small Animals
- ◆ Director of the Anesthesia and Analgesia Service at La Chopera Veterinary Hospital
- ◆ Degree in Veterinary Medicine at CEU Cardenal Herrera University
- ◆ Master's Degree in Management and Conservation of Wildlife and Protected Areas from the University of Leon
- ◆ University Specialist in Anesthesia and Analgesia in Small Animals from the Complutense University of Madrid
- ◆ Members: AVEPA, Association of Spanish Veterinarians Specialists in Small Animals, SEAAV, Spanish Society of Veterinary Anesthesia and Analgesia

**Dr. Del Castillo Magán, Noemí**

- ◆ Head of the Oncology Service of the Clinical Veterinary Hospital at Alfonso X El Sabio University, Madrid
- ◆ Head of the Internal Medicine and Oncology Service at the Subartán Health Care Center
- ◆ Founder of the Ambulant Oncology and Telemedicine Service together with Oncopets
- ◆ Professor of the Veterinary Degree at the Alfonso X El Sabio University
- ◆ PhD in Veterinary from the Complutense University of Madrid
- ◆ Degree in Veterinary Medicine from the Complutense University Madrid
- ◆ Research proficiency from the Complutense University of Madrid
- ◆ Accredited in Oncology by GEVONC- AVEPA
- ◆ Member of: ESVONC, AVEPA , GEVONC-AVEPA

**Dr. Marín Baldo Vink, Alexandra**

- ◆ Head of the Large Animal Hospitalization Service at the Clinical Veterinary Hospital of Alfonso X el Sabio University
- ◆ Professor at the Faculty of Veterinary Medicine, Alfonso X El Sabio University.
- ◆ Theoretical and practical teaching related to the Equine Species of the subjects: Parasitic Diseases, Propaedeutics, Medical Pathology and supervised practices
- ◆ Clinical Propedeutics Course Coordinator
- ◆ Equine Hospitalization Service at the Clinical Veterinary Hospital of the University Alfonso X El Sabio
- ◆ Management of Final Degree Projects of students at the Alfonso X el Sabio University
- ◆ Training Stays in Several Area of Large Animals Hospitals in Spain
- ◆ Diploma of Advanced Studies in Animal Medicine and Reproduction from the University of Murcia
- ◆ Fellowship in the Department of Equine Surgery and Large Animals at the Veterinary Hospital from Murcia University
- ◆ Scientific Publications in the field of Equine Internal Medicine

**Dr. Díaz Holgado, Mónica**

- ◆ Specialist in Veterinary Surgery and Sports Medicine
- ◆ Internal Veterinarian at Clinical Veterinary Hospital of the Alfonso X El Sabio University
- ◆ Resident in Surgery and Sports Medicine at the Veterinary Clinical Hospital of the Alfonso X el Sabio University
- ◆ Graduate in Veterinary Medicine from the Alfonso X El Sabio University.
- ◆ Master's Degree in Sports Medicine and Equine Surgery Clinical Veterinary Hospital of the Alfonso X El Sabio University
- ◆ Professional Master's Degree in Veterinary Clinic Internship in Equine Clinic modality. Clinical Veterinary Hospital of the Alfonso X El Sabio University

**Dr. Ayuela Grande, Álvaro**

- ◆ Director and owner of Oporto Veterinary Group
- ◆ In charge of control of poultry breeding hatcheries specialized in avian reproduction Veterinarian at Peñalara Veterinary Clinic
- ◆ In charge of the care and control of the CNIO experimental animal facility
- ◆ Professor of the Veterinary Degree at the Alfonso X El Sabio University
- ◆ Degree in Veterinary Medicine from the University Alfonso X El Sabio
- ◆ Postgraduate Degree in Toxic Animal Clinic from the European School of Postgraduate Veterinary Studies
- ◆ Member of: AMVAC, AVEPA y GMCAE







**Dr. Márquez Garrido, Sandra**

- ◆ Veterinary at HCV Parla Sur (Madrid)
- ◆ Emergency Veterinarian in Surbatán Veterinary Clinic (Madrid)
- ◆ Emergency Veterinarian at Hospital Veterinario 24 Horas Moncan (Madrid)
- ◆ Veterinarian at Clínica Veterinaria Sevilla Este (Sevilla)
- ◆ Veterinarian in CENSYRA Animal Selection and Reproduction Center (Badajoz)
- ◆ Graduated in Veterinary Medicine at the University of Extremadura.
- ◆ Rotational Internship Master's Degree in Small Animals at Universidad Alfonso X el Sabio
- ◆ Master's Degree in Oncology by Improve International

**Dr. De la Riva, Claudia**

- ◆ Specialist in Veterinary Oncology
- ◆ Veterinarian in the Oncology Service of OncoPets
- ◆ Veterinarian in the Emergency and Oncology Service at Moncan Veterinarian Clinic (Madrid)
- ◆ Responsible for the Oncology Service at El Retiro Veterinary Hospital
- ◆ Veterinarian at Brindley Park Feedlot for Australian Country Choice (ACC) (Rome, Australia)
- ◆ Veterinarian at the Royal Veterinary College of London (RVCL) in the Oncology Service
- ◆ Veterinarian at UAX Veterinary Clinic Hospital
- ◆ Degree in Veterinary Medicine from the Alfonso X El Sabio University of Madrid, Master's Degree in Clinical Oncology by Improve International
- ◆ Member of: AVEPA, GEVONC

# 06

## Educational Plan

The content of this program has been designed to meet the needs of the sector, allowing the specialization of veterinarians in dentistry for canines, felines and exotic animals. Therefore, in the first theoretical modality, the student will evaluate all the concepts about the oral anatomy in animals and the pathologies they may suffer. Additionally, students will learn the different diagnostic and treatment techniques that have been implemented and developed in recent years.





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*You will combine theory and professional practice through a demanding and rewarding educational approach"*



## Module 1. Dental and oral cavity anatomy in small animals

- 1.1. Embryology and Odontogenesis. Terminology
  - 1.1.1. Embryology
  - 1.1.2. Dental Rash
  - 1.1.3. Odontogenesis and the Periodontium
  - 1.1.4. Dental Terminology
- 1.2. The Oral Cavity. Occlusion and Malocclusion
  - 1.2.1. The Oral Cavity
  - 1.2.2. Occlusion in Dogs
  - 1.2.3. Occlusion in Cats
  - 1.2.4. Mandibular Prognathism
  - 1.2.5. Mandibular Brachycephalism
  - 1.2.6. *Wry Bite*
  - 1.2.7. *Narrow mandible (Narrowmandible)*
  - 1.2.8. *Anterior Crossbite*
  - 1.2.9. Malocclusion of the Canine Tooth
  - 1.2.10. Premolar and Molar Malocclusion
  - 1.2.11. Malocclusion Associated with Persistence of Primary Teeth
- 1.3. Dental Anatomy in the Dog
  - 1.3.1. Dental Formula
  - 1.3.2. Types of Teeth
  - 1.3.3. Dental Composition
    - 1.3.3.1. Enamel, Dentine, Pulp
  - 1.3.4. Terminology.
- 1.4. Periodontal Anatomy in the Dog
  - 1.4.1. Gum
  - 1.4.2. Periodontal Ligament
  - 1.4.3. *Cementum*
  - 1.4.4. Alveolar Bone
- 1.5. Dental Anatomy in Cats
  - 1.5.1. Dental Formula
  - 1.5.2. Types of Teeth
  - 1.5.3. Dental Composition
  - 1.5.4. Terminology
- 1.6. Periodontal Anatomy in Cats
  - 1.6.1. Gum
  - 1.6.2. Periodontal Ligament
  - 1.6.3. Cementum
  - 1.6.4. Alveolar Bone
- 1.7. Bone and Joint Anatomy
  - 1.7.1. Cranium
  - 1.7.2. Facial Region
  - 1.7.3. Maxillary Region
  - 1.7.4. Mandibular Region
  - 1.7.5. Temporomandibular Joint
- 1.8. Muscular Anatomy
  - 1.8.1. Masseter Muscle
  - 1.8.2. Temporal Muscle
  - 1.8.3. Pterygoid Muscle
  - 1.8.4. Digastric Muscle
  - 1.8.5. Muscles of the Tongue
  - 1.8.6. Muscles of the Soft Palate
  - 1.8.7. Muscles of Facial Expression
  - 1.8.8. Head Fascia
- 1.9. Neurovascular Anatomy
  - 1.9.1. Motor Nerves
  - 1.9.2. Sensitive Nerves
  - 1.9.3. Brachiocephalic Trunk
  - 1.9.4. Common Carotid Artery
  - 1.9.5. External Carotid Artery
  - 1.9.6. Internal Carotid Artery
- 1.10. Anatomy of the Tongue, Palate, Lymphonodes and Glands
  - 1.10.1. Hard Palate
  - 1.10.2. Soft Palate
  - 1.10.3. Canine Tongue
  - 1.10.4. Feline Tongue
  - 1.10.5. Lymphonodes and Tonsils
  - 1.10.6. Salivary Glands

## Module 2. Anesthesia and Analgesia in Small Animal Veterinary Dentistry

- 2.1. Anesthesia. Key Aspects
  - 2.1.1. History of Anesthesia
  - 2.1.2. Anesthetic Machine.
  - 2.1.3. Anesthetic Circuits
  - 2.1.4. Mechanical Ventilators
  - 2.1.5. Infusion Pumps and Perfusors
  - 2.1.6. Sedation vs Tranquillisation
  - 2.1.7. Phases of General Anesthesia
- 2.2. Pre-Anesthetic Assessment and Pre-Medication of the Dental Patient
  - 2.2.1. Pre-Anesthesia Consultation
  - 2.2.2. Anesthetic Risk. ASA Classification
  - 2.2.3. Recommendations for Chronic Medications on the Day of Anesthesia
  - 2.2.4. Pre-Anesthetic Considerations in Dental Patients
  - 2.2.5. Pharmacology in Premedication
- 2.3. Anesthetic Induction and Maintenance
  - 2.3.1. Induction Phase
  - 2.3.2. Pharmacology in Induction
  - 2.3.3. Intubation Process
  - 2.3.4. Maintenance Phase
  - 2.3.5. Inhalation Anesthesia
  - 2.3.6. Total Intravenous Anesthesia
  - 2.3.7. Fluid Therapy.
- 2.4. Basic Patient Monitoring
  - 2.4.1. Baseline Monitoring
  - 2.4.2. Electrocardiography
  - 2.4.3. Pulse Oximetry
  - 2.4.4. Capnography
  - 2.4.5. Arterial Pressure
  - 2.4.6. Introduction to Advanced Monitoring
- 2.5. Anesthetic Recovery
  - 2.5.1. General Recommendations
  - 2.5.2. Vital Signs Monitoring
  - 2.5.3. Adequate Nutritional Management
  - 2.5.4. Assessment of Post-Surgical Pain
- 2.6. Pain Management in Dentistry
  - 2.6.1. Pain Physiology
  - 2.6.2. Acute and Chronic Pain
  - 2.6.3. Nonsteroidal Anti-Inflammatory Drugs
  - 2.6.4. Opioid Analgesics
  - 2.6.5. Other Analgesics
  - 2.6.6. Pain Assessment
- 2.7. Common Complications in Anaesthesia
  - 2.7.1. Intraoperative Nociception
  - 2.7.2. Bradycardia vs Tachycardia
  - 2.7.3. Hypothermia vs. Hyperthermia
  - 2.7.4. Hypocapnia vs. Hypercapnia
  - 2.7.5. Hypotension vs. Hypertension
  - 2.7.6. Hypoxia
  - 2.7.7. Common Arrhythmias
  - 2.7.8. Regurgitation and Aspiration
  - 2.7.9. Post-anesthetic Blindness
- 2.8. Locoregional Anesthesia I. Local Anesthetics
  - 2.8.1. Introduction
  - 2.8.2. Management of the Patient Receiving a Nerve Block
  - 2.8.3. Pharmacology of Local Anesthetics
  - 2.8.4. Mechanism of Action of Local Anesthetics
  - 2.8.5. Local anesthetics
  - 2.8.6. Adjuvants to Local Anesthetics
  - 2.8.7. Treatment of Local Anesthetic Poisoning
  - 2.8.8. Good Practice Guideline for the Management of Local Anesthetics
  - 2.8.9. Effect of Inflammation on Local Anesthetic Efficacy

- 2.9. Locoregional Anesthesia II. Locoregional Blockades
  - 2.9.1. Anatomy Recap
  - 2.9.2. General Recommendations
  - 2.9.3. Contraindications
  - 2.9.4. Jaw Nerve Blockade
  - 2.9.5. Infraorbital Nerve Block
  - 2.9.6. Mandibular Nerve Block
  - 2.9.7. Mentonian Nerve Block
- 2.10. Common Anesthetic Protocols
  - 2.10.1. Anesthetic Protocols in Dogs
  - 2.10.2. Anesthetic Protocols in Cats

### Module 3. Equipment and Instruments in Small Animal Veterinary Dentistry

- 3.1. Dental Surgery and Consultation Room
  - 3.1.1. Dental Consultation
  - 3.1.2. Dental Operating Theatre
- 3.2. Materials and Instruments in Small Animal Periodontics
  - 3.2.1. Periodontal Probes
  - 3.2.2. Dental Explorer
  - 3.2.3. Dental Mirror
- 3.3. Material in Small Animal Endodontics
  - 3.3.1. Root Canal Explorers
  - 3.3.2. Endodontic Files
  - 3.3.3. Nerve Twitchers
  - 3.3.4. Filling Spirals
  - 3.3.5. Dental Locking Forceps
  - 3.3.6. Endodontic Compactors
  - 3.3.7. Endodontic Spacers
  - 3.3.8. Endodontic Fillings and Sealants
- 3.4. Material in Small Animal Orthodontics
  - 3.4.1. Orthodontic Pliers
  - 3.4.2. Orthodontic Wire
  - 3.4.3. Buttons with Curved Base
  - 3.4.4. Orthodontic Chains
  - 3.4.5. Cement
  - 3.4.6. Moulds and Printing Material
- 3.5. Dental Caps and Dentures
  - 3.5.1. Dental Caps
  - 3.5.2. Dental Prostheses
- 3.6. Materials and Instruments for Oral Cavity Surgery
  - 3.6.1. Equipment for Oral Surgery
  - 3.6.2. Surgical Material
- 3.7. Dental Equipment
  - 3.7.1. Fixed Dental Equipment
  - 3.7.2. Portable Dental Equipment
- 3.8. Imaging Equipment in Veterinary Dentistry
  - 3.8.1. X-Ray
  - 3.8.2. CAT
- 3.9. Cleaning, Disinfection and Care of Dental Equipment
  - 3.9.1. Care of Dental Equipment
  - 3.9.2. Care of Dental Material
  - 3.9.3. Disinfectants
- 3.10. Oral Health Care Tools for the Owner
  - 3.10.1. Toothbrushes
  - 3.10.2. Dentifrices
  - 3.10.3. Oral Antiseptics
  - 3.10.4. Snack/Dental Toys



**Module 4. Imaging Procedures in Veterinary Dentistry**

- 4.1. Safety and Protection in Dental and Maxillofacial Imaging Procedures. Physiological Imaging in Dentistry
  - 4.1.1. Physiological Image
  - 4.1.2. Definitions
  - 4.1.3. Protections
  - 4.1.4. Recommendations
- 4.2. Dental Radiology in Veterinary Dentistry
  - 4.2.1. X-Ray Unit. Radiographic Films.
  - 4.2.2. Intraoral Dental Radiography Techniques
    - 4.2.2.1. Bisector Angle Technique
      - 4.2.2.1.1. Positioning of Maxillary and Mandibular Incisors
      - 4.2.2.1.2. Positioning of Maxillary and Mandibular Canines
      - 4.2.2.1.3. Positioning of Premolars and Molars
    - 4.2.2.2. Parallelism Techniques
      - 4.2.2.2.1. Positioning of Premolars and Molars
  - 4.2.3. Revealing Radiography
    - 4.2.3.1. Revealing Techniques
    - 4.2.3.2. Dental Digital Development Systems
- 4.3. Ultrasonography and the Use of Ultrasound in Veterinary Dentistry
  - 4.3.1. Principles of Ultrasound. Definitions
  - 4.3.2. Ultrasounds in Veterinary Dentistry
  - 4.3.3. Uses in Veterinary Dentistry and Maxillofacial Surgery
- 4.4. Axial Computed Tomography in Veterinary Dentistry and Maxillofacial Surgery
  - 4.4.1. Introduction. Definitions. Apparatus
  - 4.4.2. Uses and Applications in Veterinary Dentistry
- 4.5. Magnetic Resonance Imaging Applied to Veterinary Dentistry
  - 4.5.1. Introduction. Definitions. Apparatus
  - 4.5.2. Uses and Applications in Veterinary Dentistry
- 4.6. Gammagraphy in Veterinary Dentistry
  - 4.6.1. Introduction. Principles and Definitions
  - 4.6.2. Uses and Applications in Veterinary Dentistry

- 4.7. Imaging Assessment and Procedures Prior to Treatment and in Diagnostic Dentistry
  - 4.7.1. Odontogram and X-Ray Study of the Patient
  - 4.7.2. Endodontic Pre-Assessment
  - 4.7.3. Orthodontics Pre-Assessment
  - 4.7.4. Pre-Evaluation in Implant Dentistry
- 4.8. Imaging Procedures During Dental Treatment
  - 4.8.1. Uses During Exodontic Treatment
  - 4.8.2. Uses During Endodontic Treatment
  - 4.8.3. Uses During Implant Treatment
- 4.9. Imaging Procedures after Treatment and at Dental Check-ups
  - 4.9.1. Uses in Exodontics
  - 4.9.2. Uses in Endodontics
  - 4.9.3. Uses in Implantology
- 4.10. Complementary to Diagnostic Imaging for a Definitive Diagnosis. Pathological Imaging in Veterinary Dentistry
  - 4.10.1. Cytology in the Oral Cavity
  - 4.10.2. Biopsy in the Oral Cavity
  - 4.10.3. Cultures, PCR and More
  - 4.10.4. Clinical Imaging in Small Animal Veterinary Dentistry

**Module 5. Dentistry in Canine Veterinary**

- 5.1. Veterinary Dentistry
  - 5.1.1. History of Veterinary Dentistry
  - 5.1.2. Basis and Fundamentals of Veterinary Dentistry
- 5.2. Equipment and Materials in Veterinary Dentistry
  - 5.2.1. Equipment
    - 5.2.1.1. Basic Equipment
    - 5.2.1.2. Specific Equipment
  - 5.2.2. Materials
    - 5.2.1.1. Basic Instruments
    - 5.2.2.2. Specific Instruments
    - 5.2.2.3. Fungibles
    - 5.2.2.4. Methods of Oral Impression Preparation

- 5.3. Oral Examination
  - 5.3.1. Medical History
  - 5.3.2. Oral Examination with the Patient Awake
  - 5.3.3. Oral Examination with Sedated or Anaesthetised Patient
  - 5.3.4. Records
- 5.4. Pediatric Dentistry
  - 5.4.1. Introduction
  - 5.4.2. Development of the Deciduous Dentition
  - 5.4.3. Change of Dentition
  - 5.4.4. Deciduous Persistence
  - 5.4.5. Supernumerary Teeth
  - 5.4.6. Agenesis
  - 5.4.7. Dental Fractures
  - 5.4.8. Malocclusions
- 5.5. Periodontal Disease
  - 5.5.1. Gingivitis
  - 5.5.2. Periodontitis
  - 5.5.3. Pathophysiology of Periodontal Disease
  - 5.5.4. Periodontal Profilaxia
  - 5.5.5. Periodontal Therapy
  - 5.5.6. Postoperative Care
- 5.6. Oral Pathologies
  - 5.6.1. Enamel Hypoplasia
  - 5.6.2. Halitosis
  - 5.6.3. Tooth Wear
  - 5.6.4. Dental Fractures
  - 5.6.5. Oronasal Fistulas
  - 5.6.6. Infraorbital Fistulas
  - 5.6.7. Temporomandibular Joint
  - 5.6.8. Cranio-Mandibular Osteopathy
- 5.7. Dental Extraction
  - 5.7.1. Anatomical Concepts
  - 5.7.2. Indications
  - 5.7.3. Surgical Technique
  - 5.7.4. Flaps
  - 5.7.5. Post-Operative Treatment
- 5.8. Endodontics
  - 5.8.1. Basis of Endodontics
  - 5.8.2. Specific Materials
  - 5.8.3. Indications
  - 5.8.4. Diagnosis
  - 5.8.5. Surgical Technique
  - 5.8.6. Postoperative Care
  - 5.8.7. Complications
- 5.9. Orthodontics
  - 5.9.1. Occlusion and Malocclusion
  - 5.9.2. Principles of Orthodontics
  - 5.9.3. Orthodontic Treatment
  - 5.9.4. Esthetics and Restoration
- 5.10. Maxillofacial Fractures
  - 5.10.1. Emergencies
  - 5.10.2. Stabilisation of the Patient
  - 5.10.3. Clinical Examination
  - 5.10.4. Treatment
    - 5.10.4.1. Conservative Treatment
    - 5.10.4.2. Surgical Management
  - 5.10.5. Therapeutics and Postoperative Care
  - 5.10.6. Complications

**Module 6. Dentistry in Feline Veterinary**

- 6.1. General Basis of Feline Dentistry
  - 6.1.1. Introduction
  - 6.1.2. Dental Equipment
    - 6.1.2.1. Basic Equipment
    - 6.1.2.2. Specific Equipment
- 6.2. Materials and Instrumentation for Felines
  - 6.2.1. Basic Instruments
  - 6.2.2. Specific Instruments
  - 6.2.3. Fungibles.
  - 6.2.4. Methods of Oral Impression Preparation
- 6.3. Oral Examination and Assessment of the Cat
  - 6.3.1. Medical History
  - 6.3.2. Oral Examination with the Patient Awake
  - 6.3.3. Oral Examination with Sedated or Anaesthetised Patient
  - 6.3.4. Registration and Odontogram
- 6.4. Periodontal Disease
  - 6.4.1. Gingivitis
  - 6.4.2. Periodontitis
  - 6.4.3. Pathophysiology of Periodontal Disease
  - 6.4.4. Gingival and Alveolar Bone Retraction
  - 6.4.6. Periodontal Profilaxia
  - 6.4.7. Periodontal Therapy
  - 6.4.8. Postoperative Care
- 6.5. Feline Oral Pathology
  - 6.5.1. Halitosis
  - 6.5.2. Dental Traumatism
  - 6.5.3. Cleft Palate
  - 6.5.4. Dental Fractures
  - 6.5.5. Oronasal Tonsils
  - 6.5.6. Temporomandibular Joint
- 6.6. Feline Gingivostomatitis
  - 6.6.1. Introduction
  - 6.6.2. Clinical Signs
  - 6.6.3. Diagnosis
  - 6.6.4. Complementary Tests
  - 6.6.5. Medical Treatment
  - 6.6.6. Surgical Management
- 6.7. Feline Dental Resorption
  - 6.7.1. Introduction
  - 6.7.2. Pathogenesis and Clinical Signs
  - 6.7.3. Diagnosis
  - 6.7.4. Complementary Tests
  - 6.7.5. Treatment
  - 6.7.6. Treatment
- 6.8. Dental Extraction
  - 6.8.1. Anatomical Concepts
  - 6.8.2. Indications
  - 6.8.3. Anatomical Particularities
  - 6.8.4. Surgical Technique
  - 6.8.5. Odontosection
  - 6.8.6. Flaps
  - 6.8.7. Post-Operative Treatment
- 6.9. Endodontics
  - 6.9.1. Basis of Endodontics
  - 6.9.2. Specific Materials
  - 6.9.3. Indications
  - 6.9.4. Diagnosis
  - 6.9.5. Surgical Technique
  - 6.9.6. Postoperative Care
  - 6.9.7. Complications

- 6.10. Maxillofacial Fractures
  - 6.10.1. Emergencies
  - 6.10.2. Stabilisation of the Patient
  - 6.10.3. Clinical Examination
  - 6.10.4. Treatment
  - 6.10.5. Therapeutics and Postoperative Care
  - 6.10.6. Complications

## Module 7. Veterinary Dentistry in Exotic Animals

- 7.1. Oral Anatomy and Physiology in Lagomorphs
- 7.2. Oral Anatomy
- 7.3. Handling and Securing
  - 7.3.1. Oral Anatomy and Physiology in Rodents and other Exotic Mammals
  - 7.3.2. Oral Anatomy
  - 7.3.3. Handling and Securing
  - 7.3.4. Oral Anatomy and Physiology in Birds and Reptiles
  - 7.3.5. Oral Anatomy
  - 7.3.6. Handling and Securing
- 7.4. Dental Materials in Exotic Animals
  - 7.4.1. Clamping Tables
  - 7.4.2. Mouth-Openers
  - 7.4.3. Exodontic Material
  - 7.4.4. Periodontic Material
- 7.5. Oral Diagnostic Tests in Exotic Animals
  - 7.5.1. Oral Exam
  - 7.5.2. Laboratory Diagnosis
  - 7.5.3. Imaging Tests
- 7.6. Oral Pathology in Lagomorphs
  - 7.6.1. Elongation
  - 7.6.2. Malocclusions
  - 7.6.3. Periodontal Diseases
  - 7.6.4. Dental Diseases
  - 7.6.5. Other diseases

- 7.7. Oral Pathology in Rodents and Other Exotic Mammals
  - 7.7.1. Elongation
  - 7.7.2. Malocclusions
  - 7.7.3. Periodontal Diseases
  - 7.7.4. Dental Diseases
  - 7.7.5. Other diseases
- 7.8. Oral Pathology in Reptiles and Birds
  - 7.8.1. Most Common Oral Pathologies in Birds
  - 7.8.2. Most Common Oral Pathologies in Reptiles
- 7.9. Anesthesia in Exotic Animals
  - 7.9.1. Anesthesia
  - 7.9.2. Pre-operative Considerations
  - 7.9.3. Postoperative Considerations
- 7.10. Prophylaxis, Prevention and other Particularities in Exotic Animals
  - 7.10.1. Prophylaxis and Prevention for Owners
  - 7.10.2. Prophylaxis and Clinical Prevention

## Module 8. Equine Veterinary Dentistry

- 8.1. Introduction
  - 8.1.1. History and Evolution of Equine Dentistry
  - 8.1.2. Equine Dental Evolution
  - 8.1.3. Steaks, Bites and Accessories
  - 8.1.4. Marketing of Equine Dentistry
- 8.2. Anatomy and Physiology
  - 8.2.1. Head Anatomy
  - 8.2.2. Tooth Anatomy
  - 8.2.3. Nomenclature. Triadan System
  - 8.2.4. Physiology of Mastication
  - 8.2.5. Change of Dentition. Approximation of Dental Age
  - 8.2.6. Temporomandibular Joint



- 8.3. Routine Dental Examination
  - 8.3.1. Medical History
  - 8.3.2. General Physical Evaluation
  - 8.3.3. Physical Examination and Palpation of the Head
  - 8.3.4. Examination of the Oral Cavity
  - 8.3.5. Dental Equipment
- 8.4. Dental and Oral Cavity Pathology
  - 8.4.1. Signs of Dental Disease
  - 8.4.2. Pathologies of Incisors and their Treatment
  - 8.4.3. Canine Pathologies and their Treatment
  - 8.4.4. Wolf Teeth
  - 8.4.5. Pathologies of Premolars and Molars. Treatment
  - 8.4.6. Dental Fractures
  - 8.4.7. Cavities
  - 8.4.8. Equine Odontoclastic Resorption and Hypercementosis
  - 8.4.9. Tumours
  - 8.4.10. Developmental Pathologies and Craniofacial Anomalies
- 8.5. Therapeutic Procedures
  - 8.5.1. Incisor Procedures
  - 8.5.2. Bite Seat
  - 8.5.3. Exodontics
  - 8.5.4. Endodontics
- 8.6. Head and Dental Trauma
  - 8.6.1. Healing in Oral Lesions
  - 8.6.2. Management of Intraoral Lesions
  - 8.6.3. Mandibular and Maxillary Fractures
- 8.7. Temporomandibular Joint
  - 8.7.1. Clinical Signs
  - 8.7.2. Temporomandibular Joint Injuries
  - 8.7.3. Treatment
- 8.8. Dental Needs According to Type of Patient
  - 8.8.1. Dentistry in Geriatric Patients
  - 8.8.2. Dentistry in Adult Sport Horses
  - 8.8.3. Dentistry in Young Sport Horses (2 to 5 years old)

- 8.9. Diagnostic Techniques
  - 8.9.1. Dental Radiology
  - 8.9.2. Scintigraphy
  - 8.9.3. Computed Tomography (CT)
  - 8.9.4. Oral endoscopy
- 8.10. Perineural Blocks for Oral Procedures
  - 8.10.1. Maxillary Nerve Block
  - 8.10.2. Mandibular Nerve Block
  - 8.10.3. Infraorbital Nerve Block
  - 8.10.4. Mentonian Nerve Block

## Module 9. Oncology in Small Animal Dentistry

- 9.1. Oral Cancer
  - 9.1.1. Etiology of Cancer
  - 9.1.2. Cancer Biology and Metastasis
  - 9.1.3. Diagnostic Procedure in Oral Oncology (Clinical Stage)
    - 9.1.3.1. Oncological Examination
    - 9.1.3.2. Cytology/Biopsy
    - 9.1.3.3. Diagnostic Imaging
  - 9.1.4. Paraneoplastic Syndromes
  - 9.1.5. Oral Cancer Treatment Overview
    - 9.1.5.1. Surgery
    - 9.1.5.2. Radiotherapy
    - 9.1.5.3. Chemotherapy
  - 9.1.6. Overview of Oral Cancer Prognosis
- 9.2. Radiotherapy
  - 9.2.1. What is Radiotherapy
  - 9.2.2. Mechanisms of action
  - 9.2.3. Modalities of Radiotherapy
  - 9.2.4. Side Effects

- 9.3. Chemotherapy
  - 9.3.1. Cellular Cycle
  - 9.3.2. Cytotoxic Agents
    - 9.3.2.1. Mechanism of Action
    - 9.3.2.2. Administration.
    - 9.3.2.3. Side Effects
  - 9.3.3. Anti-Angiogenic Therapies
  - 9.3.4. Targeted Therapy
- 9.4. Electrochemotherapy
  - 9.4.1. What is Electrochemotherapy
  - 9.4.2. Mechanism of Action
  - 9.4.3. Indications
- 9.5. Benign Oral Tumors
  - 9.5.1. Peripheral Odontogenic Fibroma
  - 9.5.2. Acanthomatous Ameloblastoma
  - 9.5.3. Odontogenic Tumours
  - 9.5.4. Osteomas
- 9.6. Canine Oral Melanoma
  - 9.6.1. Pathophysiology of Oral Melanoma
  - 9.6.2. Biological Behavior
  - 9.6.3. Diagnostic Procedure
  - 9.6.4. Clinical Status
  - 9.6.5. Treatment
    - 9.6.5.1. Surgery
    - 9.6.5.2. Radiotherapy
    - 9.6.5.3. Chemotherapy
    - 9.6.5.4. Other treatments
  - 9.6.6. Prognosis
- 9.7. Canine Oral Squamous Cell Carcinoma
  - 9.7.1. Physiopathology of Canine Oral Squamous Cell Carcinoma
  - 9.7.2. Biological Behavior
  - 9.7.3. Diagnostic Procedure
  - 9.7.4. Clinical Status
  - 9.7.5. Treatment
    - 9.7.5.1. Surgery
    - 9.7.5.2. Radiotherapy
    - 9.7.5.3. Chemotherapy
    - 9.7.5.4. Other treatments
  - 9.7.6. Prognosis
- 9.8. Canine Oral Fibrosarcoma
  - 9.8.1. Pathophysiology of Canine Oral Fibrosarcoma
  - 9.8.2. Biological Behavior
  - 9.8.3. Diagnostic Procedure
  - 9.8.4. Clinical Status
  - 9.8.5. Treatment
    - 9.8.5.1. Surgery
    - 9.8.5.2. Radiotherapy
    - 9.8.5.3. Chemotherapy
    - 9.8.5.4. Other treatments
  - 9.8.6. Prognosis
- 9.9. Feline Oral Squamous Cell Carcinoma
  - 9.9.1. Pathophysiology of Feline Oral Squamous Cell Carcinoma
  - 9.9.2. Biological Behavior
  - 9.9.3. Diagnostic Procedure
  - 9.9.4. Clinical Status
  - 9.9.5. Treatment
    - 9.9.5.1. Surgery
    - 9.9.5.2. Radiotherapy
    - 9.9.5.3. Chemotherapy
    - 9.9.5.4. Other treatments
  - 9.9.6. Prognosis
- 9.10. Other Oral Tumours
  - 9.10.1. Osteosarcoma
  - 9.10.2. Lymphoma
  - 9.10.3. Mastocytoma
  - 9.10.4. Tongue Cancer
  - 9.10.5. Oral Tumours in Young Dogs
  - 9.10.6. Multilobular Osteochondrosarcoma

**Module 10. Oral Cavity Surgery in Small Animals**

- 10.1. Surgical Pathology and Surgery of the Cheeks and Lips
  - 10.1.1. Chewing Injuries
  - 10.1.2. Lacerations
  - 10.1.3. Lip Avulsion
  - 10.1.4. Necrosis
  - 10.1.5. Cheilitis and Dermatitis
  - 10.1.6. Inappropriate Salivation
  - 10.1.7. *Tight Lip*
  - 10.1.8. Cleft Lip
- 10.2. Surgical Pathology and Tongue Surgery
  - 10.2.1. Congenital Disorders
  - 10.2.2. Infectious Disorders
  - 10.2.3. Trauma
  - 10.2.4. Miscellaneous
  - 10.2.5. Neoplasms and Hyperplastic Lesions
- 10.3. Oropharyngeal Disorders
  - 10.3.1. Dysphagia
  - 10.3.2. Penetrating Wounds to the Pharynx
- 10.4. Surgical Pathology of the Tonsils
  - 10.4.1. Tonsil Inflammation
  - 10.4.2. Tonsil Neoplasia
- 10.5. Surgical Pathology of the Palate
  - 10.5.1. Congenital Defects of the Palate
    - 10.5.1.1. Cleft Lip
    - 10.5.1.2. Cleft Palate
  - 10.5.2. Acquired Defects of the Palate
    - 10.5.2.1. Oro-Nasal Fistula
    - 10.5.2.2. Trauma
- 10.6. Surgical Pathology of the Salivary Glands in the Dog
  - 10.6.1. Surgical Diseases of the Salivary Glands
  - 10.6.2. Sialoceles
  - 10.6.3. Sialoliths
  - 10.6.4. Salivary Gland Neoplasia
  - 10.6.5. Surgical Technique
- 10.7. Oncological Surgery of the Oral Cavity in Dogs and Cats
  - 10.7.1. Sample Collection
  - 10.7.2. Benign Neoplasms
  - 10.7.3. Malignant Neoplasms
  - 10.7.4. Surgical Management
- 10.8. Surgical Pathology of the TMJ. Surgical Pathology of the TMJ
  - 10.8.1. Temporomandibular Joint Dysplasia
  - 10.8.2. Fractures and Dislocations
- 10.9. Introduction to Jaw Fractures
  - 10.9.1. Principles of Fracture Repair
  - 10.9.2. Biomechanics of Jaw Fractures
  - 10.9.3. Techniques in the Treatment of Fractures
- 10.10. Mandibular Fractures in the Dog and Cat
  - 10.10.1. Fractures of the Jaw
  - 10.10.2. Fractures of the Maxillofacial Region
  - 10.10.3. Common Problems in Fracture Repair
  - 10.10.4. Most Frequent Post-Surgical Complications



*Enroll now and advance in your field of work with a comprehensive program that will allow you to put into practice everything you have learned”*



07

# Clinical Internship

Upon completion of the online period, the student will be ready to take the practical modality in a veterinary center specialized in dentistry. During three weeks they will be able to attend real cases of animals that require attention and evaluation, guaranteeing their recovery and well-being.





“

*Start your veterinary practices to specialize in dentistry by enrolling in this Hybrid Professional Master's Degree"*



In the practical mode of this Hybrid Professional Master's Degree, the activities are aimed at the development and improvement of the necessary skills for the provision of dental care in animals in areas and conditions that require a high level of qualification and that are oriented to the specific training for the exercise of the activity, in a safe environment and high professional performance.

Therefore, this Internship Program is a great opportunity to learn everything you need to necessary to work as a veterinary dentist. Additionally, thanks to the face-to-face and participative modality, the student will acquire new skills and experience to, in the near future, carry out their profession effectively.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of skill (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal skills for the veterinary denti praxis (learning to learn and learning to do).

The procedures described below will be the basis for the practical part of the training, and their of the training, and their completion will be subject to the center's own availability and workload. the proposed activities being the following:





Module	Practical Activity
<b>Latest Technologies in Pet Dentistry Intervention</b>	Observe and assist in the performance of dental procedures using the latest technology.
	Identify the instruments necessary to perform procedures such as dental cleaning, dental extractions, endodontics, among others.
	Use and become familiar with the latest technologies in dental ultrasound equipment, dental lasers, 3D scanners for dental modeling, digital radiography systems and other advanced devices.
	Perform preliminary oral health examinations on incoming pets, inspecting the oral cavity and identifying the problem.
<b>Applications of Anesthesia in Small Animals Animals</b>	Participate in pre-anesthetic evaluation, collect patient history, perform a thorough physical examination, obtain and analyze relevant diagnostic test results
	Assist in the induction and maintenance of anesthesia in small animals.
	Implement intubation and assisted ventilation techniques under the supervision of a veterinarian
	Monitor anesthetic parameters during small animal procedures, which involves monitoring and recording vital signs such as heart rate, blood pressure, oxygen saturation, among others
<b>Diagnostic Imaging of Pathologies in Canines and Felines</b>	Use digital radiography equipment to obtain images of the thorax, abdomen, extremities and spine.
	Perform in the preparation and positioning of patients for different diagnostic imaging techniques
	Identify normal anatomical structures, detect possible anomalies or pathologies and take or pathologies and take detailed notes to contribute to the final diagnosis.
	Actively collaborate in case follow-up and clinical discussions related to canine and feline diagnostic imaging.

Module	Practical Activity
<b>Dental Treatment of Exotic Animals</b>	Observe and assist in the treatment of animals such as reptiles, birds, rabbits, ferrets, among others, having full knowledge of the approach model.
	Handle and sedate exotic species, perform dental cleaning using specific tools and assist in the extraction of diseased or damaged teeth.
	Play an important role in educating and advising owners of exotic animals on the importance of dental care in these species.
<b>Management of Cancer in the Oral Cavity</b>	Examine the oral cavity for suspicious lesions, assess the degree of disease progression, and collect relevant information about the patient's medical history and symptoms
	Participate in performing biopsies and taking specimens
	Assist during radiotherapy and chemotherapy treatments, as well as monitor the patient's vital signs and assist in the management of possible side effects



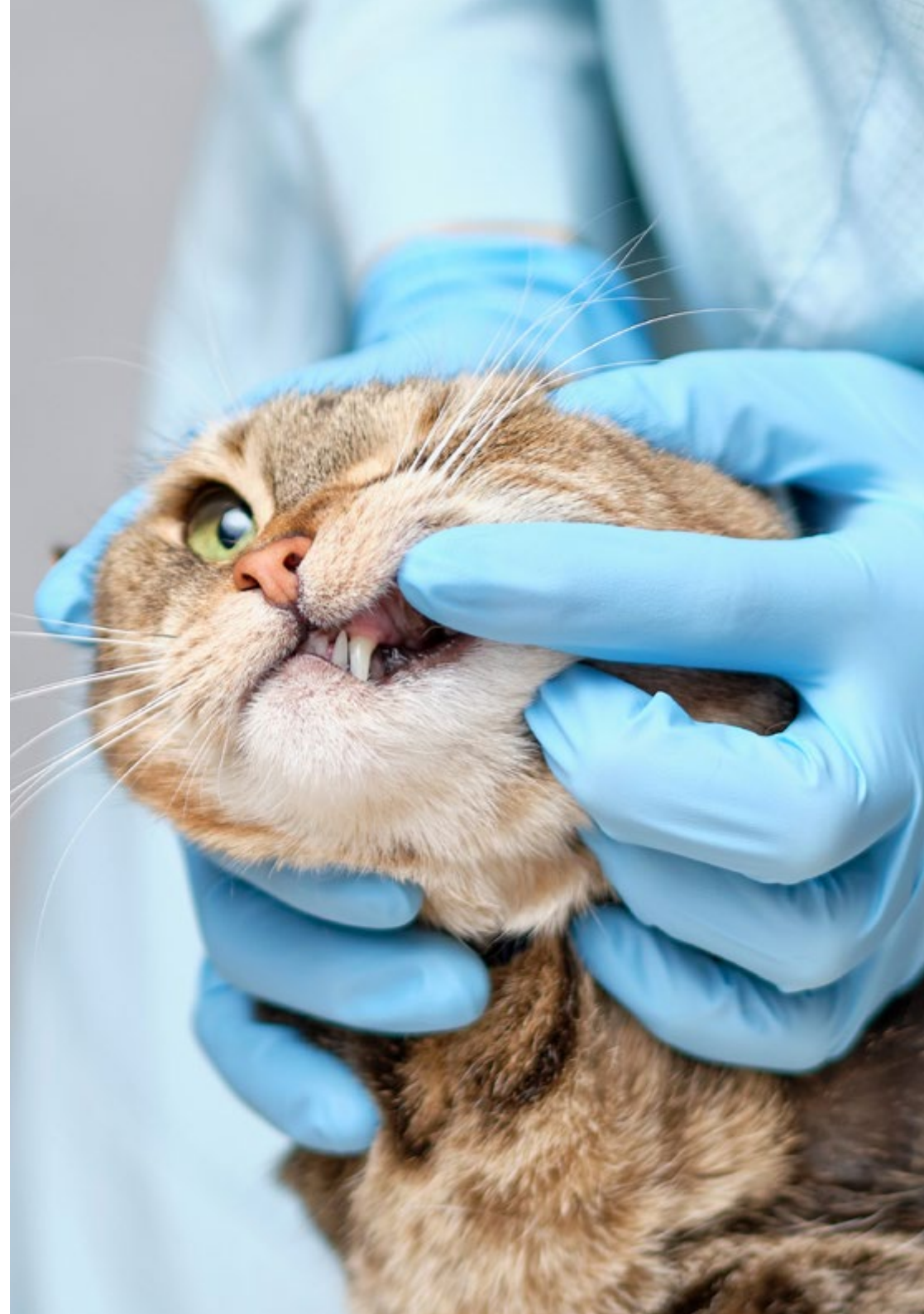
*Receive specialized education in an institution that can offer you all these possibilities, with an innovative academic program and a human team that will help you develop your full potential"*

## 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 Internship Program 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 program agreement shall be 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. DOS 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.

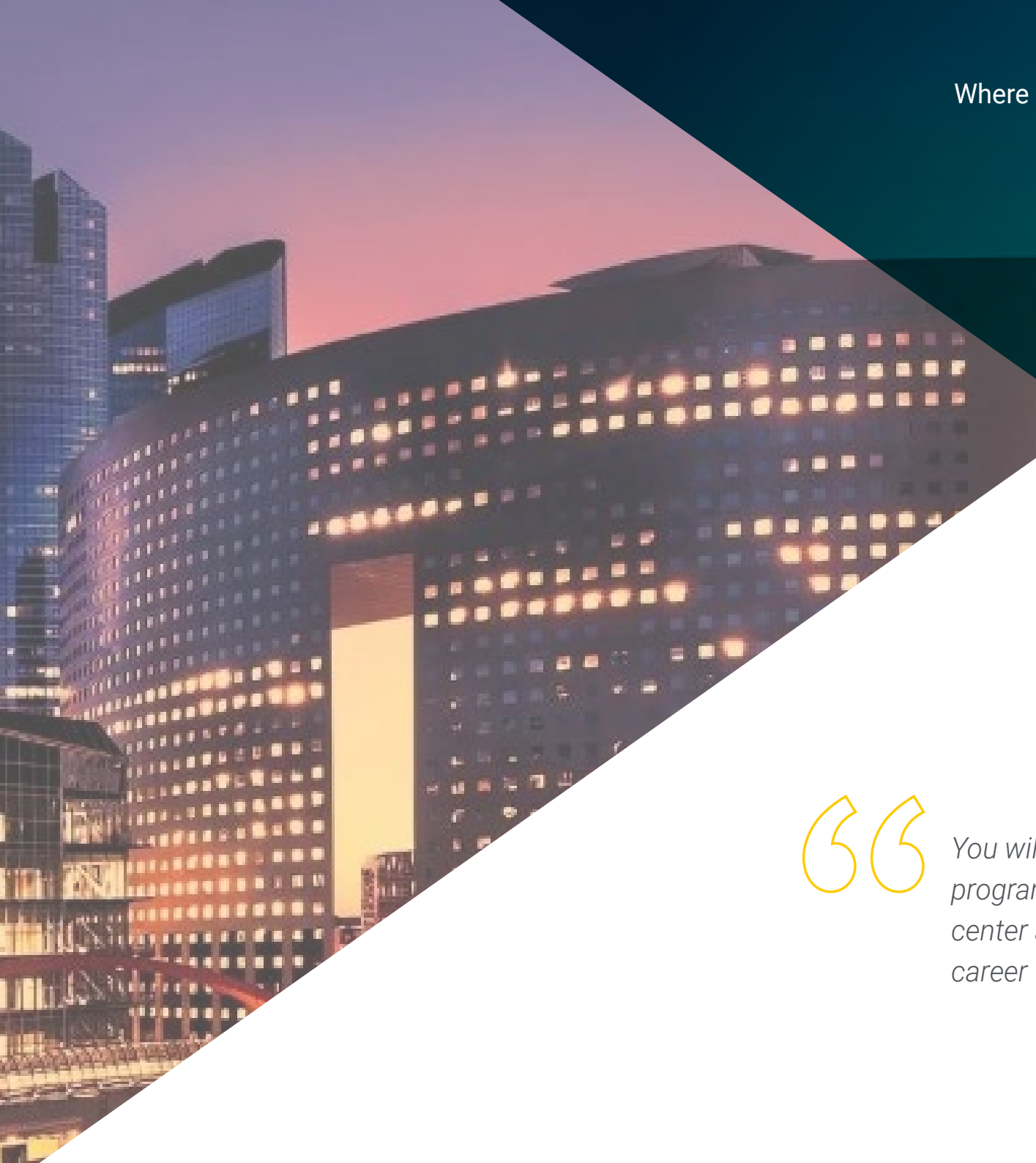
08

# Where Can I Do the Clinical Internship?

TECH knows the needs of the veterinary dental sector, therefore, has selected the best center to help the internship program of professionals interested in the area. This is a unique opportunity for the student to continue growing in their area of work, alongside the best veterinary specialists in the sector.








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*You will be able to study this program in a prestigious veterinary center and start your professional career with the best in the field"*

## 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:



Pharmacodynamics.

### Happy Can Camp

Country	City
Mexico	Puebla

Address: Km 4.5 lateral Recya a Cholula Col.  
Bella Horizonte Puebla C.P. 72170

Veterinary clinic and hotel

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**Related internship programs:**

- Veterinary Radiology in Small Animals
- Veterinary Ophthalmology in Small Animals







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*Delve into the theory of major relevance in this field, subsequently applying it in a real work environment”*

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



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

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

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



## Relearning Methodology

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

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



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



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

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

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

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

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



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



#### Study Material

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

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



#### Latest Techniques and Procedures on Video

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



#### Interactive Summaries

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

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



#### Additional Reading

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





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

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



#### Testing & Retesting

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



#### Classes

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

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



#### Quick Action Guides

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





# 10 Certificate

The Hybrid Professional Master's Degree in Veterinary Dentistry 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 Veterinary Dentistry** 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 Veterinary Dentistry**

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.



## Hybrid Professional Master's Degree Veterinary Dentistry

Modality: Hybrid (Online + Clinical Internship)  
Duration: 12 months  
Certificate: TECH Global University  
60 + 5 ECTS Credits

# Hybrid Professional Master's Degree Veterinary Dentistry

