Professional Master's Degree Veterinary Dentistry





# **Professional Master's Degree** Veterinary Dentistry

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/veterinary-medicine/professional-master-degree/master-veterinary-dentistry

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# 01 Introduction

Veterinary dentistry is an emerging specialty in the clinical veterinary sector and, like other clinical specialties, is the future of the veterinary profession. The program in Veterinary Dentistry covers all relevant and advanced aspects for the student to develop specialized knowledge, practice and safety in the performance of any oral and dental procedure. It examines the anatomy of the species under study, the anaesthesia and analgesia required for most oral interventions, and provides an in-depth look at oral and oral-dental pathologies and procedures in dogs, cats, exotic animals and equids.

G Throughout these months of study, you will acquire specialized knowledge of the dental and periodontal anatomical structures from professionals with extensive experience in the field"

# tech 06 | Introduction

Over the last 15 years, veterinary dentistry has become a clinical sector in high demand among patients' owners. Veterinary clinics are increasingly receiving more and more pets for dental techniques to improve their oral health, as well as to maintain and preserve their teeth. The figure of the veterinary dentist is now a reality and, as such, must be prepared.

The Professional Master's Degree in Veterinary Dentistry is a response to the need and demand of the veterinary clinicians who, supported by the high casuistry that they encounter, seek to offer the best service to their patients. The modules that are developed have been selected with the aim of offering the veterinary clinicians the possibility of taking a step further in their future as a specialist in Dentistry and to update specialized theoretical and practical knowledge to face with guarantees any oral and maxillofacial procedure that they may encounter in their daily practice.

The knowledge developed in this Professional Master's Degree is supported by the clinical experience of the authors, as well as articles and scientific publications directly related to the most current field of Veterinary Dentistry. This program covers all the domestic species that can benefit from this specialty. It brings together modules on exotic animal dentistry, equine dentistry and, above all, dentistry of small species such as dogs and cats.

The format of the Professional Master's Degree allows the work and academic conciliation of all students, and meets the requirements and demands of the veterinary professional.

This **Professional Master's Degree in Veterinary Dentistry** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- » The latest technology in online teaching software
- » A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- » Practical cases presented by practising experts
- » State-of-the-art interactive video systems
- » Teaching supported by telepractice
- » Continuous updating and recycling systems
- » Autonomous learning: full compatibility with other occupations
- » Practical exercises for self-evaluation and learning verification
- » Support groups and educational synergies: questions to the expert, debate and knowledge forums
- » Communication with the teacher and individual reflection work
- » Content that is accessible from any fixed or portable device with an Internet connection
- » Supplementary documentation databases are permanently available, even after the program

A Professional Master's Degree that will enable you to perform the activity of a veterinary dentist with the solvency of a high-level experienced professional"

# Introduction | 07 tech

Obtain a complete and adequate qualification in Veterinary Dentistry with this highly effective Professional Master's Degree and open new paths to your professional progress"

Our teaching staff is made up of professionals from different fields related to this specialty. In this way, TECH ensures to offer you the updating objective it intends. A multidisciplinary team of qualified and experienced professionals in different environments, who will develop the theoretical knowledge in an efficient way, but above all, they will bring their practical knowledge from their own experience to the program: one of the differential qualities of this educational program.

This mastery of the subject is complemented by the effectiveness of the methodological design of this Professional Master's Degree in Veterinary Dentistry. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your education.

The design of this program is based on Problem-Based Learning: an approach that views learning as a highly practical process. To achieve this remotely, we will use telepractice learning: with the help of an innovative interactive video system and Learning from an Expert, the students will be able to acquire the knowledge as if they were facing the scenario they are learning at that moment. A concept that will allow students to integrate and memorize what they have learnt in a more realistic and permanent way.

You will have the experience of expert professionals who will contribute their experience in this field to the program, making this educational program a unique opportunity for professional growth.

> With this high-level program, you will learn how to choose the most appropriate dental treatments based on imaging tests.

# 02 **Objectives**

TECH's objective is to prepare highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping medical professionals reach a much higher level of expertise and control. A goal that, in just six months, can be achieved with a high intensity and precision program.

You will gain in-depth knowledge in the basics of animal dentistry and establish action protocols, generating a specific routine for this dental specialty"

# tech 10 | Objectives



## **General Objectives**

- » Establish the basis of the anatomy involved in veterinary dentistry
- » Provide specialized knowledge of dental and periodontal anatomical structures
- » Generate specialized knowledge in comparative anatomy of dogs and cats
- » Identify oral anatomical structures
- » Establish a working methodology that encompasses the patient from the pre-anaesthesia visit to recovery at home
- » Examine the main points of interest in the anesthetic management of the dental patient
- » Generate specialized knowledge in the management of pain and the use of regional blocks in the dental patient
- » Propose reference protocols commonly used in dental procedures
- » Determine the instruments and materials available in veterinary dentistry
- » Determine the importance of the correct use of materials
- » Identify the instruments necessary for each procedure to be carried out in the oral cavity
- » Analyse the importance of having good equipment and how to preserve it correctly
- » Establish an appropriate imaging test methodology for each patient
- » Identify pathological images obtained from imaging tests
- » Generate a dental diagnostic protocol based on diagnostic imaging
- » Choose the most appropriate dental treatments based on imaging tests

- » Establish the foundations of canine dentistry and establish protocols for action, generating a specific routine for the specialty
- » Develop all aspects of dog dentistry: complete clinical examination, differential diagnoses, specific treatments, surgical technique and prognosis
- » Identify the most frequent pathologies quickly and accurately and prescribe effective and precise treatment
- » Analyze clinical cases objectively and precisely
- » Develop specialized knowledge to examine, diagnose and treat oral pathologies correctly based on the latest advances in the specialty
- » Establish the foundations of feline dentistry and establish protocols for action, generating a specific routine for the specialty
- » Identify the most frequent pathologies quickly and accurately with effective and precise treatment
- » Analyze diseases on the basis of good theory and in an interactive way
- » Generate specialized knowledge to examine, diagnose and treat oral pathologies correctly based on the latest advances in the specialty
- » Establish the anatomical and physiological basis of the oral cavity of different exotic species
- » Identify oral disorders and pathologies by means of different diagnostic tests
- » Analyze the possible dental treatments to be implemented depending on the diagnosed pathology



## **Specific Objectives**

## » Propose a series of prophylactic and preventive guidelines to reduce the incidence of oral pathologies in exotic animals

- » Determine the importance of equine dentistry
- » Recognize the main oral pathologies
- » Develop possible treatments according to pathologies and each specific case
- » Analyse the dental particularities and management of the equine patient
- » Develop specialized advanced knowledge in cancer biology and diagnostic procedure in veterinary oncology
- » Specialize in veterinary chemotherapy and radiotherapy
- » Examine the types of oral tumours.
- » Examine the main surgical pathologies occurring in the oral cavity of dogs and cats
- » Diagnose any type of injury taught in this module.
- » Develop specialized and advanced knowledge in order to carry out medical-surgical treatment in each case in an individualized manner
- » Determine the surgical techniques necessary to safely approach oral cavity surgery and avoid as many complications as possible.

## 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

# tech 12 | Objectives

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

- » Provide the means of exploration of the oral cavity, and of surgical material
- » Generate 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 specialized knowledge on the functioning and development of dental radiography
- » Generate advanced knowledge on the dynamics of Computed Tomography applied to veterinary dentistry
- » Analyse the usefulness of Magnetic Resonance Imaging applied to this sector of veterinary medicine

### Module 5. Canine Veterinary Dentistry

- » 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 specialised knowledge on antibiotics and antiseptics
- » Prescribe specific and advanced treatments

### Module 6. Feline Veterinary Dentistry

- » 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

# Objectives | 13 tech

### 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 tumours 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

# 03 **Skills**

This program has been created as a high-skilled education for veterinary professionals. Its intensive knowledge will enable you to intervene appropriately in the different areas of dentistry.

This educational program will provide you with the personal and professional skills necessary to be able to act in any professional situation in this field of intervention"

# tech 16 | Skills



**General Skills** 

- » 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



666 A unique specialization course that will enable you to acquire superior education enable you to acquire superior education for development in this field"



# Skills | 17 tech

# Specific Skills

- » 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

# 04 Course Management

Within the concept of total quality of the program, TECH is proud to offer you a teaching staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.

An impressive teaching staff, made up of professionals from different fields of expertise, will be your teachers during your education: a unique opportunity not to be missed"

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# tech 20 | Course Management

## Management



## Dr. Saura Alfonseda, José María

- » Degree in Veterinary Medicine from the University of Murcia
- » Member of the SEOVE and speaker at several SEOVE Congresses
- » Master's Degree in Dentistry and Maxillofacial Surgery V from the UCM in 2008
- » Lecturer at the Faculty of Veterinary Medicine of the UAX in subjects such as Animal Physiopathology, Clinical Propaedeutics and Animal Anatomy
- Senior Veterinarian at the Internal Medicine Service of the Veterinary Hospital Universidad Alfonso X El Sabio (HCV UAX) since 2006
- » Head of the Veterinary Dentistry and Maxillofacial Surgery Service of the HCV UAX since 2009
- » Outpatient Veterinary Dentistry and Maxillofacial Surgery Service (sauraodontovet) since 2013

# Course Management | 21 tech

## Professors

## Ms. De la Riva, Claudia

- » Degree in Veterinary Medicine from the Alfonso X El Sabio University in Madrid, 2013
- » Certified General Practitioner in Oncology (GPcertOncol) from the European School of Veterinary Postgraduate Studies (ESVPS)
- » Certified in traditional Chinese veterinary medicine with a speciality in oncology from the Chi institute of Europe and Florida
- » Member of the Spanish Small Animal Association (AVEPA) and the Veterinary Oncology Group (GEVONC)
- » In the process of accreditation in Oncology from GevoncAvepa
- » Has worked in different centers in the community of Madrid as a general and emergency veterinarian from 2015 to the present

## Ms. Del Castillo Magán, Noemí

- » PhD in Veterinary Medicine from the Complutense University of Madrid (2001)
- » Degree in Veterinary Medicine from the Complutense University of Madrid (1997)
- » Research proficiency from the Complutense University of Madrid
- » Accredited in Oncology by Gevonc Avepa
- » Founding Member and Secretary of Gevonc Avepa
- » Speaker at National Veterinary Oncology Congresses and Courses
- » Member of the European Society of Veterinary Oncology (ESVONC), the Spanish Small Animal Veterinary Association (AVEPA) and the Veterinary Oncology Group (Gevonc-Avepa)
- » Head of the Oncology Service of the Clinical Veterinary Hospital at Alfonso X El Sabio University
- » In 2019 she founded the Ambulate Oncology and Telemedicine service, together with her partner, Oncopets

## Dr. Ayuela Grande, Álvaro

- » Degree in Veterinary Medicine: Alfonso X El Sabio University Member of the Illustrious College of Veterinarians of Madrid no. 6808 Collaborator AMVAC no. 1707
- » Director and owner of Porto Veterinary Group, which includes the Porto Veterinary Clinic (Madrid) and La Paz Veterinary Clinic (Getafe)
- » AVEPA member no. 7072
- » Member of the group of exotic animal specialists GMCAE
- » Postgraduate course in Toxic Animal Clinic (General Practitioner Certificate in Exotic Animal Practice) accredited by the ESVPS during the 2011-2012 academic year
- » Professor of Veterinary Medicine at Universidad Alfonso X El Sabio 2017 present
- » In charge of teaching practical classes in the subject of Clinical Propaedeutics
- » Control of specialised poultry breeding hatcheries 06/2011 present

## Dr. Carrillo Segura, Manuel

- » Graduated in Veterinary Medicine from the Alfonso X El Sabio University of Madrid in 2017
- » Rotational internship at the Majadahonda Veterinary Hospital (2017-2018
- » Rotational internship master's degree (2018-2019) at the Hospital Clínico Veterinario UAX
- Master in Soft Tissue Surgery and Traumatology at the Hospital Clínico Veterinario UAX (2019-2022)
- » Practical Teacher of the Degree in Veterinary Medicine at the Alfonso X El Sabio University, in the subject of Surgical Pathology and Surgery
- » Currently, he is an outpatient veterinarian in different clinics in the Community of Madrid

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## Dr. Plaza del Castaño, Enrique

- » Degree in Veterinary Medicine from the Cardenal Herrera-CEU University (Valencia) in 2008
- » Director of the Anaesthesia and Analgesia Service at La Chopera Veterinary Hospital
- » Specialist qualification in Anaesthesia and Analgesia in Small Animals (2016)
- » Member of the Association of Spanish Veterinary Specialists in Small Animals (AVEPA)
- » Member of the Spanish Society of Veterinary Anesthesia and Analgesia (SEAAV
- » Member of the Working Group on Anaesthesia and Analgesia (GAVA)
- » Master's Degree in Management and Conservation of Wildlife and Protected Areas, University of Leon
- » University Specialist in Anaesthesia and Analgesia in Small Animals from the Complutense University of Madrid

## Ms. Marín-Baldo Vink, Alexandra

- » Degree in Veterinary Medicine from the University of Alfonso X el Sabio (2015)
- » Master's Degree in Sports Medicine and Equine Surgery from the Alfonso X El Sabio University. (2016-2019)
- » Professional Master's Degree in Veterinary Clinic Internship in Equine Clinic modality from the Alfonso X El Sabio University. 2015-2016
- » Attendance at courses and congresses related to equine clinical practice
- » Resident in Sports Medicine and Equine Surgery at the UAX
- » Intern in the large animals unit at the Alfonso X University Hospital
- » Residency at La Equina Hospital of Reference

### Ms. Márquez Garrido, Sandra

- » Degree in Veterinary from the University of Extremadura (2018)
- » Small Animal Rotational Internship at Alfonso X el Sabio University (2018-19)
- » International Oncology Course (Novotech) 2018
- » Certification by ESVPS in Oncology (GPCertOncol) 2020
- » Emergencies at Moncan Veterinary Hospital (Madrid) 2018-2020
- » Emergencies in Surbatán Veterinary Clinic (Madrid) 2019-2020
- » Collaborator with the Oncology Service of HCV UAX (Madrid) 2019-2020
- » Oncopets Outpatient Oncology (Madrid) 2020

## Ms. Díaz Holgado, Mónica

- » Degree in Veterinary Medicine from the Alfonso X El Sabio University (2009-2015)
- » Professional 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
- » Collaborator in the area of large animals at the Clinical Veterinary Hospital
- » Clinical Veterinary Hospital of the Alfonso X El Sabio University. Resident in surgery and sports medicine

# Course Management | 23 tech

## Ms. González González, Laura

- » Degree in Veterinary Medicine from the Alfonso X El Sabio University in Madrid
- » Veterinary doctor at Porto Veterinary Clinic
- » Master in Feline Clinics. Improve International. Classroom Course. November 2019- present
- » Master's Degree in Clinical Practice and Small Animal Emergencies. AEVA. Classroom Course. October 2016-Febuary 2017
- » Course on Clinical Dentistry in Dogs and Cats. Inveta. Online Course 39h. April 2015-June 2016
- » Support in Dental and Maxillofacial Surgeries at Porto Veterinary Clinic

## Dr. Mena Cardona, Rafael

- » Specialist in Veterinary Dentistry
- » Veterinarian at Merevet Veterinary Clinic
- » Degree in Veterinary Medicine from Cardenal Herrera University

### Dr. Oliveira Fernández, Andrea

- » Veterinarian specialized in feline medicine
- » Graduated in Veterinary Medicine at the University of Zaragoza
- » Rotating internship in the referral hospital of the Veterinary Hospital Valencia Sur

# 05 Structure and Content

The contents of this program have been developed by different experts, with a clear purpose: to ensure that students acquire each and every one of the skills necessary to become true experts in this field.

A complete and well-structured program will take you to the highest standards of quality and success.

We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"

# tech 26 | Structure and Content

### 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
  - 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 Muscles
  - 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



# Structure and Content | 27 tech

## 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

# tech 28 | Structure and Content

- 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

## Structure and Content | 29 tech

- 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 Prosthetics
- 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 Security 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

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- 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. Canine Veterinary Dentistry

- 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
    - 5.2.2.1. 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

## Structure and Content | 31 tech

#### 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 and Orthodontics
- 5.9. Dental Radiology
- 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 Treatment
  - 5.10.5. Therapeutics and Postoperative Care
  - 5.10.6. Complications

### Module 6. Feline Veterinary Dentistry

- 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 Fistulas
  - 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

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#### 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

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- 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)

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- 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

## Structure and Content | 35 tech

- 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

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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. Sialocele 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 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




## Structure and Content | 37 tech

A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"

# 06 **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.

## Methodology | 39 tech

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"

## tech 40 | Methodology

### 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.



## tech 42 | Methodology

### **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.





## Methodology | 43 tech

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.

## tech 44 | Methodology

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.

20%

15%

3%

15%

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.

## Methodology | 45 tech



#### **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.

20%

7%

3%

17%



#### **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.

# 07 **Certificate**

The 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 issued by TECH Global University.



Successfully complete this program and receive your university degree without travel or laborious paperwork"

## tech 48 | Certificate

This program will allow you to obtain your **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: Professional Master's Degree in Veterinary Dentistry

Modality: **online** Duration: **12 months** 

Accreditation: 60 ECTS



\*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.

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