



# Hybrid Professional Master's Degree

Veterinary Surgery in Small Animals

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 créditos ECTS

website: www.techtitute.com/us/veterinary-medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-veterinary-surgery-small-animals

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## tech 06 | Introduction

Veterinarians are currently facing new challenges in the treatment of their patients and, therefore, the future of this scientific branch is specialization. Advances in this field bring with them new tools with which to diagnose and make treatments more precise, so it is necessary for professionals to acquire a sharper preparation about the strategies and protocols available to them for small animal intervention through surgery. This Hybrid Master's Degree offers theoretical content and first-level practical skills related to this professional field. Through it, the student will master the most contemporary specificities about the specific material and instruments for each anatomical region, the most precise anesthetics and complementary medications to become a true expert in pet surgery.

This program consists of two main phases, the first of which will examine all these subjects from a theoretical point of view. In addition, once this part has been completed, the veterinarian will have the luxury of a three-week practical stay in a reference veterinary center where they will be able to put into action everything they have learned. It is, therefore, a qualification designed especially for those professionals who want to learn about this area of knowledge through an eminently practical plan. Therefore, it is a highly efficient educational project committed to updating knowledge in order to enhance a high quality professional practice.

In addition, during the stay the professional will be able to see real cases alongside a professional team of reference in the veterinary area, applying the most innovative procedures of the latest generation. In this way, the practical activities that will take place during the plan will be aimed at developing and perfecting the skills required for this sector. With this study, the veterinarian will acquire updated knowledge, useful, with scientific rigor and ideal for immediate application in their daily clinical practice. A high-level academic occasion that aims to bring together minimally invasive surgical and therapeutic techniques that can be performed in the clinical practice of small animals.

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

- Development of more than 100 clinical cases presented by nursing professionals
  with expertise in intensive care and university professors with extensive experience
  in Minimally Invasive Techniques
- 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
- Veterinary patient assessment and monitoring, the latest international recommendations in minimally invasive surgery
- · Comprehensive surgical approach plans for small animals
- Presentation of practical workshops on diagnosis, and therapeutic techniques for the veterinary patient
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Practical clinical guides on approaching different pathologies
- With a special emphasis on evidence-based medicine and the most effective methodologies in Surgery Small Animal Veterinary Surgery
- 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 available from any fixed or portable device with an Internet connection
- Furthermore, you will be able to carry out a clinical internship in one of the best veterinary centers in the worldIn this proposal for a Hybrid Professional Master's



Take an intensive 3-week internship at a prestigious institution and acquire all the knowledge to grow personally and professionally"

Degree, of a professionalizing nature and hybrid learning modality, the program is aimed at updating veterinary professionals who perform their functions in surgical units, and who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a didactic way to integrate theoretical knowledge in veterinary practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision making in the management of small animalsThanks to its multimedia content developed 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. The design of this program focuses on Problem Based Learning, through which the student will have to try to solve the different professional practice situations that will arise throughout the program. This will be done with the help of an innovative interactive video system created by renowned veterinary experts

The entire program is designed based on the highest scientific rigor and the latest developments in the profession.

Update your knowledge through the Hybrid Professional Master's Degree in Small Animals Nursing, in a practical way that is adapted to your needs.







## **tech** 10 | Why Study this Hybrid Professional Master's Degree?

## 1. Updating from the Latest Technology Available

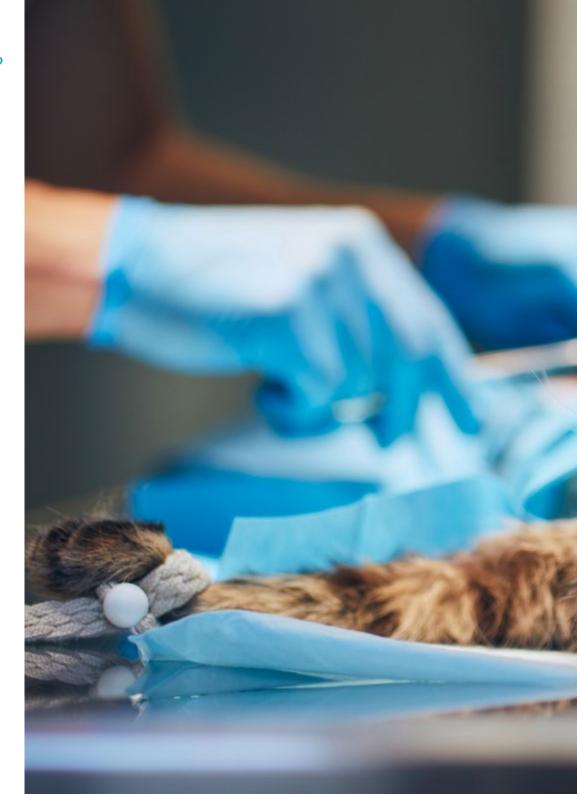
The most avant-garde surgical techniques for the Veterinary field are collected in this excellent Practical Training of this Hybrid Professional Master's program. Therefore, after 1,500 hours of theoretical learning, the student will enjoy 3 weeks of practical training in the use of the most complex technologies available.

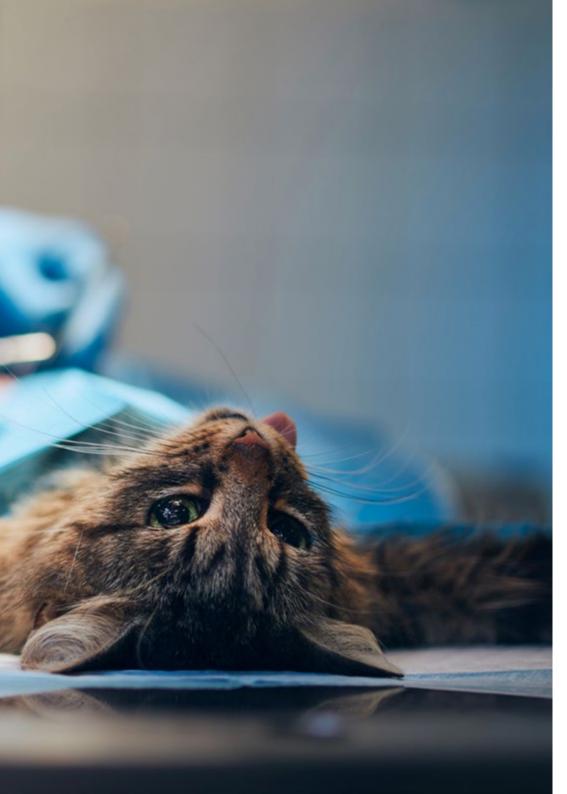
## 2. Gaining In-depth Knowledge from the Experience of Top Specialists

During this study program, students will have direct contact with leading experts in the field of Veterinary Surgery. They will also have a designated tutor, who will provide them with up-to-date knowledge and complex skills.

## 3. Entering into first-class veterinary environments.

Through an analysis of the academic landscape, TECH has chosen prestigious centers to be part of the practical stay of this pedagogical program. These veterinary institutions apply novel techniques and technologies for animal intervention. At the same time, they have the most highly trained specialists in this field of knowledge.





## Why Study this Hybrid Professional Master's Degree? | 11 tech

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

TECH wants its students to learn quickly and flexibly the most sought-after skills in this professional field. To this end, it has configured a learning model that perfectly integrates the hours of theoretical workload with a first-class practical stay. From the skills developed in both stages, the student will acquire an indispensable qualification for future employment.

## 5. Expanding the Boundaries of Knowledge

TECH offers the possibility of carrying out the professional internship of this Hybrid Professional Master's Degree Program in centers of international importance. In this way, the specialist will be able to expand his frontiers and keep up to date with the best professionals, who practice Pharmacodynamics. in first class hospitals and in different continents.







## tech 14 | Objectives



## **General Objective**

• The main objective of the Hybrid Professional Master's Degree in Small Animal Veterinary Surgery is to update the professional performance of the veterinarian dedicated to the surgical area. This is done through the latest advances and the most innovative treatments in the sector. In this way, through a program that perfectly combines theory and practice, the veterinarian will be able to position himself as a reference in this area of knowledge, being able to apply the latest surgical techniques correctly and efficiently to his patients



Upgrade your knowledge and start to see how you improve day by day in your daily practice"







## **Specific Objectives**

# Module 1. Basic Principles of Soft Tissue Surgery. Medical-surgical Techniques. Exploratory Laparotomy.

- Refine the rules of conduct for a surgeon
- Explain the correct use of tissue synthesis materials
- Develop knowledge of the surgical instruments available and promote their correct use
- Refine the surgical technique to minimize tissue damage
- Propose new hemostasis techniques
- Identify and successfully treat surgical site infections

### Module 2. Skin. Treatment of Wounds and Reconstructive Surgery.

- Understand the types of wounds there are, not only from an etiopathogenesis point of view, but also from a microbiological point of view
- Develop an understanding of the criteria involved in making decisions about the medical and surgical treatment of wounds
- Specify the local and systemic factors affecting healing
- Understand what laser therapy consists of, which parameters are important, their indications and their contraindications
- Gain an in-depth understanding of how to manage of the subdermal plexus with the use of local options they provide
- Propose techniques specially adapted to each different zone on the body, from the head to interdigital areas
- Specify how axial plexus flaps are designed and implemented in each area
- Explain grafting and the importance of correct patient selection and postoperative management

## tech 16 | Objectives

### Module 3. Gastrointestinal Surgery.

- Examine the anatomy of the affected area and provide the student with the specialized knowledge to safely and appropriately perform the surgical procedures on the gastrointestinal tract
- Compile all the latest material and develop it in a clear way so that the student can get the most out of it
- Develop understanding of the most common surgical techniques in the gastrointestinal tract
- Propose diagnostic and therapeutic plans for the different diseases that affect the gastrointestinal tract
- Examine the unique tools used for the diagnosis of gastrointestinal tract diseases
- Explain in detail the different diseases that can occur in each zone and how to treat them
- Develop specialized knowledge so that the student can perfect their clinical practice in the diagnosis and management of gastrointestinal tract diseases

### Module 4. Genitourinary Surgery. Mammary Surgery.

- Examine the most important anatomical considerations in the surgical treatment of genitourinary disease
- Consolidate knowledge of how certain surgical principles are applied in the treatment of urinary tracts
- Develop knowledge of the problems that occur when urine cannot be excreted from the patient's body
- Establish clear recommendations for the imaging techniques to choose to diagnose each disease
- Develop a detailed understanding of relevant surgical techniques

- Identify the most common complications in each surgical technique and how to prevent or solve them
- Propose protocols for making decisions in breast oncology
- Demonstrate the importance of peri-operative care of patients with breast tumors

#### Module 5. Surgical Oncology. Basic Principles. Cutaneous and Subcutaneous Tumors.

- Define the differences between curative, cytoreductive or palliative interventions
- · Analyze each patient to understand the optimal treatment for them
- Develop an action protocol for cutaneous tumors, including correct prior diagnosis and staging
- Establish correct surgical management techniques and margins to deal with soft tissue sarcomas
- Establish correct surgical management techniques and margins to deal with mastocytomas
- Establish correct surgical management techniques and margins to deal with cutaneous and subcutaneous tumors relevant to pet animal medicine

# Module 6. Liver and Biliary System Surgery Spleen Surgery. Endocrine System Surgery.

- Analyze the liver anatomy and the principal surgical techniques and complications in the most common liver diseases affecting small animals
- Analyze the spleen anatomy, main surgical techniques and complications in the main splenic diseases affecting small animals. Specifically, an action protocol for dealing with a splenic mass will be developed
- Establish diagnostic and therapeutic plans for the different diseases that affect
  the liver and the spleen, based on evidence and with the aim of tailoring it to each
  individual patient and their owner

- Develop the most appropriate techniques and therapeutic plans to treat the most common diseases which affect the thyroid glands, such as thyroid tumors and hyperthyroidism in cats
- Develop the most appropriate techniques and therapeutic plans to treat the most common diseases which affect the adrenal gland, such as adrenal tumors
- Develop the most appropriate techniques and therapeutic plans to treat the most common diseases which affect the endocrine pancreas, such as pancreatic tumors
- Establish diagnostic and therapeutic plans for the different endocrine diseases, based on evidence and with the aim of tailoring it to each individual patient and their owner

### Module 7. Head and Neck Surgery

- Revise the anatomy of the oral cavity, nasal cavity, ear, trachea and larynx, so that the student has the knowledge to adequately and safely perform surgical procedures
- Develop understanding of the main conditions of the oral cavity such as oral and labial tumors in the context of diagnosis, therapeutic approach, surgical techniques, complications and prognosis
- Develop understanding of the main ear problems such as otohematomas, tumors
  of the external auditory pavilion and external auditory canal, chronic recurrent
  otitis and nasopharyngeal polyps. This will be in the context of diagnosis, the
  therapeutic approach, surgical techniques, complications and prognosis
- Develop the main pharyngeal conditions such as laryngeal paralysis in the context of diagnosis, therapeutic approach, surgical techniques, complications and prognosis

- Develop understanding of the main conditions of the salivary glands such as sialoceles in the context of diagnosis, therapeutic approach, surgical techniques, complications and prognosis
- Compile all scientific literature to develop a diagnostic and therapeutic protocol, with the latest techniques for the treatment of tracheal collapse
- Compile all the scientific literature to elaborate a diagnostic and therapeutic protocol, with the latest techniques for the treatment of brachycephalic syndrome
- Define other less frequent diseases which affect the head and neck of small animals, such as nasopharyngeal stenosis, tracheal and laryngeal tumors and cricopharyngeal achalasia
- Establish different diagnostic and therapeutic techniques for the different head and neck diseases
- Generate up-to-date material, based on evidence from different surgical techniques of the oral cavity, nasal cavity, ears, trachea and larynx

## tech 18 | Objectives

## Module 8. Thoracic Cavity Surgery.

- Provide knowledge of the anatomy to establish the basis for an appropriate surgical technique for procedures in the thoracic cavity
- Present the specific material needed to perform surgical interventions in this area
- Develop more advanced techniques, less common in daily clinical practice due to their complexity, to make them understandable and practicable for the student
- Compile an up-to-date of the best surgical techniques on thoracic structures
- Propose diagnostic and therapeutic plans for the different diseases that affect the thoracic cavity
- To compile the different tools for the diagnosis of pathologies in the thoracic cavity
- To enable the student to identify and resolve the most frequent complications that may occur during surgery of the thoracic cavity

# Module 9. Amputations: Thoracic Limb, Pelvic Limb, Caudectomy, Phalanges. Umbilical, Inguinal, Scrotal, Traumatic, Perineal, Diagrammatic and Peritoneopericardial Diaphragmatic Hernias.

- Present the most common indications for the amputation of the pelvic limb, thoracic, caudectomy and phalanges
- Compile the different surgical techniques for performing amputations in small animals as a resolution technique for tumors of the pelvic region, including hemipelvectomy
- Revise the preoperative indications, patient selection, post-operative care and complications that could arise when performing amputations in small animals
- Present the most appropriate techniques and therapeutic plans for resolving the different umbilical, inguinal, scrotal and traumatic hernias





## Objectives | 19 tech

- Revise the different techniques for the resolution of a perineal hernia as well as establishing an appropriate therapeutic protocol for treating this condition
- Develop knowledge of a diaphragmatic hernia in the context of the indication for surgery, diagnosis and most effective techniques for its resolution
- Develop diaphragmatic peritoneal pericardial hernia in the context of the indication for surgery, diagnosis and most effective techniques for its resolution

# Module 10. Minimally Invasive Surgery. Laparoscopy. Thoracoscopy. Interventional Radiology.

- Identify the main equipment and instruments necessary to perform laparoscopies and thoracoscopies
- Develop the main techniques performed in small animal laparoscopic surgery such as ovariectomy, cryptorchidectomy, preventive gastropexy and liver biopsy
- Define other, less-common techniques of laparoscopic approach such as assisted cystoscopy, digestive examination, cholecystectomy and biopsy of different organs of the abdominal cavity
- Develop the main techniques performed in thoracoscopic surgery in small animals such as pericardiectomy and establish the most appropriate protocol in each case
- Define other less common techniques of thoracoscopic approach in small animals such as lung biopsy, pulmonary lobectomy, chylothorax resolution technique and vascular rings
- Identify the main equipment and instruments needed to perform interventional radiology
- Define the main techniques with which interventional radiology is performed



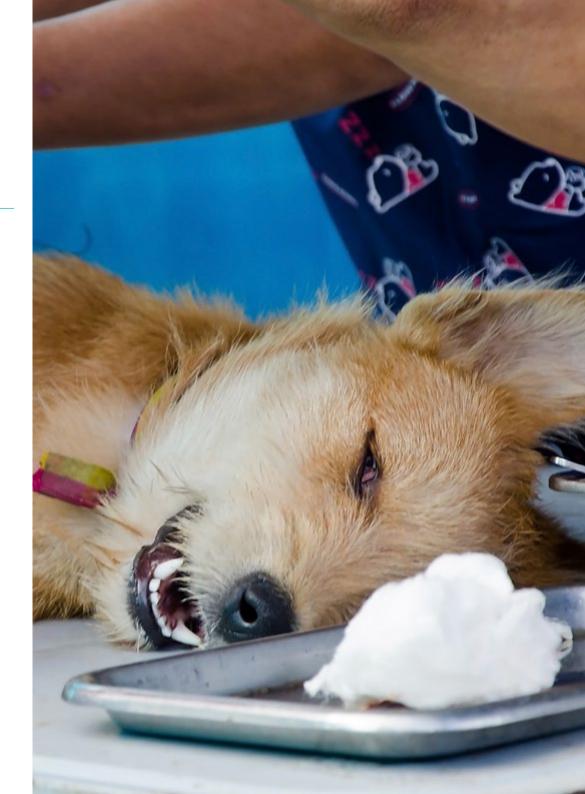


## tech 22 | Skills



## **General Skills**

- Correctly perform surgical procedures
- Deal with surgical and postoperative complications
- Perform appropriate diagnoses according to the type of disease that the animal has
- Use the correct specific surgical material in each case
- Treat the various wounds they could find when examining an animal
- Use the most appropriate instruments for each intervention





- Understand the most appropriate surgical material for tissue damage and perform this type of surgery
- Treat surgical infections
- Understand the healing process of wounds and the best way to proceed with the treatment
- Perform laser therapy and grafting
- Correctly resolve surgical pathologies that affect the gastrointestinal tract
- Solve a multitude of cases of the gastrointestinal system in a comprehensive manner
- Deal with genitourinary pathologies
- Perform surgical processes that affect the urinary tract
- Solve complications in this area
- Diagnose and treat skin tumors
- Surgical management of soft tissue sarcomas, mastocytomas or cutaneous and subcutaneous tumors, among others
- Diagnose diseases which affect the liver, spleen, thyroid glands, adrenal gland, pancreas or endocrine system

- Choose the most appropriate treatments in each case
- Recognise the main diseases which affect the head and neck
- Diagnose and treat said diseases
- Use the most appropriate material in each of the interventions
- Use the most advanced techniques in interventions related to the thoracic cavity
- Solve the most common complications that occur in thoracic cavity surgery
- Use the most appropriate techniques and therapeutic plans for resolving the different umbilical, inguinal, scrotal and traumatic hernias
- Use the most appropriate laparoscopic techniques for small animals
- Understand interventional radiology, its main uses and how to apply it in practice





## **International Guest Director**

Dr. Wendy Baltzer is a leading figure in the international veterinary community. Her passion and extensive experience in Veterinary Medicine have led her to become involved in the field of research in Small Animal Veterinary Surgery. In this way, she has multiple publications in academic and scientific media, most of them very well positioned, reflecting an index H 20 in Google Scholar.

Likewise, in her studies reflected in publications she defends the use of ultrasound and radiographs to predict the time of delivery in small animals, thereby reducing the likelihood of neonatal morbidity and mortality. In addition, she associates a decrease in pup vitality with the use of thiobarbiturates, ketamine and inhalation anesthetics.

Similarly, her work also focuses on the effects of oxidative stress on agility exercise in dogs, ligament and tendon injuries, improved impulse fracture repair, as well as injuries in working, sport, police and military dogs. She has also devoted much of her studies to **osteoarthritis**, **low back pain**, taping techniques and omentum grafting for bone healing.

She has taught at major academic institutions such as the School of Veterinary Science at Massey

University, as well as Oregon State University. In the latter, she held a position of high
responsibility, occupying the position of director of its Rehabilitation Center. Likewise, her work
at Sydeny University focuses on teaching the clinical practice of Small Animal Surgery, while
continuing to develop her research in the fields of Surgery, Sports Medicine and Rehabilitation.



# Dr. Baltzer, Wendy

- Head of Veterinary Surgery at the University of Sydney
- Director of the Rehabilitation Center at the University of Oregon
- · Associate Professor in the School of Veterinary Science at the University of Sydney
- Ph.D. in Veterinary Physiology, Texas A&M University
- · Specialist in Small Animal Surgery at Texas A&M University



## Management



## Dr. Ortiz Díez, Gustavo

- Head of Small Animal Unit at Complutense Clinical Veterinary Hospita
- Head of the Department of Soft Tissue Surgery and Minimally Invasive Procedures at the Veterinary Specialties Hospital 4
  Octubre Spain)
- AVEPA Accredited Soft Tissue in Surgery
- Master's Degree in Research Methodology in Health Sciences from the UAB
- Specialist in Traumatology and Orthopedic Surgery in Companion Animals by the UCM. Degree in Small Animal Cardiology from the UCM
- PhD and Undergraduate Degree in Veterinary Medicine from the UCM
- Courses of laparoscopic and thoracoscopic surgery at the Minimally Invasive Center Jesús Usón. Accredited in functions B,
   C, D and E of Experimentation Animals, Community of Madrid
- ICT competencies course for teachers by UNEI
- Member of the scientific committee and current president of AVEPAs Soft Tissue Surgery Specialty Group

### **Professors**

### Dr. Suárez Redondo, María

- Small Animal Surgeon at the Complutense University of Madrid Veterinary Clinical Hospital
- Doctoral Graduate, Complutense University, Madrid
- Degree in Veterinary Medicine from the University of Leon
- Master in Traumatology and Surgery Orthopedic from the Complutense University of Madrid

#### Dr. García Fernández, Paloma

- Head of Small Animal Unit at from the University Complutense Clinical Veterinary Hospital of Madrid
- Professor of Surgery and Anesthesia, Department of Animal Medicine and Surgery,
   Faculty of Veterinary Medicine, Hospital Clínico Veterinario, Universidad Complutense
   de Madrid
- PhD in Veterinary Medicine, Complutense University of Madrid
- Degree in Veterinary Medicine from from Madrid's Veterinary University

## Dr. Carrillo Sánchez, Juana Dolores

- Specialist in Endoscopy and Minimally Invasive Surgery in small animals
- Pharmacodynamics
- Doctor from the University of Murcia
- General Practioner Certificate in Small Animal Surgery
- Degree in Veterinary Medicine from the University of Murcia
- Accreditation in the specialty of soft tissue surgery
- Specialist in Endoscopy and Minimally Invasive Small Animal Surgery at the University of Extremadura
- Member of the Association Spanish Veterinarians of Specializing in Small Animals (AVEPA)

### Dr. López Gallifa, Raúl

- Veterinary Specialists in the Small Animals Surgery Service at Alfonso X El Sabio University
- University of North Carolina Clinical Fellow
- PhD from University of Alfonso X el Sabio
- Degree in Veterinary Medicine from Alfonso X El Sabio University
- Master's Degree in of soft tissue and Surgery at the Clinical symptoms Veterinary Hospital of Alfonso X el Sabio University





## tech 32 | Educational Plan

# **Module 1.** Basic Principles of Soft Tissue Surgery. Medical-surgical Techniques. Exploratory Laparotomy

- 1.1. Principles of Asepsis and Sterilization
  - 1.1.1. Definition of the Concepts of Asepsis, Antisepsis and Sterilization
  - 1.1.2. Main Methods for Disinfection
  - 1.1.3. Main Methods for Sterilization
- 1.2. The Operating Room
  - 1.2.1. Preparation of Surgical Personnel
  - 1.2.2. Hand Washing
  - 1.2.3. clothing
  - 1.2.4. Preparation of the Operating Environment
  - 1.2.5. Sterilization Maintenance
- 1.3. Instruments
  - 1.3.1. General Materials
  - 1.3.2. Specific Materials
- 1.4. Hemostasis, Sutures, Alternative Hemostasis Methods
  - 1.4.1. Hemostasis Physiopathology
  - 1.4.2. Suture Features
  - 1.4.3. Suture Materials
  - 1.4.4. Suture Patterns
  - 1.4.5. Alternative Techniques of Hemostatis
- 1.5. Surgical Site Infection (SSI)
  - 1.5.1. Nosocomial Infections
  - 1.5.2. Definition of SSI Types of ISQ
  - 1.5.3. Types of Surgery
  - 1.5.4. Risk Factors
  - 1.5.5. Treatment of SSI
  - 1.5.6. Use of Antimicrobials
  - 1.5.7. Precautions to Avoid SSI

- 1.6. Surgical Defects. Bandages and Drainage
  - 1.6.1. Use of Cutting Instruments
  - 1.6.2. Use of Gripping Instruments
  - 1.6.3. Use of Retractors
  - 1.6.4. Aspiration
  - 1.6.5. Bandages
  - 1.6.6. Drainages
- 1.7. Electrosurgery and Lasers
  - 1.7.1. Physical Principles
  - 1.7.2. Monopolar
  - 1.7.3. Bipolar
  - 1.7.4. Sealants
  - 1.7.5. Basic Rules of Use
  - 1.7.6. Main Techniques
  - 1.7.7. Laser
    - 1.7.7.1. CO2 Laser
    - 1.7.7.2. Diode Laser
- 1.8. Postsurgical Monitoring and Care
  - 1.8.1. Nutrition
  - 1.8.2. Pain Management
  - 1.8.3. Decubitus Patients
  - 1.8.4. Renal Monitoring
  - 1.8.5. Hemostasis
  - 1.8.6. Hyperthermia and Hypothermia
  - 1.8.7. Anorexia
- 9. Medical-surgical Procedures
  - 1.9.1. Feeding Tubes
    - 1.9.1.1. Nasoesophageal
    - 1.9.1.2. Esophagostomy
    - 1.9.1.3. Gastronomy

- 1.9.2. Thoracostomy Tubes
- 1.9.3. Temporary Tracheostomy
- 1.9.4. Other Procedures
  - 1.9.4.1. Abdominocentesis
  - 1.9.4.2. Jejunostomy Probes
- 1.10. Exploratory Laparotomy. Abdominal Cavity Closure
  - 1.10.1. Abdominal Opening and Closure
  - 1.10.2. Topographic Anatomy

## Module 2. Skin. Treatment of Wounds and Reconstructive Surgery

- 2.1. Skin: Anatomy, Vascularization and Tension
  - 2.1.1. Skin Anatomy
  - 2.1.2. Vascular Contribution
  - 2.1.3. Correct Treatment of the Skin
  - 2.1.4. Tension Lines
  - 2.1.5. Ways to Manage Tension
    - 2.1.5.1. Sutures
    - 2.1.5.2. Local Techniques
    - 2.1.5.3. Flap Types
- 2.2. Pathophysiology of Healing
  - 2.2.1. Inflammatory Phase
  - 2.2.2. Types of Debridement
  - 2.2.3. Proliferative Phase
  - 2.2.4. Maturation Phase
  - 2.2.5. Local Factors Which Affect Healing
  - 2.2.6. Systemic Factors Which Affect Healing
- 2.3. Wounds: Types and How to Treat Them
  - 2.3.1. Types of Wounds (Etiology)
  - 2.3.2. Wound Assessment
  - 2.3.3. Wound Infection
    - 2.3.3.1. Surgical Site Infection (SSI)

- 2.3.4. Wound Management
  - 2.3.4.1. Preparation and Cleaning
  - 2.3.4.2. Dressings
  - 2.3.4.3. Bandages
  - 2.3.4.4. Antibiotics: Yes or No
  - 2.3.4.5. Other Medication
- 2.4. New Techniques to Aid Healing
  - 2.4.1. Laser Therapy
  - 2.4.2. Vacuum Systems
  - 2.4.3. Others
- 2.5. Plasties and Subdermal Plexus Flaps
  - 2.5.1. Z-plasty, V-Y Plasty
  - 2.5.2. Bow-tie Technique
  - 2.5.3. Advance Flaps
    - 2.5.3.1. U
    - 2.5.3.2. H
  - 2.5.4. Rotation Flaps
  - 2.5.5. Transposition Flaps
    - 2.5.5.1. Interpolation Flaps
- 2.6. Other Flaps. Grafts
  - 2.6.1. Pedicle Flaps
    - 2.6.1.1. What They Are and Why Do They Work?
    - 2.6.1.2. Most Common Pedicle Flaps
  - 2.6.2. Muscle and Myocutaneous Flaps
  - 2.6.3. Grafts
    - 2.6.3.1. Indications
    - 2.6.3.2. Types
    - 2.6.3.3. Bedding Requirements
    - 2.6.3.4. Collection and Preparation Technique
    - 2.6.3.5. Postoperative Care

## tech 34 | Educational Plan

2.7.	Common Head Injuries		
	2.7.1.	Eyelids	
		2.7.1.1. Techniques for Eyelid Reconstruction	
		2.7.1.2. Advance Flaps	
		2.7.1.2.1. Rotation	
		2.7.1.2.2. Transposition	
		2.7.1.3. Superficial Temporalis Axial Flap	
	2.7.2.	Nose	
		2.7.2.1. Rotation Flaps	
		2.7.2.2. Lip to Nose Plasty	
	2.7.3.	Lips	
		2.7.3.1. Direct Closure	
		2.7.3.2. Advance Flaps	
		2.7.3.3. Rotation Flaps. <i>Lip to Eye</i>	
	2.7.4.	Ears	
2.8.	Neck ar	nd Torso Techniques	
	2.8.1.	Advance Flaps	
	2.8.2.	Myocutaneous Flap of the Latissimus Dorsi	
	2.8.3.	Axillary Crease and Inguinal Crease	
	2.8.4.	Cranial Epigastric Axial Flap	
	2.8.5.	Episioplasty	
2.9.	Techniques for Wounds and Defects in the Extremities (I)		
	2.9.1.	Problems Related to Compression and Tension	
		2.9.1.1. Alternative Closure Methods	
	2.9.2.	Thoracodorsal Axial Flap	
	2.9.3.	Lateral Thoracic Axial Flap	
	2.9.4.	Superficial Brachial Axial Flap	
	2.9.5.	Caudal Epigastric Axial Flap	
2.10.	Techniques for Wounds and Defects in the Extremities (II)		
		Problems Related to Compression and Tension	
	2.10.2.	Axial Flap of the Deep Iliac Circumflex (Dorsal and Ventral Branches)	
		2.10.2.1. Genicular Axial Flap	
		2.10.2.2. Reverse Saphenous Flap	
		2.10.2.3. Pads and Interdigital Pads	

## Module 3. Gastrointestinal Surgery

- 3.1. Anatomy of the Gastrointestinal Tract
  - 3.1.1. Stomach
  - 3.1.2. Small Intestine
  - 3.1.3. Large Intestine
- 3.2. General Aspects
  - 3.2.1. Sutures and Materials
  - 3.2.2. Laboratory and Imaging Tests
- 3.3. Stomach
  - 3.3.1. Surgical Principles
  - 3.3.2. Clinical Stomach Pathologies
  - 3.3.3. Foreign Bodies
  - 3.3.4. Gastric Dilatation-Volvulus Syndrome
  - 3.3.5. Gastropexy
  - 3.3.6. Gastric Retention and Obstruction
  - 3.3.7. Gastroesophageal Intussusception
  - 3.3.8. Hiatal Hernia
  - 3.3.9. Neoplasty
- 3.4. Surgical Techniques
  - 3.4.1. Biopsy Sampling
  - 3.4.2. Gastrotomy
  - 3.4.3. Gastrectomy
    - 3.4.3.1. Simple Gastrectomy
    - 3.4.3.2. Billroth I
    - 3.4.3.3. Billroth II
- 3.5. Small Intestine
  - 3.5.1. Surgical Principles
  - 3.5.2. Clinical Pathologies of the Small Intestine
    - 3.5.2.1. Foreign Bodies
      - 3.5.2.1.1. Non-linear
      - 3.5.2.1.2. Linear
    - 3.5.2.2. Duplication of the Intestinal Wall
    - 3.5.2.3. Intestinal Perforation

		3.5.2.5. Intestinal Intussusception 3.5.2.6. Mesenteric Volvulus		
		3.5.2.7. Neoplasty		
3.6.	Surgical	Techniques		
		Biopsy Sampling		
		Enterotomy		
		Enterectomy		
		Enteroplication		
3.7.	Large Intestine			
	3.7.1.	Surgical Principles		
		Clinical Pathologies		
		3.7.2.1. Ileocolic Intussusception or Cecal Inversion		
		3.7.2.2. Megacolon		
		3.7.2.3. Transmural Migration		
		3.7.2.4. Neoplasty		
3.8.	Surgical Techniques			
	3.8.1.	Biopsy Sampling		
	3.8.2.	Typhlectomy		
	3.8.3.	Colopexy		
	3.8.4.	Colotomy		
	3.8.5.	Colectomy		
3.9.	Rectum			
	3.9.1.	Surgical Principles		
	3.9.2.	Clinical Pathologies and Rectum Surgical Techniques		
		3.9.2.1. Rectal Prolapse		
		3.9.2.2. Anal Atresia		
		3.9.2.3. Neoplasty		
3.10.	Perianal Zone and Anal Sacs			
	3.10.1.	Pathology and Perianal Area Surgical Technique		
		3.10.1.1. Perianal Fistulas		
		3.10.1.2. Neoplasms		
	3.10.2.	Pathologies and Anal Sacs Surgical Techniques		

3.5.2.4. Intestinal Incarceration

IVIOC	iule 4. (	senitourinary Surgery. Marrimary Surgery	
4.1.	Introduction to Urogenital Surgical Pathology		
	4.1.1.	Surgical Principles Applied in Urogenital Surgery	
	4.1.2.	Surgical Material Used	
	4.1.3.	Suture Materials	
	4.1.4.	Pathophysiology of Urinary Surgical Problems: Introduction	
	4.1.5.	Urinary Obstruction	
	4.1.6.	Urinary Trauma	
4.2.	Kidney		
	4.2.1.	Anatomy Recap	
	4.2.2.	Techniques (I)	
		4.2.2.1. Renal Biopsy	
		4.2.2.2. Nephrotomy. Pyelolithotomy	
	4.2.3.	Techniques (II)	
		4.2.3.1. Nephrectomy	
		4.2.3.2. Nephropexy	
		4.2.3.3. Nephrostomy	
	4.2.4.	Congenital Diseases	
	4.2.5.	Renal Trauma	
	4.2.6.	Infection. Abscesses	
4.3.	Urether		
	4.3.1.	Anatomy Recap	
	4.3.2.	Techniques (I)	
		4.3.2.1. Ureterotomy	
		4.3.2.2. Anastomosis	
	4.3.3.	Techniques (II)	
		4.3.3.1. Ureteroneocystostomy	
		4.3.3.2. Neoureterostomy	
	4.3.4.	Congenital Diseases	
	4.3.5.	Urethral Trauma	
	4.3.6.	Ureteral Obstruction	

4.3.6.1. New Techniques

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4.4.	Bladder	
	4.4.1.	Anatomy Recap
	4.4.2.	Techniques (I)
		4.4.2.1. Cystotomy
		4.4.2.2. Cystectomy
	4.4.3.	Techniques (II)
		4.4.3.1. Cystopexy. Serosal Patch
		4.4.3.2. Cystostomy
		4.4.3.3. Boari Flap
	4.4.4.	Congenital Diseases
	4.4.5.	Bladder Trauma
	4.4.6.	Bladder Lithiasis
	4.4.7.	Bladder Torsion
	4.4.8.	Neoplasms
4.5.	Urethra	
	4.5.1.	Anatomy Recap
	4.5.2.	Techniques (I)
		4.5.2.1. Urethrotomy
		4.5.2.2. Anastomosis
	4.5.3.	Techniques (II): Urethrostomy
		4.5.3.1. Introduction
		4.5.3.2. Feline Perineal Urethrostomy
		4.5.3.3. Canine Pre-scrotal Urethrostomy
		4.5.3.4. Other Urethrostomies
	4.5.4.	Congenital Diseases
	4.5.5.	Urethral Trauma
	4.5.6.	Urethral Obstruction
	4.5.7.	Urethral Prolapse
	4.5.8.	Sphincter Incompetence
4.6.	Ovaries	, Uterus, Vagina
	4.6.1.	Anatomy Recap
	4.6.2.	Techniques (I)
		4.6.2.1. Ovariectomy
		4.6.2.2. Ovariohysterectomy

4.6.3.	Techniques (II)
	4.6.3.1. Cesarean Section
	4.6.3.2. Episiotomy
4.6.4.	Congenital Diseases
	4.6.4.1. Ovaries and Uterus
	4.6.4.2. Vagina and Vestibule
4.6.5.	Ovarian Remnant Syndrome
	4.6.5.1. Effects of Gonadectomy
4.6.6.	Pyometra
	4.6.6.1. Stump Pyometra
4.6.7.	Uterine Prolapse and Vaginal Prolapse
4.6.8.	Neoplasms
Penis,	Testicles and Scrotum
4.7.1.	Anatomy Recap
4.7.2.	Techniques (I)
	4.7.2.1. Pre-scrotal Orchiectomy
	4.7.2.2. Feline Scrotal Orchiectomy
	4.7.2.3. Abdominal Orchiectomy
4.7.3.	Techniques (II)
	4.7.3.1. Scrotum Ablation
	4.7.3.2. Penis Amputation
4.7.4.	Techniques (III)
	4.7.4.1. Preputial Plasties
	4.7.4.2. Phallopexy
4.7.5.	Congenital Alterations of the Penis and Foreskir
	4.7.5.1. Hypospadias
	4.7.5.2. Phimosis vs Paraphimosis
4.7.6.	Congenital Alterations to the Testicles
	4.7.6.1. Anorchia/Monorchidism
	4.7.6.2. Cryptorchidism
4.7.7.	Neoplasms in the Penis
4.7.8.	Testicular Neoplasms

4.7.

+.0.	PIUSIAI	e. Andhary redfiniques in drogenital surgery		
	4.8.1. A	natomy Recap		
	4.8.2.	Techniques		
		4.8.2.1. Omentalization		
		4.8.2.2. Marsupialization		
	4.8.3.	Prostatic Hyperplasia		
	4.8.4.	Prostatic Cysts		
	4.8.5.	Prostatitis and Prostatic Abscesses		
	4.8.6.	Neoplasms		
	4.8.7.	Auxiliary Techniques Catheterization and Cystopuncture		
	4.8.8.	Abdomen Drainage		
4.9.	Complementary Tests in Urogenital Surgical Pathology			
	4.9.1.	Diagnostic Imaging Techniques(I)		
		4.9.1.1. Simple Radiography		
		4.9.1.2. Contrast Radiography		
	4.9.2.	Diagnostic Imaging Techniques (II)		
		4.9.2.1. Ultrasound		
	4.9.3.	Diagnostic Imaging Techniques (III)		
	4.9.4.	Importance of Laboratory Diagnosis		
4.10.	Breast			
	4.10.1.	Anatomy Recap		
	4.10.2.	Techniques (I)		
		4.10.2.1. Nodulectomy		
		4.10.2.2. Lymphadenectomy		
	4.10.3.	Techniques (II)		
		4.10.3.1. Simple Mastectomy		
		4.10.3.2. Regional Mastectomy		
		4.10.3.3. Radical Mastectomy		
	4.10.4.	Postoperative Care		
		4.10.4.1. Analgesic Catheters		
	4.10.5.	Hyperplasia and Pseudo-gestation		
	4.10.6.	Canine Mammary Tumors		
	4.10.7.	Feline Mammary Tumors		

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# **Module 5.** Surgical Oncology. Basic Principles. Cutaneous and Subcutaneous Tumors

- 5.1. Principles of Surgical Oncology (I)
  - 5.1.1. Pre-operative Considerations
  - 5.1.2. Surgical Approach
  - 5.1.3. Biopsies and Sample Collecting
- 5.2. Principles of Surgical Oncology (II)
  - 5.2.1. Surgical Considerations
  - 5.2.2. Definition of Surgical Margins
  - 5.2.3. Cytoreductive and Palliative Surgeries
- 5.3. Principles of Surgical Oncology (III)
  - 5.3.1. Post-operative Considerations
  - 5.3.2. Adjuvant Therapy
  - 5.3.3. Multimodal Therapy
- 5.4. Cutaneous and Subcutaneous Tumors. Soft Tissue Sarcomas (I)
  - 5.4.1. Clinical Presentation
  - 5.4.2. Diagnosis
  - 5.4.3. Staging
  - 5.4.4. Surgical Aspects
- 5.5. Cutaneous and Subcutaneous Tumors. Soft Tissue Sarcomas (II)
  - 5.5.1. Reconstructive Surgery
  - 5.5.2. Adjuvant Therapies
  - 5.5.3. Paliative Procedures
  - 5.5.4. Prognosis
- 5.6. Cutaneous and Subcutaneous Tumors. Mastocytoma (I)
  - 5.6.1. Clinical Presentation
  - 5.6.2. Diagnosis
  - 5.6.3. Staging
  - 5.6.4. Surgery (I)
- 5.7. Cutaneous and Subcutaneous Tumors. Mastocytoma (II)
  - 5.7.1. Surgery (II)
  - 5.7.2. Post-operative Recommendations
  - 5.7.3. Prognosis

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5.8.	5.8.1. 5.8.2.	ous and Subcutaneous Tumors. Other Cutaneous and Subcutaneous Tumors (I)  Melanoma  Epitheliotropic Lymphoma  Hemangiosarcoma	
5.9.	Cutane 5.9.1.	ous and Subcutaneous Tumors. Other Cutaneous and Subcutaneous Tumors (II) Cutaneous and Subcutaneous Benign Tumors	
	5.9.2.	Feline Injection Site Sarcoma	
5.10.	Interver	ntional Oncology	
	5.10.1.	Material	
		Vascular Interventions	
	5.10.3.	Non-Vascular Interventions	
Mod	ule 6. L	iver and Biliary System Surgery Spleen Surgery. Endocrine	
	em Sur		
6.1.	Liver Surgery. Basic Principles		
	6.1.1.	Liver Anatomy	
	6.1.2.	Liver Pathophysiology	
	6.1.3.	General Principles of Liver Surgery	
	6.1.4.	Hemostasis Techniques	
6.2.	Liver Su	urgery (II). Techniques	
	6.2.1.	Hepatic biopsy	
	6.2.2.	Partial Hepatectomy	
	6.2.3.	Hepatic Lobectomy	
6.3. Liver Surgery (III). Liver Cysts and Abscesses		urgery (III). Liver Cysts and Abscesses	
	6.3.1.	Liver Tumors	
	6.3.2.	Abscesos hepáticos	
6.4.	Liver Su	urgery (IV)	
	6.4.1.	Portosystemic Shunt	
6.5.	Extrahe	patic Biliary Tree Surgery	
	6.5.1.	Anatomy	
	6.5.2.	Techniques Cholecystectomy	
	6.5.3.	Cholecystitis (Biliary Mucocele)	
	6.5.4.	Bladder Stones	

.6.	Spleen Surgery (I)			
	6.6.1.	Spleen Anatomy		
	6.6.2.	Techniques		
		6.6.2.1. Ssplecnorraphy		
		6.6.2.2. Partial Splenectomy		
		6.6.2.3. Complete Splenectomy		
		6.6.2.3.1. Three Clamp Technique Approach		
.7.	Spleen Surgery (II)			
	6.7.1.	Splenic Mass Approach		
	6.7.2.	Hemoabdomen		
.8.	Thyroid Gland Surgery			
	6.8.1.	Anatomy Recap		
	6.8.2.	Surgical Techniques		
		6.8.2.1. Thyroidectomy		
		6.8.2.2. Parathyroidectomy		
	6.8.3.	Diseases		
		6.8.3.1. Thyroid Tumors in Dogs		
		6.8.3.2. Hyperthyroidism in Cats		
		6.8.3.3. Hyperparathyroidism		
.9.	Adrenal Gland Surgery			
	6.9.1.	Anatomy Recap		
	6.9.2.	Surgical Technique		
		6.9.2.1. Adrenalectomy		
		6.9.2.2. Hypophysectomy		
	6.9.3.	Diseases		
		6.9.3.1. Adrenal Adenomas/Adenocarcinomas		
		6.9.3.2. Pheochromocytomas		
.10.	Endocr	ne Pancreatic Surgery		
	6.10.1.	Anatomy Recap		
	6.10.2.	Surgical Technique		
		6.10.2.1. Pancreatic Biopsy		
		6.10.2.2. Pancreatectomy		
	6.10.3.	Diseases		

6.10.3.1. Insulinoma

# Module 7. Head and Neck Surgery

- 7.1. Salivary Glands
  - 7.1.1. Anatomy
  - 7.1.2. Surgical Technique
  - 7.1.3. Sialocele
- 7.2. Laryngeal Paralysis
  - 7.2.1. Anatomy
  - 7.2.2. Diagnosis
  - 7.2.3. Pre-operative Considerations
  - 7.2.4. Surgical Techniques
  - 7.2.5. Post-operative Considerations
- 7.3. Brachycephalic Syndrome (I)
  - 7.3.1. Description
  - 7.3.2. Syndrome Components
  - 7.3.3. Anatomy and Physiopathology
  - 7.3.4. Diagnosis
- 7.4. Brachycephalic Syndrome (II)
  - 7.4.1. Pre-operative Considerations
  - 7.4.2. Surgical Techniques
  - 7.4.3. Post-operative Considerations
- 7.5. Tracheal Collapse
  - 7.5.1. Anatomy
  - 7.5.2. Diagnosis
  - 7.5.3. Medical Management
  - 7.5.4. Surgical Treatment
- 7.6. Ears (I)
  - 7.6.1. Anatomy
  - 7.6.2. Techniques
    - 7.6.2.1. Technique for Treating Otohematoma
    - 7.6.2.2. Aurectomy
    - 7.6.2.3. External Auditory Canal Ablation with Trephination of the Bulla
    - 7.6.2.4. Ventral Osteotomy of the Tympanic Bulla

- 7.7. Ears (II)
  - 7.7.1. Diseases
    - 7.7.1.1. Otohematomas
    - 7.7.1.2. External Auricular Pavilion Tumors
    - 7.7.1.3. Terminal Otitis
    - 7.7.1.4. Nasopharyngeal Polyps
- 7.8. Oral and Nasal Cavity (I)
  - 7.8.1. Anatomy
  - 7.8.2. Techniques
    - 7.8.2.1. Maxillectomy
    - 7.8.2.2. Mandibulectomy
    - 7.8.2.3. Techniques for Oral Cavity Reconstruction
    - 7.8.2.4. Rhinotomy
- 7.9. Oral and Nasal Cavity (II)
  - 7.9.1. Diseases
    - 7.9.1.1. Oral and Lip Tumors
    - 7.9.1.2. Nasal Cavity Tumors
    - 7.9.1.3. Aspergillosis
    - 7.9.1.4. Cleft Palate
    - 7.9.1.5. Oronasal Fistulas
- 7.10. Other Head and Neck Diseases
  - 7.10.1. Nasopharyngeal Stenosis
  - 7.10.2. Laryngeal Tumors
  - 7.10.3. Tracheal Tumors
  - 7.10.4. Cricopharyngeal Achalasia

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# Module 8. Thoracic Cavity Surgery 8.1. Pleural Cavity Surgery (I) 8.1.1. Basic Principles and Anatomy 8.1.2. Pleural Effusions 8.1.2.1. Pleural Drainage Techniques Pleural Cavity Surgery (II) 8.2.1. Clinical Pathologies 8.2.1.1. Trauma 8.2.1.2. Pneumothorax 8.2.1.3. Chylothorax 8.2.1.3.1. Thoracic Duct Ligation 8.2.1.3.2. Cisterna Chyli Ablation 8.2.1.4. Pyothorax 8.2.1.5. Hemothorax 8.2.1.6. Malignant Pleural Effusion 8.2.1.7. Benign Cysts 8.2.1.8. Neoplasty 8.3. Rib Wall Surgery 8.3.1. Basic Principles and Anatomy 8.3.2. Clinical Pathologies 8.3.2.1. Floating Thorax 8.3.2.2. Pectus Excavatum 8.3.3. Neoplasty 8.4. Diagnostic Methods 8.4.1. Laboratory Tests 8.4.2. Imaging Tests Thorax Surgery Approaches 8.5.1. Instruments and Material 8.5.2. Types of Thorax Approach 8.5.2.1. Intercostal Thoracotomy 8.5.2.2. Thoracotomy for Costal Resection 8.5.2.3. Median Sternotomy 8.5.2.4. Transsternal Thoracotomy

8.5.2.5. Transdiaphragmatic Thoracotomy

Restoration of Negative Pressure			
Lung Surgery			
Basic Principles and Anatomy			
Surgical Techniques			
8.6.2.1. Partial Lobectomy			
8.6.2.2. Total Lobectomy			
8.6.2.3. Pneumonectomy			
Clinical Pathologies			
8.6.3.1. Trauma			
8.6.3.2. Pulmonary Abscess			
8.6.3.3. Pulmonary Torsion			
8.6.3.4. Neoplasty			
Gurgery (I)			
Basic Principles and Anatomy			
Surgical Techniques			
8.7.2.1. Pericardiocentesis			
8.7.2.2. Partial Pericardiectomy			
8.7.2.3. Partial Auriculectomy			
8.7.2.4. Pacemaker Insertion			
Gurgery (II)			
Clinical Pathologies			
8.8.1.1. Septal Defects			
8.8.1.2. Pulmonary Stenosis			
8.8.1.3. Subaortic Stenosis			
8.8.1.4. Tetralogy of Fallot			
8.8.1.5. Pericardial Effusion			
8.8.1.6. Neoplasty			
ar Anomolies and Vascular Rings			
Basic Principles and Anatomy			
Clinical Pathologies			
8.9.2.1. Persistent Ductus Arteriosus			
8.9.2.2. Persistent Right Aortic Arch			

8.6.

8.7.

8.8.

8.9.

- 8.10. Thoracic Esophageal Surgery
  - 8.10.1. Basic Principles and Anatomy
  - 8.10.2. Surgical Techniques
    - 8.10.2.1. Esophagotomy
    - 8.10.2.2. Esophagectomy
  - 8.10.3. Clinical Pathologies
    - 8.10.3.1. Foreign Bodies
    - 8.10.3.2. Idiopathic Megaesophagus
    - 8.10.3.3. Neoplasty

**Module 9.** Amputations: Thoracic Limb, Pelvic Limb, Caudectomy, Phalanges. Umbilical, Inguinal, Scrotal, Traumatic, Perineal, Diagrammatic and Peritoneopericardial Diaphragmatic Hernias

- 9.1. Thoracic Limb Amputation
  - 9.1.1. Indications
  - 9.1.2. Pre-operative Considerations. Patient and owner selection and aesthetic considerations
  - 9.1.3. Surgical Techniques
    - 9.1.3.1. With Scapulectomy
    - 9.1.3.2. Humeral Osteotomy
  - 9.1.4. Post-operative Considerations
  - 9.1.5. Short and Long-Term Complications
- 9.2. Pelvic Limb Amputation
  - 9.2.1. Indications
  - 9.2.2. Patient Selection. Esthetic Considerations
  - 9.2.3. Pre-operative Considerations
  - 9.2.4. Surgical Techniques
    - 9.2.4.1. Coxofemoral Disarticulation
    - 9.2.4.2. Femoral and Tibial Osteotomy
    - 9.2.4.3. Hemipelvectomy
  - 9.2.5. Post-operative Considerations

- 9.2.6. Complications
- 9.3. Diseases
  - 9.3.1. Osteosarcoma
  - 9.3.2. Other Bone Tumors
  - 9.3.3. Trauma, Old Articular Fractures, Osteomyelitis
- 9.4. Other Amputations
  - 9.4.1. Phalange Amputation
  - 9.4.2. Caudectomy
  - 9.4.3. Tumors that Affect the Phalanges
- 9.5. Umbilical, Inquinal, Scrotal and Traumatic Hernias
  - 9.5.1. Umbilical Hernia
  - 9.5.2. Inguinal Hernia
  - 9.5.3. Scrotal Hernia
  - 9.5.4. Traumatic Hernias
- 9.6. Traumatic Hernias
  - 9.6.1. Polytraumatized Patient Care
  - 9.6.2. Pre-operative Considerations
  - 9.6.3. Surgical Techniques
  - 9.6.4. Post-operative Considerations
- 9.7. Perineal Hernia (I)
  - 9.7.1. Anatomy
  - 9.7.2. Pathophysiology
  - 9.7.3. Types of Perineal Hernias
  - 9.7.4. Diagnosis
- 9.8. Perineal Hernia (II)
  - 9.8.1. Preoperative Considerations
  - 9.8.2. Surgical Techniques
  - 9.8.3. Postoperative Considerations
  - 9.8.4. Complications

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9.9.	Diaphrac	ımatic H	ernia

9.9.1. Diaphragmatic Hernia

9.9.1.1. Anatomy

9.9.1.2. Diagnosis

9.9.1.3. Preoperative Considerations

9.9.1.4. Surgical Techniques

9.9.1.5. Postoperative Considerations

### 9.10. Peritoneopericardial Diaphragmatic Hernia

9.10.1. Anatomy

9.10.2. Diagnosis

9.10.3. Preoperative Considerations

9.10.4. Surgical Techniques

9.10.5. Postoperative Considerations

# **Module 10.** Minimally Invasive Surgery. Laparoscopy. Thoracoscopy. Interventional Radiology

- 10.1. History and Advantages/ Disadvantages of Minimally Invasive Surgery
  - 10.1.1. History of Laparoscopy and Thoracoscopy
  - 10.1.2. Advantages and Disadvantages
  - 10.1.3. New Perspectives
- 10.2. Equipment and Instruments
  - 10.2.1. Equipment
  - 10.2.2. Instruments
- 10.3. Laparoscopy Techniques. Training Program
  - 10.3.1. Laparoscopy Sutures

10.3.1.1. Conventional Sutures

10.3.1.2. Mechanical Sutures

10.3.2. Laparoscopy Training Program

### 10.4. Laparoscopy (I). Approaches

- 10.4.1. Techniques for Performing Pneumoperitoneum Surgery
- 10.4.2. Port Placement
- 10.4.3. Ergonomics





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10.5.	Laparosco	p۱	(II). Most	Common	Techniques
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- 10.5.1. Ovariectomy
- 10.5.2. Abdominal Cryptorchidism
- 10.5.3. Preventive Gastropexy
- 10.5.4. Hepatic biopsy

# 10.6. Laparoscopy (III). Less Common Techniques

- 10.6.1. Cholecystectomy
- 10.6.2. Assisted Cystoscopy
- 10.6.3. Digestive Examination
- 10.6.4. Splenectomy
- 10.6.5. Biopsy
  - 10.6.5.1. Renal
  - 10.6.5.2. Pancreatic
  - 10.6.5.3. Lymph Nodes

# 10.7. Thoracoscopy (I). Approaches. Specific Materials

- 10.7.1. Specific Materials
- 10.7.2. Most Common Approaches. Port Placement
- 10.8. Thoracoscopy (II). Most Common Techniques. Pericardiectomy
  - 10.8.1. Indications and Techniques for Pericardiectomy
  - 10.8.2. Pericardial Examination. Subtotal Pericardiectomy Versus Pericardial Window
- 10.9. Thoracoscopy (II). Less Common Techniques
  - 10.9.1. Pulmonary Biopsy
  - 10.9.2. Pulmonary Lobectomy
  - 10.9.3. Chylothorax
  - 10.9.4. Vascular Rings
- 10.10. Interventional Radiology
  - 10.10.1. Equipment
  - 10.10.2. More Common Techniques





# tech 46 | Clinical Internship

Throughout this program in Small Animal Veterinary Surgery, students will develop a practical stay in a prestigious center. This program will last 3 weeks and will be developed in 8-hour days from Monday to Friday. The entire educational process will have the personalized guidance of an assistant tutor who will be in charge of supervising the students' activity with a view to the intervention of real cases. At the same time, students will be integrated into a team of veterinary professionals of excellence, who will facilitate the learning of the most innovative and non-invasive surgical procedures for small animals.

In this training proposal, of a completely practical nature, the activities are aimed at the development and improvement of the competencies necessary for the provision of veterinary care in small animals that require a high level of qualification, and which are oriented to the specific training for the exercise of the professional activity.

It is, without a doubt, an opportunity to learn by working in a first class veterinary facility. In addition, it is a new way of understanding and integrating surgical interventions on animals, acquiring the essential skills that will make the student shine in their future work scenarios.

Practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of Veterinary Surgery (learning to be and learning to relate).

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





# Clinical Internship | 47 tech

Module	Practical Activity			
Updated Surgical	Take biopsies and apply gastrointestinal surgery variants such as Enterotomy, Enterectomy and Enteroplication			
Techniques for Small	Perform variants of genitourinary surgeries such as Nephrotomy, Pyelolithotomy, Nephrectomy, Nephropexy, Nephrostomy			
Animal Veterinary Surgery	Apply cytoreductive and palliative surgeries for veterinary oncologic tumors			
	Compile and develop available flap techniques for skin reconstruction in animals			
Up-to-date surgical	Use of monopolar, bipolar and sealant electrosurgery in small animals			
technologies for small animal veterinary	Implement the application of lasers for specific surgical procedures affecting small animals			
surgery	Develop different variants of laparoscopy for animals, including cholecystectomy, assisted cystoscopy, splenectomy, among others			
Updated trends for the diagnosis of	Apply exploratory laparotomy for gastrointestinal problems			
pathologies in small animals	Integrating radiodiagnostics to determine the cause of various pathologies in Small Animals			
Contemporary control activities to prevent	Practice monitoring and post-surgical care related to the nutrition of the veterinary patient, renal evolution and pain management			
the development of postoperative	Implement feeding tubes, thoracostomy tubes and other recovery techniques			
infections in small animals	Apply principles of asepsis and sterilization suitable for animal health in the operating room			



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"

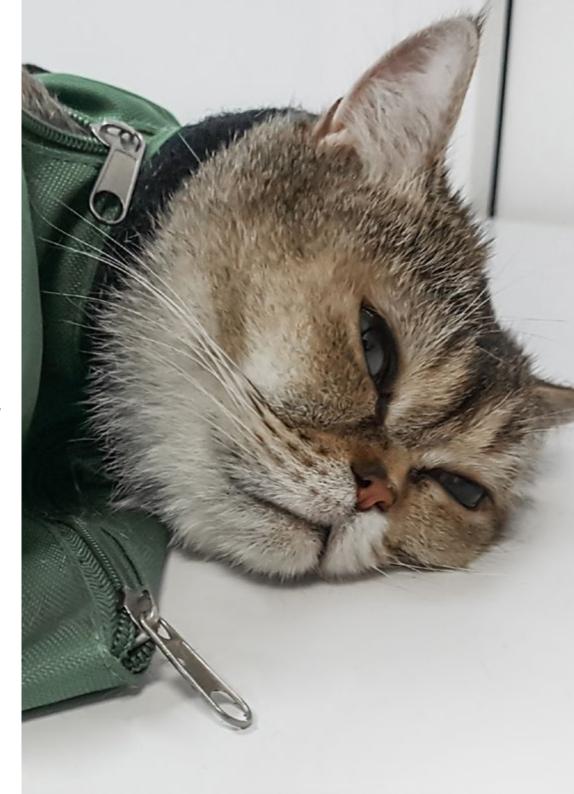


# **Civil Liability Insurance**

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 achievingthis is the response to any incident that may occur during the entire teaching-learning process.

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

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



# **General Conditions of the Internship Program**

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

- 1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.
- **2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.
- 3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

- **4. CERTIFICATION**: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.
- **5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.
- **6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed
- 7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

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





# tech 52 | 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:



### **Hospital Veterinario Retiro**

Country City
Spain Madrid

Address: Av. de Menéndez Pelayo, 9

Veterinary Hospital specialized in Nutrition and with 24 hour emergency service

#### Related internship programs:

- Veterinary Traumatology and Orthopedic Surgery - Veterinary Emergencies in Small Animals



#### Centro Veterinario San Antón

Country City
Spain Madrid

Address: Avenida de la Libertad, 93. Local 14-16, 28770 Colmenar Viejo

Veterinary Center offering personalized attention to different animal species.

#### Related internship programs:

Veterinary Anesthesiology
- Veterinary Cardiology in Small Animals



#### Pharmacodynamics.

#### Veterinarea Hospital Veterinario Villalba

Country City
Spain Madrid

Address: Avenida de Reina Victoria nº 9 28430 Alpedrete, Madrid

Clinical Symptoms Veterinarian Specialised in exotic animals

#### Related internship programs:

-Veterinary Anesthesiology -Veterinary Emergencies in Small Animals



### Centro Quirúrgico Veterinario Algabeño

Country City
Spain Madrid

Address: Calle de José Rizal, 57, Madrid

Veterinary Center specialized in reproductive, oral, digestive, ophthalmic, otic, plastic and reconstructive, urological and urinary tract surgery.

#### Related internship programs:

-Veterinary Anesthesiology
- Veterinary Surgery in Small Animals



#### Mastervet

Country City
Spain Madrid

Address: Calle de Nuria, 57 Madrid

Veterinary center specialized in the training of professionals based on the latest techniques available.

#### Related internship programs:

- Exotic Animal Medicine and Surgery - Veterinary Surgery in Small Animals



#### Centro Veterinario Fuente del Moral

Country City Spain Madrid

> Address: Avda. de la Salud, 12, 28411 Moralzarzal

The veterinary center specializing in the care of dogs and cats

#### Related internship programs:

-Veterinary Anesthesiology - Small Animal Ultrasonography



### Madrid Este Hospital Veterinario

Country City
Spain Madrid

Address: Paseo de la Democracia, 10

Veterinary center offering 24-hour care with surgery, ICU, hospitalization and diagnostic imaging services. and diagnostic imaging services.

#### Related internship programs:

Veterinary Anesthesiology - Veterinary Surgery in Small Animals



### Hospital Artemisa Cañaveral

Country City
Spain Madrid

Address: Francisco Grande Covian, local 1, 28052 Madrid

Veterinary Hospital specialized in General and care of 24 hour emergency service

#### Related internship programs:

Professional Master's Degree in Veterinary Surgery in Small Animals

# Where Can I Do the Clinical Internship? | 53





#### Supervet

Country City Spain Madrid

Address: Calle de Fermín Caballero, 56, 28034 posterior, Madrid

Center specialized in alternative therapies such as homeopathy, acupuncture, physiotherapy, laser or magnetotherapy.

#### Related internship programs:

- Infectious Diseases in Small Animals
- Veterinary Radiology in Small Animals



#### Centro Veterinario La Caleta MiVet

Country Spain Malaga

Address: Av. de Andalucía, 126, 29751 Caleta de Vélez, Málaga

Centro Veterinario La Caleta is a high level center specialized in general and integral care.

#### Related internship programs:

- Dermatology in Small Animals - Veterinary Emergencies in Small Animals



### Hospital Veterinario Málaga Este MiVet

City Country Spain Malaga

Address: Avenida Infanta Elena, 29740 Torre del Mar, Málaga

The only veterinary hospital in the East zone of Malaga with 24 hours emergency attention

#### Related internship programs:

- Management and Administration of Veterinary Centers - Veterinary Emergencies in Small Animals



### **Hospital Veterinario** La Fortuna MiVet

Country City Madrid Spain

> Address: C. de San Pedro, 29, 28917 Leganés, Madrid

Clinic specializing in the comprehensive care of the sick animal and in clinical problems difficult to diagnose

#### Related internship programs:

- Veterinary Surgery in Small Animals
- Veterinary Emergencies in Small Animals



#### **Hospital Veterinario** MiVet Maresme

Citv Country Spain Barcelona

Address: Camí de la Geganta, 113, 08302 Mataró, Barcelona

24-hour care hospital in Mataró

#### Related internship programs:

- Small Animal Ultrasonography - Veterinary Emergencies in Small Animals



#### Animalia BCN MiVet

Country City Barcelona Spain

Address: Carrer de la Creu Coberta, 130, Barcelona

Veterinary Hospital in Barcelona with 24h attention 365 days a year

#### Related internship programs:

- Dermatology in Small Animals -Physiotherapeutic and Rehabilitation of Small Animals



#### Veterinario Sant Morí MiVet

Country City Spain Barcelona

Address: Av. d'Alfons XIII, 571, 08918 Badalona, Barcelona

Veterinary Hospital in Badalona Barcelona with 24h attention 365 days a year

#### Related internship programs:

-Veterinary Anesthesiology - Small Animal Ultrasonography



### **Hospital Veterinario** MiVet Faycan Catarroja

Country City Valencia Spain

Address: Carrer Charco, 15, 46470 Catarroja, Valencia

Comprehensive animal care clinic with 24-hour emergency and hospitalization service.

#### Related internship programs:

- Veterinary Surgery in Small Animals

# tech 54 | Where Can I Do the Clinical Internship?



### Hospitaria Elche MiVet

Country City
Spain Alicante

Address: Avda. Libertad, 144 03205 Elche (Alicante)

Veterinary Sector benchmark clinical with more than 32 years of experience. They offer services 24 hours a day, 365 days a year

#### Related internship programs:

- Veterinary Surgery in Small Animals - Veterinary Emergencies in Small Animals



#### Centro Veterinario MiVet Onteniente

Country City
Spain Valencia

Address: Av. d'Albaida, 12, 46870 Ontinyent, Valencia

Veterinary Hospital with state-of-the-art facilities facilities and with specialized attention 24 hours a day.

#### Related internship programs:

- Veterinary Traumatology and Orthopedic Surgery - Small Animal Ultrasonography



# Centro Veterinario MiVet Faucan Cartagena

Country City
Spain Murcia

Address: Av. Juan Carlos I, 5, 30310 Cartagena, Murcia

Veterinary Hospital with state-of-the-art facilities facilities and with specialized attention 24 hours a day.

#### Related internship programs:

- Veterinary Surgery in Small Animals
- Veterinary Oncology in Small Animals



#### Hospital Veterinario Miramadrid MiVet

Country City
Spain Madrid

Address: 63 C. Real, Paracuellos de Jarama, Madrid

Veterinary hospital with specialized care 24 hours a day and 7 days a week

#### Related internship programs:

- Veterinary Traumatology and Orthopedic Surgery - Veterinary Surgery in Small Animals



#### Hospital Veterinario Mon Can MiVet

Country City
Spain Madrid

Address: Av. de Montecarmelo, 55, 28049 Madrid

Veterinary Hospital specializing in the comprehensive care of the sick animal and in clinical problems difficult to diagnose

#### Related internship programs:

- Veterinary Traumatology and Orthopedic Surgery - Veterinary Emergencies in Small Animals



### Hospital Veterinario Avenida MiVet

Country City
Spain Vizcaya

Address: Sabino Arana Etorbidea, 18 48013 Bilbao, Bizkaia

General veterinary clinic with 24-hour service 24 hours a day

#### Related internship programs:

-Veterinary Anesthesiology - Veterinary Emergencies in Small Animals



### Centro Veterinario Del Sol MiVet

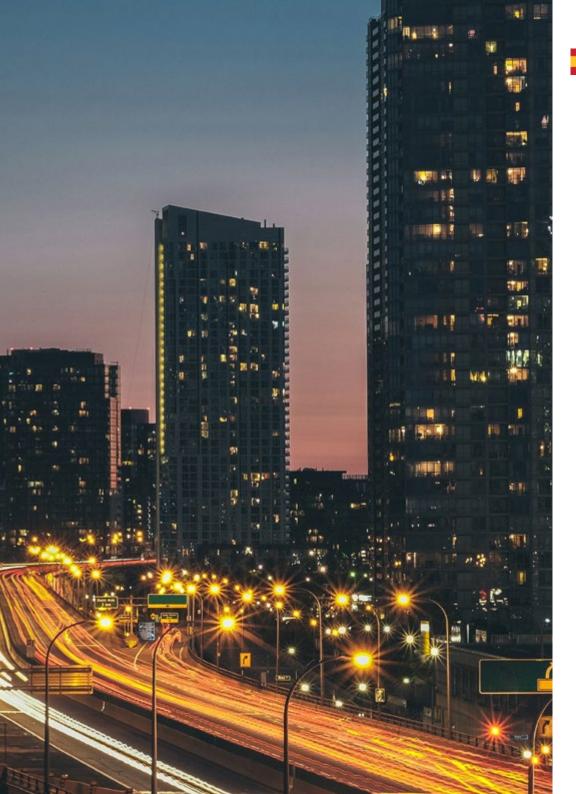
Country City
Spain La Coruña

Address: Avenida de la Habana 22, 15011 -La Coruña

Veterinary Centers specialized in Integrals and care of 24 hour emergency service

#### Related internship programs:

-Veterinary Surgery in Small Animals



# Where Can I Do the Clinical Internship? | 55 tech



### Clínica Veterinaria la Navata

Country City
Spain Madrid

Address: Centro Comercial Mercadona, Av. de las Víctimas del Terrorismo, 1, 28420 Galapagar, Madrid

Veterinary center with specialized attention to nets

#### Related internship programs:

- Veterinary Surgery in Small Animals



### Centro Veterinario Animal-Vetx El Saladillo

Country City
Spain Huelva

Address: Cam. del Saladillo, 3, 21007 Huelva

AnimalVetx El Saladillo Veterinary Center in Huelva is a complete and innovative veterinary center since 2014.

#### Related internship programs:

- Veterinary Surgery in Small Animals - Small Animal Ultrasonography

# tech 56 | Where Can I Do the Clinical Internship?



#### Centro Veterinario Puebla

Country Puebla Mexico

Address: Calzada zavaleta 115 Local 1 Santa Cruz Buenavista C.P 72154

Veterinary Centers a generalist to care of 24 hour emergency service

#### Related internship programs:

-Veterinary Anesthesiology - Veterinary Cardiology in Small Animals



### **Hospital Veterinario Animalitos**

Country Baja California Sur Mexico

Address: Bulevar pino pallas #244 Villas del Encanto La Paz B.C.S C.P 23085

> General veterinary center and high specialties

#### Related internship programs:

- Veterinary Surgery in Small Animals - Dermatology in Small Animals



### Hospital Veterinario Paraíso Animal

Country City Mexico Puebla

Address: Antiguo Camino Real a Cholula 99-B Villas de Zabaleta C.P 72176 Heroica Puebla de Zaragoza. Puebla México

> High level Veterinary Hospital with a wide range of services in the different specialties

#### Related internship programs:

- Veterinary Surgery in Small Animals -Veterinary Anesthesiology



### Meds for pets

City Country Mexico Nuevo León

Address: Av. Venustiano Carranza 429 Centro C.P 64000

Advanced and Comprehensive Care Veterinary Hospital

#### Related internship programs:

- Veterinary Cardiology in Small Animals - Small Animal Ultrasonography



### Pets, life & Care

Country Mexico Nuevo León

Address: Av. Cabezada 10701-L12 Barrio acero C.P 64102

Comprehensive Care Veterinary Hospital

#### Related internship programs:

- Small Animal Ultrasonography - Veterinary Emergencies in Small Animals



#### Clínica Veterinaria Luifran

Country Mexico Mexico City

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

Veterinary assistance center specialized in dogs and cats.

#### Related internship programs:

-Veterinary Anesthesiology - Infectious Diseases in Small Animals



# Dog City Pet Hospital

Country City Mexico Mexico City

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

> The veterinary center specializing in the care of dogs

#### Related internship programs:

-Veterinary Anesthesiology - Veterinary Emergencies in Small Animals



#### Veterinaria Palo Verde

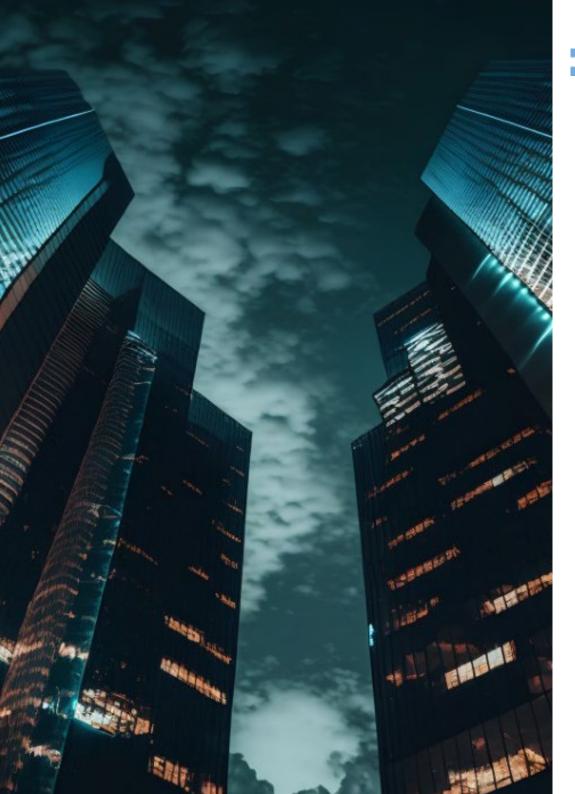
Country Mexico City Mexico

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

Clinical Veterinary with more than 30 years of experience in care to

#### Related internship programs:

- Small Animal Internal Medicine -Animal Welfare



# Where Can I Do the Clinical Internship? | 57 tech



# **Hospital Veterinario**

Country City
Argentina Buenos Aires

Address: Caveri 1343, Cruce Castelar, Moreno

Emergency and specialty veterinary hospital for small domestic and exotic animals.

#### Related internship programs:

- Veterinary Surgery in Small Animals
- Veterinary Emergencies in Small Animals



# Clínica Veterinaria Don Bosco

Country City
Argentina Buenos Aires

Address: Conquista de Desierto 662, Ezeiza, Bs. As

Clinic of general and specific specialties of Veterinary

Medicine

#### Related internship programs:

-Veterinary Anesthesiology - Veterinary Emergencies in Small Animals



# tech 58 | Where Can I Do the Clinical Internship?



# Veterinaria UCLE

City Country Cordoba Argentina

Address: Maestro Vidal 1600

Veterinary center specialized in hospitalization and emergencies

#### Related internship programs:

- Veterinary Surgery in Small Animals



# Veterinaria SUMMA

Country City Argentina Cordoba

Address: José Roque Funes 1660 cerro de las rosas - Córdoba Capital

> High complexity veterinary center and product distribution

#### Related internship programs:

- Management and Administration of Veterinary Centers - Veterinary Surgery in Small Animals





# Where Can I Do the Clinical Internship? | 59 tech





Take advantage of this opportunity to surround yourself with expert professionals and learn from their work methodology"



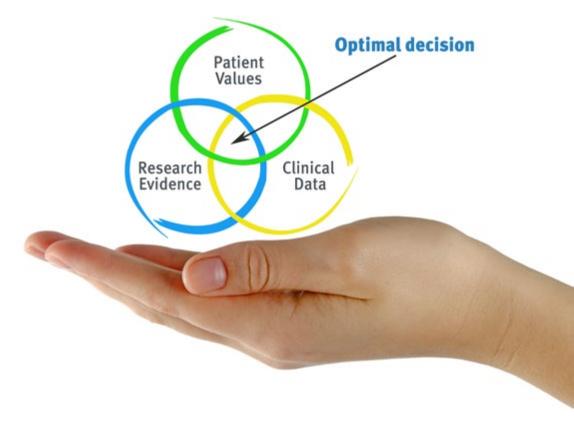


# tech 62 | Methodology

### 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.





# **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 | 65 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 66 | 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.

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



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.

and direct way to achieve the highest degree of understanding.

# Classes



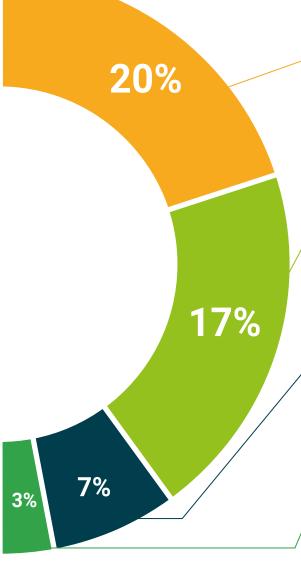
There is scientific evidence suggesting that observing third-party experts can be useful.

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.







# tech 70 | Certificate

This program will allow you to obtain your **Hybrid Professional Master's Degree diploma in Veterinary Surgery in Small Animals** 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.

Mr./Ms. \_\_\_\_\_\_\_ with identification document \_\_\_\_\_\_ has successfully passed and obtained the title of:

Hybrid Professional Master's Degree in Veterinary Surgery in Small Animals

This is a program of 1,500 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra Ia Vella, on the 28th of February of 2024

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 Surgery in Small Animals

Course Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

Recognition: 60 + 5 ECTS Credits



<sup>\*</sup>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.

health confidence people

health information tutors

education information teaching
guarantee accreditation teaching
institutions technology learning



# Hybrid Professional Master's Degree

Veterinary Surgery in Small Animals

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 créditos ECTS

