

# Hybrid Professional Master's Degree Veterinary Anesthesiology





## Hybrid Professional Master's Degree Veterinary Anesthesiology

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

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

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# 01

# Introduction

Veterinary Anesthesiology is a medical field that requires qualified professionals, being a highly demanded position by veterinary centers of all kinds. It is, therefore, an essential and vital specialization for the patient's well-being, which requires expert personnel who know how to proceed in each case. Therefore, TECH has developed this program, together with experts in the field of Veterinary Anesthesiology, so that the student can perfect the necessary skills to act with rigor in their medical practice, from theoretical knowledge to practice it in 120 hours of stay in a veterinary center reference on the international scene.





A close-up, soft-focus photograph of a light-colored dog's face, showing its eye and nose. The image is partially obscured by a diagonal teal graphic element.

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*TECH offers you a unique opportunity in the veterinary field, with which you will position yourself professionally thanks to the quality of its contents and the practical training in a prestigious veterinary clinic"*

Small Animal veterinary anesthesia has undergone a great development in recent years. The techniques used today are quite different from those of yesteryear, providing maximum rigor and inherent safety in each intervention. In this way, clinical care for animals has advanced considerably in favor of their welfare, providing shorter hospital stays with minimal pain, reducing the recovery time of patients and achieving better results in general terms. All this thanks to the implementation and development of increasingly specific and specialized strategies and tools based on the physiological needs of the patient.

And in order for the specialist to get up to date on all these new developments, TECH and its team of experts in the field have developed a complete program that is perfect for this purpose. This is the Hybrid Professional Master's Degree in Veterinary Anesthesiology, whose objective is to teach all aspects of the intervention in Veterinary Anesthesiology, so that the agenda starts from the phases prior to the application of anesthesia on the patient, such as knowledge of the equipment, previous handling of the patient, medication and study of drug interactions.

In turn, the study of physiology is another important aspect of anesthesia, focusing on the involvement of the cardiocirculatory, respiratory, nervous system and endocrine systems. This program provides essential knowledge to understand how anesthesia works and its consequences on the patient. To that end, we offer 1,500 hours of the best theoretical, and additional content, which will be presented in a convenient and flexible 100% online format.

However, the highlight of the program comes once this first period is over, since TECH will provide graduates with a 120-hour internship in a reference clinical center. In this way, they will be able to take the updated knowledge to real practice, participating in a leading role in the management of the different animals that come to the veterinary practice. In addition, during the 3 weeks, you will have the support of an expert tutor in the field, who will ensure that all the requirements for which this very complete and comprehensive multidisciplinary program was designed are met.

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

- ◆ Development of more than 100 clinical cases presented by experts in Veterinary Anesthesiology
- ◆ Its graphic, schematic and eminently practical contents, with which they are conceived, gather scientific and assistance information on those medical disciplines that are indispensable for the professional practice
- ◆ New developments in animal anesthesiology presented through various case studies
- ◆ Practical exercises where the self-assessment process can be carried out to improve the updating process
- ◆ Special emphasis on innovative methodologies in Veterinary Anaesthesiology
- ◆ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection
- ◆ Furthermore, you will be able to carry out a clinical internship in one of the best veterinary centers in the world



*In this Hybrid Professional Master's Degree you will deal with a key aspect of anesthesiology: detecting, preventing and treating the main complications during the perioperative period"*

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*In the Virtual Campus you will find dozens of hours of multimedia resources to expand each section of the syllabus in a personalized way”*

In this proposal for a Hybrid Professional Master's Degree, of a professionalizing nature and blended learning modality, the program is aimed at updating veterinary care professionals who perform their functions in operating room 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 will allow decision making in patient management.

Thanks to their multimedia content developed with the latest educational technology, they will allow the clinical animal care professional to obtain situated and contextual learning, i.e. a simulated environment that will provide immersive learning programmed to train in real situations. The design of this program focuses on Problem Based Learning, by means of which the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will learn firsthand the latest features of each anesthetic time and the control points to take into account when increasing patient safety.*

*You will acquire a logical understanding of the physiological implications of untreated pain, which will enable you to hone your skills in the assessment of the whole patient.*





02

# Why Study this Hybrid Professional Master's Degree?

Veterinary practice, especially in the surgical area, has undergone countless changes in recent years, which have resulted in more specialized, complete, safe and comfortable care for patients. Among them, the Veterinary Anesthesiology sector has been one of those that has benefited the most, including efficient and effective strategies in its action guidelines. Based on this, TECH has developed a complete theoretical-practical program that will give veterinarians the opportunity to update their practice according to the latest developments in this science through a multidisciplinary experience that will mark a before and after in their professional career.



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*A program designed to bring you up to date on the latest developments related to the physiology and pharmacology of anesthesia through an unparalleled theoretical and practical experience"*



### 1. Updating from the Latest Technology Available

TECH is characterized by the use of the most sophisticated and cutting-edge academic technology in order to offer the best experiences. For this reason, when selecting the centers where the practical period will be carried out, special emphasis is placed on ensuring that they also have the most sophisticated and avant-garde clinical equipment, in order to continue along the line of innovation and to guarantee a highly innovative experience for the graduate.

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

The internship tutor assigned to the graduate will ensure that all the objectives for which this experience was designed are met. In addition, he will be able to use his experience to update himself on the most innovative and effective anesthesiology strategies, using his experience to implement the best techniques for each animal he treats.

### 3. Entering First-Class Clinical Environments

The participation of the graduate in this Hybrid Professional Master's Degree will give them the possibility of access to numerous cases with different casuistry, in which they will have to use all their knowledge to solve them in a satisfactory way for the health of the animal that is being intervened. In this way, TECH guarantees that you will be able to perfect your skills in the effective management of different patients, applying the necessary clinical strategies for each case.







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

The program consists of an initial period of 1,500 hours of theoretical and additional content, which has been developed exclusively by the teaching team for this Hybrid Professional Master's Degree. Afterwards, the graduate will be able to use all the updated knowledge in a practical internship of 120 hours, which will serve to consolidate this knowledge and to perfect their competencies in only 12 months of multidisciplinary academic experience.

#### 5. Expanding the Boundaries of Knowledge

TECH has different locations around the world, in order to provide access to all people to the best academic experiences, as is the case of this Hybrid Professional Master's Degree. Therefore, graduates who are interested in updating their practice may do so in various veterinary centers around the world, giving rise to an update based on the clinical strategies that are being developed in different parts of the world.



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

# 03

## Objectives

TECH is aware that veterinary science, as in the human medical field, is advancing by leaps and bounds, making it difficult, in most cases, to effectively update the knowledge of its professionals. Therefore, the objective of this Hybrid Professional Master's Degree is precisely to provide graduates with the most complete and exhaustive information related to animal anesthesiology, also providing them with the possibility of taking a practical stay in a reference center in order to fix the concepts previously updated in theoretical period and 100% online.







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*In this TECH program you will understand the novelties related to the basics of locoregional anesthesia and analgesia with practical cases and the possibility to apply them during your stay"*





## General Objective

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- The objective of this Hybrid Professional Master's Degree in Veterinary Anesthesiology is to promote the student's professional career so that they can broaden their field of work by keeping up to date with the latest developments in animal anesthesia techniques, an essential task in the sector. Therefore, you will deepen in this area of veterinary medicine, knowing how to correctly identify which medication and what dosage to use depending on the case, as well as the control of the entire procedure until the animal is discharged, being aware of the risks that it may entail. However, this program prepares you in depth and trains you through an internship in a veterinary hospital with a quality medical team and state-of-the-art equipment



*A program like this will propel you towards greater job placement in the veterinary field, which demands qualified specialists, specialized in anesthetic technique"*







## Specific Objectives

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### Module 1. Introduction. Anesthetic Equipment

- ◆ Know the origins of the specialty in human medicine and its incorporation into the veterinary field
- ◆ Know the guidelines and importance of perioperative management of feeding of the surgical patient and fasting of solids and liquids
- ◆ Know and understand the operation of anesthetic machines and mechanical ventilators

### Module 2. Physiology and Pharmacology Related to Anesthesia

- ◆ Know and understand the ventilatory, cardiovascular, digestive, renal, endocrine, nervous (both central and peripheral) physiology and their age-related modifications
- ◆ Know and understand the general pharmacological processes and those directly related to each of the pharmacological families related to anesthesia (sedatives, analgesics, inducers, neuromuscular relaxants,)

### Module 3. Anesthetic Timing

- ◆ Practical knowledge of the different phases of anesthesia from preoperative assessment to patient awakening and the main postoperative care
- ◆ Know the characteristics of premedication, induction, maintenance and education to minimize anesthetic risks as much as possible
- ◆ Understand in a practical way the differences during the maintenance phase in the case of inhalation and intravenous anesthesia
- ◆ Know the characteristics and indications of perioperative fluid therapy and the administration of blood products



#### Module 4. Analgesia

- ◆ Understand the different nociceptive pathways and the phenomena of central and peripheral sensitization
- ◆ Understand the action of each family of analgesics and their use in both acute and chronic pain
- ◆ Know the importance and different methods of acute and chronic pain assessment

#### Module 5. Locoregional Anesthesia/Analgesia

- ◆ Understand the basics of locoregional anesthesia and analgesia with the different technical methods used
- ◆ Know the main complications associated with locoregional techniques and their treatment
- ◆ Understand basic pharmacology of local anesthetics and their adjuvants
- ◆ Understand the different Blockages to be performed on the head, trunk and limbs
- ◆ Include locoregional techniques explained in specific clinical cases , within multimodal analgesia protocols

#### Module 6. Monitoring

- ◆ Understand in detail how to make the most of basic patient monitoring based on examination, observation and palpation
- ◆ Understand the most important parameters to monitor from a cardiovascular, ventilatory and neurological point of view
- ◆ Understand and assess the different methods of monitoring patient volemia







### **Module 7. Anesthetic Complications**

- ◆ Assist in the detection, prevention and treatment of complications related to perioperative management (regurgitation, hypothermia)
- ◆ Assist in the detection, prevention and treatment of cardiovascular, neurological and ventilatory complications associated with anesthesia
- ◆ Assist in the detection and treatment of cardiorespiratory arrest and patient management after resuscitation

### **Module 8. Anesthetic Management in Specific Situations I**

- ◆ Establish and understand the differences in management of specific anesthetic situations and determine mechanisms to anticipate potential problems that may arise during patient management

### **Module 9. Anesthetic Management in Specific Situations II**

- ◆ Establish and understand the differences in the management of specific anesthetic situations and determine the mechanisms to anticipate possible problems that may arise during the management of patients with respiratory or ophthalmologic pathologies, for minimally invasive procedures, with alterations in body condition, extreme body size, brachiocephalic, with thoracic pathology, oncologic or pregnant

### **Module 10. Anesthetic Management in Specific Situations III**

- ◆ See in a practical way the use of different protocols, anesthetic and monitoring techniques applied to specific situations
- ◆ Assess the most appropriate protocol for each patient and understand that there are no predetermined protocols and that individualization is necessary for each procedure and each case

# 04 Skills

After completing this Hybrid Professional Master's Degree in Veterinary Anesthesiology, the professional will achieve high competences in this area that will boost them professionally, as it is a specialty continuously demanded by veterinary clinics and hospitals. Its intensive program will enable you to work in the field related to the most suitable sedation technique for each case, with the security of having experts in the field throughout the course and the Practical Training. In this way, the student will acquire the skills required to carry out a quality praxis.







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*Thanks to this program, you will be able to master all aspects of individual patient anesthesia care with complete proficiency”*





## General Skills

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- ◆ Acquire the necessary knowledge to be able to carry out a previous anesthetic approach
- ◆ Elaborate a specific anesthesia plan for each case
- ◆ Know and know how to use the necessary tools effectively
- ◆ Be familiar with and know how to implement existing protocols
- ◆ Know and know how to develop preoperative
- ◆ Know and know how to develop operative and postoperative management
- ◆ Know and know how to develop postoperative management
- ◆ Master all aspects of anesthetic care for each patient individually
- ◆ Be able to create concrete plans in various specific situations: diseases, intolerances and critical states





## Specific Skills

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- ◆ Know the anesthetic procedure for the surgical process
- ◆ Identify the necessary amounts of anesthetic for different patients
- ◆ Identify the possible consequences of anesthetic delivery
- ◆ Recognize the relevant times for the duration of anesthesia
- ◆ Recognize the use of local and general anesthesia
- ◆ Identify surgeries requiring local anesthesia
- ◆ Identify surgeries requiring general anesthesia



*If you want to be an expert in Veterinary Anesthesiology, this program is for you: the best syllabus, prestigious teachers and a practical training in a rigorous center"*

# 05

# Course Management

The teachers of this Hybrid Professional Master's Degree are professionals from different areas and competences of veterinary medicine, specialized in anesthesiology. They have extensive academic and professional experience in the area, synonymous with TECH's excellence. A team of experts who have poured their knowledge and professional experience in the development of this program for the student to update their skills in the technique of animal anesthesia. In addition, the program is completed with an internship in a veterinary clinic of reference, for the achievement of their academic and work objectives guided by the best professionals.





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*Highly qualified veterinarians in anesthesiology will accompany you throughout the course and give you the tools you need to succeed in this medical field"*

## Management



### Dr. Cabezas Salamanca, Miguel Ángel

- ♦ Head of the Anesthesia, Resuscitation Service and Pain Unit at Puchol Veterinary Hospital
- ♦ Veterinario Especialista en Anestesia y Analgesia en Dolorvet
- ♦ Degree in Veterinary Medicine from the Complutense University of Madrid
- ♦ Accredited by the Association of Spanish Veterinarians Specializing in Small Animals (AVEPA) in the Specialty of Anesthesia and Analgesia
- ♦ Member of: SEAAV, AVA, IASP and IVAPM

## Professors

### Ms. Soto Martín, María

- ♦ Anaesthesiology veterinary specialist
- ♦ Veterinary Specialist in Anesthesia in the Traumatology and Orthopedic Surgery Service at the Sierra Veterinary Hospital. Madrid
- ♦ Veterinary Anesthesia Specialist in Sinergia Veterinaria
- ♦ Veterinaria de Medicina General en Centro Veterinario Fuente del Moral
- ♦ Small Animal General Practice Veterinarian at Centro Veterinario Sierra Norte
- ♦ Contributor to scientific articles published nationally and internationally
- ♦ Degree in Veterinary Medicine from the Complutense University Madrid
- ♦ Training stay in the Department of Anesthesia at Cornell University Hospital for Animals
- ♦ Member of: Spanish Society of Veterinary Anesthesia and Analgesia (SEAAV) and the Anesthesia Group of the Spanish Association of Veterinarians Specializing in Small Animals (AVEPA)





# 06

## Educational Plan

The contents of this program have been developed by the different experts of this Hybrid Professional Master's Degree with the objective that the student acquires each and every one of the necessary skills to update their practice in animal anesthesiology. Its structure and practice plan make this degree the most complete on the market today, as it covers all the relevant knowledge for the veterinarian to develop successfully in a highly demanded specialty, essential for any surgical procedure. In this way, the ten-module structure allows an up-to-date classified by different knowledge related to the anesthesia of animals, from the equipment to be used, the physiological changes of the patient's condition or the control of monitoring.







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*Thanks to this TECH program you will master mechanical ventilation and controlled and assisted ventilatory modes safely in less than 12 months"*

## Module 1. Introduction. Anesthetic Equipment

- 1.1. Brief History of Anesthesia
  - 1.1.1. Important Facts About Human Anesthesiology
  - 1.1.2. Relevant Historical Events in Veterinary Anesthesiology
- 1.2. Optimization of the Surgical Patient. Pre-operative Fasting
  - 1.2.1. Importance of Liquid Fasting
  - 1.2.2. Fasting of Solids, Why and When?
- 1.3. Peri-operative Drugs
  - 1.3.1. Precautions in the Polymedicated Patient. General Aspects
  - 1.3.2. Medication Guidelines for Patients with Cardiac Medication
  - 1.3.3. Medication Guidelines in Diabetic Patients
  - 1.3.4. Medication Guidelines for Patient with Epilepsy
  - 1.3.5. Other Chronic Medications
- 1.4. Anesthetic Machines and Systems
  - 1.4.1. General Aspects
  - 1.4.2. Technical Description and Equipment Care
  - 1.4.3. Anesthetic Circuits
    - 1.4.3.1. No Re inhalation
    - 1.4.3.2. With Re inhalation
- 1.5. Mechanical Ventilators
  - 1.5.1. Introduction
  - 1.5.2. Types of Ventilators
- 1.6. Systems of Administrating Drugs
  - 1.6.1. Systems of Administrating Inhalants
  - 1.6.2. Basic Systems
  - 1.6.3. Volumetric Infusion Pumps
  - 1.6.4. Perfusers
- 1.7. Patient Classification Systems
  - 1.7.1. Introduction
  - 1.7.2. Conduction Heating Systems
  - 1.7.3. Heating Systems with Hot Air







- 1.8. Miscellaneous (Endotracheal Tubes and Other Intubation Systems, Laryngoscope)
  - 1.8.1. Endotracheal Tubes
  - 1.8.2. Supraglottic Devices
  - 1.8.3. Laryngoscopy
- 1.9. Clinical Safety
- 1.10. Contributions of Current Anesthesiology to Veterinary Medicine and Client Expectations

## Module 2. Physiology and Pharmacology Related to Anesthesia

- 2.1. Ventilatory Physiology
  - 2.1.1. Introduction
  - 2.1.2. Ventilation of the Awake Patient
  - 2.1.3. Ventilation in Anesthesia
- 2.2. Cardiovascular Physiology
  - 2.2.1. Introduction
  - 2.2.2. Anesthesia-Related Characteristics of the Cardiovascular System
- 2.3. Neurological Physiology. Central and Autonomic Nervous System
  - 2.3.1. Introduction
  - 2.3.2. Anesthesia-related Characteristics of the SNA
- 2.4. Renal Physiology Acid/ Base Balance
  - 2.4.1. Introduction
  - 2.4.2. Anesthesia-related Characteristics of the Renal System
  - 2.4.3. Mechanism of Regulating the Acid/ Base Balance
- 2.5. Gastrointestinal and Endocrine Physiology
  - 2.5.1. Introduction
  - 2.5.2. Characteristics of the Digestive System in Anesthesia
  - 2.5.3. Characteristics of the Endocrine System in Anesthesia
- 2.6. Age Related Physiological Changes
  - 2.6.1. Ventilatory Changes
  - 2.6.2. Cardiovascular Changes
  - 2.6.3. Nervous System Changes
  - 2.6.4. Endocrine Changes
  - 2.6.5. Other Changes Related to Anesthesia

- 2.7. Pharmacology and Anesthesia I. Basic Principles
  - 2.7.1. Pharmacokinetics Applied to Anesthesia
  - 2.7.2. Pharmacodynamics Applied to Anesthesia
- 2.8. Pharmacology and Anesthesia II. Inhalation Drugs
  - 2.8.1. Main Halogenated Agents
  - 2.8.2. Pharmacology of the Main Agents
- 2.9. Pharmacology and Anesthesia III. Non-inhaled Drugs
  - 2.9.1. Pharmacology of Inducers
  - 2.9.2. Pharmacology of Sedatives
  - 2.9.3. Pharmacology of Opioids
  - 2.9.4. Pharmacology of Non-steroid Anti-inflammatory Drugs
  - 2.9.5. Pharmacology of Neuromuscular Blockers
- 2.10. Tables of physiological constants, drug tables, dosage calculation, etc
  - 2.10.1. Physiological Constants Charts
  - 2.10.2. Continuous Medical Infusion Charts
  - 2.10.3. Dose Calculation Sheets
- 3.3. Induction Intubation
  - 3.3.1. Induction Drugs
    - 3.3.1.1. Propofol
    - 3.3.1.2. Alfaxalone
    - 3.3.1.3. Tiopental
    - 3.3.1.4. Etomidate
    - 3.3.1.5. Adjuvants
  - 3.3.2. Intubation Maneuver
    - 3.3.2.1. Sellick Maneuver
- 3.4. Maintenance. Inhalation Anesthesia
  - 3.4.1. Characteristics of Inhalation Maintenance
  - 3.4.2. Main Anesthetic Agents (Halothane, Isoflurane, Sevoflurane, Desflurane)
- 3.5. Maintenance. Total Intravenous Anesthesia (TIVA)
  - 3.5.1. Maintenance Characteristics in Total Intravenous Anesthesia
  - 3.5.2. Drugs Used in TIVA (Propofol, Alfaxalone)
  - 3.5.3. Partial Intravenous Anesthesia (PIVA)
    - 3.5.3.1. Features
    - 3.5.3.2. Drugs:

### Module 3. Anesthetic Timing

- 3.1. Pre-anesthetic/anesthetic Risk Assessment
  - 3.1.1. Anesthetic Risk versus Procedure Risk
  - 3.1.2. ASA Classification
- 3.2. Pre-medication Premedication Drugs
  - 3.2.1. Sedatives
  - 3.2.2. Opioids
  - 3.2.3. Alpha-2 Agonists
  - 3.2.4. Benzodiazepines
  - 3.2.5. NSAIDs
  - 3.2.6. Others
- 3.3. Induction Intubation
  - 3.3.1. Induction Drugs
    - 3.3.1.1. Propofol
    - 3.3.1.2. Alfaxalone
    - 3.3.1.3. Tiopental
    - 3.3.1.4. Etomidate
    - 3.3.1.5. Adjuvants
  - 3.3.2. Intubation Maneuver
    - 3.3.2.1. Sellick Maneuver
- 3.4. Maintenance. Inhalation Anesthesia
  - 3.4.1. Characteristics of Inhalation Maintenance
  - 3.4.2. Main Anesthetic Agents (Halothane, Isoflurane, Sevoflurane, Desflurane)
- 3.5. Maintenance. Total Intravenous Anesthesia (TIVA)
  - 3.5.1. Maintenance Characteristics in Total Intravenous Anesthesia
  - 3.5.2. Drugs Used in TIVA (Propofol, Alfaxalone)
  - 3.5.3. Partial Intravenous Anesthesia (PIVA)
    - 3.5.3.1. Features
    - 3.5.3.2. Drugs:
- 3.6. Mechanical Ventilation
  - 3.6.1. Principles of Mechanical Ventilation
  - 3.6.2. Controlled Ventilatory Modes
    - 3.6.1.1. Volume Mode
    - 3.6.1.2. Pressure Mode
  - 3.6.3. Assisted Ventilatory Modes
    - 3.6.3.1. Pressure Support
    - 3.6.3.2. Intermittent Synchronized Ventilation
  - 3.6.4. Positive End-Expiratory Pressure (PEEP)
  - 3.6.5. Alveolar Recruitment Maneuvers
- 3.7. Education. Immediate Postoperative
  - 3.7.1. Precautions Before Education
  - 3.7.2. Precautions In the Immediate Postoperative Period



- 3.8. Intraoperative Fluid Therapy
    - 3.8.1. Principles of Fluid Therapy
    - 3.8.2. Types of Fluid
    - 3.8.3. Fluid Choice and Infusion Rate
  - 3.9. Coagulation During the Perioperative Period
    - 3.9.1. Coagulation Physiology
    - 3.9.2. Basic Alterations in Perioperative Coagulation
    - 3.9.3. Disseminated Intravascular Coagulation
  - 3.10. Perioperative Transfusion
    - 3.10.1. Indications
    - 3.10.2. Transfusion Techniques
- Module 4. Analgesia**
- 4.1. Pain Physiology
    - 4.1.1. Nociceptive Pathways
    - 4.1.2. Peripheral Sensitization
    - 4.1.3. Central Sensitization
  - 4.2. Chronic Pain I. Osteoarthritis
    - 4.2.1. Peculiarities of OA Pain
    - 4.2.2. Basic Lines of Pain Treatment Due to OA
  - 4.3. Chronic Pain II. Oncologic Pain; Neuropathic Pain
    - 4.3.1. Peculiarities of Oncological Pain
    - 4.3.2. Peculiarities of Neuropathic Pain
    - 4.3.3. Basic Lines of Treatment
  - 4.4. Opioid Analgesics
    - 4.4.1. General Characteristics of Opioids
    - 4.4.2. Opioid Peculiarities in Felines
  - 4.5. Nonsteroidal Anti-Inflammatory Drugs
    - 4.5.1. General Characteristics of NSAIDS
    - 4.5.2. NSAIDS Peculiarities in Felines
  - 4.6. Other analgesics I: Ketamine, Lidocaine
    - 4.6.1. Ketamine General Characteristics
    - 4.6.2. Lidocaine General Characteristics
      - 4.6.2.1. Precautions with Felines
  - 4.7. Other Analgesics II
    - 4.7.1. Paracetamol
    - 4.7.2. Dipyrone
    - 4.7.3. Gabapentinoids (Gabapentin and Pregabalin)
    - 4.7.4. Amantadine
    - 4.7.5. Grapiprant
  - 4.8. Assessment of Post-Surgical Pain
    - 4.8.1. Implications of Post-Surgical Pain
    - 4.8.2. Perioperative Pain Assessment Scales
      - 4.8.2.1. Canines
      - 4.8.2.2. Felines
  - 4.9. Assessment of Chronic Pain
    - 4.9.1. Implications of Chronic Pain
    - 4.9.2. Chronic Pain Assessment Scales
      - 4.9.2.1. Canines
      - 4.9.2.2. Felines
  - 4.10. Analgesia in the Emergency Department and in the Hospitalized Patient
    - 4.10.1. Peculiarities in Emergency and Hospitalized Patients
    - 4.10.2. Analgesic Protocols for Hospitalized Patients

## Module 5. Locoregional Anesthesia/Analgesia

- 5.1. Pharmacology of Local Anesthetics
  - 5.1.1. General Aspects of Local Esthetics
  - 5.1.2. Adjuvants in Locoregional Anesthesia
- 5.2. Basics of Locoregional Anesthesia: Anatomical Localization, Neurolocalizer and Ultrasound
  - 5.2.1. Basic Aspects of Locoregional Anesthesia
  - 5.2.2. Basic Locoregional Anesthesia: Anatomical Localization
  - 5.2.3. Locoregional Anesthesia With Neurolocalizer
  - 5.2.4. Ultrasound-guided Locoregional Anesthesia
- 5.3. Complications Associated with Locoregional Anesthesia
  - 5.3.1. Toxicity of Local Anesthetics
  - 5.3.2. Puncture Injury
- 5.4. Head Blockages I
  - 5.4.1. Anatomic Introduction
  - 5.4.2. Jaw Nerve Blockade
  - 5.4.3. Mandibular Nerve Block
- 5.5. Head Blockages II
  - 5.5.1. Ophthalmic Blockages
  - 5.5.2. Blockages Related to the Pinna
- 5.6. Forelimb Blockages
  - 5.6.1. Anatomic Introduction
  - 5.6.2. Paravertebral Brachial Plexus Blockade
  - 5.6.3. Subscapularis Brachial Plexus Blockade
  - 5.6.4. Axillary Brachial Plexus Blockade
  - 5.6.5. RUMM Blocking
- 5.7. Trunk Blocks I
  - 5.7.1. Intercostal Blockages
  - 5.7.2. Serratus Blockage
  - 5.7.3. Pleural Instillation
- 5.8. Trunk Blockages II
  - 5.8.1. Lumbar Square Blockage
  - 5.8.2. Transverse Abdominal Blockage
  - 5.8.3. Peritoneal Instillation

- 5.9. Rear Limb Blockages
  - 5.9.1. Anatomic Introduction
  - 5.9.2. Sciatic Nerve Block
  - 5.9.3. Femoral Nerve Block
- 5.10. Epidural
  - 5.10.1. Anatomic Introduction
  - 5.10.2. Location of the Epidural Space
  - 5.10.3. Epidural Drug Administration
  - 5.10.4. Epidural vs. Spinal
  - 5.10.5. Contraindications and Complications

## Module 6. Monitoring

- 6.1. Basic Monitoring
  - 6.1.1. Palpitation
  - 6.1.2. Observation
  - 6.1.3. Auscultation
  - 6.1.4. Temperature Monitoring
- 6.2. Electrocardiography
  - 6.2.1. Introduction to Electrocardiography
  - 6.2.2. ECG Interpretation in Anesthesia
- 6.3. Arterial Pressure
  - 6.3.1. Introduction to Arterial Pressure Physiology
  - 6.3.2. Medication Methods of Arterial Pressure
  - 6.3.3. Non-invasive Arterial Pressure
  - 6.3.4. Invasive Arterial Pressure
- 6.4. Cardiac Output Monitoring
  - 6.4.1. Introduction to Cardiac Output Physiology
  - 6.4.2. Different Methods of Monitoring Cardiac Output
- 6.5. Ventilatory Monitoring I. Pulse Oximetry
  - 6.5.1. Physiological Introduction
  - 6.5.2. Plethysmogram Interpretation
- 6.6. Ventilatory Monitoring II Capnography
  - 6.6.1. Physiological Introduction
  - 6.6.2. Capnogram Interpretation



- 6.7. Ventilatory Monitoring III
  - 6.7.1. Spirometry
  - 6.7.2. Anesthetic Gases
  - 6.7.3. Arterial Blood Gases
- 6.8. Hypnosis Monitoring
  - 6.8.1. Introduction to Hypnosis During Anesthesia
  - 6.8.2. Subjective Monitoring of the Hypnosis Plane
  - 6.8.3. BIS Monitoring
- 6.9. Nociception Monitoring
  - 6.9.1. Physiology Introduction of Intraoperative Nociception
  - 6.9.2. Monitoring of Nociception by ANI
  - 6.9.3. Other Methods of Intraoperative Nociception Monitoring
- 6.10. Volemia Monitoring Acid/ Base Balance
  - 6.10.1. Introduction to the Physiology of Volemia During Anesthesia
  - 6.10.2. Monitoring Methods

## Module 7. Anesthetic Complications

- 7.1. Regurgitation/Aspiration
  - 7.1.1. Definition
  - 7.1.2. Treatment
- 7.2. Hypotension/Hypertension
  - 7.2.1. Definition
  - 7.2.2. Treatment
- 7.3. Hypocapnia/Hypercapnia
  - 7.3.1. Definition
  - 7.3.2. Treatment
- 7.4. Bradycardia/Tachycardia
  - 7.4.1. Definition
  - 7.4.2. Treatment
- 7.5. Other Alterations in an Electrodiagram
  - 7.5.1. Definition
  - 7.5.2. Treatment

- 7.6. Hypothermia/Hyperthermia
  - 7.6.1. Definition
  - 7.6.2. Treatment
- 7.7. Nociception/Intraoperative Awakening
  - 7.7.1. Definition
  - 7.7.2. Treatment
- 7.8. Airway Complications/Hypoxia
  - 7.8.1. Definition
  - 7.8.2. Treatment
- 7.9. Cardiorespiratory Arrest
  - 7.9.1. Definition
  - 7.9.2. Treatment
- 7.10. Various Complications
  - 7.10.1. Post-anesthetic Blindness
  - 7.10.2. Postanesthetic Tracheitis
  - 7.10.3. Post-anesthesia Cognitive Dysfunction

## Module 8. Anesthetic Management in Specific Situations I

- 8.1. Anesthesia in Elderly Patients
  - 8.1.1. Characteristics to Take into Account
  - 8.1.2. Postoperative Management
  - 8.1.3. Anesthetic Management
  - 8.1.4. Post-Operative Care
- 8.2. Anesthesia in Pediatric Patients
  - 8.2.1. Characteristics to Take into Account
  - 8.2.2. Postoperative Management
  - 8.2.3. Anesthetic Management
  - 8.2.4. Post-Operative Care
- 8.3. Anesthesia in Patients with Cardiac Pathology I (Congenital Heart Disease)
  - 8.3.1. Characteristics to Take into Account
  - 8.3.2. Postoperative Management
  - 8.3.3. Anesthetic Management
  - 8.3.4. Post-Operative Care

- 8.4. Anesthesia in Patients with Cardiac Pathology II (Acquired Heart Disease)
  - 8.4.1. Characteristics to Take into Account
  - 8.4.2. Postoperative Management
  - 8.4.3. Anesthetic Management
  - 8.4.4. Post-Operative Care
- 8.5. Anesthesia for Patients With Thyroid Pathologies
  - 8.5.1. Hypothyroid Patient
    - 8.5.1.1. Characteristics to Take into Account
    - 8.5.1.2. Postoperative Management
    - 8.5.1.3. Anesthetic Management
    - 8.5.1.4. Post-Operative Care
  - 8.5.2. Hypothyroid Patient
    - 8.5.2.1. Characteristics to Take into Account
    - 8.5.2.2. Postoperative Management
    - 8.5.2.3. Anesthetic Management
    - 8.5.2.4. Post-Operative Care
- 8.6. Anesthesia for Patients With Adrenal Pathologies
  - 8.6.1. Patient with Hypoadrenocorticism
    - 8.6.1.1. Characteristics to Take into Account
    - 8.6.1.2. Postoperative Management
    - 8.6.1.3. Anesthetic Management
    - 8.6.1.4. Post-Operative Care
  - 8.6.2. Patient with Hyperadrenocorticism
    - 8.6.2.1. Characteristics to Take into Account
    - 8.6.2.2. Postoperative Management
    - 8.6.2.3. Anesthetic Management
    - 8.6.2.4. Post-Operative Care
- 8.7. Anesthesia in Diabetic Patients
  - 8.7.1. Characteristics to Take into Account
  - 8.7.2. Postoperative Management
  - 8.7.3. Anesthetic Management
  - 8.7.4. Post-Operative Care





- 8.8. Anesthesia for Patients With Digestive Pathologies I
  - 8.8.1. Characteristics to Take into Account
  - 8.8.2. Postoperative Management
  - 8.8.3. Anesthetic Management
  - 8.8.4. Post-Operative Care
- 8.9. Anesthesia in Patients with Digestive Pathology II (HepatobiliarySystem)
  - 8.9.1. Characteristics to Take into Account
  - 8.9.2. Postoperative Management
  - 8.9.3. Anesthetic Management
  - 8.9.4. Post-Operative Care
- 8.10. Anesthesia for Patients With Neurological Pathologies
  - 8.10.1. Characteristics to Take into Account
  - 8.10.2. Postoperative Management
  - 8.10.3. Anesthetic Management
  - 8.10.4. Post-Operative Care



## Module 9. Anesthetic Management in Specific Situations II

- 9.1. Anesthesia for Patients With Respiratory Pathologies
  - 9.1.1. Characteristics to Take into Account
  - 9.1.2. Postoperative Management
  - 9.1.3. Anesthetic Management
  - 9.1.4. Post-Operative Care
- 9.2. Anesthesia for Ophthalmologic Procedures
  - 9.2.1. Characteristics to Take into Account
  - 9.2.2. Postoperative Management
  - 9.2.3. Anesthetic Management
  - 9.2.4. Post-Operative Care
- 9.3. Anesthesia for Endoscopic and Laparoscopic Procedures
  - 9.3.1. Characteristics to Take into Account
  - 9.3.2. Postoperative Management
  - 9.3.3. Anesthetic Management
  - 9.3.4. Post-Operative Care
- 9.4. Anesthesia in Patients with Altered Body conditions (Obesity, Cachexia)
  - 9.4.1. Obese Patient
    - 9.4.1.1. Characteristics to Take into Account
    - 9.4.1.2. Postoperative Management
    - 9.4.1.3. Anesthetic Management
    - 9.4.1.4. Post-Operative Care
  - 9.4.2. Cachectic Patient
    - 9.4.2.1. Characteristics to Take into Account
    - 9.4.2.2. Postoperative Management
    - 9.4.2.3. Anesthetic Management
    - 9.4.2.4. Post-Operative Care
- 9.5. Anesthesia in Brachiocephalic Patients
  - 9.5.1. Characteristics to Take into Account
  - 9.5.2. Postoperative Management
  - 9.5.3. Anesthetic Management
  - 9.5.4. Post-Operative Care
- 9.6. Anesthesia in Patients with Extreme Sizes (Miniature vs. Giant Patient)
  - 9.6.1. Characteristics to Take into Account
  - 9.6.2. Postoperative Management
  - 9.6.3. Anesthetic Management
  - 9.6.4. Post-Operative Care
- 9.7. Anesthesia for Patients With Genitourinary Pathologies  
Pyometra, Urinary Obstruction
  - 9.7.1. Characteristics to Take into Account
  - 9.7.2. Postoperative Management
  - 9.7.3. Anesthetic Management
  - 9.7.4. Post-Operative Care
- 9.8. Anesthesia in Pregnant Patients and for Cesarean Section
  - 9.8.1. Characteristics to Take into Account
  - 9.8.2. Postoperative Management
  - 9.8.3. Anesthetic Management
  - 9.8.4. Post-Operative Care
- 9.9. Anesthesia in Oncology Patients (OFA)
  - 9.9.1. Characteristics to Take into Account
  - 9.9.2. Postoperative Management
  - 9.9.3. Anesthetic Management
  - 9.9.4. Post-Operative Care
- 9.10. Anesthesia in Thoracic Surgery
  - 9.10.1. Characteristics to Take into Account
  - 9.10.2. Postoperative Management
  - 9.10.3. Anesthetic Management
  - 9.10.4. Post-Operative Care

**Module 10. Anesthetic Management in Specific Situations III**

- 10.1. Hemoabdomen
  - 10.1.1. Characteristics to Take into Account
  - 10.1.2. Postoperative Management
  - 10.1.3. Anesthetic Management
  - 10.1.4. Post-Operative Care
- 10.2. Ovariohysterectomy and Orchiectomy in Healthy Patients
  - 10.2.1. Characteristics to Take into Account
  - 10.2.2. Postoperative Management
  - 10.2.3. Anesthetic Management
  - 10.2.4. Post-Operative Care
- 10.3. Sedation Procedures in the Hospitalized Patient
  - 10.3.1. Characteristics to Take into Account
  - 10.3.2. Postoperative Management
  - 10.3.3. Anesthetic Management
  - 10.3.4. Post-Operative Care
- 10.4. Pulmonary Lobectomy
  - 10.4.1. Characteristics to Take into Account
  - 10.4.2. Postoperative Management
  - 10.4.3. Anesthetic Management
  - 10.4.4. Post-Operative Care
- 10.5. Anesthetic Management With Felines
  - 10.5.1. Characteristics to Take into Account
  - 10.5.2. Postoperative Management
  - 10.5.3. Anesthetic Management
  - 10.5.4. Post-Operative Care
- 10.6. Anesthesia for Imaging Procedures
  - 10.6.1. Characteristics to Take into Account
  - 10.6.2. Postoperative Management
  - 10.6.3. Anesthetic Management
  - 10.6.4. Post-Operative Care
- 10.7. Enterotomy and Enterectomy
  - 10.7.1. Characteristics to Take into Account
  - 10.7.2. Postoperative Management
  - 10.7.3. Anesthetic Management
  - 10.7.4. Post-Operative Care
- 10.8. Perineal Hernia
  - 10.8.1. Characteristics to Take into Account
  - 10.8.2. Postoperative Management
  - 10.8.3. Anesthetic Management
  - 10.8.4. Post-Operative Care
- 10.9. Cutaneous Tumor Excision and Dermatological Surgery (Mastocytoma, for Example)
  - 10.9.1. Characteristics to Take into Account
  - 10.9.2. Postoperative Management
  - 10.9.3. Anesthetic Management
  - 10.9.4. Post-Operative Care
- 10.10. Anesthesia for Dentistry and Maxillofacial Surgery
  - 10.10.1. Characteristics to Take into Account
  - 10.10.2. Postoperative Management
  - 10.10.3. Anesthetic Management
  - 10.10.4. Post-Operative Care



*Among the most complex issues of your profession is the care of patients with neurological pathology. With this program you will get up to speed on the safest and most innovative techniques to succeed with their management"*

07

# Clinical Internship

After passing the online updating period, the program includes a period of Practical Training in a reference veterinary clinic. The specialist will have at their disposal the support of a tutor who will accompany them throughout the process, both in the preparation and in the development of the 120 hours of clinical practice.







“

*Complete your update in Veterinary Anesthesiology with an internship in a prestigious veterinary hospital with state-of-the-art equipment”*

The Practical Training of this program in Veterinary Anesthesiology consists of a practical stay in a veterinary referral center, lasting 3 weeks, from Monday to Friday with 8 consecutive hours of practical training with an assistant specialist. This stay will allow the graduate to see real cases alongside a professional team of reference in the veterinary area of anesthesiology, applying the most innovative state-of-the-art procedures.

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

It is undoubtedly an opportunity to learn by working with the best experts in the field of Veterinary Anesthesiology, who perform their work in renowned clinics, with the best medical facilities. All this makes for an ideal teaching scenario for the student, who will enjoy the experience while perfecting professional veterinary skills for the 21st century.

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 Anaesthesiology (learning to be and learning to relate).

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



*Get up to date in an institution that can offer you all these possibilities, with an innovative academic program and a human team capable of developing you to the maximum"*



Module	Practical Activity
<b>Equipment Management Anesthetics</b>	Internship in Patient Optimization Dental
	Evaluate perioperative medication
	Practice in the handling of drug delivery systems: inhaled delivery systems, basic systems, volumetric infusion pumps and perfusors
	Conduct patient warming system analysis
	Examine endotracheal tubes and other intubation systems: endotracheal tubes, supraglottic devices and laryngoscope
<b>Update in Physiology and Pharmacology Related to Anesthesia</b>	Analyze ventilatory, cardiovascular, neurological (central and autonomic nervous system), renal (acid/base balance), gastrointestinal and endocrine physiology
	Conduct examinations of age-related physiological changes: ventilatory, cardiovascular, nervous system, endocrine and other anesthesia-related changes
	Evaluate pharmacology and anesthesia: inhalation drugs and non-inhalation drugs
<b>Control of anesthetic times</b>	Assess the pre-anesthetic area and anesthetic risk
	Conduct an analysis of drugs in premedication: sedatives, opioids, alpha-2 agonists, benzodiazepines, aines and others,
	Develop the practice of intubation: drugs in induction and intubation maneuver
	Analyze inhalation, intravenous and partial anesthesia
	Assessing mechanical ventilation: controlled and assisted ventilatory modes
<b>Local and locoregional Analgesia</b>	Analyze the physiology of pain: nociceptive pathways, peripheral sensitization and central sensitization
	Assess chronic pain: osteoarthritis and oncological pain, neuropathic pain
	Conduct an analysis of Opioid Analgesics
	Practices in the Locoregional Anesthesia: Anatomical Localization, Neurolocalizer, Ultrasound
	Evaluate head blocks: maxillary nerve block, mandibular nerve block, ophthalmic blocks and blocks related to the pinna
<b>Anesthetic Complications Monitoring and Control</b>	Practice in basic monitoring: palpation, observation, auscultation and temperature monitoring
	Conduct blood pressure analysis, ventilatory monitoring and hypnosis
	Examine the monitoring of nociception
	Analyze regurgitation, aspiration, hypotension and hypertension
	Conduct a hypocapnia and hypercapnia test

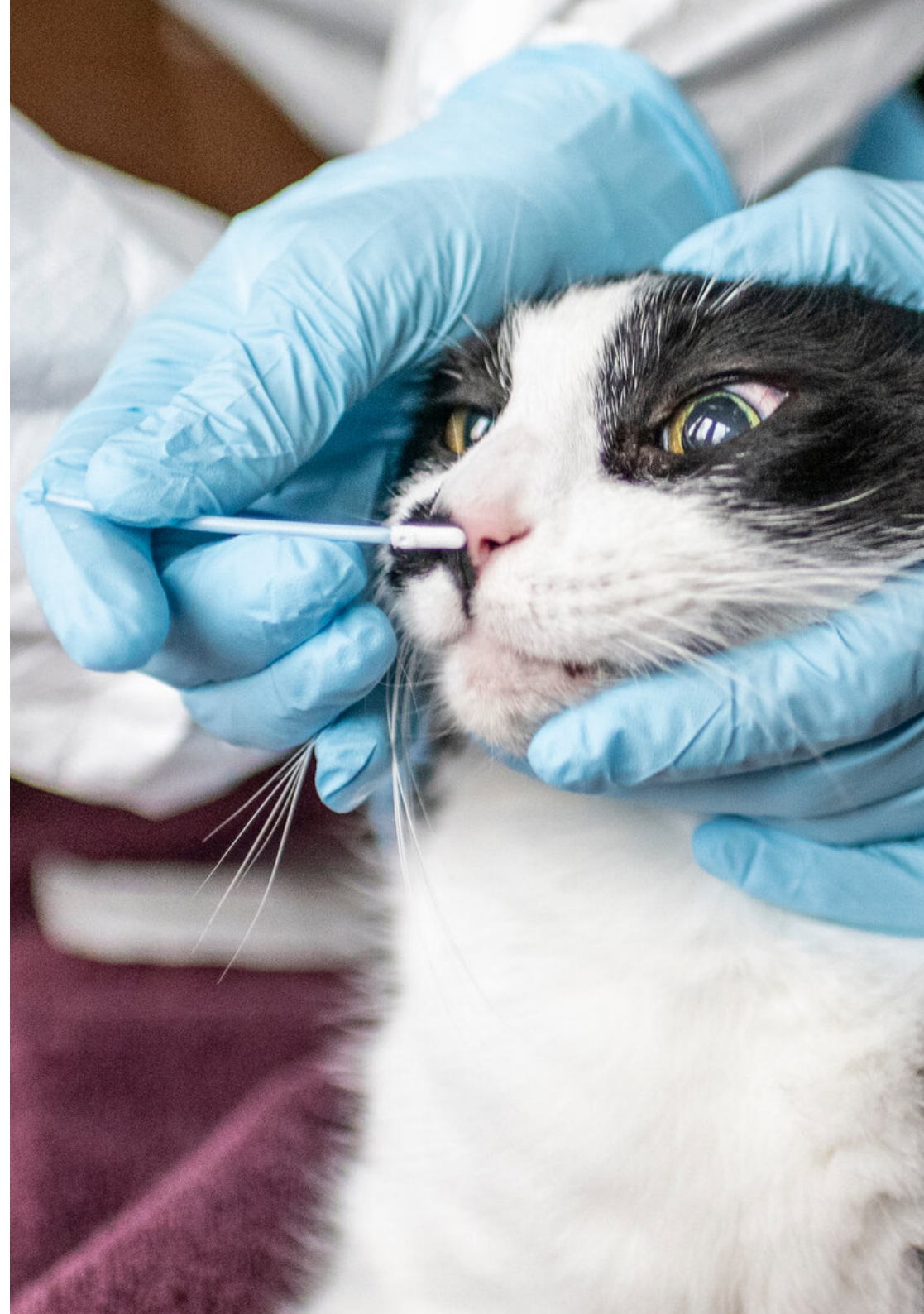


## Civil Liability Insurance

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

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

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



## General Conditions of the Internship Program

The general terms and conditions of the internship program agreement shall be as follows:

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

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

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

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

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

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

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

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



# 08

## Where Can I Do the Clinical Internship?

In its maxim of offering a unique experience where the student can put into practice the theoretical knowledge learned, TECH gives you the opportunity to choose between several renowned veterinary centers to undertake this Practical Training. In this way, it adapts to the needs of the student and contributes to the updates in Veterinary Anesthesiology in several areas of the national territory.







“

*Become a successful professional in Veterinary Anesthesiology by perfecting your management of the best clinical strategies. Take your career to the next level by upgrading with TECH"*



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



Veterinaty-medicine

### Centro Veterinario San Antón

Country: Spain  
City: 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



Veterinaty-medicine

### Veterinaria Hospital Veterinario Villalba

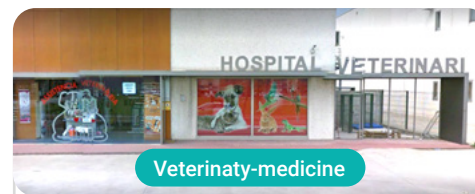
Country: Spain  
City: Madrid

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



Veterinaty-medicine

### Hospital Veterinario Asistencia veterinaria Vic

Country: Spain  
City: Barcelona

Address: Carrer de Cervera, 6, Bajo; Pol.Ind, 08500 Vic, Barcelona

Clinic specialized in services such as Surgery, Diagnostic Imaging, Laboratory and Intensive Care, among others.

**Related internship programs:**

- Physiotherapy and Rehabilitation of Small Animals
- Small Animal Ultrasonography



Veterinaty-medicine

### Centro Veterinario Fuente del Moral

Country: Spain  
City: 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



Veterinaty-medicine

### Madrid Este Hospital Veterinario

Country: Spain  
City: 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



Veterinaty-medicine

### Hospital Artemisa Cañaverál

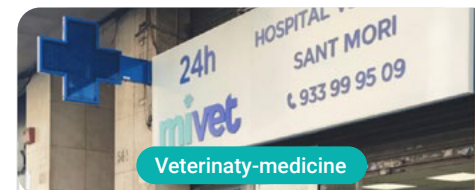
Country: Spain  
City: Madrid

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



Veterinaty-medicine

### Veterinario Sant Morí MiVet

Country: Spain  
City: 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 Stolz Valencia

Country: Spain  
City: Valencia

Address: C/ de Pintor Stolz, 67 Valencia

Reference clinic in the veterinary sector with more than 20 years of experience and 24 hours a day, 365 days a year service.

**Related internship programs:**

- Veterinary Anesthesiology
- Veterinary Traumatology and Orthopedic Surgery



### Hospital Veterinario Avenida MiVet

Country: Spain  
City: 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





Veterinaty-medicine

### Centro Veterinario Puebla

Country: Mexico  
City: Puebla

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



Veterinaty-medicine

### Hospital Veterinario Paraíso Animal

Country: Mexico  
City: 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



Veterinaty-medicine

### Pets, life & Care

Country: Mexico  
City: 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



Veterinaty-medicine

### Hospital Veterinario Reynoso

Country: Mexico  
City: Mexico

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

High specialty veterinary hospital

**Related internship programs:**

- and Veterinary Anesthesiology
- Management and Administration of Veterinary Centers



Veterinaty-medicine

### Centro Veterinario CIMA

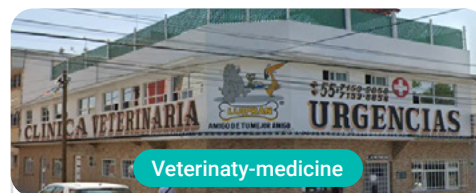
Country: Mexico  
City: Mexico City

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

Clinical pet care center

**Related internship programs:**

- Small Animal Internal Medicine
- Veterinary Oncology in Small Animals



Veterinaty-medicine

### Clínica Veterinaria Luifran

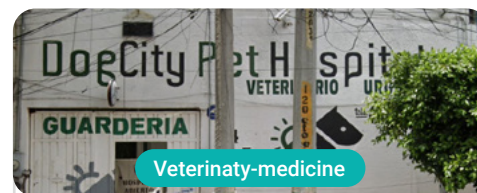
Country: Mexico  
City: Mexico City

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



Veterinaty-medicine

### Dog City Pet Hospital

Country: Mexico  
City: 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



Veterinaty-medicine

### Veterinaria Palo Verde

Country: Mexico  
City: Mexico City

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



Veterinary-medicine

### SAVET Sanatorio Veterinario

Country: Argentina  
City: Río Negro

Address: Santa Cruz 1515 General Roca,  
Río Negro

Veterinary clinic with state-of-the-art supplies and materials of the latest generation

**Related internship programs:**

- Veterinary Anesthesiology
- Veterinary Emergencies in Small Animals



Veterinary-medicine

### Clínica Veterinaria Don Bosco

Country: Argentina  
City: 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



09

# Methodology

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

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







“

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

## At TECH we use the Case Method

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

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



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



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

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

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





## Relearning Methodology

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

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



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

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

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

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

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

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



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



#### Study Material

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

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



#### Latest Techniques and Procedures on Video

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



#### Interactive Summaries

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

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



#### Additional Reading

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







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

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



#### Testing & Retesting

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



#### Classes

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

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



#### Quick Action Guides

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



# 10 Certificate

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



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



This program will allow you to obtain your **Hybrid Professional Master's Degree diploma in Veterinary Anesthesiology** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

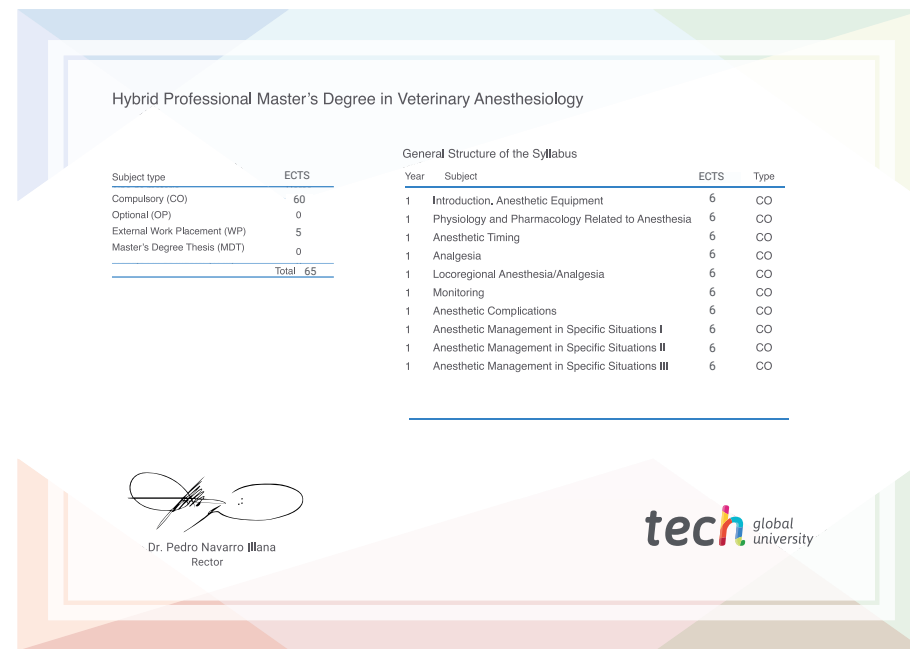
Title: **Hybrid Professional Master's Degree in Veterinary Anesthesiology**

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

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**



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

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



## Hybrid Professional Master's Degree

### Veterinary Anesthesiology

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

# Hybrid Professional Master's Degree Veterinary Anesthesiology

