Professional Master's Degree
Veterinary Anesthesiology

tech technological university

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Professional Master's Degree
Veterinary Anesthesiology

Course Modality: **Online**
Duration: **12 months**
Certificate: **TECH Technological University**
Official Nº of hours: **1,500 h.**
Website: **www.techtitute.com/us/veterinary-medicine/professional-master-degree/master-veterinary-anesthesiology**

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01

Introduction

Veterinary medicine is one of the fields that has evolved the most in recent times. Both in the demand for quality care and in the advances in intervention, the profession has reached, and continues to explore, ever higher levels of specialization. This progression has also been evident in procedures requiring anesthesia. A need that calls for professionals to have the most up-to-date and specific knowledge in the field of anesthesiology. In this prorgam, we offer you the most advanced developments, with an approach focused on real practice, which will allow you to implement what you have learned in your field of action in a safe and real way.

Specialize in Veterinary Anesthesiology with this comprehensive online Professional Master's Degree designed by elite veterinary sector professionals"

The objective of this complete program is to learn all the aspects of the intervention in Veterinary Anesthesiology, which we now present to you. With extensive methodological development, throughout this program you will be able to learn each and every one of the fundamental points in this area of work.

In this sense, the Professional Master's Degree will begin with the phases prior to the application of anesthesia to the patient: knowledge of the equipment, previous management of the patient, medication and study of drug-drug interactions.

The study of the physiology most closely related to anesthesia, focusing on the involvement of the cardiovascular, respiratory, nervous and endocrine systems, will occupy the second part of the Professional Master's Degree, an essential review to understand the functioning and consequences on the patient of the application of anesthesia.

However, the success of an anesthetic procedure goes far beyond the administration of the appropriate drugs. It is essential to master pre-anesthetic assessment, induction, maintenance and education in order to achieve success in the process and a return to normality without sequelae. Fluid therapy and even transfusion must also be taken into account and, therefore, will be covered in our complete program in Veterinary Anesthesiology.

The anesthesiologist must also take care of pain management. A basic vital sign that, if not adequately controlled, can be one of the main causes of delayed discharge and perioperative complications. Acquiring competence in this part of care is another of our major objectives.

Monitoring, anesthetic complications, management of anesthesia under special conditions and the application of balanced anesthesia and multimodal anesthesia protocols will also be covered in this highly scientifically rigorous program.

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

- The latest technology in online teaching software
- Intensely visual teaching system, supported by graphic and schematic contents, easy to assimilate and understand
- Practical cases presented by practising experts
- State-of-the-art interactive video systems
- Teaching supported by telepractice
- Continuous updating and recycling systems
- Autonomous learning: full compatibility with other occupations
- Practical exercises for self-evaluation and learning verification
- Communication with the teacher and individual reflection work
- Availability of content from any fixed or portable device with internet connection
- Supplementary documentation banks that are permanently available, including after the program

This Professional Master's Degree is the opportunity you were waiting for to take your career to the next level and become a prestigious veterinarian"

You will learn about all aspects of Veterinary Anesthesiology from leading professionals with years of experience in the sector"

Our teaching staff is made up of professionals from different fields related to this specialty. In this way, we ensure that we provide you with the educational update we are aiming for. A multidisciplinary team of qualified and experienced professionals in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will contribute all the practical knowledge derived from their own experience; one of the differential qualities of this program.

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

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

This intensive program in Veterinary Anesthesiology will take you through different teaching approaches to allow you to learn in a dynamic and effective way.

This program represents a unique opportunity for professional growth due to the quality of the contents offered and the excellent teaching staff.

02

Objectives

Our goal is to help veterinary professionals attain a much higher level of competence and control in Veterinary Anesthesiology. A goal that, in just twelve months, you will be able to achieve with a high intensity and precise course.

With this intensive program, you will learn how to monitor the anesthetized patient, from the most basic to the most complicated, such as nociception and hypnosis monitoring"

General Objectives

- Know and understand the main mechanical parts of the anesthesia machine and the importance of the previous management of the patient in terms of medication and feeding
- Know the most important physiological characteristics of the different organ systems and their relationship and modifications that occur during anesthesia
- Know the general characteristics of pharmacology and the specific characteristics of the main anesthetic drugs used
- Use tables for the preparation of combinations of anesthetic or anesthesia-related drugs
- Know the characteristics of each anesthetic time and the control points to take into account in order to increase patient safety
- Know the specific needs in terms of fluid therapy and transfusion medicine related to the perioperative period
- Learn and understand the physiology of nociceptive and acute and chronic pain
- Acquire a logical understanding of the physiological implications of untreated pain
- In-depth knowledge of the different analgesics and their indications
- Know how to assess both acute and chronic pain
- Understand the basics of locoregional anesthesia and analgesia
- Understand the main differences and indications of different drugs
- Understand the different blockages t be performed and the areas affected by them
- Understand the monitoring of the anesthetized patient, from the most basic to the most complicated such as nociception and hypnosis monitoring
- Understand the limitations and the most appropriate monitoring in each patient and in each specific case
- Detect, prevent and treat the main complications during the perioperative period
- Manage the patient's anesthetic under specific pathological situations, or with specific physiological alterations that will mark a different anesthetic management
- Establish and understand the differences in management of specific anesthetic situations and determine mechanisms to anticipate potential problems that may arise during patient management
- Implement all the topics learned in the management of concrete situations, understanding the protocol used, monitoring, detection of complications and their solution

A path to achieve training and professional growth that will propel you towards a greater level of competitiveness in the employment market"

Specific Objectives

Module 1. Introduction: Anesthetic Equipment

- Know the origins of the specialty in human medicine and its incorporation into the field of veterinary medicine
- 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. Anesthetic Physiology and Pharmacology

- Know and understand 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 the preoperative assessment to the awakening of the patient, and the main postoperative care
- Know the characteristics of premedication, induction, maintenance and education, in order 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 the 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 the patient's blood volume

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 patients

Module 10. Anesthetic Management in Specific Situations III

- Observe how to use different protocols, anesthetic techniques and monitoring techniques applied to specific situations in a practical way
- Assess the most appropriate protocol for each patient and understand the absence of predetermined protocols individualization is necessary for each procedure and each case

03

Skills

This Professional Master's Degree includes a compendium of knowledge that will provide you with the appropriate skills in all the stages and developments of the anesthetic and analgesic process, from the initial approach to the patient's discharge.

This Professional Master's Degree will provide you with the essential professional skills to successfully specialize in Veterinary Anesthesiology"

General Skills

- Acquire the necessary knowledge to be able to carry out a previous anesthetic approach
- Elaborate a specific anesthesia plan for each case
- Learn about and know how to use the necessary tools effectively
- Be familiar with and know how to implement existing protocols
- Know and understand preoperative management
- Know and understand operative and postoperative management
- Know and understand 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

- Know the anesthetic procedure for the surgical process
- Identify the required amounts of anesthesia 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

Improve your patients' care by taking advantage of the training offered by the Online Professional Master's Degree in Veterinary Anesthesiology"

04

Course Management

Professionals coming from different fields with diverse skillsets that make up a complete multidisciplinary team have developed this high-level program in order to grant you the opportunity to be trained with the most complete and up-to-date syllabus available on the market. A unique opportunity to learn from the best.

Leading professionals in the field have come together to teach you the latest advances in Veterinary Anesthesiology"

Management

Dr. Cabezas Salamanca, Miguel Ángel

- Graduated in veterinary medicine from the Complutense University of Madrid Two-year internship at the Anesthesia Service of the Veterinary Clinic Hospital of the UCM
- Accredited by AVEPA in the Specialty of Anesthesia and Analgesia
- Head of the Anesthesia-Reanimation Service and Pain Unit at Hospital Veterinario Puchol
- Founding member of the Spanish Society of Veterinary Anesthesia and Analgesia (SEAAV). Member of the European Association of Veterinary Anesthesia (AVA), International Association for the Study of Pain (IASP) and the International Veterinary Academy of Pain Management (IVAPM)
- Speaker in several Anesthesia and Analgesia courses and national and international congresses
- Author of the books "Practical Pain Management in Small Animals" and "Role of NSAIDs in Chronic Pain"
- Co-author of the "Clinical Manual of Pharmacology and "Complications in Small Animal Anesthesia", as well as author of specific chapters in other books

Professor

Ms. Soto Martín, María

- Degree in veterinary medicine from the Complutense University of Madrid in 2009, with preferential dedication to anesthesia since 2010 and sole dedication since 2012
- Member of the Spanish Society of Veterinary Anesthesia and Analgesia, with frequent participation in its annual congresses, one of which earned her the award for best oral communication
- Member of the Anesthesia group of AVEPA, having also participated on several occasions with scientific content in its annual congress
- She provided specific small animal anesthesia training throughout his career in the form of lectures, webinars, hands-on workshops and clinic-based training
- She also collaborated in books and scientific articles, published nationally and internationally

05

Structure and Content

A comprehensive and well-structured program that will take you to the highest standards of quality and success, with which you will acquire each and every one of the skills requried to become a true expert in this field.

This Professional Master's Degree in Veterinary Anesthesiology contains the most complete and up-to-date scientific program on the market"

Module 1. Introduction: Anesthetic Equipment

1.1. Brief History of Anesthesia
  1.1.1. Important Facts about Human Anesthesiology
  1.1.2. Relevant Historic Facts in Veterinary Anesthesiology
1.2. Optimization of the Surgical Patient: Preoperative Fasting
  1.2.1. Importance of Liquid Fasting
  1.2.2. Fasting of Solids, Why and When?
1.3. Perioperative 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 for 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. Non-Inhalation
    1.4.3.2. Inhalational
1.5. Mechanical Ventilators
  1.5.1. Introduction
  1.5.2. Types of Ventilators
1.6. Drug Administration Systems
  1.6.1. Inhalational Drug Adminstration Systems
  1.6.2. Basic Systems
  1.6.3. Volumetric Infusion Pumps
  1.6.4. Perfusors
1.7. Patient Warming Systems
  1.7.1. Introduction
  1.7.2. Conduction Heating Systems
  1.7.3. Warm Air Heating Systems
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. Anesthetic Physiology and Pharmacology

2.1. Ventilatory Physiology
  2.1.1. Introduction
  2.1.2. Awake Patient Ventilation
  2.1.3. Ventilation in Anesthesia
2.2. Cardiovascular Physiology
  2.2.1. Introduction
  2.2.2. The Cardiovascular System and Anesthesia
2.3. Neurological Physiology: Central and Autonomic Nervous System
  2.3.1. Introduction
  2.3.2. The Autonomic Nervous System and Anesthesia
2.4. Renal Physiology: Acid-Base Balance
  2.4.1. Introduction
  2.4.2. The Renal System and Anesthesia
  2.4.3. Acid-Base Balance Regulatory Mechanism
2.5. Gastrointestinal and Endocrine Physiology
  2.5.1. Introduction
  2.5.2. The Digestive System and Anesthesia
  2.5.3. The Endocrine System and 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. Anesthetic Pharmacology I: Basic Principles
- 2.7.1. Pharmacokinetics Applied to Anesthesia
- 2.7.2. Pharmacodynamics Applied to Anesthesia

2.8. Anesthetic Pharmacology II: Inhalational Drugs
- 2.8.1. Main Halogenated Agents
- 2.8.2. Pharmacology of the Main Agents

2.9. Anesthetic Pharmacology III: Non-Inhalation 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, Dose Calculation, etc.
- 2.10.1 Physiological Constants Charts
- 2.10.2 Continuous Medical Infusion Charts
- 2.10.3 Dose Calculation Sheets

Module 3. Anesthetic Timing

3.1. Pre-Anesthetic Assessment and Anesthetic Risk
- 3.1.1. Anesthetic Risk vs. Procedure Risk
- 3.1.2. ASA Classification

3.2. Pre-Medication: Pre-Medication 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. Thiopental
  - 3.3.1.4. Etomidate
  - 3.3.1.5. Adjuvants
- 3.3.2. Intubation Maneuver
  - 3.3.2.1. Sellick Maneuver

3.4. Maintenance: Inhalational Anesthesia
- 3.4.1. Features of Inhalational Maintenance
- 3.4.2. Main Anesthetic Agents (Halothane, Isoflurane, Sevoflurane, Desflurane)

3.5. Maintenance: Total Intravenous Anesthesia (TIVA)
- 3.5.1. Features of Total Intravenous Anesthesia Maintenance
- 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. Eduction: Immediate Postoperative
- 3.7.1. Precautions before Eduction
- 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 Fluids
- 3.8.3. Fluid Choice and Infusion Rate

3.9. Perioperative Coagulation
- 3.9.1. Coagulation Physiology
- 3.9.2. Basic Perioperative Coagulation Disorders
- 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 OA Treatment Methods

4.3. Chronic Pain II: Oncologic Pain; Neuropathic Pain
- 4.3.1. Peculiarities of Oncologic Pain
- 4.3.2. Peculiarities of Neuropathic Pain
- 4.3.3. Basic Treatment Methods

4.4. Opioid Analgesics
- 4.4.1. General Features of Opioids
- 4.4.2. Opioid Peculiarities in Felines

4.5. Non-Steroidal Anti-Inflammatory Drugs
- 4.5.1. General Properties of NSAIDs
- 4.5.2. NSAID Peculiarities in Felines

4.6. Other Analgesics I: Ketamine, Lidocaine
- 4.6.1. Ketamine: General Properties
- 4.6.2. Lidocaine: General Properties
  - 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. Post-Surgical Pain Assessment
- 4.8.1. Post-Surgical Pain Implications
- 4.8.2. Perioperative Pain Assessment Scales
  - 4.8.2.1. Canines
  - 4.8.2.2. Felines

4.9. Chronic Pain Assessment
- 4.9.1. Chronic Pain Implications
- 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 Anesthetics
- 5.1.2. Adjuvants in Locoregional Anesthesia

5.2. Basics of Locoregional Anesthesia: Anatomical Localization, Neurolocalizer and Ultrasound
- 5.2.1. Basic Principles 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. Locoregional Anesthesia Complications
- 5.3.1. Toxicity of Local Anesthetics
- 5.3.2. Puncture Injury

5.4. Head Blocks I
- 5.4.1. Anatomical Introduction
- 5.4.2. Maxillary Nerve Block
- 5.4.3. Mandibular Nerve Block

5.5. Head Blocks II
- 5.5.1. Ophthalmic Blocks
- 5.5.2. Pinna Blocks

5.6. Forelimb Blocks
- 5.6.1. Anatomical Introduction
- 5.6.2. Paravertebral Brachial Plexus Block
- 5.6.3. Subscapularis Brachial Plexus Block
- 5.6.4. Axillary Brachial Plexus Block
- 5.6.5. RUMM Block

5.7. Trunk Blocks I
- 5.7.1. Intercostal Blocks
- 5.7.2. Serratus Block
- 5.7.3. Pleural Instillation

5.8. Trunk Blocks II
- 5.8.1. Quadratus Lumborum Block
- 5.8.2. Transverse Abdominal Block
- 5.8.3. Peritoneal Instillation

5.9. Rear Limb Blocks
- 5.9.1. Anatomical Introduction
- 5.9.2. Sciatic Nerve Block
- 5.9.3. Femoral Nerve Block

5.10. Epidural
- 5.10.1. Anatomical Introduction
- 5.10.2. Epidural Space Location
- 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. Blood Pressure
- 6.3.1. Introduction to Blood Pressure Physiology
- 6.3.2. Blood Pressure Measurement Methods
- 6.3.3. Non-Invasive Blood Pressure
- 6.3.4. Invasive Blood 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 Gas Test

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. Introduction to the Physiology of Intraoperative Nociception
- 6.9.2. Nociception Monitoring with 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 Electrocardiogram Disturbances
- 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. Post-Anesthetic Tracheitis
- 7.10.3. Post-Anesthetic Cognitive Dysfunction

Module 8. Anesthetic Management in Specific Situations I

8.1. Anesthesia in Elderly Patients
- 8.1.1. Aspects to Consider
- 8.1.2.. Postoperative Management
- 8.1.3. Anesthetic Management
- 8.1.4. Postoperative Care

8.2. Anesthesia in Pediatric Patients
- 8.2.1. Aspects to Consider
- 8.2.2. Postoperative Management
- 8.2.3. Anesthetic Management
- 8.2.4. Postoperative Care

8.3. Anesthesia in Patients with Cardiovascular Diseases I (Congenital Heart Disease)
- 8.3.1. Aspects to Consider
- 8.3.2. Postoperative Management
- 8.3.3. Anesthetic Management
- 8.3.4. Postoperative Care

8.4. Anesthesia in Patients with Cardiovascular Diseases II (Acquired Heart Disease)
- 8.4.1. Aspects to Consider
- 8.4.2. Postoperative Management
- 8.4.3. Anesthetic Management
- 8.4.4. Postoperative Care

8.5. Anesthesia for Patients with Thyroid Diseases
- 8.5.1. Hypothyroid Patient
  - 8.5.1.1. Aspects to Consider
  - 8.5.1.2. Postoperative Management
  - 8.5.1.3. Anesthetic Management
  - 8.5.1.4. Postoperative Care
- 8.5.2. Hypothyroid Patient
  - 8.5.2.1. Aspects to Consider
  - 8.5.2.2. Postoperative Management
  - 8.5.2.3. Anesthetic Management
  - 8.5.2.4. Postoperative Care

8.6. Anesthesia for Patients with Adrenal Diseases
- 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. Postoperative Care
- 8.6.2. Patient with Hyperadrenocorticism
  - 8.6.2.1. Aspects to Consider
  - 8.6.2.2. Postoperative Management
  - 8.6.2.3. Anesthetic Management
  - 8.6.2.4. Postoperative Care

8.7. Anesthesia in Diabetic Patients
- 8.7.1. Aspects to Consider
- 8.7.2. Postoperative Management
- 8.7.3. Anesthetic Management
- 8.7.4. Postoperative Care

8.8. Anesthesia for Patients with Digestive System Diseases I
- 8.8.1. Aspects to Consider
- 8.8.2. Postoperative Management
- 8.8.3. Anesthetic Management
- 8.8.4. Postoperative Care

8.9. Anesthesia in Patients with Digestive System Diseases II (Hepatobiliary System)
- 8.9.1. Aspects to Consider
- 8.9.2. Postoperative Management
- 8.9.3. Anesthetic Management
- 8.9.4. Postoperative Care

8.10. Anesthesia for Patients with Neurological Disease
- 8.10.1. Aspects to Consider
- 8.10.2. Postoperative Management
- 8.10.3. Anesthetic Management
- 8.10.4. Postoperative Care

Module 9. Anesthetic Management in Specific Situations II

9.1. Anesthesia for Patients with Respiratory System Diseases
- 9.1.1. Aspects to Consider
- 9.1.2. Postoperative Management
- 9.1.3. Anesthetic Management
- 9.1.4. Postoperative Care

9.2. Anesthesia for Ophthalmologic Procedures
- 9.2.1. Aspects to Consider
- 9.2.2. Postoperative Management
- 9.2.3. Anesthetic Management
- 9.2.4. Postoperative Care

9.3. Anesthesia for Endoscopic and Laparoscopic Procedures
- 9.3.1. Aspects to Consider
- 9.3.2. Postoperative Management
- 9.3.3. Anesthetic Management
- 9.3.4. Postoperative Care

9.4. Anesthesia in Patients with Bodily Disorders (Obesity, Cachexia)
- 9.4.1. Obese Patient
  - 9.4.1.1. Aspects to Consider
  - 9.4.1.2. Postoperative Management
  - 9.4.1.3. Anesthetic Management
  - 9.4.1.4. Postoperative Care

9.4.2. Cachectic Patient
9.4.2.1. Aspects to Consider
9.4.2.2. Postoperative Management
9.4.2.3. Anesthetic Management
9.4.2.4. Postoperative Care
9.5. Anesthesia in Brachiocephalic Patients
9.5.1. Aspects to Consider
9.5.2. Postoperative Management
9.5.3. Anesthetic Management
9.5.4. Postoperative Care
9.6. Anesthesia in Patients with Extreme Sizes (Miniature vs. Giant Patients)
9.6.1. Aspects to Consider
9.6.2. Postoperative Management
9.6.3. Anesthetic Management
9.6.4. Postoperative Care
9.7. Anesthesia for Patients with Genitourinary System Diseases: Pyometra, Urinary Obstruction
9.7.1. Aspects to Consider
9.7.2. Postoperative Management
9.7.3. Anesthetic Management
9.7.4. Postoperative Care
9.8. Anesthesia in Pregnant Patients and for Cesarean Section
9.8.1. Aspects to Consider
9.8.2. Postoperative Management
9.8.3. Anesthetic Management
9.8.4. Postoperative 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. Postoperative Care
9.10. Anesthesia in Thoracic Surgery
9.10.1. Aspects to Consider
9.10.2. Postoperative Management
9.10.3. Anesthetic Management
9.10.4. Postoperative Care

Module 10. Anesthetic Management in Specific Situations III

10.1. Hemoabdomen
10.1.1. Aspects to Consider
10.1.2. Postoperative Management
10.1.3. Anesthetic Management
10.1.4. Postoperative Care
10.2. Ovariohysterectomy and Orchiectomy in Healthy Patients
10.2.1. Aspects to Consider
10.2.2. Postoperative Management
10.2.3. Anesthetic Management
10.2.4. Postoperative Care
10.3. Sedation Procedures in the Hospitalized Patient
10.3.1. Aspects to Consider
10.3.2. Postoperative Management
10.3.3. Anesthetic Management
10.3.4. Postoperative Care
10.4. Pulmonary Lobectomy
10.4.1. Aspects to Consider
10.4.2. Postoperative Management
10.4.3. Anesthetic Management
10.4.4. Postoperative Care
10.5. Feline Anesthetic Management
10.5.1. Aspects to Consider
10.5.2. Postoperative Management
10.5.3. Anesthetic Management
10.5.4. Postoperative Care

10.6. Anesthesia for Imaging Procedures
- 10.6.1. Aspects to Consider
- 10.6.2. Postoperative Management
- 10.6.3. Anesthetic Management
- 10.6.4. Postoperative Care

10.7. Enterotomy and Enterectomy
- 10.7.1. Aspects to Consider
- 10.7.2. Postoperative Management
- 10.7.3. Anesthetic Management
- 10.7.4. Postoperative Care

10.8. Perineal Hernia
- 10.8.1. Aspects to Consider
- 10.8.2. Postoperative Management
- 10.8.3. Anesthetic Management
- 10.8.4. Postoperative Care

10.9. Cutaneous Tumor Excision and Dermatologic Surgery (e.g., Mastocytoma)
- 10.9.1. Aspects to Consider
- 10.9.2. Postoperative Management
- 10.9.3. Anesthetic Management
- 10.9.4. Postoperative Care

10.10. Anesthesia for Dentistry and Maxillofacial Surgery
- 10.10.1. Aspects to Consider
- 10.10.2. Postoperative Management
- 10.10.3. Anesthetic Management
- 10.10.4. Postoperative Care

You will have the most up-to-date material on the market, taught by a team of experts from the veterinary elite"

06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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

At TECH we use the Case Method

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

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

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

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

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

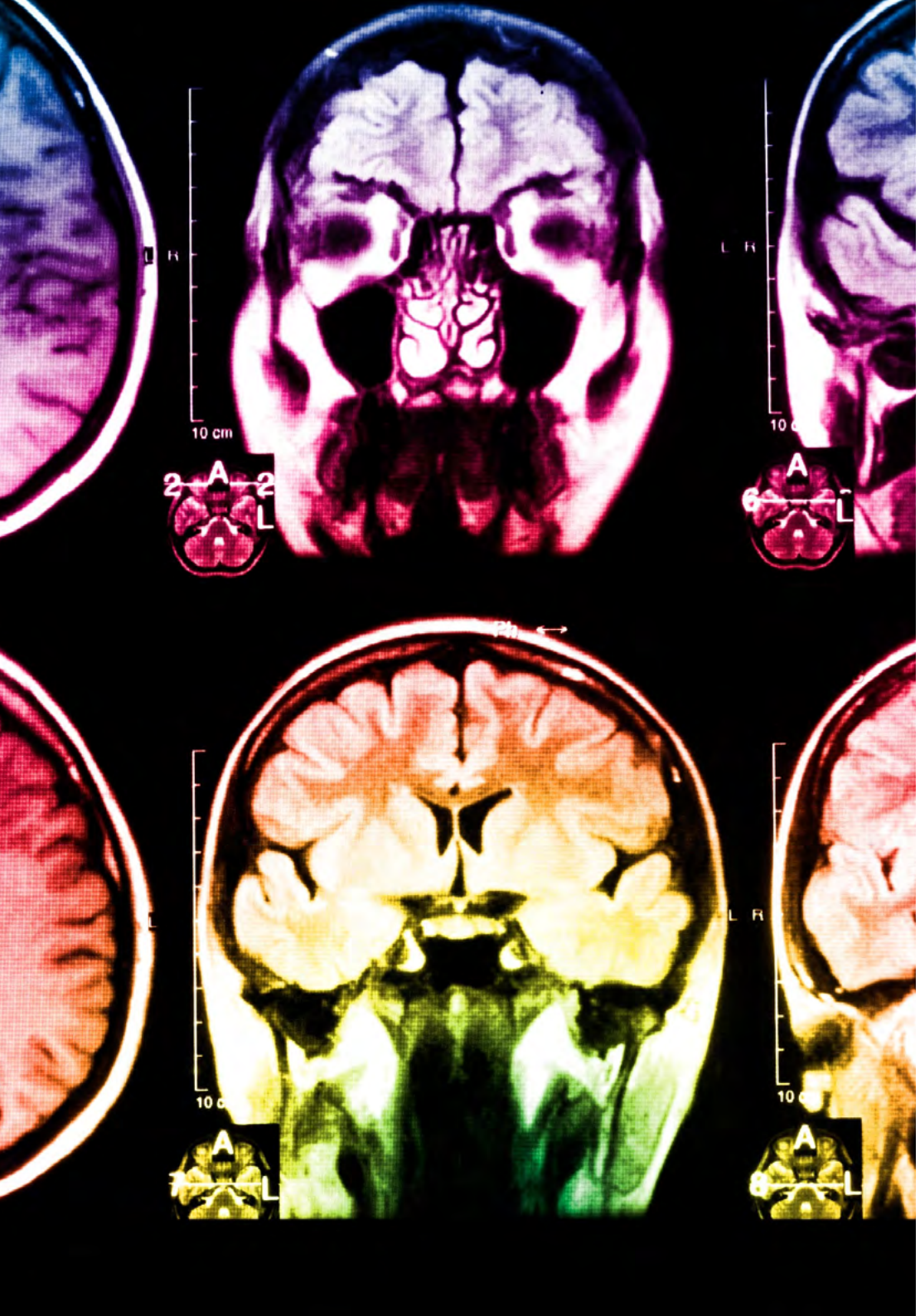
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real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

Relearning Methodology

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

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

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



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

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

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

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

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

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

Study Material

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

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

Latest Techniques and Procedures on Video

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

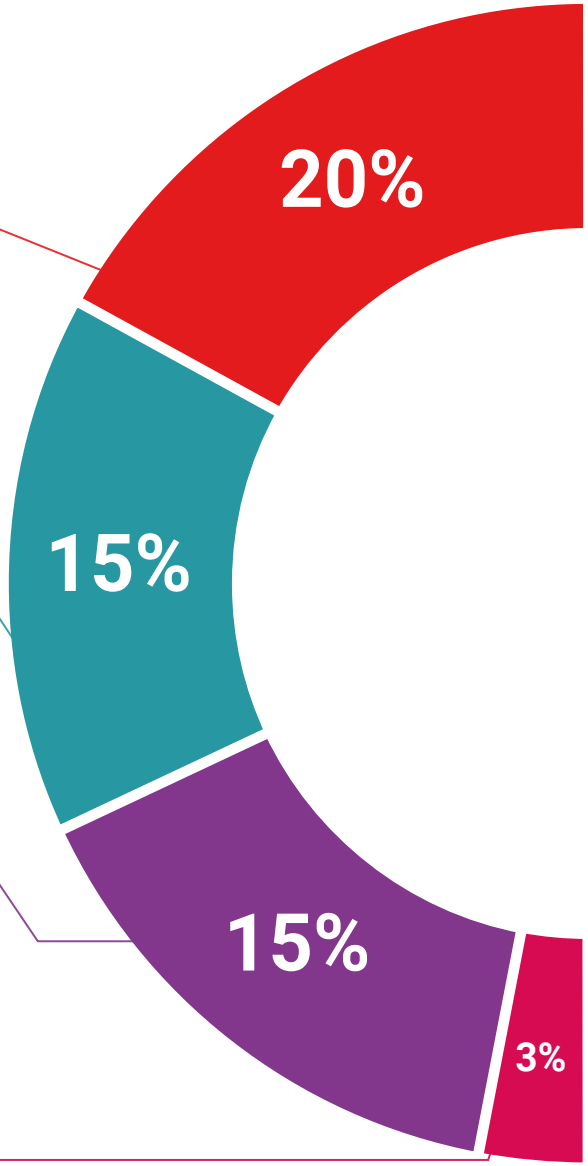
Interactive Summaries

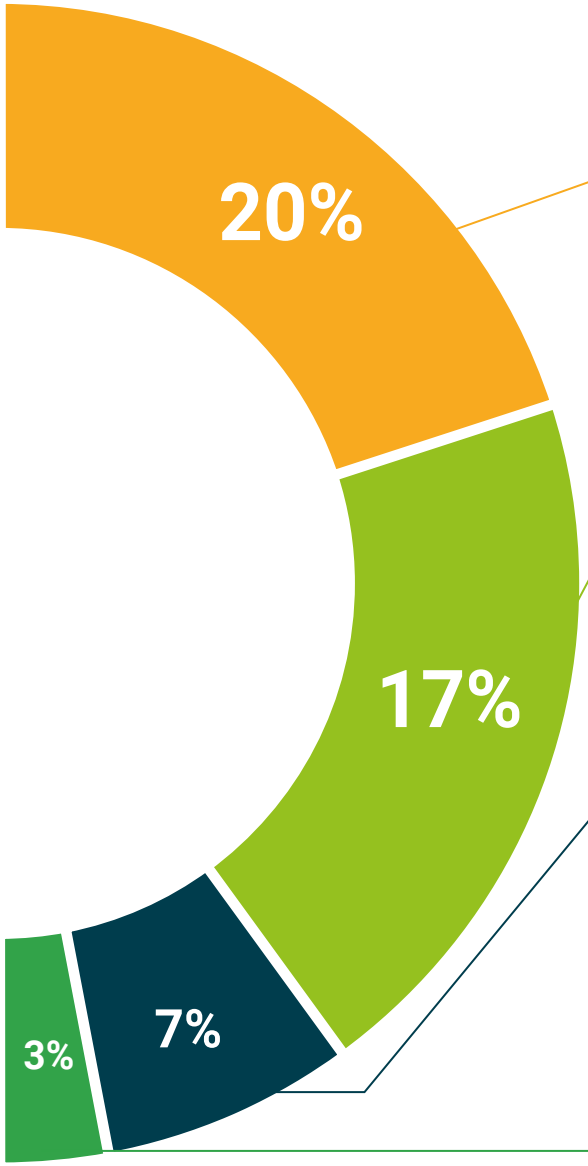
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

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

Testing & Retesting

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

Classes

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

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

Quick Action Guides

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

07

Certificate

The TECH Master's Degree in Veterinary Anesthesiology guarantees students, in addition to the most rigorous and updated education, access to a Professional Master's Degree issued by the TECH Technological University.University.

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

This **Professional Master's Degree in Veterinary Anesthesiology** contains the most complete and up-to-dated program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

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

Official Nº of hours: **1,500 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Veterinary Anesthesiology

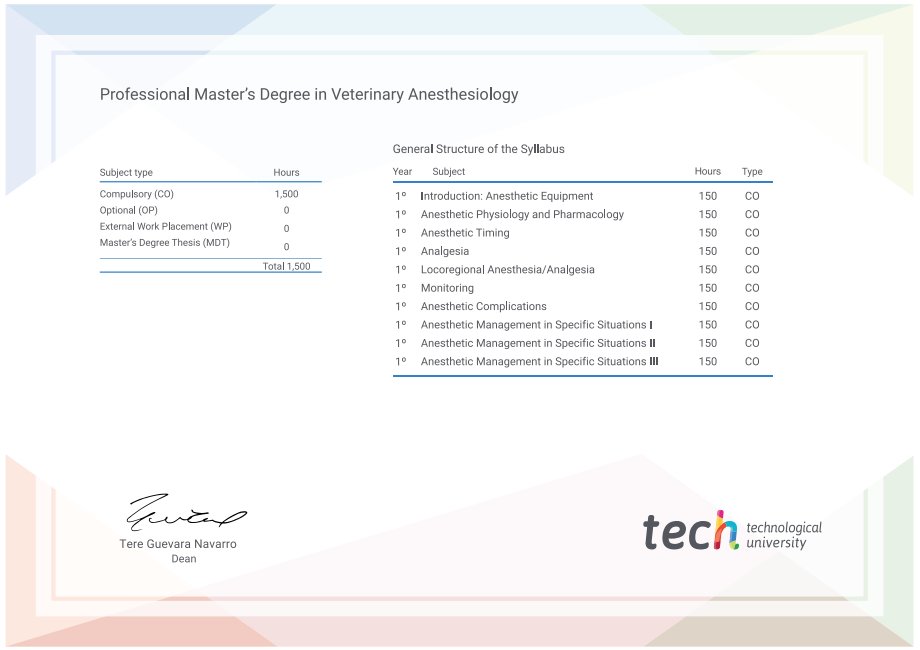
This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Veterinary Anesthesiology

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Introduction: Anesthetic Equipment	150	CO
1º	Anesthetic Physiology and Pharmacology	150	CO
1º	Anesthetic Timing	150	CO
1º	Analgesia	150	CO
1º	Locoregional Anesthesia/Analgesia	150	CO
1º	Monitoring	150	CO
1º	Anesthetic Complications	150	CO
1º	Anesthetic Management in Specific Situations I	150	CO
1º	Anesthetic Management in Specific Situations II	150	CO
1º	Anesthetic Management in Specific Situations III	150	CO

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Dean

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

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Professional Master's Degree
Veterinary Anesthesiology

Course Modality: **Online**
Duration: **12 months**
Certificate: **TECH Technological University**
Official Nº of hours: **1,500 h.**

Professional Master's Degree
Veterinary Anesthesiology

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