

Postgraduate Certificate

Small Animal Neurosurgery: Anesthesia and Analgesia





Postgraduate Certificate Small Animal Neurosurgery: Anesthesia and Analgesia

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/pk/veterinary-medicine/postgraduate-certificate/small-animal-neurosurgery-anesthesia-analgesia

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01

Introduction

This complete Postgraduate Certificate addresses all the pathologies that require surgical intervention, emphasizing the learning of the most up-to-date forms and procedures, the different techniques and applications that promote a higher success rate. An ability that requires mastery of the patient's anesthesia and analgesia, as well as recovery from surgery and rehabilitation.





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A high-quality study that will allow you to know extensively the novelties that small animal neurosurgery has incorporated to its performance"

Neurosurgery is a fundamental part of learning veterinary neurology, since a large number of processes must be treated and approached surgically for their correct evolution. Surgeries as frequent in this specialty as the resolution of herniated discs or vertebral dislocations are the day-to-day of this specialty, being familiar with the approaches, anatomy and surgical technique.

It is equally or even more important to plan the procedure and carry out the most appropriate anesthetic protocols for each case, knowing the pathophysiology of the disease and the most appropriate drugs and doses for each case.

In the postoperative period, correct management of the patient's pain is especially important. To this end, we have structured in this module a unit that deals in depth with physiotherapy and rehabilitation, fundamental therapies in neurological processes and in the good results of the cases.

"The safe and effective management of anesthesia, the different techniques and their suitability in each case, in a high-quality course"



"A study that includes knowledge of the anatomy and physiology of the nervous system, brain or spinal cord"

This Postgraduate Certificate offers you the characteristics of a high-level scientific, educational and technological course. These are some of its most notable features:

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

The units and clinical cases proposed, as well as their resolution, are based on both the teachers' practical experience and on the latest advances in research and development that contribute to this field of work.

All information is presented through high-quality multimedia content, analysis of clinical cases prepared by teachers, master classes and video techniques that allow the exchange of knowledge and experience, maintain and update the skill level of its members, create protocols for action and disseminate the most important developments in the emergencies within medicine of small animals.

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 update we are aiming for. A multidisciplinary team of professionals trained and experienced in different environments, who will cover the theoretical knowledge in an efficient way, but, above all, will put the practical knowledge derived from their own experience at the service of the course: one of the differential qualities of this course.

This mastery of the subject is complemented by the effectiveness of the methodology used in the design of this course. 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: 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 actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

A study that integrates the most current knowledge of the sector with the direct experience of the teachers who give the course, in a successful tandem.

Intensive and flexible, this course will propel you to a higher level of safety in your intervention.



02 Objectives

A comprehensive study that will update students in Small Animal Neurosurgery: Anesthesia and Analgesia, in an intensive and quality manner. The objective is for students to generate specialized knowledge, creating a well-structured base to be able to work applying the latest techniques in neurosurgery in everything related to the operating environment.





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Include in your skills the most advanced knowledge in all the moments involved in small animal neurosurgery, including anesthesia, analgesia, recovery and rehabilitation"



General Objectives

- ♦ Structure the different anesthetic protocols in neurosurgery.
- ♦ Identify the different pathologies that require surgical intervention, as well as their technique
- ♦ Propose the appropriate analgesic management for each case.
- ♦ Define the fundamentals of rehabilitation, its indications and the most appropriate techniques for each case.

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Providing better care in the field of neurology will result in the growth of quality care for your patients that today's pet owners demand"





Specific Objectives

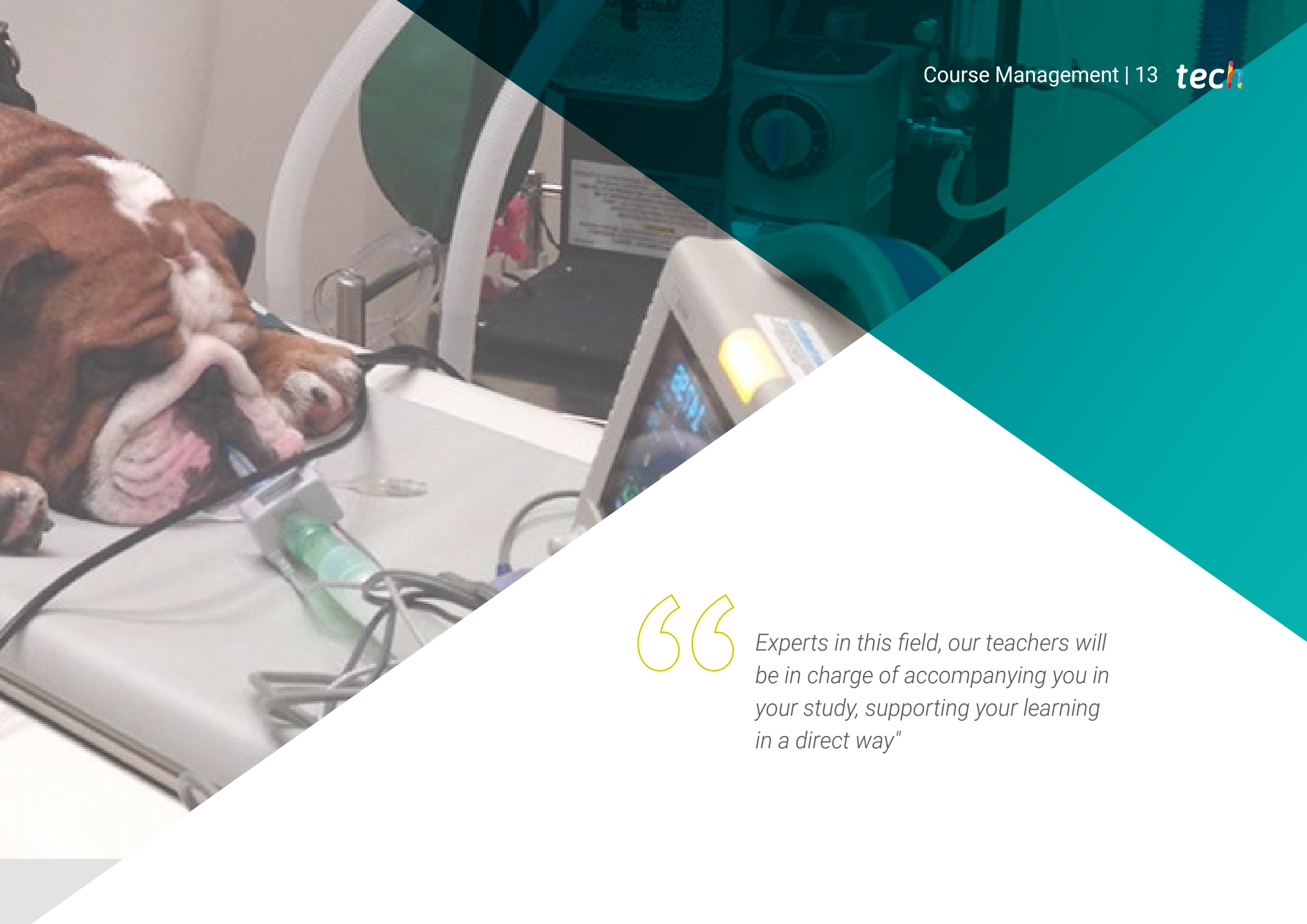
- ◆ Define types and protocols of the different procedures in neurosurgery.
- ◆ Determine the types and indications for analgesia in neurological patients.
- ◆ Examine the basic principles of neurosurgery.
- ◆ Address the techniques necessary to perform surgery for herniated discs, vertebral fractures and dislocations.
- ◆ Present and discuss the concepts and techniques of intracranial surgery and oncologic surgery
- ◆ Structure correct physiotherapy plans for neurological patients

03

Course Management

Through a rigorous selection process, we are able to provide students with a teaching staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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Experts in this field, our teachers will be in charge of accompanying you in your study, supporting your learning in a direct way”

Director Invitado Internacional

Dr. Steven de Decker's interest in the field of Veterinary Neurology has led him to be one of the most important figures in this area worldwide. He has participated in several international congresses, including the Singapore Vet Show, the largest veterinary conference in the Asian continent.

Such is his relevance that he has become president of the British Society of Veterinary Neurology. He is also a senior lecturer and head of the Neurology and Neurosurgery service at the Royal Veterinary College, considered one of the best veterinary institutions in the world.

His main area of research is spinal disorders and neurosurgery, having delved into the diagnosis and treatment of cervical disc-associated spondylomyelopathy or Wobbler's syndrome in dogs. His most cited studies deal with the prevalence of thoracic vertebral malformations, meningoencephalomyelitis of unknown origin and spinal arachnoid diverticula in dogs.



Dr. De Decker, Steven

- Head of Neurology and Neurosurgery Service, Royal Veterinary College - Hertfordshire, United Kingdom
- Head and Professor of the Neurology and Neurosurgery Service of the Royal Veterinary College - Hertfordshire, UK
- Past President of the British Veterinary Neurological Society.
- Doctor of Veterinary Neurology and Neurosurgery, University of Ghent, Belgium
- Graduate of the University of Ghent, Belgium

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Gracias a TECH podrás aprender con los mejores profesionales del mundo”

Management



Dr. Moya García, Sergio

- Doctoral candidate with the Chair of Surgery at the Faculty of Veterinary Medicine of Córdoba
- Miembro de Royal Collage Veterinary Surgeon (MRCVS)
- Member of the Endoscopy Group (GEA) of the Association of Veterinary Specialists in Small Animals (GEA-AVEPA) and of the Association of Veterinary Specialists in Minimally Invasive Medicine (AEVMI) and of the Neurology Group of AVEPA
- Vocal of Small Animals of the Official College of Veterinarians of Malaga since 2014
- Head of ATV training for AVEPA. Postgraduate in Neurology by the European School of Veterinary Studies Postgraduate (ESVP) Master's Degree in Clinical and Therapeutic Research from the University of Las Palmas de Gran Canaria
- Veterinary Specialist Degree in Endoscopy and Minimally Invasive Surgery by the University of Extremadura
- Assistance Director of the Vetsalud Dr. Moya Day Hospital and Head of the Neurology Department of the Bluecare Animal Hospital
- Currently pursuing neurology accreditation by AVEP

Professors

Dr. Christian Mauricio Gómez Álvarez

- ♦ Veterinarian Doctor Universidad de La Salle (ULS)
- ♦ More than 10 years of experience in Clinical Neurology.
- ♦ Master's Degree (MSc) in Physiology UNAL
- ♦ ACVIM-Neurology Course Neuroimaging, Neuropathology and Electrophysiology 2020
- ♦ Ohio State University Braincamp Course in Neurología y Neurociencias 2016.
- ♦ Postgraduate Course in Advanced Clinical Neurology, UCASAL, Argentina
- ♦ Clinical Neurology Fellowship, University of Montreal, Canada.

Dr. Teresa Mangas Ballester

- ♦ Degree in Veterinary Medicine from the University of Extremadura (2009)..
- ♦ Since 2017 she has been working as Head of the Anesthesia Service at AniCura Valencia Sur Veterinary Hospital..
- ♦ Later she worked as a resident intern at the Hospital Clínico Veterinario de la Universidad Complutense for 3 years.
- ♦ In 2015 she started working at the Jesús Usón Minimally Invasive Surgery Center, as a researcher in the Anesthesiology Unit.
- ♦ There, in addition to participating as a professor in the official university Master's Degree in endoscopy and minimally invasive surgery in small animals and courses in small animal anesthesia, she participated in several research projects..
- ♦ During his professional career, he has made stays in hospitals in Europe and North America, as well as participating in several publications and communications in congresses..

Dr. Jorge Antonio Luque Garrido.

- ♦ Diploma in Acupuncture and Traditional Chinese Medicine at IVAS Barcelona 2006.
- ♦ Trained in Rehabilitation and Physiotherapy at FORVET (Madrid) 2007.
- ♦ Certificate in Rehabilitation and Physiotherapy at ESAVS Vienna (Austria) 2009.
- ♦ Certificate in Chiropractic at AIQA Malaga. 2010.
- ♦ Specialist in Veterinary Sports Medicine at CRI. Zurich (Switzerland) 2014
- ♦ Veterinarian and co-owner of Clínicas Vetersalud El Dogo Azul. Marbella
- ♦ Medical Director of the Rehavet Sport veterinary rehabilitation center. Veterinary in
- ♦ Collaborating Professor in the Master of Physiotherapy and Rehabilitation at UCM from 2012 to 2020,
- ♦ Collaborating Professor in Rehabilitation Courses for veterinarians at FORVET.
- ♦ Collaborating Professor in the IVAS Acupuncture Diploma Courses.
- ♦ Speaker at various AVEPA specialty congresses, lectures and specialized seminars on rehabilitation and sports medicine, both nationally and internationally..
- ♦ Member of ISDVMA, VEPRA, IVAS, AVEPA, AMVEAC ,AARV.



An teaching staff made up of specialists from different areas of expertise, will be your teachers during your training: A unique opportunity not to be missed"

04

Structure and Content

Through a comprehensive syllabus, the student will cover all the essential topics proposed, gradually acquiring the skills required to put the necessary knowledge into practice. A very well-developed learning structure that will allow you to learn in a continuous, efficient way and which is tailored to your needs.

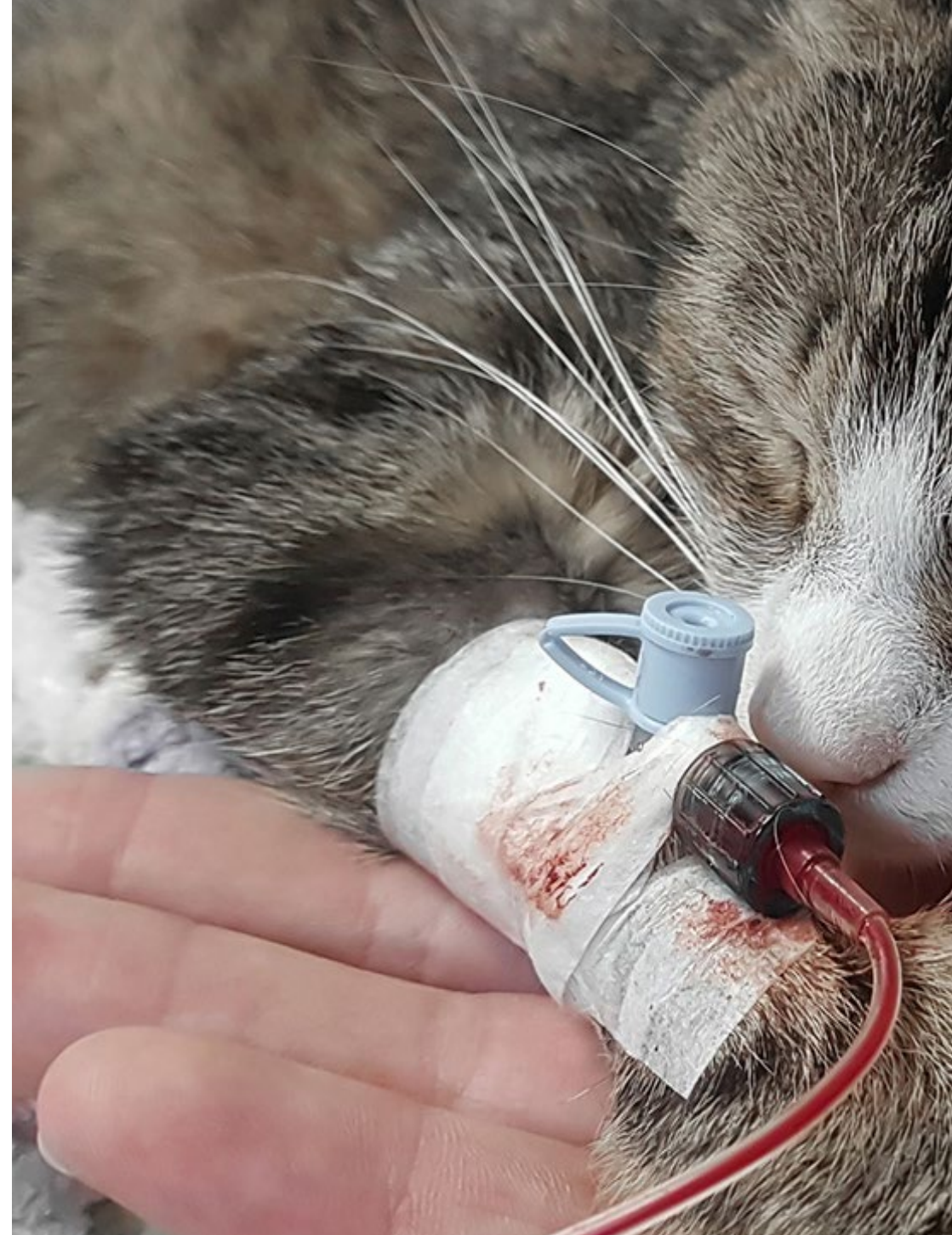


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A constant learning development that converts theoretical study into real working skills.”

Module 1. Anesthesia, Analgesia and Neurosurgery

- 1.1. Anesthesia in Neurological Patients
 - 1.1.1. Types of Anesthetic Agents
 - 1.1.2. Protocols of the Different Procedures
- 1.2. Analgesia in Neurological Patients
 - 1.2.1. Types
 - 1.2.2. Indications
- 1.3. Neurosurgery
 - 1.3.1. Patient Preparation
 - 1.3.2. Material
- 1.4. Herniated Cervical Disc
 - 1.4.1. Surgical Approach and Technique
- 1.5. Thoracolumbar Disc Herniation
 - 1.5.1. Approach and Surgical Techniques
- 1.6. Atlantoaxial Dislocation and Caudal Cervical Spondylomyelopathy
 - 1.6.1. Atlantoaxial Dislocation. Surgical Approach and Technique
 - 1.6.2. Caudal Cervical Spondylomyelopathy. Surgical Approach and Technique
- 1.7. Fractures, Vertebral Dislocations, Vertebral Diverticulum and Vertebral Malformations
 - 1.7.1. Vertebral Fractures, Surgical Approach and Resolution
 - 1.7.2. Vertebral Dislocations, Surgical Approach and Resolution
 - 1.7.3. Arachnoid Diverticulum, Surgical Approach and Resolution
 - 1.7.4. Vertebral Malformations, Types and Medical Management
- 1.8. Principles of Intracranial Surgery
 - 1.8.1. Indications
 - 1.8.2. Approach
 - 1.8.3. Surgical Technique





- 1.9. Surgery in Spinal and Intracranial Neoplasia
 - 1.9.1. Approach
 - 1.9.2. Surgical Technique
- 1.10. Rehabilitation
 - 1.10.1. Practical Application in Neurological Patients
 - 1.10.2. Kinesiotherapy
 - 1.10.3. Laser Therapy
 - 1.10.4. Hydrotherapy
 - 1.10.5. Electrostimulation

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Stimulating and engaging, the course will make you grow in your profession with the convenience of the best online system on the market”

05

Methodology

This training provides you with a different way of learning. Our methodology follows a cyclical learning process: **Relearning**.

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





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

At TECH we use the Case Method

In a given clinical situation, what should a professional do? 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 can 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 potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional veterinary 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 achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
2. The learning process has a clear focus on 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. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the program.



Relearning Methodology

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

Our 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, which represent a real revolution with respect to simply studying and analyzing 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 we have trained more than 65,000 veterinarians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong 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 specialization, developing a critical mindset, defending arguments, and contrasting opinions: A direct equation to success.

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

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



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Latest Techniques and Procedures on Video

We bring you closer to the latest Techniques, to the latest Educational Advances, to the forefront of current Veterinary Techniques and Procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, students can watch them as many times as they want.



Interactive Summaries

We present 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, international guides... in our 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, we will present students with real case developments in which the expert will guide them through 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 your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your 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 our future difficult decisions.



Quick Action Guides

We offer students 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.



06

Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.





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Include a Postgraduate Certificate in Small Animal Neurology: Anesthesia and Analgesia on your professional profile, a high-quality added value for any professional in this field"

This **Postgraduate Certificate in Small Animal Neurosurgery: Anesthesia and Analgesia** contains the most complete and up-to-date scientific program on the market.

After the students has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professionals from career evaluation committees.

Title: **Postgraduate Certificate in Small Animal Neurosurgery: Anesthesia and Analgesia**

ECTS: 6

Official Number of Hours: **150**



*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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