

Postgraduate Certificate

Bone Plates and Screws



Postgraduate Certificate Bone Plates and Screws

- » Modality: Online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/veterinary/postgraduate-certificate/bone-plates-screws

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

In the last 20 years, fracture fixation using rigid internal fixation implants, such as plates, has evolved enormously. It is possible to speak of eight or nine different systems of fracture fixation, the most widely recognized, by means of plates. Therefore, it is essential for professionals to specialize in this field.





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*This program is the best option you can find
to specialize in Bone Plates and Screws”*

The teaching team of this Postgraduate Certificate in Bone Plates and Screws has made a careful selection of the different state-of-the-art techniques for experienced professionals working in the veterinary field. This program focuses on the most widely used fixation methods worldwide.

The universal system in the use of plates and screws was established by the Orthopedic Association and the Association for the Study of Internal Fixation in the 1970s. It is a universal system in which stainless steel is used, since the screws used 50 years ago compressed the plate on the bone surface. It is now known that this type of fixation causes great damage to the bone surface and bone necrosis underneath the implant.

Locked plates and minimal contact plates provide a biological rigid internal fixation, which means that there is little or no interference in the perfusion of the periosteal irrigation. This is how the Advanced Locked Plate System was created, that is, the combination of the minimum contact of the plate with the bone, in addition to the locking of the screw, taking into account that, when we speak of locking, we are referring to the fact that the screw is fixed to the plate by means of a string or thread.

The teachers of this program are university professors, with between 10 and 50 years of classroom and hospital experience. They are professors from schools from different continents, with different ways of performing surgery and with surgical techniques of worldwide recognition. This makes this Postgraduate Certificate a unique specialization program, different from those offered at this time by other universities.

As it is an online program, the student is not constrained by fixed schedules or the need to move to another physical location, but rather, they can access the contents at any time of the day, allowing them to balance their professional or personal life with their academic life as they please.

This **Postgraduate Certificate in Bone Plates and Screws** contains the most complete and up to date academic program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Bone Plates and Screws
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Latest developments in Bone Plates and Screws
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Special emphasis on innovative methodologies in Bone Plates and Screws
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



Don't miss the opportunity to take this Postgraduate Certificate in Bone Plates and Screws. It is the perfect opportunity to advance your career"

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This Postgraduate Certificate is the best investment you can make in selecting a refresher program to update your knowledge in Bone Plates and Screws”

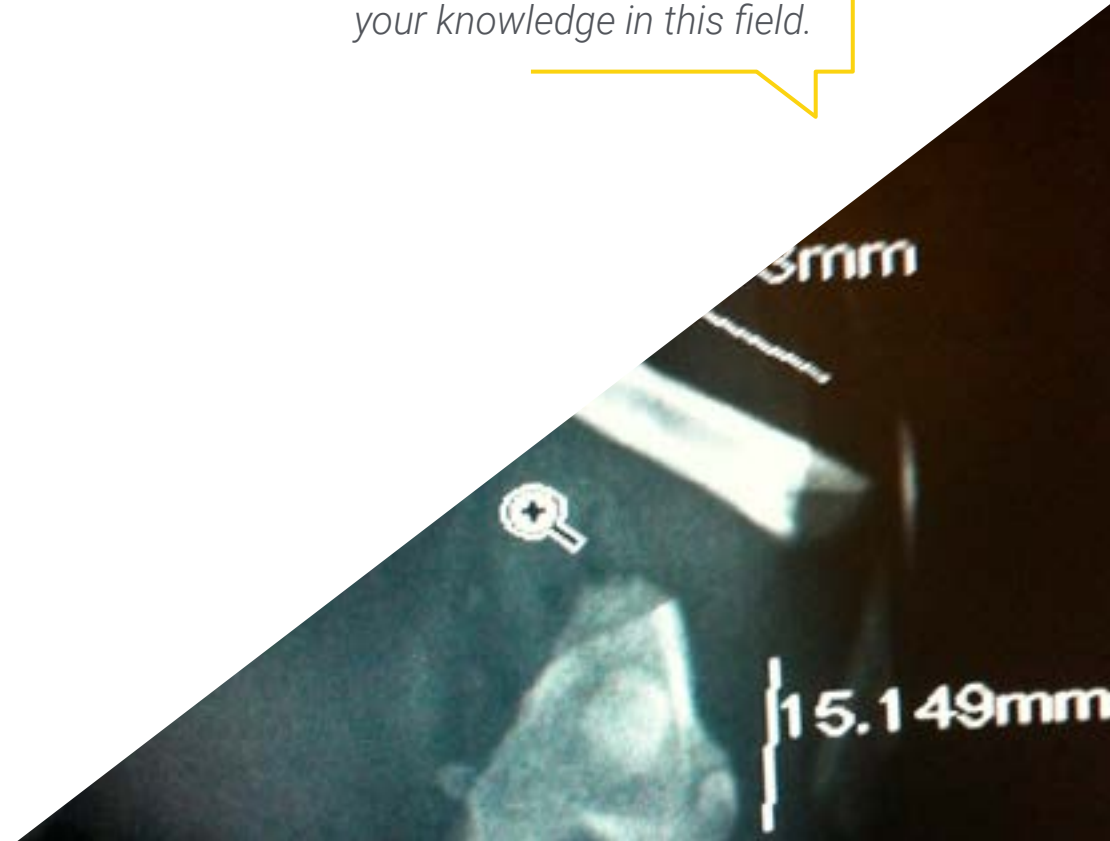
Its teaching staff includes professionals belonging to the veterinary field, who contribute their expertise to this program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the specialist must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Bone Plates and Screws.

This program has the best teaching material, which will enable a contextual study that will facilitate your learning.

This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work while expanding your knowledge in this field.



02 Objectives

The Postgraduate Certificate in Plates and Screws for Bones is oriented to facilitate the performance of the professional with the latest advances in the sector.



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*This is the best option to know
the main developments in Bone
Plates and Screws”*



General Objectives

- ♦ Examine the evolution of internal fixation with plates over the last 50 years
- ♦ Determine the characteristics of each of the most important systems used in the world
- ♦ Classify the different plate fixation systems for osteosynthesis in dogs and cats, in terms of form, size and function



A path of learning and professional growth that will propel you towards greater competitiveness in the labor market"





Specific Objectives

- ♦ Develop specialist judgment in the use of any of the systems covered in this module to decide which is the optimal fracture verification system for daily practice in dogs and cats
- ♦ Identify the main advantages and disadvantages of each of the plate fixation methods
- ♦ Evaluate the rope or conical locking systems in each of the plate fastening systems
- ♦ Determine the instrumentation required for the application of each implant
- ♦ Make the best decision for each of the most common fractures on the best plate fixation system
- ♦ Decide on the optimal system to be used for different developmental conditions that cause angulations or abnormalities of bones and joints

03

Course Management

The program includes in its teaching staff reference experts in Veterinary Traumatology and Orthopedic Surgery who pour into this training the experience of their work. They are world-renowned doctors from different countries with proven theoretical and practical professional experience.





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*Our teaching team will help you
achieve professional success”*

Management



Dr. Soutullo Esperón, Ángel

- Veterinarian Specialist in Animal Traumatology
- Responsible for the Orthopedic Surgery Service in the Hospitals Fuente el Saz, Prívet, Alcor, Velázquez, Valdemoro and Felino Gattos
- Owner of ITECA Veterinary Clinic
- Degree in Veterinary Medicine from the Complutense University of Madrid
- Master's Degree in Surgery and Traumatology from the Complutense University of Madrid
- Diploma of advanced studies in Veterinary Medicine from the Complutense University of Madrid
- Member of GEVO and AVEPA Scientific Committee
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Professors

Dr. Borja Vega, Alonso

- ♦ Head of the Surgery and Ophthalmology Department at Vet 2.0 Veterinary Clinic
Founder of Vet 2.0 Veterinary Clinic
- ♦ Degree in Veterinary Medicine from the Alfonso X El Sabio University
- ♦ Master's Degree in Veterinary Ophthalmology, UAB
- ♦ Advanced General Practitioner Certificate (GPAdvCert) in Small Animal Orthopedic Surgery
Practical initiation course in Osteosynthesis, SETOV

Dr. García Montero, Javier

- ♦ Surgeon in the Traumatology and Orthopedics Service at the Cruz Verde Vetsum Veterinary Hospital
Veterinary specialist at El Pinar Veterinary Clinic
- ♦ Degree in Veterinary Medicine from the University of Cordoba
Postgraduate Degree in Traumatology and Orthopedics in Small Animals at the Complutense University of Madrid
- ♦ Postgraduate Degree in Surgery and Anesthesia at the Autonomous University of Barcelona
Member of AO VET Foundation

Dr. Guerrero Campuzano, María Luisa

- ♦ Director of the Veterinary Clinic Petiberia
Bird Veterinarian at Puy du Fou Spain
Veterinarian at Oasis Wildlife Fuerteventura Zoo
- ♦ Animal Technician at the Spanish National Cancer Research Center (CNIO)
Volunteer in the Feline Colony Spay/Neuter Campaign at ALBA Animal Protection Society
Co-author of clinical trials and scientific knowledge pills
- ♦ Degree in Veterinary Medicine from the University Alfonso X El Sabio

Master's Degree in Soft Tissue Surgery and Anesthesia in Small Animals from the Autonomous University of Barcelona

Master's Degree in Exotic and Wild Animal Medicine and Surgery from the Complutense University of Madrid

Member of AVEPA and GMCAE

Dr. Monje Salvador, Carlos Alberto

- ♦ Head of Endoscopy and Minimally Invasive Surgery Service at ECCOA Veterinary Diagnostics
Veterinary Surgeon in Dopplervet
Responsible for Surgery and Diagnostic Imaging at Gattos Feline Clinical Center
- ♦ Veterinarian at Openvet Veterinary Hospital
Veterinary Surgeon at Unzeta Veterinary Clinic
Degree in Veterinary Medicine from the University of Santiago de Compostela
- ♦ Master's Degree in Endoscopy and Minimally Invasive Surgery in Small Animals from the University of Extremadura
Postgraduate Degree in Small Animal Surgery from the Autonomous University of Barcelona
Member of the Association of Veterinarians Specialists in Small Animals (AVEPA), the Group of Specialists in Feline Medicine AVEPA (GEMFE) and the Group of Veterinary Specialists in Traumatology and Orthopedics (GEVO)

Dr. Flores Galán, José Antonio

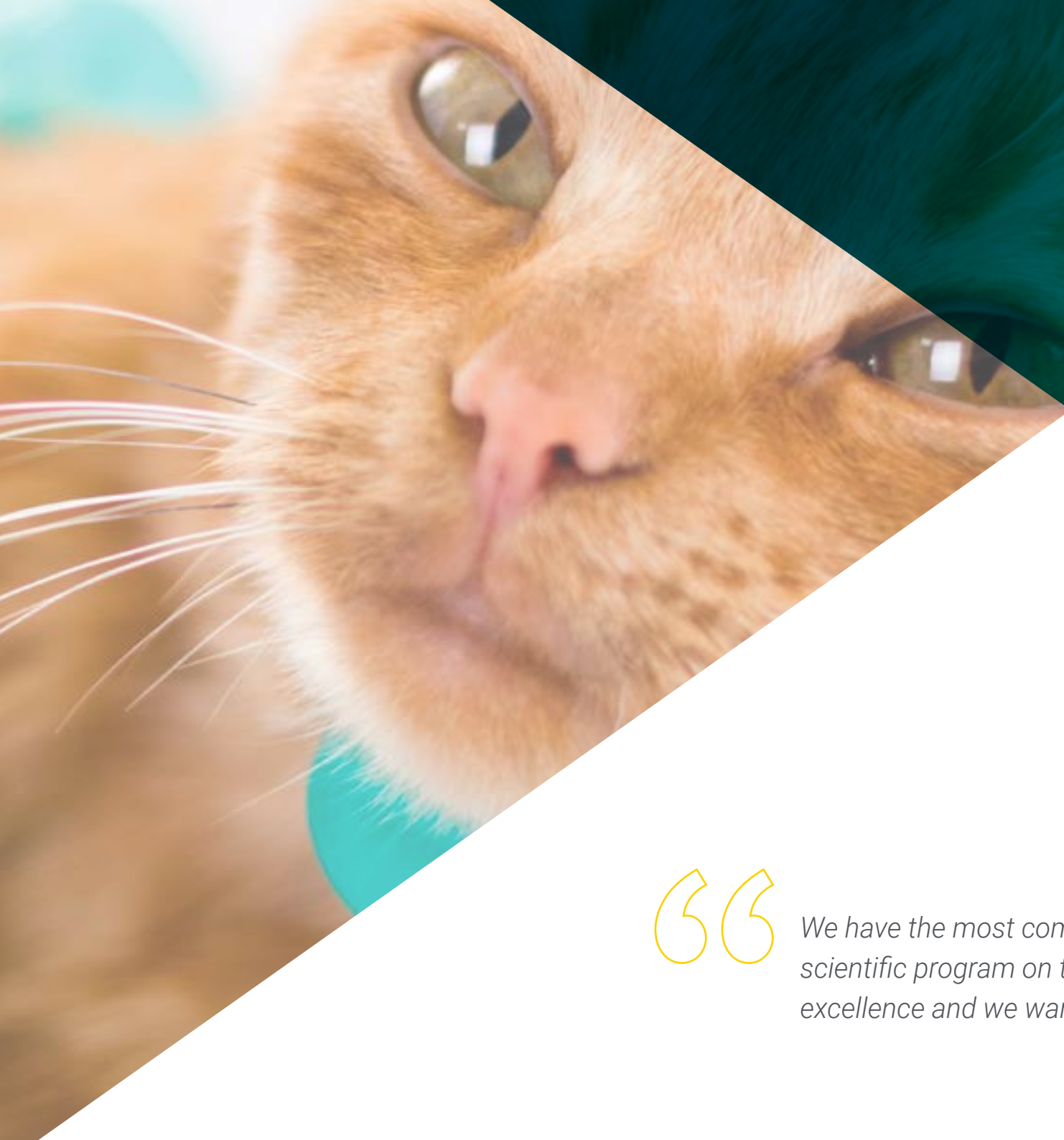
- ♦ Head of the Traumatology, Orthopedics and Neurosurgery Service at the Privet Veterinary Hospitals
- ♦ Doctor by the Complutense University of Madrid
- ♦ Degree in Veterinary Medicine from the Complutense University of Madrid
- ♦ Specialist in Traumatology and Orthopedic Surgery in Companion Animals by the Complutense University of Madrid

04

Structure and Content

The structure of the content has been designed by the best professionals in Veterinary Traumatology and Orthopedic Surgery sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to veterinary.





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We have the most complete and up-to-date scientific program on the market. We strive for excellence and we want you to achieve it too"

Module 1. Bone Plates and Screws

- 1.1. History of Metal Plates in Internal Fixing
 - 1.1.1. The Initiation of Plates for Fracture Fixation
 - 1.1.2. The World Association of Orthopedic Manufacturers (AO/ASIF)
 - 1.1.3. Sherman and Lane Plates
 - 1.1.4. Steel Plates
 - 1.1.5. Titanium Plates
 - 1.1.6. Plates of Other Materials
 - 1.1.7. Combination of Metals for New Plate Systems
- 1.2. Different Fixing Systems with Plate 8 (AO/ASIF, ALPS, FIXIN)
 - 1.2.1. AO/ASIF Plates
 - 1.2.2. Advanced Locked Plate System. (ALPS)
 - 1.2.3. FIXIN and Its Conical Block
- 1.3. Instrument Care
 - 1.3.1. Cleaning and Disinfection
 - 1.3.2. Washing
 - 1.3.3. Drying
 - 1.3.4. Lubrication
 - 1.3.5. Organization
- 1.4. Instruments Used for the Fixation of Plates and Screws
 - 1.4.1. Self-Tapping Screws and Tap Removal
 - 1.4.2. Depth Gages
 - 1.4.3. Drilling Guides
 - 1.4.4. Plate Benders and Plate Twisters
 - 1.4.5. Screw Heads
 - 1.4.6. Screws/Bolts



- 1.5. Use and Classification of Screws
 - 1.5.1. Cancellous Bone Screws
 - 1.5.2. Cortical Bone Screws
 - 1.5.3. Locked Screws/Bolts
 - 1.5.4. Fastening Screws
 - 1.5.4.1. Use of the Drill
 - 1.5.4.2. Use of the Countersink
 - 1.5.4.3. Borehole Depth Measurement
 - 1.5.4.4. Use of the Tap
 - 1.5.4.5. Introduction to Screws
- 1.6. Technical Classification of Screws
 - 1.6.1. Big Screws
 - 1.6.2. Small Screws
 - 1.6.3. Minifragments
- 1.7. Classification of Screws According to Their Function
 - 1.7.1. Screw with Interfragmentary Compression Effect
 - 1.7.2. The Cortical Bone Screw with Interfragmentary Compression Effect
 - 1.7.3. Screw Reduction and Fixation Techniques with Interfragmentary Compression Effect
 - 1.7.4. Locked System
- 1.8. Bone Plates
 - 1.8.1. Bases for Fixing with Plates
 - 1.8.1.1. Classification of Plates According to Their Shape
 - 1.8.1.2. Classification of Plates According to Their Function
 - 1.8.1.2.1. Compression Plate
 - 1.8.1.2.2. Neutralization Plate
 - 1.8.1.2.3. Bridge Plate
 - 1.8.1.3. Dynamic Compression Plates
 - 1.8.1.3.1. Mode of Action
 - 1.8.1.3.2. Fixing Technique
 - 1.8.1.3.3. Advantages and Disadvantages
 - 1.8.1.4. Blocked Plates
 - 1.8.1.4.1. Advantages and Disadvantages
 - 1.8.1.4.2. Block Types
 - 1.8.1.4.3. Mode of Action
 - 1.8.1.4.4. Techniques, Instrumental
 - 1.8.1.5. Minimum Contact Plates
 - 1.8.1.6. Mini Plates
 - 1.8.1.7. Special Plates
- 1.9. How to Select an Implant
 - 1.9.1. Biological Factors
 - 1.9.2. Physical Factors
 - 1.9.3. Collaboration of the Owner in the Treatment
 - 1.9.4. Table of Implant Size According to Patient Weight
- 1.10. When to Remove a Plate
 - 1.10.1. Fulfilled Clinical Function
 - 1.10.2. Implant Ruptures
 - 1.10.3. Implant Bends
 - 1.10.4. Implant Migrates
 - 1.10.5. Rejection
 - 1.10.6. Infections
 - 1.10.7. Thermal Interference



*This program will allow you
to advance in your career
comfortably"*

05 Methodology

This 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.



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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

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.

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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 assess 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. 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.

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 prepared 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 education, 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 adapted in 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

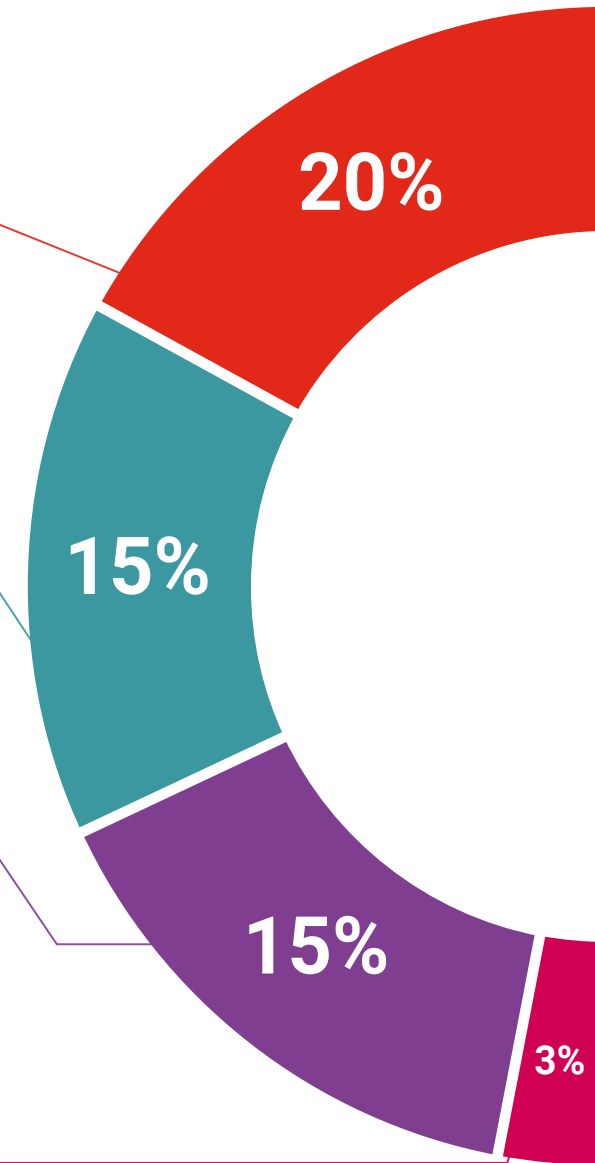
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

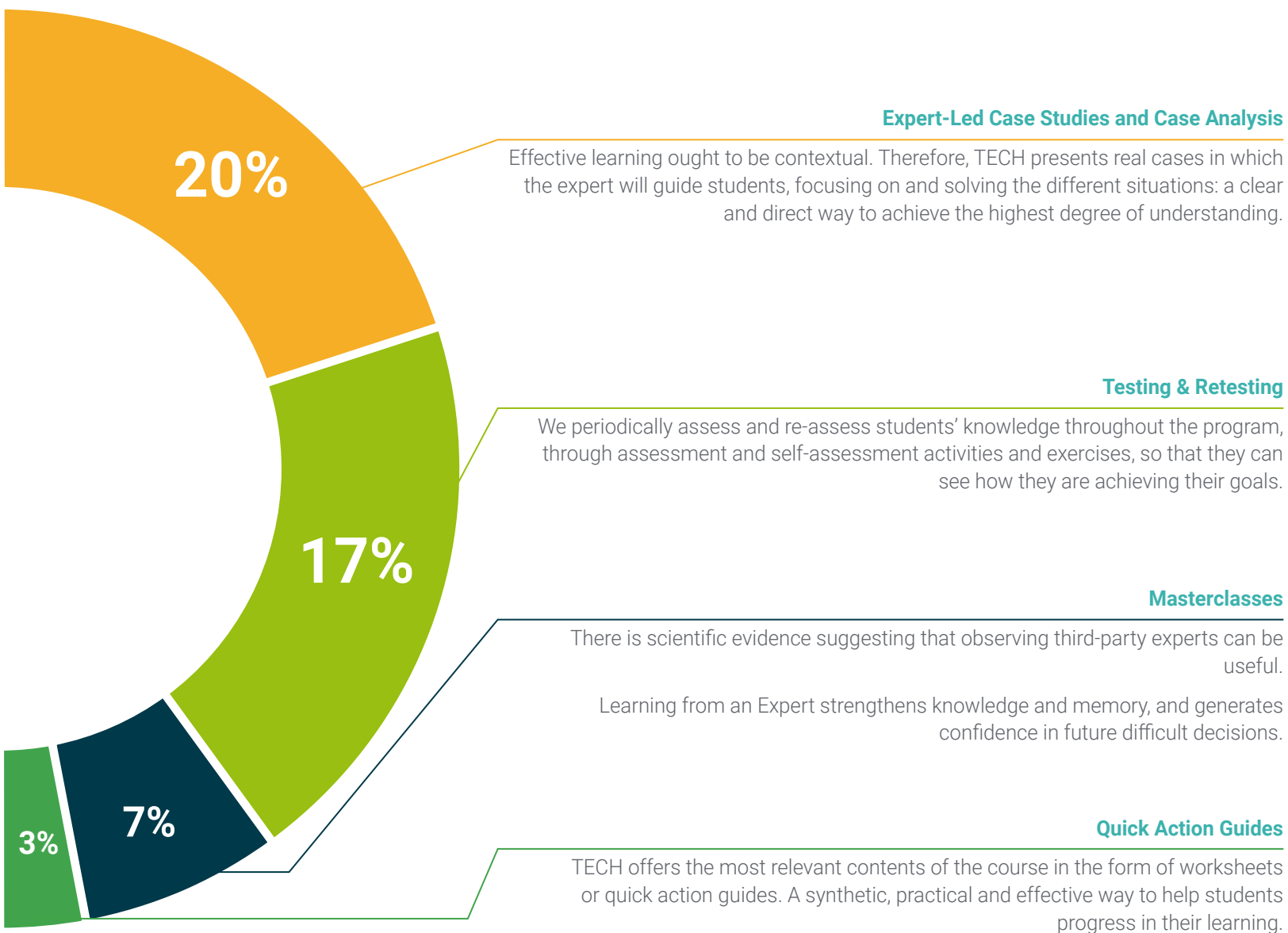
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.





06 Certificate

The Postgraduate Certificate in Bone Plates and Screws guarantees, in addition to the most rigorous and updated knowledge, access to a Postgraduate Certificate 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 private qualification will allow you to obtain a **Postgraduate Certificate in Bone Plates and Screws** 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: **Postgraduate Certificate in Bone Plates and Screws**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





Postgraduate Certificate Bone Plates and Screws

- » Modality: Online
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Postgraduate Certificate

Bone Plates and Screws