

Postgraduate Certificate

Bone Plates and Screws



Postgraduate Certificate Bone Plates and Screws

Course Modality: Online

Duration: 6 weeks

Certificate: TECH - Technological University

6 ECTS Credits

Teaching Hours: 150 hours.

Website: www.techtitute.com/us/veterinary/postgraduate-certificate/bone-plates-scews

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01

Introduction

In the last 20 years, the fixation of fractures with the use of rigid internal fixation implants, such as plates, has evolved enormously. One could speak of eight or nine different systems of fixation, more recognized, of fractures by means of plates. It is therefore essential for professionals to specialize in this area.





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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.

Pelvic fractures are characterized by commonly affecting more than one of the bones of the pelvis or associated adjoining structures, a situation that requires the clinician to have a detailed knowledge of the anatomy and biomechanics of the pelvis in order to achieve an optimal therapeutic outcome in each patient.

It is of vital importance to know the pathophysiological alterations that can be found in a patient with a pelvic fracture, since most of these presentations are associated with high-energy trauma, such as traffic accidents or falls from high heights.

For this reason, and due to the anatomical relationships of the pelvis, this Postgraduate Certificate explains what injuries can be found associated with these fractures (damage to neurological structures, injuries to abdominal organs and abdominal wall among others), as well as in other regions distant from the pelvis (thoracic injuries or craniocerebral trauma, for example) to offer a comprehensive therapeutic management to our patient.

From the therapeutic point of view, multiple options have been described for the management of these pelvic fractures, ranging from conservative treatment to surgical therapy with pins, screws, plates and external fixators. This is why the veterinary traumatologist must specialize in the various options and recommendations in each case in order to choose the most appropriate treatment according to the clinical presentation.

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

As it is an online Postgraduate Certificate, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

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

- ◆ The development of case studies presented by experts in veterinary food safety.
- ◆ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice.
- ◆ News about Bone Plates and Screws
- ◆ Practical exercises where self-assessment can be used to improve learning.
- ◆ Special emphasis on innovative methodologies at 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 with us. It's 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”.

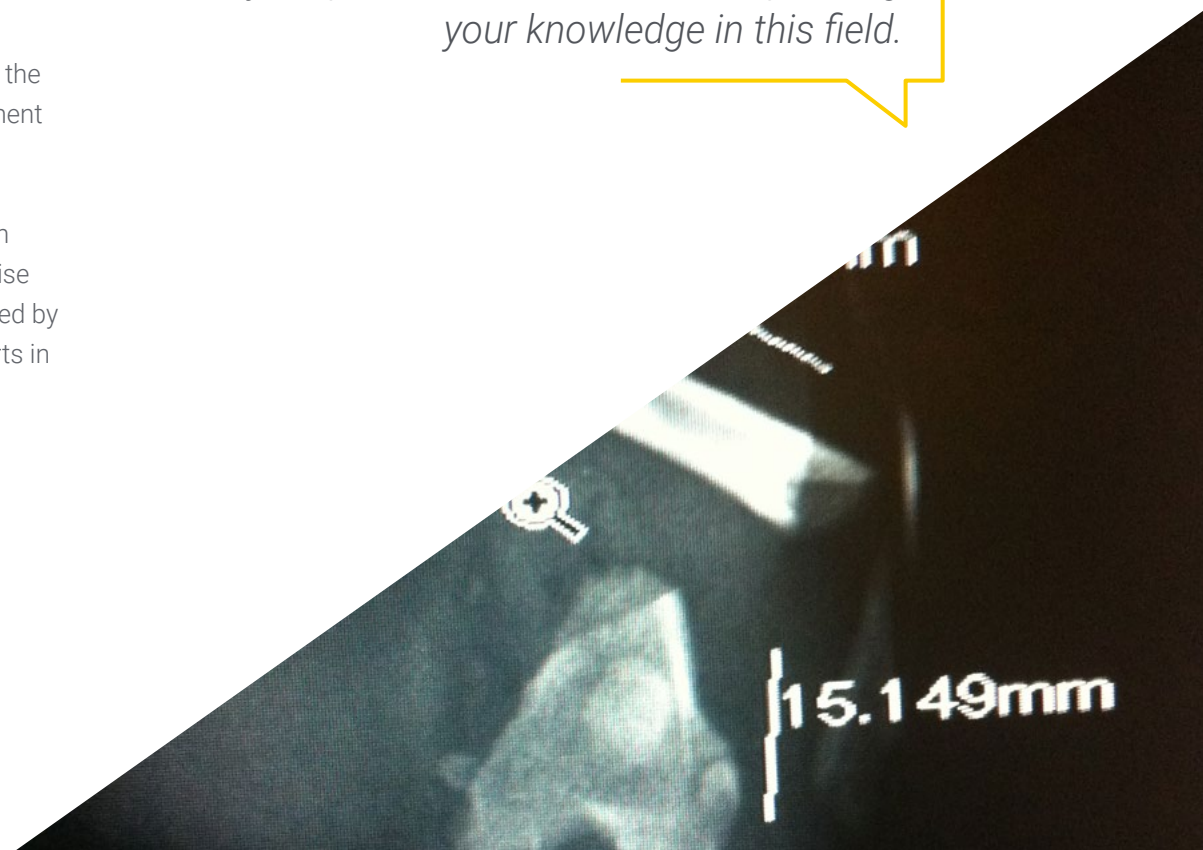
Its teaching staff includes professionals from the veterinary field, who contribute their work experience to this program, in addition to renowned specialists from prestigious reference societies and universities.

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.

The design of this program focuses on problem-based learning, by means of which the specialist must try to solve the different professional practice situations that arise throughout the academic 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 didactic material, which will allow you 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 Bone Plates and Screws is oriented to facilitate the professional's performance with the latest advances in the sector.





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This is the best option to know the main novelties 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.

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





Specific Objectives

- ◆ Develop specialized judgment in the use of any of the systems discussed in this module to decide which is the optimal system for fracture verification in daily practice in dogs and cats.
- ◆ Identify the main advantages and disadvantages of each of the plate fastening 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 in each of the most common fractures about the best fixation system with plates.
- ◆ Decide which system will be the optimal one to use in the different developmental diseases that cause angulations or abnormalities in 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 success in your profession”.

Director



D. Soutullo Esperón, Ángel

- ◆ Degree in Veterinary Medicine from the Complutense University of Madrid, 1994.
- ◆ Diploma of Advanced Studies in Veterinary Medicine from the Complutense University of Madrid 2010.
- ◆ Member of the Scientific Committee of GEVO and AVEPA 2014
- ◆ Master's Degree in Surgery and Traumatology Complutense University of Madrid, 1996.
- ◆ Professor of Radiology, Surgical Pathology and Surgery at the Alfonso X el Sabio University 2005-2010.
- ◆ Responsible for the surgical section of the 2011 AEVA Master in Small Animal Emergency Medicine.
- ◆ Owner of the veterinary clinic ITECA 1996-2011
- ◆ Head of the Surgical Service of the University Hospital of the Alfonso X el Sabio University 2005-2010
- ◆ Study of the clinical repercussions in corrective osteotomies in tplo (TFG Meskal Ugatz 2018).
- ◆ Study of the Clinical Impact of Corrective Osteotomies in Tplo (TFG Ana Gandia 2020)
- ◆ Studies of Biomaterials and Xenografts for Orthopedic Surgery 2010-2018

Professors

Dr. Borja Vega, Alonso

- ◆ Attendance to postgraduate course Veterinary Ophthalmology UAB 2014/2015
- ◆ SETOV 2016 practical course on osteosynthesis initiation.
- ◆ Advanced elbow course 2018
- ◆ Advanced Orthopedic Surgery Program 2019 (GPCert Advanced in Small Animal Orthopedics)

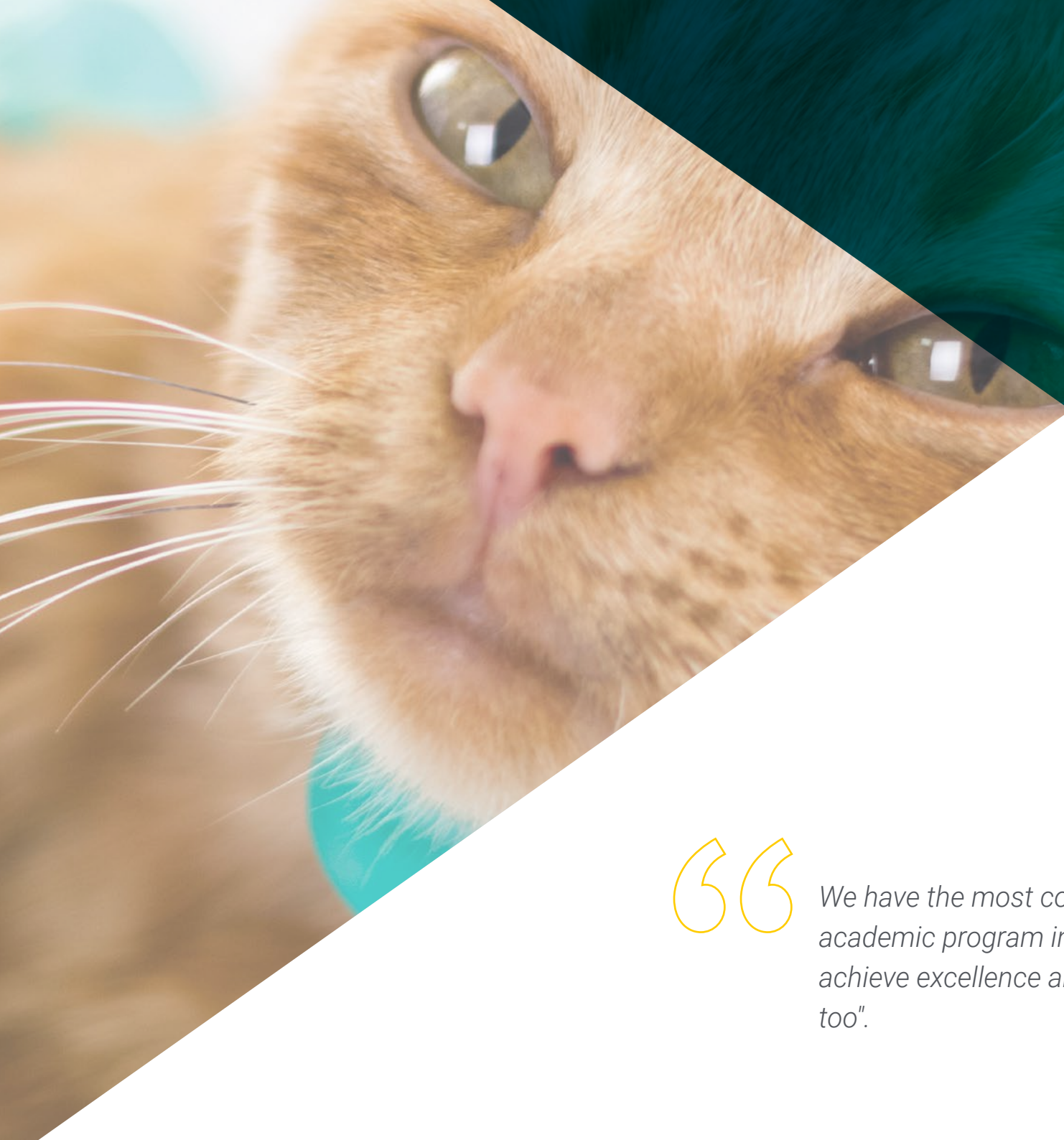


04

Structure and Content

The structure of the contents has been designed by the best professionals in the field of Veterinary Traumatology and Orthopedic Surgery, 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 medicine.





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We have the most complete and up-to-date academic program in the market. We want to achieve excellence and we want you to achieve it too”.

Module 1. Bone Plates and Screws

- 1.1. History of Metal Plates in Internal Fixation
 - 1.1.1. The Initiation of Plates for Fracture Fixation
 - 1.1.2. The World Association of Orthopaedics (AO/ASIF)
 - 1.1.2.1. Sherman and Lane Plates
 - 1.1.2.2. Steel Plates
 - 1.1.2.3. Titanium Plates
 - 1.1.2.4. Plates of Other Materials
 - 1.1.2.5. Combination of Metals for New Plate Systems
- 1.2. Different Fastening Systems with Plate 8 (AO/ASIF, ALPS, FIXIN)
 - 1.2.1 AO/ASIF Plates
 - 1.2.2. Advanced Locked Plate System. (ALPS)
 - 1.2.2.1. FIXIN and its Conical Block
- 1.3. Instrument Care
 - 1.3.1. Disinfection
 - 1.3.2. Cleaning
 - 1.3.3. Rinse
 - 1.3.4. Drying
 - 1.3.5. Lubrication
- 1.4. Instruments used for Plate and Screw Fixation
 - 1.4.1. Self-tapping Screws and Tap Removal
 - 1.4.2. Depth Gauges
 - 1.4.3. Drilling Guides
 - 1.4.4. Plate Benders and Plate Twisters
 - 1.4.5. Screw Heads
 - 1.4.6. Screws / Bolts



- 1.1. 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 of Screws
 - 1.5.4.1. Use of the Drill
 - 1.5.4.2. Use of Countersink
 - 1.5.4.3. Borehole Depth Measurement
 - 1.5.4.4. Use of the Taps
 - 1.5.4.5. Screw Insertion
- 1.6. Technical Classification of Screws
 - 1.6.1. Large Screws
 - 1.6.2. Small Screws
 - 1.6.3. Miniscrews
- 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 Bolts
- 1.8. Bone Plates
 - 1.8.1. Bases for Fixing with Plates
 - 1.8.2. Classification of Plates According to Their Shape
 - 1.8.3. Dynamic Compression Plates
 - 1.8.3.1. Mode of Action
 - 1.8.3.2. Fixing Technique
 - 1.8.3.3. Advantages of Dynamic Compression Plates (DPC)
 - 1.8.3.4. Disadvantages of Dynamic Compressor Plates (DPC)
 - 1.8.4. Locked Plates
 - 1.8.4.1. Advantages and Disadvantages.
 - 1.8.4.2. Types of blocks
 - 1.8.4.3. Mode of Action
 - 1.8.4.4. Fixing Techniques
 - 1.8.4.3. Instruments
 - 1.8.5. Minimum Contact Plates
 - 1.8.6. Mini-plates
 - 1.8.7. Special Plates
 - 1.8.8. Classification of Plates According to their Function
 - 1.8.8.1. Compression Plate
 - 1.8.8.2. Neutralization Plate
 - 1.8.8.3. Bridge Plate
- 1.9. Guide for Proper Selection of Implants
 - 1.9.1. Biological Factors
 - 1.9.2. Physical Factors
 - 1.9.3. Owner Collaboration in the Treatment
 - 1.9.4. Table of Implant Size According to Patient's Weight
- 1.10. Bone Plate Removal Guide
 - 1.10.1. Fulfilled its Clinical Function
 - 1.10.2. Implant Ruptures
 - 1.10.3. The Implant Bends
 - 1.10.4. The Implant Migrates
 - 1.10.5. Rejection
 - 1.10.6. Infections
 - 1.10.7. Thermal Interference

05 Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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.





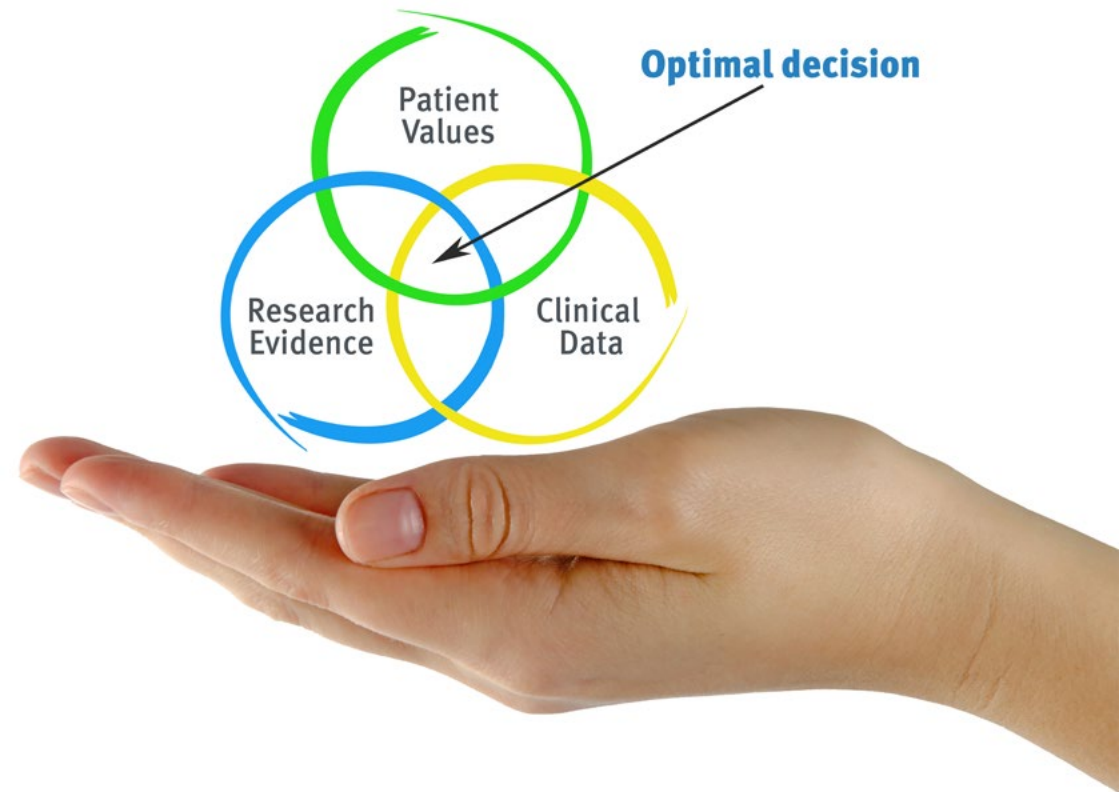
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Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".

At TECH we use the Case Method

In a given clinical situation, what would you 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. 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 potential or because of its uniqueness or rarity. It is essential that the case be based on current professional life, trying to recreate the real conditions in the 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 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. 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.



Re-learning Methodology

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

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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking 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.

Re-learning 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 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 really 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 this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

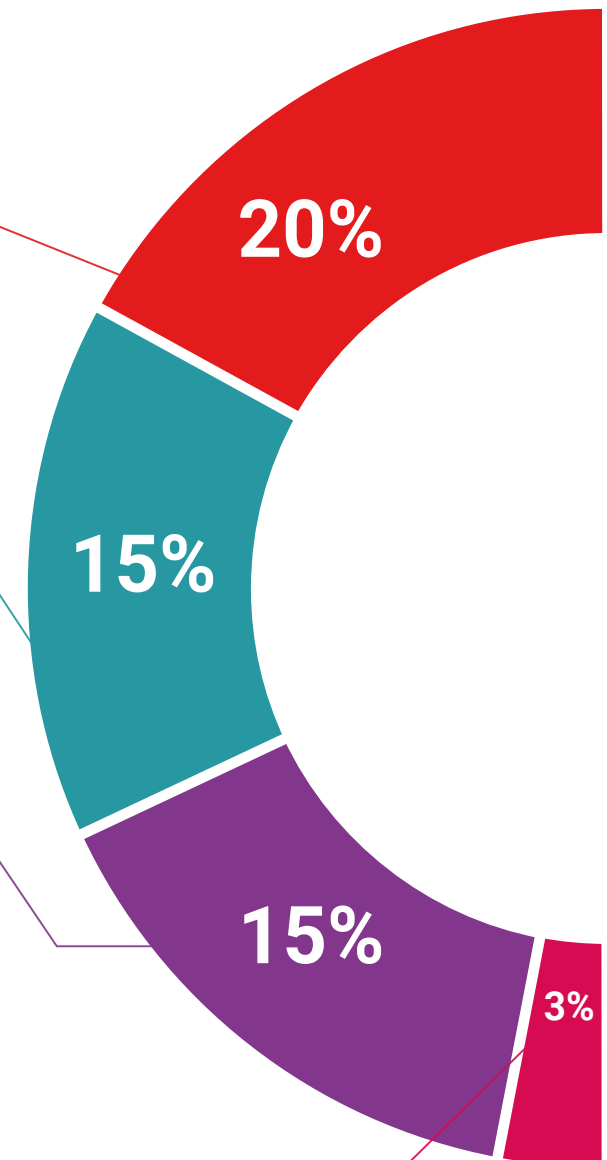
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

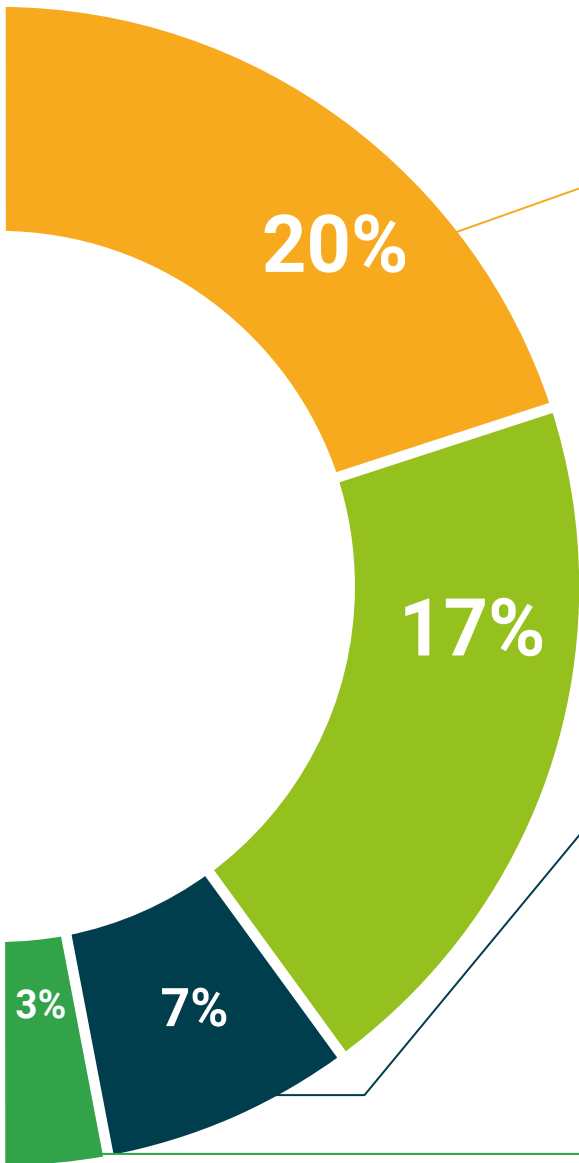
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





Expert-led case studies and case analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through the development of attention and the resolution of 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 difficult future decisions.



Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

Certificate

The **Postgraduate Certificate in Bone Plates and Screws** guarantees, in addition to the most rigorous and up to date training, access to a Postgraduate Certificate issued by **TECH - Technological University**.



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Successfully complete this program and receive your Postgraduate certificate without travel or cumbersome paperwork”.

This **Postgraduate Certificate in Bone Plates and Screws** contains the most complete and up to date program on the market. After passing the evaluations, the student will receive their corresponding **Postgraduate Certificate** issued by **TECH - Technological University**.

The certificate issued by **TECH - Technological University** will express the qualification obtained in the Postgraduate Certificate, and will meet the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Bone Plates and Screws**

ECTS: **6**

Official Number of Hours: **150 hours**.



*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.

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
classroom



Postgraduate Certificate
Bone Plates and Screws

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH - Technological University**

6 ECTS Credits

Teaching Hours: **150 hours.**

Postgraduate Certificate

Bone Plates and Screws