

Postgraduate Certificate

Skeletal External Fixators and Circular Fixators





Postgraduate Certificate Skeletal External Fixators and Circular Fixators

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH - Technological University**

6 ECTS Credits

Teaching Hours: **150 hours.**

Website: www.techitute.com/us/veterinary/postgraduate-certificate/skeletal-external-fixators-circular-fixators

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01

Introduction

External fixation of fractures is the use of a rigid support placed outside the body and connected to the bone by means of needles through the skin (transcutaneous). This is a complex technique that requires specialized and qualified veterinary professionals.





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This training is the best option you can find to specialize in Skeletal External Fixators and Circular Fixators”.

The teaching team of this Postgraduate certificate in External Skeletal Fixators and Circular Fixators has made a careful selection of the different state-of-the-art techniques for experienced professionals working in the veterinary field.

The technique of external fixation placement with respect to other methods of internal osteosynthesis shows that external fixation improves the biological environment, preserves soft tissue and irrigation, accelerates healing, decreases the risk of infection and reduces operative time.

The external fixator provides stable fixation of the bony ends without the need for implants in the fracture line or immobilization of neighboring joints, and is therefore particularly suitable for open, exposed or infected fractures. It allows to compress, neutralize or distract the bony ends depending on the need of the pathology. This type of fixation should not be confused with external coaptation (bandages, splints or casts).

The system's versatility, ease of placement and relatively low cost compared to internal fixation methods have made it an attractive and valuable method for treating a large number of orthopedic and trauma pathologies. External skeletal fixation allows for postoperative corrections, as well as viewing of the skin for associated treatments, such as dressing changes, skin grafts, etc.

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 any other offered at this moment in the rest of the universities.

As it is an online course, 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 External Skeletal Fixators and Circular Fixators** contains the most complete and up to date educational program on the market.

The most important features of the program include:

- ♦ The development of case studies presented by experts in skeletal external fixators and circular fixators.
- ♦ 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.
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Special emphasis on innovative methodologies in Skeletal External Fixators and Circular Fixators.
- ♦ 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.



Do not miss the opportunity to take with us this University Course in Skeletal External Fixators and Circular Fixators. 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 External Skeletal Fixators and Circular Fixators.”

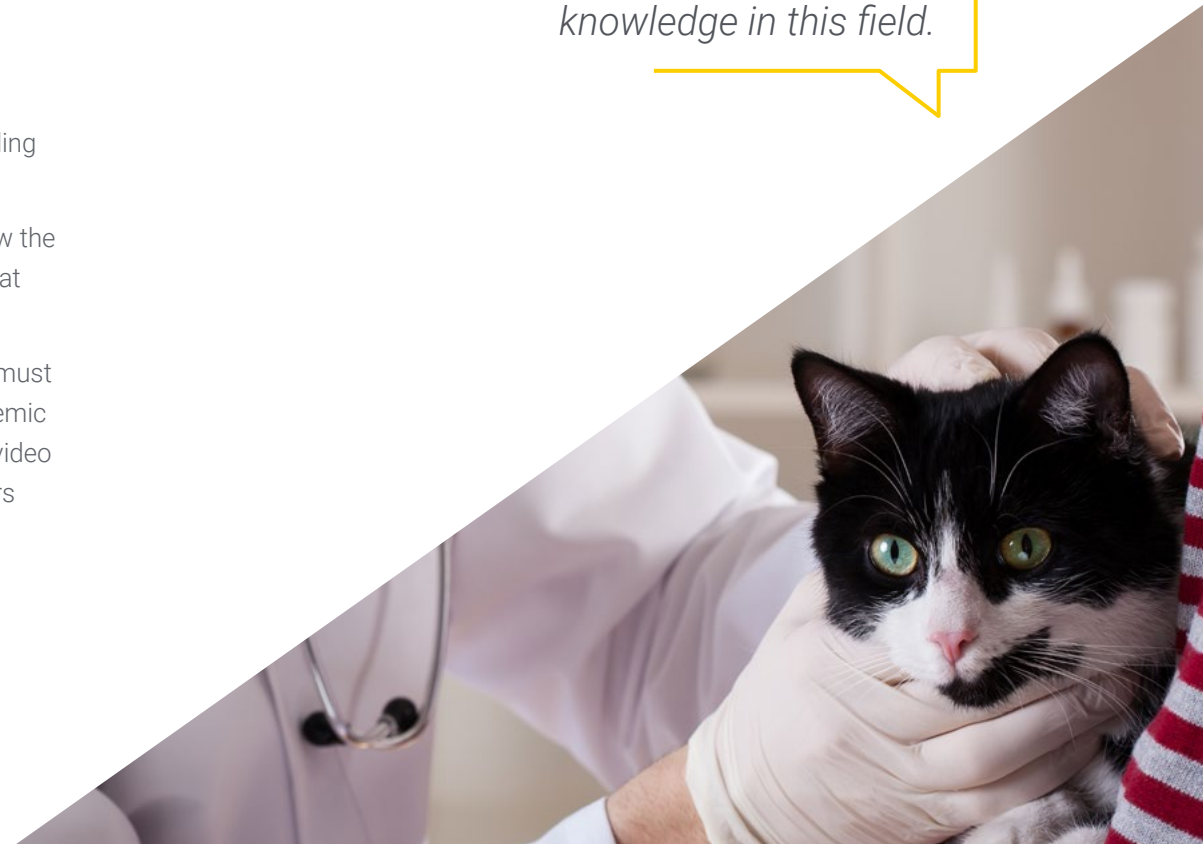
Its teaching staff includes professionals from the veterinary field, who bring the experience of their work to this training, as well as recognised specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive training 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 during the academic year. For this purpose, the practitioner will be assisted by an innovative interactive video system developed by renowned and experienced experts in skeletal external fixators and circular fixators.

This training comes with the best didactic material, providing you with a contextual approach 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 External Skeletal Fixators and Circular Fixators** is oriented towards facilitating the performance of the professional dedicated to veterinary medicine with the latest and most innovative treatments in the sector.





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This is the best option to learn about the latest advances in skeletal external fixators and circular fixators”.



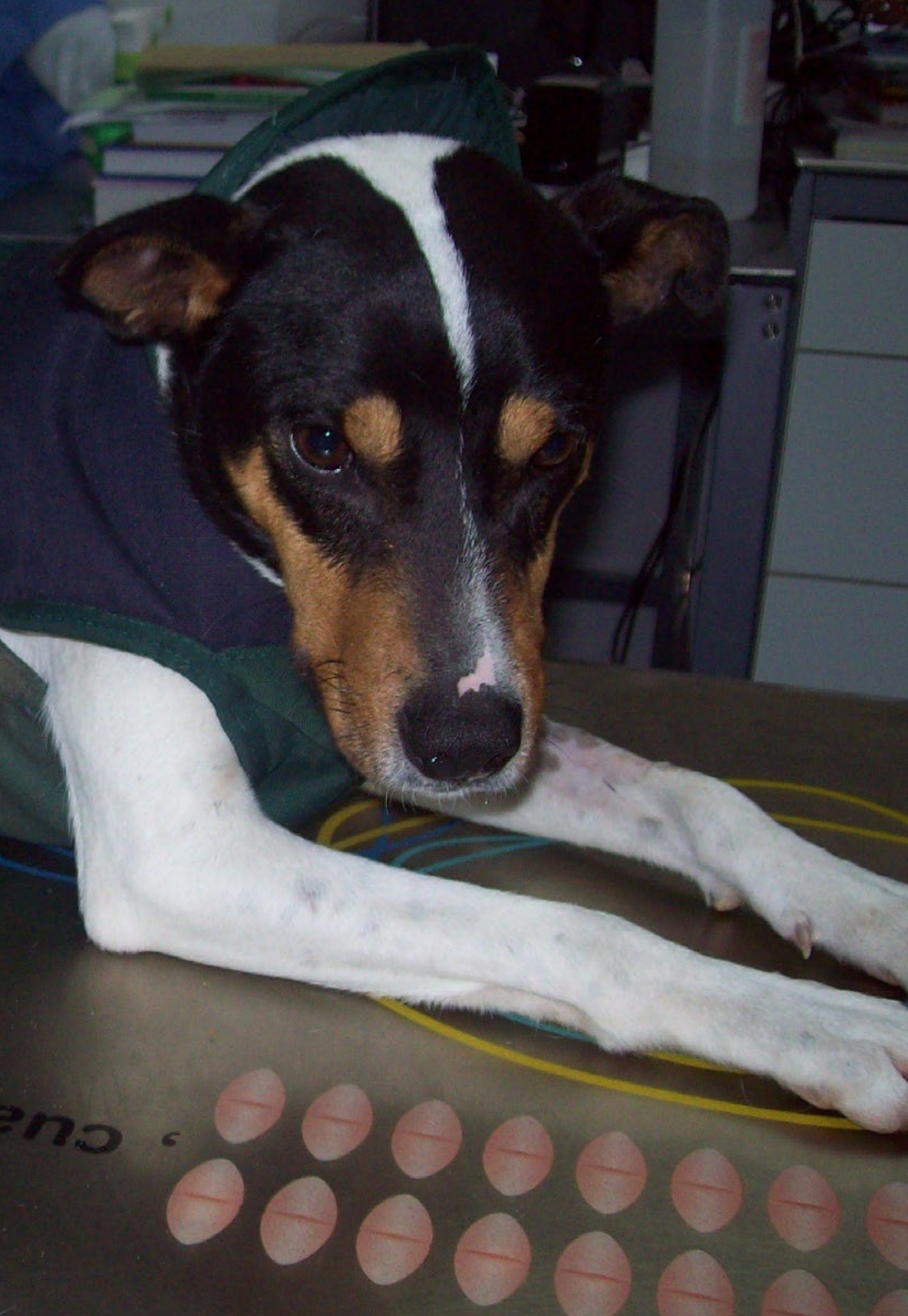
General Objectives

- Compile the various configurations of the Kirschner-Ehmer external tutor
- Analyze the advantages and disadvantages of the use of external fixators.
- Establish the post-surgical care of external tutors.
- Develop a discussion regarding nailing technique.

“

Seize the opportunity and take the step to get up to date in the latest developments in Skeletal External Fixators and in Skeletal External Fixators and Circular Fixators”.





Specific Objectives

- ♦ Analyze the performance of different configurations of linear, hybrid and circular tutors. and circular
- ♦ Compile the use of external tutors in cases of non-unions
- ♦ Propose the use of external fixation as the first option for tibia and radius fractures.
- ♦ Specify the use of braces as the first option for open or infected fractures.
- ♦ Demonstrate that external braces can be used in felines.
- ♦ Establish guidelines for the choice of use of each of the configurations.
- ♦ Evaluate the importance of material quality
- ♦ Examining the behavior of using acrylic for long bone fractures.
- ♦ Justify the advantages of the use of circular braces for arthrodesis.
- ♦ Generate in the student the concern about the use of external tutors.

03

Course Management

The program includes in its teaching staff experts of reference in Veterinary Traumatology and Orthopedic Surgery who bring to 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 to achieve success in your profession".

Director



Dr. 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. García Montero, Javier

- ◆ Member of the Official College of Veterinarians of Ciudad Real Veterinary Hospital Cruz Verde (Alcazar de San Juan).
- ◆ In Charge of Trauma and Orthopedics, Surgery and Anesthesia. Currently as of March 2019.
- ◆ Clínica Veterinaria El Pinar, (Madrid), as veterinarian (2015 -2019)

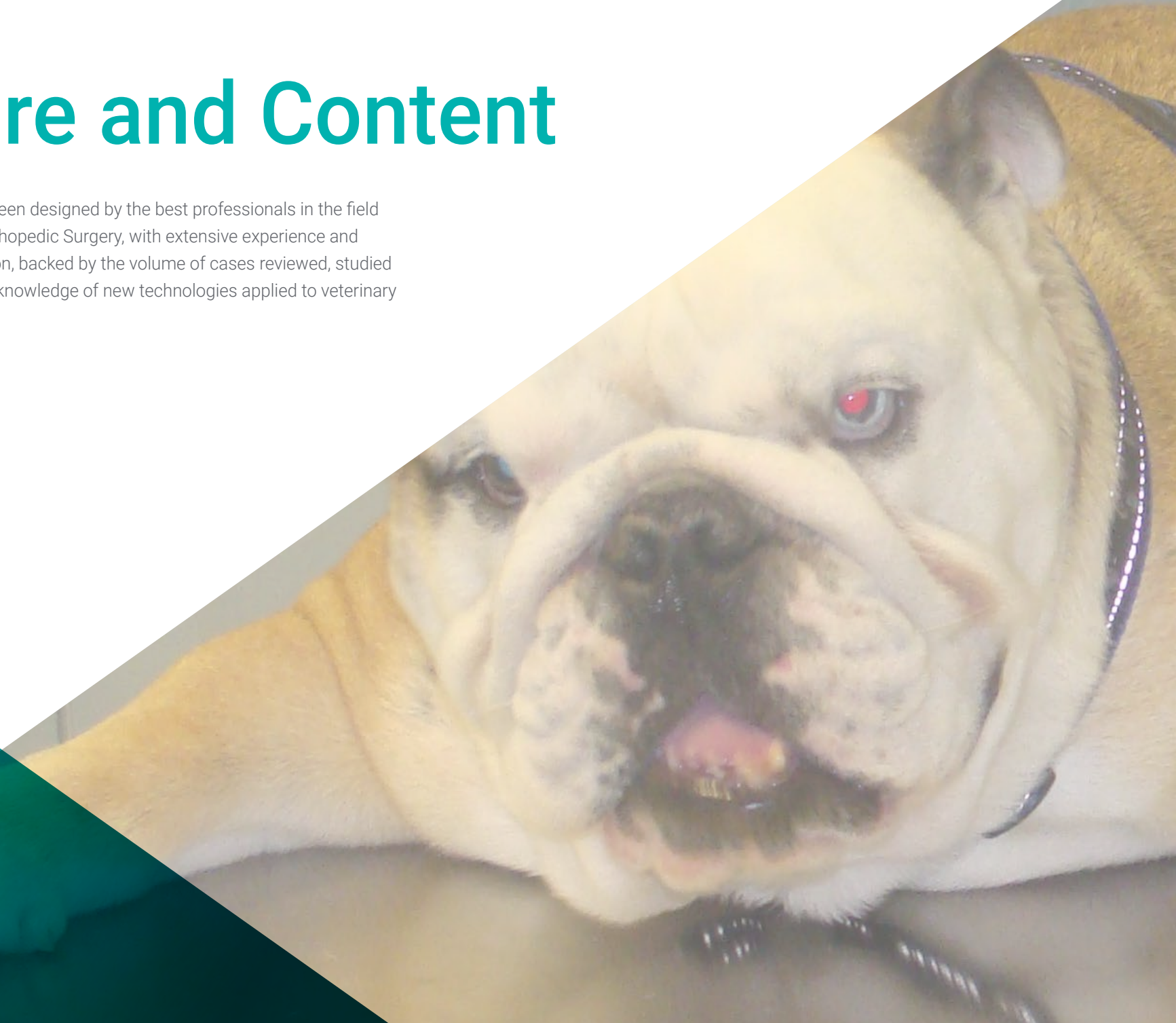
Dr. Guerrero Campuzano, María Luisa

- ◆ Director, exotic animal and small animal veterinarian
- ◆ The Petiberia Veterinary Clinic
- ◆ Zoo Veterinarian
- ◆ Veterinarian - Official College of Veterinarians of Madrid

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. Skeletal External Fixators and Circular Fixators

- 1.1. External Fixators
 - 1.1.1. History of the External Skeletal Fixator
 - 1.1.2. External Fixative Description
- 1.2. Parts constituting the Kirschner-Ehmer Apparatus
 - 1.2.1. Nails
 - 3.2.1.1. Fixators
 - 1.2.2. Connecting Rod
- 1.3. External Skeletal Fixator Configurations
 - 1.3.1. Half Skeletal Fixation Device
 - 1.3.2. Standard Kirschner-Ehmer Apparatus
 - 1.3.3. Modified Kirschner-Ehmer Apparatus
 - 1.3.4. Bilateral External Fixator Model
- 1.4. Mixed Skeletal Fixator Apparatus
- 1.5. Methods of Application of the Kirschner-Ehmer Apparatus
 - 1.5.1. Standard Method
 - 1.5.2. Modified Method
- 1.6. External Fixators with Dental Acrylic
 - 1.6.1. The Use of Epoxy Resin
 - 1.6.2. Use of Dental Acrylic
 - 1.6.2.1. Acrylic Preparation
 - 1.6.2.2. Application and Setting Time
 - 1.6.2.3. Post-operative Care
 - 1.6.2.4. Acrylic Removal
 - 1.6.3. Bone Cement for Spinal Fracture Use
- 1.7. Indications and Uses of External Fixatives
 - 1.7.1. Femur
 - 1.7.2. Tibia
 - 1.7.3. Tarsus
 - 1.7.4. Humerus
 - 1.7.5. Radio and Ulna
 - 1.7.6. Carpos
 - 1.7.7. Jaw
 - 1.7.8. Pelvis
 - 1.7.9. Spinal Column
- 1.8. Advantages and Disadvantages of Using External Fixatives
 - 1.8.1. Acrylic Material Acquisition
 - 1.8.2. Care in the Application of Acrylics
 - 1.8.3. Toxicity of Acrylic
- 1.9. Post-surgical Care
 - 1.9.1. Cleaning of the Acrylic Fixative
 - 1.9.2. Post-operative Radiographic Studies
 - 1.9.3. Gradual Removal of Acrylics
 - 1.9.4. Care when Removing the Fixative
 - 1.9.5. Re-positioning of the Acrylic Fixative
- 1.10. Circular Fasteners
 - 1.10.1. History
 - 1.10.2. Components.
 - 1.10.3. Structure
 - 1.10.4. Application
 - 1.10.5. Advantages and Disadvantages.



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This training will allow you to advance in your career comfortably”

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.





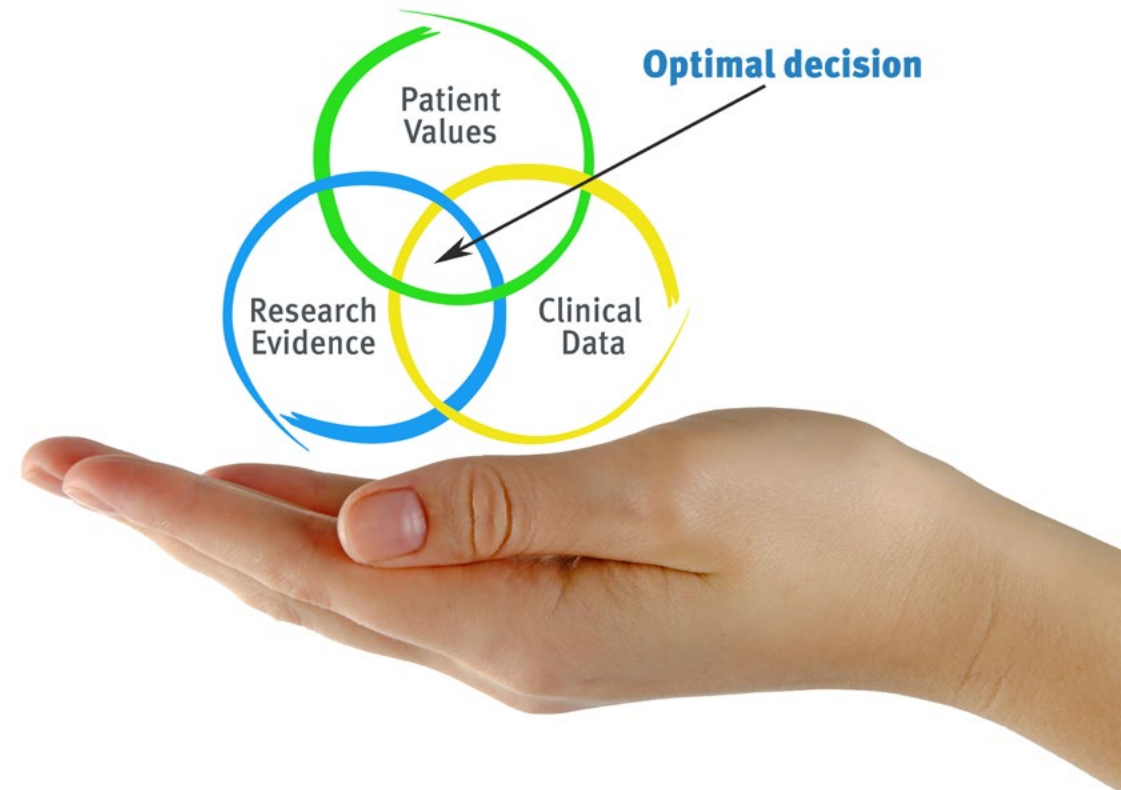
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Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".

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 External Skeletal Fixators and Circular Fixators** guarantees you, in addition to the most rigorous and up to date training, access to a Postgraduate certificate university degree issued by **TECH - Technological University**.





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

This **Postgraduate certificate in External Skeletal Fixators and Circular Fixators** contains the most complete and up to date scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding **Postgraduate certificate** issued by **TECH - Technological University**

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

Title: **Postgraduate Certificate in Skeletal External Fixators and Circular Fixators**

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.

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



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