

# Postgraduate Certificate Musculoskeletal System Surgery





## Postgraduate Certificate

### Musculoskeletal System Surgery

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

Website: [www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/musculoskeletal-system-surgery](http://www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/musculoskeletal-system-surgery)

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# 01

# Introduction

This program in Musculoskeletal System Surgery addresses the processes that affect the limbs of ruminants and compromise their welfare and productivity, covering all the theoretical and, above all, practical knowledge that the veterinarians in this sector will need in their intervention. An essential professional growth process of the highest quality.



A close-up photograph of a muddy animal hoof, likely from a ruminant, stepping into dark, wet mud. The mud is splattered and glistening. The hoof is partially visible on the left side of the frame.

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*All forms of detection and treatment of musculoskeletal diseases or problems that can affect ruminants are compiled in the most complete Postgraduate Certificate of the online educational panorama”.*

The study of this Postgraduate Certificate includes everything from the anatomy and biomechanics of the hoof, preventive management and diagnosis and treatment of podiatric conditions, to tendon, joint and bone conditions, including the emergency treatment of bone fractures, as well as the prognosis and surgical options for long bone fractures.

The diagnosis of lameness and especially of hoof disorders, which represent a great economic loss, is fundamental for animal welfare, and adequate preventive and therapeutic management must be carried out.

Serious injuries such as arthritis and septic tenosynovitis have treatment options that keep the animal comfortable and productive and therefore should be known and resolved.

Advances in orthopedic surgery with new principles, implants and methods offer possibilities in ruminant traumatology. The genetic value of breeding stock may require specialized orthopedic surgery in reference centers. But the field surgeon can also resolve fractures in a practical, economical and effective manner, as will be seen with the application of plaster casts, transfixing nails or external fixators.

This **Postgraduate Certificate in Musculoskeletal System Surgery** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ The latest technology in Online teaching software
- ♦ A 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
- ♦ Autonomous learning: full compatibility with other occupations
- ♦ Practical exercises for self-assessment 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
- ♦ Complementary documentation banks permanently available, even after the course



*Essential yet rare training for the specialist veterinary clinician that will set you apart as a specialist in this field of work"*

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*The clinical, specialized and advanced fundamentals, based on veterinary evidence that will allow you to face the daily intervention in cattle and ruminants”*

Our teaching staff is made up of professionals from different fields related to this specialty. In this way, TECH makes sure to offer professionals the up-to-date objective it intends. A multidisciplinary team of professionals prepared and experienced in different environments who will develop theoretical knowledge efficiently, but, above all, will provide students with practical knowledge derived from their teaching experience: one of the differential qualities of this program.

This mastery of the subject is complemented by the effectiveness of the methodological design. Developed by a multidisciplinary team of e-Learning experts, it integrates the latest advances in educational technology. In this way, the student will be able to study with comfortable and versatile multimedia tools that will give them the operability they need in their 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 telepractice will be used: with the help of an innovative system of interactive videos and learning from an expert they will be able to acquire the knowledge as if they were facing the case you are learning at that moment. A concept that will make it possible to integrate and fix learning in a more realistic and permanent way.

*With a methodological design based on proven teaching techniques, this innovative program will take you through different teaching approaches to allow you to learn in a dynamic and effective way.*

*Supported by evidence, the approach of this program will allow you to learn in a contextual way and acquire the skills you will really need in your daily practice.*



# 02 Objectives

The completion of this Postgraduate Certificate provides the veterinary professional with specialized and advanced clinical fundamentals based on evidence to face the daily clinical practice in cattle and ruminants.

Additionally, to this up-to-date approach to the problems encountered in daily clinical practice, the bibliography provided and the structuring of the topics will allow you to keep this knowledge up to date.





A close-up photograph of a person's arm wrapped in a green, textured medical bandage. The bandage is wrapped in several layers, covering the forearm and hand. The background is blurred, showing what appears to be a natural setting with leaves and ground.

“

*The Postgraduate Certificate in Musculoskeletal System Surgery will allow the veterinary clinicians to update and broaden their knowledge and skills in Ruminant Medicine and Surgery”*



## General Objectives

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- Determine the importance and impact of lameness in ruminants
- Examine how to diagnose lameness
- Develop the main conditions of the musculoskeletal system in ruminants
- Generate specialized knowledge to make the decision to indicate a surgical intervention
- Establish the fundamental surgical techniques in ruminant traumatology and orthopedics
- Analyze perioperative complications and take the necessary measures to prevent such complications
- Know how to search for complementary information on ruminant traumatology and orthopedics

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*A very complete training that will boost your ability to work in prevention, management and cost reduction in animal production, giving you greater competitiveness in the labor market"*





## Specific Objectives

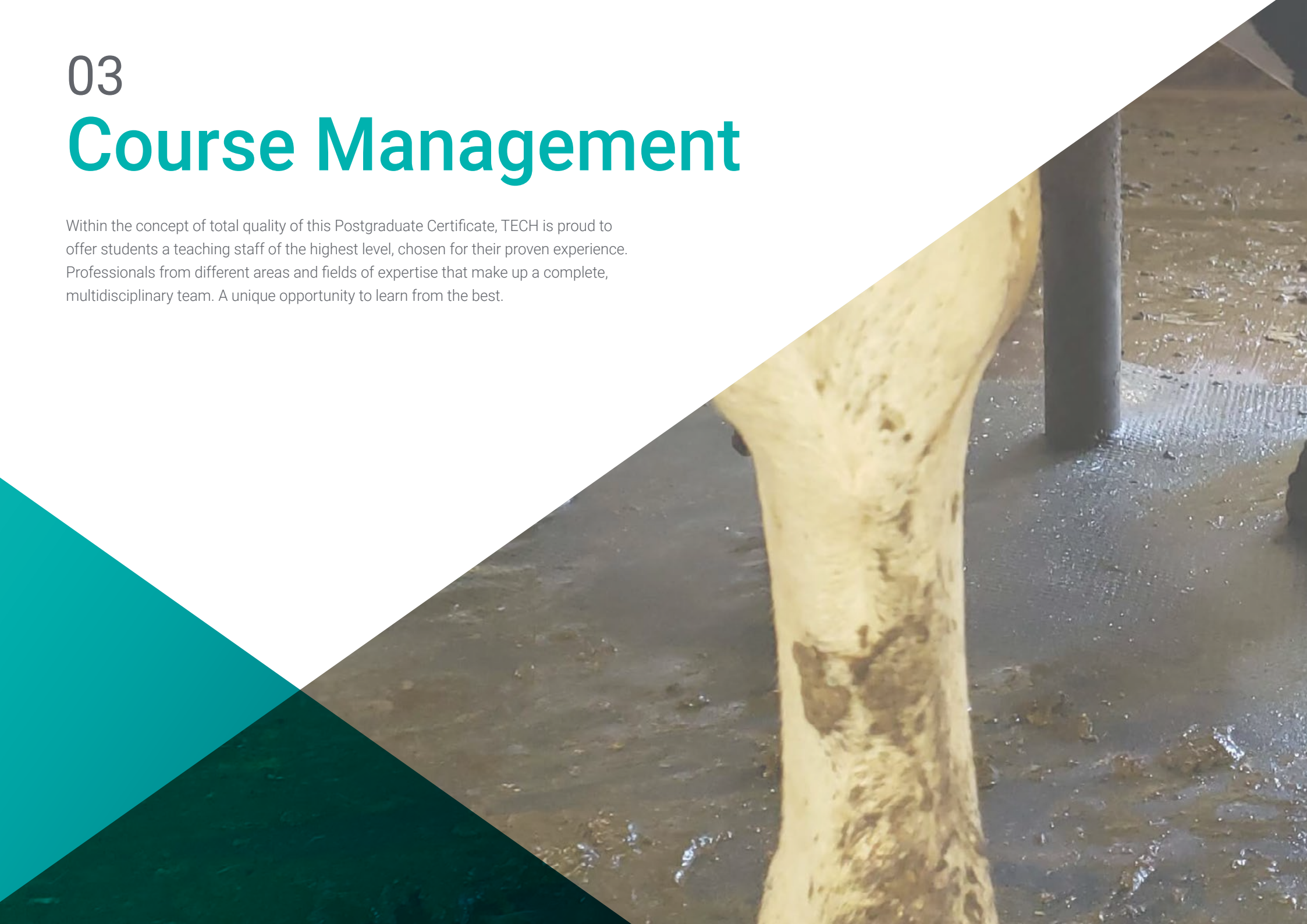
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- ◆ Establish the anatomy and biomechanics of the hoof, as well as its functional trimming
- ◆ Generate specialized knowledge to establish a differential diagnosis of hoof pathologies, their treatment and prognosis
- ◆ Diagnose septic processes of the distal limb and know their therapeutic options
- ◆ Determine the diagnosis of lameness in ruminants
- ◆ Describe, substantiate and define prognosis of surgical techniques related to cranial cruciate ligament rupture, superior patella fixation, coxofemoral dislocation and fracture of the femoral neck of the ruminant
- ◆ Examine joint pathologies and establish the therapeutic options and their prognosis
- ◆ Analyze tendon injuries and establish the therapeutic options and their prognosis
- ◆ Describe, substantiate and define prognosis of surgical techniques related to the resolution of specific fractures with external coaptation and/or open reduction and internal fixation of the ruminant

03

# Course Management

Within the concept of total quality of this Postgraduate Certificate, TECH is proud to offer students 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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*Our team of teachers, with expertise in Musculoskeletal System Surgery, will help you reach success in your profession"*

## Management



### **Dr. Ezquerra Calvo, Luis Javier**

- PhD in Veterinary Medicine from the University of Extremadura
- Degree in Veterinary from the University of Zaragoza
- Specialist in Applied and Experimental Animal Surgery University of Zaragoza
- Specialist in Animal Reproduction and Artificial Insemination University of Zaragoza
- Diploma of the European College of Veterinary Surgeons in Large Animals
- Presents 6 five-year teacher evaluation periods

## Professors

### Dr. Zaldueño Franco, Daniel

- ◆ Technical and commercial management at ANKA
- ◆ Coordination of podiatry services with sales and marketing of podiatric health products and foals at ANKA
- ◆ Degree in Veterinary Medicine from the University of Zaragoza in 2007 with specializations in Clinical and Animal Production
- ◆ Postgraduate studies at the University of Liverpool (UK) to obtain the Certificate in Advanced Veterinary Practice (CertAVP)
- ◆ Coordination of HIPRA's Mastitis Unit, enabling it to offer vaccines and services to more than 50 countries

### Mr. González Sagues, Adrián

- ◆ Founder and current manager of "ANKAPODOL S.L. Cuidados de Pezuñas"
- ◆ Internationally recognized trainer, collaborator of the English Laboratory program and director of the Spanish program of the Master's Degree of Podiatric Health at the University of Florida (USA), winner of the "Honor and Plow Awards" presented by Ann Veneman, Secretary of Agriculture of the United States
- ◆ Degree in Veterinary from the Faculty of Zaragoza
- ◆ Partner and Technical Advisor in 4 hoof care companies, three of them in Spain and one in Mexico, trimming the hooves of about 70,000 cows per year with 12 employees

### Ms. Sardoy, María Clara

- ◆ Integral Equine Veterinary Services Pincén in Córdoba, Argentina
- ◆ Degree in Veterinary Medicine from the University of Buenos Aires, Argentina
- ◆ Master's Degree in Clinical Sciences, Kansas State University, USA
- ◆ Internship in Equine Internal Medicine Kansas State University-Manhattan, KS, USA
- ◆ Residency in Equine Clinical Theriogenology at Equestrian Club Buenos Aires, Buenos Aires, Argentina
- ◆ Faculty member at Milton Equine Hospital in Campbellville, ON, Canada

### Dr. Muñoz Morán, Juan Alberto

- ◆ Member of the Examination Committee of the European College of Veterinary Surgeons
- ◆ Degree in Veterinary Medicine from the Complutense University of Madrid
- ◆ PhD in Veterinary Science
- ◆ Graduate of the European College of Veterinary Surgeons
- ◆ Graduated in experimental animals, category C, University of Lyon (France)
- ◆ Master's Degree in Veterinary Medicine Sciences from the Alfonso X El Sabio University, Madrid
- ◆ Residency in large animal surgery at the Veterinary University of Lyon
- ◆ Internship in equine surgery at London Equine Hospital, Ontario
- ◆ Internship in equine medicine and surgery at Lyon Veterinary University
- ◆ Professor of large animal surgery at the Veterinary University of Pretoria, South Africa
- ◆ Head of the Equine Surgery residency program at the Veterinary University of Pretoria, South Africa
- ◆ Head of the large animal surgery service and professor at Alfonso X el Sabio University, Madrid
- ◆ Head of the Postgraduate Master's Degree in Sports Medicine and Equine Surgery at the Alfonso X el Sabio University
- ◆ Head of the Postgraduate Master's Degree in Equine Surgery at Alfonso X el Sabio University
- ◆ Editor of the journal of equine veterinary medicine and surgery "Equinus"
- ◆ Equine surgery clinician at the Montreal Veterinary University
- ◆ Equine surgery clinician at the Veterinary University of Lyon
- ◆ Co-author of CD-ROM on Thoracic Extremity Anatomy of the Horse
- ◆ Partner Surgeon at the Veterinary Clinic of "Grand Renaud", Saint Saturnin, France
- ◆ Surgeon at the Equine Hospital of Aznalcóllar, Seville

**Dr. Bracamonte, José Luis**

- ◆ Founding Fellow of the American College of Veterinary Surgeons
- ◆ Doctorate in Veterinary Science in equine laparoscopy
- ◆ Degree in Veterinary Medicine, Faculty of Veterinary Medicine, University of Extremadura, Spain
- ◆ Diploma of the American College of Veterinary Surgery in large animals
- ◆ Diploma of the American College of Veterinary Surgery in large animals
- ◆ Diplomate European College of Veterinary Surgeons (Equine)
- ◆ Certified by the European College of Equine Veterinary Surgery
- ◆ Minimally Invasive Surgery in Large Animal Laparoscopy
- ◆ Founder and specialist in minimally invasive laparoscopic surgery in large animals by the American College of Veterinary Surgery
- ◆ ACVS committee member for minimally invasive surgery specialist
- ◆ Teacher for ACVS Fellowship Programs
- ◆ Large animal surgery especially on horses in the disciplines of Western Pleasure, Barrel Racing, Reining, Cutting and Dressage horses
- ◆ Large animal surgeon in beef cattle/calf (Angus breed) and dairy cattle productions
- ◆ Training of 15 surgical residents, all of whom are ACVS Diplomates
- ◆ Presentations at international surgical congresses and more than 20 national presentations in Canada for equine veterinarians

**Dr. Correa, Felipe**

- ◆ D. in Veterinary Sciences, Andrés Bello University, Santiago, Chile
- ◆ Degree in Veterinary Medicine from Mayor University, Santiago, Chile
- ◆ Internship in Equine Surgery at Milton Equine Hospital, Canada
- ◆ Internship in Surgery and Large Animal Medicine, University of Guelph, Canada
- ◆ Master's Degree in Veterinary Sciences, Austral University of Chile
- ◆ Diploma in University Teaching, Andrés Bello University, Santiago, Chile
- ◆ Master's Degree Candidate in Equine Surgery, University of Pretoria, South Africa







#### **D. Quinteros, Diego Daniel**

- ◆ Degree in Veterinary Medicine from the University of Buenos Aires, Argentina
- ◆ Diploma from the American College of Veterinary Surgeons
- ◆ Veterinary Surgeon at Integral Equine Veterinary Services - Pincen, Córdoba
- ◆ Diagnosis and treatment of claudication in sporting equines at Performance Equine Services, Ocala
- ◆ Professor (Head of Practical Works) and Surgeon at the Large Animal Hospital of the University of the Center of the Province of Buenos Aires
- ◆ Associate Veterinarian at the Equine Reproduction Center "Doña Pilar" - Lincoln, Province of Buenos Aires
- ◆ Member of the surgical team at the Veterinary Center of the Hippodrome of San Isidro-San Isidro, Buenos Aires, Argentina
- ◆ Private outpatient practice at the San Isidro Hippodrome-San Isidro, Buenos Aires
- ◆ Intensive care of colic patients
- ◆ San Isidro Hippodrome Veterinary Center-San Isidro, Buenos Aires

#### **Dr. Re, Michela**

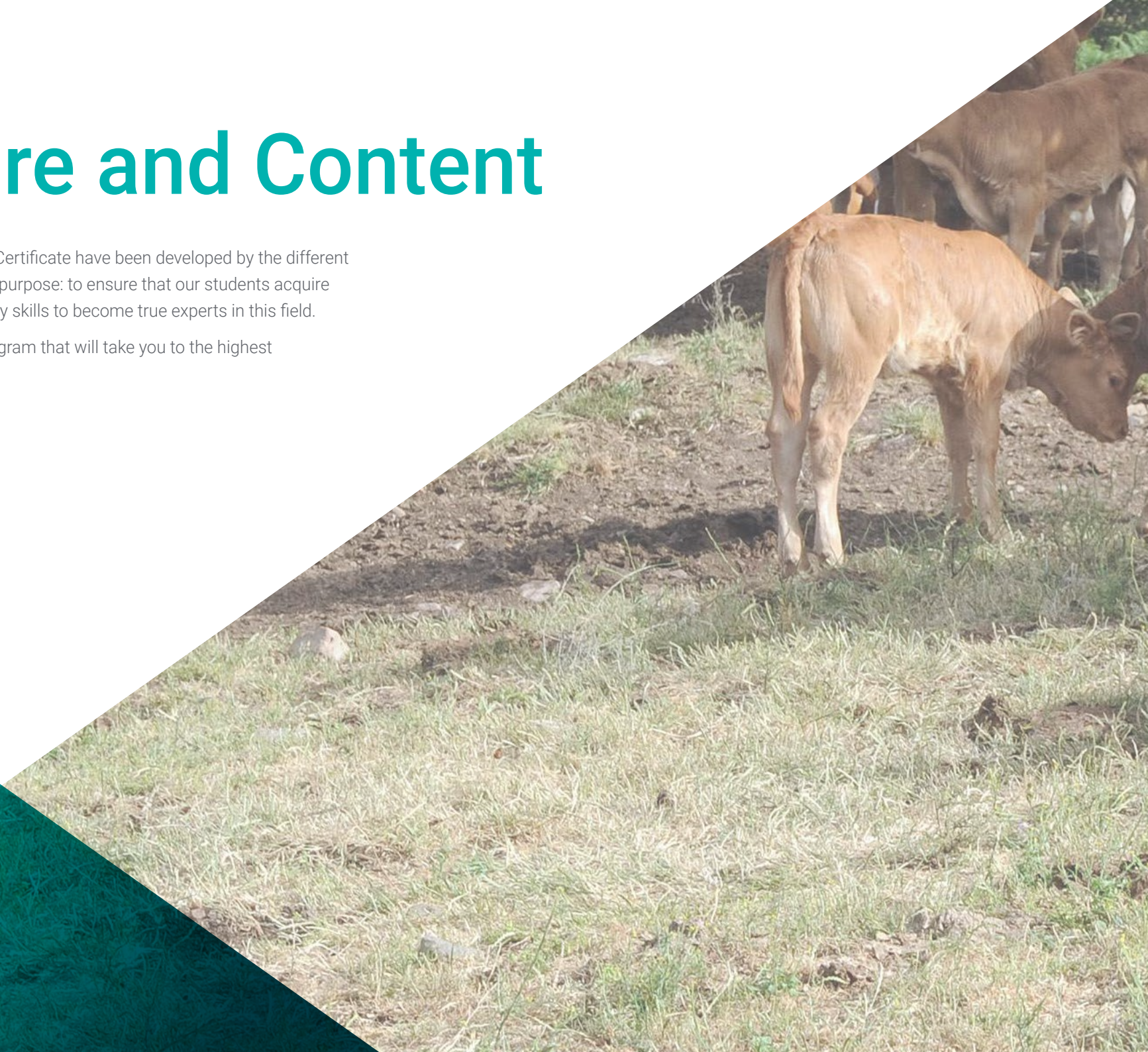
- ◆ PhD in Veterinary Medicine, Complutense University of Madrid
- ◆ Degree in Veterinary Medicine from the State University of Milan
- ◆ Veterinarian of the Large Animal Clinic Los Molinos developing clinical activity in equines and bovines
- ◆ Veterinarian of the Sierra de Guadarrama Sanitary Defense Association and collaborating agent authorized as Certifying agent, recognized by the Community of Madrid
- ◆ "Assistance activity at the Complutense Clinical Veterinary Hospital", developing the activity in the Large Animal Surgery Service of the Complutense Clinical Veterinary Hospital

# 04

# Structure and Content

The contents of this Postgraduate Certificate have been developed by the different experts on this course, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field.

A complete and well-structured program that will take you to the highest standards of quality and success.





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*A comprehensive teaching program,  
structured in well-developed teaching units,  
oriented towards learning that is compatible  
with your personal and professional life"*

## Module 1. Musculoskeletal System Surgery

- 1.1. Anatomy and Biomechanics of the Hoof. Functional Trimming
  - 1.1.1. Anatomy and Biomechanics of the Hoof
    - 1.1.1.1. Anatomical Structure. Key Structures
    - 1.1.1.2. Hoof
      - 1.1.1.2.1. Corion
      - 1.1.1.2.2. Other Structures
    - 1.1.1.3. Biomechanics
      - 1.1.1.3.1. Concept
      - 1.1.1.3.2. Hind Limbs Biomechanics
      - 1.1.1.3.3. Fore Limbs Biomechanics
    - 1.1.1.4. Factors that Affect Biomechanics
  - 1.1.2. Functional Trimming
    - 1.1.2.1. Concept and Importance of Functional Trimming
    - 1.1.2.2. Trimming Technique. Dutch Model
    - 1.1.2.3. Other Trimming Techniques
    - 1.1.2.4. Containment and Instrumentation
- 1.2. Diseases of the Hoof I. Infectious Origin: Digital Dermatitis. Interdigital Dermatitis. Interdigital Phlegmon
  - 1.2.1. Digital Dermatitis
    - 1.2.1.1. Etiology
    - 1.2.1.2. Clinical Signs
    - 1.2.1.3. Control
    - 1.2.1.4. Treatment
  - 1.2.2. Interdigital Dermatitis
    - 1.2.2.1. Etiology
    - 1.2.2.2. Clinical Signs
    - 1.2.2.3. Control
    - 1.2.2.4. Treatment





- 1.2.3. Interdigital Phlegmon
  - 1.2.3.1. Etiology
  - 1.2.3.2. Clinical Signs
  - 1.2.3.3. Control
  - 1.2.3.4. Treatment
- 1.2.4. Use of Footbath for the Control of Environmental Diseases
  - 1.2.4.1. Design
  - 1.2.4.2. Products
- 1.3. Diseases of the Hoof II. Non-Infectious Origin: Sole Ulcer. White Line Disease. Point Ulcers and Others
  - 1.3.1. Sole Ulcers
    - 1.3.1.1. Etiopathogenesis
    - 1.3.1.2. Control
    - 1.3.1.3. Treatment
  - 1.3.2. White Line Disease
    - 1.3.2.1. Etiopathogenesis
    - 1.3.2.2. Control
    - 1.3.2.3. Treatment
  - 1.3.3. Other Diseases of Non-Infectious Origin
    - 1.3.3.1. Hyperconsumption or Thin Sole
    - 1.3.3.2. Point Ulcers
    - 1.3.3.3. Ring-Shaped Hooves
- 1.4. Surgical Treatment of Septic Processes of the Distal Limb (Finger Amputation, Distal and Proximal Interphalangeal Joint Ankylosis)
  - 1.4.1. Aetiology of Septic Processes of the Distal Limb
  - 1.4.2. Diagnosis
    - 1.4.2.1. Clinical presentation
    - 1.4.2.2. Diagnostic Imaging
    - 1.4.2.3. Clinical Pathology
  - 1.4.3. Indications for Distal Limb Surgery
  - 1.4.4. Surgical preparation
  - 1.4.5. Treatment in Acute Septic Processes
    - 1.4.5.1. Joint Lavage
    - 1.4.5.2. Systemic Antibiotics

- 1.4.6. Surgical Treatment in Chronic Septic Processes
  - 1.4.6.1. Amputation of the Digit
  - 1.4.6.2. Arthrodesis/Facilitated Ankylosis
    - 1.4.6.2.1. Solar Approach
    - 1.4.6.2.2. Bulbar Approach
    - 1.4.6.2.3. Dorsal Approach
      - 1.4.6.2.3.1. Abaxial Approach
      - 1.4.6.2.3.2. Prognosis
- 1.5. Examination of Lameness. Diagnosis and Prognosis of Proximal Limb Injuries
  - 1.5.1. Examination of Lameness
  - 1.5.2. Diagnostic Tests
    - 1.5.2.1. Synovial Fluid
    - 1.5.2.2. Radiographic Diagnosis
    - 1.5.2.3. Ultrasound Diagnosis
  - 1.5.3. Diagnosis and Prognosis of Proximal Limb Injuries
- 1.6. Cranial Cruciate Ligament Rupture. Upward Patella Fixation. Coxofemoral Dislocation. Femoral Neck Fracture
  - 1.6.1. Cranial Cruciate Ligament Damage
    - 1.6.1.1. Imbrication of Patella
    - 1.6.1.2. Cranial Cruciate Ligament Replacement
      - 1.6.1.2.1. Gluteobiceps Replacement
      - 1.6.1.2.2. Synthetic Ligament
    - 1.6.1.3. Postoperative Care and Prognosis
  - 1.6.2. Coxofemoral Dislocation
  - 1.6.3. Dorsal Dislocation of Patella
  - 1.6.4. Fracture of the Femoral Neck and Head
    - 1.6.4.1. Clinical Signs
    - 1.6.4.2. Surgical Approach
    - 1.6.4.3. Surgical Techniques
    - 1.6.4.4. Femoral Head Osteotomy
    - 1.6.4.5. Post-Operative Management and Complications
- 1.7. Management of Septic Arthritis. Septic Tenosynovitis. Arthroscopy. Osteochondrosis. Osteoarthritis
  - 1.7.1. Etiology
  - 1.7.2. Diagnosis
  - 1.7.3. Medical and Surgical Treatment
  - 1.7.4. Prognosis
  - 1.7.5. Complications, Osteomyelitis
  - 1.7.6. Other Joint Pathologies
    - 1.7.6.1. Osteochondrosis in Fattening Calves
    - 1.7.6.2. Poly and Oligoarthritis
- 1.8. Tendon Surgery: Hyperextension, Flexural Deformities, Arthrogryposis, Lacerations. Spastic Paresis
  - 1.8.1. Tendon Lacerations Management and Repair
    - 1.8.1.1. Diagnosis
    - 1.8.1.2. Tendon Avulsion and Rupture
    - 1.8.1.3. Treatment
  - 1.8.2. Hyperextension
    - 1.8.2.1. Diagnosis
    - 1.8.2.2. Treatment
  - 1.8.3. Flexural Deformities
    - 1.8.3.1. Types
    - 1.8.3.2. Diagnosis
    - 1.8.3.3. Treatment
  - 1.8.4. Arthrogryposis
    - 1.8.4.1. Diagnosis
    - 1.8.4.2. Treatment
  - 1.8.5. Spastic Paresis
    - 1.8.5.1. Diagnosis
    - 1.8.5.2. Treatment
- 1.9. Emergency Treatment of Fractures. Principles of Fracture Repair
  - 1.9.1. Introduction to Fracture Management in Cattle
  - 1.9.2. Emergency Treatment
  - 1.9.3. Diagnostic Imaging

- 1.9.4. Principles of Fracture Management
  - 1.9.4.1. Hoof Blocks
  - 1.9.4.2. Plaster
  - 1.9.4.3. Thomas Splint (Thomas Schroder Splint)
  - 1.9.4.4. External Fixators
- 1.9.5. Thomas Splint
  - 1.9.5.1. Application
  - 1.9.5.2. Practical Advice
  - 1.9.5.3. Complications
- 1.9.6. Guidelines for Use of External Fixation in Long Bone Fractures
  - 1.9.6.1. Advantages
  - 1.9.6.2. Disadvantages
  - 1.9.6.3. Types of External Fixators
- 1.9.7. Transfixion Plasters
  - 1.9.7.1. Application
  - 1.9.7.2. Practical Considerations in Bovines
- 1.9.8. Complications Associated with External Fixators
- 1.10. Resolution of Specific Fractures: Decision Making and Guidance for External Skeletal Fixation. Plasters and Plasters with Transfixing Pins. Plates, Intramedullary Nails and Locking Nails
  - 1.10.1. Resolution of Specific Fractures
    - 1.10.1.1. External Coaptation
    - 1.10.1.2. Placement of Acrylic Casts
    - 1.10.1.3. Complications of Acrylic Casts
    - 1.10.1.4. Removal of Acrylic Casts
    - 1.10.1.5. External Fixators
    - 1.10.1.6. Indications
    - 1.10.1.7. Biomechanics of External Fixators
    - 1.10.1.8. External Fixators
    - 1.10.1.9. Application
    - 1.10.1.10. Post- Positioning Care
    - 1.10.1.11. Complications
    - 1.10.1.12. Removal of External Fixator
    - 1.10.1.13. Acrylic Frame Fixatros
    - 1.10.1.14. Transfixion Casts
    - 1.10.1.15. Implants
    - 1.10.1.16. Plates
    - 1.10.1.17. Screws
    - 1.10.1.18. Intramedullary Nails
    - 1.10.1.19. Locked Nails
    - 1.10.1.20. Complications of Internal Fixations
      - 1.10.1.20.1. Infections
  - 1.10.2. Failure or Migration
  - 1.10.3. Prognosis



*A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"*

# 05 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.

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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 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

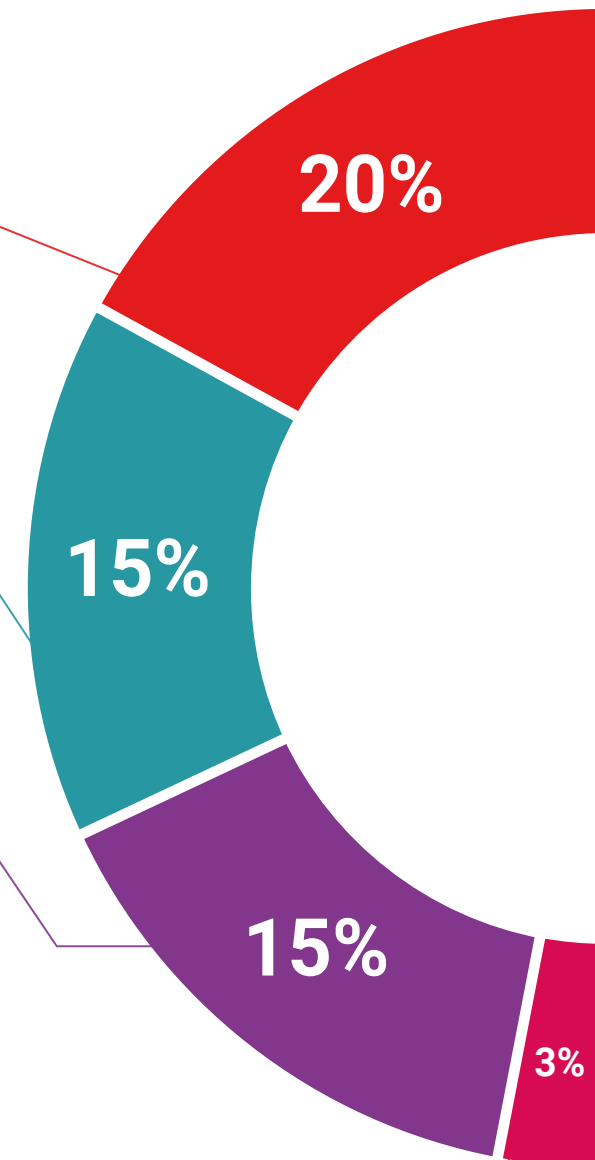
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

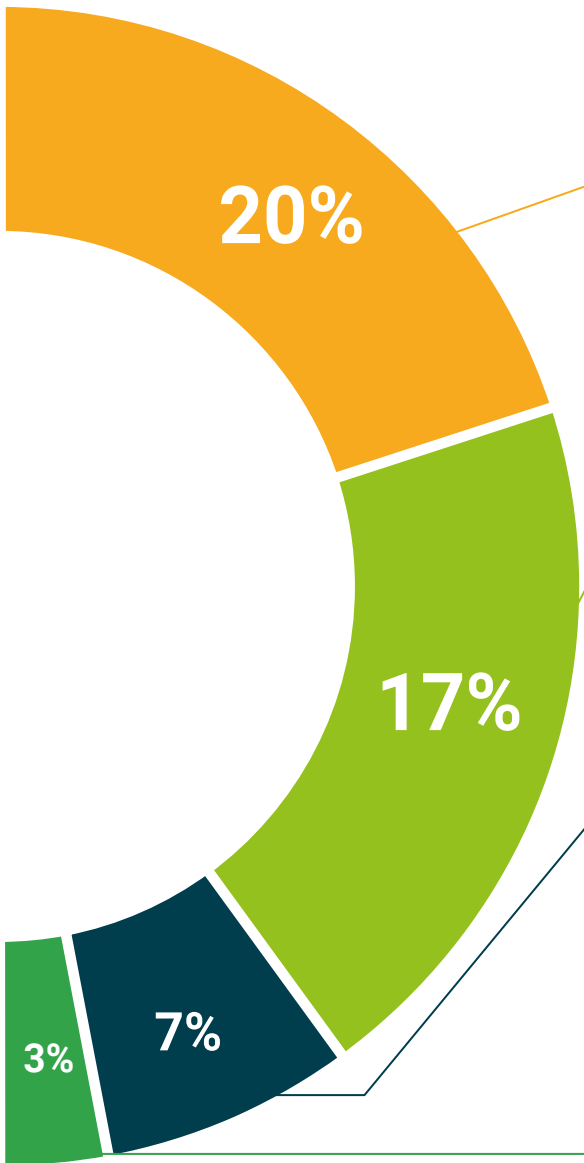
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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.



06

# Certificate

The Postgraduate Certificate in Musculoskeletal System Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





“

*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This **Postgraduate Certificate in Musculoskeletal System Surgery** contains the most complete and up-to-date scientific program on the market.

After the student 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 professional career evaluation committees.

Title: **Postgraduate Certificate in Musculoskeletal System Surgery**

Official N° of Hours: **150 h.**



\*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 language  
virtual classroom



**Postgraduate Certificate**  
Musculoskeletal  
System Surgery

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

# Postgraduate Certificate Musculoskeletal System Surgery

