



## Postgraduate Certificate

Shoulder Girdle Pathology

» Modality: online» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/in/medicine/postgraduate-certificate/shoulder-girdle-pathology

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# 01 Introduction

Shoulder girdle pathology can present great challenges in the diagnostic process. The anatomical complexity of the region and the variety of structures that may be involved in the lesion are factors that increase its difficulty. Consequently, specialists are required who are up to date with the latest developments and tools to be able to perform an accurate and efficient detection of these lesions. This is why TECH has created this program that offers the professional an update on shoulder ossification, obstetric brachial palsy or shoulder fractures in children. A 100% online program, which makes it easier for the specialist to reconcile his daily activities with this academic updating period.



### tech 06 | Introduction

The anatomical complexity of the scapular girdle region presents a complicated scenario for surgeons. This is due to the fact that conditions in this region may include fractures, rotator cuff tendon tears, glenoid labrum injuries, among others, which present similar symptoms, making differential diagnosis and, therefore, the establishment of accurate treatment difficult.

It is in this context that medical updating plays a crucial role; constant scientific and technological advances provide professionals with new tools and techniques for the evaluation of shoulder girdle pathology. For this reason, TECH has designed this Postgraduate Certificate which is developed in 150 hours of intensive updating.

In this sense, the medical professional will deepen in the most relevant topics in the pathology of the scapular girdle. A program that covers fundamental aspects such as Phylogeny, Embryology and Ossification of the Shoulder, the Dysplasias that affect it and Obstetric Brachial Palsy. In addition, he will delve into fractures of the proximal humerus, clavicle, scapula and acromioclavicular joint injuries in children, metabolic bone pathology and rheumatic diseases.

Following this approach, this academic proposal is presented under a 100% online methodology. This will allow the graduate to have a series of resources in online formats, which can be accessed at any time and place with just a digital device with an Internet connection. In addition, this methodology is combined with the Relearning system, which allows the professional to remember complex concepts in an efficient and effective manner.

This **Postgraduate Certificate in Shoulder Girdle Pathology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by expert orthopedic surgeons
- 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
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



You will learn about the different dysplasias and syndromes that affect the shoulder girdle through the best didactic material"



Increase your skills to diagnose and treat fractures and injuries to the shoulder in children, including dislocations and acquired problems.

You will have an update on Metabolic Bone Pathology and diseases affecting osteoclastic function such as Neurofibromatosis.

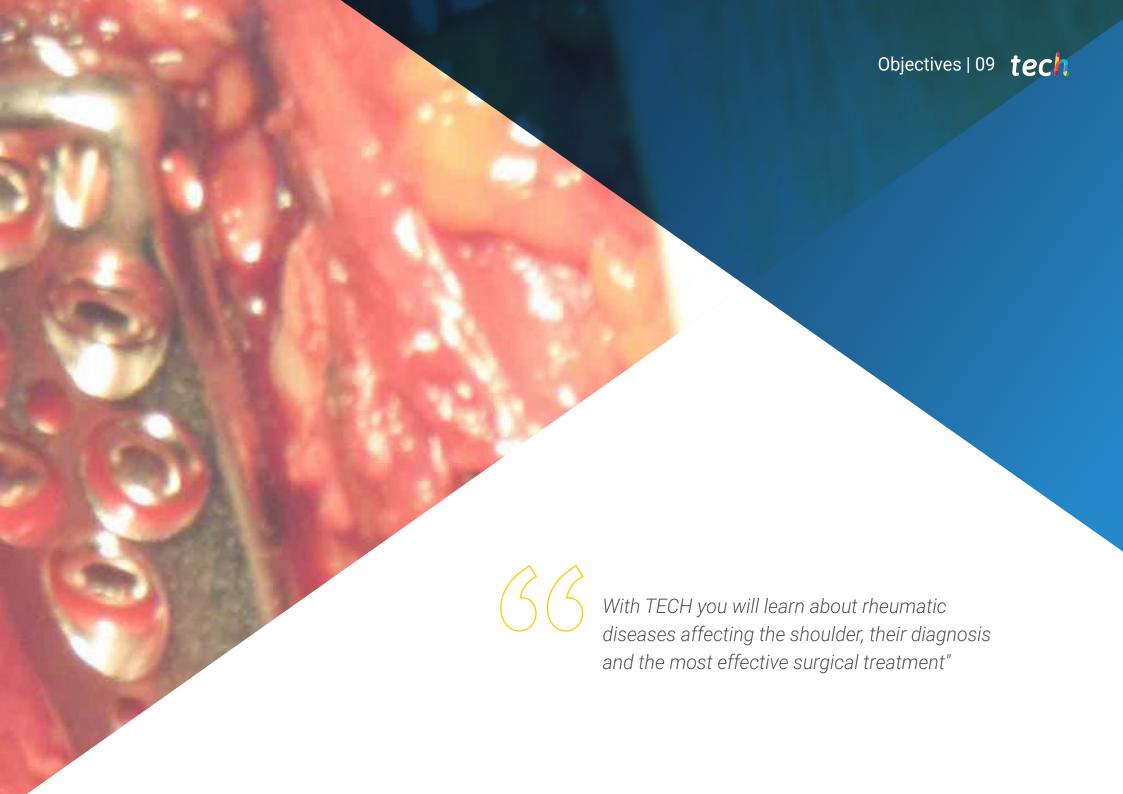
The program's teaching staff includes professionals from sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that arise throughout the academic program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.





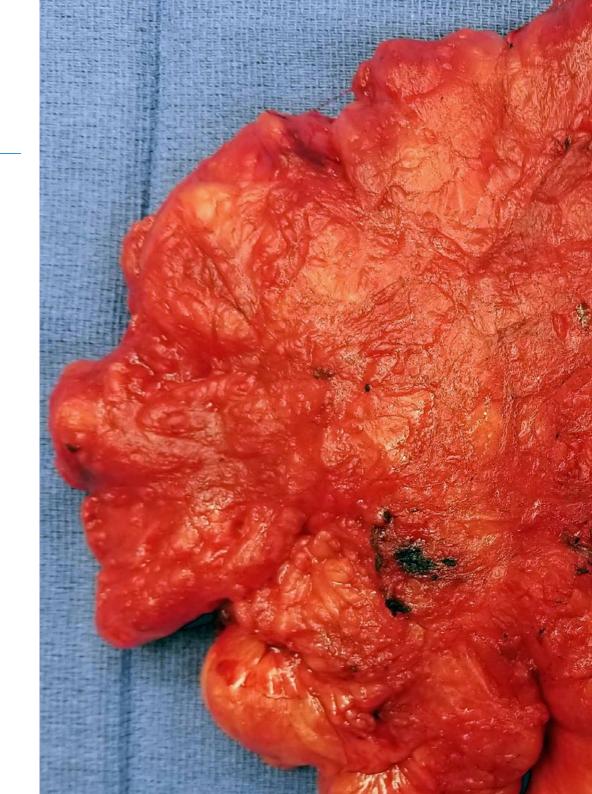


### tech 10 | Objectives



### **General Objectives**

- Analyze the macroscopic anatomy of the shoulder
- Determine the different approaches to open surgery
- Introducing the arthroscopic portals of shoulder surgery
- Delve into new technologies in anatomy and shoulder surgery
- Examine the usefulness of different radiological techniques in the diagnosis of certain shoulder pathologies
- Define ultrasound scans as a treatment technique in some shoulder pathologies
- Expose the usefulness of nuclear medicine in shoulder pathology
- Compile the different objective, subjective and quality of life scales
- Show embryology of the shoulder
- Grouping of shoulder pathologies affecting children: dysplasias, fractures and other acquired pathologies
- Development of rheumatologic, tumor and infectious diseases
- Deepening the role of anesthesia in the shoulder





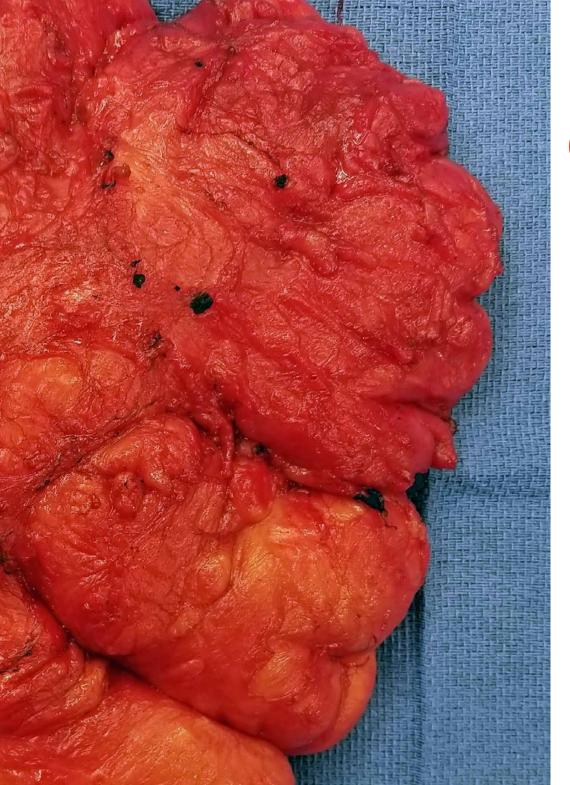


### **Specific Objectives**

- Delve into in the embryology of the shoulder
- Present congenital pathologies affecting the shoulder and acquired pathologies affecting the shoulder in childhood
- Examine the different rheumatic pathologies affecting the shoulder (villonodular synovitis, among others)
- Analyze the infections that can affect the shoulder (septic arthritis, among others)
- Identify tumors that may affect the scapular girdle



You will expand your knowledge in the diagnosis and treatment of shoulder infections through high quality multimedia pills"







### tech 14 | Course Management

### Management



### Dr. Fernández Cortiñas, Ana Belén

- Traumatologist at Cosaga Hospital
- Traumatologist (Shoulder Visiting Fellow) at the Massachusetts General Hospita
- Traumatologist at the Ourense University Hospital Complex
- · Traumatologist at Gambo General Rural Hospital
- · Journal Clinical Epidemiology Reviewer Affiliation: Clinical epidemiology
- · Scientific Journal Medical Science Melvile USA Reviewer
- Dr. in Medicine and Surgery from the Complutense University of Madrid.
- Specialist in Orthopedic and Trauma Surgery
- Degree in Medicine and Surgery from the University of Santiago de Compostela
- Member of: Spanish Association of Orthopedic Surgery and Traumatology (SECOT), Spanish Society of Shoulder and Elbow Surgery (SECHC), Spanish Association of Arthroscopy (AEA), Spanish Society of Sports Traumatology (SETRADE).



### Dr. López Fernández, Vanesa

- · Attending Doctor of Orthopedic Surgery and Traumatology, Arthroscopy Unit at the Hospital Rey Juan Carlos
- · Attending Doctor of Orthopedic Surgery and Traumatology at the Jiménez Díaz Foundation Hospital.
- · Clinical and research fellowship in shoulder, hand and upper limb surgery at the Clinique Generale d'Annecy
- Clinical and research fellowship in shoulder and elbow surgery under the supervision of Dr. Emilio Calvo and Dr. Foruria at the Jiménez Díaz Foundation.
- Professor and member of the scientific committee of the CURSOCOT for the training of residents and attendings (recertification courses) in Orthopedic Surgery and Traumatology.
- · Honorary Professor of Orthopedic Surgery and Traumatology Universidad Rey Juan Carlos.
- Dr. in Medicine from the University of Santiago de Compostela with a doctoral thesis entitled "Effect of intra-articular hyaluronic acid in experimental synovitis".
- Degree in Medicine from the Santiago de Compostela University
- · Master's Degree in Orthopedic Surgery and Traumatology from San Pablo CEU University.
- · Postgraduate Certificate in Orthopedic Surgery and Traumatology of the Upper Limb by San Pablo CEU University.
- Postgraduate Certificate in Orthopedic Surgery and Traumatology of the Pelvis, Hip and Pediatric Traumatology by San Pablo CEU University.
- Postgraduate Certificate in Orthopedic Surgery and Traumatology of the Knee, Ankle and Foot by San Pablo CEU University.
- Postgraduate Certificate in Orthopedic Surgery and Spine Traumatology, Tumors and Infections by San Pablo CEU University.

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#### **Professors**

### Dr. Pérez Fierro, María

- \* Associate Chief of the Rheumatology Service of the Rey Juan Carlos Hospital
- \* Associate Rheumatologist of the Rheumatology Service of the Hospital de Villalba
- \* Associate Rheumatologist, Rheumatology Department, Julio Perrando Hospital
- \* Associate Rheumatologist of the Rheumatology Department of the Jiménez Díaz Foundation
- Alcobendas City Hall Doctor
- \* Research Doctor of the Cardiology Department of the Hospital Clínico San Carlos
- \* Specialist in Rheumatology at the Fundación Jiménez Díaz
- Master's Degree in Autoimmune Diseases from the University of Barcelona
- Degree in Medicine and Surgery from the National Northeastern University
- Postgraduate Certificate in Advanced Studies in Internal Medicine and Immunology from the Complutense University of Madrid

### Dr. Cánovas Martínez, María Luz

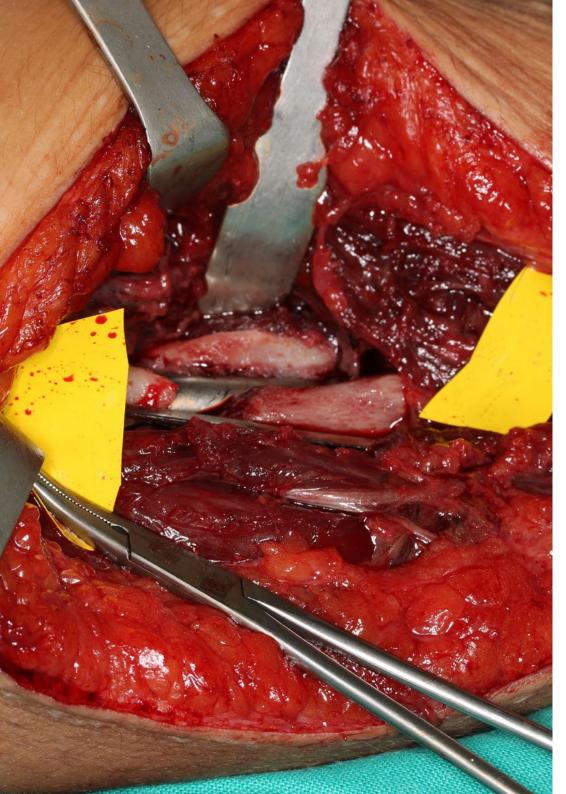
- Anesthesiologist of CHU Ourense
- Head of the Pain Section
- Anesthesiology, Resuscitation and Pain Specialist
- Lecturer in doctoral programs at the University of Vigo
- Lecturer at the European University Miguel de Cervantes and the Catholic University of Valencia
- Doctor of Medicine, University of Santiago de Compostela
- Degree in Medicine from the Santiago de Compostela University
- Accreditation in Radiofrequency Techniques Basic and Advanced Levels
- Accreditation in Pain Ultrasound Basic and Advanced Levels

#### Dr. Morcillo-Barrenechea, Diana

- \* Assistant Doctor in the Traumatology and Orthopedic Surgery Service at Ibermutua
- Assistant Doctor in the Shoulder and Elbow Unit of the Traumatology and Orthopedic Surgery Department at the Jiménez Díaz Foundation
- \* Volunteering in the Traumatology Service as support after earthquake in Nepal
- Volunteering with Doctors of the World in the Traumatology and Orthopedic Surgery Service in Palestine
- Specialist in Orthopedic and Trauma Surgery
- Degree in Medicine from the University of Valladolid
- Recognition of Research Sufficiency in the area of Microbiology at the University of Valladolid
- Member of: Spanish Society of Orthopedic Surgery and Traumatology, Spanish Society of Shoulder and Elbow Surgery, Spanish Association of Arthroscopy

### Dr. Fraga Collarte, Manuel

- Specialist in Orthopedic Surgery and Traumatology at the Niño Jesús University Children's Hospital
- Specialist in orthopedic surgery and traumatology, subspecialty in children at the University of Orense Ourense Hospital Complex
- Visiting fellowship at the Niño Jesús University Children's Hospital
- Observership in Prosthetic Hip and Knee Surgery at Helios Endo-Klinik, Hamburg
- Doctor in the Shoulder, Knee and Wrist Arthroscopy Unit at the Santa Cristina University Hospital



### Course Management | 17 tech

- Traumatology and Orthopedic Surgery Service Doctor at the Santa Cristina University Hospital
- Doctor of the Vascular Surgery Service at the University of Orense Ourense Hospital Complex
- Teacher for pediatricians at Niño Jesús University Children's Hospital
- Teacher in Professional Master's Degree in Orthopedics for Children at CEU Cardenal Herrera University
- Degree in Medicine from the University of Santiago de Compostela
- Professional Master's Degree in Orthopedics for Children CEU Cardenal Herrera University
- Member of: Spanish Society of Pediatric Orthopedics (SEOP), Spanish Society of Orthopedic Surgery and Traumatology (SECOT), Medical Records Committee of the Children's Hospital.
   Niño Jesús University, Violence Commission of the Children's Hospital. Niño Jesús University

#### Dr. Rodríguez del Real, Maria Teresa

- Specialist in Orthopedic Surgery and Traumatology, subspecialty in children at the Getafe University Hospital
- Specialist Doctor in the area of child Traumatology on call at the Niño Jesús University Hospital
- \* Visiting fellowship en Imprefect Osteogenesis en el Sheffield Children's Hospital
- Teacher of Orthopedic Surgery and Traumatology internship students at the Madrid European University
- \* Teacher for pediatricians at the Niño Jesús University Children's Hospital
- in the program Professional Master's Degree in Pediatric Orthopedics
- Degree in Medicine from the Autonomous University Madrid
- \* Master's Degree in Orthopedics for Children by the CEU Cardenal Herrera University
- Master's Degree in Assimilation and Resolution of Clinical Cases in Medicine from the University of Alcalá, Spain
- Member of: Spanish Society of Pediatric Orthopedics (SEOP), Spanish Society of Orthopedic Surgery and Traumatology (SECOT)

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### Dr. Río Gómez, Antía

- Anesthesiologist and Pain Management at COSAGA
- \* Anesthesiologist at the University Hospital Complex of Ourense CHUO
- CHUO
- Resident tutor at CHUOU
- Degree in Medicine from the Santiago de Compostela University
- Anesthesia, Resuscitation and Pain Therapeutics

### Dr. Navas Clemente, Iván

- Medical Specialist in Internal Medicine at the Hospital Universitario Rey Juan Carlos
- \* Assistant Doctor of the Emergency Department at the University Hospital of Fuenlabrada
- Residency in Internal Medicine at the University Hospital of Fuenlabrada
- Lecturer associated with the Faculty of Medicine of the Rey Juan Carlos University
- Master's Degree in Infectious Diseases and Antimicrobial Treatment from Cardenal Herrera University
- Degree in Medicine from the University of Alcalá de Henares

### Dr. Di Giacomo, Pablo Andrés

- \* Staff Doctor in Upper Limb Surgery at Sanatorio Trinidad de Palermo
- \* Doctor in the Health Department of the Argentine Naval Prefecture Welfare Department
- Upper Extremity Surgeon at the Virreyes Clinic
- Staff Doctor in Upper Extremity Surgery and outpatient service at the Julio Méndez Sanatorium
- Head of Upper Limb Surgery Team at OPSA FATSA
- Upper Limb Surgeon at the Ateneo Sanatorium
- Traumatologist at the Emergency Medical Clinic Belgrano Branch
- Outpatient Traumatologist at the Trinidad Sanatorium



- \* Staff Doctor in Upper Limb Surgery at Centro Traumatologico del Oeste
- A.A.O.T. Certified Orthopedic and Traumatology Doctor
- Medical Auditor at the German Hospital
- Traumatology and Orthopedics Resident Instructor at the Dr. Julio Méndez Sanatorium
- Chief Resident of Traumatology and Orthopedics at the Sanatorio Dr. Julio Méndez
- University Specialist in Shoulder and Elbow Surgery
- University Specialist in Medical Auditing
- Specialist in Orthopedics and Traumatology by the Argentine Association of Orthopedics and Traumatology
- \* Specialist in Orthopedics and Traumatology by the National Ministry of Health
- \* Postgraduate Degree in Medical Auditing from the Argentine Catholic University (UCA)
- Postgraduate Degree in Extracorporeal Shock Waves from the Argentine Catholic University (UCA)
- Postgraduate Degree as Shoulder and Elbow Surgeon Specialist from the Argentine Catholic University (UCA)
- Postgraduate Degree as Shoulder and Elbow Surgeon Specialist from the Argentine Catholic University (UCA)
- Medical Degree from the University of Buenos Aires
- Fellowship in Hand Surgery
- Fellowship in Hand Surgery at the Center for Traumatology, Orthopedics and Rehabilitation (CTO

#### Dr. Quintero Antolín, Tomás Luis

- Specialist in Orthopedics and Traumatology
- Traumatologist Specialist in Mutua Gallega
- Area Specialist Doctor at the Vigo Hospital Complex
- Doctor in the Orthopedic Surgery and Traumatology Unit at the Meixueiro Hospital in Vigo
- Degree in Medicine and Surgery from the University of Santiago de Compostela
- Diploma of Advanced Studies by the University of Vigo
- Diploma of the European Board of Orthopedics and Traumatology
- Diploma in Management of Musculoskeletal Tumors by SECOT
- Member of: Spanish Society of Shoulder and Elbow Surgery, Upper Limb Unit of the University Hospital Complex, Bone and Soft Tissue Tumors Unit of the University Hospital Complex of Vigo, Interdisciplinary Committee of Sarcomas of the University Hospital Complex of Vigo, Commission of the external catastrophe plan of the University Hospital Complex of Vigo, Spanish Technical Team of Emergency Aid and Response, Galician Society of Orthopedic Surgery and Traumatology SOGACOT





### tech 22 | Structure and Content

## **Module 1.** Congenital, pediatric and rheumatic pathologies, infections and tumors. Anesthesia

- 1.1. Phylogeny, Embryology and Ossification of the Shoulder
  - 1.1.1. Phylogeny of the Shoulder
  - 1.1.2. Shoulder Embryology
  - 1.1.3. Shoulder Ossification
- 1.2. Dysplasias affecting the shoulder
  - 1.2.1. Congenital Shoulder Pathology
  - 1.2.2. Dysplasias and syndromes involving the shoulder girdle
  - 1.2.3. Orthopedic and surgical management
- 1.3. Obstetric Brachial Palsy
  - 1.3.1. Types of obstetric brachial palsy
  - 1.3.2. Clinical Manifestations and Differential Diagnosis
  - 1.3.3. Treatment
  - 1.3.4. Residual deformities and management
- 1.4. Fractures of the proximal humerus, clavicle, scapula and acromioclavicular joint injuries in children
  - 1.4.1. Shoulder fractures in children
  - 1.4.2. Shoulder dislocations in children
  - 1.4.3. Other Acquired Shoulder Problems in Children
- 1.5. Metabolic bone pathology. Diseases due to altered osteoclastic function. Neurofibromatosis. Collagen and soft-tissue disorders
  - 1.5.1. Metabolic bone pathology
  - 1.5.2. Diseases due to alteration of osteoclastic function
  - 1.5.3. Neurofibromatosis
  - 1.5.4. Collagen and soft-tissue disorders
- 1.6. Rheumatic diseases affecting the Shoulder
  - 1.6.1. Rheumatic diseases affecting the shoulder girdle
  - 1.6.2. Diagnosis of rheumatic diseases affecting the shoulder
  - 1.6.3. Therapeutic algorithm and aspects to be taken into account in the surgical treatment of rheumatic patients





### Structure and Content | 23 tech

- 1.7. Shoulder Infections
  - 1.7.1. Anamnesis and Physical Examination
  - 1.7.2. Etiopathogenesis.
  - 1.7.3. Diagnosis of Shoulder Infections
  - 1.7.4. Medical and surgical treatment. Therapeutic Algorithms
- 1.8. Common tumors affecting the shoulder girdle
  - 1.8.1. Most common shoulder tumors
  - 1.8.2. Algorithm for an adequate diagnosis
  - 1.8.3. Therapeutic Algorithms
- 1.9. Anesthesia in procedures affecting the Shoulder
  - 1.9.1. Regional Anesthesia
  - 1.9.2. General Anesthesia
  - 1.9.3. Brachial plexus block. Complications
  - 1.9.4. Preoperative and Intraoperative Considerations
  - 1.9.5. Postoperative Anesthesia Care
- 1.10. Treatment of pain in pathologies affecting the shoulder: Preoperative and postoperative
  - 1.10.1. Techniques
  - 1.10.2. Suprascapular nerve block and intra-articular nerve block.
  - 1.10.3. Radiofrequency and stimulation
  - 1.10.4. Botulinum toxin



With this program you will broaden your skills in the delivery of anesthesia for procedures affecting the Shoulder"





### tech 26 | Methodology

#### At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately 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, trying to recreate the real conditions in the physician's professional practice.



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:

- Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
- 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 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.

Professionals 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.



### Methodology | 29 tech

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 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (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.



#### **Surgical Techniques and Procedures on Video**

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical 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 on the usefulness of learning by observing experts.

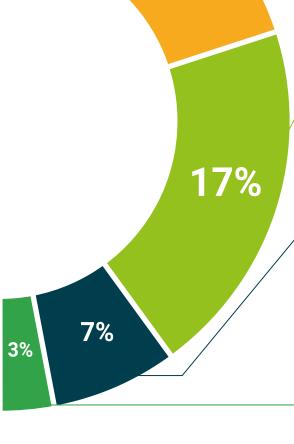
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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.









### tech 34 | Certificate

This Postgraduate Certificate in Shoulder Girdle Pathology contains the most complete and up-to-date scientific 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 certificate 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 Shoulder Girdle Pathology Official N° of Hours: 150 h.



#### Shoulder Girdle Pathology

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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Information



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

