



Diagnosis of the Musculoskeletal Pathology of the Shoulder Girdle

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 18 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-diagnosis-musculoskeletal-pathology-shoulder-girdle

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### tech 06 | Introduction

The scapular girdle is a complex anatomical area of great importance for arm movement. However, despite the wide variety of lesions and pathologies that can affect this region, some of these can be difficult to detect. This factor can increase the risk of an injury in this area going undiagnosed or misdiagnosed, which can lead to inadequate medical care and complications in the management of the injury. This is why it is important for physicians to keep up to date with the latest techniques for image interpretation and pathology evaluation, as well as the most advanced techniques for treating injuries affecting this area of the body.

In this context, TECH has developed a Postgraduate Diploma, which will allow the specialist to keep up to date with the diagnosis of musculoskeletal conditions of the scapular girdle. During 6 months of intensive updating, the graduate will deepen in Surgery and Osteology of the Shoulder and Glenohumeral Joint. He will also delve into diagnostic imaging, Nuclear Medicine in shoulder pathologies and evaluation scales and quality of life.

Since the program is 100% online, the professional will have the excellent opportunity to combine his or her daily responsibilities with those of updating his or her knowledge. Also, thanks to the Relearning method, you will explore in detail the fundamental aspects of the curriculum, strengthening the updated concepts.

This Postgraduate Diploma in Diagnosis of the Musculoskeletal Pathology of the Shoulder Girdle 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



With this program you will delve into the Glenohumeral Joint, its arthrology, capsule and ligaments"



In only 6 months you will deepen your knowledge of the anatomy of the Acromioclavicular, Sternoclavicular and Scapulothoracic joints"

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 are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

You will identify, throughout this program, the revolutionary techniques to maintain the stability and movement of the Shoulder Girdle Muscles.

Update your knowledge of the nerves and blood vessels of the shoulder and their relationship to surgical approaches to treating injuries in this area.





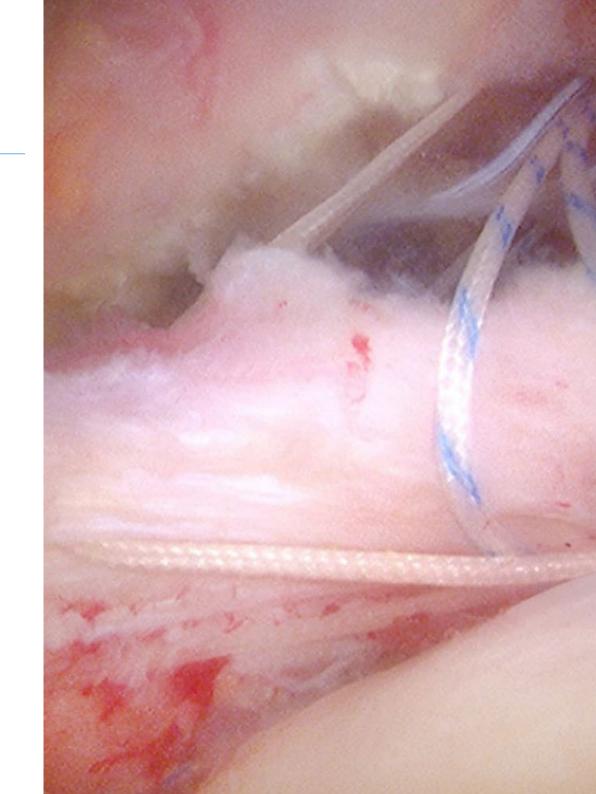


## tech 10 | Objectives



### **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**

#### Module 1. Arthroscopic Approach to the Scapular Belt

- Compiling the milestones and key points of Shoulder Surgery
- \* Delve into on the bony and muscular anatomy of the shoulder
- Identify the vasculonervous anatomy of the shoulder
- \* Examine the approaches used in shoulder surgery
- Determine the arthroscopic portals used in shoulder surgery
- To analyze the biomechanics of the Scapular Waist
- Develop knowledge of new technologies applied to shoulder surgery (surgical planning platforms and navigation in shoulder surgery, among others)

#### Module 2. Radiology, other diagnostic techniques and scales

- Define the usefulness of plain radiography within the different diagnostic techniques
- Deepen on the validity of CT and arthroTAC
- Identify the pathologies that can be diagnosed through the use of MRI and ArthroMRI
- Analyze ultrasound from a diagnostic and therapeutic point of view
- \* Specify the indications for the use of Nuclear Medicine techniques
- Examine objective and subjective scales in Shoulder

## Module 3. Congenital, pediatric and rheumatic pathologies, infections and tumors. Anesthesia

- 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



With TECH you will learn more about the different ways of approaching the shoulder and its application in minimally invasive surgery"





#### Management



#### Dr. Vanesa López Fernández

- · Attending Physician of Orthopedic Surgery and Traumatology, Arthroscopy Unit at the Hospital Rey Juan Carlos
- · Attending Physician of Orthopedic Surgery and Traumatology at the Fundación Jiménez Díaz 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 Diploma in Orthopedic Surgery and Upper Limb Traumatology from San Pablo CEU University
- Postgraduate Diploma in Orthopedic Surgery and Traumatology of the Pelvis, Hip and Pediatric Traumatology from San Pablo CEU University
- · Postgraduate Diploma in Orthopedic Surgery and Traumatology of the knee, ankle and foot by San Pablo CEU University
- Postgraduate Diploma in Orthopedic Surgery and Traumatology of the Spine, Tumors and Infections, San Pablo CEU University



#### Dr. Ana Belén Fernández Cortina

- Traumatologist at Cosaga Hospital
- Traumatologist (Shoulder Visiting Fellow) at the Massachusetts General Hospital
- Traumatologist at the Ourense University Hospital Complex
- · Traumatologist at Gambo General Rural Hospita
- 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)

#### **Professors**

#### 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. Ferrando de Jorge, Albert

- Assistant Doctor of Traumatology and Orthopedic Surgery at the Universitari Sant Joan de Reus Hospital
- Doctor at the MQ Center
- Doctor at the Alomar Clinic
- Doctor at the Monegal Clinic
- Doctor of Medicine and University of Valencia Surgery

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#### Dr. Santiago Garnica, Sergio Froylán

- Traumatologist and Orthopedist at Hospital General Regional 180
- Orthopedist and Traumatologist assigned to the General Hospital of the Zone
- \* Sports Traumatology Doctor for the Universidad del Valle Mexico American Football Team
- Coordinator of the Shoulder and Elbow Module of the Medical College of Orthopedics and Traumatology of Jalisco
- Professor at congresses and conferences of Orthopedics and Traumatology of the Mexican College of Orthopedics and Traumatology
- Full professor of high specialty training in Shoulder and Knee Articular Surgery at Hospital General Regional 180
- Full Professor of Orthopedics and Traumatology Residency at Hospital General Regional 180
- Specialty in Traumatology and Orthopedics by the Mexican Institute of Social Security and the Ignacio Garcia Tellez National Medical Center
- \* Specialty in Traumatology and Orthopedics from the Autonomous University of Yucatan
- High Specialty in Shoulder and Elbow Joint Surgery by the Institute of Shoulder & Elbow Surgery and the Autonomous University of Guadalajara
- High Specialty in Shoulder and Elbow Joint Surgery by the Autonomous University of Guadalajara
- \* Training in Musculoskeletal Ecosonography by the Autonomous University of Guadalajara
- Master's Degree in Education from the Instituto Tecnológico de Estudios Superiores de Monterrey

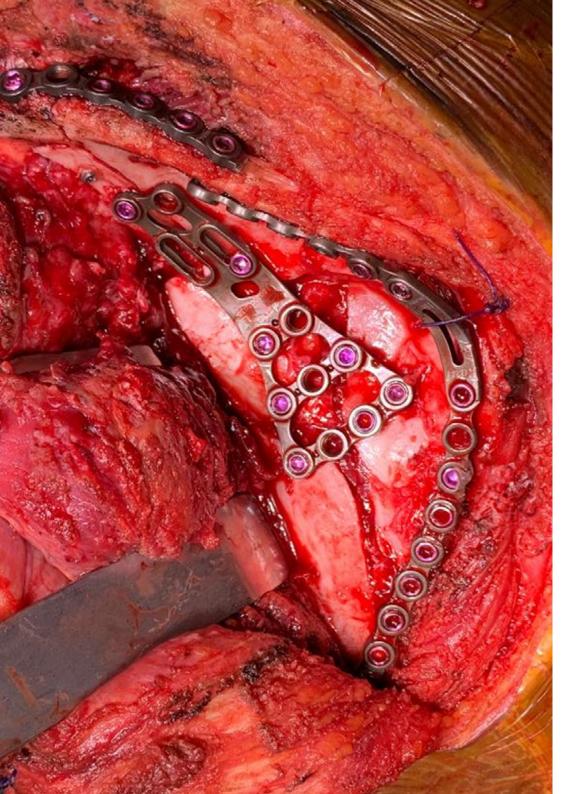
- \* Surgeon, National Autonomous University of Mexico
- SLAOT Order of Merit with the rank of Knight of the Federation of Latin American
   Orthopedic and Traumatology Societies and Associations and Associations of Latin
   American Orthopedics and Traumatology
- Member of: Mexican Federation of Colleges of Orthopedics and Traumatology, Federation of Latin American Societies and Associations of Orthopedics and Traumatology, Medical College of Orthopedics and Traumatology of Jalisco, Mexican Association of Reconstructive Joint Surgery and Arthroscopy

#### Dr. Lázaro Amorós, Alexandre

- Head of Shoulder, Elbow and Hip Unit at MC Mutual
- Founder Amorós Institute of Traumatology
- Professor: Master's Degree in Sports Traumatology, University of Barcelona
- Consultant Stryker Ibérica in Medical Education
- Dr. in Medicine and Translational Research from the University of Barcelona
- Degree in Medicine from the Autonomous University of Barcelona
- Diploma in Advanced Studies (DEA) Program of Doctorate in Surgery and Surgical Specialties from the University of Barcelona
- \* Specialist in Orthopedic Surgery and Traumatology at the Hospital Clinic of Barcelona

#### Dr. Casado Pérez, Cristina

- \* Nuclear medicine specialist at the Rey Juan Carlos Hospital in Móstoles
- Radiodiagnostic specialist in the musculoskeletal radiology section of the 12 de Octubre University Hospital
- Member of the head and neck and endocrinology committee at Hospital Rey Juan Carlos de Móstoles
- Degree in Medicine from the Faculty of Medicine of the University of Oviedo



### Course Management | 17 tech

#### Dr. Aguilar GonzálezD, Juan

- Specialist in Orthopedic Surgery and Traumatology, Upper Limb Surgery in Union of Mutuals
- Specialist in Orthopedic Surgery and Traumatology at the Hospital Vithas Valencia
- Medical Specialist in Orthopedic Surgery and Traumatology at the La Fe University and Polytechnic Hospital, Valencia
- Teacher: Project Elite 2022 Training Race: Sports Medicine Smith&Nephew
- Clinical and Research Fellowship in Shoulder and Elbow Surgery at the Jiménez Díaz Foundation University Hospital
- Specialization in Arthroscopic Surgery by the Francisco de Victoria University
- Master's Degree in Integration and Clinical Problem Solving in Medicine from the University of Alcalá, Spain
- \* Doctor and Surgeon from the Vicente Mártir Catholic University of Valencia
- Expert in Shoulder Surgery by the Spanish Society of Shoulder and Elbow Surgery
- Member of: European Board of Orthopedics and Traumatology FEBOT, European Society for Surgery of the Shoulder and Elbow SECEC-ESSE Associate Member, AoTrauma Europe Member, Sociedad Española de Cirugía de Hombro y Codo SECHC, Asociación Española de Artroscopia AEA, Comité Paciente Multidisciplinar Paciente Politraumatizado

#### Dr. Amezcua Peregrina, Felipe

- Social Service Doctor in the Sports Medicine Department of the Universidad Autónoma de Guadalajara
- Doctor in Traumatology and Orthopedics at the Regional Hospital Dr. Valentín Gómez Farias
- Expert in Spine Trauma at Harvard Global Mexico
- Medical Surgeon by the Autonomous University of Guadalajara

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#### Dr. Claro, Rui

- Chief of the Shoulder Unit of the University Hospital Center of Santo António
- Orthopedic Specialist in the Department of Orthopedics of CHUdSA
- Coordinator of the Shoulder and Elbow Section of the Portuguese Society of Orthopedics and Traumatology
- Lecturer in the discipline of Orthopedics at ICBAS at the University of Porto
- Degree in Medicine from the University of Oporto
- Member of: President of the Portuguese Shoulder and Elbow Society, Portuguese National
  Delegate of the European Society of Shoulder and Elbow Surgery (SECEC-ESSSE), Member
  of the Registry Committee of the SECEC-ESSSE, Member of the Portuguese Society of
  Orthopedics and Traumatology (SPOT), Member of the SECEC-ESSSE, Member of the
  SPOC, Member of the SPOT, Member of the Portuguese Medical Society

#### 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. Torres, Byron

- Orthopedic Orthopedic Traumatologist Doctor
- Doctor in Hospital Metropolitano, Hospital Vozandes, Hospital De Los Valles, Salud S.A., Ecua sanitas S.A
- Professor of the Orthopedics and Traumatology Postgraduate Course of the P.U.C.E
- Professor of the Orthopedics and Traumatology Postgraduate Course of the Loja National University / Pichincha Clinic
- Professor of the International Course on Sports Traumatology
- Fellow in Shoulder and Elbow Reconstructive and Arthroscopic Surgery at the Humanist Center and Concordia Hospital
- Fellow in Shoulder and Elbow Reconstructive and Arthroscopic Surgery at Imbanaco Medical Center
- Fellowship in Knee Surgery and Sports Medicine by the Latin American Society of Arthroscopy
- Medical Degree from Central University of Ecuador
- Doctor of Medicine and Surgery, School of Medicine
- \* Specialist in Orthopedics and Traumatology from the International University of Ecuador
- Member of: Founder of the Ecuadorian Society of Shoulder and Elbow Surgery, American Academy of Orthopedics of Traumatology AAOS, Ecuadorian Society Of Traumatology, Latin American Society Of Knee Arthroscopy And Sports Traumatology S.L.A.R.D

#### Dr. Novo Rivas, Ulrike María

- \* Assistant Radiodiagnostic Physician at the Jiménez Díaz Foundation University Hospital
- \* Assistant Physician of Radiodiagnosis at the Gregorio Marañón University Hospital
- \* Assistant Radiodiagnostic Physician at the Jiménez Díaz Foundation University Hospital
- Medical Specialist in Occupational Medicine in a national prevention society
- Clinical teaching collaborator of Medicine at the Madrid Autonomous University
- Clinical teaching collaborator of Medicine at the Complutense University of Madrid
- Degree in Medicine from the Santiago de Compostela University
- Master's Degree in Occupational Risk Prevention
- Postgraduate Diploma in Musculoskeletal Ultrasound by the Francisco de Vitoria University

#### Dr. Abellán Albert, Andrés

- Radiodiagnostic Specialist in the musculoskeletal radiology section at the Jiménez Díaz Foundation University Hospital
- Radiodiagnostic Specialist in the musculoskeletal radiology section at the Jiménez Díaz Foundation University Hospital
- External rotation physician in Musculoskeletal Radiology at the Rey Juan Carlos University Hospital, Madrid
- External rotation physician in Musculoskeletal Radiology at the Jiménez Díaz Foundation University Hospital
- External rotation physician in Musculoskeletal Radiology at Hospital Asepeyo Coslada
- \* Degree in Medicine and Surgery from the Francisco de Vitoria University
- Master's Degree in Clinical Reasoning and Clinical Practice, Alcalá University

#### Dr. Moreno Zamarro, Gonzalo

- \* Assistant Radiodiagnostic Physician at Jiménez Díaz Foundation University Hospital
- \* Teaching collaborator at Madrid Autonomous University
- Training to operate X-Ray facilities for medical diagnostic purposes
- Degree in Medicine and Surgery from San Pablo CEU University
- Master's Degree in Clinical Reasoning and Practice by the CTO Academy and University of Alcala

#### Dr. Naula, Víctor

- Director of the Integral Miniinvasive & Arthroscopic Center
- Director of the Comprehensive Shoulder Arthroscopic Improvement Center
- \* Chief of the Traumatology and Orthopedics Service of the Clínica María Auxiliadora
- \* Associate Physician at San Jacinto Orthopedic and Traumatology Department
- Doctor of Medicine and Surgery
- Specialist in Traumatology and Orthopedics
- \* Shoulder and Knee Arthroscopic and Open Shoulder and Knee Surgeon
- Bachelor of Medicine, State University of Medical Sciences
- Fellowship Hospital San Gerardo of Monza
- Fellowship Shoulder Surgery Center Forlì
- Fellowship Arthroscopic and Open Shoulder Surgery
- Member of: Italian Arthroscopy Society, Ecuadorian Arthroscopy Group, Latin American Society of Arthroscopy, Knee and Sports, Guayas Medical and Surgical Society, American Academy of Orthopaedic Surgeons, Ecuadorian Society of Orthopedics and Traumatology

### tech 20 | Course Management

#### Dr. León Ramírez, Luisa Fernanda

- Nuclear Medicine specialist at the Rey Juan Carlos Hospital in Móstoles
- Head of Radioguided Surgery at the Rey Juan Carlos Hospital in Móstoles
- Nuclear Medicine Specialist at the San Carlos Clinical Hospital
- Extremadura Health Service Continuous Care Plan in Don Benito
- Pediatric Emergency Physician at the Cardio Infantil Foundation
- General Practitioner at the University Hospital Clínica San Rafael
- Professor and coordinator of the Nuclear Medicine course at the School of Diagnostic Imaging Technicians
- Collaborating Doctor in the Department of Nuclear Medicine of the Rey Juan Carlos Hospital
- \* Degree in Medicine from Universidad Colegio Mayor Nuestra Señora del Rosario Bogotá

#### Dr. Monfared Croigny, Ziba Ghazizadeh

- \* Specialist in Clinical Neurophysiology at the Rey Juan Carlos University Hospital, Madrid
- Specialist in Clinical Neurophysiology at the General Hospital of Villalba
- Specialist in Clinical Neurophysiology at the Jiménez Díaz Foundation University Hospital
- Specialist in Clinical Neurophysiology at the Virgen Macarena University Hospital
- \* Specialist in Clinical Neurophysiology at the Mérida Hospital
- \* Specialist in Clinical Neurophysiology at the Virgen del Rocío University Hospital
- Honorary Tutor at the Universidad Rey Juan Carlos
- \* MIR teaching collaborator Honorary tutor at Rey Juan Carlos University
- Master's Degree in Physiology and Sleep Medicine from the University of Murcia
- Degree in Medicine from the University of Zaragoza
- Member of: Spanish Society of Clinical Neurophysiology, Multidisciplinary Unit of Facial Paralysis HRJC, Multidisciplinary Committee of Neuromuscular Diseases HRJC

#### Dr. Bracamonte López, Yolanda

- Internist in Clinical Neurophysiology at the Rey Juan Carlos University Hospital, Madrid
- Doctor of the Rural and Urban Marginal Urban Health Service at the Primary Care Health Center of the National Health Police of Ventanilla
- Degree in Medicine from the Cayetano Heredia Peruvian University
- Member of: Spanish Society of Clinical Neurophysiology, Spanish Sleep Society, Multidisciplinary Sleep Committee of the Rey Juan Carlos University Hospital, Rey Juan Carlos University Hospital Facial Paralysis Committee

#### Dr. de Rus Aznar, Ignacio

- \* Specialist Physician at the Hospital Olympia Quirón Salud
- Specialist Physician at the Beata María Ana Hospital
- Specialist Physician at HM Sanchinarro Hospital
- Fellowship in Shoulder and Elbow Surgery at the Hospital Ramón y Cajal
- Doctor of Medicine from the Alcalá de Henares University
- Master's Degree in Medicine, Complutense University of Madrid
- Degree in Medicine from the Complutense University of Madrid
- Member of: Spanish Society of Orthopedic Surgery and Traumatology SECOT, Spanish Association of Arthroscopy AEA, Spanish Society of Sports Traumatology SETRADE, European Society of Shoulder and Elbow Surgery SECHC

#### Dr. Asenjo Gismero, Cristina Victoria

- Shoulder and Elbow Specialist in the +Qtrauma Team at Beata María Ana Hospital
- \* Traumatology Assistant, Upper Extremity Unit, Majadahonda Hospital
- FEA at the Ramón y Cajal Hospital
- Lecturer in Use of corticosteroids in acute postoperative pain by SECOT
- Lecturer in Surgical application of the Glenoid Track. AEA
- Program of Management, Research and Innovation in Health by Instituto de Empresa Business School
- Doctorate in Medicine, University of Alcala
- Degree in Medicine from the University of Alcalá, Spain
- \* Shoulder and Elbow Fellow at the Ramón y Cajal Hospital

#### 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
- 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, María 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)

### tech 22 | Course Management

#### 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. 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. 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. 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: 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

#### 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. Fierro Porto, Guido Alfonso

- \* Chief of the Shoulder and Elbow Section at Santa Fe Foundation of Bogotá
- Orthopedic Doctor Shoulder and Elbow Surgeon
- Advanced Fellow Training in Shoulder and Elbow Surgery by Santa Fe Foundation of Bogotá
- Medical Degree from the University of Colombia
- Member of: Shoulder and Elbow Committee of the International Society of Orthopaedic Surgery and Traumatology (SICOT), Secretary General of the Latin American Shoulder and Elbow Society. SLAHOC, President of the Colombian Shoulder and Elbow Society. SCCOT Affiliate, Vice President of the Colombian Shoulder and Elbow Society. Subsidiary SCCOT

#### Dr. Salcuta Chalco, Abraham

- Traumatology and Orthopedics Physician at Nuestra Señora de La Paz Hospital
- Expert in Sports Knee Injuries
- Expert in Reconstructive and Orthoplastic Surgery
- Expert in shoulder and upper limb infiltrations
- Specialist in Orthopedics and Traumatology
- Medical Degree from the Universidad Mayor de San Andrés





### tech 26 | Structure and Content

#### Module 1. Arthroscopic Approach to the Scapular Belt

- 1.1. Shoulder Surgery
  - 1.1.1. Shoulder Surgery
  - 1.1.2. Shoulder Surgery Milestones
  - 1.1.3. Key points of Shoulder Surgery
- 1.2. Shoulder Osteology
  - 1.2.1. The Humerus. Osteology relevant to Shoulder Surgery
  - 1.2.2. The Scapula. Osteology relevant to the realization of scapula implants
  - 1.2.3. The collarbone
- 1.3. Glenohumeral joint: arthrology, capsule and ligaments
  - 1.3.1. Glenohumeral Joint Arthrology
  - 1.3.2. Joint Structures Relevant to Shoulder Surgery Treatment
  - 1.3.3. Capsule of the Glenohumeral Joint, clinical relevance
  - 1.3.4. Ligaments of the Glenohumeral Joint, clinical relevance
- 1.4. Acromioclavicular, sternoclavicular and scapulothoracic joints
  - 1.4.1. Acromioclavicular joint: Relevant Structures for Surgical Treatment
  - 1.4.2. Sternoclavicular joint
  - 1.4.3. Scapulothoracic joint: Relevant aspects in the diagnosis and treatment of the pathology
- 1.5. Muscles of the shoulder girdle
  - 1.5.1. Glenohumeral muscles
  - 1.5.2. Scapulothoracic Muscles
  - 1.5.3. Muscles involved in various joints
  - 1.5.4. Landmark Muscles
- 1.6. Innervation and vascularization of the shoulder
  - 1.6.1. Relation of Shoulder Innervation and Vascularization to Arthroscopic Approaches and Portals
  - 1.6.2. Shoulder innervation
  - 1.6.3. Shoulder Vascularization
- 1.7. Shoulder Biomechanics
  - 1.7.1. Relation of Shoulder Biomechanics to Current Surgical Techniques
  - 1.7.2. Advanced Shoulder Biomechanics
  - 1.7.3. Physiology of Shoulder Movements

- 1.8. Shoulder approach routes
  - 1.8.1. Relevant Structures for Shoulder Surgical Approaches
  - 1.8.2. Shoulder approach routes
  - 1.8.3. Minimally invasive approaches to the Shoulder
- 1.9. Shoulder arthroscopy. Arthroscopic portals and applied anatomy
  - 1.9.1. Shoulder Arthroscopy
  - 1.9.2. Arthroscopic portals
  - 1.9.3. Applied Anatomy in Shoulder Arthroscopy
- 1.10. New technologies applied to Shoulder Surgery
  - 1.10.1. 3D printing of bone structures
  - 1.10.2. Surgical planning platforms
  - 1.10.3. Custom-made implants
  - 1.10.4. Shoulder Surgery Navigation

#### **Module 2**. Radiology, other diagnostic techniques and scales

- 2.1. Radiography in the Diagnosis of Shoulder Pathology
  - 2.1.1. Radiography as an initial study in shoulder pathology
  - 2.1.2. Indication of radiography in pathology of the shoulder
  - 2.1.3. Radiographic projections of the shoulder
- 2.2. Computed Axial Tomography (CT) and ArthroTAC in the Diagnosis of Shoulder Pathology
  - 2.2.1. CT and arthroCT
  - 2.2.2. CT in Shoulder Pathology
  - 2.2.3. ArthroTAC in the pathology of the shoulder
- 2.3. Magnetic Resonance Imaging (MRI) in Shoulder Pathology
  - 2.3.1. Magnetic Resonance Imaging (MRI) for the study of the shoulder
  - 2.3.2. MRI in traumatic shoulder pathology
  - 2.3.3. MRI in non-traumatic shoulder pathology
- 2.4. ArthroMRI in Shoulder Pathology
  - 2.4.1. ArthroMRI in Shoulder Pathology
  - 2.4.2. ArthroRMN in Shoulder Instability
  - 2.4.3. ArthroRMN in rotator cuff tears

- 2.5. Diagnosis by ultrasound. Eco-guided Techniques
  - 2.5.1. Ultrasound. Principles of Ultrasound Study of the Shoulder
  - 2.5.2. Ultrasound in the pathology of the shoulder
  - 2.5.3. Ultrasound-guided techniques in shoulder pathology
- 2.6. Nuclear Medicine in Shoulder Pathology
  - 2.6.1. Important Aspects
    - 2.6.1.1. Planar Gammagraphic and SPTECT CT images
    - 2.6.1.2. PET-CT
  - 2.6.2. Conventional Nuclear Medicine in Infectious Pathology
    - 2.6.2.1. Bone scan
    - 2.6.2.2. Labeled leukocyte scintigraphy and bone marrow scintigraphy
  - 2.6.3. Clinical PET-CT Applications
- 2.7. Neurophysiology
  - 2.7.1. Neurophysiology
  - 2.7.2. Neurophysiology in the Locomotor System
  - 2.7.3. Neurophysiological diagnosis of the most frequent injuries of the shoulder girdle
- 2.8. Objective Scales in Shoulder Pathology
  - 2.8.1. Objective scale
  - 2.8.2. Objective scales in Shoulder Pathology
  - 2.8.3. Applications of objective scales in shoulder pathology
- 2.9. Subjective Scales in Shoulder Pathology
  - 2.9.1. Subjective scale
  - 2.9.2. Objective scales in Shoulder Pathology
  - 2.9.3. Applications of subjective scales in shoulder pathology
- 2.10. Quality of life scales. Applications in Shoulder Pathology
  - 2.10.1. Quality of life scale
  - 2.10.2. Quality of life scales in shoulder pathology
  - 2.10.3. Applications of quality of life scales in shoulder pathology

## **Module 3.** Congenital, pediatric and rheumatic pathologies, infections and tumors. Anesthesia

- 3.1. Phylogeny, Embryology and Ossification of the Shoulder
  - 3.1.1. Phylogeny of the Shoulder
  - 3.1.2. Shoulder Embryology
  - 3.1.3. Shoulder Ossification
- 3.2. Dysplasias affecting the shoulder
  - 3.2.1. Congenital Shoulder Pathology
  - 3.2.2. Dysplasias and syndromes involving the shoulder girdle
  - 3.2.3. Orthopedic and surgical management
- 3.3. Obstetric Brachial Palsy
  - 3.3.1. Types of obstetric brachial palsy
  - 3.3.2. Clinical Manifestations and Differential Diagnosis
  - 3.3.3. Treatment
  - 3.3.4. Residual deformities and management
- 8.4. Fractures of the proximal humerus, clavicle, scapula and acromioclavicular joint injuries in children
  - 3.4.1. Shoulder fractures in children
  - 3.4.2 Shoulder dislocations in children
  - 3.4.3. Other Acquired Shoulder Problems in Children
- 3.5. Metabolic bone pathology. Diseases due to altered osteoclastic function.

Neurofibromatosis. Collagen and soft-tissue disorders

- 3.5.1. Metabolic bone pathology
- 3.5.2. Diseases due to alteration of osteoclastic function
- 3.5.3. Neurofibromatosis
- 3.5.4. Collagen and soft-tissue disorders
- 3.6. Rheumatic diseases affecting the Shoulder
  - 3.6.1. Rheumatic diseases affecting the shoulder girdle
  - 3.6.2. Diagnosis of rheumatic diseases affecting the shoulder
  - 3.6.3. Therapeutic algorithm and aspects to be taken into account in the surgical treatment of rheumatic patients

### tech 28 | Structure and Content

- 3.7. Shoulder Infections
  - 3.7.1. Anamnesis and Physical Examination
  - 3.7.2. Etiopathogenesis
  - 3.7.3. Diagnosis of Shoulder Infections
  - 3.7.4. Medical and surgical treatment. Therapeutic Algorithms
- 3.8. Common tumors affecting the shoulder girdle
  - 3.8.1. Most common shoulder tumors
  - 3.8.2. Algorithm for an adequate diagnosis
  - 3.8.3. Therapeutic Algorithms
- 3.9. Anesthesia in procedures affecting the Shoulder
  - 3.9.1. Regional Anesthesia
  - 3.9.2. General Anesthesia
  - 3.9.3. Brachial plexus block. Complications
  - 3.9.4. Preoperative and Intraoperative Considerations
  - 3.9.5. Postoperative Anesthesia Care
- 3.10. Treatment of pain in pathologies affecting the shoulder: Preoperative and postoperative
  - 3.10.1. Techniques
  - 3.10.2. Suprascapular nerve block and intra-articular nerve block
  - 3.10.3. Radiofrequency and stimulation
  - 3.10.4. Botulinum toxin









Implement in your clinical practice the new technologies applied to Shoulder Surgery such as 3D printing and surgical navigation"





### tech 32 | 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 | 35 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.

### tech 36 | Methodology

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**

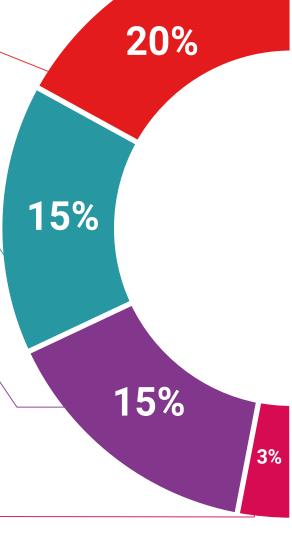
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many 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.

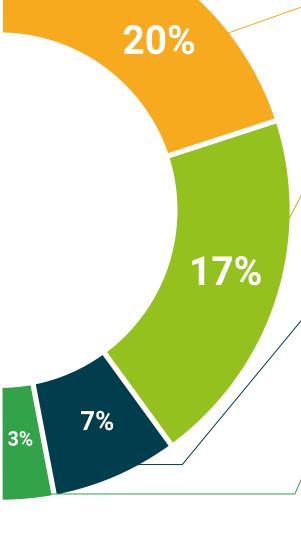
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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 40 | Certificate

This program will allow you to obtain your **Postgraduate Diploma in Diagnosis of the Musculoskeletal Pathology of the Shoulder Girdle** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Postgraduate Diploma in Diagnosis of the Musculoskeletal Pathology of the Shoulder Girdle

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



Postgraduate Diploma in Diagnosis of the Musculoskeletal Pathology of the Shoulder Girdle

has successfully passed and obtained the title of:

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



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



## Postgraduate Diploma

Diagnosis of the Musculoskeletal Pathology of the Shoulder Girdle

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

