

# Postgraduate Certificate

## Tendon Injuries of the Hand





## Postgraduate Certificate Tendon Injuries of the Hand

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/tendon-injuries-hand](http://www.techtute.com/us/medicine/postgraduate-certificate/tendon-injuries-hand)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 18*

05

Methodology

---

*p. 22*

06

Certificate

---

*p. 30*

# 01

# Introduction

The development of less invasive surgical techniques for the approach of tendon injuries of the hand, the use of new materials and fixation devices for sutures, have improved the prognosis of patients undergoing surgery. These advances have led specialists to be constantly updating their technical skills and competences in this type of pathologies. For this reason, TECH has designed this 100% online program that leads the graduate to be aware of the scientific evidence in the use of various therapeutic alternatives, diagnostic methods, treatments and rehabilitation protocols. All through a theoretical-practical approach and clinical case simulations, facilitated by the best experts.







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Get 180 teaching hours with the most rigorous curriculum on *Tendon Injuries of the Hand*”

The quality of life of patients with tendon injuries has improved considerably as a result of the development of stem cell therapies, the evolution of minimally invasive surgical techniques or the implementation of artificial tendon implants. These advances undoubtedly mark the daily practice of Hand Surgery specialists.

Given this reality, it is necessary for specialists to be aware of the optimization of treatments, existing alternatives, as well as the most effective rehabilitation procedures currently available. In this line, TECH has developed this 6-week Postgraduate Certificate, which brings together in this period the most rigorous information on the study and management of the various Tendon Injuries of the Hand.

A syllabus that delves into the vascularization of the tendons in their ability to recover, stenosing tenosynovitis of the flexors, tendinopathies of the extensors, as well as the approach to diagnosis and treatment in acute and chronic phase of flexor tendon ruptures. Likewise, thanks to the multimedia didactic material, students will delve into the complications that can arise after an extensor or flexor tendon injury.

In addition, thanks to the *Relearning* method, the professional will advance naturally through the syllabus of this program, reinforcing the key concepts. In this way, you will be able to reduce the long hours of study and memorization, optimizing the access time to the program.

An excellent opportunity to keep up-to-date with the most relevant advances in this field through a program characterized by its flexibility. The student only needs a cell phone, tablet or computer with internet connection to visualize, at any time of the day, the content of this university proposal. An ideal option to reconcile with the most demanding responsibilities and be at the forefront in this subspecialty.

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

- ◆ The development of practical cases presented by experts in Upper Limb Surgery, Orthopedic Surgery and Traumatology
- ◆ 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



*A 6-week academic itinerary that will bring you up to speed on the main tendinopathies and their correct treatment"*

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*Delve into the most successful tendon sutures and rehabilitation procedures at your convenience”*

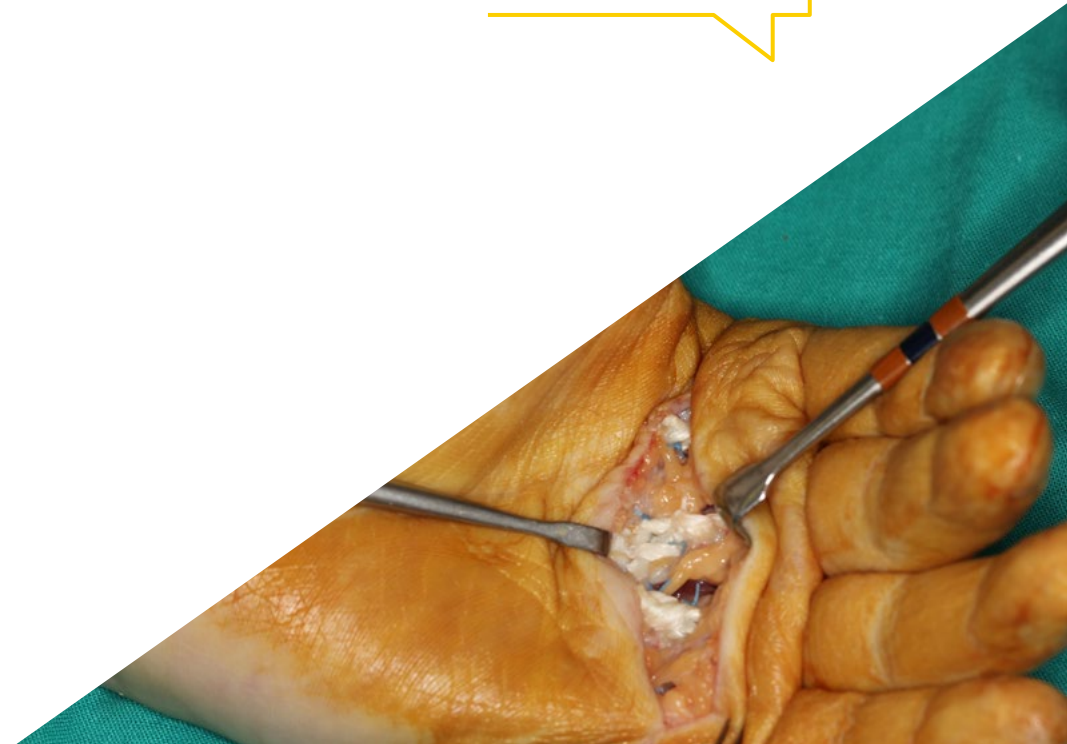
The program’s teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

The 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 immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*If you have a digital device with internet connection you can view the agenda of this program at any time of the day.*

*Face the challenge of tendon rupture surgery with greater assurance thanks to the update offered by TECH.*





# 02 Objectives

The purpose of this Postgraduate Certificate is to provide a complete update on the most effective diagnosis and surgical treatment of Tendon Injuries of the Hand. To achieve this goal, TECH has brought together true specialists in this field and provides a syllabus with a great direct utility in clinical practice. In this way, at the end of this program, students will be able to keep abreast of procedural advances and take them to their practice and operating room.







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*Integrate into your practice the optimal treatments for patients with acute and chronic flexor tendon ruptures”*



## General Objectives

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- ◆ Update knowledge in the different medical and basic specialties surrounding hand pathology
- ◆ Determine the types of wound healing, sutures and skin grafts to specify the treatment of less complex wounds; escalating to the management of complex wounds
- ◆ Analyze the basic anatomy of the wrist and hand to provide a starting point from which to recognize injuries that may occur after trauma or injury of any kind
- ◆ Structure the bony and ligamentous anatomy of metacarpals and phalanges of the hand
- ◆ Analyze different surgical approaches to the hand
- ◆ Compile current arthroscopic treatment methods
- ◆ Establish general criteria for the anatomy and pathophysiology of osteoarthritis in the various joints of the wrist and hand
- ◆ Analyze in detail the anatomy of the flexor and extensor tendons of the hand, as well as the detailed development of their vascularization and the biology of tendon healing
- ◆ Homogenize knowledge and skills in the pathology of the peripheral nerve of the upper limb and brachial plexus
- ◆ Update diagnostic and therapeutic knowledge based on the fundamental principles of nerve and brachial plexus injuries
- ◆ Guide the different therapeutic options (conservative and surgical) as well as the appropriate time to perform them
- ◆ Examine the different surgical techniques used in the treatment of the different pathologies of the pediatric upper limb
- ◆ Delve into the anatomical and pathophysiological knowledge of Dupuytren's disease through physical examination and accurate use of the classification of the disease, to determine the appropriate timing of surgical treatment
- ◆ Analyze the surgical techniques available in primary and relapsed Dupuytren's disease and the sequelae of previous treatments
- ◆ Show the advantages of ultrasound for daily practice in Traumatology
- ◆ Explore occupational hand-wrist injuries
- ◆ Develop the latest technological advances in Hand Surgery





## Specific Objectives

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- ◆ Examine in detail the anatomy and vascularization of the flexor and extensor tendons and analyze their biomechanics
- ◆ Delve into the diagnosis and prognosis of flexor tenosynovitis of the fingers, as well as its complications
- ◆ Evaluate extensor tenosynovitis from its initial diagnosis to its conservative and surgical treatment
- ◆ Examine the different tendon suturing techniques in different flexor tendon areas, as well as types of post-surgical immobilization and initiation of rehabilitative therapy
- ◆ Identify extensor tendon rupture zones and their optimal treatment, as well as their rehabilitation protocol
- ◆ Delve into the complications of extensor tendon sutures and their treatment
- ◆ Analyze flexor suture failures and their treatment

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*The high quality audiovisual material will allow you to delve into the most effective repair techniques for flexor and extensor ruptures”*





# 03

## Course Management

The direction and teaching team of this university program is made up of authentic experts in Hand Surgery, Traumatology and Tendon Injuries of the Hand. Their accumulated surgical, scientific and teaching experience gives the student the guarantee of having access to a syllabus prepared by real specialists and the best didactics in the current academic world. In addition, thanks to the proximity of the teaching staff you will be able to resolve any questions you may have about the content of this program.





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*Experts in Hand Surgery and Traumatology will provide you with the most current and rigorous information on Tendon Injuries of the Hand"*

## Management



### Dr. Ríos García, Beatriz

- Medical Specialist in Orthopedic Surgery and Traumatology in the Hand and Microsurgery Unit at the Monographic Hospital of Orthopedic Surgery and Traumatology ASEPEYO
- Medical Specialist in Orthopedic Surgery and Traumatology (Dr. Rayo and Amaya Team) at the Hospital San Francisco de Asís
- Resident Tutor at the Hospital ASEPEYO
- Medical Specialist in Hand Surgery (Dr. de Haro Team) at the San Rafael Hospital
- Teacher of Knee, Shoulder, Osteosynthesis, Locomotor System and Ultrasound Pathology Courses
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Member of: Spanish Society of Orthopedic Surgery and Traumatology, Spanish Society of Orthopedic Surgery and Traumatology, Spanish Society of Hand Surgery and Microsurgery



### Dr. Valdazo Rojo, María

- Traumatology and Orthopedic Surgery Service at the Hospital Universitario San Francisco de Asís
- Traumatology and Orthopedic Surgery Area Specialist at the Hospital Fundación Jiménez Díaz
- Specialist in Traumatology and Orthopedic Surgery at the Albacete University Hospital Complex
- Professor of Medicine at the Universidad Alfonso X el Sabio, Madrid
- Professor of Medicine at the Autonomous University of Madrid
- Professor of Medicine at the University of Albacete
- PhD in Medicine and Surgery from the Complutense University of Madrid
- Graduated from the Universidad Autónoma de Madrid



## Professors

### Dr. García Prieto, Alfonso Luis

- ◆ Specialist in Orthopedic and Trauma Surgery
- ◆ Author and coordinator of the book "Traumatology for Emergency Doctors"
- ◆ Utility Model / Patent Inventor (55%) of the Utility Model "Osteotomy guide for surgery of the first metatarsal", approved by the Spanish Patent and Trademark Office
- ◆ Degree in Medicine from the University of Cadiz
- ◆ Postgraduate Diploma in Biostatistics applied to Health Sciences by the UNED
- ◆ Member of the teaching and research committee of the Hospital San Juan de la Cruz

### Dr. Alfaro Micó, Joaquín

- ◆ Area Specialist Physician at Hospital Quirón Salud Albacete
- ◆ Member of the teaching committee of Hospital General Albacete
- ◆ Master's Degree in Clinical and Medical Professionalism, Universidad de Alcalá, Spain
- ◆ Master's Degree in Update on Orthopedic Surgery and Traumatology. CEU Cardenal Herrera University
- ◆ Master's Degree in Clinical Management, Medical and Health Care Management. CEU Cardenal Herrera University
- ◆ Master in Traumatologic Emergencies by CEU Cardenal Herrera University
- ◆ Master's Degree in Hand Surgery from the International University of Andalusia
- ◆ Member of the Spanish Society of Orthopedic Surgery and Traumatology (SECOT), Castilian-La Mancha Society of Orthopedic Surgery and Traumatology (SCMCOT), Spanish Society of Hand Surgery (SECMA)

### Dr. Ortega Carnero, Álvaro

- ◆ Doctor
- ◆ Master's degree in integration of medical knowledge and its application to clinical problem solving
- ◆ Degree in Medicine

### Dr. Font Bilbeny, Mercé

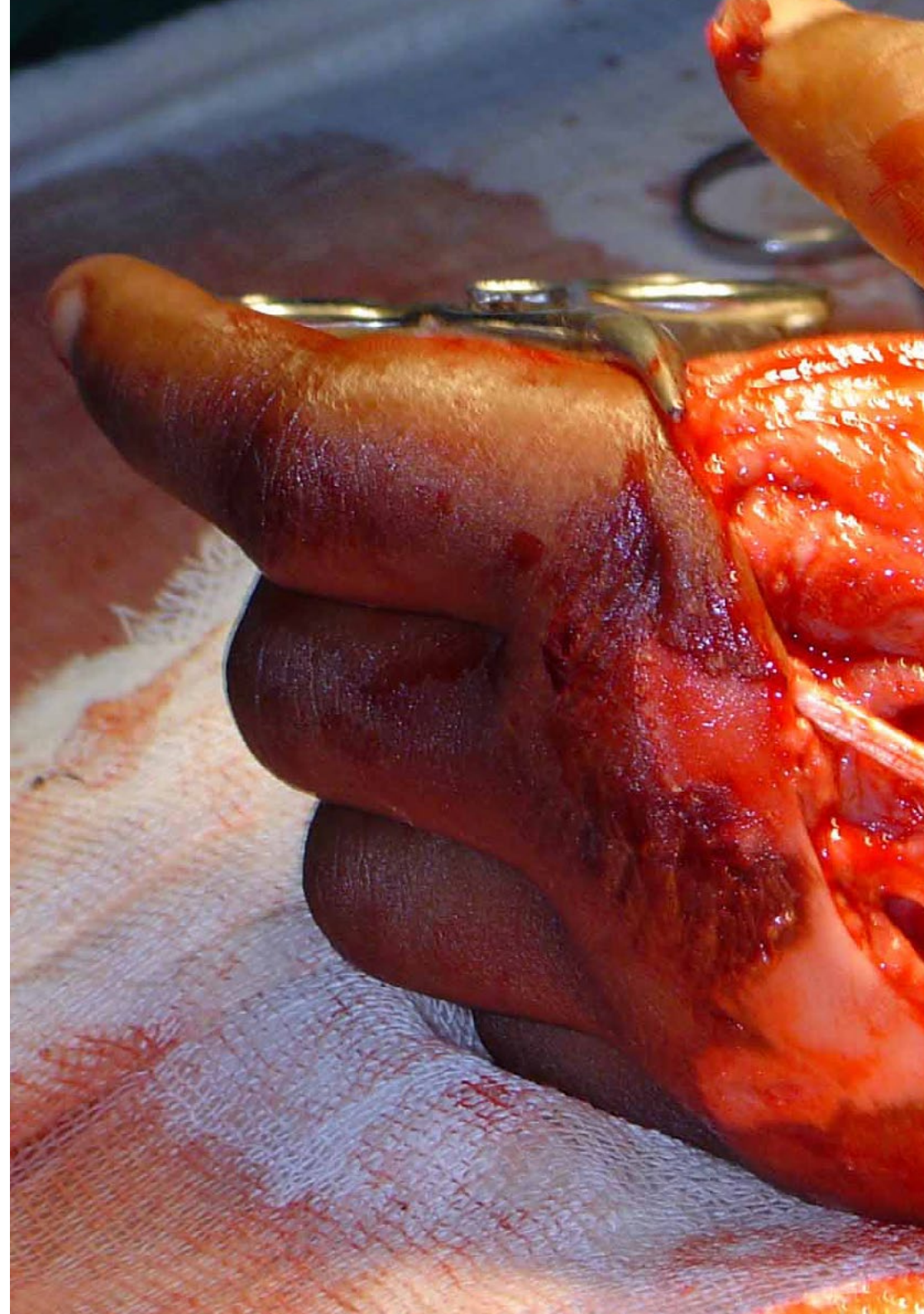
- ◆ Primary Care Continuity of Care Assessment Coordinator - Orthopedic Surgery and Traumatology Specialist
- ◆ Medical specialist of the Orthopedic Surgery and Traumatology of the Gabinete de Especialidades Médicas (GEMA)
- ◆ Teacher collaborator at the Teaching Unit of the Hospital de Mataró
- ◆ Action Guide and Protocols for referral from Primary Care to the Orthopedic Surgery and Traumatology Service of the Consorci Sanitari del Maresme
- ◆ Degree in Medicine and Surgery from the Universitat Autònoma de Barcelona
- ◆ Member of the Upper Extremity Unit of the Orthopedic Surgery and Traumatology Service of the Hospital de Mataró

**Dr. Gimeno García-Andrade, María Dolores**

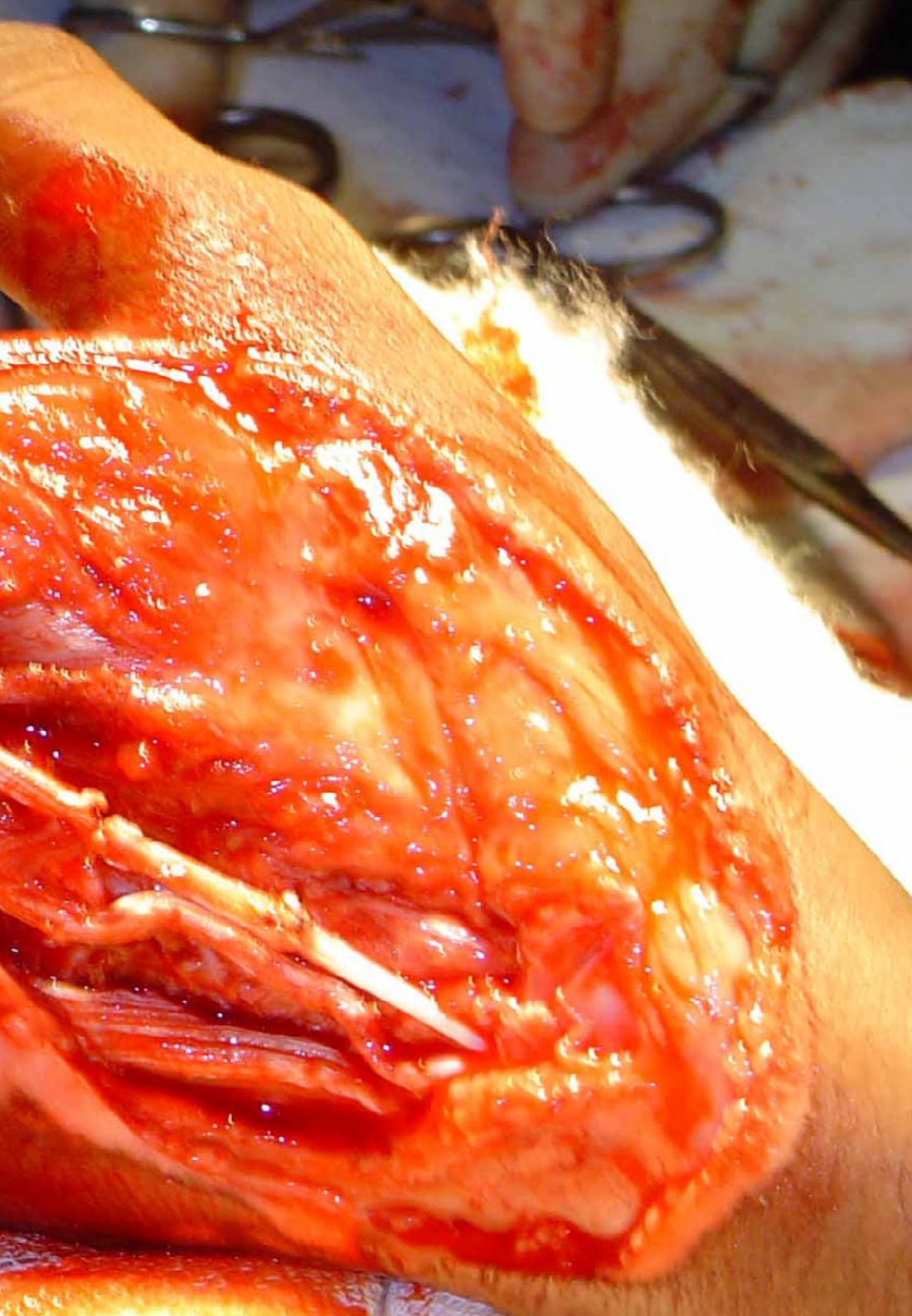
- ◆ Specialist in Traumatology and Orthopedic Surgery at the Hospital Clínico San Carlos de Madrid
- ◆ Medical Director of Procion-Hathayama Medical Center
- ◆ Traumatology and Orthopedic Surgery Consultation Meditrafic
- ◆ Traumatology and Orthopedic Surgery Consultation at Vaguada Medical Center
- ◆ Traumatology and Orthopedic Surgery Consultation at Proci3n-Hathayama Medical Center
- ◆ Teacher and internship to MIR and students of the Complutense University of Madrid
- ◆ Teacher at the Hospital Cl3nico San Carlos
- ◆ Collaborator with the NGO Vicente Ferrer Foundation in Anantapur (India) with the RDT Project for the treatment of disability
- ◆ Degree in Medicine and Surgery from the Complutense University of Madrid

**Dr. Gallach Sanch3s, David**

- ◆ Specialist in Hand Surgery Unit
- ◆ Specialist in Orthopedic Surgery and Traumatology in the specialized care area of Albacete.
- ◆ Degree in Medicine and Surgery from the Faculty of Medicine and Dentistry of Valencia.







**Dr. Losa Palacios, Sergio**

- ◆ Medical Specialist of the Hand Surgery Unit of the Albacete University Hospital Complex
- ◆ Orthopedic Surgery and Traumatology Physician at the General Hospital of Villarrobledo
- ◆ Honorary teaching collaborator of the University of Albacete
- ◆ Master in Hand Pathology by the International University of Andalusia
- ◆ Master's Degree in Patient Safety and Health Care Quality, Universidad Miguel Hernández
- ◆ Master's Degree in Health Law, Universidad de Castilla-La Mancha
- ◆ Postgraduate Certificate in Hand Surgery from the Spanish Society of Hand Surgery
- ◆ Member of the Spanish Society of Hand Surgery



# 04

## Structure and Content

Thanks to the Relearning method, used by TECH, the graduate will achieve an optimal update of their knowledge and skills in Hand Tendon Injuries. Therefore, the continuous reiteration of the key concepts throughout the academic itinerary will lead the graduate to be aware of the diagnostic procedures and the main surgical aspects for the treatment of the various existing injuries. All this, in addition, with an extensive Virtual Library, accessible 24 hours a day, from any electronic device with internet connection.





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*A complete syllabus that will  
get you up to speed on Tendon  
Injuries of the Hand"*

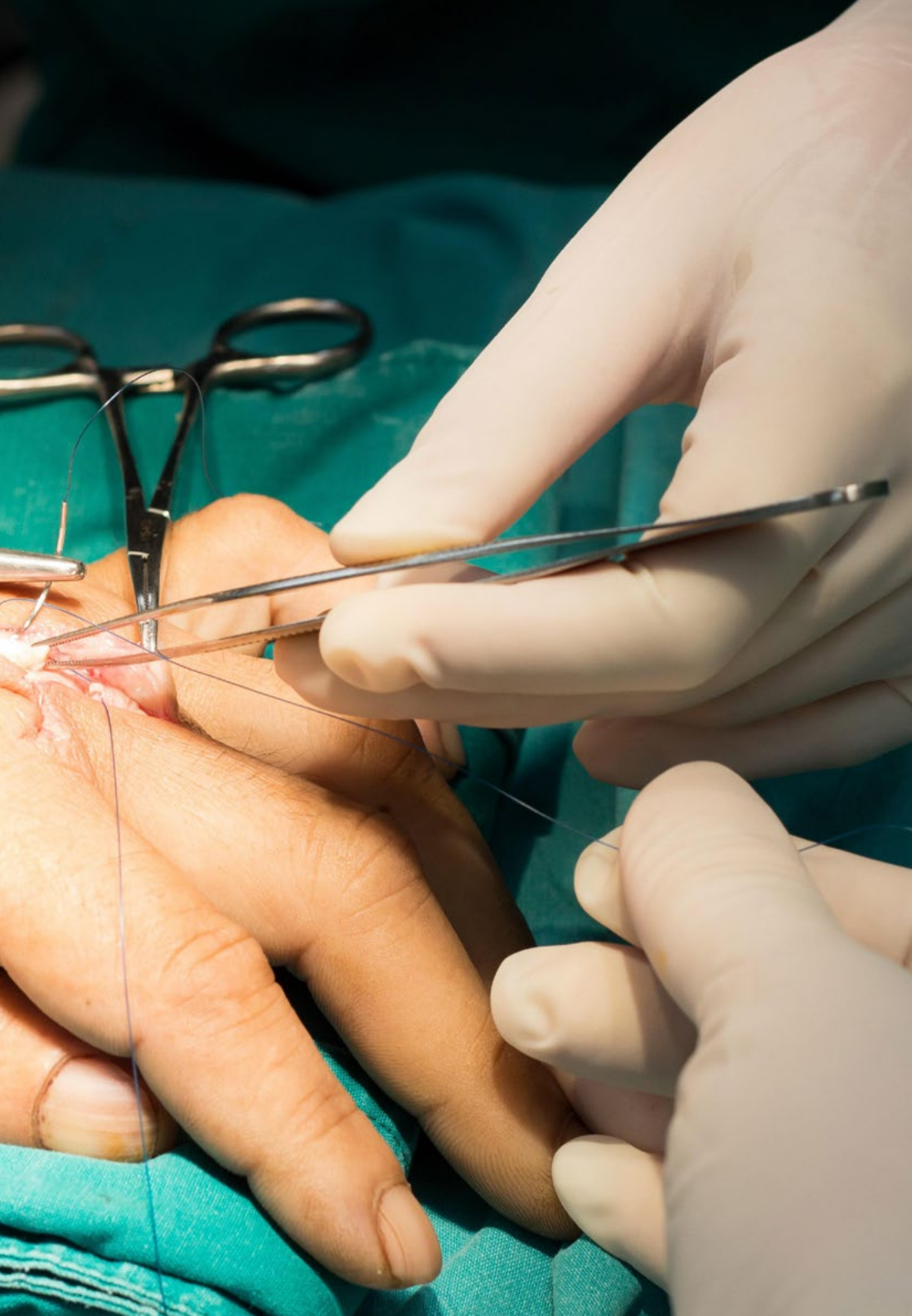


## Module 1. Tendon Injuries of the Hand

- 1.1. Anatomy and Biomechanics of the Extensor Tendons and Flexor Tendons
  - 1.1.1. Anatomy of the extensor tendons
  - 1.1.2. Anatomy of the flexor tendons
  - 1.1.3. Biomechanics of the extensor tendons
  - 1.1.4. Biomechanics of the flexor tendons
- 1.2. Intra and Extrasynovial Vascularization. Pathophysiology of Tendon Repair
  - 1.2.1. Vascularization of flexor tendons
  - 1.2.2. Vascularization of extensor tendons
  - 1.2.3. Pathophysiology of tendon repair
- 1.3. Stenosing tenosynovitis of flexor tendons
  - 1.3.1. Stenosing tenosynovitis of flexors. Diagnosis and Prognosis
  - 1.3.2. Stenosing tenosynovitis of flexors. Conservative treatment. Rehabilitation 1
  - 1.3.3. Stenosing tenosynovitis of flexors. Surgical Management
- 1.4. Extensor Tendinopathies. Clinical and ultrasound diagnosis. Surgical Management
  - 1.4.1. Clinical diagnosis of extensor tendinopathies
  - 1.4.2. Ultrasound in the best diagnosis and therapeutic orientation
  - 1.4.3. Surgical Management
  - 1.4.4. Conservative treatment of extensor tendinopathies. Ultrasound assistance
  - 1.4.5. Surgical treatment of extensor tendinopathies. Ultrasound assistance
- 1.5. Flexor tendon ruptures. Treatment in acute and chronic phase
  - 1.5.1. Flexor tendon rupture and prognosis according to zone
  - 1.5.2. Flexor tendon rupture diagnosis. Treatment in acute phase
  - 1.5.3. Flexor tendon rupture diagnosis. Treatment in chronic phase
- 1.6. Extensor tendon ruptures. Treatment in acute and chronic phase
  - 1.6.1. Flexor tendon rupture and prognosis according to zone
  - 1.6.2. Flexor tendon rupture diagnosis. Treatment in acute phase
  - 1.6.3. Flexor tendon rupture diagnosis. Treatment in chronic phase
- 1.7. Sutures. Types and Forms. Tension. Scientific Evidence
  - 1.7.1. Sutures, types and materials
  - 1.7.2. Tension according to type of sutures. Available evidence
  - 1.7.3. Applications according to cases of the different sutures







- 1.8. Rehabilitation Protocols
  - 1.8.1. Rehabilitation of flexor tendon ruptures treated in acute phase
  - 1.8.2. Rehabilitation of extensor tendon ruptures treated in the acute phase
  - 1.8.3. Rehabilitation of extensor tendon ruptures treated in the acute phase
- 1.9. Complications in extensor ruptures. Diagnosis and Treatment Repair Techniques
  - 1.9.1. Complications of extensor tendon ruptures. Diagnosis. How to predict them
  - 1.9.2. Surgical treatment of these complications
  - 1.9.3. Postoperative rehabilitation after surgical resolution of the complication
- 1.10. Complications in flexor ruptures. Diagnosis and Treatment Repair Techniques
  - 1.10.1. Complications of flexor tendon ruptures. Diagnosis. How to predict them
  - 1.10.2. Surgical treatment of these complications
  - 1.10.3. Postoperative rehabilitation after surgical resolution of the complication



*Explore through the best multimedia material on stenosing tenosynovitis its diagnosis and treatment of De Quervain's disease"*

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.





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*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, 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.

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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. 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.*





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.





# 06 Certificate

The Postgraduate Certificate in Tendon Injuries of the Hand guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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

This program will allow you to obtain your **Postgraduate Certificate in Tendon Injuries of the Hand** 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 Certificate in Tendon Injuries of the Hand**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**







## Postgraduate Certificate Tendon Injuries of the Hand

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

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