

# Postgraduate Certificate Advances in Hand Surgery





## Postgraduate Certificate Advances in Hand Surgery

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

Website: [www.techtitute.com/us/medicine/postgraduate-certificate/advances-hand-surgery](http://www.techtitute.com/us/medicine/postgraduate-certificate/advances-hand-surgery)

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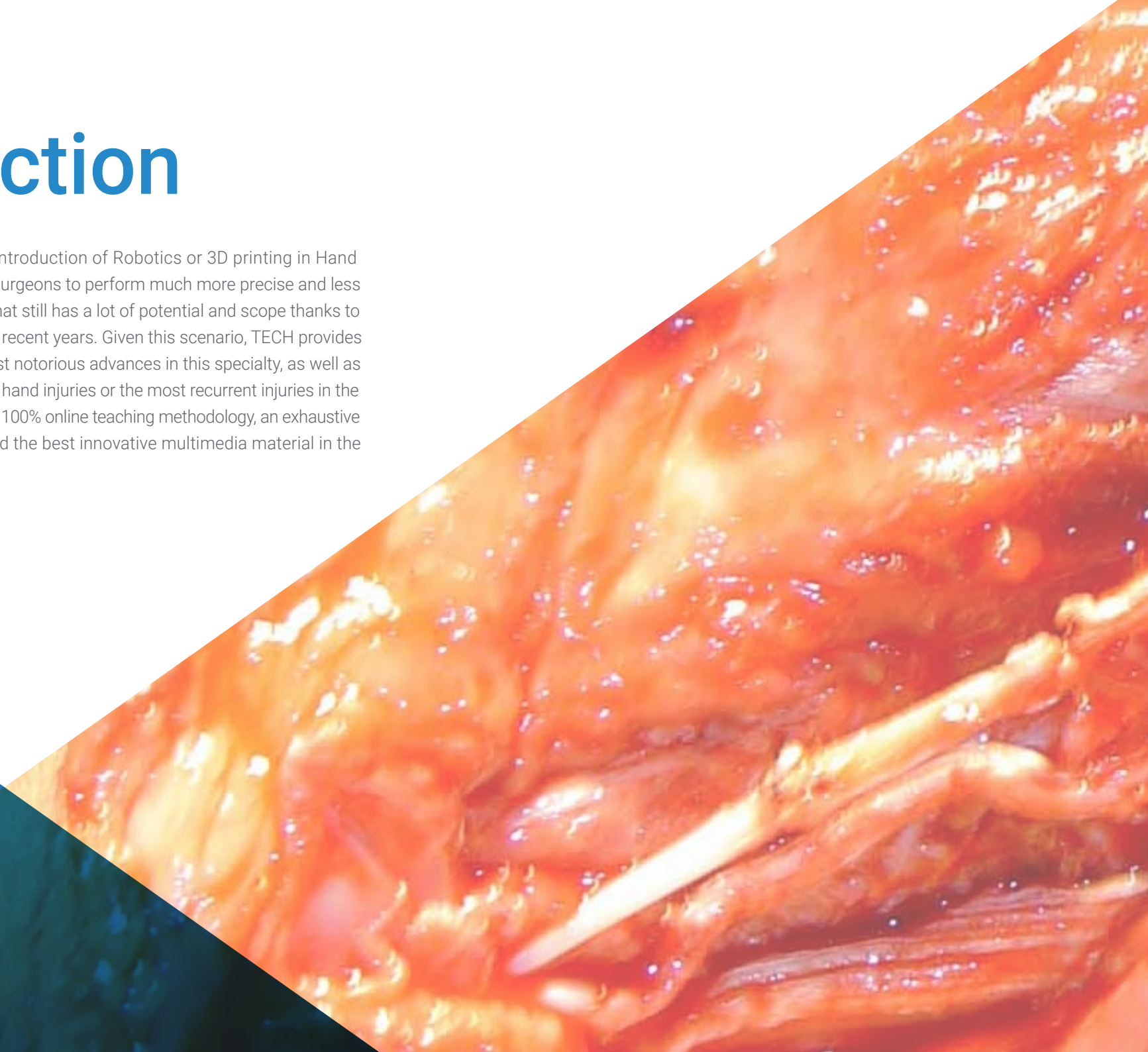
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# 01

# Introduction

New technologies, especially the introduction of Robotics or 3D printing in Hand surgical procedures, have allowed surgeons to perform much more precise and less invasive interventions. A scenario that still has a lot of potential and scope thanks to the boost of Artificial Intelligence in recent years. Given this scenario, TECH provides students with an update on the most notorious advances in this specialty, as well as ultrasound applications in wrist and hand injuries or the most recurrent injuries in the workplace. All this, in addition, with a 100% online teaching methodology, an exhaustive syllabus created by real experts and the best innovative multimedia material in the current academic scenario.





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*Do you want to be aware of the surgical possibilities offered by AI in Hand Surgery? Do it through TECH"*

The introduction of new technologies to plan and carry out operations in Upper Extremity pathologies has marked a turning point in clinical practice. In this way, Robotics, 3D printing, Virtual Reality and Artificial Intelligence are part of the daily routine of many Hand Surgery specialists.

The constant evolution of devices and the improvement of the technique requires constant updating and an innovative vision. For this reason, TECH has designed this Postgraduate Certificate that focuses on Advances in Hand Surgery, developed by an exquisite team of consolidated specialists in this area.

This is a program whose academic itinerary provides the graduate with an effective update on the use of the latest technology to address the main injuries through 3D Engineering, the surgical possibilities of AI or the use of Ultrasound to perform Wrist and Hand Surgeries. A complete update that will be much more dynamic and attractive thanks to the multimedia pills, clinical case studies and complementary readings, which facilitate the extension of the information in this program.

In addition, the Relearning method, based on the reiteration of the essential content throughout the academic course, will allow the graduate to reduce the hours of study and memorization so frequent in other pedagogical systems.

An excellent opportunity to keep abreast of progress in Hand Surgery through a university program that offers the flexibility to study when and where you want. The only thing the professional needs is a digital device with internet connection to visualize, at any time of the day, the syllabus of this first level academic proposal.

This **Postgraduate Certificate in Advances in Hand Surgery** 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



*In only 6 weeks you will be up to date with the progress of 3D Engineering in Hand Surgery"*

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*A first level university proposal that will allow you to be up to date with pharmacological and interventional treatments for CRPS"*

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.

*With the Relearning method you will focus your attention on the key concepts of this program, thus reducing the hours of memorization.*

*You will be aware of the most innovative treatments to address injuries of musicians or climbers.*



# 02 Objectives

The purpose of this Postgraduate Certificate is to provide the pedagogical tools and the most rigorous information on the Advances in Hand Surgery. In this way, the graduate will be up-to-date with the advances in the approach to occupational injuries, Complex Regional Dystrophy Syndrome or in the use of the most innovative equipment. Therefore, the specialist will integrate the most notorious diagnostic and surgical advances in his daily practice.







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*Incorporate the latest innovations for three-dimensional analysis of the infantile spastic hand into your daily exercise"*

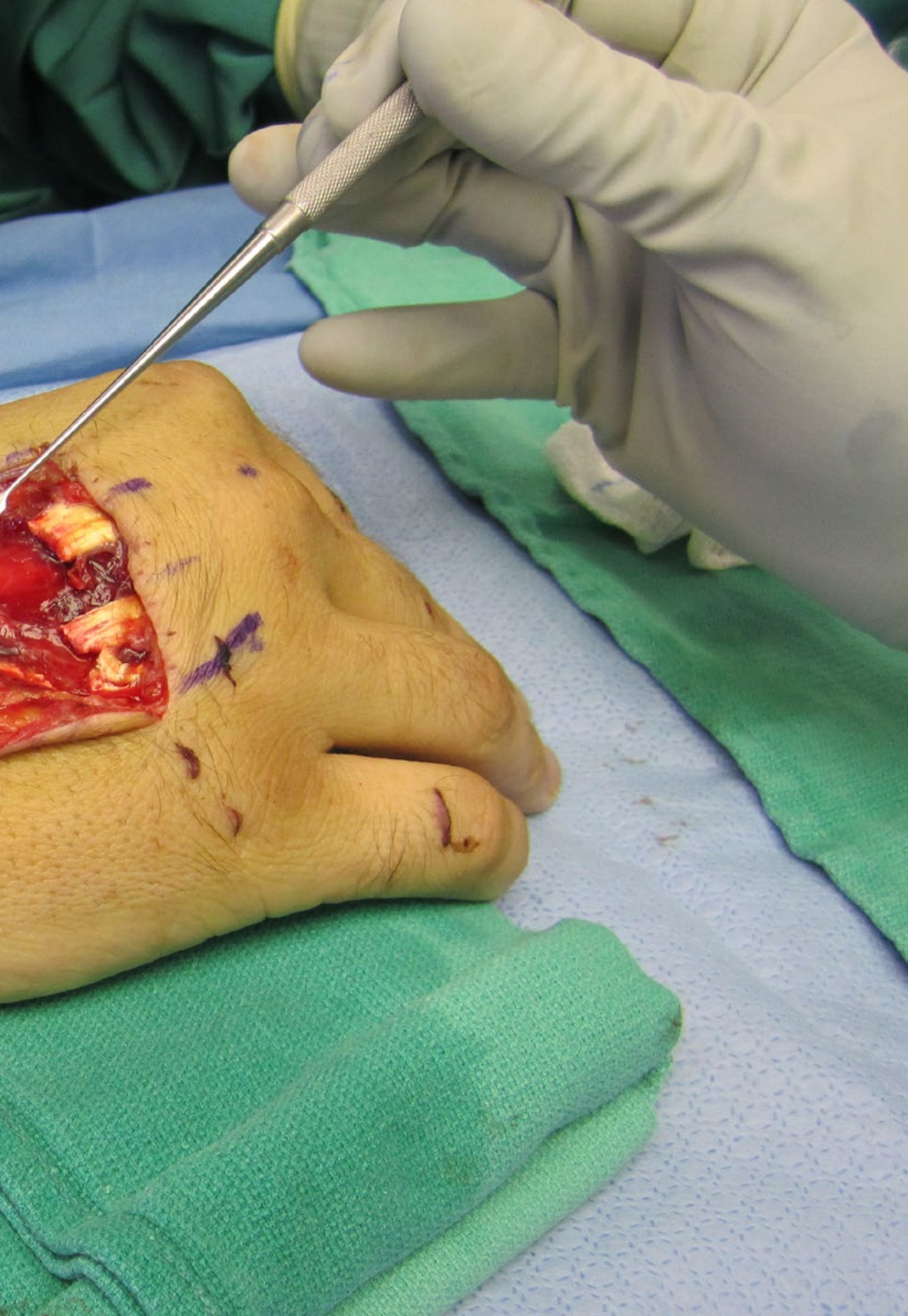


## General Objectives

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- ◆ Update knowledge in the different medical and basic specialties surrounding hand pathology
- ◆ 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
- ◆ Develop the latest technological advances in Hand Surgery





## Specific Objectives

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- ◆ Provide step-by-step guidelines for the diagnosis and ultrasound-guided treatment of hand and wrist injuries
- ◆ Evaluate hand injury prevention and treatment guidelines for climbers and musicians
- ◆ Identify patients most susceptible to occupational hand injuries
- ◆ Establish treatment protocol for CRPS

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*Inquires through the scientific literature on the most frequent chronic degenerative lesions in the Hand”*

03

# Course Management

The extensive professional background of the management and teaching team in the field of Orthopedic Surgery and Traumatology have been decisive for TECH's choice to include them in this program. Therefore, this institution maintains its commitment to offer students a quality update, through a syllabus prepared by the best specialists in Hand Surgery. In this way, the graduate will be able to keep abreast of the most notorious advances in this specialty in only 6 weeks.





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*Get an update on Advances in Hand Surgery from highly experienced and active specialists"*

## 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

### Mr. Dávila Fernández, Fernando

- ◆ Medical specialist in the Hand, Peripheral Nerve and Ultrasound-guided Surgery Unit Sendagrup Associated Doctors
- ◆ Assistant Doctor in the Orthopedic Surgery and Traumatology Service of the Pakea Clinic of Mutualia
- ◆ Associate researcher in clinical trial: "A Multicenter, Open-label study of SI-6603 in Patients with Lumbar Disc Herniation (Phase III)"
- ◆ Associate researcher in clinical trial: A phase 2b, randomized, double-blind, placebo-controlled, study to evaluate the safety and efficacy of staphylococcus aureus 4-antigen (sa4ag) vaccine in adults undergoing elective posterior instrumented lumbar spinal fusion procedures
- ◆ Honorary Professor in the Faculty of Health Sciences at the Universidad Rey Juan Carlos, Madrid
- ◆ Degree in Medicine from the Complutense University of Madrid

### Dr. Sánchez González, José

- ◆ Clinical Chief of the Upper Extremity Unit at Mataró Hospital
- ◆ Member of the Teaching Commission at Hospital de Mataró
- ◆ Specialist in the Traumatology and Sports Medicine Unit at the GEMA Clinic in Mataró
- ◆ Specialist in the Trauma Pathology and Shoulder Arthroplasty Unit
- ◆ Sports Traumatology Team at the Clínica Creu Blanca
- ◆ Specialist in Orthopedic and Trauma Surgery
- ◆ Teaching Collaborator at the Mataró Hospital Teaching Unit
- ◆ Member of: Catalan Society of COIT (SCCOT), Spanish Society of COT (SECOT) and Commission of tutors of residents of the Catalan Society of Orthopedic Surgery and Traumatology

### Dr. Maroto Rodríguez, Raquel

- ◆ Assistant Specialist in Upper Limb Unit at Hospital de Mataró, Consorci Sanitari del Maresme
- ◆ Specialist in Reconstructive Hand Surgery and Microsurgery at ASST Gaetano Pini-CTO
- ◆ Teaching collaborator in FESSH Academy / Foundation Course
- ◆ Teaching collaborator at Universidad Autónoma de Madrid
- ◆ Teaching collaborator at the Hospital Universitario de la Princesa
- ◆ Master in Emergency Medicine at Centro de estudios de preparación al MIR (CTO) in Madrid
- ◆ Master in Clinical and Medical Professionalism at the Universidad de Alcalá de Henares

### Dr. Pérez Prieto, Andrés

- ◆ Author of clinical teaching sessions in Orthopedics and Traumatology Service
- ◆ Graduated in Medicine from the University of Santiago de Compostela
- ◆ Senior Technician in Anatomical Pathology and cytology

### Dr. Gutiérrez Medina, David

- ◆ Assistant of Orthopedic Surgery and Traumatology at Figueres Hospital
- ◆ Teacher in courses at the Faculty of Medicine of the University of Barcelona
- ◆ Graduate in Medicine from the University of Barcelona

### Dr. Arribas Agüera, Daniel

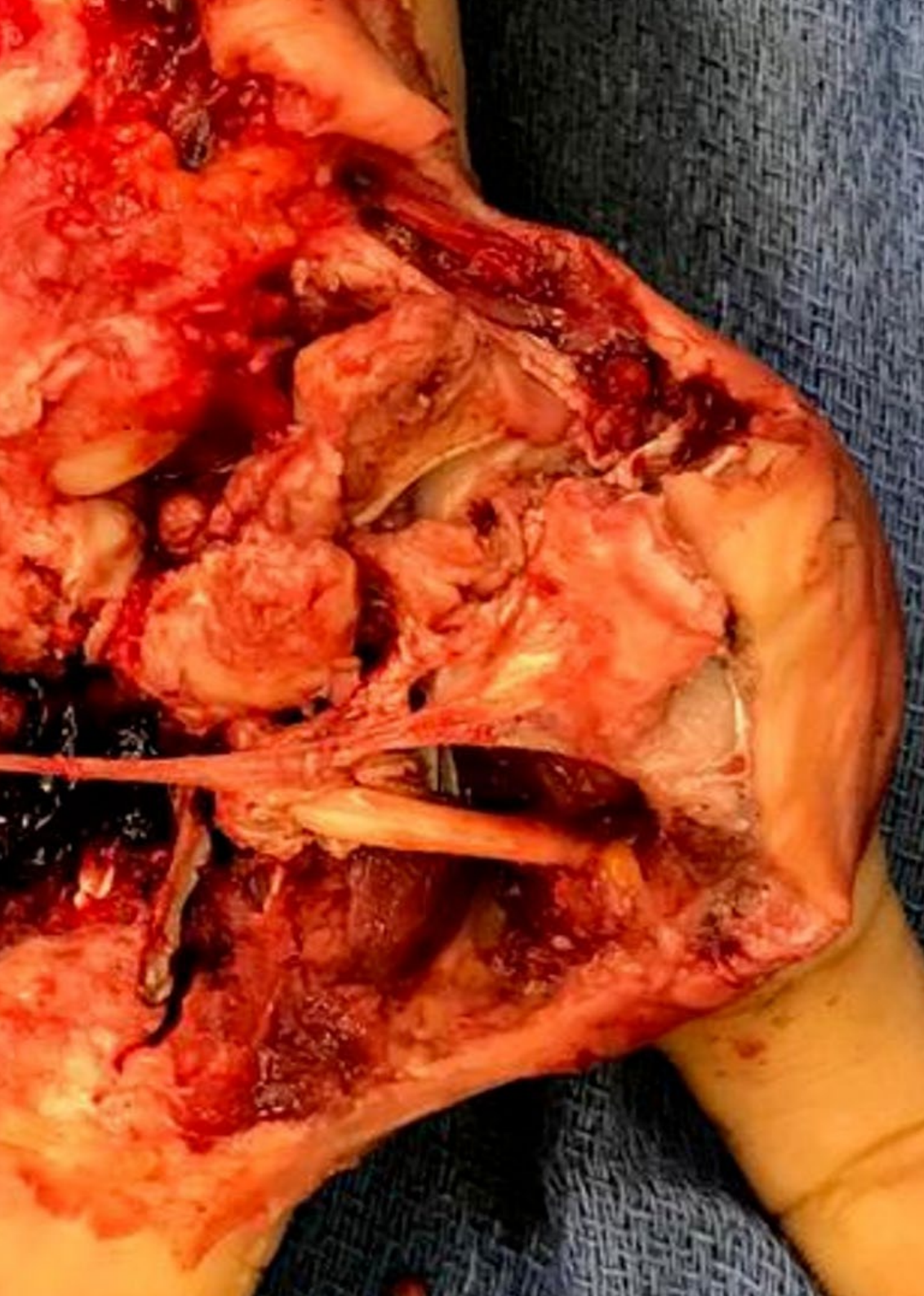
- ◆ Assistant Physician in Traumatology at Hospital de Palamós
- ◆ Assistant Physician in Traumatology at Hospital Dr Josep Trueta
- ◆ Teacher of MIR at the University Hospital Dr Josep Trueta of Girona
- ◆ Teacher in courses of the University of Girona
- ◆ Postgraduate in Health Services Management

**Dr. Vara Patudo, Isabel**

- ◆ Assistant Physician of the Orthopedic Surgery and Pediatric Traumatology Service of the Hospital Infantil Niño Jesús
- ◆ Assistant Physician of Pediatric Orthopedic Surgery and Traumatology at Hospital de Nens
- ◆ Assistant Physician of the Orthopedic and Traumatology Service of the Children's Orthopedic and Traumatology Service of the Hospital Sant Joan de Déu
- ◆ Medical Specialist in Orthopedic Surgery and Traumatology at Hospital Príncipe de Asturias
- ◆ Degree in Medicine from the University of Alcalá, Spain
- ◆ Professional Master's Degree in Children's Orthopedics by TECH Universidad Tecnológica
- ◆ Advanced Training Program in Pediatric Orthopedic Surgery and Traumatology of the SEOP
- ◆ Spanish Society of Pediatric Orthopedics







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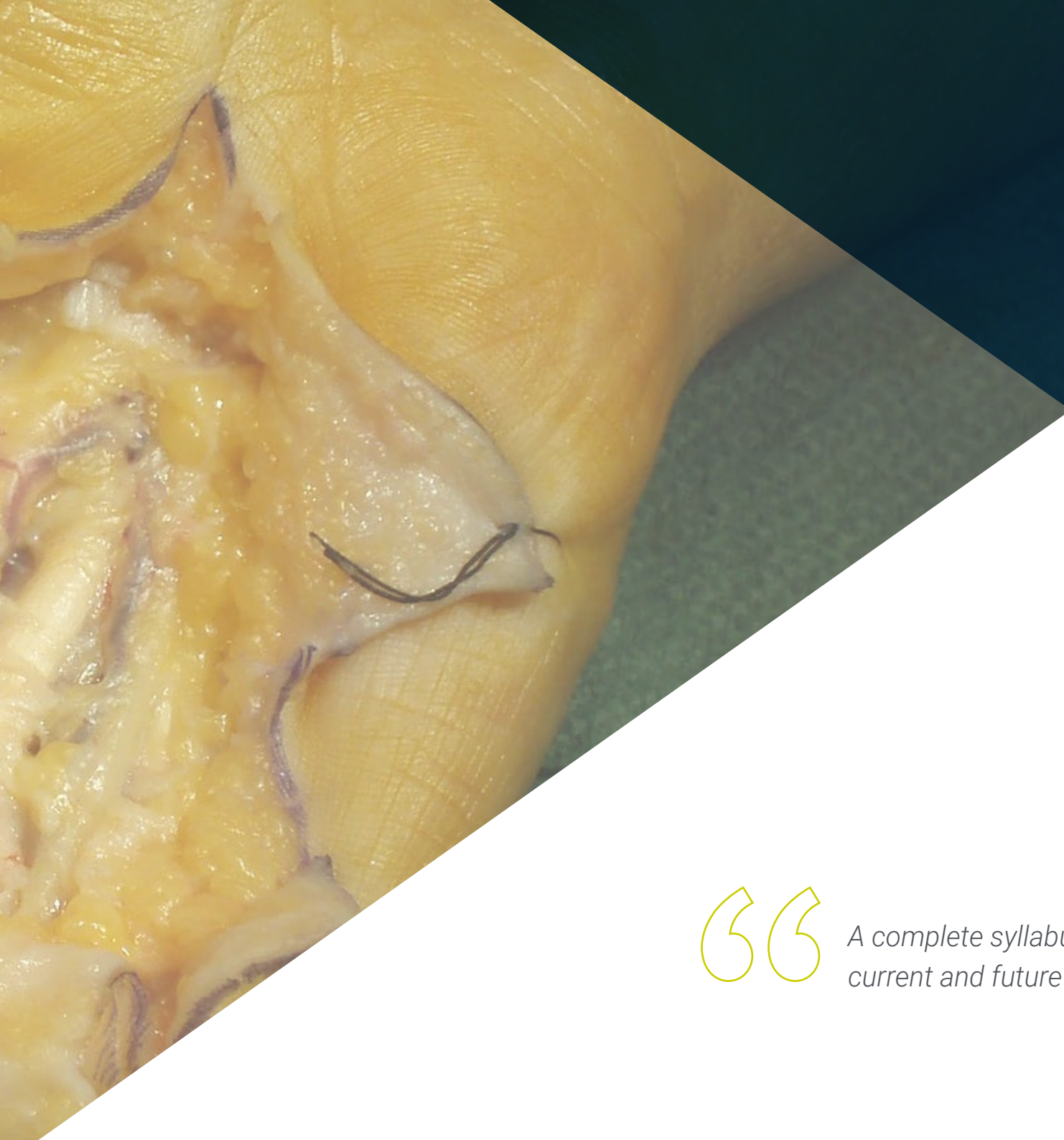
*A unique, key, and decisive educational experience to boost your professional development”*

# 04

## Structure and Content

The syllabus of this university program offers professionals the latest information on ultrasound-guided interventionism, the use of robotics and 3D engineering in hand surgery. These advances are compiled in a syllabus characterized by the dynamism provided by the multimedia didactic material and clinical case studies. Likewise, the teacher has at their disposal a Virtual Library, accessible 24 hours a day, 7 days a week.





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*A complete syllabus that offers you the most current and future vision of Hand Surgery”*

## Module 1. Advances in hand surgery. Other Lesions

- 1.1. Ultrasound Applications in Wrist Surgery
  - 1.1.1. Ultrasound anatomy of the wrist
  - 1.1.2. Ultrasound-guided interventionism in the wrist
  - 1.1.3. Ultrasound-guided surgery
- 1.2. Applications of Ultrasound in Hand Surgery
  - 1.2.1. Ultrasound anatomy of the hand
  - 1.2.2. Ultrasound-guided interventionism in the hand
  - 1.2.3. Ultrasound-guided hand surgery
- 1.3. Wrist and hand injuries specific to musicians. Conservative and surgical treatment
  - 1.3.1. Wrist and carpal injuries in musicians
  - 1.3.2. Finger injuries in musicians
  - 1.3.3. Conservative and surgical treatment
- 1.4. Wrist and hand injuries specific to climbers. Conservative and surgical treatment
  - 1.4.1. Wrist and carpal injuries in climbers
  - 1.4.2. Finger injuries in climbers
  - 1.4.3. Conservative and surgical treatment
- 1.5. Specific injuries in certain manual workers
  - 1.5.1. Wrist injuries in the workplace
  - 1.5.2. Hand injuries in the workplace
  - 1.5.3. Conservative treatment vs. Surgical
- 1.6. Total Wrist Arthroplasty
  - 1.6.1. Indications for Total Wrist Arthroplasty
  - 1.6.2. Types of arthroplasty
  - 1.6.3. Wrist prosthetic surgery
  - 1.6.4. Wrist arthroplasty complications



- 1.7. Neuropathic pain and its management. Complex Regional Dystrophy Syndrome
  - 1.7.1. Identification of the Patient with Neuropathic Pain
  - 1.7.2. Management of Neuropathic Pain
  - 1.7.3. Symptoms and Diagnostic Criteria of CRPS
  - 1.7.4. Pharmacological and Interventional Treatment of CRPS
- 1.8. New Technologies applied to Hand Surgery. Robotics, 3D
  - 1.8.1. Technological advances in Hand Surgery
  - 1.8.2. Robotics and the Hand
  - 1.8.3. 3D engineering in Hand Surgery
- 1.9. Artificial Intelligence. Current and future applications
  - 1.9.1. Possibilities of AI
  - 1.9.2. Diagnostics and development of conservative treatment
  - 1.9.3. Surgical possibilities of AI
- 1.10. Infantile spastic hand. Three-dimensional analysis and applied treatments
  - 1.10.1. Identification of an Infantile Spastic Hand
  - 1.10.2. Diagnostic Methods and Three-dimensional Analysis
  - 1.10.3. Management of the spastic hand in children

“ A 100% online Postgraduate Certificate, with the flexibility you need to reconcile your professional and personal responsibilities ”



05

# Methodology

This academic program offers students a different way of learning. Our methodology follows a cyclical learning process: **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 assess 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

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*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 prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational 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 adapted in 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 assess and re-assess 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 Advances in Hand Surgery guarantees, in addition to the most rigorous and updated training, the access to a program of Postgraduate Certificate in Hand Surgery 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 **Postgraduate Certificate in Advances in Hand Surgery** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Advances in Hand Surgery**

Official N° of Hours: **150 h.**



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



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



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