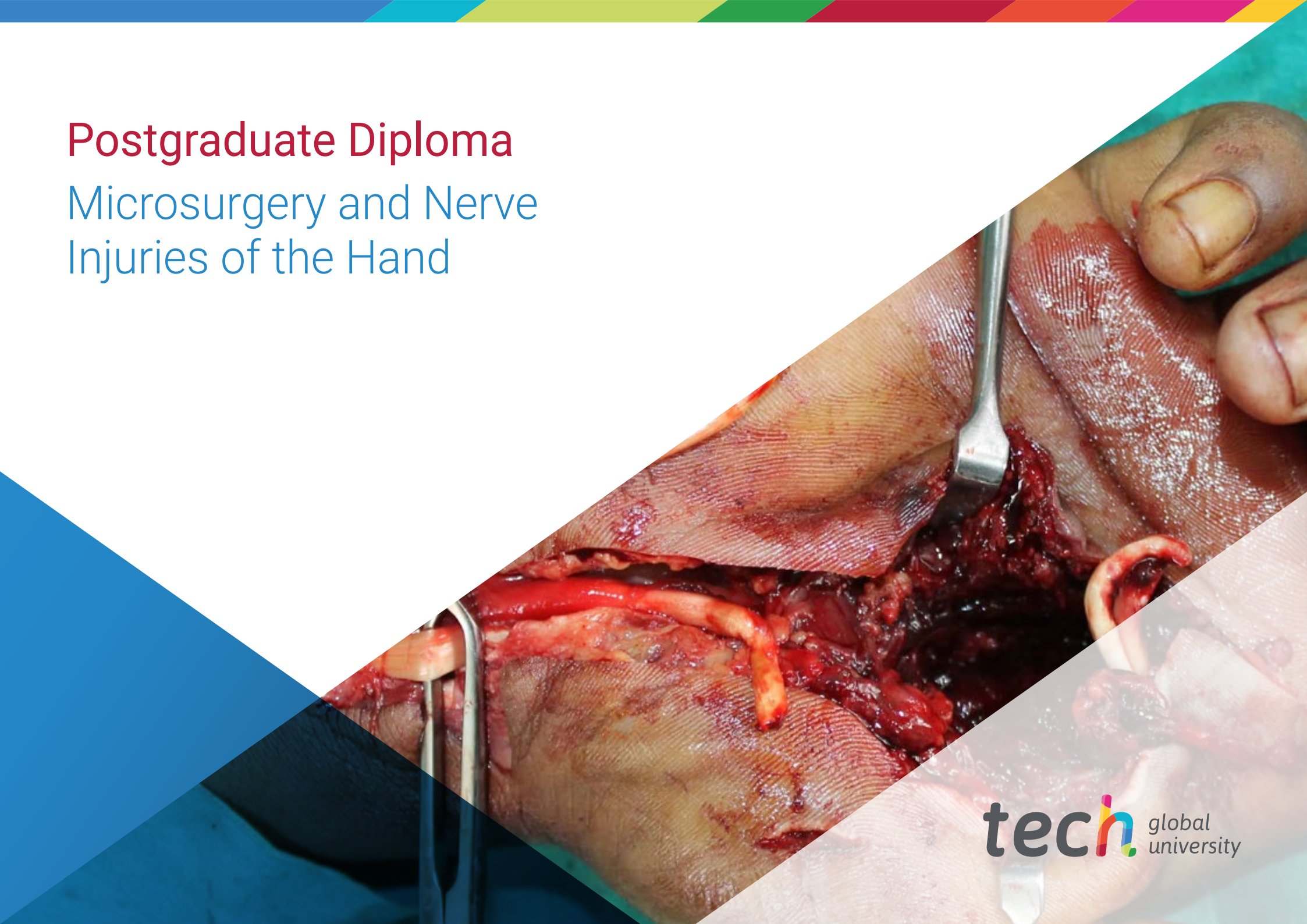
Postgraduate Diploma

Microsurgery and Nerve Injuries of the Hand



tech global university

tech global university

Postgraduate Diploma

Microsurgery and Nerve Injuries of the Hand

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-microsurgery-nerve-injuries-hand**

Index

01

Introduction

Microsurgery of the hand is a procedure that allows specialists to repair nerves and arteries of less than 1 millimeter. Therefore, the latest techniques of this caliber favor a successful intervention in the vast majority of cases, also guaranteeing a full and speedy recovery for the patient. Therefore, identifying them is essential for any specialist who wishes to be at the forefront of interventional procedures. For this reason, TECH has created this program, which provides the student with an in-depth knowledge of the sophisticated methods of microsurgical suturing of nerves and vessels and the surgical protocols used for flaps. In addition, the upgrade will be completed 100% online and without the need to leave your own home.

Through this Postgraduate Diploma, you will learn about the latest microsurgical suturing methods for nerves and vessels of the hand"

As a result of scientific advances, the use of microsurgery has spread enormously among specialists to treat nerve, vascular and tendon injuries of the hand with excellent results. Consequently, the methods used for its performance are constantly being improved, with the idea of facilitating the specialist's surgical work as much as possible and guaranteeing the patient's optimal recovery For this reason, knowledge of all these advances is essential for specialists in Orthopedic Surgery and Traumatology who wish to fully optimize their professional update.

In view of this situation, TECH has decided to carry out this program, which provides the student with the latest knowledge in Microsurgery and Nerve Injuries of the Hand. During 6 months of intensive updating, you will identify the latest surgical techniques to treat nerve and brachial plexus injuries or conditions produced in the soft tissues. Likewise, you will delve into the ultrasound-guided surgical methods used to treat wrist pathologies in very specific patients, such as musicians or climbers.

Thanks to the fact that this Postgraduate Diploma is developed by means of a 100% online methodology, the professional will be able to optimize their learning without having to adhere to uncomfortable pre-established study schedules. Moreover, this program is designed and taught by leading specialists in Orthopedic Surgery and Traumatology, who have extensive experience in the treatment of hand disorders. Therefore, all the knowledge provided to students will have a complete applicability in daily medical practice.

This **Postgraduate Diploma in Microsurgery and Nerve 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
- The availability of access to content from any fixed or portable device with internet connection fixed or portable with internet connection

Thanks to this program, you will delve into the latest surgical techniques to treat nerve and brachial plexus injuries"

Enjoy the most revolutionary educational methodology of the pedagogical panorama and update yourself with the best study comforts"

Learn at your own pace and without external teaching limitations thanks to the Relearning method of this program.

Learn, with this program, the revolutionary techniques of ultrasound-guided surgery used to address wrist pathologies in musicians or climbers.

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.

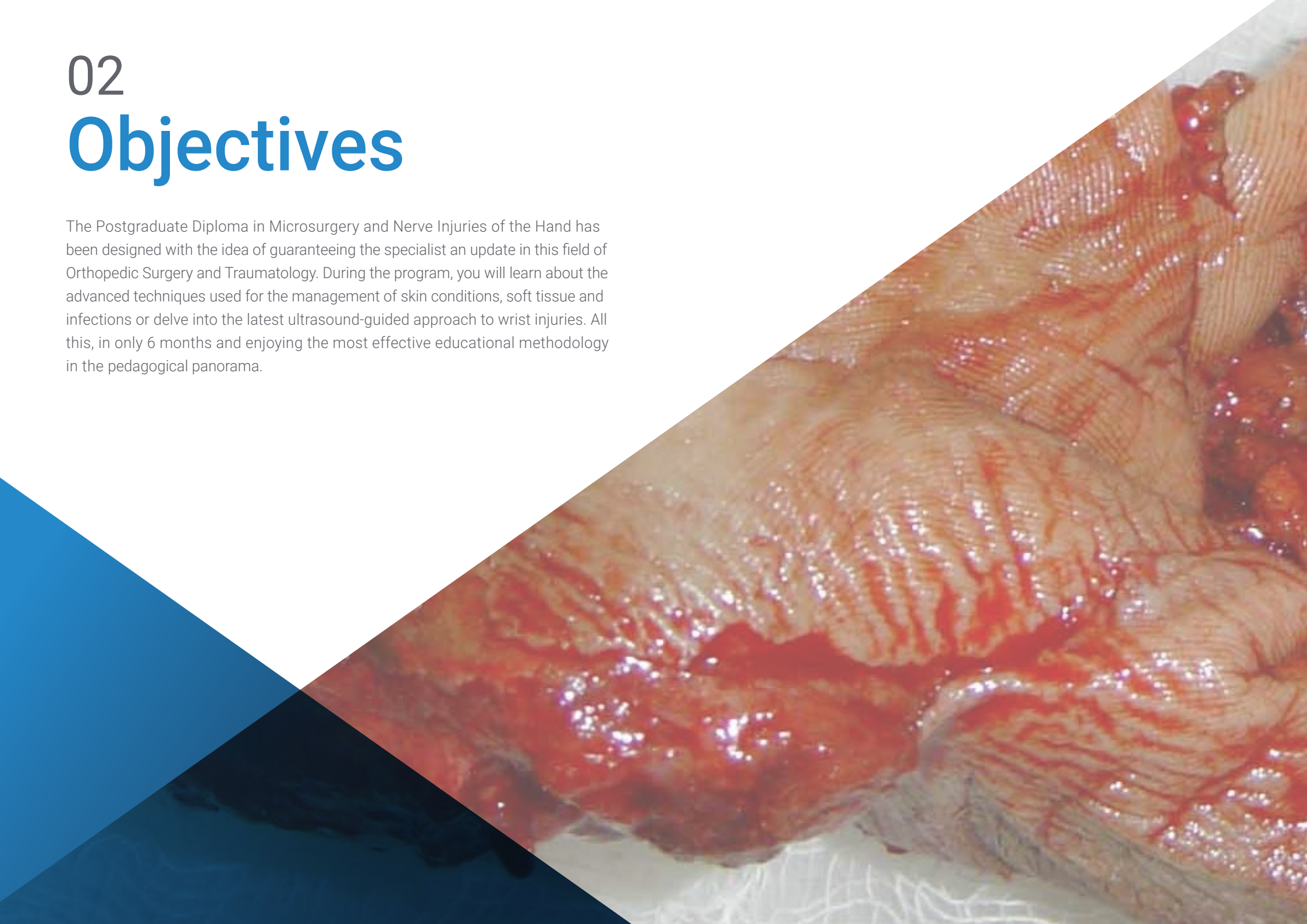
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

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.

02

Objectives

The Postgraduate Diploma in Microsurgery and Nerve Injuries of the Hand has been designed with the idea of guaranteeing the specialist an update in this field of Orthopedic Surgery and Traumatology. During the program, you will learn about the advanced techniques used for the management of skin conditions, soft tissue and infections or delve into the latest ultrasound-guided approach to wrist injuries. All this, in only 6 months and enjoying the most effective educational methodology in the pedagogical panorama.



In just 600 hours, you will position yourself at the forefront of Hand Surgery, learning the latest techniques for managing skin lesions, soft tissue injuries or infections"

General Objectives

- 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

Module 1. Basic sciences applied to hand and upper extremity surgery. Methodology. Rehabilitation

- Place chronologically the current state of hand surgery after a historical review
- Analyze the physiological bases necessary for the study of hand pathology
- Define the imaging techniques available for the study of hand pathology, develop each of them and specify their indications
- Review the anesthetic techniques used during hand surgery
- Delve into the advantages, disadvantages and risks of each of them and understand the indication of one or the other
- Delve into orthopedic and rehabilitative treatment in hand pathology processes, as well as non-surgical treatments, and their importance in the postoperative period
- Develop the concepts of hand surgery research, analyzing the different types of clinical studies and levels of scientific evidence

Module 2. Hand Skin, Soft Parts and Infections

- Examine types of hand wounds, wound healing and types of sutures
- Delve into the knowledge of skin grafts
- Analyze the use of microsurgery for skin coverage in the Hand, as well as for reimplantation
- Analyze infections of the hand, cellulitis, tenosynovitis, arthritis and osteomyelitis
- Determine detailed management of the burned hand and its consequences

Module 3. Nerve and Brachial Plexus Injuries

- Develop the embryology and anatomy of the brachial plexus and distal branching to the peripheral nerves of the upper limb
- Establish the etiology and pathophysiology of compressive syndromes of the ulnar, median and radial nerves
- Identify other compressive factors in wrist and hand or other pathologies, such as thoracic gorge
- Examine the principles, indications and surgical recommendations for nerve repair and nerve transfer techniques
- Demonstrate palliative tendon surgery as a valid option for the treatment of peripheral nerve palsy after failure of other nerve rescue techniques
- Fundamentals of basic principles of strategy and management of brachial plexus pathology
- Define central nervous system lesions, analyze signs and symptoms of spasticity and generate surgical strategies for tetraplegia

Module 4. Advances in Hand Surgery. Other Lesions

- 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

Incorporate into your daily practice the latest advances in Microsurgery and Nerve Injuries of the Hand"

03

Course Management

Thanks to TECH's untiring commitment to raise the academic quality of its programs, this program has a teaching team made up of active reference specialists in the field of Orthopedic Surgery and Traumatology. These experts stand out for their excellent handling of microsurgery and for their experience in the approach to hand injuries. Therefore, the knowledge provided to the student will be fully up-to-date.

This teaching team is made up of specialists in Orthopedic Surgery and Traumatology, who are highly experienced in the use of microsurgery to treat hand injuries"

Management

Dr. Ríos García, Beatriz

- 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 Occupational Traumatology, Spanish Society of Hand Surgery and Microsurgery

Dr. Valdazo Rojo, María

- 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. Hernández Aguado, Juan José

- Coordinator of the CSUR of Brachial Plexus Surgery at the Virgen del Rocío University Hospital
- Teacher of the Department of Surgery of the University of Seville from 2018 to the present.
- Teacher of Master of the International University of Andalusia
- Teacher of Master of the University of Seville
- Degree in Medicine from the University of Extremadura
- Specialist in Orthopedic Surgery and Traumatology at the Hospital Virgen del Rocio
- Doctor of Medicine, University of Seville
- Official Master's Degree in Biomedical Research from the University of Seville
- Official Master's Degree in Health Management by UNIDAM

Dr. Sánchez García, Alberto

- Teacher in courses of the University of Valencia and Spanish Anatomical Society
- Graduated in Medicine from the University of Castilla La Mancha (UCLM), Faculty of Albacete.
- Doctor of Medicine and Surgery from the University of Valencia, with a grade of outstanding Cum Laude
- Master in Aesthetic Medicine and Surgery by the European University Miguel de Cervantes.

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. Palmero Sánchez, Beatriz

- Degree in Medicine from the University of Cantabria

Dr. Gómez Lanz, Carlos Arcadio

- Member of the reimplantation team of the CSUR center of the HUBU in catastrophic hand and upper limb reimplantation
- Member of the Sarcoma Treatment Unit of the Burgos Hospital Complex
- Member of the Head and Neck Tumor and Complex Pathology Treatment Unit of the Burgos Hospital Complex
- Graduate in Medicine and Surgery from the Complutense University of Madrid
- Master's Degree in Continuing Education in Aesthetic Medicine and Surgery from the European University

Dr. Rizea, Christian

- Resident tutor at Hospital Universitario La Paz, Madrid
- Degree in Medicine from the Complutense University of Madrid
- Fellow at Cleveland Clinic

Dr. Álvarez Bautista, Cristina

- Teacher in the National Arthroscopy Plan, organized by the Spanish Arthroscopy Association.
- Postgraduate Certificate in Nursing from the University Alfonso X "El Sabio"
- Degree in Medicine from the University CEU San Pablo
- Master in Socio-Health Sciences

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 Gironaç
- Teacher in courses of the University of Girona
- Postgraduate in Health Services Management

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. Noriego Muñoz, Diana

- Specialist Physician at Hospital Fundació Salut Empordà since March
- Specialist Physician at the Hospital Universitari de Girona Dr Josep Trueta
- Medical Associate Lecturer at the Faculty of Medicine of the University of Girona
- Professor in Basic Courses in principles of fracture management by AO Trauma
- Doctor in Orthopedic Surgery and Traumatology by the Universitat de Girona
- Degree in Medicine from the Autonomous University of Barcelona
- UAB Postgraduate Certificate in "Cirurgia d'Espatlla i Colze"

Dr. Vallejo Aparicio, Eduardo

- Degree in Medicine from the Universidad Rey Juan Carlos
- Master in Clinical Medicine by UDIMA
- Member of Spanish Society of Plastic, Aesthetic and Reconstructive Surgery, Society of Plastic, Aesthetic and Reconstructive Surgeons of Asturias, Cantabria and Castilla y León

Dr. Nevado Sánchez, Endika

- Coordinator of upper limb reimplantation through the national transplant organization
- Graduate in Medicine and Surgery from the University of the Basque Country
- Associate Professor at the University of Burgos
- Specialist in Aesthetic and Reconstructive Plastic Surgery
- Specialist in Hand Surgery
- Judicial Expert in valuation of bodily injury

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. 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

Dr. González– Cuevas, Javier Fernández

- Teacher in courses on Trauma for Pediatric Emergency and Plastic Surgery nurses
- Master's Degree in Advanced Care of Ulcers of the Lower Extremity
- Postgraduate Diploma in Surgical Anatomy of the Hand
- Degree in Medicine and Surgery, Faculty of Medicine, Oviedo University
- Member of Spanish Society of Reconstructive and Aesthetic Plastic Surgery, Spanish Association of Senology and Breast Pathology, Society of Aesthetic and Reconstructive Plastic Surgeons of Asturias, Cantabria and Castilla-León, International Society of Plastic and Aesthetic Surgery and Spanish Association of Microsurgery

Dr. Felices Farias, José Manuel

- Head of Residents at the Virgen de la Arrixaca University Hospital
- Associate Professor of Radiodiagnostics in the Medicine and Dentistry Degrees of the San Antonio Murcia Catholic University
- Honorary Collaborating Professor of the Department of Dermatology, Stomatology, Radiology
- Degree in Medicine and Surgery from the Faculty of Medicine of the University Murcia
- Doctor of Medicine, University of Murcia
- Master in Applied Clinical Anatomy, University of Murcia
- Degree in Medicine from the University of Murcia

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. Gimeno García-Andrade, María Dolores

- 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 Proción-Hathayama Medical Center
- Teacher and internship to MIR and students of the Complutense University of Madrid
- Teacher at the Hospital Clínico San Carlos
- Collaborator with the NGO Vicente Ferrer Foundation in Anantapur (India) with the Disability Treatment RDT Project
- Degree in Medicine and Surgery from the Complutense University of Madrid

Dr. Rayo Navarro, María Jesús

- Assistant Physician of Orthopedic Surgery and Traumatology at the Hospital Francisco de Asis
- Assistant Doctor of Orthopedic Surgery and Traumatology at Hospital Universitario Príncipe de Asturias
- Doctor in the University Hospital of Getafe
- Degree in Medicine and Surgery from the Autonomous University of Madrid

Dr. Jiménez Fernández, María

- Specialist in the Traumatology Area at Hospital Costa del Sol
- Clinical tutor at Hospital Costa del Sol, teaching practice and clinical activity to students of the Faculty of Medicine in Malaga.
- Teacher of Traumatology courses
- PhD in Orthopedic Surgery and Traumatology from the University of Malaga
- Graduate in Medicine and Surgery from the University of Malaga
- University Master's Degree in Hip and Pelvis Pathology by UNIA

Dr. Diéguez Rey, Pablo

- Specialist in Traumatology and Hand Surgery
- Graduated in Medicine from the University of Santiago de Compostela
- Teacher in the Ultrasound Course "Mánchate las manos"

Dr. Vanaclocha Saiz, María Nieves

- Assistant Specialist in Plastic, Aesthetic and Reconstructive Surgery at the University and Polytechnic Hospital La Fe
- Second Assistant Surgeon in Cardiovascular Surgery at the St. Josefs-Hospital Wiesbaden
- Cooperative Campaign in the Reconstructive Surgery Project at the non-profit association Viva Makeni in Sierra Leone
- Doctor Cum Laude
- Applied Master in Quality of Care at the Universitata de Barcelona
- Master in Management and Organization of Hospitals and Health Services by the Universidad Politécnica de Valencia
- Polytechnic University of Valencia
- Member of Sociedad Española de Cirugía Plástica, Estética y Reconstructiva (SECPRE) y Sociedad Valenciana de Cirugía Plástica, Reparadora y Estética (SCPRECV)

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 Autonóma 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. Aragonés Maza, Paloma

- Specialist in Orthopedic and Trauma Surgery
- Specialist in Orthopedic Surgery and Traumatology at the University Hospital Santa Cristina
- Specialist in Orthopedic Surgery and Traumatology at the Santa Clotilde Hospital
- Specialist in Orthopedic Surgery and Traumatology at Hospital Universitario Getafe.
- PhD in Medicine and Surgery from the Complutense University of Madrid
- Associate Professor Complutense University of Madrid
- Professor at Alfonso X El Sabio private university
- Teacher in multiple courses and postgraduate training for doctors, technicians and other health professions
- Member of: Spanish Anatomical Society and of the European Association of Clinical Anatomy and Spanish Society of Orthopedic Surgery and Reviewer and Associate editor of the European Journal of Anatomy

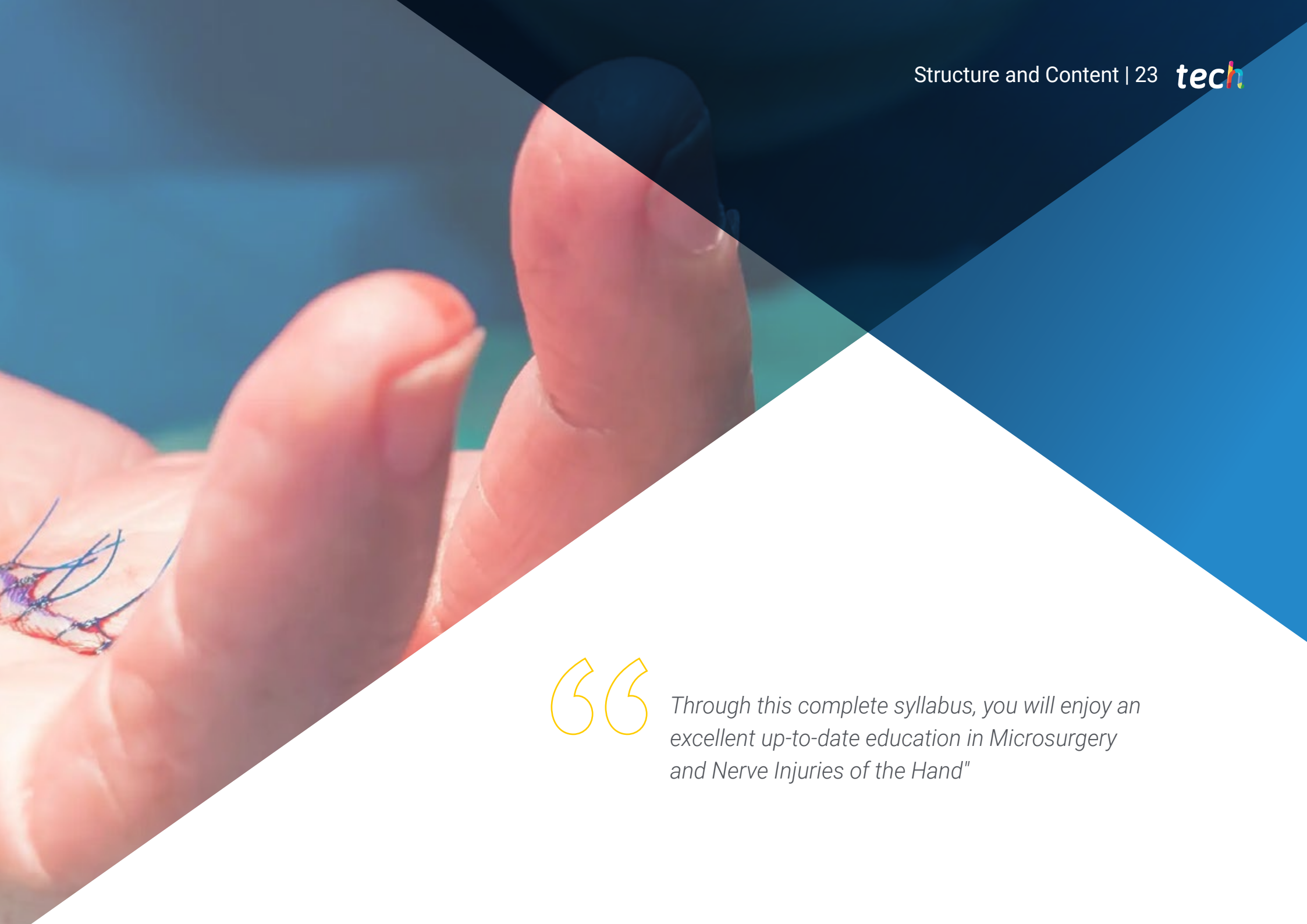
Dr. Sánchez López, Amalia

- Madrid Rehabilitation Physician at Hospital Quirón de Talavera de la Reina
- Specialist in Physical Medicine and Rehabilitation at the Jiménez Díaz Foundation Hospital
- Degree in Medicine from the University of Salamanca Academic Formation

04

Structure and Content

The syllabus of this Postgraduate Diploma is made up of 4 modules through which the specialist will delve into the most up-to-date aspects of microsurgery and the approach to nerve lesions of the hand. All the didactic resources available throughout this program are available in a wide range of highly varied textual and multimedia formats. Thanks to this, and through a completely online methodology, the student will enjoy an effective teaching adapted to their academic preferences.



Through this complete syllabus, you will enjoy an excellent up-to-date education in Microsurgery and Nerve Injuries of the Hand"

Module 1. Basic sciences applied to hand and upper extremity surgery. Methodology. Rehabilitation

1.1. History of Hand Surgery. Progress in the XXI century
- 1.1.1 From Ancient Times to the Modern Age
- 1.1.2 Contemporary Age. Discovery and changes
- 1.1.3 From 1950 to the present day. Progress in the XXI Century

1.2. Biology and physiology in relation to hand surgery. Tissue healing
- 1.2.1 Classification and clinical classification of hand wounds
- 1.2.2 Physiology: healing and epithelialization
- 1.2.3 Scar pathology

1.3. Embryology and genetics in hand surgery. Malformations
- 1.3.1 Early stages of development of the upper extremity. Genes involved
- 1.3.2 Growth and rotation of the outlines. Fragmentation process
- 1.3.3 Formation of the skeleton, musculature and appendicular joints
- 1.3.4 Vascularization and innervation of the developing limbs
- 1.3.5 Classification of congenital malformations of the upper extremity

1.4. Anatomy I in Hand Surgery. Functions and Biomechanics
- 1.4.1 Topography
- 1.4.2 Skin and fibrous skeleton
- 1.4.3 Bone and ligamentous skeleton
- 1.4.4 Functions and biomechanics

1.5. Anatomy II in Hand Surgery. Approaches
- 1.5.1 Musculature
- 1.5.2 Vascularization
- 1.5.3 Sensory innervation
- 1.5.4 Main approaches in hand surgery

1.6. Ultrasound applied to hand surgery
- 1.6.1 Objectives
- 1.6.2 Basic principles of ultrasound
- 1.6.3 Ultrasound diagnostic pathology in wrist and hand
  - 1.6.3.1.1. Dorsal side
  - 1.6.3.1.2. volar side
- 1.6.4 Bone and Joint Pathology

1.7. Magnetic Resonance Imaging applied to hand surgery. Nuclear Medicine
- 1.7.1 Wrist and hand radiography
- 1.7.2 CT in Hand Surgery. Diagnostic Applications
- 1.7.3 MRI in Hand Surgery

1.8. Anesthesiology applied to Hand Surgery. Walant Technique
- 1.8.1 Walant. Preparation
- 1.8.2 Use of the Walant in Hand Surgery
- 1.8.3 The Yes and No to the Walant

1.9. Rehabilitation: orthoses and basic principles in hand rehabilitation
- 1.9.1 Principles of Rehabilitation in Hand Surgery. Evaluation and therapeutic approach
- 1.9.2 Treatments with physiotherapy, electrotherapy and occupational therapy
- 1.9.3 Orthoses

1.10. Clinical Research in Hand Surgery: Study Population, Clinical Designs, Instruments and Measurements, and Data Analysis
- 1.10.1 Types of Clinical Studies
- 1.10.2 Design errors in clinical studies
- 1.10.3 Level of evidence
- 1.10.4 Diagnostic test statistics

Module 2. Hand Skin, Soft Parts and Infections

2.1. Wounds and types of healing. Sutures. Skin grafts
- 2.1.1 Hand wounds and types of sutures
- 2.1.2 Types of healing
- 2.1.3 Skin Grafts

2.2. Basics of the vascular anatomy of the hand applied to the realization of flaps.
- 2.2.1 Vascular anatomy of the hand
- 2.2.2 Pedicle Flaps
- 2.2.3 Grafts, from where and for where

2.3. Complex Wound Management
- 2.3.1 Initial Assessment
- 2.3.2 Evolution of the event
- 2.3.3 Advanced Cure Systems

2.4. Microsurgery
- 2.4.1 Bases of microsurgery on the hand
- 2.4.2 Microsurgical suturing of nerves and vessels
- 2.4.3 Use of microsurgery for flaps

2.5. Reimplantation. Fingertip coverage
- 2.5.1 Reimplants except thumb
- 2.5.2 Fingertip coverage except for the thumb
- 2.5.3 Reimplantation on the thumb, thumb tip coverage

2.6. Skin coverage with pedicled and free flaps on wrist and hand
- 2.6.1 Pedicle flaps on the Wrist
- 2.6.2 Pedicled flaps in hand
- 2.6.3 Free flaps in hand and Wrist

2.7. Reconstruction of the Hand by Composite Free Flaps
- 2.7.1 Neurocutaneous Flaps
- 2.7.2 Osteocutaneous Flaps
- 2.7.3 Toe-Hand

2.8. Infections of the hand. Cellulitis, tenosynovitis, arthritis, osteomyelitis
- 2.8.1 Cellulitis
- 2.8.2 Tenosynovitis
- 2.8.3 Arthritis and osteomyelitis

2.9. Burns
- 2.9.1 The acute burned hand: initial treatment
- 2.9.2 Initial surgery in the burned hand
- 2.9.3 Secondary surgeries and sequelae

2.10. High Pressure Injections and Extravasation Lesions
- 2.10.1 High pressure injections in the hand
- 2.10.2 Extravasation injuries
- 2.10.3 High pressure sequelae

Module 3. Nerve and Brachial Plexus Injuries

3.1. Clinical Exam. Electrophysiological diagnosis of peripheral nerve and brachial plexus
- 3.1.1 Anamnesis and clinical nerve examination
- 3.1.2 Electrophysiological techniques
- 3.1.3 Interpretation of neurophysiological results

3.2. Compressive lesions of the ulnar nerve
- 3.2.1 Distribution, exploration and definition of the areas of innervation of the ulnar nerve
- 3.2.2 Compression areas of the ulnar nerve. Functional Alterations
- 3.2.3 Conservative treatment and nerve decompression techniques.

3.3. Compressive lesions of the median nerve
- 3.3.1 Distribution, exploration and definition of the areas of innervation of the median nerve
- 3.3.2 Compression areas of the median nerve. Functional Alterations
- 3.3.3 Conservative treatment and nerve decompression techniques.

3.4. Compressive lesions of the radial nerve. Other compressive injuries in wrist and hand. Thoracic gorge
- 3.4.1 Distribution, exploration and definition of the areas of innervation of the radial nerve
- 3.4.2 Areas of compression of the radial nerve. Functional Alterations
- 3.4.3 Conservative treatment and nerve decompression techniques
- 3.4.4 Other compressive lesions. Thoracic gorge syndrome

3.5. Peripheral nerve palsy and palliative tendon surgery
- 3.5.1 Indications for tendon transfer. Sequence of the procedure
- 3.5.2 Tendon transfers for ulnar nerve palsy
- 3.5.3 Tendon transfers for median nerve palsy
- 3.5.4 Tendon transfers for radial nerve palsy

3.6. Nerve repair techniques
- 3.6.1 Neuroanatomy. General principles of nerve repair
- 3.6.2 Neurolysis and nerve transposition
- 3.6.3 Terminoterminal neurorrhaphy: epineural, perineural or fascicular, epiperineural
- 3.6.4 Nerve transfer (neurotization)
- 3.6.5 Nerve grafts. Types of Grafts: Results
- 3.6.6 Tubulization. Indications, techniques, results

3.7. Principle of nerve repairs: timing, tension, debridement, technique, strategy
- 3.7.1 Ideal timing for nerve repair. Repair vs. nerve replacement
- 3.7.2 Nerve repair surgery. Characteristics and Techniques
- 3.7.3 Nerve pathology surgery. Practical know-how
- 3.7.4 Pre- and post-surgical strategy. Medium and long term prognosis

3.8. Principle of nerve transfers. Nerve transfers of paralysis. Supercharge concept
- 3.8.1 Neurophysiological and technical principles of nerve transfers
- 3.8.2 Types of nerve transfers of paralysis
- 3.8.3 Supercharge technique. Concept, technique, results

3.9. Brachial plexus injuries. Strategy and management. Management of BPP
- 3.9.1 Brachial plexus injuries. Congenital and traumatic
- 3.9.2 Therapeutic strategy and management
- 3.9.3 Management of BPP

3.10. Spasticity and lesions of the central nervous system. Surgery of tetraplegia
- 3.10.1 Central nervous system lesions and spasticity clinic
- 3.10.2 Therapeutic strategy of the tetraplegic patient
- 3.10.3 Results and prognosis in the medium and long term

Module 4. Advances in hand surgery. Other Lesions

4.1. Ultrasound Applications in Wrist Surgery
- 4.1.1 Ultrasound anatomy of the wrist
- 4.1.2 Ultrasound-guided interventionism in the wrist
- 4.1.3 Ultrasound-guided surgery

4.2. Applications of Ultrasound in Hand Surgery
- 4.2.1 Ultrasound anatomy of the hand
- 4.2.2 Ultrasound-guided interventionism in the hand
- 4.2.3 Ultrasound-guided hand surgery

4.3. Wrist and hand injuries specific to musicians. Conservative and surgical treatment
- 4.3.1 Wrist and carpal injuries in musicians.
- 4.3.2 Finger injuries in musicians
- 4.3.3 Conservative and surgical treatment

4.4. Wrist and hand injuries specific to climbers. Conservative and surgical treatment
- 4.4.1 Wrist and carpal injuries in climbers
- 4.4.2 Finger injuries in climbers
- 4.4.3 Conservative and surgical treatment

4.5. Specific injuries in certain manual workers
- 4.5.1 Wrist injuries in the workplace
- 4.5.2 Hand injuries in the workplace
- 4.5.3 Conservative treatment vs. Surgical

4.6. Total Wrist Arthroplasty
- 4.6.1 Indications for Total Wrist Arthroplasty
- 4.6.2 Types of arthroplasty
- 4.6.3 Wrist prosthetic surgery
- 4.6.4 Wrist arthroplasty complications

4.7. Neuropathic pain and its management. Complex Regional Dystrophy Syndrome
- 4.7.1 Identification of the Patient with Neuropathic Pain
- 4.7.2 Management of Neuropathic Pain
- 4.7.3 Symptoms and Diagnostic Criteria of CRPS
- 4.7.4 Pharmacological and Interventional Treatment of CRPS

4.8. New Technologies applied to Hand Surgery. Robotics, 3D
- 4.8.1 Technological advances in Hand Surgery
- 4.8.2 Robotics and the Hand
- 4.8.3 3D engineering in Hand Surgery

4.9. Artificial Intelligence. Current and future applications
- 4.9.1 Possibilities of AI
- 4.9.2 Diagnostics and development of conservative treatment
- 4.9.3 Surgical possibilities of AI

4.10. Infantile spastic hand. Three-dimensional analysis and applied treatments
- 4.10.1 Identification of an Infantile Spastic Hand
- 4.10.2 Diagnostic Methods and Three-dimensional Analysis
- 4.10.3 Management of the spastic hand in children

Study this Postgraduate Diploma and enjoy didactic materials available in various multimedia formats, choosing those that best suit your study needs"

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, 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:

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.

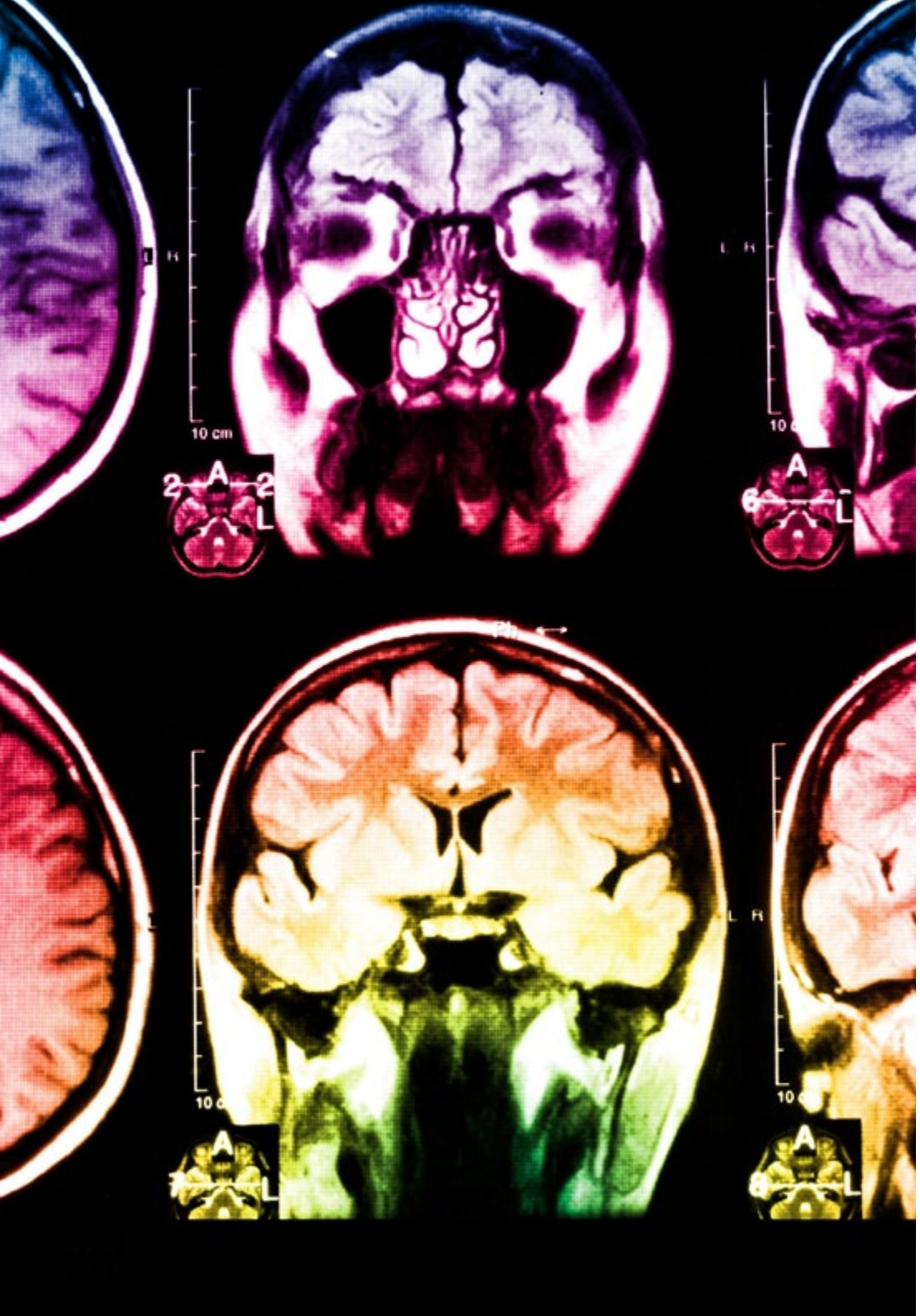
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

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.

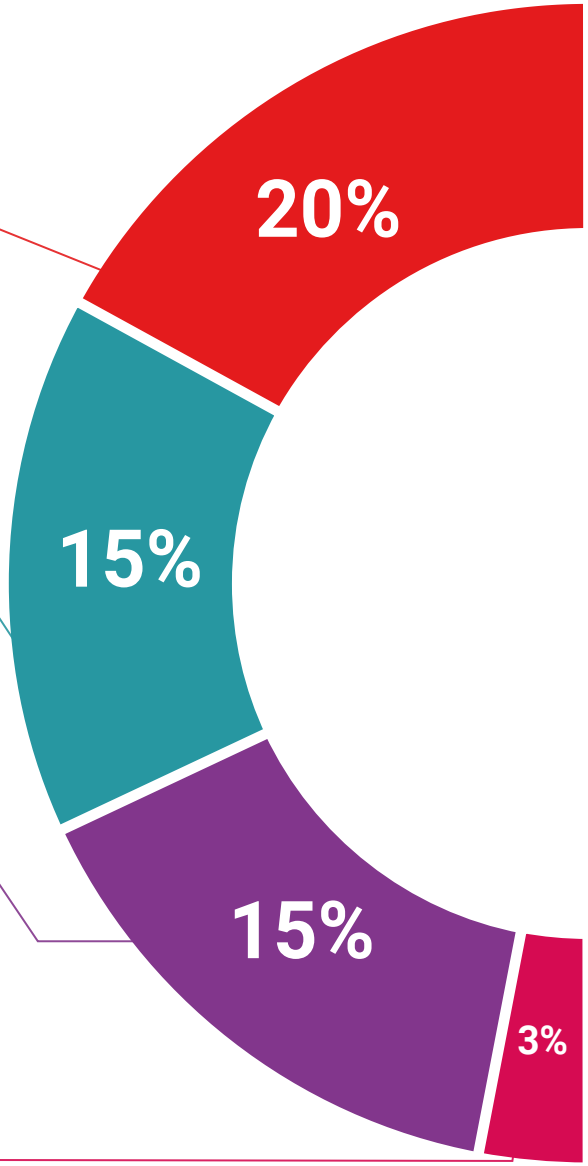
Interactive Summaries

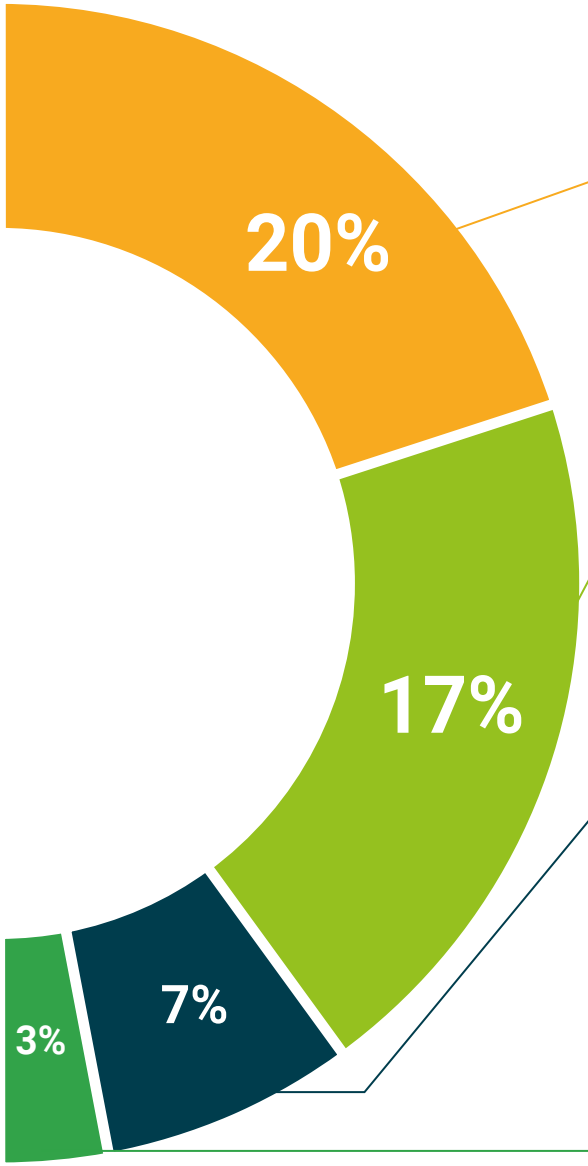
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Diploma in Microsurgery and Nerve Injuries of the Hand guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

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 Diploma in Microsurgery and Nerve 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.

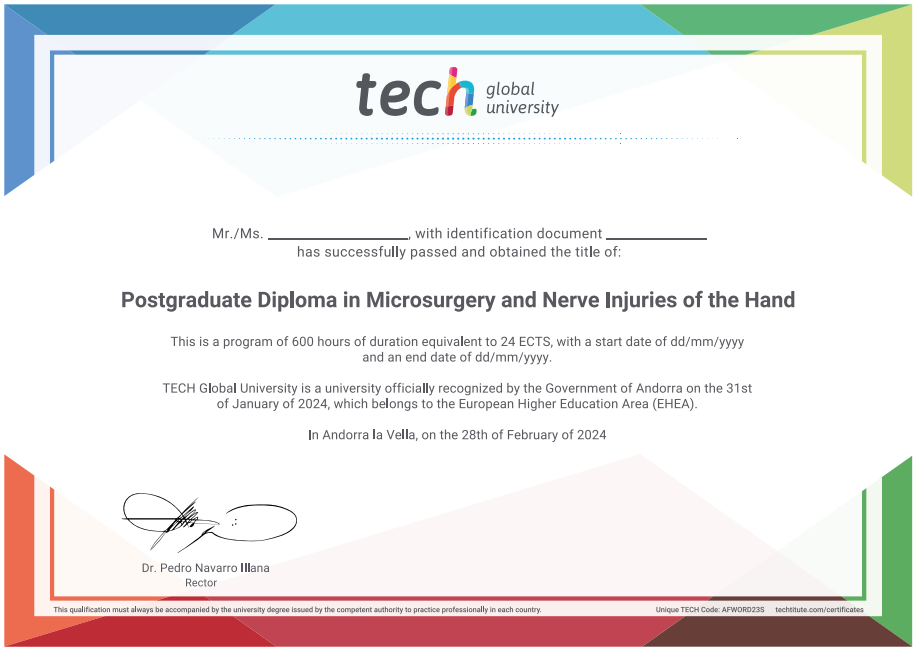
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Microsurgery and Nerve Injuries of the Hand**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Microsurgery and Nerve Injuries of the Hand

This is a program of 600 hours of duration equivalent to 24 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

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

tech global university

Postgraduate Diploma

Microsurgery and Nerve Injuries of the Hand

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma

Microsurgery and Nerve Injuries of the Hand

tech global university