Postgraduate Certificate

Pediatric Upper Limb Surgery

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Postgraduate Certificate

Pediatric Upper Limb 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/pediatric-upper-limb-surgery**

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01

Introduction

Microsurgical techniques, brachial plexus reconstruction surgery or 3D printing for preoperative planning have optimized the surgical practice of medical professionals. A reality that has made it possible to improve the quality of life of pediatric patients with congenital malformations, tumors or birth injuries. A reality that leads specialists to keep their knowledge constantly updated. For this reason, TECH has developed this 100% online academic proposal that leads the graduate to be updated in the existing diagnostic and therapeutic methods in congenital pathologies, tumors or syndromes affecting the upper limb. All this, through a current and high quality content, created by distinguished expert surgeons in this field.

A 100% online Postgraduate Certificate that brings you up-to-date in Pediatric Upper Extremity Surgery in a short period of time"

The frequent fractures in infant patients, Brachial Plexus injuries or infections of the Hand, Wrist and Forearm present a higher prevalence in surgical consultations. However, anomalies of the upper limb in infants or tumors occupy an area that requires specialists to have a deep knowledge of their etiology and existing treatments.

A wide field of action, which leads the surgeon to an incessant update on diagnostic procedures, the performance of complementary tests, as well as the techniques used to address from the most common pathologies to the less recurrent ones. For this reason, TECH has designed this 6-week Postgraduate Certificate in Pediatric Upper Extremity Surgery.

It is an intensive program that brings together the most rigorous content and according to the latest scientific evidence progress in this field. In this way, the graduate will delve into the clinical exploration of this part of the body to obtain a differential evaluation. Likewise, multimedia pills, case study simulations and complementary readings will bring more dynamism to this update on amniotic bridle constriction syndrome, Madelung's deformity and arthrogryposis.

Likewise, thanks to the Relearning method, students will consolidate the most important concepts of this academic option. In this way, they will be able to consolidate the key content in a short period of time and reduce the long hours of study and memorization.

Undoubtedly, an excellent opportunity to improve knowledge on surgical interventions in Upper Intermediate in minors through a flexible program. The professional only needs a digital device with internet connection to visualize, at any time of the day, its content. A quality academic option that is at the academic forefront.

This **Postgraduate Certificate in Pediatric Upper Limb 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 the self-assessment process can be carried out 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 university program that will bring you up to date with the most accurate techniques used to treat Kirner's deformity"

Inquire with the existing scientific literature on Madelung's Deformity"

Looking for a Postgraduate Certificate compatible with your professional responsibilities? TECH adapts to you and your schedule.

Delve into the various treatment options in agenesis and central defects.

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

This Postgraduate Certificate provides the graduate with an update on the different studies of the pediatric upper limb, complementary tests to make the best therapeutic decisions according to the existing options. To achieve this goal, TECH provides clinical cases that will allow you to increase your skills in this field, as well as the improvement of surgical techniques in the various existing pathologies in pediatric patients.

In only 6 weeks you will learn about the different therapeutic alternatives to treat the main pathologies of the Upper Limb"

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
- 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
- Develop the latest technological advances in Hand Surgery

Specific Objectives

- Delve into the knowledge of the origin and embryology of the different congenital malformations
- Identify the different congenital malformations, studying, in each pathology, its etiopathogenesis, clinical study, complementary studies, classifications and treatments
- Evaluate the different treatment options for tumors affecting the pediatric hand, including resections, amputations and reconstructions in the surgical treatment
- Evaluate and analyze the treatment options for obstetric brachial plexus injuries, including conservative and surgical treatment

Delves through the best multimedia resources in the management of the most frequent benign and malignant tumors of the Upper Extremity"

03

Course Management

One of the elements that distinguishes this Postgraduate Certificate is its teaching team, made up of eminent experts in the field of Upper Limb Surgery in pediatric patients. Their accumulated clinical, research and teaching experience in this field guarantees the graduate the access to a first level program. Therefore, you will get a complete update from the hand of the best experts in this subspecialty.

Get up-to-date on the different alterations of the Upper Limb in pediatric patients through reference surgeons in this field"

International Guest Director

Doctor David A. Kulber, is an internationally renowned personality in the field of Plastic and Hand Surgery. In fact, he has a distinguished career as a long-term member of the Cedars-Sinai Medical Group, his practice encompasses a wide range of plastic, reconstructive, cosmetic and hand procedures. He has served as Director of Hand and Upper Limb Surgery, and as Director of the Plastic Surgery Center, both positions at Cedars-Sinai Medical Center in California, United States.

His contribution to the medical field has been recognized nationally and internationally, and he has published nearly 50 scientific studies presented to prestigious medical organizations worldwide. In addition, he has been known for his pioneering work in bone and soft tissue regeneration research using stem cells, innovative surgical techniques for Hand Arthritis and advances in breast reconstruction. He has also received multiple awards and grants, including the prestigious Gasper Anastasi Award, given by the American Society for Aesthetic Plastic Surgery, and the Paul Rubenstein Award for Excellence in Research.

Beyond his clinical and academic career, Doctor David A. Kulber, has demonstrated a deep commitment to philanthropy through his co-founding of the Ohana One organization. This initiative has led him to undertake medical missions in Africa, where he has improved the lives of children who would not have access to specialized medical care, and trained local surgeons to replicate Cedars-Sinai's high level of care.

With impeccable academic preparation, he graduated with honors from the University of California and completed his medical training at the University of Health Sciences University/Chicago Medical School, followed by prestigious residencies and fellowships at Cedars-Sinai, New York Hospital-Cornell Medical Center and Memorial Sloan Kettering Cancer Center.

Dr. Kulber, David A.

- Director of Hand and Upper Limb Surgery, Cedars-Sinai Medical Center, California, United States
- Director of the Center for Plastic and Reconstructive Surgery at Cedars-Sinai Medical Center
- Director of the Center of Excellence in Plastic Surgery at Cedars-Sinai Medical Center
- Medical Director of the Hand Rehabilitation and Occupational Therapy Clinic at Cedars-Sinai Medical Center
- Vice Chair of the Medical Board at the Musculoskeletal Transplant Foundation
- Co-founder of Ohana One
- Specialist in General Surgery from Cedars-Sinai Medical Center
- Doctor of Medicine from the University of the Health Sciences/Chicago Medical College
- B.A. in European and Medical History from the University of California
- Member of:
  - American Society of Surgery of the Hand
  - American Society of Plastic Surgeons (American Board of Plastic Surgery)
  - Musculoskeletal Tissue Foundation
  - Grossman Burn Foundation
  - American Medical Association
  - American Society of Plastic and Reconstructive Surgeons
  - Los Angeles Plastic Surgery Society

Thanks to TECH, you will be able to learn with the best professionals in the world"

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 Asis
- 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 C
- 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. Martínez Álvarez, Sergio

- Head of the Pediatric Upper Extremity Unit at Beata María Ana Hospital
- Medical Specialist in the Orthopedic Surgery and Traumatology Service of the Hospital Niño Jesús
- Medical Specialist in Orthopedic Surgery and Traumatology Hospital Universitario de la Princesa
- Medical collaboration with Texas Scottish Rite Hospital
- Medical collaboration with Boston Children's Hospital
- Medical Collaboration with Cincinnatti Children's Hospital
- Medical Collaboration with Children's National Medical Center Washington
- Medical collaboration with Atlanta Children's Hospital
- RECOT, JBJS and RICMA Reviewer
- Members of the *European Pediatric Orthopedic Society*

Dr. Fernándes de Carvalho, Marcos Antonio

- Specialist in Orthopedic Surgery and Traumatology at the Pediatric Hospital at CHUC
- Teaching Collaboration in Orthopedics at FMUC
- Graduate in Medicine at the Faculty of Medicine of the University of Coimbra
- Postgraduate degree in Sports Medicine from FMUC
- Master in Sports Medicine by FMUC (2015)
- Specialized Education in Orthopedics and Traumatology at the Centro Hospitalar e Universitário de Coimbra (CHUC)
- Member of Portuguese Society of Orthopedics and Traumatology, Portuguese Society of Pediatric Orthopedics, European Society of Pediatric Orthopedics (EPOS), Upper Limb Study Group of EPOS and Portuguese Society of Hand Surgery

Dr. Vara Patudo, Isabel

- Specialist in Traumatology and Orthopedics for Children at the Centro Creciendo Madrid
- 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. Casañas Sintes, Joaquim

- Head of the Brachial Plexus and Microsurgery Unit in Pediatrics Hospital Sant Joan de Deu
- Head of the Brachial Plexus and Microsurgery Unit in Pediatrics Hospital Sant Joan de Deu
- Director of the Hand, Peripheral Nerve, Brachial Plexus and Microsurgery Unit in
- Bellvitge University Hospital
- Director of the Traumatology Unit at Centro Medico Teknon
- Physician at the Hospital de Andorra Nostra Senyora de Meritxell
- Doctor at the Hospital Universitari de Bellvitge
- Teacher at the Universities of Barcelona, Catalunya and Gimbernat
- Degree in Medicine and Surgery from the University of Barcelona
- European Accreditation as a Hand Surgeon by the *Federation European Societies Surgery of Hand (FESSH)*
- Postgraduate Certificate in Integrated Health Systems ESADE (*Health Manegment*)
- Co-director of the National Wrist Arthroscopy Program for the AEM

04

Structure and Content

The syllabus of this university program compiles over 150 teaching hours, the most comprehensive and current content on congenital malformations and pathologies affecting the upper limb in growing patients, acquiring a detailed understanding of all aspects related to this pathology. Also, thanks to the quality multimedia material you will be able to delve into the performance of surgical interventions in a safe and efficient way through the latest techniques used.

A complete syllabus that brings you closer to the most rigorous and current information on Pediatric Upper Limb Surgery"

Module 1. Pediatric Upper Member

1.1. Agenesis and Transverse Defects
- 1.1.1. Description of agenesis and central defects
- 1.1.2. Associated syndromes and the complementary studies that allow their diagnosis
- 1.1.3. Types of agenesis and central defects
- 1.1.4. Treatment options for agenesis and central defects

1.2. Radial longitudinal deficiency. Hypoplasias and Agenesis of the Thumb
- 1.2.1. Radial longitudinal deficiency. Epidemiology
- 1.2.2. Radial longitudinal deficiency. Association with other pathologies
- 1.2.3. Radial longitudinal deficiency. Treatment
- 1.2.4. Hypoplasias and agenesis of the thumb. Spectrum of affectation and association to other pathologies
- 1.2.5. Hypoplasias and agenesis of the thumb. Blauth classification
- 1.2.6. Hypoplasias and agenesis of the thumb. Treatment according to Blauth's classification

1.3. Ulnar Longitudinal Deficiency. Proximal Radioulnar Synostosis
- 1.3.1. Ulnar Longitudinal Deficiency. Incidence
- 1.3.2. Ulnar Longitudinal Deficiency. Indications and treatment options
- 1.3.3. Proximal radioulnar radioulnar synostosis. Incidence and inheritance
- 1.3.4. Proximal radioulnar radioulnar synostosis. Indications and types of surgical treatment

1.4. Pre-axial and Post-axial Polydactyly
- 1.4.1. Preaxial polydactyly. Incidence
- 1.4.2. Preaxial polydactyly. Wassel's classification
- 1.4.3. Preaxial polydactyly. Treatment, goals and surgical options
- 1.4.4. Postaxial polydactyly. Incidence
- 1.4.5. Postaxial polydactyly. Classification
- 1.4.6. Postaxial polydactyly. Conservative and surgical treatment options

1.5. Syndactyly. Macrodactyly. Clinodactyly. Camptodactyly. Kirner's Deformity
- 1.5.1. Syndactyly. Incidence. Types. Cutaneous plastias
- 1.5.2. Macrodactyly. Classification. Surgical Options
- 1.5.3. Clinodactyly. Definition. Indication and surgical options
- 1.5.4. Camptodactyly. Definition. Indication and treatment options
- 1.5.5. Kirner's deformity. Definition. Indication and therapeutic management

1.6. Amniotic Band Syndrome
- 1.6.1. Definition. Incidence
- 1.6.2. Differential Diagnosis
- 1.6.3. Surgical Options

1.7. Madelung's Deformity
- 1.7.1. Madelung's deformity. Causes. Epidemiology
- 1.7.2. Diagnostic Tests
- 1.7.3. Types of surgical intervention according to skeletal maturity

1.8. Arthrogryposis of the upper limb
- 1.8.1. Arthrogryposis of the upper limb. Definition, disease?
- 1.8.2. Etiopathogenesis
- 1.8.3. Objectives and conservative therapeutic options, Surgical?

1.9. Obstetric Brachial Palsy
- 1.9.1. Anatomy of the plexus for the management of BPP
- 1.9.2. Diagnosis of a PBO lesion
- 1.9.3. Surgical indication for plexus reconstruction and palliative surgeries

1.10. Tumors Affecting the Pediatric Hand: Osteochondromatosis, Enchondromatosis and Soft Tissue Tumors
- 1.10.1. Osteochondromatosis. Diagnosis. Treatment
- 1.10.2. Chondromatosis. Diagnosis. Treatment
- 1.10.3. Soft tissue tumors. Types. Diagnosis. Treatment Management

You will be up-to-date on the main techniques used for the management of the obstetric brachial plexus"

05

Methodology

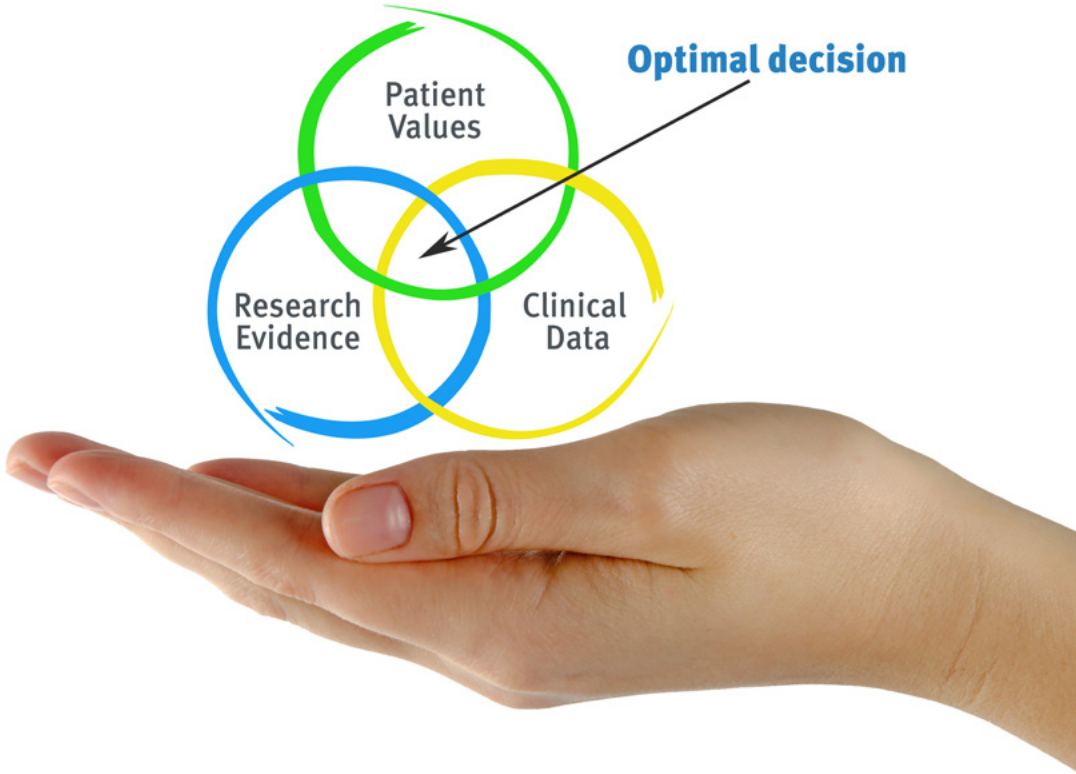
This academic program offers students a different way of learning. Our methodology follows a cyclical learning process:**Relearning**.
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

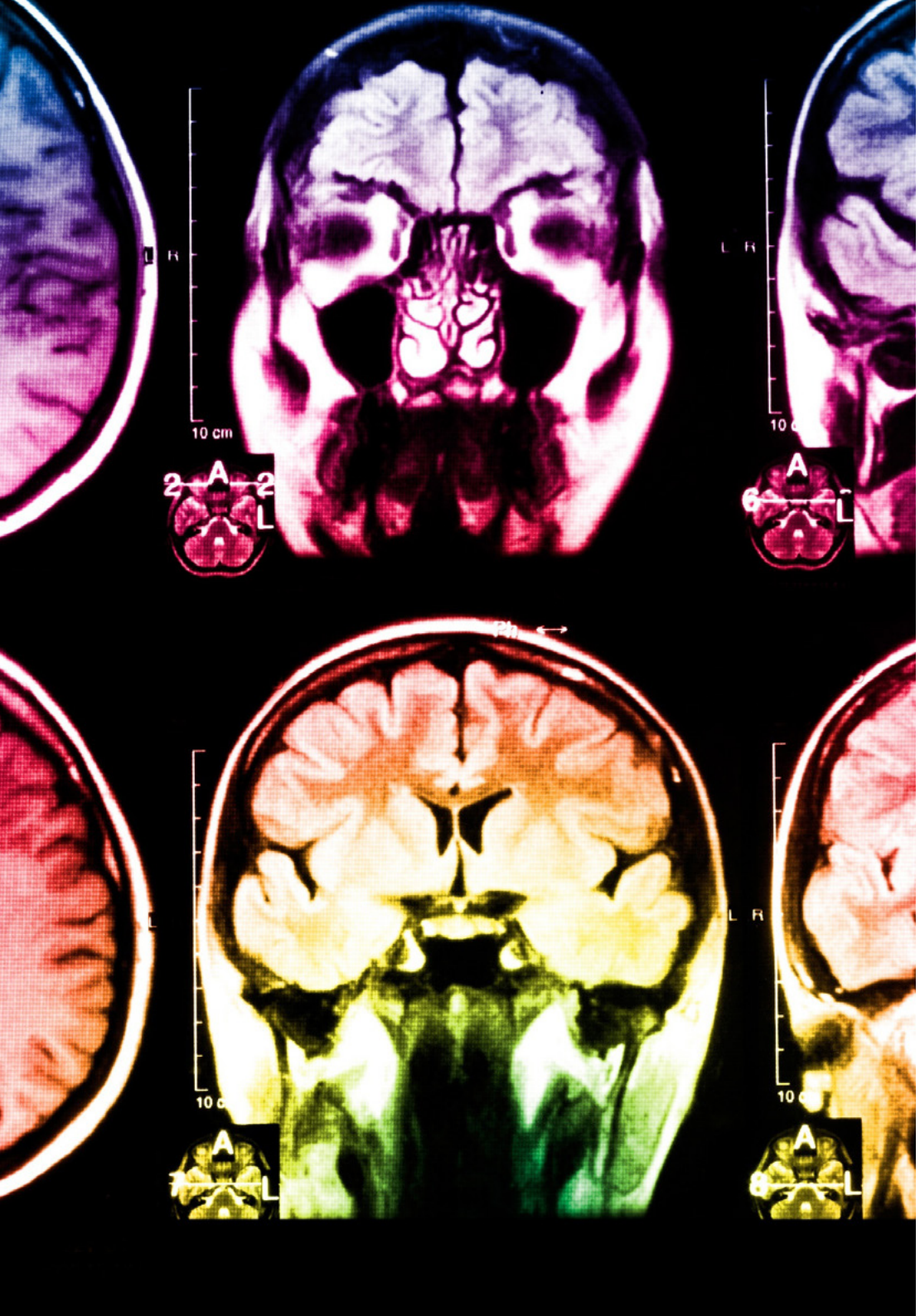
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate 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.

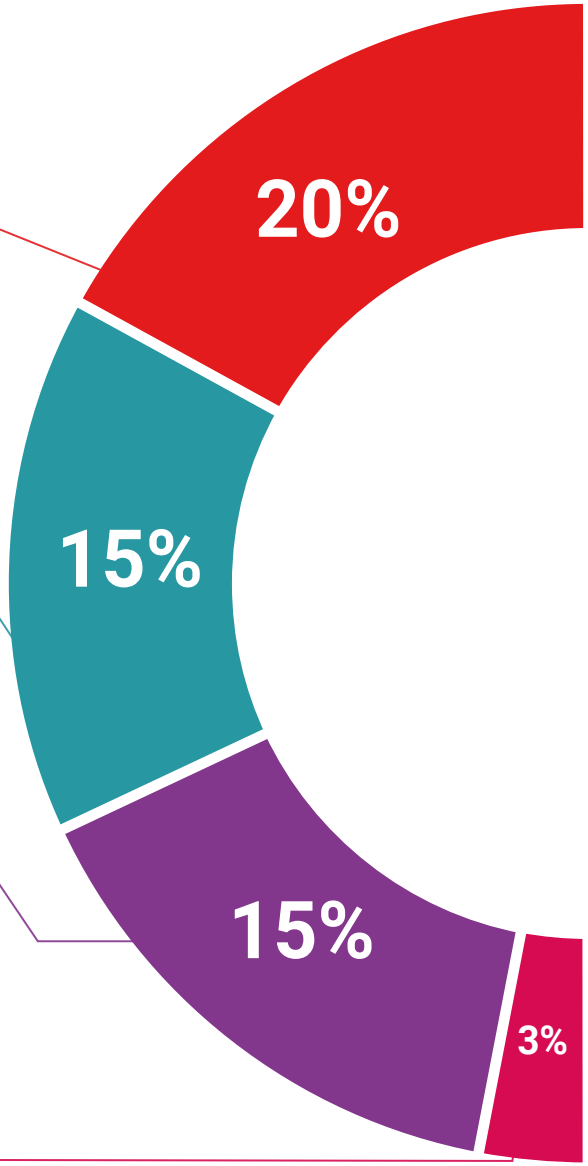
Interactive Summaries

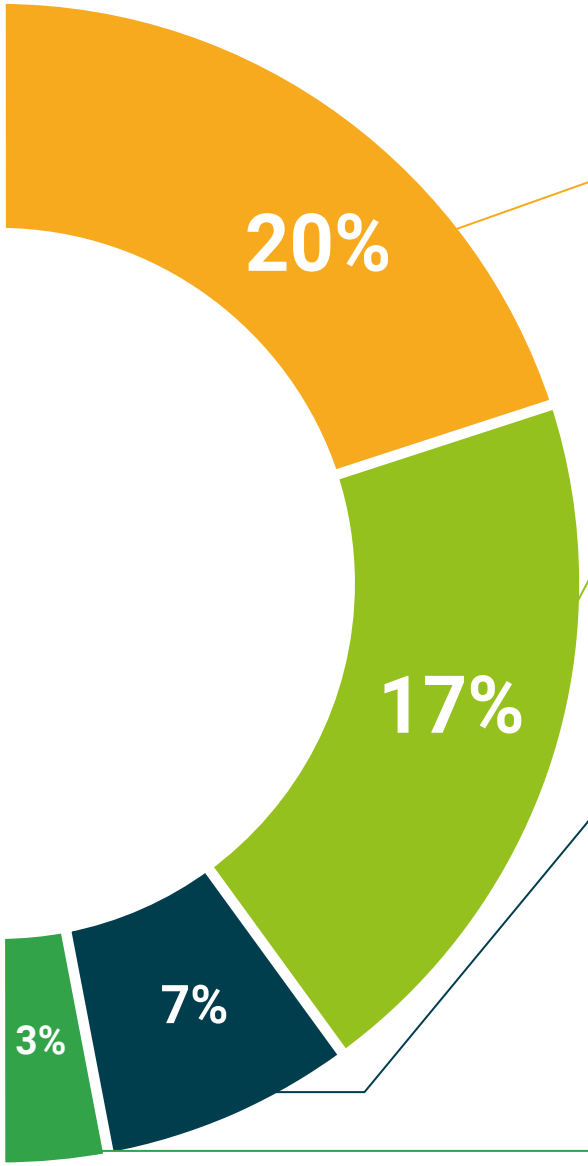
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Pediatric Upper Limb Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

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

This **Postgraduate Certificate in Pediatric Upper Limb 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 Pediatric Upper Limb Surgery**

Official Nº of Hours: **150 h.**

tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Pediatric Upper Limb Surgery

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

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

June 17, 2020

Tere Guevara Navarro
Dean

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 EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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