Postgraduate Certificate

Surgical Approaches and Complications

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Postgraduate Certificate

Surgical Approaches and Complications

- Modality: **online**
- Duration: **12 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/us/medicine/postgraduate-certificate/surgical-approaches-complications**

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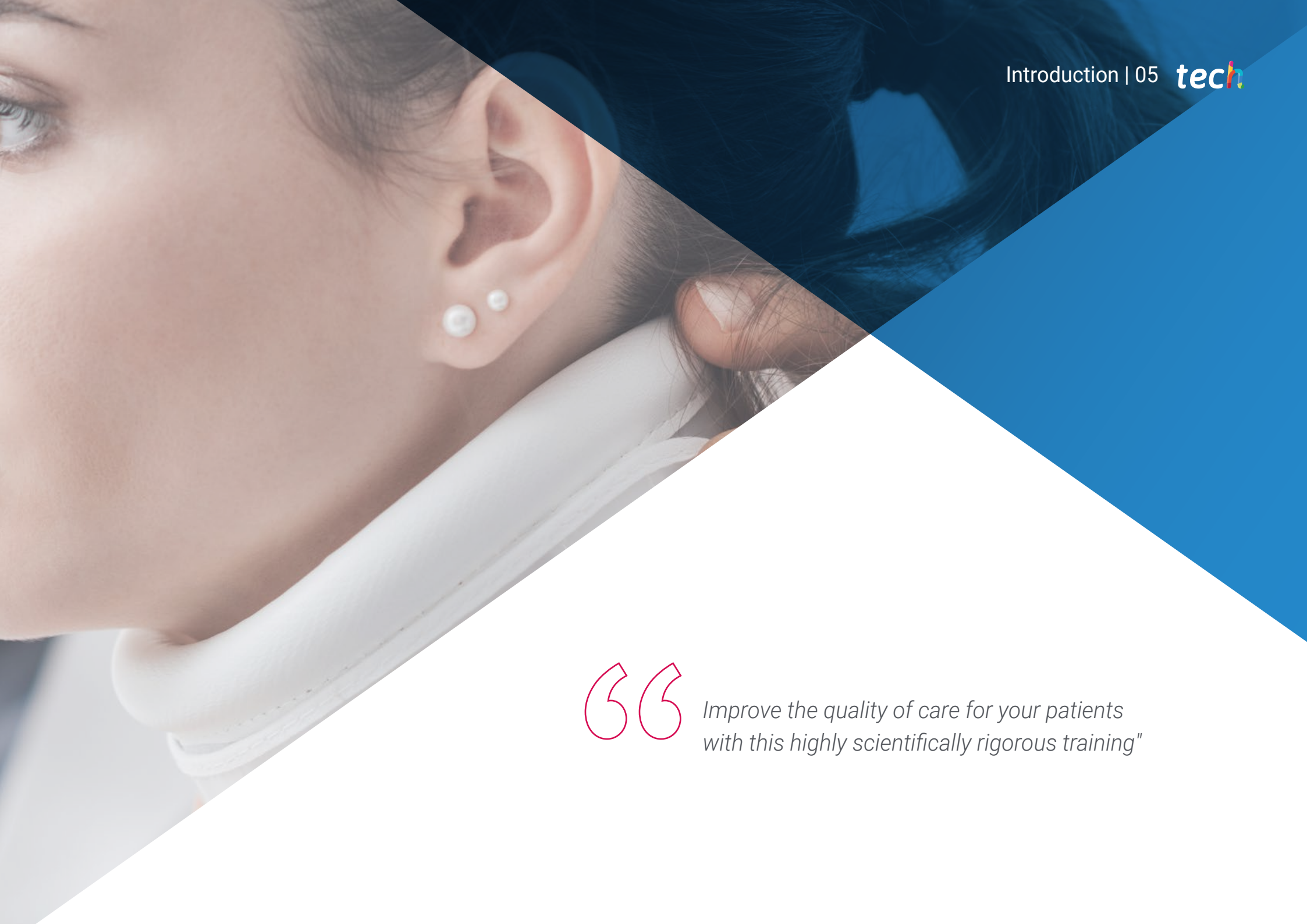
01

Introduction

Update your knowledge in Surgical Approaches and Complications with this program of high scientific rigor, developed by professionals with extensive experience in the field. Train in a high-demand specialty, with the latest resources in the sector, used in this intensive training.



Improve the quality of care for your patients with this highly scientifically rigorous training"

There is an increasing trend towards subspecialization within the medical-surgical specialties. There are so many different areas in the human body, that it is difficult to be up to date in the knowledge of a specialty as broad as Spinal Surgery. Hence, the need for a complete and quality scientific program to help and guide in this specific and exciting field.

With this course, the professional will have a complete vision of the knowledge derived from the Pathology of the Vertebral Column. The program will highlight advances in surgical practice that directly affect patient's quality of life and improvement of pain. These will be transmitted so that the specialists can have the most up-to-date view possible of the knowledge available in the field. For this purpose, experts in Spinal Surgery from Spain and South America will collaborate with us.

This program will teach the surgical techniques that are currently setting trends in the sector, used in the Specialized Surgery Centers. This will allow the professional, in addition to expanding his personal knowledge, to be able to apply it with greater skill in his daily clinical practice.

This Postgraduate Certificate is the best investment you can make to acquire the best and most up-to-date training in Surgical Approaches and Complications"

This **Postgraduate Certificate in Surgical Approaches and Complications**, contains the most complete and up-to-date scientific program on the market. The most important features:

- Latest technology in online teaching software.
- Highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- Practical cases presented by practising experts.
- State-of-the-art interactive video systems.
- Teaching supported by telepractice.
- Continuous updating and recycling systems.
- Self-regulating learning: full compatibility with other occupations.
- Practical exercises for self-evaluation and learning verification.
- Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- Communication with the teacher and individual reflection work.
- Content that is accessible from any fixed or portable device with an Internet connection.
- Supplementary documentation databases are permanently available, even after the course.

Apply the latest trends in Surgical Approaches and Complications in the daily practice of your profession"

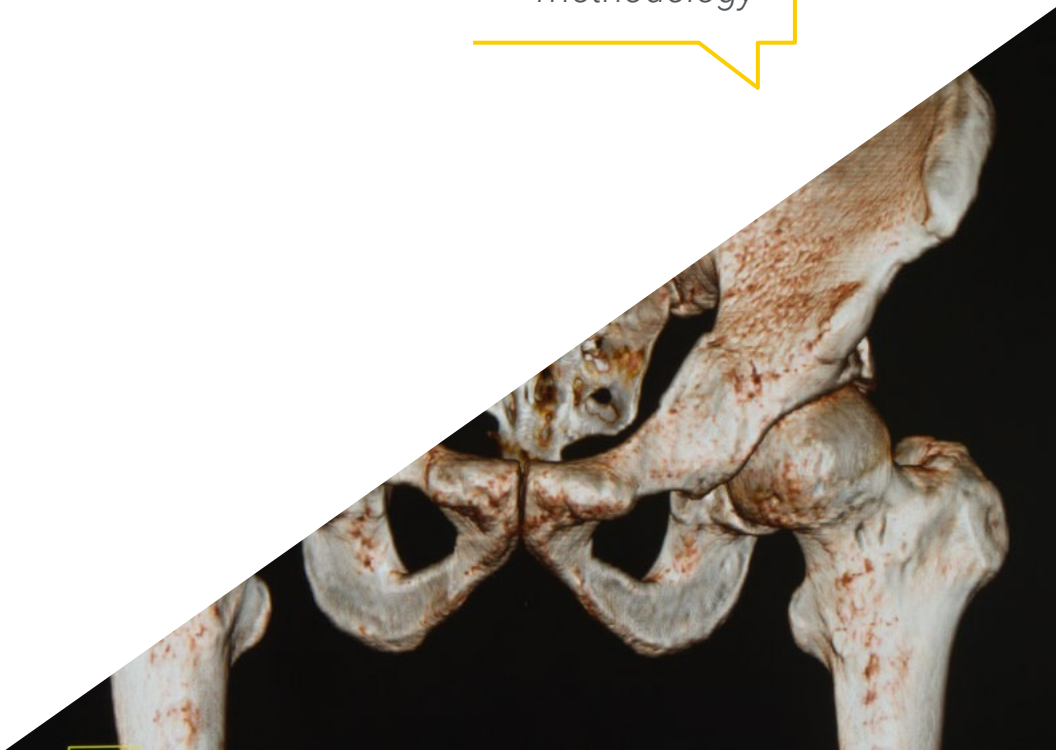
Our teaching staff is composed of medical professionals, practising specialists. In this way we ensure that we can offer you the training update we are aiming for. A multidisciplinary team of doctors trained and experienced in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at the service of the course the practical knowledge derived from their own experience: one of the differential qualities of this Postgraduate Certificate.

This mastery of the subject is complemented by the effectiveness of the methodological design of this training. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were facing the scenario you are learning at that moment. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

You will have the latest multimedia tools, designed by experts in Surgical Approaches and Complications, which will favor the speed of assimilation and learning

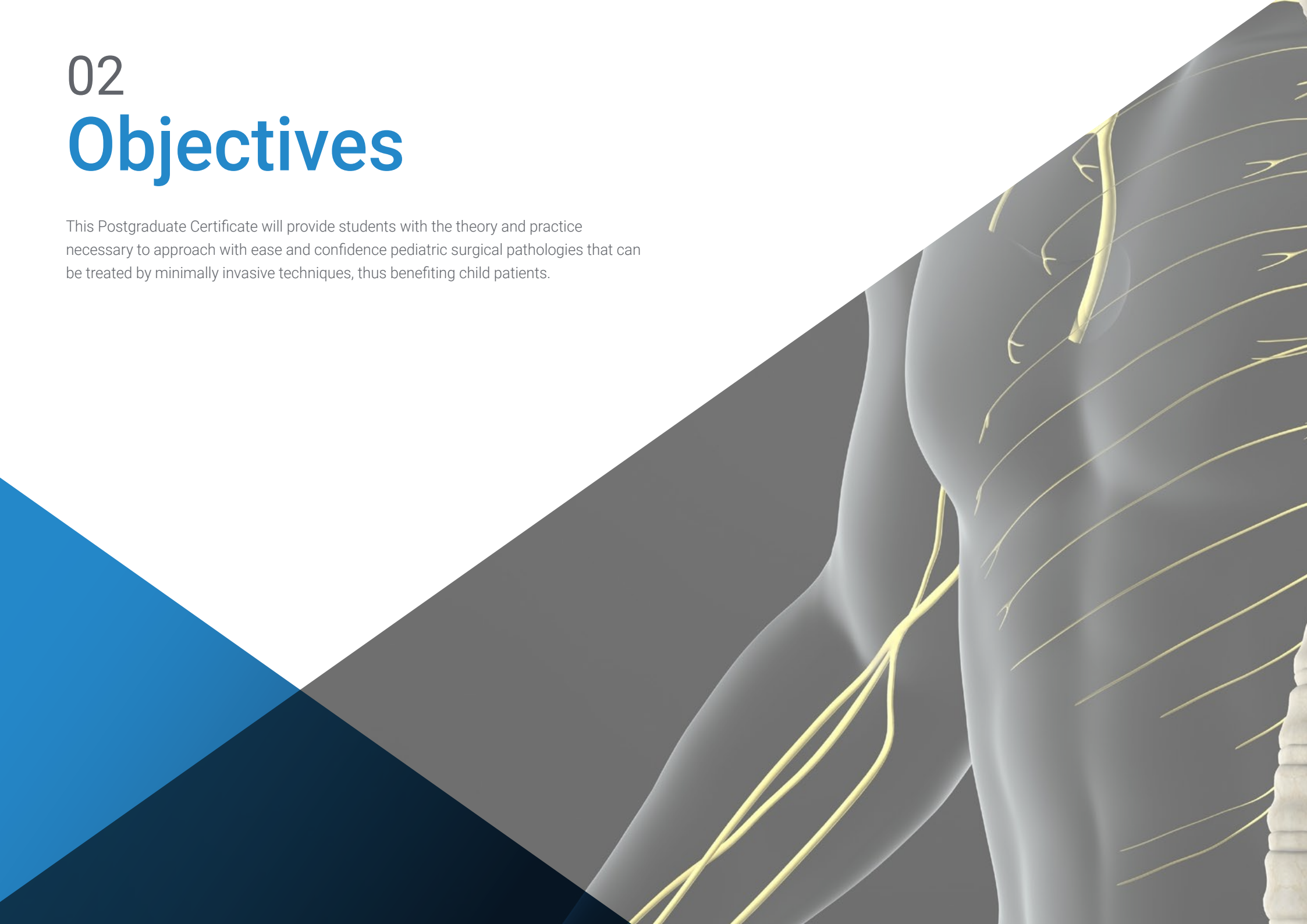
This program has the latest advances in educational technology, based on e-learning methodology

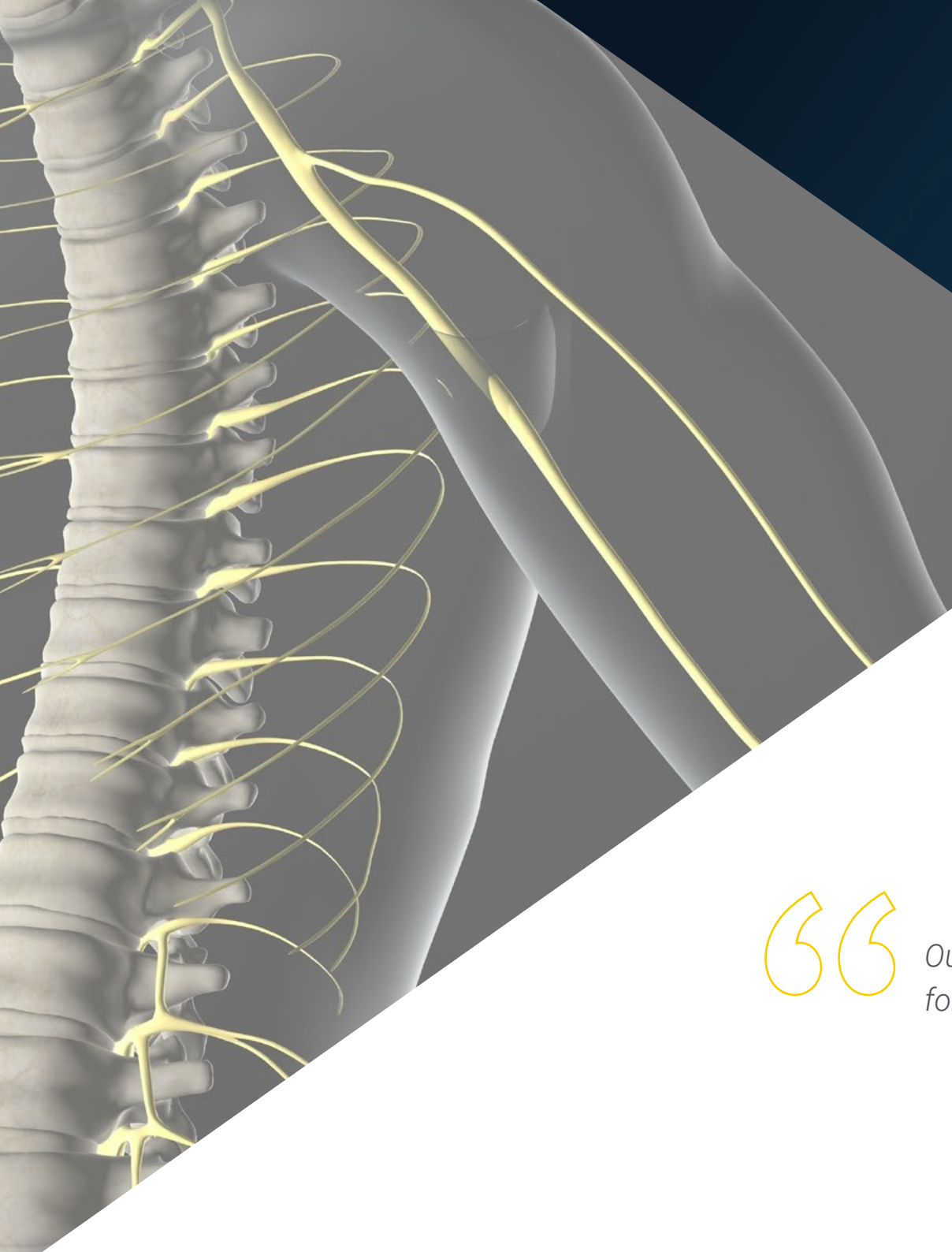


02

Objectives

This Postgraduate Certificate will provide students with the theory and practice necessary to approach with ease and confidence pediatric surgical pathologies that can be treated by minimally invasive techniques, thus benefiting child patients.





Our goal is to train highly qualified professionals for work experience"

General Objectives

- Complement the training of specialists in Pediatric Surgery with special interest in minimally invasive techniques.
- Adequately prepare these professionals to face with guarantee and quality the different pediatric pathologies that can be addressed through these access routes.
- Enable students to offer professional assistance backed by an accredited teaching program.

Specific Objectives

- Know the anatomical areas of the cervical, thoracic, lumbar and sacral spine, as well as their surgical approaches.
- Know the anatomy of the usual sites of access to the spine by Minimally Invasive Techniques.
- Know the advances in the use of new instrumentation, in the improvement of manufacturing materials and in the use of new grafts.
- Use the advances in antibiotherapies and in the use of vacuum devices.
- Know the problems of the sacroiliacs.

An opportunity created for professionals who are looking for an intensive and effective course, with which to take a significant step in the practice of their profession"

03

Course Management

For our master's degree to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven track record in the field of education. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.

An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during your training: a unique opportunity not to be missed"

Management

Dr. Losada Viñas, Jose Isaac

- Coordinator of the Spine Unit of Alcorcón Foundation University Hospital
- PhD in Medicine and Surgery from the University of Navarra.
- Member of the Communication Committee of GEER (Raquis Diseases Study Group).
- National Basic Research Award SECOT 1995
- Numerous national and international articles and books

Dr. González Díaz, Rafael

- Head of the Spinal Surgery Unit at Niño Jesús Hospital (pediatric surgery) and at Rosario Hospital and Sanitas la Moraleja Hospital in Madrid (adult and pediatric surgery).
- Doctor of Medicine and Surgery, Extraordinary Prize. University of Salamanca
- Specialist in Orthopedic and Trauma Surgery. Spine Surgery
- Master's Degree in Medical Management and Clinical Management by the School of Health/UNED
- Former president of the Spanish Spinal Society GEER (Study Group of Spine Diseases).
- Secretary General of SILACO (Ibero-Latin American Spine Society).
- Author of numerous articles and book chapters. Editor of two books on spinal surgery.
- Direction of 5 doctoral theses on spine pathology.

Professors

Diez Ulloa, Máximo Alberto
- Head of Rachis Unit, Serv COT. U.C.H. Santiago de Compostela.

Dr. García de Frutos, Ana
- Spine Unit of the Vall d'Hebron Hospital in Barcelona and in the ICATME Spine Unit at the Quirón-Dexeus Clinic in Barcelona.

Dr. Hernández Fernández, Alberto
- Spine Unit, COT Service, Donostia University Hospital.

Dr. González Díaz, Rafael
- Head of Section, Spine Unit. COT Service. Niño Jesús Pediatric University Hospital.

Dr. Martín Benlloch, J. Antonio
- Dr Peset Hospital Valencia. Head of Spine Section, COT Service. Dr Peset University Hospital Valencia

Dr. Barriga Martin, Andrés
- Head of the COT department at Paraplegics National Hospital of Toledo.

Dr. Sanfeliu Giner, Miguel
- Head of the Spine Unit Section. COT service. General Hospital of Valencia.

Hidalgo Ovejero, Angel
- Head the COT Department. Ubarmin Hospital. Pamplona

Dr. Otero Fernández, María
- Rachis Unit. Santiago de Compostela University Hospital Complex.

Dr. Puente Sánchez, Luís
- Santiago de Compostela University Hospital Complex.

Pernal Durán, Carlos

Dr. Blanco Blanco, Juan
- Head of COT service, Salamanca University Hospital.

Dr. Pescador, David
- Spine Unit. COT service. Salamanca University Hospital.

Dr. Bas Hermida, Paloma
- Spine Unit. La Fe University Hospital (Valencia).

Dr. Manrique Cuevas, Diego
- FEA Traumatology and Orthopedic C. Rachis Unit. Navarra Hospital Complex.

Dr. Martínez Agüero, José Ángel
- Spine Unit. Marqués de Valdecilla University Hospital. Santander

Dr. Cueto-Felgueroso, Paloma de la Dehesa
- Spine Unit. Marqués de Valdecilla University Hospital Santander

04

Structure and Content

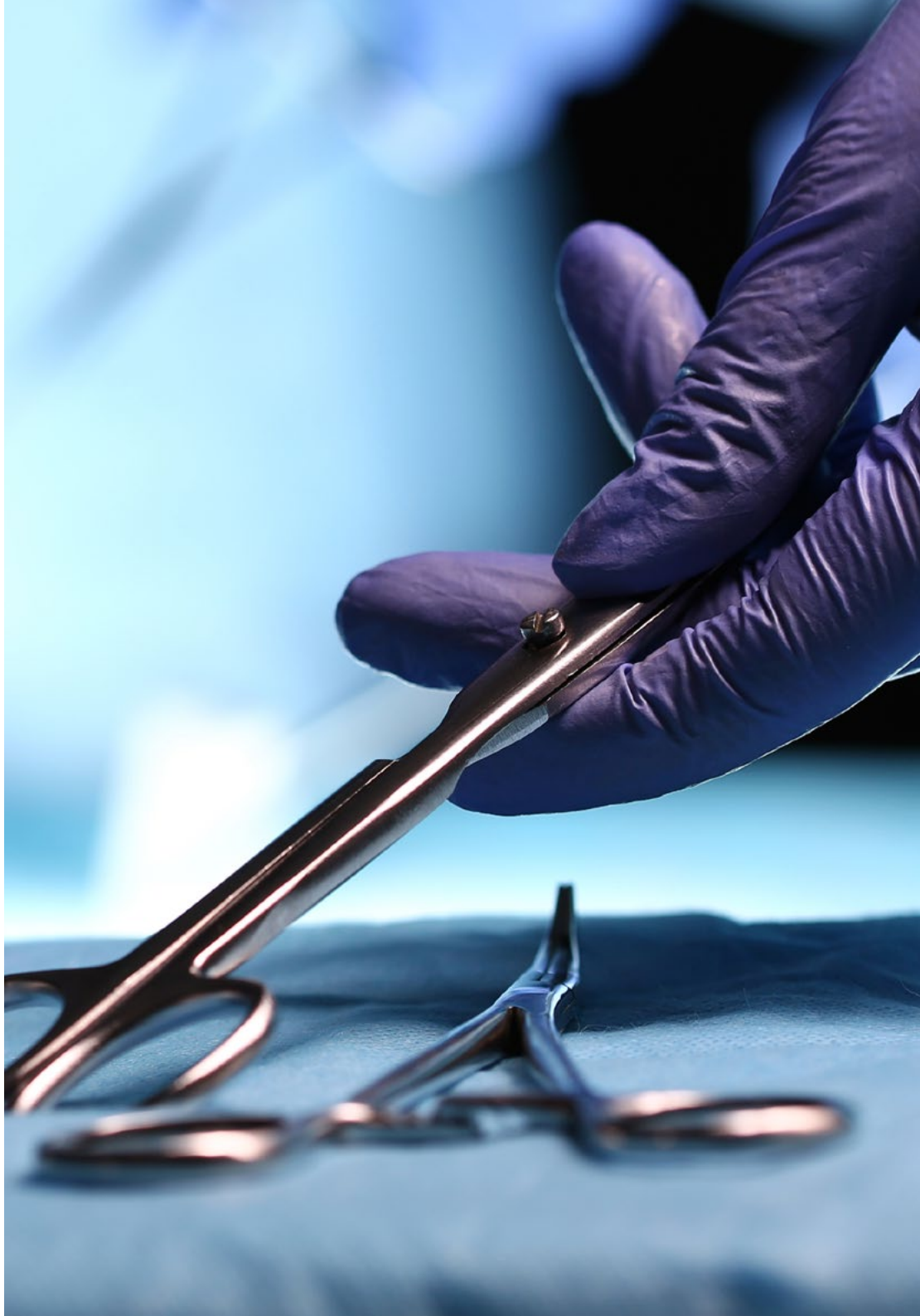
The structure of the contents has been designed by a team of expert surgeons, which encompasses all the updates in spinal pathology.

This Postgraduate Certificate has a quality program adapted to the latest trends in the field of spinal surgery"

Module 1. Surgical Approaches to the Spine

1.1. Cervical Column Approaches
- 1.1.1. Cervical Anatomy.
- 1.1.2. Muscles and Anatomical Limits.
- 1.1.3. Neurological Structures and Their Location.
- 1.1.5. Anterior Approaches to the Cervical Spine.
- 1.1.6. C1-C2 Transoral Approach.
- 1.1.7. Lateral Approaches to the Cervical Spine.
- 1.1.8. Which Approach to Perform: Right or Left.
- 1.1.9. Approaches to the Cervico-Thoracic Union.
- 1.1.10. Posterior Approaches to the Cervical Spine.
- 1.1.11. Posterior Approach to the C1-C2 Joints.
- 1.1.12. Posterior Cervical Foraminotomy.
- 1.1.13. Complications of Cervical Spine Surgery.
- 1.1.14. Bleeding.
- 1.1.15. Durable Lesions.
- 1.1.16. Alterations of Pharynx.
- 1.1.17. Esophageal Injuries.
- 1.1.18. Postoperative Management of Cervical Surgery Patients.

1.2. Thoracic Column Approaches.
- 1.2.1. General Indications.
- 1.2.2. Absolute and False Contraindications
- 1.2.3. Preoperative Planning.
- 1.2.4. Anterior Approaches to Thoracic Spine.
- 1.2.5. DIV-DXI Transthoracic Approach.
- 1.2.6. Transpleural Anterior Approach DIII-DXI. Louis.
- 1.2.7. Thoracolumbar Junction Approaches.
- 1.2.8. Transpleural-Retroperitoneal Approach.
- 1.2.9. Extrapleural Approaches.
- 1.2.10. Video-endoscopic Approach to the Thoracic Spine.
- 1.2.11. Posterior and Posterolateral Approaches tothe Thoracic Spine. Thoracic Disc Access.
- 1.2.12. Costotransversectomy.
- 1.2.13. Postoperative Management



1.3. Lumbar Spine Approaches.
- 1.3.1. Anterior Approach.
- 1.3.2. L2-L5 Retroperitoneal Anterior Approaches.
- 1.3.3. Extraperitoneal Anterior Approach with Median Incision for L2-L5 Levels.
- 1.3.4. Anterior Pararectal Approach Retroperitoneal to L5-S1.
- 1.3.5. Laparoscopic Transperitoneal Approach to L5-S1.
- 1.3.6. Lateral Oblique Approach of the Lumbar Spine to L2-L5.
- 1.3.7. En Bloc Sacrectomy.

1.4. Lateral Approach:
- 1.4.1. Lateral Approach for Discectomies, Foraminotomies or XLIF Lateral Fusions.
- 1.4.2. Microscopic or Minimally Invasive Lumbar Discectomy.

1.5. Posterior Approach:
- 1.5.1. Posterior Approaches to the Cervical Spine.
- 1.5.2. Lumbar Paraspinous Spinal Cord Approaches.
- 1.5.3. Foraminal Approach to the Lumbar Disc.

1.6. Complications of Thoracolumbar and Lumbar Spine Approaches.

Module 2. Complications in Spinal Surgery Miscellaneous

2.1. Neurological Complications in Spinal Surgery.
- 2.1.1. Dura Mater Tears.
  - 2.1.1.1. Conservative Management of Dural Tears.
  - 2.1.1.2. Primary Repair.
  - 2.1.1.3. Secondary Actions.
- 2.1.2. Nerve Root Injuries.
  - 2.1.2.1. Direct Injury to Nerves During Surgery.
  - 2.1.2.2. Peripheral Neuropathies due to Patient Positioning.
- 2.1.2. Neurological Complications related to Bone Grafts.

2.2. Vascular Complications.
- 2.2.1. Vascular Injuries in Spinal Surgery.
- 2.2.2. Anterior Cervical Vascular Injuries.
- 2.2.3. Thoracic Vascular Complications.
  - 2.2.3.1. Anterior Approach.
  - 2.2.3.2. Posterior Approach.
- 2.2.4. Lumbar Vascular Complications.
  - 2.2.4.1. Anterior Approach.
  - 2.2.4.2. Posterior Approach.
- 2.2.5. Other Vascular Complications.

2.3. Spine Infections.
- 2.3.1. Main Pathogens in Spinal Surgery.
- 2.3.2. Causes of the Infections. Risk Factors.
- 2.3.3. Diagnostic and Imaging Tests.
- 2.3.4. Spondylodiscitis.
- 2.3.5. Post Surgical Infections.
- 2.3.6. Treatment Planning.
  - 2.3.6.1. Antibiotic Medical Treatment.
  - 2.3.6.2. Treatment of Surgical Wounds Vacuum Systems.

2.4. Complications Derived from the Surgical procedure.
- 2.4.1. Failed Back Syndrome. Classification.
  - 2.4.1.1. Reasons for Failure of Surgical Instrumentation.
  - 2.4.1.2. Postoperative Vertebral Instability.
  - 2.4.1.3. Postoperative Deformities.
  - 2.4.1.4. Pseudarthrosis.
- 2.4.2. Adjacent Level Diseases. Therapeutic Attitude.
- 2.4.3. Revision Surgery. Strategies.

2.5. Evaluation and Treatment of Sacroiliac Pathology.

2.6. Navigation and Robotics in Thoracolumbar Spinal Surgery.

2.7. Use of Bone Grafts in Spinal Surgery.
- 2.7.1. Autograft and Allograft.
- 2.7.2. Demineralized Bone Matrix and Osteoconductive Ceramics.
- 2.7.3. Biological Substitutes.
- 2.7.4. Grafts in Revision Surgeries.
- 2.7.5. Stem Cells and Cellular Bone Matrix.

2.8. Evaluation and Follow-up Tools in Spinal Surgery.
- 2.8.1. Rating Scales.
- 2.8.2. SF-36, VAS, Oswestry.

05

Methodology

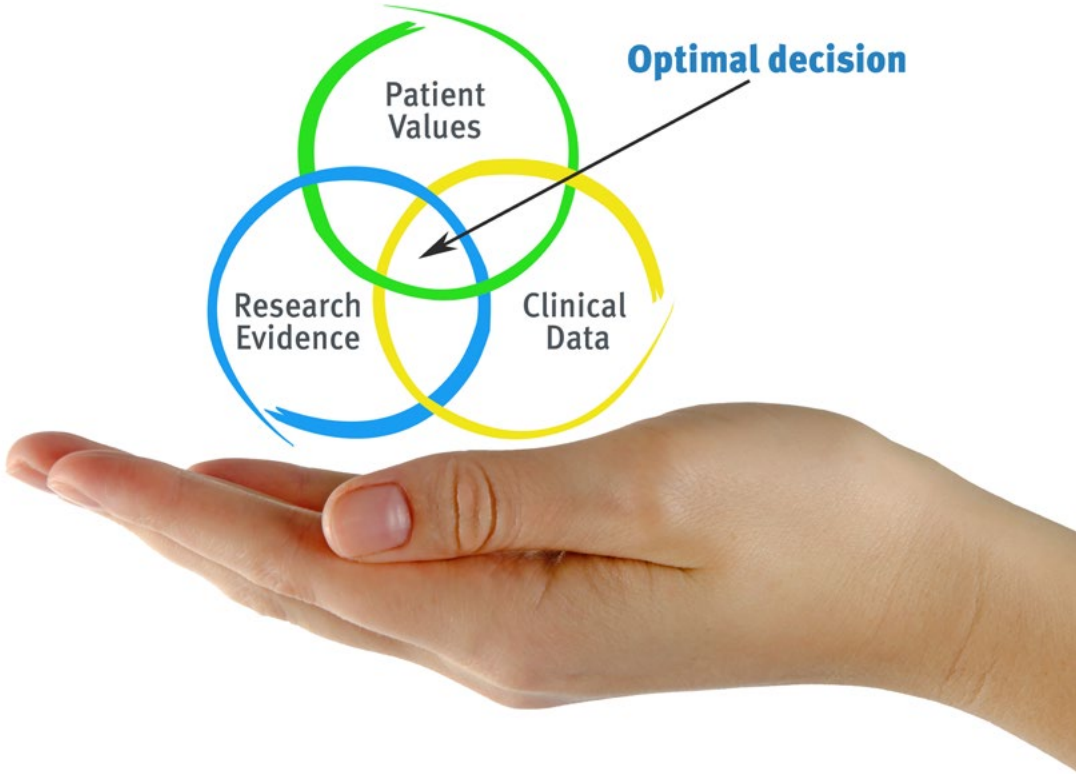
This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.
This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.

Discover Re-learning, 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

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, 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 can 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 potential 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 professional medical 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:

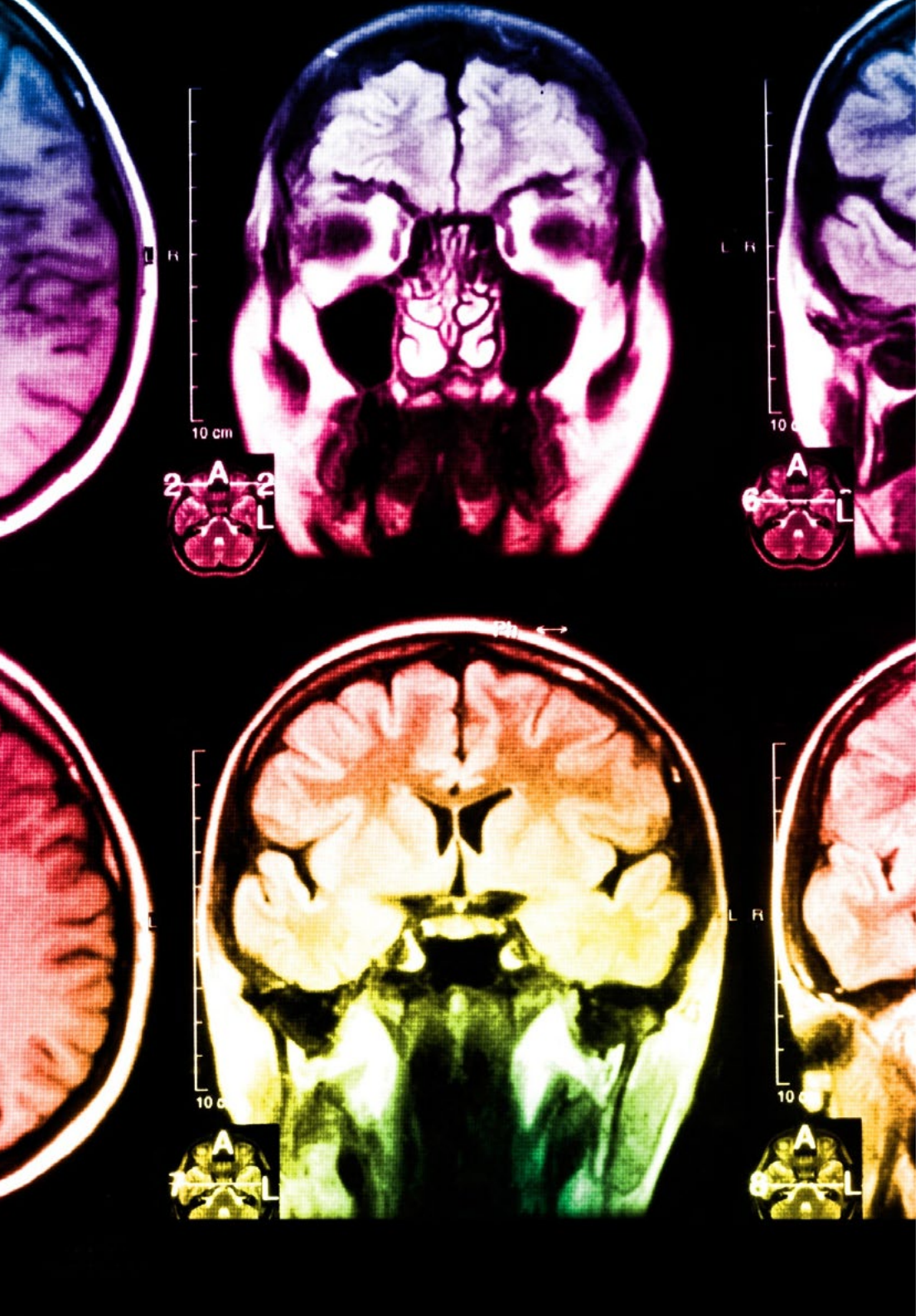
1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts 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.

Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.

The physician will learn through real cases and by solving 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning 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 (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.

In this program you will have access to the best educational material, prepared with you 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 really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.

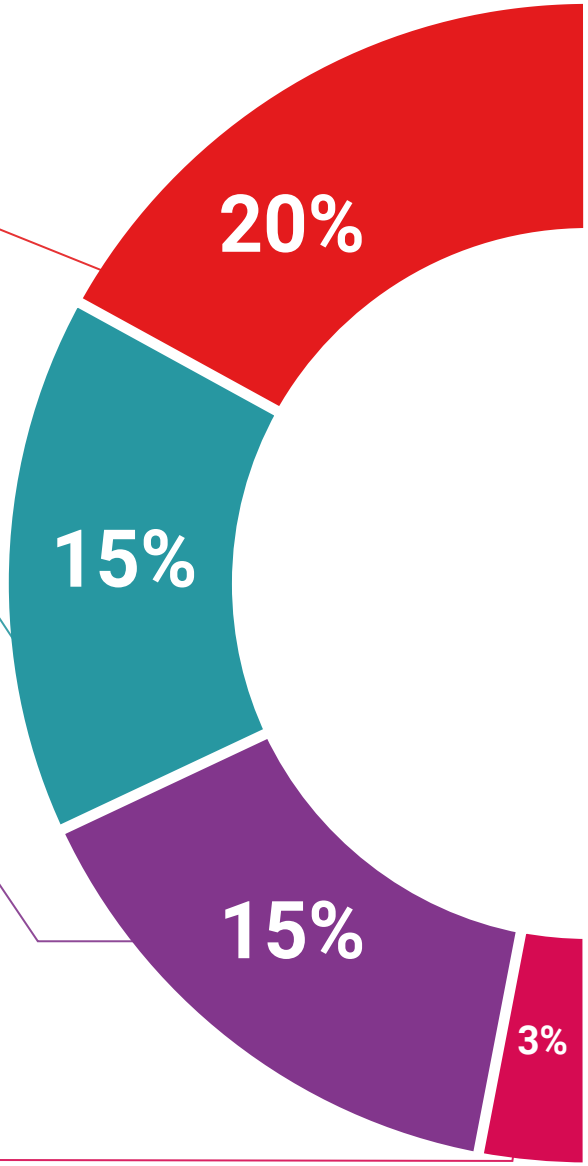
Interactive Summaries

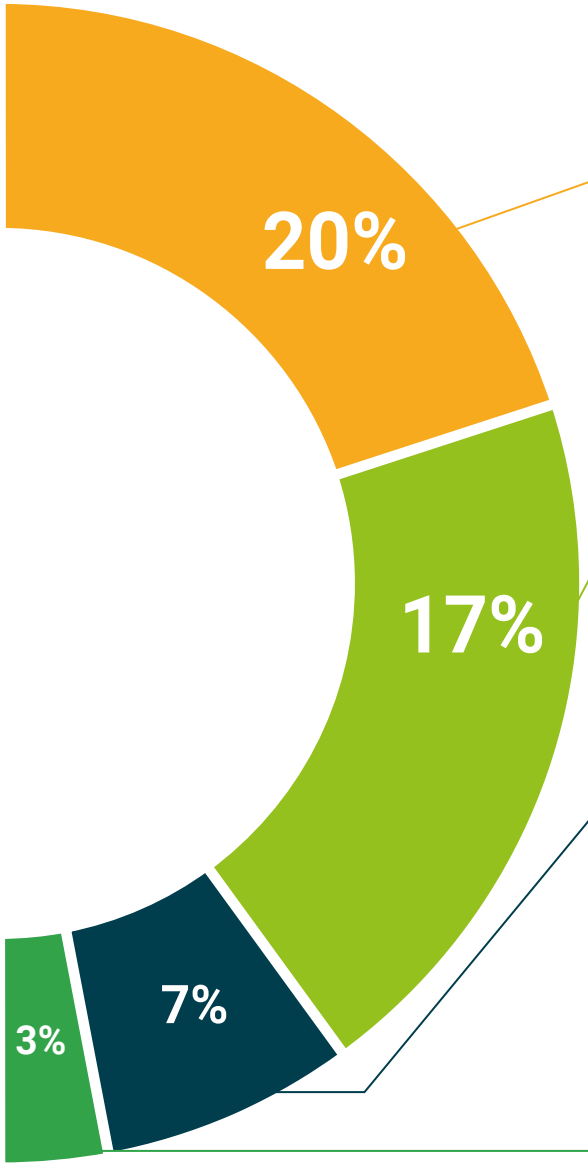
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.

Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.

Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.

06

Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.

Include in your training a Postgraduate Certificate in Surgical Approaches and Complications: a highly qualified added value for any professional in the field of medicine"

This **Postgraduate Certificate in Surgical Approaches and Complications** contains the most complete and up-to-date scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding **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 professionals from career evaluation committees.

Title: **Postgraduate Certificate in Surgical Approaches and Complications**

Official Number of Hours: **150**


tech technological university

Awards the following

DIPLOMA

to

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

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Surgical Approaches and Complications

This is a qualification awarded by this University, with 6 ECTS credits and 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 Apostilled, TECH EDUCATION will make the necessary arrangements to obtain it at an additional cost of €140 plus shipping costs of the Apostilled diploma.

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