

Postgraduate Diploma

Minimally Invasive Thoracic Surgery





Postgraduate Diploma Minimally Invasive Thoracic Surgery

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-minimally-invasive-thoracic-surgery

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01

Introduction to the Program

Minimally invasive thoracic surgery has undergone significant advances in recent years, offering patients less aggressive procedures and faster recovery times. Furthermore, the early detection of pulmonary nodules smaller than two centimeters has improved cure rates, allowing for less invasive surgeries with better results. For example, robotic surgery, such as that performed with the Da Vinci system, has proven to be effective in performing thoracic procedures, offering greater precision and reducing the risk of complications. In this context, TECH has designed a comprehensive, fully online program, designed to fit in optimally with graduates' work and personal schedules. All this is backed by the innovative Relearning methodology, pioneered at this institution.





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With this 100% online program, you will receive training in cutting-edge surgical techniques, strengthening your ability to perform procedures with less risk and faster recovery times”

The latest advances in Minimally Invasive Thoracic Surgery have not only improved the patient experience, but have also represented a great opportunity for healthcare professionals to expand their skills in cutting-edge techniques, improving the quality of care and surgical outcomes.

This is how this program came about, thanks to which doctors will immerse themselves in the historical evolution of minimally invasive techniques, understanding how advances in technologies and surgical methods have significantly reduced complications and improved outcomes for patients. In addition, they will acquire in-depth knowledge of the different types of surgical approaches, such as uniportal, multiport, subxiphoid or transcervical, each with its specific indications and benefits.

By mastering techniques that optimize the surgeon's position and the tools used, graduates will be able to perform procedures with greater precision and less physical effort, which will contribute to a reduction in the risk of fatigue and errors. Likewise, innovations in thoracoscopic surgery and thoracic robotics will be addressed, with the aim of training in the use of these advanced technologies, marking a before and after in Minimally Invasive Surgery.

Finally, the experts will delve into the most appropriate anesthetic techniques for these procedures, as well as into the management of ventilation and intraoperative monitoring. The anesthetic management of thoracic surgery without intubation will also be analyzed, a technique that has gained relevance due to its less invasiveness and rapid recovery.

In this way, TECH has created a comprehensive 100% online program, which only requires an electronic device with Internet access to use all the academic resources, eliminating inconveniences such as traveling to a physical center or adjusting to fixed schedules. In turn, it is based on the revolutionary Relearning methodology, which focuses on the repetition of key concepts to guarantee an efficient and natural assimilation of the contents.

This **Postgraduate Diploma in Minimally Invasive Thoracic Surgery** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts with a deep knowledge of the latest techniques in Minimally Invasive Thoracic Surgery, which simplifies the work of doctors in clinics, hospitals and other healthcare centers
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable 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.



You will update your knowledge of less invasive methods, which will result in a significant reduction in postoperative pain and a shorter hospital stay, thanks to an extensive library of multimedia resources"

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You will delve into fluid therapy, analgesic techniques and their impact on reducing postoperative pain, to ensure an optimal surgical experience and improve the long-term quality of life of your patients"

The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing 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 prepare for 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will be equipped with the necessary tools to integrate Robotic Surgery into your daily clinical practice, thereby strengthening your precision and the results of surgical interventions. What are you waiting for to enroll?

You will address the importance of surgical ergonomics, contributing to efficiency and safety in the operating room, and optimizing operative results. With all the TECH quality guarantees!



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.



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Study at the world's largest online university and guarantee your professional success. The future starts at TECH”

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

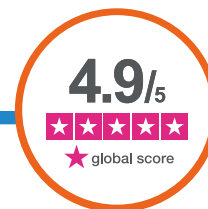
Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.



The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.



03 Syllabus

Throughout the syllabus, physicians will delve into the evolution of thoracic surgery, examining the different types of surgical approaches and their application in specific cases, such as uniportal and robotic procedures. Crucial aspects such as anesthesia and monitoring during interventions, as well as postoperative pain management and fluid therapy, will also be addressed. Likewise, skills will be developed to evaluate the indications and contraindications of Minimally Invasive Surgery, improving clinical decision making.





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You will master the use of anesthesia in non-intubation procedures, analyzing its advantages and disadvantages, as well as its relation to pain management, always relying on the revolutionary methodology Relearning”

Module 1. Approach to Minimally Invasive Thoracic Surgery

- 1.1. Minimally Invasive Thoracic Surgery. Historical Aspects
 - 1.1.1. Evolution of Surgical Techniques
 - 1.1.2. Influence of Technology on the Development of Thoracic surgery
 - 1.1.3. Pioneers in Minimally Invasive Thoracic Surgery
- 1.2. Simulation and Experimental Surgery in Minimally Invasive Thoracic Surgery
 - 1.2.1. Simulation Models in Surgical Training
 - 1.2.2. Training Programs in Minimally Invasive Thoracic Surgery
 - 1.2.3. Ethics and Considerations in Experimental Surgery
- 1.3. Material for Minimally Invasive Thoracic Surgery
 - 1.3.1. Basic Surgical Instruments
 - 1.3.2. Specialized Surgical Instruments
 - 1.3.3. Imaging and Visualization Devices
- 1.4. Thoracic Robotic Surgery. Historical Development
 - 1.4.1. Development of the First Robotic Systems
 - 1.4.2. Learning Curve and Adoption in Clinical Practice
 - 1.4.3. Global Expansion of Robotic Surgery
- 1.5. Unique Systems and Aspects of Robotic Thoracic Surgery
 - 1.5.1. Components of the Robotic Surgical System
 - 1.5.2. Technical Advantages over Traditional Surgery and VATS
 - 1.5.3. Current Limitations and Challenges
- 1.6. Surgical Anatomy for Minimally Invasive Surgery
 - 1.6.1. Anatomical Structures Involved in Minimally Invasive Approaches
 - 1.6.2. Anatomical View in the Different Minimally Invasive Approaches
 - 1.6.3. Anatomical Limits in the Thorax in Minimally Invasive Surgery
 - 1.6.3.1. Thoracic Duct, Transcervical Approach
- 1.7. Single-port and Multiport Minimally Invasive Intercostal Approaches
 - 1.7.1. Single-port Approach
 - 1.7.2. Biportal Approach
 - 1.7.3. Multiportal Approach



- 1.8. Others Minimally Invasive Approaches. Subxiphoid, Video-assisted Mediastinoscopic, VAMLA, TEMPLA
 - 1.8.1. Subxiphoid Approach
 - 1.8.2. VAMLA Approach
 - 1.8.3. TEMPLA Approach
- 1.9. Ergonomics in Minimally Invasive Thoracic Surgery
 - 1.9.1. Space Distribution in the Operating Room
 - 1.9.2. Surgeon's Position in Minimally Invasive Thoracic Surgery
 - 1.9.3. Strategies to Reduce Fatigue and Improve Ergonomics
- 1.10. Indications and Advantages of Supine, Lateral or Prone Positioning in Minimally Invasive Thoracic Surgery
 - 1.10.1. Supine Approach
 - 1.10.2. Lateral Approach
 - 1.10.3. Prone Approach

Module 2. Anesthesia in Minimally Invasive Thoracic Surgery

- 2.1. Evolution of Anesthesia towards Minimally Invasive Surgery
 - 2.1.1. Background and Evolution of Anesthesia in Minimally Invasive Thoracic Surgery
 - 2.1.2. Advances in Anesthetic Techniques
 - 2.1.3. One-Lung Ventilation
 - 2.1.4. New Analgesic Blockades
 - 2.1.5. Technological Advances
 - 2.1.5.1. Thoracoscopic Surgery (VATS)
 - 2.1.5.2. Robotic Surgery
- 2.2. Pre-anesthetic Assessment in Minimally Invasive Surgery
 - 2.2.1. Identification of Risk Factors
 - 2.2.1.1. Risk Assessment Scales
 - 2.2.1.2. Immediate Postoperative Complications
 - 2.2.1.3. Respiratory Factors
 - 2.2.1.4. Cardiovascular Factors
 - 2.2.1.5. Metabolic Risk Factors and Comorbidities
 - 2.2.2. Pulmonary Function Tests
 - 2.2.2.1. Respiratory Function Tests
 - 2.2.2.2. Unilateral Function Tests
 - 2.2.2.3. Stress Tests
- 2.3. Minimally Invasive Anesthetic Management of the Thoracic Patient
 - 2.3.1. Anesthetic Techniques
 - 2.3.1.1. General Anesthesia
 - 2.3.1.2. One-Lung Ventilation
 - 2.3.1.3. Protective Lung Ventilation
 - 2.3.2. Monitoring
 - 2.3.2.1. Standard Monitoring
 - 2.3.2.2. Diuresis
 - 2.3.2.2.1. Anesthetic Depth
 - 2.3.2.2.2. Progressive Muscle Relaxation. Temperature
 - 2.3.3. Others. Positioning
 - 2.3.3.1. Fluid Therapy
 - 2.3.3.2. Multimodal Analgesia
- 2.4. Airway Management: Double-Lumen Tube Placement
 - 2.4.1. Background and Evolution of Double-Lumen Tube in Minimally Invasive Surgery
 - 2.4.2. Indications for the Use of Double-Lumen Tubes
 - 2.4.2.1. Advantages and Disadvantages of the Use of Double-Lumen Tubes
 - 2.4.3. Types of Double-Lumen Tubes
 - 2.4.3.1. With Camera
 - 2.4.3.2. Without Camera
 - 2.4.3.3. Positioning of Double-Lumen Tubes

- 2.5. Airway Management: Bronchial Blockers and Endotracheal Intubation
 - 2.5.1. Background and Evolution of Bronchial Blockers in Minimally Invasive Surgery
 - 2.5.2. Indications for the Use of Bronchial Blockers
 - 2.5.2.1. Difficult Airway in One-Lung Ventilation
 - 2.5.2.2. Segmental Pulmonary Isolation
 - 2.5.2.3. One-Lung Ventilation in Pediatric Patients or Patients of Small Stature
 - 2.5.2.4. Altered Tracheobronchial Anatomy
 - 2.5.3. Types of Bronchial Blockers
 - 2.5.3.1. Independent
 - 2.5.3.2. Incorporated into the Endotracheal Tube
 - 2.5.3.3. Advantages and Disadvantages of Using Bronchial Blockers
 - 2.5.3.4. Positioning of Bronchial Blockers
- 2.6. Airway Management: Thoracic Surgery Without Intubation
 - 2.6.1. Preoperative Assessment. Inclusion and Exclusion Criteria
 - 2.6.2. Intraoperative Anesthetic Management
 - 2.6.2.1. Monitoring
 - 2.6.2.2. Airway Management
 - 2.6.2.3. Anesthetic Induction
 - 2.6.2.4. Postoperative Pain Management
 - 2.6.3. Postoperative Care. Complications
- 2.7. Airway Management: Intraoperative Bronchoscopy
 - 2.7.1. Anatomy of the Tracheobronchial Tree
 - 2.7.2. Indications for Intraoperative Bronchoscopy
 - 2.7.2.1. Placement and Verification of the Lung Isolation Device
 - 2.7.2.2. Readjustment of Lung Isolation
 - 2.7.2.3. Control of Intraoperative Secretions and Bleeding
 - 2.7.2.4. Detection and Handling of Intraoperative Complications
 - 2.7.2.5. Guidance in Complex Surgeries
 - 2.7.2.6. Confirmation of Bronchial Patency after Resection
 - 2.7.2.7. Evaluation of Bronchial Leaks
 - 2.7.2.8. Assistance in the Management of Bronchopleural Fistulas
 - 2.7.3. Management of Fiberoptic Bronchoscopy in the Difficult Airway

- 2.8. Analgesic Management: Spinal Erector Plane Block and Other Selective Blockades
 - 2.8.1. Pain in Minimally Invasive Thoracic Surgery. Anatomy of the Thoracic Wall
 - 2.8.2. Intercostal Blockade
 - 2.8.3. Interfascial Blockade
 - 2.8.3.1. Features
 - 2.8.3.2. Types of Blockades
 - 2.8.3.2.1. Erector Spinal Blockade
 - 2.8.3.2.2. Serratus Plane Blockade PECS Blockade
- 2.9. Analgesic Management: Epidural and Paravertebral Blockade
 - 2.9.1. Epidural Blockade. Effects. Complications
 - 2.9.2. Paravertebral Blockade. Techniques. Complications
 - 2.9.3. Comparison of Epidural Blockade vs. Paravertebral Blockade
- 2.10. Postoperative and Discharge Analgesic Management
 - 2.10.1. Pain Assessment
 - 2.10.1.1. One-dimensional Scales
 - 2.10.1.2. Multidimensional Scales
 - 2.10.2. Multimodal Pain Management
 - 2.10.2.1. Analgesics
 - 2.10.2.2. Regional Techniques
 - 2.10.2.3. Adjuvant Drugs
 - 2.10.3. Chronic Post-Thoracotomy Pain
 - 2.10.3.1. Incidence
 - 2.10.3.2. Risk Factors

Module 3. Surgical Indications in Minimally Invasive Thoracic Surgery

- 3.1. From Pleuroscopy to Sublobar Resections. Historical Development
 - 3.1.1. Pleuroscopy. Videothoracoscopy in Pleural Disease and Wedge Resections
 - 3.1.2. Lobectomies and Pneumonectomies. Anatomical Segmentectomies
 - 3.1.3. Contribution of Robotic Surgery to the Improvement of Resectability through Minimally Invasive Techniques
- 3.2. Neoplastic Lung Disease. Treatment
 - 3.2.1. Treatment in Neoplastic Lung Disease
 - 3.2.2. Treatment Contraindications
 - 3.2.3. Key Points for Each Indication. Current State of the Art

- 3.3. Neoplastic Lung Disease. Treatment
 - 3.3.1. Benign Neoplasms
 - 3.3.2. Pleural Metastases
 - 3.3.3. Malignant Pleural Mesothelioma
 - 3.3.4. Management of Malignant Pleural Effusion
- 3.4. Mediastinal Tumor. Treatment
 - 3.4.1. Anterior Mediastinal Tumors. Posterior Mediastinal Tumors
 - 3.4.2. Mediastinoscopy and Mediastinotomy. TEMPLA. VAMLA
 - 3.4.3. Lymphadenectomy in Lung Cancer.
- 3.5. Thoracic Wall Disease. Treatment
 - 3.5.1. Thoracic Wall Deformities
 - 3.5.2. First Rib Resection
 - 3.5.3. Malignant Tumor Resection of the Thoracic Wall
 - 3.5.4. Benign Tumor Disease of the Thoracic Wall
- 3.6. Esophageal Disease. Treatment
 - 3.6.1. Achalasia
 - 3.6.2. Diverticulum
 - 3.6.3. Tumors of the Gastroesophageal Junction
 - 3.6.4. Benign Tumors of the Esophagus
- 3.7. Infectious Diseases. Treatment
 - 3.7.1. Bronchiectasis. TB. Fungal Infections. Pulmonary Hydatidosis
 - 3.7.2. Empyema
 - 3.7.3. Descending Necrotizing Mediastinitis
 - 3.7.4. Pulmonary Hydatidosis
- 3.8. Lung Malformations. Current Indications
 - 3.8.1. Pulmonary Sequestration
 - 3.8.2. Cystic Adenomatoid Malformation
 - 3.8.3. Congenital Lobar Emphysema
 - 3.8.4. Bronchogenic Cysts
- 3.9. Other Specifications in Minimally Invasive Thoracic Surgery
 - 3.9.1. Surgery of the Diaphragm
 - 3.9.2. Pericardial Disease. Cardiac Surgery
 - 3.9.3. Thoracic Spine Procedures
- 3.10. General Contraindications in Minimally Invasive Surgery
 - 3.10.1. Contraindications of the Multiport VATS Approach
 - 3.10.2. Contraindications of Robotic Approaches
 - 3.10.3. Alternatives to the Minimally Invasive Approach: Hybrid Approaches



You will immerse yourself in the historical evolution of Minimally Invasive Thoracic Surgery interventions, understanding the milestones that have marked their development, as well as their impact on contemporary surgical practice"

04

Teaching Objectives

With this university program, professionals will be able to select and properly apply different surgical approaches, such as single-port and robotic procedures. In addition, they will gain an in-depth understanding of anaesthetic and analgesic techniques, as well as pain monitoring and management, to ensure faster and safer recovery. The physicians will also be trained in the correct assessment of the indications and contraindications of Minimally Invasive Surgery, promoting informed clinical decision making and the efficient use of technological innovations for the benefit of patients.





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Bet on TECH! You will analyze the surgical indications in Minimally Invasive Thoracic Surgery, determining when these techniques are appropriate, according to the type of disease and the characteristics of the patient"



General Objectives

- Analyze the main minimally invasive surgical approaches in thoracic surgery
- Assess the systems and materials used in minimally invasive thoracic surgery, both in robotics and other advanced technologies
- Analyze the key points in the development of anesthesia and its impact on minimally invasive thoracic surgery
- Identify current analgesic techniques that allow for pain management
- Identify the diseases most frequently suitable for minimally invasive surgery
- Identify the key points of minimally invasive surgery for each procedure





Specific Objectives

Module 1. Approach to Minimally Invasive Thoracic Surgery

- Compile information on the historical evolution of minimally invasive thoracic surgery, highlighting key milestones and their impact on current practice
- Determine the main characteristics of the different intercostal (uniportal, multiport), subxiphoid or transcervical surgical approaches
- Demonstrate the importance of surgical ergonomics in the context of minimally invasive thoracic surgery, improving operative efficiency and patient safety
- Present recent technological innovations in thoracoscopic surgery and thoracic robotics

Module 2. Anesthesia in Minimally Invasive Thoracic Surgery

- Analyze the different anesthetic techniques used in minimally invasive thoracic surgery
- Develop the ventilation modalities used in minimally invasive procedures in thoracic surgery
- Assess the monitoring required in the different minimally invasive thoracic surgery procedures
- Present the anaesthetic management of thoracic surgery without intubation, recall the characteristics of this anaesthetic management and analyse its use in medical practice
- Define fluid therapy in these minimally invasive procedures
- Examine the different analgesic techniques and their implications in the intraoperative and postoperative periods and establish their relation to chronic pain

Module 3. Surgical Indications in Minimally Invasive Thoracic Surgery

- Identify the technical details of each minimally invasive approach
- Define the differentiating aspects between conventional minimally invasive thoracic surgery and robotic surgery
- Reasonably assess the indication or contraindication of minimally invasive surgery depending on the clinical case and the type of disease
- Analyze and learn about the technical development of robotic surgery



You will examine in detail the various intercostal surgical approaches, such as uniportal and multiport, as well as subxiphoid and transcervical options, through the best teaching materials on the educational market"

05

Career Opportunities

Graduates will have access to opportunities in hospitals and clinics specializing in thoracic surgery, where they will apply their knowledge of advanced and less invasive techniques, improving patient outcomes and recovery. In addition, they will have the option of joining cutting-edge surgical teams that use these innovative technologies. They will also have the possibility of developing a career in research, contributing to the advancement of new techniques and protocols. They will also be able to work as leaders or consultants in the hospital setting, participating in the implementation of best surgical practices in their professional environment.



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The program in Minimally Invasive Thoracic Surgery will open up various professional opportunities for those physicians who wish to specialize in this outstanding area of Medicine”

Graduate Profile

Graduates will be prepared to apply these methods in a variety of thoracic disorders, maximizing patient safety and well-being and minimizing recovery time and complications. They will also master the specific anesthetic and analgesic techniques for these procedures, as well as the advanced monitoring methods necessary in this type of surgery. In addition, your profile will be marked by a critical and reflective attitude, capable of adequately evaluating the indications and contraindications of each case, using the latest technological innovations.

You will be a physician highly trained in the most advanced and effective techniques of Thoracic Surgery, with a solid understanding of the least invasive surgical approaches, such as uniportal and robotic procedures.

- ♦ **Leadership and Management of Surgical Teams:** Ability to coordinate and lead multidisciplinary teams, promoting a collaborative and efficient approach in the surgical environment
- ♦ **Effective Communication:** Skills to communicate clearly and empathetically with patients, family members and members of the medical team, facilitating patient-centered care and expectation management
- ♦ **Evidence-based Clinical Decision Making:** Development of skills to make informed decisions, integrating the latest technological and scientific advances in Thoracic Surgery, always aimed at optimizing results for the patient
- ♦ **Innovation Management and Continuous Improvement:** Ability to identify, apply and promote innovative practices in Thoracic Surgery, contributing to the continuous improvement of the quality of care in the institutions where they work



After completing the program, you will be able to use your knowledge and skills in the following positions:

- 1. Minimally Invasive Thoracic Surgeon:** Specialist in thoracic surgery who applies minimally invasive techniques for the treatment of lung, pleural and mediastinal diseases.
- 2. Thoracic Robotic Surgeon:** Physician specialized in the use of Robotic Surgery for thoracic procedures, offering a less invasive option with high precision.
- 3. Thoracic Anesthesia Specialist:** Anesthesiologist with a focus on Minimally Invasive Thoracic Surgery, expert in the anesthetic management of complex procedures.
- 4. Thoracic Surgery Coordinator:** Physician in charge of organizing and coordinating the surgical area of a hospital or health center specialized in Thoracic Surgery.
- 5. Consultant in Minimally Invasive Thoracic Surgery:** An experienced physician who advises healthcare institutions on the implementation of minimally invasive techniques in Thoracic Surgery.
- 6. Chief of Thoracic Surgery Department:** Professional in charge of leading research projects related to Minimally Invasive Thoracic Surgery, with the aim of improving surgical techniques and results.
- 7. University Professor in Thoracic Surgery:** Teacher specialized in Minimally Invasive Thoracic Surgery, in charge of teaching new health professionals in the academic field.
- 8. Consultant Physician in Specialized Hospitals:** Expert who provides consultancy in specialized hospitals, optimizing surgical processes in the area of Minimally Invasive Thoracic Surgery.



You will increase your competitiveness in Minimally Invasive Thoracic Surgery, improving your surgical results and offering more precise and effective care, in line with the latest trends in Medicine"

06

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



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TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

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.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



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.

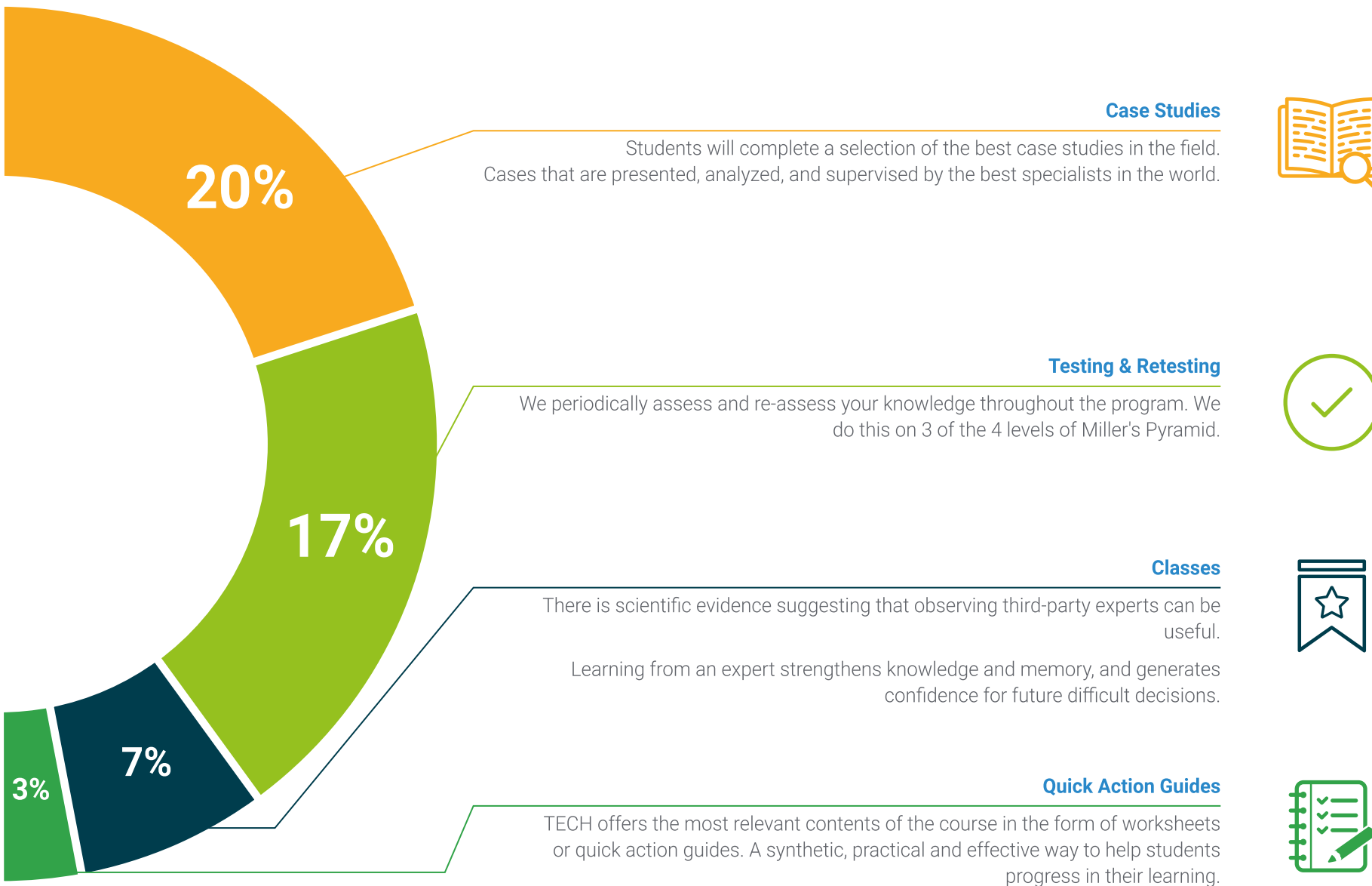
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





07

Teaching Staff

The teaching staff is made up of a group of professionals of renowned prestige in the field of Thoracic Surgery, with extensive clinical and research experience. In fact, it includes renowned thoracic surgeons with experience in advanced and minimally invasive techniques, as well as experts in complementary areas such as anaesthesia, radiology and respiratory medicine. This qualification is designed to provide graduates with the most advanced theoretical knowledge, as well as practical training based on the latest techniques and technological tools, to improve clinical outcomes and patients' quality of life.



“

The teaching staff also have outstanding track records in research and scientific publication, guaranteeing you access to up-to-date education based on the latest scientific evidence”

Management



Dr. Martínez Hernández, Néstor J.

- ♦ President of the Scientific Advisory Office of the Spanish Society of Thoracic Surgery (SECT)
- ♦ Coordinator of the Scientific Committee of the Spanish Society of Thoracic Surgery
- ♦ Thoracic Surgeon at the University Hospital La Ribera
- ♦ Thoracic Surgeon Editor of Cirugía Española in Elsevier
- ♦ Guest Editor at the Journal of Visualized Experiments
- ♦ Associate Professor at the Department of Respiratory Medicine, Faculty of Medicine, Catholic University of Valencia
- ♦ Thoracic Surgeon at the Manises Hospital
- ♦ Visiting Physician at Cedars-Sinai Medical Center
- ♦ Resident Medical Intern at the General University Hospital of Valencia
- ♦ Visiting Physician at Mount Sinai Hospital, New York, United States
- ♦ Visiting Physician at Yale New Haven Hospital, United States
- ♦ Doctor of Medicine and Surgery from the University of Valencia
- ♦ Degree in Medicine and Surgery from the University of Valencia
- ♦ Specialist in Thoracic Surgery
- ♦ Extraordinary Doctorate Award from the University of Valencia
- ♦ Antonio Caralps y Masso Award of the SECT for the Best Communication in Thoracic Surgery
- ♦ First Prize of IX Edition to the Best Specialist in Training at the Gregorio Marañón General University Hospital
- ♦ Member of: European Society for Thoracic Surgery (ESTS), Spanish Society of Thoracic Surgery (SECT), Spanish Society of Pulmonology and Thoracic Surgery (SEPAR), Valencian Society of Pulmonology (SVN)



Dr. Quero Valenzuela, Florencio

- Chief of the Thoracic Surgery Department at the Virgen de las Nieves University Hospital
- Specialist Physician in Thoracic Surgery at the Virgen de las Nieves University Hospital
- Specialist Physician in Thoracic Surgery at the Virgen Macarena University Hospital
- Member of the Ae22-Cancer Genetics, Biomarkers and Experimental Therapies Research Group
- Doctor of Surgery from the University of Granada
- Master's Degree in Clinical Unit Management from the University of Murcia
- Expert in Epidemiology and Clinical Research from the University of Granada
- Degree in Medicine and Surgery from the University of Granada

Professors

Dr. Aragón Álvarez, Sonsoles

- Specialist in Anesthesiology and Resuscitation, UR Hospital
- Scientific researcher specializing in the study of the effect of medication on patients with anxiety
- Doctor of Medicine, University of Valencia
- Degree in Medicine from the UCV

Dr. Fuentes Martín, Álvaro

- Coordinator of MIR in Committee of the Spanish Society of Thoracic Surgery
- Specialist Physician of Thoracic Surgery at the University Clinical Hospital of Valladolid
- Member of the National Commission of the Specialty of Thoracic Surgery in the Ministry of Health
- PhD in Health Sciences Research from the University of Valladolid
- Resident Physician in Thoracic Surgery at the University Clinical Hospital of Valladolid
- Degree in Medicine from the Complutense University of Madrid
- Member of: Spanish Society of Thoracic Surgery (SECT)

Dr. Campo-Cañaveral de la Cruz, José Luis

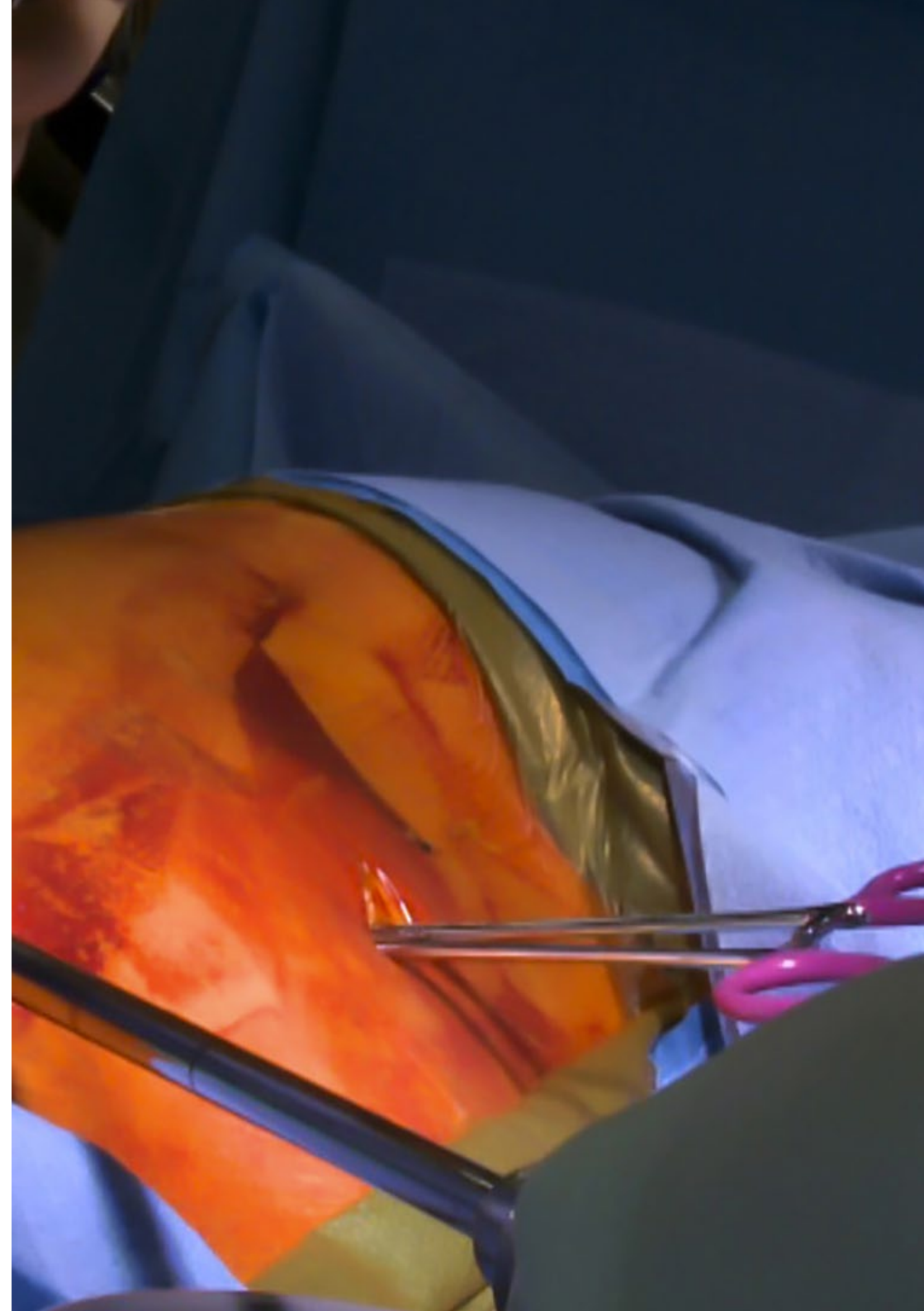
- ♦ Specialist Physician in Thoracic Surgery at the 12 de Octubre University Hospital
- ♦ Specialist Physician in Thoracic Surgery at the Puerta de Hierro University Hospital
- ♦ Medical Intern Resident in Thoracic Surgery at the Puerta de Hierro University Hospital
- ♦ Specialist in Lung Transplantation and Cardiorespiratory Support at Toronto General Hospital, Canada
- ♦ Doctor of Medicine from the Autonomous University of Madrid
- ♦ Master's Degree in Diagnosis and Treatment of Thoracic Tumors from the Autonomous University of Madrid
- ♦ Master's Degree in Clinical Management from TECH University
- ♦ Bachelor's Degree in Medicine from the Complutense University of Madrid

Dr. Meneses Pardo, José Carlos

- ♦ Medical Director of the "Evita una Muerte, Está en tus manos" Project
- ♦ Thoracic Surgeon at the 12 de Octubre University Hospital
- ♦ Thoracic Surgeon at the Torrejón University Hospital
- ♦ Specialist in Thoracic Surgery from the University of Sevilla
- ♦ Degree in Medicine from the University of Seville

Dr. Sánchez García , Fernando

- ♦ Faculty Specialist in Anesthesiology and Resuscitation at the University Hospital La Ribera
- ♦ Manager at La Ribera University Hospital
- ♦ Expert in Pain Therapy
- ♦ Degree in Medicine



Dr. Cilleruelo Ramos, Ángel

- Thoracic Surgeon at the Clinical University Hospital of Valladolid
- Member of the Institutional Relations Committee of the Spanish Society of Pulmonology and Thoracic Surgery (SEPAR)
- Treasurer of the Castile-Leon and Cantabria Society of Respiratory Pathology (SOCALPAR)
- Medical Intern Resident in Thoracic Surgery at the University Clinical Hospital of Valladolid
- PhD in Medicine, University of Valladolid
- Master's Degree in Airway Diseases from the San Antonio Catholic University of Murcia
- Master's Degree in Healthcare Unit Management from the Menéndez Pelayo International University
- Master's Degree in Innovation and New Technologies Applied to Respiratory Medicine from the San Pablo CEU University
- University Expert in Pleural Pathology by the University of Barcelona.
- University Expert in Emergencies in Thoracic Surgery from the Catholic University of Valencia
- Member of: Spanish Society of Pulmonology and Thoracic Surgery (SEPAR) and Castile-Leon and Cantabria Society of Respiratory Pathology (SOCALPAR)

Dr. Miñana Aragón, Encarna

- Attending Physician of Anesthesiology, Resuscitation and Pain Therapy at the University Hospital of La Ribera
- Attending Physician in Anesthesiology, Resuscitation and Pain Therapy at La Fe University Hospital in Valencia
- Attending Physician in Anesthesiology at Malva-Rosa Hospital
- Specialist in Anesthesiology, Resuscitation and Pain Therapy at La Fe University Hospital in Valencia
- PhD in Medicine, Autonomous University of Barcelona.
- Degree in Medicine and Surgery from the Autonomous University of Barcelona



This program will enhance your technical excellence and understanding of the multidisciplinary benefits of MITS, positioning you as a leader in the evolution of modern Thoracic Surgery”

08 Certificate

The Postgraduate Diploma in Minimally Invasive Thoracic Surgery guarantees students, in addition to the most rigorous and up-to-date education program, access to a Postgraduate Diploma issued by TECH Global University.



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

This private qualification will allow you to obtain a **Postgraduate Diploma in Minimally Invasive Thoracic Surgery** 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 private qualification**, 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 Minimally Invasive Thoracic Surgery**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**





Postgraduate Diploma
Minimally Invasive Thoracic
Surgery

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Postgraduate Diploma

Minimally Invasive Thoracic Surgery

