



Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Accreditation: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/minimally-invasive-surgery-thoracic-wall-diaphragm-pleura

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# tech 06 | Introduction

Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura represents a significant advance in the treatment of complex diseases. These techniques allow surgical problems to be addressed with precision, reducing the impact on surrounding tissues, which translates into faster recovery and better outcomes for patients. In this context, acquiring specialized skills in this area is essential for healthcare professionals seeking to excel in the surgical field.

For this reason, TECH has designed this Postgraduate Certificate in Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura which will meet this need. Using a comprehensive methodology and a rigorous academic approach, the program will cover topics such as advanced thoracoscopy techniques, the management of surgical complications, and specific procedures for the treatment of diaphragmatic hernias. In this way, physicians will develop in-depth knowledge and essential skills to implement these techniques in the clinical setting.

Completing this Postgraduate Certificate will open doors to new professional opportunities, given the growing interest in less invasive surgical interventions. For this reason, specialists in this field are highly valued in hospitals, surgical centers, and specialized clinics, where they can play key roles in multidisciplinary teams. Likewise, this program will enable graduates to lead innovative projects and optimize surgical protocols, increasing their relevance and competitiveness in the labor market.

At the same time, this Postgraduate Certificate will be taught 100% online, allowing students to balance their educational development with their personal and professional responsibilities. Thanks to the Relearning methodology, the most relevant concepts will be presented in a repetitive and structured way, facilitating effective and lasting assimilation. Finally, TECH will provide access to multimedia materials, available 24 hours a day, which will guarantee flexibility and convenience for acquiring cutting-edge knowledge in Minimally Invasive Surgery.

This Postgraduate Certificate in Minimally Invasive Surgery of the Thoracic Wall,

Diaphragm and Pleura contains the most complete and up-to-date educational program
on the market. Its most notable features are:

- The development of case studies presented by experts with a deep knowledge of Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura
- 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 process of self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



Make the most of the Relearning methodology and access dynamic, accessible and effective learning.

TECH will assist you every step of the way. Enrol now and master the latest techniques in Thoracic Surgery!"

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An internationally renowned teaching team will guide you in the use of advanced techniques for interventions on the Thoracic Wall, Diaphragm and Pleura. You will increase your professional impact with this exclusive program!"

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 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 master the most advanced techniques in Thoracic Surgery! You will immerse yourself in an exhaustive syllabus, covering everything from surgical planning to innovations in minimally invasive approaches.

With TECH, you will have access to 100% online learning, based on Relearning, a methodology based on the continuous reiteration of key concepts for an optimal and organic assimilation of all the contents.







# tech 10 | Why Study 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 world's best online university". 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 aimed at educating the professionals of the future"

#### A world-class teaching staff

TECH's teaching staff is made up of more than 6,000 professors with the highest international recognition. 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 online educational catalog, one hundred percent online and covering the vast majority of areas of knowledge. We offer a large selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university degrees, in eleven different languages, make us the largest educational largest in the world.









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# The most complete study plans on the university scene

TECH offers the most complete study plans on the university scene, with syllabuses that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously being updated to guarantee students the academic vanguard and the most in-demand professional skills. 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. It is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this disruptive educational model is complemented with the "Case Method", thereby setting up 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 managed to become the leading university in employability. 99% 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.









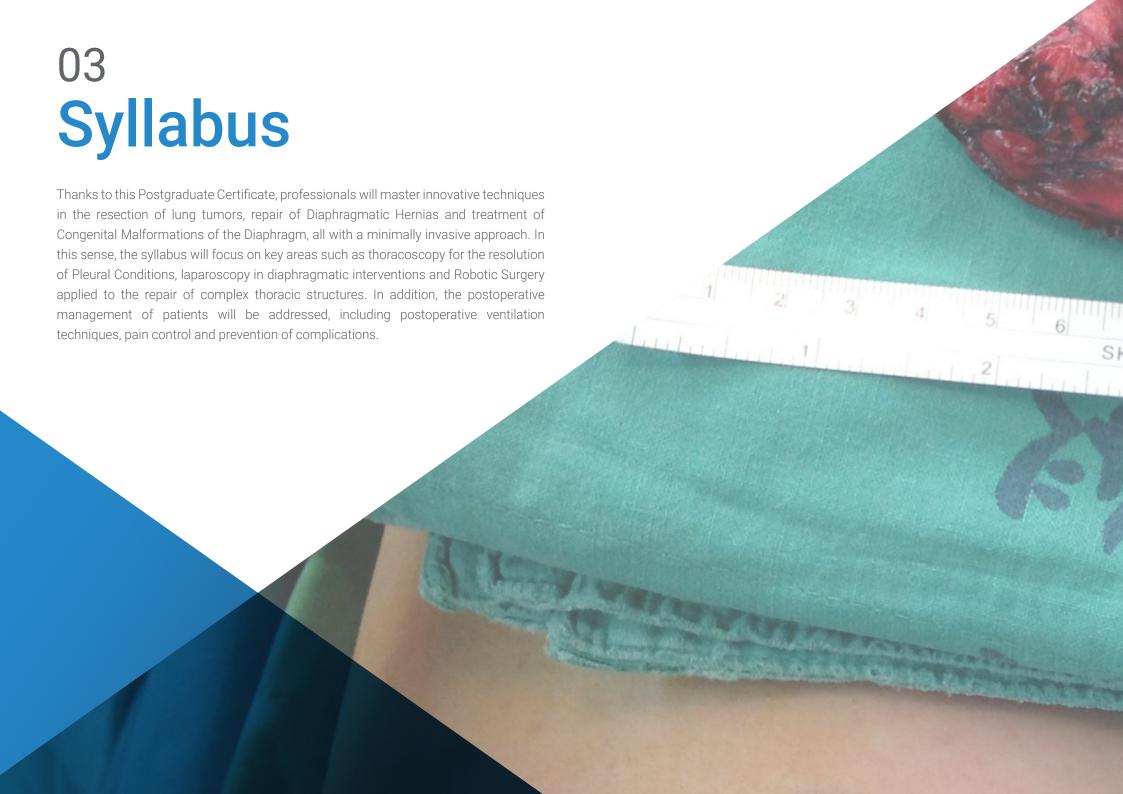


#### **Google Premier Partner**

The American technology giant has awarded to 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 as a Google Premier Partner 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 toprated 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.

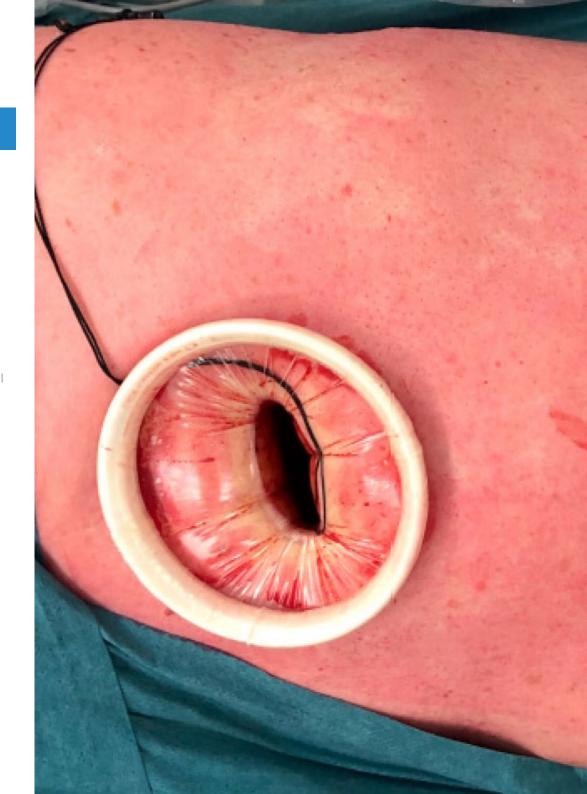




# tech 14 | Syllabus

# **Module 1.** Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

- 1.1. Videothoracoscopic Thoracic Sympathectomy: Techniques, Indications and Results
  - 1.1.1. Anatomy of the Sympathetic System. Pathophysiology of the Sympathetic Nervous System Disorders
  - 1.1.2. VATS Sympathectomy
    - 1.1.2.1. Hyperhidrosis and Facial Flushing
    - 1.1.2.2. VATS Sympathectomy: Other Specifications
  - 1.1.3. Results and Complications of Videothoracoscopic Thoracic Sympathectomy
- 1.2. Minimally Invasive Resections of the Thoracic Wall
  - 1.2.1. Indications for Minimally Invasive Resections of the Thoracic Wall. Techniques and Approach
  - 1.2.2. Minimally Invasive Reconstruction after Resection of the Thoracic Wall
  - 1.2.3. Results
- 1.3. Usefulness of the Hybrid Approach in Resection and Reconstruction of the Thoracic Wall
  - 1.3.1. Hybrid Approach
  - 1.3.2. Indications for the Hybrid Approach
  - 1.3.3. Surgical Variants of the Hybrid Approach
- 1.4. Congenital Deformities of the Thoracic Wall. Pectus Excavatum and Pectus Carinatum
  - 1.4.1. Indication for Surgery
  - 1.4.2. Pectus Excavatum. Minimally Invasive Techniques
  - 1.4.3. Pectus Carinatum. Minimally Invasive Techniques
- 1.5. Minimally Invasive Technique for Upper Thoracic Stenosis Surgery
  - 1.5.1. Surgical Anatomical Considerations
  - 1.5.2. Indications and Diagnosis of Upper Thoracic Stenosis Syndrome
  - 1.5.3. VATS Surgery of Upper Thoracic Stenosis Syndrome. RATS Surgery of Upper Thoracic Stenosis Syndrome
- 1.6. Minimally Invasive Resection of Tumors of the Pleura
  - 1.6.1. Types of Pleural Tumors
  - 1.6.2. Minimally Invasive Surgery for Benign Pleural Tumors
  - 1.6.3. Role of VATS in Malignant Pleural Disease





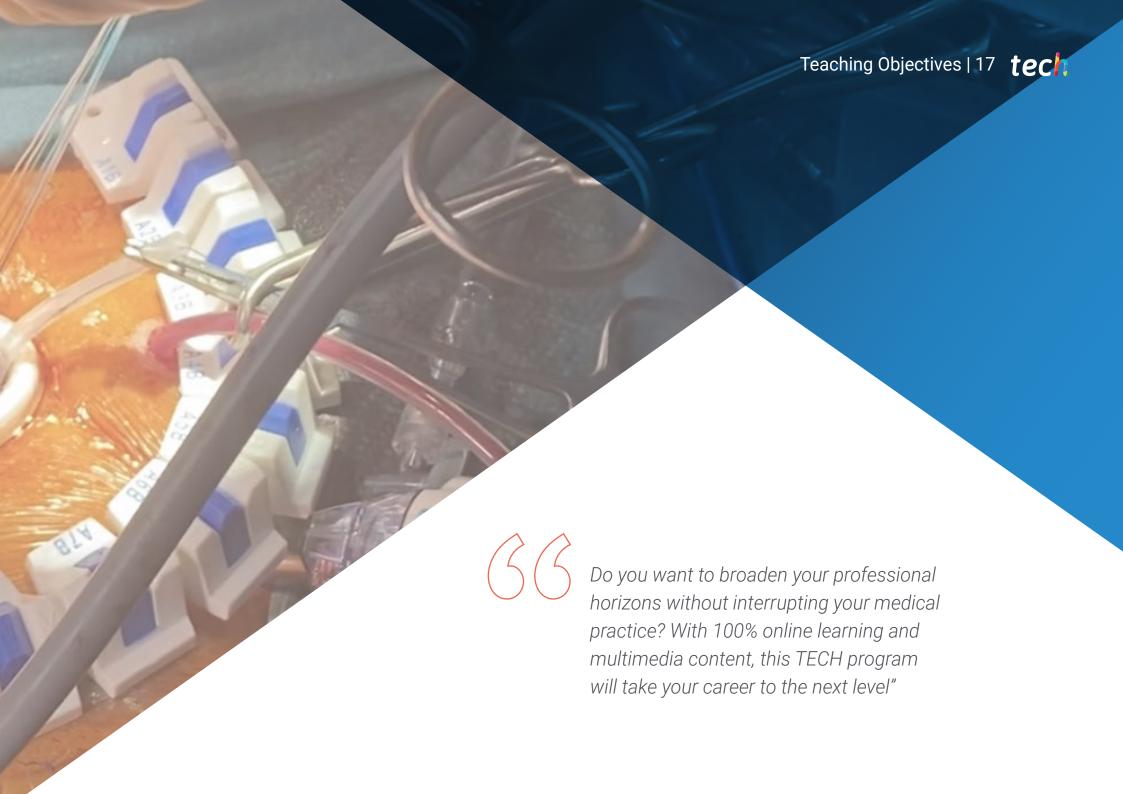
# Syllabus | 15 tech

- 1.7. Pleural Empyema. Minimally Invasive Treatment
  - 1.7.1. Expert Consensus Guidelines for the Surgical Treatment of Pleural Empyema
  - 1.7.2. VATS in the Early Stages of Empyema
  - 1.7.3. VATS in the Late Stage of Empyema
- 1.8. Pleural Decortication
  - 1.8.1. Trapped Lung
  - 1.8.2. Surgical Technique
  - 1.8.3. Results
- 1.9. Congenital and Acquired Diaphragmatic Hernias. Treatment
  - 1.9.1. Types and Classification of Diaphragmatic Hernias
  - 1.9.2. Surgical Strategy: Thoracic vs. Abdominal Approach
  - 1.9.3. Surgical Indications and Technique
- 1.10. Diaphragmatic Plication
  - 1.10.1. Etiology and Indications for Diaphragmatic Plication
  - 1.10.2. VATS and RATS Approaches
  - 1.10.3. Short- and Long-Term Results of Diaphragmatic Plication



You will acquire the knowledge and skills necessary to skillfully handle the most advanced techniques in the field of Minimally Invasive Thoracic Surgery. With the support of expert teachers!"



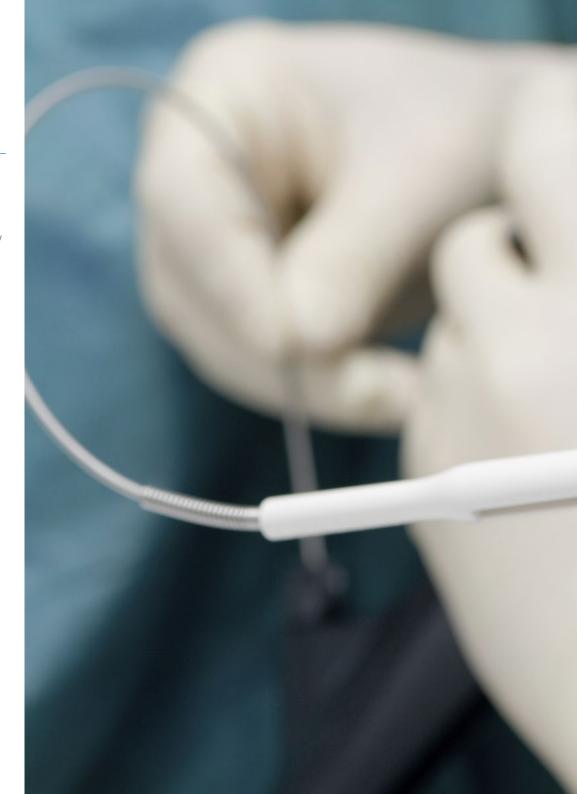


# tech 18 | Teaching Objectives



# **General Objectives**

- Acquire knowledge of minimally invasive surgery techniques on the thoracic wall and diaphragm
- Develop skills in the use of advanced technologies, such as thoracoscopy and laparoscopy
- Master preoperative management and diagnostic imaging of thoracic and diaphragmatic malformations
- Learn to perform minimally invasive surgical interventions with high precision and safety
- Improve the ability to plan surgical procedures efficiently using advanced imaging
- Develop skills in postoperative management, including pain control and prevention of complications
- Encourage informed and reasoned clinical decision making in the context of minimally invasive thoracic surgery
- Acquire skills in the implementation of robotic surgery in thoracic and diaphragmatic procedures







# **Specific Objectives**

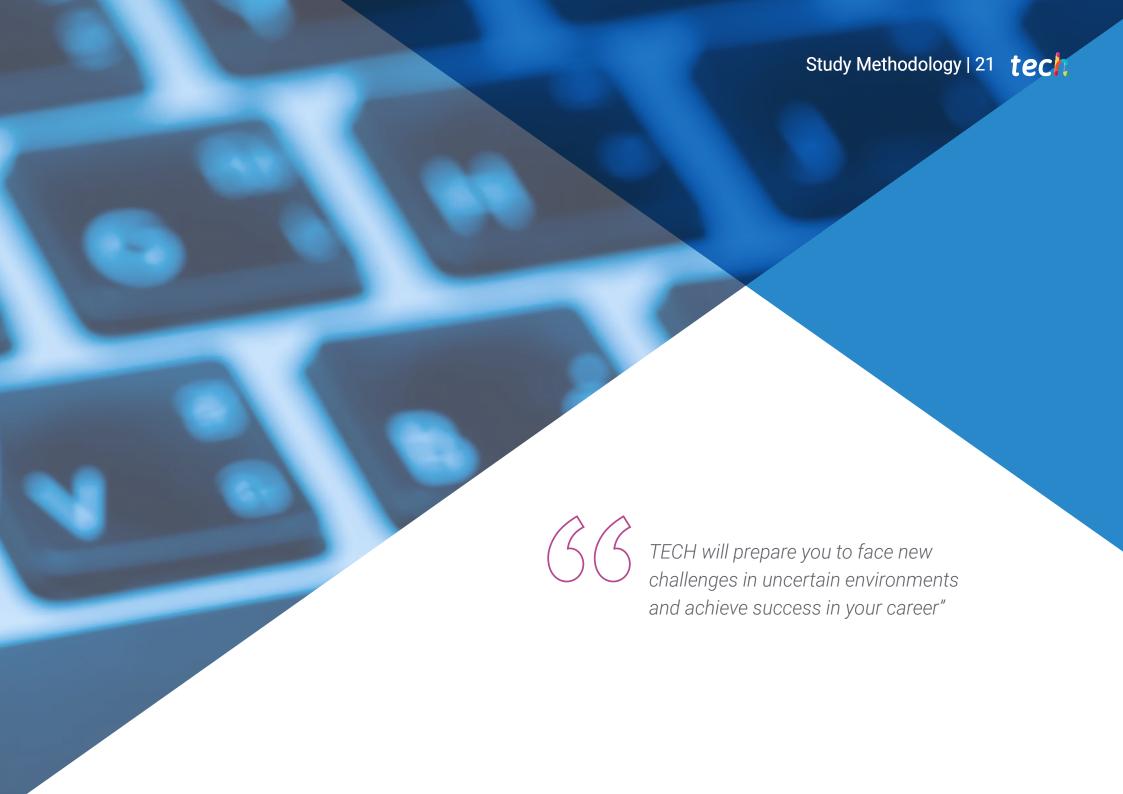
- Define existing surgical techniques and identify the different approaches to the sympathetic system
- Identify the subgroup of patients who can benefit from a minimally invasive or hybrid resection of the thoracic wall and propose their approach routes
- Delve into the indication and minimally invasive surgical techniques for resection of the first rib
- Justify the benefits of the minimally invasive treatment of pleural empyema, as well as examine the current guidelines for the treatment of this disease



In just six weeks and with a modality based on the Case Method, you will master the key aspects to stand out professionally in Minimally Invasive Surgery. Enroll now!"







### 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.







### 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"

# tech 24 | Study Methodology

### 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.

## Study Methodology | 27 tech

### 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**

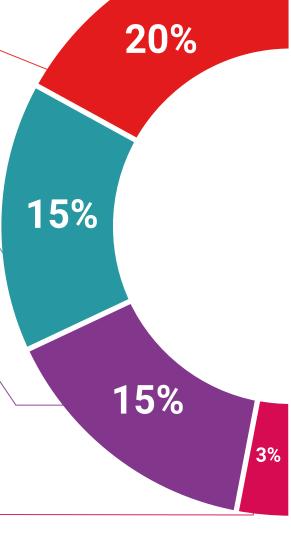
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### **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.

#### **Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

### **Testing & Retesting**



We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

### Classes



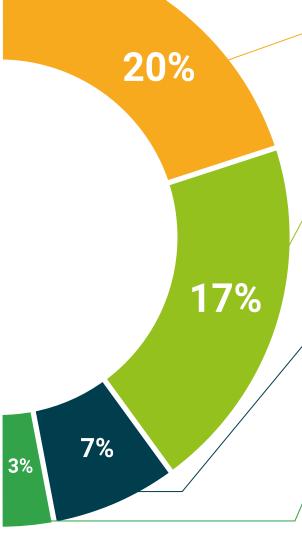
There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence for 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.







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### 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 Hospita
- 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
- Bachelor's Degree in Medicine and Surgery from the University of Granada

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### **Professors**

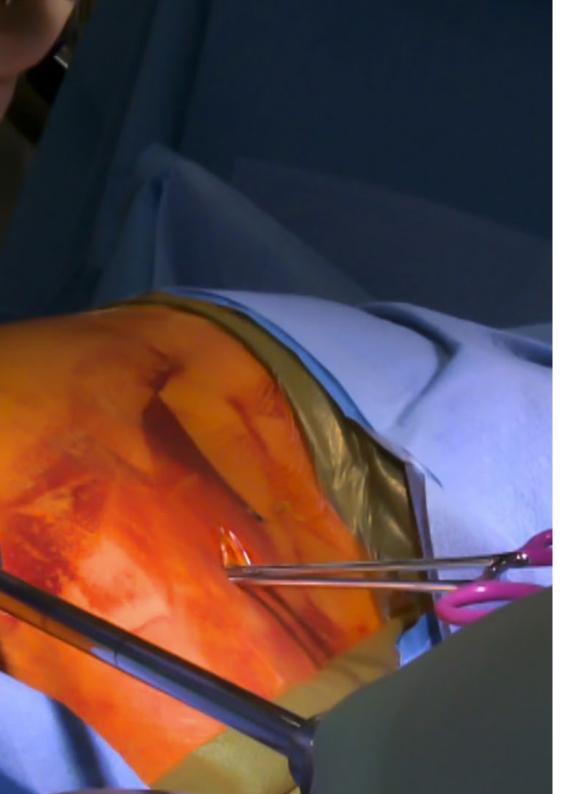
### Dr. Jiménez Maestre, Unai

- Chief of the Service of Thoracic Surgery at the IMQ Zorrotzaurre Clinic
- Specialist Physician in the Thoracic Surgery Department at the Cruces University Hospital
- Resident Physician in the Thoracic Surgery Department at Cruces University Hospital
- Specialty in Cardiothoracic Transplantation at Freeman Hospital, Newcastle, United Kingdom
- Bachelor's Degree in Medicine and Surgery from the University of the Basque Country

### Dr. Cano García, José Ramón

- Specialist Physician in Thoracic Surgery at the Mother and Child Hospital Complex of Gran Canaria
- Member of the Technical Assistance Board at the Mother and Child Hospital Complex of Gran Canaria
- Specialist Physician in Thoracic Surgery at the San Roque University Hospitals
- MIR specialty in Thoracic Surgery at the Reina Sofia University Hospital
- Doctor of Medicine from the University of Córdoba
- Master's Degree in Thoracic Oncology from the CEU Cardenal Herrera University
- University Expert in Lung Cancer, Tumors of the Pleura, Mediastinum and Thoracic Wall from the CEU Cardenal Herrera University
- University Expert in Screening, Molecular Biology and Staging of Lung Cancer from the CEU Cardenal Herrera University
- University Expert in Diagnosis and Treatment Bases in Thoracic Oncology from the CEU Cardenal Herrera University
- University Expert in Emergencies in Thoracic Surgery from the Catholic University of Valencia San Vicente Mártir
- Degree in Medicine from the University of Córdoba





### Dr. Lorenzo Martín, Mónica

- Secretary of the Thoracic Tumors Committee at Cruces University Hospital
- Specialist Physician in Thoracic Surgery at Cruces University Hospital
- Resident Physician in Thoracic Surgery at Cruces University Hospital
- Doctor of Medicine and Surgery from the University of the Basque Country
- Bachelor's Degree in Medicine and Surgery from the University of the Basque Country
- Member of: Spanish Society of Thoracic Surgery (SECT)



Take this opportunity to learn about the latest advances in this field in order to apply it to your daily practice"





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This private qualification will allow you to obtain a diploma for the Postgraduate Certificate in Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura 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 Certificate in Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



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

#### Postgraduate Certificate in Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

This is a private qualification of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024





# Postgraduate Certificate Minimally Invasive Surgery of the Thoracic Wall, Diaphragm and Pleura

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