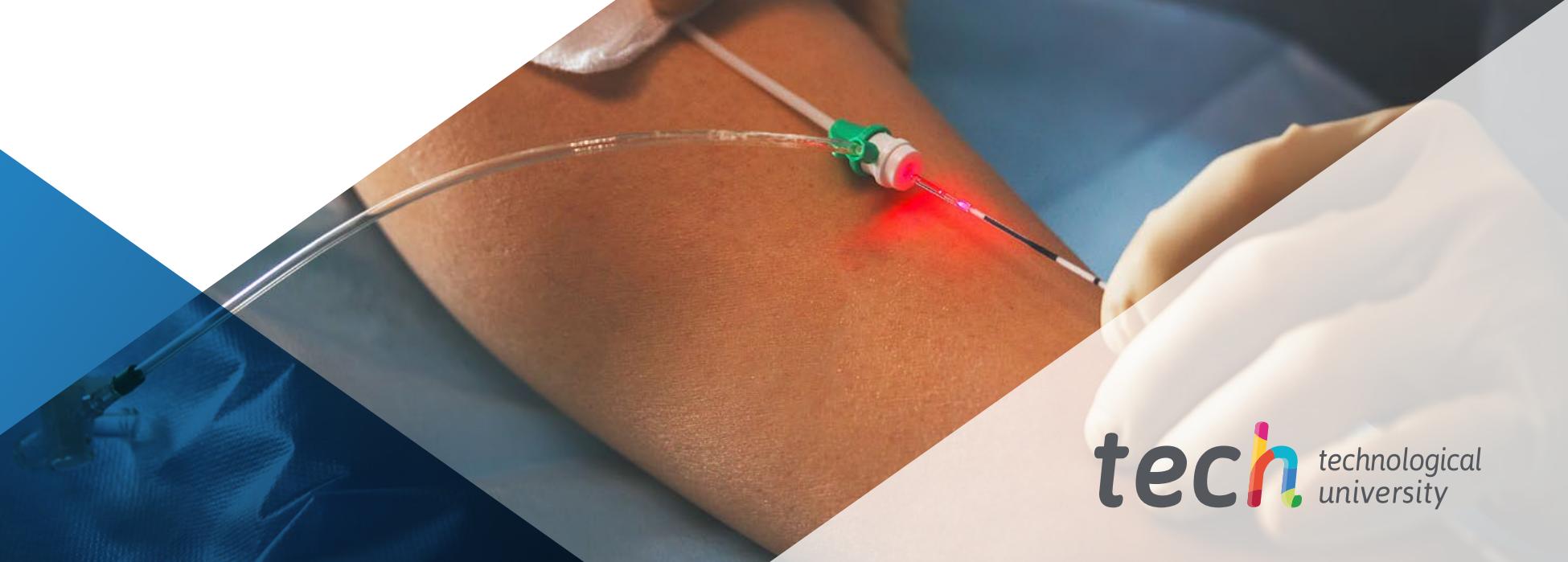


# Postgraduate Certificate

## Surgical and Endovascular Treatment of Vascular Diseases





## Postgraduate Certificate Surgical and Endovascular Treatment of Vascular Diseases

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/medicine/postgraduate-certificate/surgical-endovascular-treatment-vascular-diseases](http://www.techtitute.com/us/medicine/postgraduate-certificate/surgical-endovascular-treatment-vascular-diseases)



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01

# Introduction

Surgical and endovascular treatments have advanced significantly in recent decades, and new techniques and technologies have been developed that improve the efficacy and safety of these procedures. Especially noteworthy is the use of innovations such as angioplasty, embolization or stenting, which encourages specialists in the area to update their knowledge in greater depth. For this reason, TECH has designed a program focused on Vascular Diseases, preparing the specialist to update his approach and clinical practice in this area. A syllabus that is also taught completely online, allowing the necessary flexibility to make it compatible with the most demanding schedules and responsibilities.



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*Get up to date in the surgical and endovascular approach to vascular diseases, including techniques such as endarterectomy or bypass surgery"*

Due to the constant evolution in surgical and endovascular treatments for diseases in this field, it has become necessary to take giant steps when updating techniques and the latest medical studies. Due to these modernizations, surgical and endovascular treatments are becoming less invasive and more effective, which leads to a further in-depth study in order to be able to master them and apply them in daily practice.

In the case of aortic aneurysm disease, for example, endovascular treatments in recent years have allowed faster and more effective treatment compared to open surgery. There has also been significant progress in the approach to complications such as embolism, hemorrhage or ischemia, so the specialist must be aware of the latest developments related to these cases.

With this in mind, TECH has developed a specific program in this area, delving into reinterventions in vascular surgery, management of perioperative complications and also those arising from vascular surgeries, with the help of an updated plan created by experts in the area. In this way, specialists will have access to a program in a 100% online format, being able to combine it with their daily and professional activities without having to sacrifice any aspect of their lives.

This **Postgraduate Certificate in Surgical and Endovascular Treatment of Vascular Diseases** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ Practical cases presented by experts in vascular surgery
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*You will delve into the expert and up to date management of perioperative complications and those derived from vascular surgeries"*

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*Incorporate into your daily practice the work methodology to be followed when facing complications in Vascular Diseases such as thrombosis, hemorrhages or infections"*

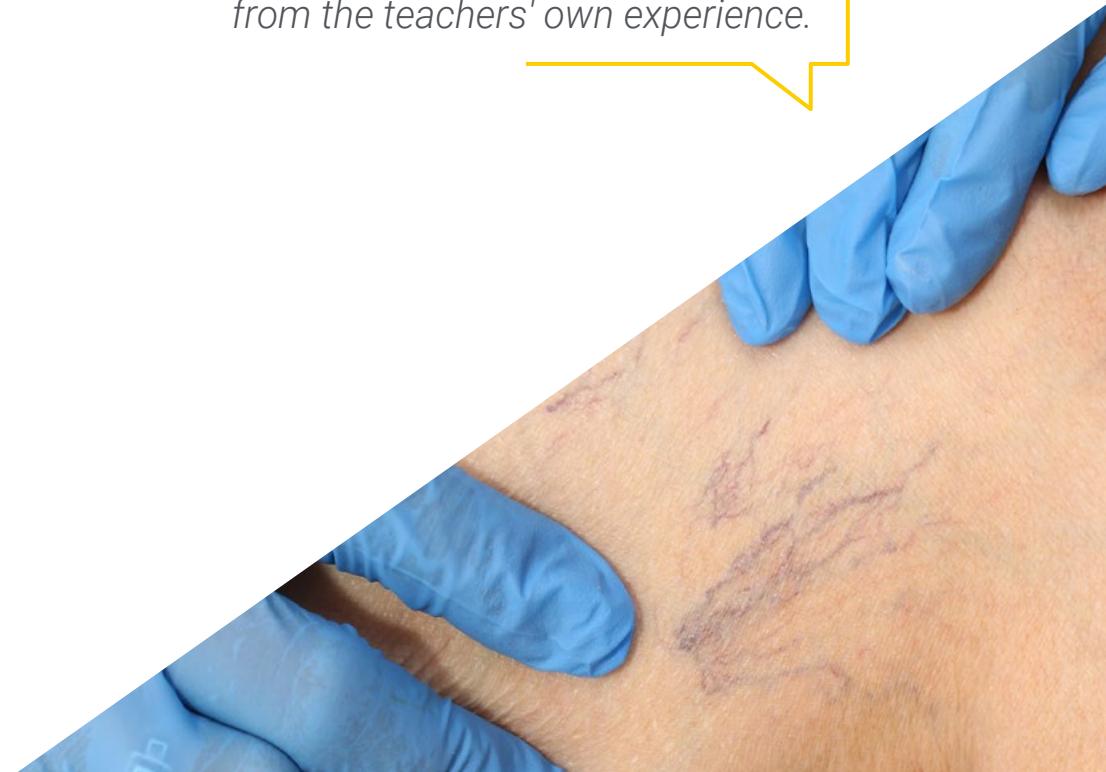
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will have total freedom to adapt all the content to your own pace, as there are no presential classes or fixed schedules.

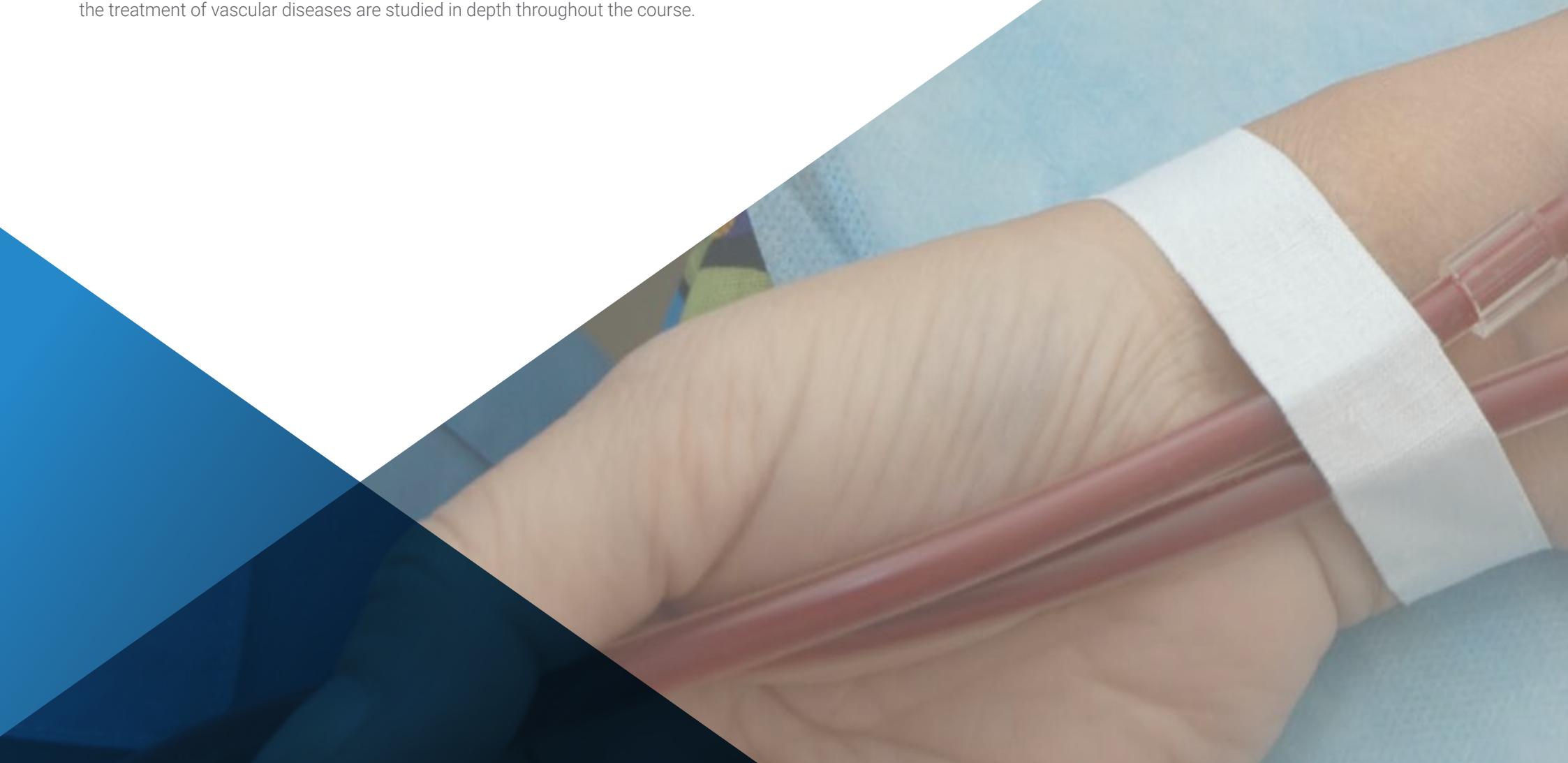
You will be able to contextualize all the theory covered with numerous clinical cases and detailed analyses drawn from the teachers' own experience.



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# Objectives

This Postgraduate Certificate focuses mainly on the most innovative surgical and endovascular treatments, so that the specialist can immediately incorporate them into their daily practice. In this way, specific surgical techniques and procedures used for the treatment of vascular diseases are studied in depth throughout the course.





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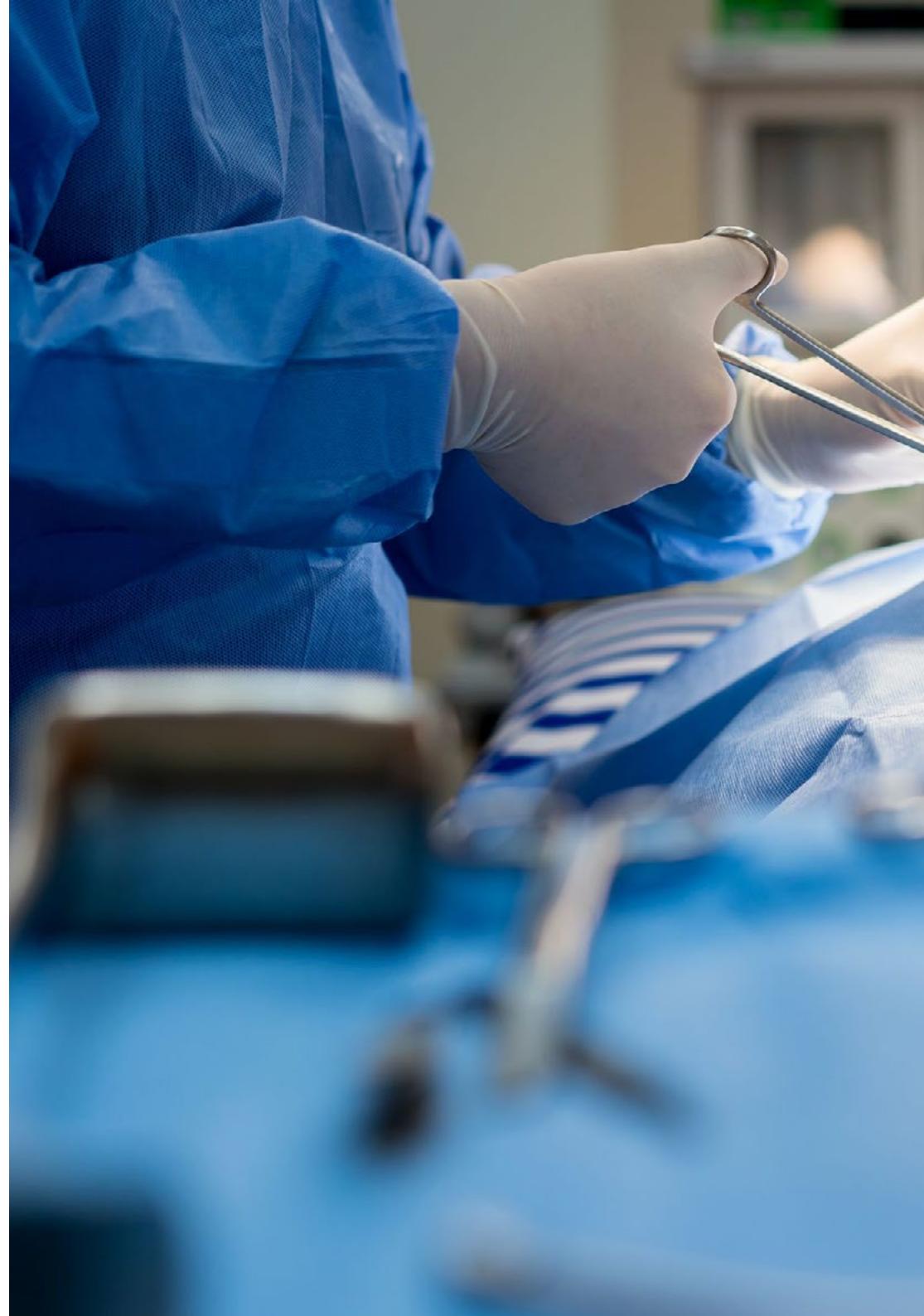
*You will delve into the surgical techniques  
and the different procedures used for the  
treatment of vascular diseases"*



## General Objectives

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- Learn about the structure and function of blood vessels, both arterial and venous, and the regulation of blood flow in the microcirculation
- Delve into the epidemiology and Risk Factors
- Update knowledge on the main risk factors for the development of vascular diseases and the strategies for primary and secondary prevention
- Gain in-depth understanding of the pathophysiology of vascular diseases
- Inquire into the different diagnostic methods
- Delve into the diagnostic techniques used in vascular pathology, including clinical examination and vascular semiology, imaging methods, laboratory diagnosis and study of vascular function and hemodynamics
- Explain the different research methods and advances in vascular pathology, especially those focused on vascular pathology, including the development of new drug therapies, genetics and genomics in vascular diseases, and the development of new imaging techniques for the diagnosis and follow-up of vascular diseases





## Specific Objectives

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- Delve into the concepts of vascular surgery, including surgical techniques and procedures used for the treatment of vascular diseases
- Delve into endovascular treatment, including the use of catheters, guidewires, and devices for the treatment of vascular diseases
- Select appropriate patients for different surgical and endovascular procedures
- Delve into the complications associated with surgical and endovascular procedures, as well as techniques for their management
- Interpret and use different imaging techniques, such as angiography, ultrasound and tomography, for the diagnosis and follow-up of vascular diseases

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*You will be able to take to your daily practice the most advanced techniques and surgical treatments in Vascular Diseases”*

03

# Course Management

This program has an outstanding team of professionals with extensive experience in the field of vascular surgery. This is why the specialist is guaranteed access to didactic material based on the most demanding clinical practice, as it is nurtured. TECH offers the possibility to learn from the hand of these health experts all the techniques and forms of treatments to develop skills in the field of Surgical and Endovascular Treatments of Vascular Diseases.





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The whole teaching staff has a wide experience in the approach of Surgical Treatments of Vascular Diseases, contributing with their own clinical vision in all the didactic material"

## Management



### **Dr. Del Río Sola, María Lourdes**

- Head of the Angiology and vascular surgery at Valladolid Clinical University Hospital
- Specialist in Angiology and Vascular Surgery
- European Board in Vascular Surgeon
- Permanent Correspondents of the Royal Academy of Medicine and Surgery
- Professor at Miguel de Cervantes European University
- Associate Teacher in Health Sciences, University of Valladolid

## Professors

### **Dr. Revilla Calavia, Álvaro**

- Assistant Physician at the the Angiology and vascular surgery at Valladolid Clinical University Hospital
- Specialist in Angiology and Vascular Surgery
- Associate Professor at Miguel de Cervantes European University
- Doctor Cum Laude from the University of Valladolid
- Certification of the second level training course in Radiation Protection oriented to interventional practice
- Academic Correspondent of the Royal Academy of Medicine and Surgery of Valladolid

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# Structure and Content

The Postgraduate Certificate in Surgical and Endovascular Treatment of Vascular Diseases has a high quality structure and content. Students will have access to detailed and up to date didactic material on vascular anatomy, vascular pathologies and surgical and endovascular techniques, among other key topics. In addition, detailed explanatory videos, interactive summaries and complementary readings are included, all designed to allow students to update their knowledge in an efficient and practical manner.



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*Download all the contents of this Postgraduate Certificate and get a useful reference guide even after you have completed the program”*

## Module 1. Surgical and Endovascular Treatment of Vascular Diseases

### 1.1. Vascular Surgery

- 1.1.1. Vascular anatomy: structures and function of the circulatory system
- 1.1.2. Vascular pathologies: diseases and disorders affecting the blood vessels
- 1.1.3. Revascularization surgery: surgical procedures to restore blood flow

### 1.2. Principles of Endovascular Surgery

- 1.2.1. Vascular access: techniques to reach the site of intervention inside the body
- 1.2.2. Device selection: choice of appropriate materials and tools for each procedure
- 1.2.3. Imaging techniques: use of technology to guide the procedure and monitor the outcome

### 1.3. Selection of the treatment method: criteria and decisions

- 1.3.1. Severity of the disease: determination of the severity of the pathology and its impact on the patient's health
- 1.3.2. Location of the lesion: consideration of the location of the vascular problem and surgical accessibility
- 1.3.3. Patient's health status: assessment of the patient's general medical condition, including possible contraindications

### 1.4. Surgical techniques: description and application

- 1.4.1. Bypass surgery
- 1.4.2. Endarterectomy
- 1.4.3. Aneurysmectomy

### 1.5. Endovascular techniques: description and application

- 1.5.1. Angioplasty: dilation of a narrowed artery by means of an inflatable balloon
- 1.5.2. Vascular stent: placement of a metallic device to keep an artery open
- 1.5.3. Embolization: deliberate obstruction of a blood vessel to treat a lesion or malformation

### 1.6. Vascular Surgery Complications

- 1.6.1. Thrombosis: formation of blood clots
- 1.6.2. Hemorrhage: excessive bleeding during or after the procedure
- 1.6.3. Infection: development of an infection at the site of the procedure



- 1.7. Management of Perioperative Complications
  - 1.7.1. Monitoring of vital signs: constant monitoring of the patient's health during surgery and recovery
  - 1.7.2. Pharmacological treatment: administration of drugs to prevent or treat complications
  - 1.7.3. Additional surgical intervention: performance of rescue surgery to solve a complication
- 1.8. Reinterventions in Vascular Surgery
  - 1.8.1. Revision of anastomosis: correction of a junction between two blood vessels previously surgically joined
  - 1.8.2. Vascular prosthesis replacement: substitution of a previous vascular implant that has failed or generated complications
  - 1.8.3. Treatment of late complications: resolution of complications that arise after an initial vascular surgery

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*Enroll now and access a high quality multimedia library with a multitude of interactive resources and practical working guides”*

05

# Methodology

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

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



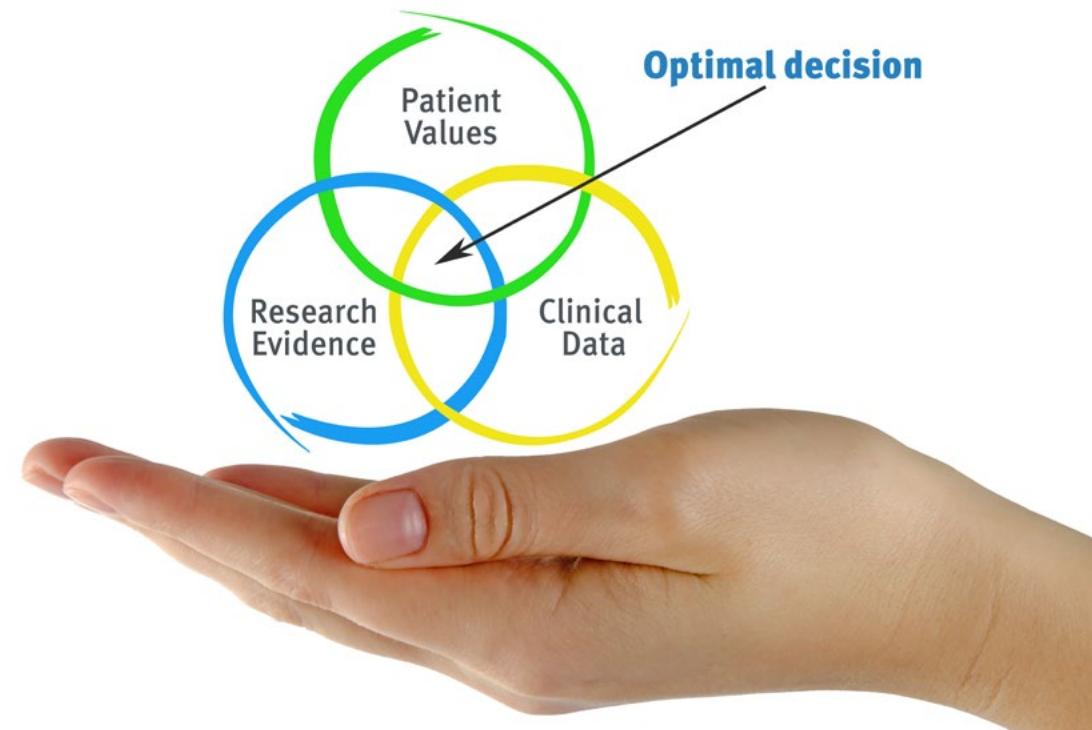
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvás, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

#### The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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

This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

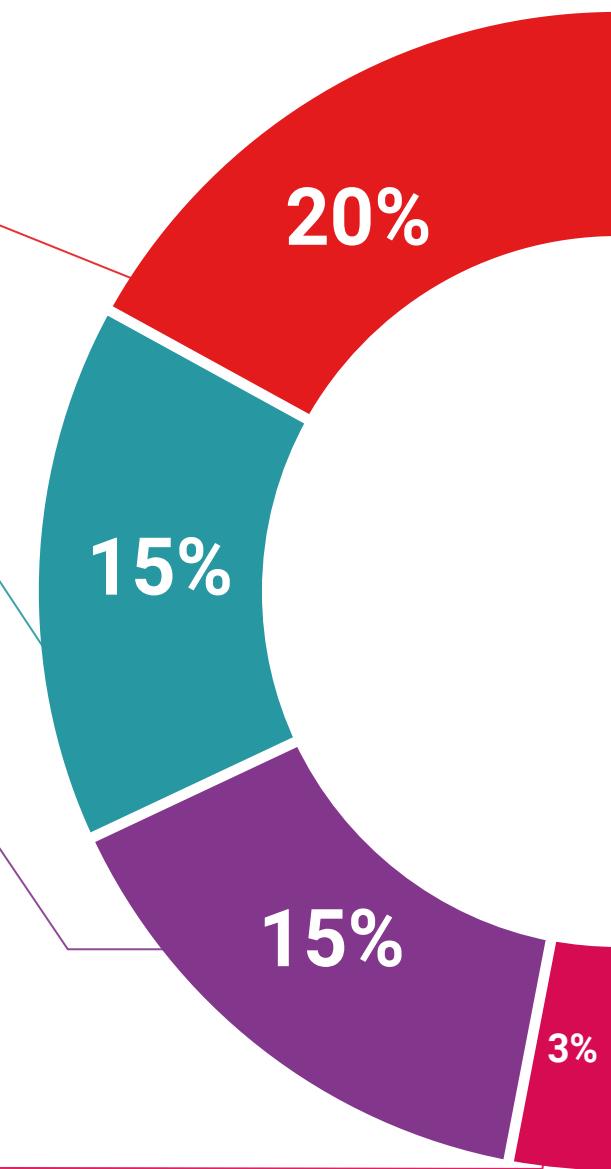
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

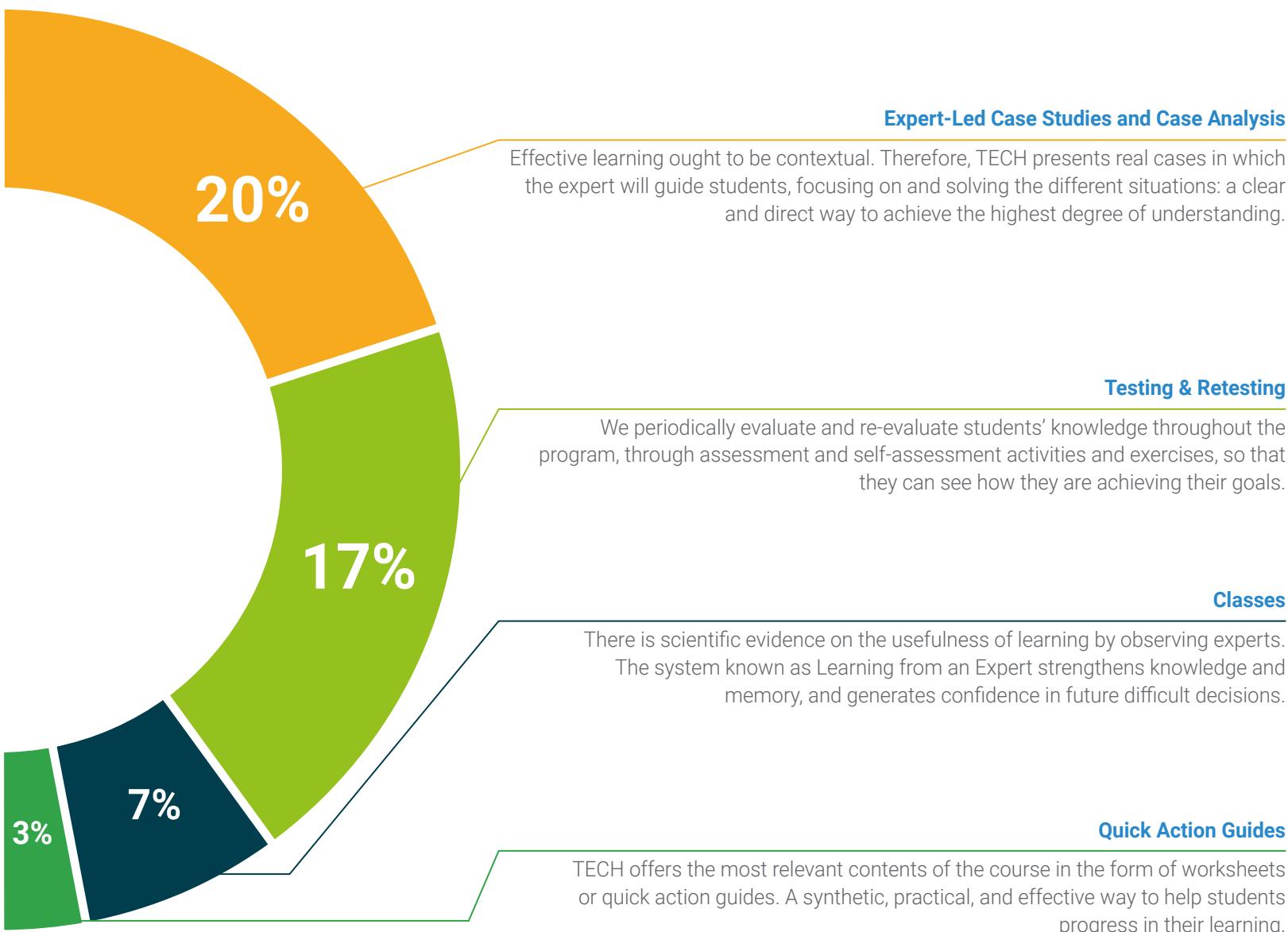
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





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# Certificate

The Postgraduate Certificate in Surgical and Endovascular Treatment of Vascular Diseases guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Surgical and Endovascular Treatment of Vascular Diseases** contains the most complete and up-to-date scientific on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Surgical and Endovascular Treatment of Vascular Diseases**

Official Nº of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



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