



### Postgraduate Certificate

### Vascular Interventions

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 6 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/vascular-interventions

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# 01 Introduction

Vascular Interventions have become one of the medical procedures that more and more patients have to resort to due to the incidence of pathologies such as acute thrombosis. At the same time, this type of therapeutic protocols encompasses a wide number of procedures ranging from pharmacological strategies to the insertion of Arterial Stents. In turn, specialists are expected to master the most advanced techniques. That is why TECH has created this program where students will delve into these techniques in a 100% online way. It is an academic itinerary without tight schedules and with the best teaching staff that allows its graduates to offer their patients less aggressive treatments and faster recoveries.



### tech 06 | Introduction

The incidence of Arterial Occlusive Disease, or Arteriosclerosis, is considerably high at a global level and high morbidity and mortality figures are also attributed to it. The disorders associated with this pathology generally cause a narrowing and obstruction of the arteries, which in turn limits blood flow to organs and tissues. Taking into account these characteristics, medical sciences have continuously innovated in search of procedures to widen these ducts and reestablish their correct functioning. In this regard, techniques such as Balloon Angioplasty and the use of Stents stand out.

At the same time, keeping up to date with all the advances in this field can be a real challenge for specialists. That is why they strive to find academic programs that fit their schedule and obligations. In view of this,

TECH stands as a truly unparalleled opportunity by providing a comprehensive program that is delivered 100% online.

This disruptive syllabus covers the main treatments currently in use for the treatment of cardiovascular and peripheral diseases. It also delves into the basics of pharmacological, mechanical and pharmacomechanical Thrombolysis to effectively dissolve or remove clots, reducing the risk of ischemic tissue damage. It also addresses how endovascular embolizations and ablations allow physicians to treat vascular malformations and other problems without the need for invasive surgery, offering less aggressive treatments. By mastering all these topics, physicians can significantly improve the quality of life of their patients and be at the forefront of medicine.

For all this academic process, TECH graduates are supported by the analysis of real cases and the disruptive Relearning methodology. In addition, they have the opportunity to complete their specialization from the place and at the time of their choice thanks to a complete Virtual Campus.

This **Postgraduate Certificate in Vascular Interventions** 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 in Angiology and Vascular Surgery
- 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



Specialize in disruptive techniques to restore blood flow in narrowed or obstructed arteries such as the use of Stents or Balloon Angioplasty"



The didactic methods of this program include the analysis of real cases and self-assessment tests so that you can individually measure your academic progress"

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 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

Specialize now in Vascular Interventions through this program taught by TECH, the best digital university in the world according to Forbes magazine.







### tech 10 | Objectives



### **General Objectives**

- Develop the technical skills necessary to accurately perform and analyze angiographic studies
- Promote an appreciation of the importance of multidisciplinary teamwork in the interpretation and management of vascular angiographic results
- Acquire skills to apply techniques such as angioplasty, Stent placement, and other minimally invasive procedures
- Determine the procedures and protocols for performing and interpreting computed tomography angiography (CTA) in the context of vascular interventional procedures







### **Specific Objectives**

- Determine the fundamental principles of Angioplasty, including balloon dilatation and the use of Stents, in the treatment of arterial stenosis and Occlusions
- Identify the indications and contraindications for percutaneous angioplasty and detail the necessary pre- and postoperative care
- Analyze the techniques and devices used in embolization, including embolization materials and selective occlusion procedures
- Explore the applications of vascular interventional procedures in the treatment of aneurysms, vascular malformations and arteriovenous fistulae



You will treat vascular malformations and other problems without the need for invasive surgery after completing this very comprehensive program"







### tech 14 | Course Management

#### Management



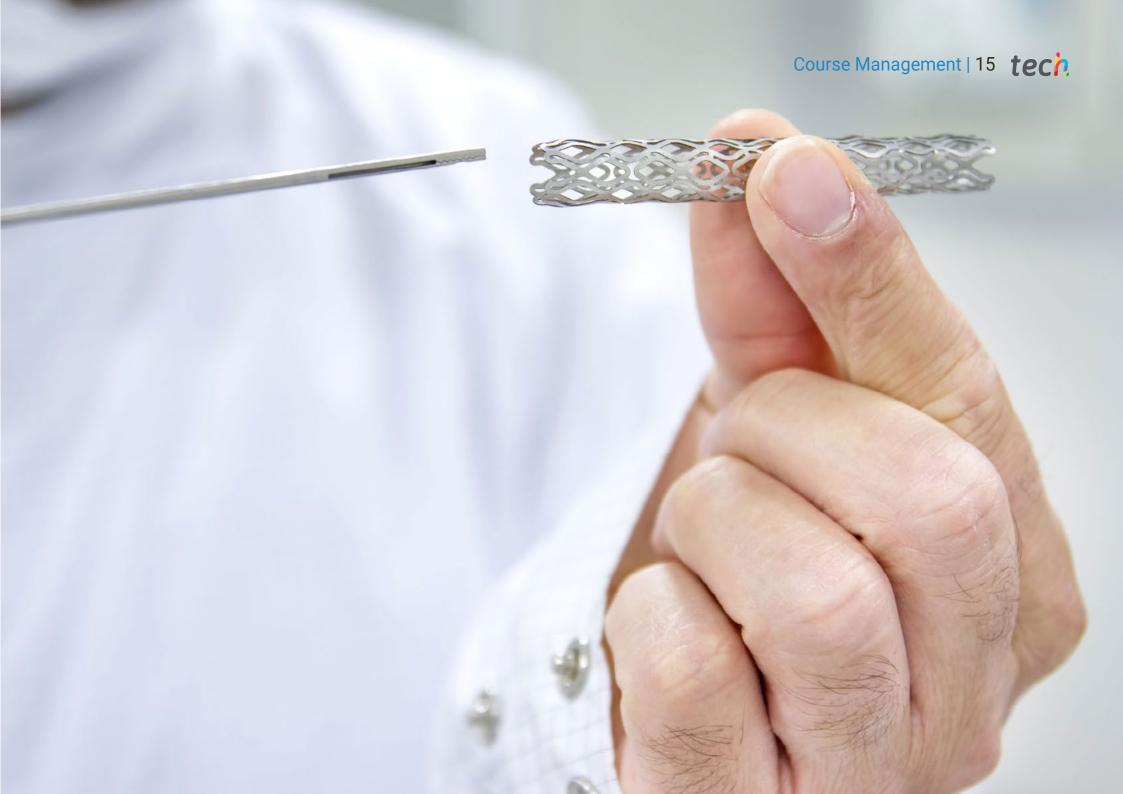
#### Dr. Del Río Solá, María Lourdes

- Chief from the Vascular Angiology and Surgery Service at the Valladolid University Clinical Hospital
- Specialist in Angiology and Vascular Surgery
- European Board in Vascular Surger
- Academic Correspondent of the Royal Academy of Medicine and Surgery
- Full Professor at the European University Miguel de Cervantes
- Associate Professor in Health Sciences at the University of Valladolid

#### **Professors**

#### Dr. Estévez Fernández, Isabel

- Chief of the Angiology and Vascular Surgery Section of the Hospital San Jorge de Huesca
- Physician at the Clinical Hospital of Valladolid
- Stay at Barnes-Jewish Hospital, St. Louis, Missouri USA.
- Doctor of Medicine from the University of Valladolid
- Degree in Medicine from the University of Valladolid
- University Expert in Venous Thromboembolic Disease and Cancer
- Training as Director of X-Ray Facilities by the Spanish Society of Medical Physics
- Course on Radiological Protection by the Ministry of Health, Consumption and Social Welfare Member of: Spanish Society of Angiology and Vascular Surgery



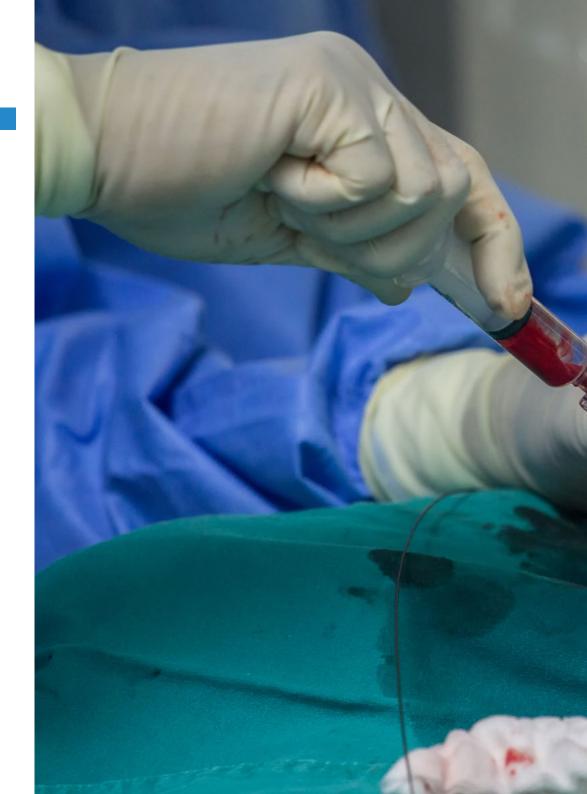




### tech 18 | Structure and Content

#### Module 1. Vascular Interventions

- 1.1. Balloon Angioplasty
  - 1.1.1. Angioplasty Mechanisms
  - 1.1.2. Patient Selection and Preprocedural Evaluation
  - 1.1.3. Angioplasty Techniques and Procedures
- 1.2. Embolic Protection Devices
  - 1.2.1. Embolic Protection Devices
  - 1.2.2. Indications and Clinical Utility
  - 1.2.3. Safety and Potential Complications of Atheroembolism
- 1.3. Stents and Stent-Grafts for Endovascular Treatment
  - 1.3.1. Stents and Stent-Grafts
  - 1.3.2. Implantation and Placement Techniques
  - 1.3.3. Stent-Grafts in the Treatment of Aneurysms
- 1.4. Pharmacological Thrombolysis in Acute Thrombosis
  - 1.4.1. Thrombolytic Agents
  - 1.4.2. Administration and Monitoring Protocols
  - 1.4.3. Clinical Outcomes and Associated Complications
- 1.5. Mechanical Thrombectomy in Acute Thrombosis
  - 1.5.1. Thrombectomy Devices
  - 1.5.2. Thrombectomy Procedures and Techniques
  - 1.5.3. Outcomes and Effectiveness in Vascular Recanalization
- 1.6. Pharmacomechanical Thrombolysis in Acute Thrombosis
  - 1.6.1. Pharmacomechanical Thrombolysis
  - 1.6.2. Devices and Techniques Used
  - 1.6.3. Comparison with Other Methods of Thrombolysis
- 1.7. Vasodilator Drugs in Limb Ischemia
  - 1.7.1. Mechanism of Action and Vasodilator Effects in Limb Ischemia
  - 1.7.2. Clinical Uses in Vascular Interventions
  - 1.7.3. Administration of Drugs and Monitoring of Results after Administration of Vasodilator Drugs





### Structure and Content | 19 tech

- 1.8. Endovascular Embolization and Ablation in Vascular Malformations
  - 1.8.1. Embolization and Ablation
  - 1.8.2. Embolization Techniques
  - 1.8.3. Endovascular Ablation: Methods and Clinical Applications
- 1.9. Pseudoaneurysms of Arterial Access
  - 1.9.1. Evaluation of Pseudoaneurysms after Radial Access
  - 1.9.2. Endovascular and Surgical Treatment
  - 1.9.3. Follow-up and Management of Complications
- 1.10. Implantation of Devices for Endovascular Treatment
  - 1.10.1. Implantation Techniques
  - 1.10.2. Device Selection for Endovascular Treatment
  - 1.10.3. Perioperative Management and Postimplantation Follow-Up



With TECH's Relearning system you will be able to strengthen your knowledge and skills in a fast and flexible way. Don't miss this opportunity and enroll now"





### tech 22 | Methodology

#### At TECH we use the Case Method

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

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



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



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

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

- 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.



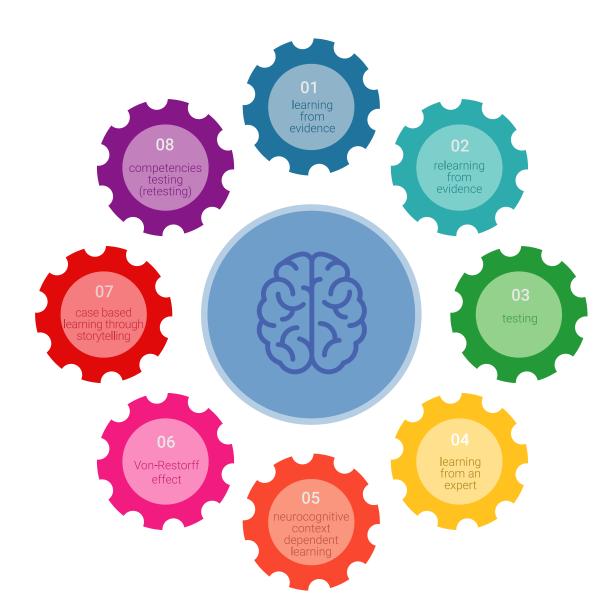


#### Relearning Methodology

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.



### Methodology | 25 tech

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.

### tech 26 | Methodology

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**

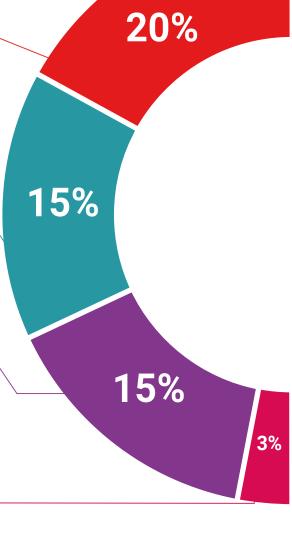
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many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

### **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### **Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts.

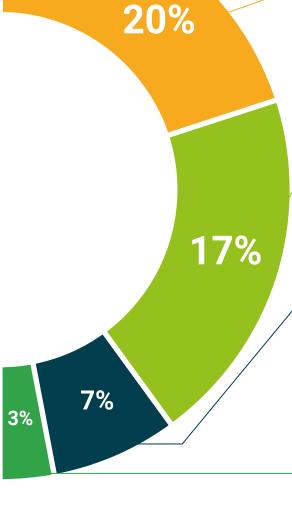
The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.









### tech 30 | Certificate

This private qualification will allow you to obtain a **Postgraduate Certificate in Vascular Interventions** 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 Vascular Interventions

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



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

#### Postgraduate Certificate in Vascular Interventions

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



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



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- » Modality: online
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- » Schedule: at your own pace
- » Exams: online

