

Postgraduate Certificate Vascular Angiography





Postgraduate Certificate Vascular Angiography

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/medicine/postgraduate-certificate/vascular-angiography

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 16

05

Methodology

p. 20

06

Certificate

p. 28

01

Introduction

Vascular angiography has been consolidated as a diagnostic tool to evaluate pathologies such as Aneurysms, Vascular Stenosis and occlusive diseases. At the same time, its management is a challenge for physicians since most programs have a heavy teaching load, incompatible with their work schedules. In this context, TECH provides a 100% online university program that meets the needs of the specialist and facilitates its update from the rigor and excellence. Its syllabus addresses arterial and venous puncture, as well as the main safety mechanisms during this type of intervention. Likewise, in order to master all these concepts without the need to memorize them, the academic itinerary is based on the exclusive Relearn system.



“

Thanks to this 100% online Postgraduate Certificate, you will develop skills to use Angiography equipment and you will deal effectively with Vascular Diseases"

According to the World Health Organization, cardiovascular diseases are the leading cause of death globally, reaching figures of up to 31% of deaths. Within this context, Vascular Angiography emerges as an essential diagnostic tool, allowing early detection and accurate assessment of diseases that can lead to fatal conditions. In addition, the continuous evolution of this set of techniques and their working tools obliges specialists to keep up to date in order to achieve a holistic mastery of them.

For this reason, TECH has designed this exclusive syllabus where students can analyze different arterial and venous puncture techniques to achieve maximum success in angiographic procedures. By addressing these criteria, physicians can reduce complications and improve their clinical results. At the same time, the Postgraduate Certificate covers different contrast agents, such as iodinated and other less conventional ones like carbon dioxide and gadolinium chelates. In addition, it addresses how their use has become indispensable to optimize imaging results and minimize adverse effects such as Nephrotoxicity.

For the mastery of all the contents of this academic itinerary, the doctors have a disruptive methodology: Relearning. This didactic system promotes the gradual assimilation of the most complex concepts through repetition, while minimizing the investment of time and effort in having to memorize them. Also, the program is developed 100% online, another significant advantage that provides autonomy to the graduates, allowing them to organize their learning pace depending on their other obligations.

Also, the university program is supported by a variety of complementary materials such as articles, articles of interest and other materials. All of this is accompanied by explanatory videos, interactive summaries and self-assessment tests that enhance the comprehensive specialization of specialists, making this academic option a truly unparalleled opportunity.

This **Postgraduate Certificate in Vascular Angiography** 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



You will access the disruptive Relearning system, based on the gradual reiteration of concepts and that provides progressive assimilation throughout the entire syllabus"

“ *With an approach based on scientific evidence and real clinical cases, this program will provide you with the necessary tools to offer quality and safe clinical care*”

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.

You will scrupulously follow the Radiological Protection protocols, guaranteeing the safety of both patients and healthcare personnel.

You will delve into the most avant-garde techniques for Femoral and Axillary Artery Puncture.



02 Objectives

With this program, medical professionals will develop advanced skills to handle Vascular Angiography equipment and perform therapeutic procedures. Likewise, graduates will master the most sophisticated tools in this type of interventions, among which the Access Needles and Dilators stand out. In the same line, the specialists will be able to manage the complications that may arise during and after the angiographic procedures.





“

You will carry out the most advanced safety protocols to minimize the risks associated with radiation and contrasts”

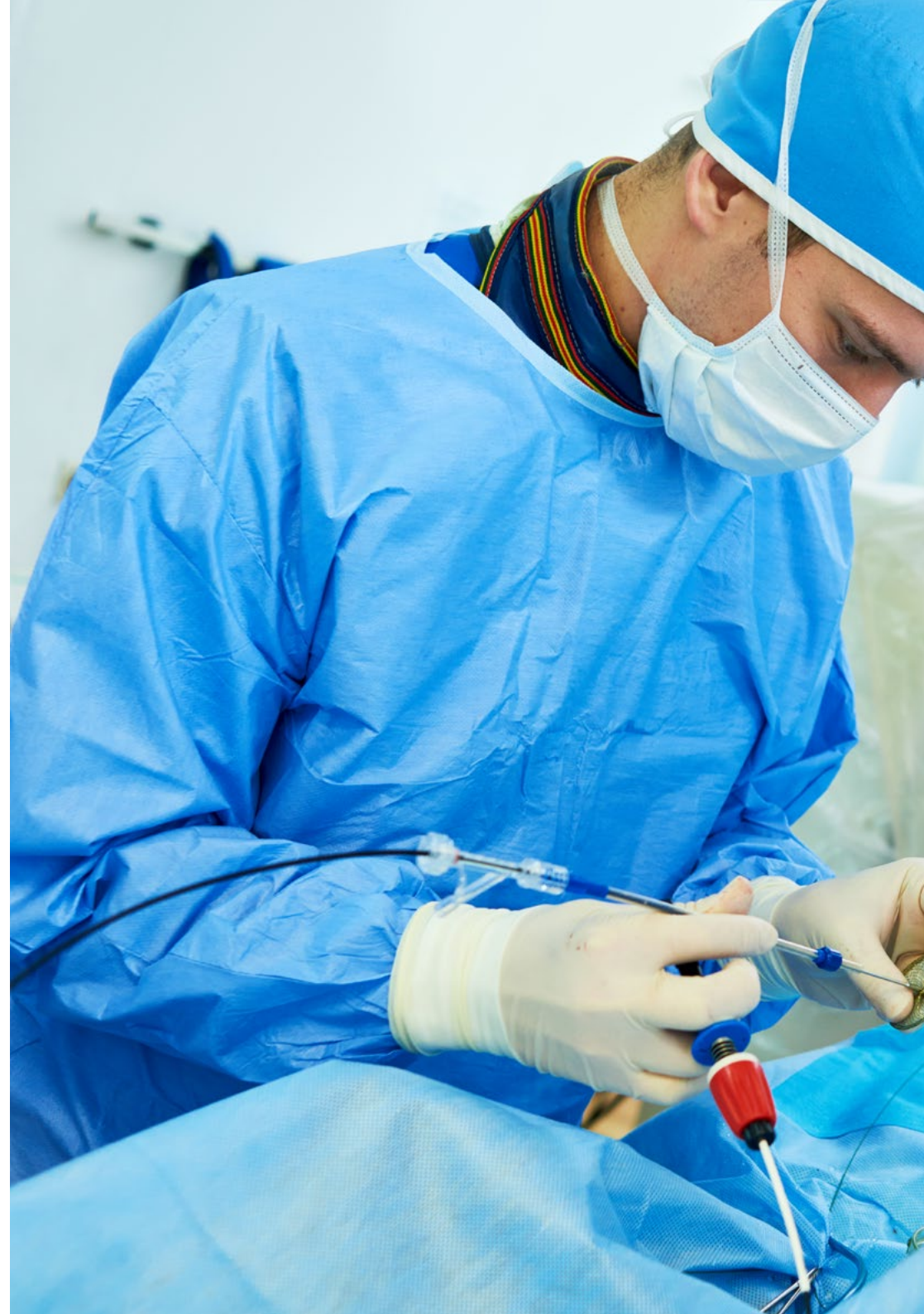


General Objectives

- ◆ 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



The clinical videos and case studies bring you much closer to the methodologies used in the risks of Vascular Interventional Procedures"





Specific Objectives

- ◆ Acquire specialized knowledge about the physical and technological principles behind vascular angiography, including digital imaging, contrast injection and fluoroscopy
- ◆ Develop practical skills in patient preparation, safe contrast administration, and monitoring during vascular angiography procedures
- ◆ Analyze clinical cases and angiographic studies to identify vascular abnormalities, assess disease severity and plan therapeutic interventions
- ◆ Integrate angiographic findings with clinical information and results of other diagnostic imaging tests to make an accurate differential diagnosis and formulate an optimal treatment plan for each patient

03

Course Management

TECH is focused on providing everyone with the opportunity to access the most comprehensive and up-to-date university programs in the academic market. To achieve this goal, it carries out a rigorous process to choose highly qualified specialists.

Therefore, this program has a teaching staff made up of true experts in the field of Vascular Angiography. These professionals have an extensive professional career, in which they have worked in hospitals of international prestige and have contributed to the welfare of many patients. In this way, this program will significantly optimize the clinical practice of the graduates.





“

The teaching team, specialized in Vascular Angiography, has designed hours of additional content for you to expand each section of the syllabus in a personalized way"

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. Gutiérrez Véliz, Daniel

- ♦ Deputy Chief of Surgery and Chief of Vascular Surgery at Chilean Public Assistance Emergency Hospital
- ♦ General and Peripheral Vascular Surgeon of Public Assistance Emergency Hospital
- ♦ Peripheral Vascular Surgeon at las Condes and Redsalud Clinic, Santiago de Chile
- ♦ Bachelor of Medicine from the Catholic University of Maule
- ♦ Expert in General Surgery from the University of Santiago de Chile
- ♦ Subspecialist in Peripheral Vascular Surgery from the University of Chile, Clinical University Hospital of Chile
- ♦ Member of: Chilean Society of Surgery (SOCHICIR), Chilean Society of Vascular and Endovascular Surgery (SOCHIVAS) and American College of Surgery (FACS)



04

Structure and Content

Through this university program, physicians will have a solid understanding of the principles of vascular anatomy. The syllabus will go in depth in the management of patients with vascular pathologies, taking into account factors such as clinical history, psychological preparation or informed consent. Likewise, the syllabus will provide graduates with sophisticated tools such as Access Needles, Dilators and Catheters. In line with this, the didactic materials will provide specialists with guidelines for the safe administration of sedatives during procedures. Therefore, graduates will obtain competencies to handle Angiography equipment and perform therapeutic procedures efficiently.





“

A high level syllabus that covers, in only 150 hours, the latest scientific postulates in Hemodynamic Stability and Thrombosis Prevention"

Module 1. Vascular Angiography

- 1.1. Evaluation and Management of the Pre-procedure of the Patient with Vascular Pathology
 - 1.1.1. Clinical History and Physical Evaluation
 - 1.1.2. Psychological Preparation and Informed Consent
 - 1.1.3. Evaluation of Contraindications and Risk Factors
- 1.2. Safety in Vascular Interventional Procedures
 - 1.2.1. Radiological Protection for the Patient and Staff
 - 1.2.2. Infection Prevention and Sterility Control
 - 1.2.3. Emergency Procedures and Response Plan
- 1.3. Tools in Vascular Intervention: Access Needles, Guides, Dilators and Catheters
 - 1.3.1. Access Needles
 - 1.3.2. Guides and Advancement Techniques
 - 1.3.3. Dilators and Catheters
- 1.4. Contrast Agents in Vascular Intervention
 - 1.4.1. Iodinated Contrast Agents
 - 1.4.2. Evaluation of Renal Function and Risk of Nephrotoxicity
 - 1.4.3. Adverse Reactions to Contrast
- 1.5. Alternative Contrast Agents: Carbon Dioxide Gas, Gadolinium Chelates
 - 1.5.1. Carbon Dioxide Gas as a Contrast Agent
 - 1.5.2. Gadolinium Chelates in Angiography
 - 1.5.3. Alternative Contrast Agents
- 1.6. Intraprocedural Care in Vascular Intervention: Sedation, Antibiotic Prophylaxis, Blood Pressure Control, Anticoagulation
 - 1.6.1. Safe Administration of Sedatives during the Procedure
 - 1.6.2. Antibiotics and Prophylaxis Protocols prior to the Intervention
 - 1.6.3. Hemodynamic Stability and Prevention of Thrombosis



- 1.7. Arterial Puncture: Common Femoral Artery, Axillary or High Brachial Artery, Translumbar Aorta, Unusual Arterial Access
 - 1.7.1. Puncture Site and Artery Evaluation
 - 1.7.2. Femoral and Axillary Artery Puncture Techniques
 - 1.7.3. Management of Unusual Puncture Sites
- 1.8. Venous Puncture: Common Femoral Vein, Internal Jugular Vein, Subclavian Vein, Veins of the of the Upper Extremity, Inferior Cava Vein
 - 1.8.1. Evaluation of the Central and Peripheral Venous System
 - 1.8.2. Venous Catheter Puncture and Positioning Techniques
 - 1.8.3. Complications and Management Strategies during and after Puncture
- 1.9. Other Venous Accesses
 - 1.9.1. Deep Vein Access: Deep Femoral Vein or External Jugular Vein
 - 1.9.2. Access in Emergency Situations
 - 1.9.3. Risk-Benefit Assessment to Determine the Best Venous Access
- 1.10. Do's and Don'ts in Vascular Interventional Procedures
 - 1.10.1. Safety Protocols and Etiquette in the Angiography Area
 - 1.10.2. Preventing Complications and Common Errors During the Procedure
 - 1.10.3. Teamwork Strategies in the Angiographic Environment



This program prepares you for the present and future challenges in Vascular Angiography. Enroll now!"



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.



“

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. 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:

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.

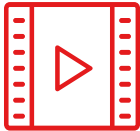
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

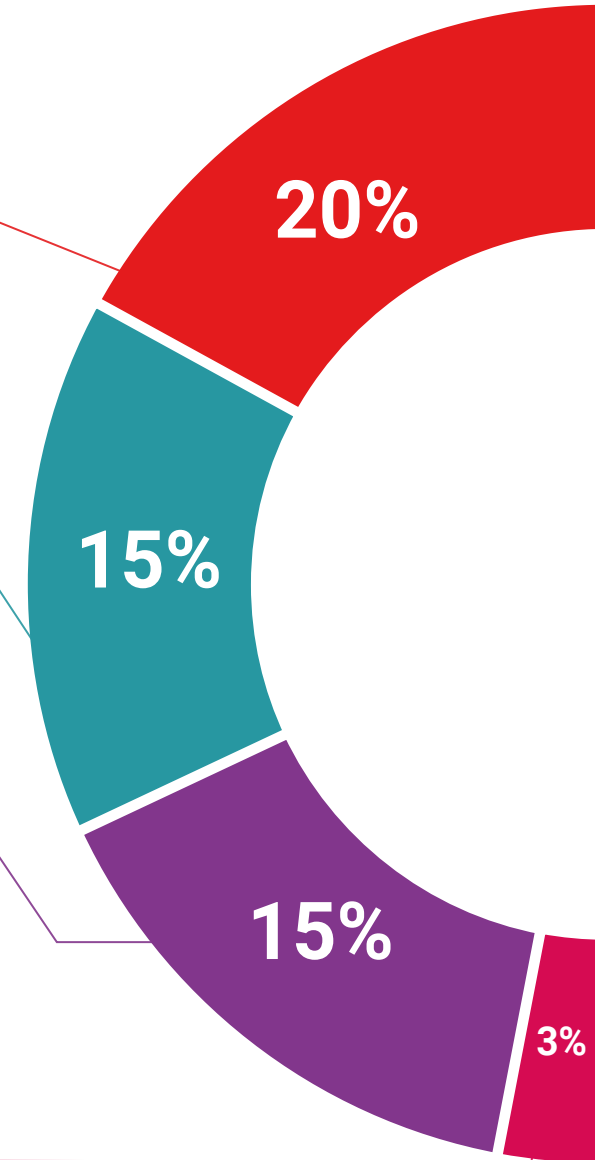
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

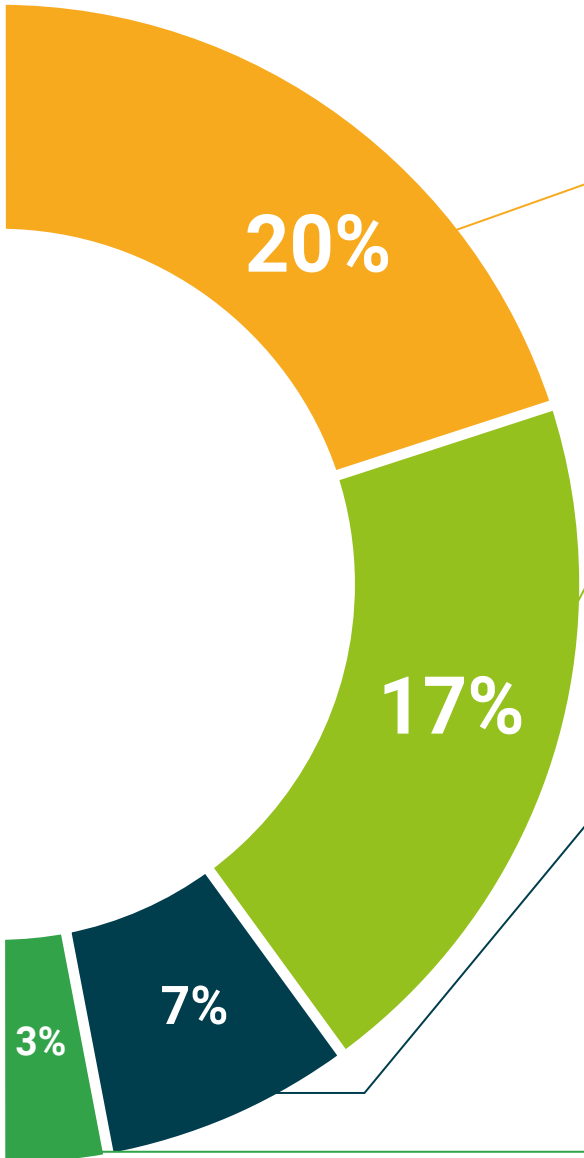
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.





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.



06 Certificate

The Postgraduate Certificate in Vascular Angiography guarantees, in addition to the most accurate and up-to-date knowledge, access to a Postgraduate Certificate issued by TECH Global University.



“

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 Certificate in Vascular Angiography** 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.

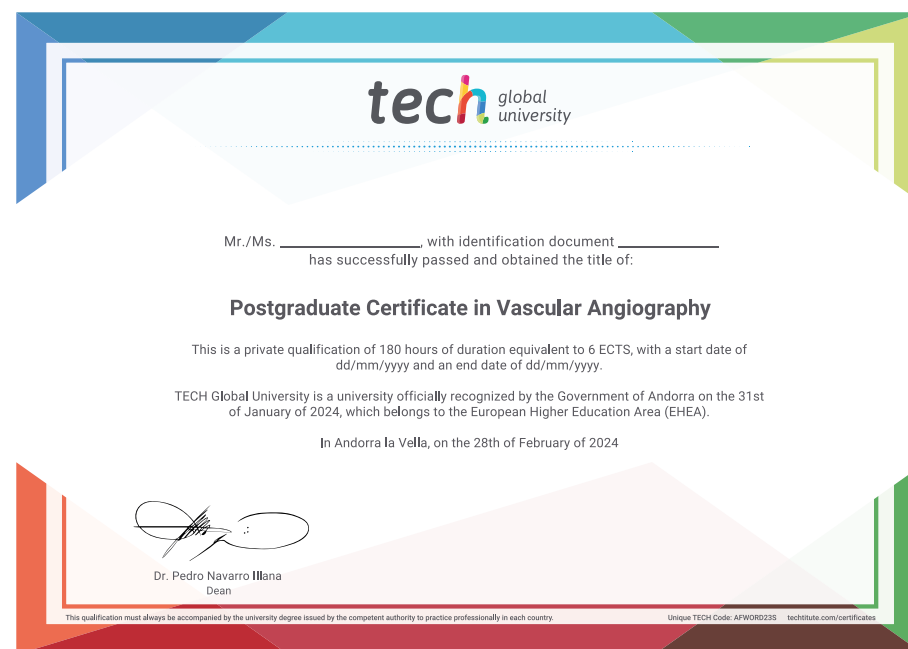
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Vascular Angiography**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development languages
virtual classroom



Postgraduate Certificate Vascular Angiography

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Postgraduate Certificate Vascular Angiography

