

# Postgraduate Certificate

## Perioperative Care





## Postgraduate Certificate Perioperative Care

- » 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/perioperative-care](http://www.techtitute.com/us/medicine/postgraduate-certificate/perioperative-care)

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# 01

# Introduction

Achieving a better recovery, avoiding complications and reducing mortality in cardiology surgical patients has to do with Perioperative Care. A subject of interest and study for cardiothoracic surgeons, cardiovascular anesthesiologists and specialists in cardiovascular critical care and professionals in the area in general, so updating programs based on scientific evidence are necessary for these personnel who have under their responsibility to care for and improve the clinical conditions of the cardiac surgery patient. In this case, the specialist is offered a content developed by expert cardiac surgeons to be studied 100% online and under an innovative methodology that will allow flexibility and convenience to obtain a degree in 6 weeks.







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*You will delve into Perioperative Care for a better recovery, avoid complications and decrease mortality in cardiology surgical patients"*

Knowing the best practices of perioperative management based on scientific evidence and with the verification of countless real cases, is what this update program is an interesting option for professionals related to this area of cardiac surgery who want to broaden their experience and have access to the most updated contents to be able to attend the different cases raised in daily life, improving results and reducing costs.

Being a subject of important study, the directors of this program propose the most specific content starting with the exhaustive analysis of how to take patients in the best conditions to surgery through preoperative optimization; continuing with monitoring in the operating room. Likewise, in the development of the program, a study of post-surgical complications in the different systems is carried out and finally, strategies are proposed aimed at reducing transfusions of blood products as much as possible.

For this purpose, TECH has a teaching staff with the most prestigious profile in the area of cardiology. Their innumerable experiences provide this refresher program with a high academic level. All of this, through a completely online study system, which provides flexibility to the practitioner by being able to connect from any device and adjusting the schedule of your choice, obtaining the degree in 6 weeks.

The contents are available from day one, 24 hours a day, and are adjusted to an innovative methodology of an iterative nature the *Relearning*. This method is characteristic of TECH's programs and has benefited millions of students around the world. The practical nature provides dynamism and a better understanding of the concepts, which can be downloaded for offline consultation.

This **Postgraduate Certificate in Perioperative Care** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in cardiology
- ◆ 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



*A secure, comfortable and responsive platform. Designed to offer invaluable quality content for today's professionals"*

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*Within the agenda of this program, the strategy aimed at reducing blood product transfusions to a minimum will be analyzed"*

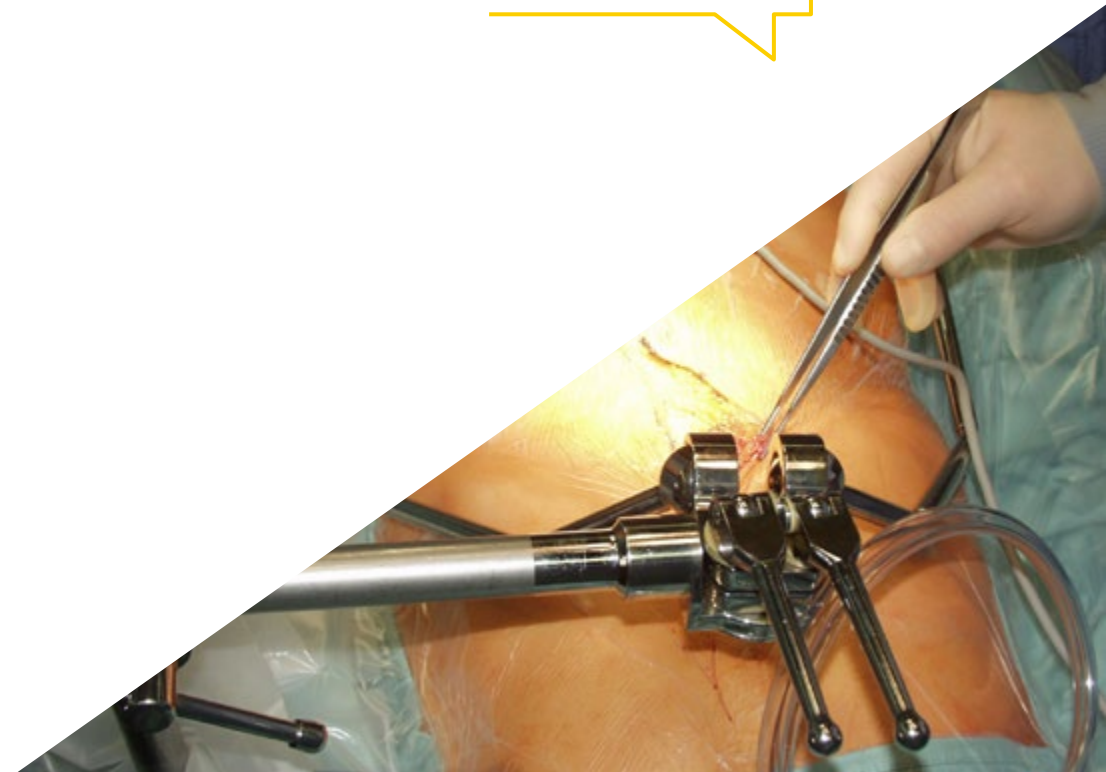
*In this program you will be guided by experts in cardiology who will offer you the most advanced knowledge.*

*Deepen the study of post-surgical complications in the different systems.*

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

Its 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 an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.





# 02 Objectives

The objective of this Postgraduate Certificate in Perioperative Care is to provide the professional with the most updated knowledge on the subject and therefore consider all the measures and strategies before, during and after surgery in cardiology surgical patients for a better recovery, avoid complications and reduce mortality. So that the specialist can perform in an up-to-date, safe and cutting-edge way.







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*Open yourself to new opportunities and experiences with an up-to-date program that has everything about Perioperative Care"*



## General Objectives

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- ◆ Analyze the importance of new technologies involved in the management and control of cardiac pathologies and imaging techniques
- ◆ Obtain the necessary knowledge to improve patient recovery, avoid complications and reduce mortality
- ◆ Obtain the most up-to-date knowledge to approach care and monitoring in a holistic manner and from a surgical point of view or as appropriate



*TECH has what you need to be an expert in Perioperative Care. Start now"*





## Specific objectives

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- ◆ Acquire in-depth knowledge of all perioperative measures and strategies
- ◆ Update monitoring techniques in the operating room
- ◆ Understand ways to improve for optimal recovery of the surgical patient
- ◆ In-depth study of the techniques to be applied prior to surgery to avoid complications and reduce mortality
- ◆ Achieve more efficient postoperative control
- ◆ Reduce transfusions of blood products as much as possible



# 03

## Course Management

Decades of experience, global visions of medicine and scientific contributions of proven case studies, concur in the direction of this program. A Postgraduate Certificate in Perioperative Care with the most exclusive content selected by renowned professional, who currently hold positions of responsibility in prestigious hospitals, thereby contributing their in-depth experience to the program. The professional and human quality allows us to provide warmth and proximity within a 100% virtual environment, thanks to the resources that TECH has available for this purpose.







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*You will meet experts in the  
cardiology field with an invaluable  
professional background”*

## International Guest Director

With pioneering contributions in the field of **cell therapy for cardiovascular diseases**, Dr. Philippe Menasché is considered one of the most prestigious surgeons in the world. The researcher has been awarded several prizes such as the **Lamont of Cardiology laureates of the French Academy of Sciences** and the **Matmut for Medical Innovation**, as well as the **Earl Bakken Award** for his scientific achievements.

His work has established him as a reference in the understanding of **Heart Failure**. In relation to this pathology, he stands out for having participated in the **first intramyocardial transplant of autologous skeletal myoblasts**, marking a true therapeutic milestone. He has also led clinical trials on the use of **cardiac progenitors** derived from **human embryonic stem cells**, as well as the application of **tissue therapy** combined with these progenitors in patients with **terminal heart disease**.

His research has also revealed the **crucial role of paracrine signals in cardiac regeneration**. As a result, his team has succeeded in developing cell therapy strategies based exclusively on the **use of the secretome**, with the aim of optimizing the clinical effectiveness and transmissibility of these procedures.

At the same time, this specialist maintains an active work as a surgeon at the **European Hospital Georges Pompidou**. In this institution, he also directs the **Inserm 970 Unit**. On the other hand, in the academic field, he is a professor in the **Department of Biomedical Engineering** at the University of Alabama at Birmingham, as well as at the University of Paris Descartes.

He holds a **PhD in Medical Sciences** from the Faculty of Paris-Orsay. He has also served as Director of the **French National Institute of Health and Medical Research** and, for almost two decades, he managed the **Biosurgical Research Laboratory of the Carpentier Foundation**.



## Dr. Menasché, Philippe

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- ♦ Director of the National Institute of Health and Medical Research (INSERM), Paris, France
- ♦ Clinical Surgeon in the Heart Failure Unit of the European Hospital Georges Pompidou, Paris, France
- ♦ Regenerative Therapies for Heart and Vascular Diseases Team Leader
- ♦ Professor of Thoracic and Cardiovascular Surgery at the University Paris Descartes
- ♦ Academic Consultant to the Department of Biomedical Engineering at the University of Alabama at Birmingham
- ♦ Former Director of the Biosurgical Research Laboratory of the Carpentier Foundation
- ♦ Doctor of Medical Sciences from the Faculty of Paris-Orsay
- ♦ Member of: National Council of Universities, Medical and Scientific Council of the Agency for Biomedicine, Working Group on Regenerative and Reparative Cardiovascular Medicine of the European Society of Cardiology

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*Thanks to TECH you will be able to learn with the best professionals in the world"*

## Management



### Dr. Rodríguez-Roda, Jorge

- ◆ Chief of Cardiovascular Surgery Service at the Ramon and Cajal University Hospital
- ◆ Cardiac Surgeon of the Cardiac Surgery Unit of the Hospital Madrid Monteprincipe
- ◆ Clinical Professor in the Department of Surgery, University of Alcalá de Henares
- ◆ Care Coordinator of the Cardiovascular Surgery Service of the Gregorio Marañón General University Hospital
- ◆ Assistant Physician of Cardiovascular Surgery at Gregorio Marañón General University Hospital, Hospital Central de la Defensa Gómez Ulla and Hospital del Aire
- ◆ Resident physician of the Cardiovascular Surgery, specialty in the Cardiovascular and Thoracic Surgery Service Puerta de Hierro University Hospital. Madrid
- ◆ Medical Officer in the Military Health Corps of Spain
- ◆ Degree in Medicine and Surgery from the Complutense University of Madrid
- ◆ Executive Master's Degree in Healthcare Organization Management ESADE
- ◆ Healthcare Organization Leadership Program at Georgetown University
- ◆ Resident Medical Intern in the specialty of Cardiovascular Surgery in the Department of Cardiovascular and Thoracic Surgery, Puerta de Hierro Autonomous University Hospital of Madrid
- ◆ Diploma of Advanced Studies (DEA) of the Department of Surgery of the Faculty of Medicine of the Complutense University of Madrid
- ◆ General Practitioner in the Spanish National Health System and in the Public Social Security Systems of the Member States of the European Communities





## Professors

### Dr. Martin, Miren

- ◆ Cardiovascular Surgery Specialist. Ramón y Cajal University Hospital
- ◆ Resident Intern. Ramón y Cajal University Hospital
- ◆ PhD in Medicine and Surgery University of the Basque Country
- ◆ Master in Cardiac Surgery Minimum access. University of Malaga
- ◆ Master's Degree in Cardiovascular Emergencies. University of Alcalá
- ◆ Specialization in Clinical Research Methodology for Residents. University of Alcalá
- ◆ Specialist in Cardiovascular Surgery Ramón y Cajal University Hospital

# 04

# Structure and Content

This Postgraduate Certificate in Perioperative Care has been designed through an innovative method that facilitates the learning and understanding of the syllabus. Deploying a series of multimedia resources where theoretical and practical contents allow a progressive and natural updating of knowledge. A 100% online study system where the health professional will have access to a variety of research articles, real case studies, meeting rooms, private chats with professors and interactive summaries of each unit.





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*Online study has many advantages.  
Enroll and start now"*

## Module 1. Perioperative Care

- 1.1. Preoperative Optimization
  - 1.1.1. Risk Assessment
  - 1.1.2. Nutritional Status
  - 1.1.3. Anaemia
  - 1.1.4. Diabetes Mellitus
  - 1.1.5. ATB Prophylaxis
- 1.2. Intraoperative
  - 1.2.1. Monitoring
  - 1.2.2. Anesthetic Induction and Maintenance
  - 1.2.3. Fluid Use
  - 1.2.4. Pulmonary Hypertension
- 1.3. Cardiovascular System
  - 1.3.1. Volemia and Contractility
  - 1.3.2. Postoperative AMI
  - 1.3.3. Arrhythmias
  - 1.3.4. Cardio Respiratory Arrest and Cardiopulmonary Resuscitation
- 1.4. Low-Energy Expenditure Syndrome
  - 1.4.1. Monitoring and Diagnosis
  - 1.4.2. Treatment
- 1.5. Respiratory System
  - 1.5.1. Postoperative Changes in Pulmonary Function
  - 1.5.2. Ventilator Management
  - 1.5.3. Pulmonary Complications
- 1.6. Kidney Function
  - 1.6.1. Kidney Pathophysiology
  - 1.6.2. Predisposing Factors for Kidney Failure
  - 1.6.3. Prevention of Kidney Failure
  - 1.6.4. Treatment of Kidney Failure







- 1.7. Nervous System. Neurological Damage
  - 1.7.1. Types of Neurological Damage
  - 1.7.2. Risk Factors
  - 1.7.3. Etiology and Prevention
  - 1.7.4. Neuropathy in Critically Ill Patients
- 1.8. Hematologic Complications
  - 1.8.1. Postoperative Bleeding
  - 1.8.2. Diagnosis of Coagulopathies
  - 1.8.3. Prevention of Bleeding
  - 1.8.4. Treatment
- 1.9. Infections
  - 1.9.1. Pneumonia Associated with Mechanical Ventilation
  - 1.9.2. Infection of Surgical Wounds
  - 1.9.3. Infections Associated with Catheter Devices
  - 1.9.4. Antibiotic Prophylaxis
- 1.10. Optimization of Blood Derivative Transfusion



*A 100% online program  
to make the most of your  
time. Enroll now”*

05

# Methodology

This training program offers 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 publications from 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 departs from traditional linear learning and embraces cyclical teaching methods. This approach to learning has proven to be highly effective, particularly in subjects that involve 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. Gervas, 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.







**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 Perioperative Care guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This program will allow you to obtain your **Postgraduate Certificate in Perioperative Care** 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** title 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 Perioperative Care**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*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.



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



## Postgraduate Certificate Perioperative Care

- » Modality: online
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- » Certificate: TECH Global University
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