



# Postgraduate Certificate

Critical Patient Management for Acute Coronary Syndrome in the ICU

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Credits: 7 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-certificate/critical-patient-management-acute-coronary-syndrome-icu

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# 01 Introduction

Acute cardiovascular pathology consists of a group diseases that frequently require complex, on-the-spot decision making and with great repercussions for the patient's prognosis. The monitoring of patients with cardiovascular pathology in a critical situation is a very common occurrence, both in emergency departments as well as coronary units, ICU and in post-surgery patients with underlying heart disease. Whether the patient's clinical problem is primarily cardiac or is a complication resulting from an acute problem of another organ or system, the appropriate diagnosis and management of the acute heart disease is crucial for the patient's evolution and prognosis in the short, medium and long term.

### tech 06 | Introduction

The field of cardiology is one of the areas of great research activity, which leads to the frequent emergence of new studies, reviews, clinical practice guidelines, etc. that modify or should modify the management of patients with acute heart disease. Gaining up-to-date knowledge in this area is essential for cardiologists interested in developing specific skills in this area, for cardiologists who aren't in daily contact with acute cardiac patients but need to be competent in dealing with them or for non-cardiologists who work in an environment where they treat these types of patients.

The program structure for this Postgraduate Certificate is clearly laid out, which provides students with an orderly approach to each topic. The modules are divided in a simple way, focusing on each one of the main groups of acute heart disease. They are taught by professionals who combine their high academic skill level with their teaching experience and their dealings with critical cardiology patients. The learning tools and texts available to the student are fully up-to-date and are oriented to the development of skills which are directly applicable to clinical practice.

The structure of this Postgraduate Certificate compiles more theoretical content and the latest developments in diagnosis and medical management with other content that is focused on students acquiring more practical skills as well.

The program is aimed at encouraging and enabling the development of essential skills in the management of a patient with acute heart disease.

Future students will acquire knowledge and skills that will improve their ability to manage critical cardiovascular patients. With this, they will be able to participate in a team oriented toward managing acute cardiac patients, or to stand out as leaders in treating these patients within a broader team or other specialties.

This Postgraduate Certificate in Critical Patient Management for Acute Coronary Syndrome in the ICU contains the most complete and up-to-date scientific program on the market. The most important features include:

- More than 75 clinical cases presented by experts in Critical Patient Management for Acute Coronary Syndrome in the ICU
- The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional
- Diagnostic-therapeutic developments in the evaluation, diagnosis, and intervention of Critical Patient Management for Acute Coronary Syndrome in the ICU
- It contains practical exercises where the self-evaluation process can be carried out to improve learning
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- With special emphasis on evidence-based medicine and research methodologies in Critical Patient Management for Acute Coronary Syndrome in the ICU
- All of this will be complemented by 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



Update your knowledge through the Postgraduate Certificate in Critical Patient Management for Acute Coronary Syndrome in the ICU"



This Postgraduate Certificate may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge of Critical Patient Management for Acute Coronary Syndrome in the ICU, you will obtain a qualification from TECH Global University"

Its teaching staff includes professionals belonging to the field of Critical Patient Management for Acute Coronary Syndrome in the ICU, who contribute their work experience to this training, as well as renowned specialists belonging to leading scientific societies.

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 an immersive training program to train in real situations.

This program is designed around Problem Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, physicians will be supported by an innovative interactive video system created by renowned experts in Critical Patient Management for Acute Coronary Syndrome in the ICU with extensive teaching experience.

Increase your decision-making confidence by updating your knowledge through this Postgraduate Certificate.

Take the opportunity to learn about the latest advances in Critical Patient Management for Acute Coronary Syndrome in the ICU and improve your patient care.





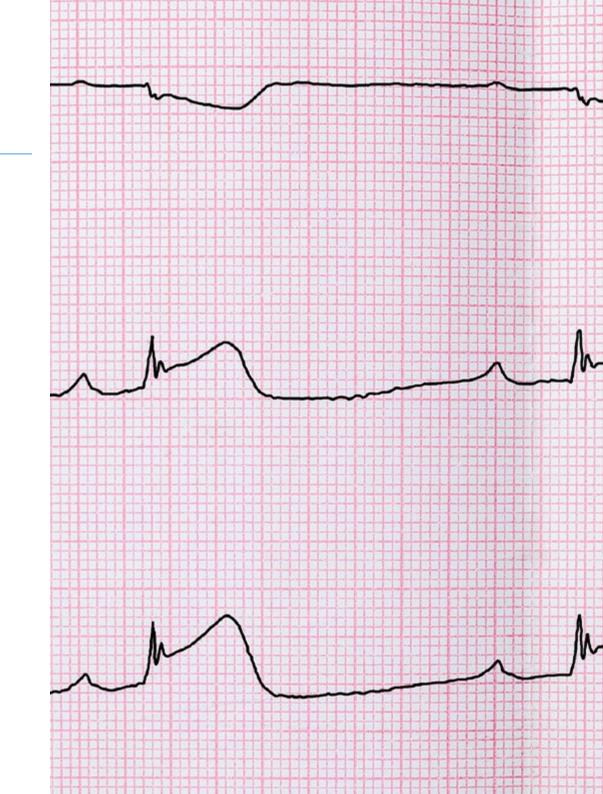


# tech 10 | Objectives



### **General Objectives**

- Handle with ease the diagnostic arsenal available in a tertiary center for the management of critically ill cardiovascular patients
- Identify a patient in a serious or potentially serious short-term situation due to cardiovascular problems
- Explain the treatment indications and the therapy options in critical cardiovascular patients
- Lead a group attending to urgent or emergency situation caused by acute cardiovascular problems and guide fellow colleagues in the treatment of critical patients







### **Specific Objectives**

- Accurately diagnose the patient's acute coronary event profile
- Establish a treatment strategy that is most appropriate for the type of coronary event suffered by the patient
- Anticipate and appropriately deal with possible complications that can present themselves in the context of acute coronary syndrome

Update your knowledge through the Postgraduate Certificate in Critical Patient Management for Acute Coronary Syndrome in the ICU.







#### **International Guest Director**

Alain Combes, M.D., a recognized specialist in Intensive Care Medicine, and an outstanding leader in the field of critical care, has an eminent career in the management of critically ill patients. As Head of the ICU Department at La Pitié-Salpêtrière Hospital, an integral part of the Paris Public Assistance Hospitals, he has led significant advances in the treatment of patients with acute cardiac conditions and cardiac transplantation.

His extensive research interests range from the care of the critically ill cardiac patient, including situations of Cardiogenic Shock, Acute Myocardial Infarction and Complex Cardiac Surgery. Likewise, his pioneering work in Mechanical Circulatory Assistance and Extracorporeal Membrane Oxygenation has positively impacted the treatment of Severe Respiratory Failure, excelling in rescue therapies such as ECMO and ECCO<sub>2</sub>R.

In fact, his active participation in technological advances also stands out. A great example is its collaboration with Hemovent GmbH, which has been crucial for the development of the world's most compact Portable Extracorporeal Membrane Oxygenation System (ECMO). This revolutionary device not only offers unparalleled mobility, but also improves performance parameters compared to standard therapies. In this way, it has demonstrated its commitment to medical innovation and improved care for patients with cardiac and respiratory failure.

To this must be added the **solid international reputation** that Dr. Combes has forged as an opinion leader, being an active member of renowned medical organizations such as The Société de Réanimation de Langue Française (SRLF), The European Society of Intensive Care Medicine (ESICM), The American Thoracic Society (ATS), The European Society of Cardiology (ESC) and The Extra Corporeal Life Support Organization (ELSO). In addition, his expertise has been instrumental in publishing **cutting-edge research** in prestigious medical journals, consolidating his influence in the field.



# Dr. Combes, Alain

- Specialist in Intensive Care Medicine
- Doctorate in Medicine and Philosophy
- Member of: The Société de Réanimation de Langue Française (SRLF),
   The European Society of Intensive Care Medicine (ESICM), The American Thoracic
   Society (ATS), The European Society of Cardiology (ESC), The Extra Corporeal Life
   Support Organization (ELSO), The International ECMO Network (ECMONet)



## tech 16 | Course Management

### Management



### Dr. Rodríguez Muñoz, Daniel

- Specialist Cardiologist in Electrophysiology and Arrhythmias at Ramón y Cajal University Hospital
- PhD in Health Sciences, University of Alcalá
- Master's Degree in Pacemakers, Defibrillators and Resynchronization.
- Master's Degree in Medical Education.
- Master's Degree in Diagnostic and Therapeutic Cardiac Electrophysiology.
- Fellow of the European Society of Cardiology (FESC)
- Member of the European Heart Rhythmia Association (EHRA)
- Member of the Spanish Society of Cardiology (SEC).
- Member of the Arrhythmia and Electrophysiology Section of the SEC



### Dr. Zamorano Gómez, José Luis

- Head of the Cardiology Services. Ramón y Cajal University Hospital Madrid
- Doctor of Medicine- Cum Laude.
- Executive Management and Health Resources (ESADE, Madrid)
- National Qualification Professor of Medicine.
- Member of the First European Echocardiography Accreditation Committee of the European Association of Echocardiography.
- Honorary Fellow American Society of Echocardiography.
- Chairman of the Clinical Guidelines Committee of the European Society of Cardiology.
- Chairman National Cardiovascular Panel FIS, Instituto Carlos III
- Member of the Editorial Board of the Spanish Society of Cardiography Journal
- Member of the Editorial Board of the Journal of Echocardiography.
- Member of the Editorial Board of the American Society of Echocardiography.
- Member of International Relations Task Force of the American Society of Echocardiography.
- Associate Editor of the European Heart Journal Cardiovascular Imaging.
- Author of more than 20 books, more than 500 articles in scientific journals and more than 400 communication in National and International Conferences.
- Impact Factor > 1500. IH 84 Citations > 40000

# tech 18 | Course Management

### Professors

### Dr. Castillo Orive, Miguel

- Cardiology Specialist in Hospitalization Unit and Cardio-diabetes Unit.
- Ramón y Cajal University Hospital Madrid

### Dr. Sanmartín Fernández, Marcelo

- Head of Acute Coronary Syndrome Department.
- Ramón y Cajal University Hospital, Madrid





# Course Management | 19 tech

### Dr. Sionis Green, Alessandro

- Head of Cardiac Intensive Care Unit, Cardiology Department.
- Santa Creu and Sant Pau Hospital Barcelona

### Dr. Fernández-Golfín Lobán, Covadonga

- Cardiac Imaging Unit Coordinator.
- Ramón y Cajal University Hospital Madrid

# 05

# **Structure and Content**

The content structure has been designed by a team of professionals from the best hospitals and universities in the country, who are aware of the relevance of current training to intervene in the diagnosis, treatment and monitoring of critical patient management for Acute Coronary Syndrome in the ICU, and who are committed to quality teaching through new educational technologies.



# tech 22 | Structure and Content

# **Module 1.** Critical Patient Management for Acute Coronary Syndrome (ACS)

- 1.1. The Underlying Pathology in Acute Coronary Syndrome
  - 1.1.1. Structural Alterations
    - 1.1.1.1 Ischemic Heart Disease
  - 1.1.2. Acute Coronary Syndrome without Evidence of Coronary Lesions1.1.2.1. The Reason for Chronic Treatment and its Effect on Prognosis
- 1.2. Non-ST-Segment-Elevation in ACS
  - 1.2.1. Acute Management
    - 1.2.1.1. Diagnosis
    - 1.2.1.2. Treatment in the First 24 Hours
- 1.3. Expected Complications and Chronic Treatment in NSTEACS
- 1.4. ST-Segment-Elevation ACS
  - 1.4.1. Acute Management
    - 1.4.1.1. Diagnosis
    - 1.4.1.2. Treatment in the First 24 Hours
  - 1.4.2. Expected Complications and Chronic Treatment







A unique, key, and decisive training experience to boost your professional development"







## tech 26 | Methodology

#### At TECH we use the Case Method

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, 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 can 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 potential 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 professional medical 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on 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.
- 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.





### **Re-learning Methodology**

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.

The physician will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-theart software to facilitate immersive learning.



### Methodology | 29 tech

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

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning 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 (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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

In this program you will have access to the best educational material, prepared with you 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 really 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.



### **Latest Techniques and Procedures on Video**

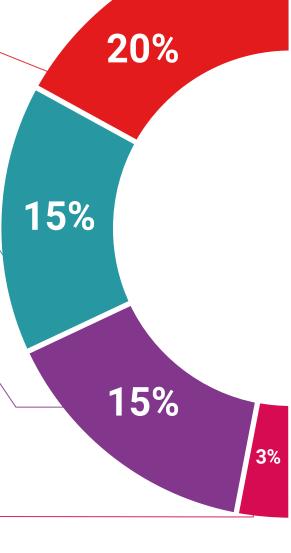
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **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.

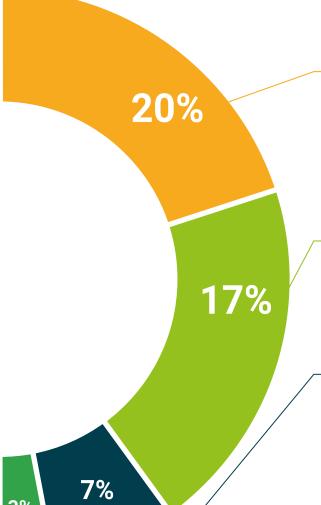
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





### **Additional Reading**

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.



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

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through 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 your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

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





#### **Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.







### tech 32 | Certificate

This program will allow you to obtain your **Postgraduate Certificate in Critical Patient Management for Acute Coronary Syndrome in the ICU** 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 Critical Patient Management for Acute Coronary Syndrome in the ICU

Modality: online

Duration: 6 weeks

Accreditation: 7 ECTS



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

### Postgraduate Certificate in Critical Patient Management for Acute Coronary Syndrome in the ICU

This is a program of 210 hours of duration equivalent to 7 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.



# Postgraduate Certificate Critical Patient Management for Acute Coronary Syndrome in the ICU

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

