

# Postgraduate Certificate Cardiovascular Pathology in Critically Ill Patients





## Postgraduate Certificate Cardiovascular Pathology in Critically Ill Patients

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

Website: [www.techtute.com/pk/medicine/postgraduate-certificate/postgraduate-certificate-cardiovascular-pathology-critically-ill-patients](http://www.techtute.com/pk/medicine/postgraduate-certificate/postgraduate-certificate-cardiovascular-pathology-critically-ill-patients)

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# 01

# Introduction

Advances in the diagnostic and therapeutic processes of cardiovascular diseases oblige physicians to constantly update their knowledge when dealing with critically ill patients. This program includes the latest advances in the management of cardiovascular pathology in the critically ill patient, in a practical way and adapted to their needs, in order to maintain quality and safety in medical care.



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*Increase your knowledge in the diagnosis of cardiovascular pathologies through this program, where you will find the best didactic material, high definition images and real clinical cases. Learn here about the latest advances in laboratory research and help improve patient care"*

The severity of cardiovascular disease often forces patients affected by this pathology to be admitted to an Intensive Care Unit. These units require the use of the latest technology, the most effective drugs and a team of well-trained professionals capable of making decisions based on scientific evidence, without neglecting the close and respectful support needed by the patient and his family, the efficient management of resources, the climate of safety, ethical issues and many other aspects that converge in these units.

The Postgraduate Certificate in Cardiovascular Pathology in Critically Ill Patients is oriented to update the physician in the diagnostic and therapeutic processes that take place in an Intensive Care Unit and give them the opportunity to update their knowledge in cardiovascular pathology in critically ill patients.

The specialist will obtain a useful approach for his daily clinical practice and will be able to respond to the specific problems and situations he will face in his job.

The **Postgraduate Certificate in Cardiovascular Pathology in Critically Ill Patients** contains the most complete and updated scientific program on the market. The most important features of the course university are:

- ♦ Clinical cases presented by experts in Intensive Care Medicine. 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 practice
- ♦ Diagnostic and therapeutic innovations in patients with cardiovascular disease in the critically ill patient
- ♦ Interactive learning system based on algorithms for decision making on different clinical situations
- ♦ 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

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*This Postgraduate Certificate may be the best investment you can make when choosing an up-to-date program for two reasons: in addition to updating your knowledge in Cardiovascular Pathology in Critically Ill Patients you will obtain a qualification from TECH Technological University"*

Forming part of the teaching staff is a group of professionals in the world of Intensive Care Medicine, who bring to this course their work experience, as well as a group of renowned specialists, recognised by esteemed scientific communities.

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 training program to train in real situations.

This program is designed around Problem Based Learning, whereby the Doctor must try to solve the different professional practice situations that arise during the course university. This will be done with the help of an innovative interactive video system developed by renowned experts in the field of Intensive care medicine 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 developments in Cardiovascular Pathology in critically ill patients and improve the training of your students.*



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the physician can master in a rigorous way the organisation of an Intensive Care Unit.





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*This refresher program will generate a sense of confidence when practising medicine, which will help you grow both personally and professionally”*



## General Objective

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- Update the physician in the processes of stabilization, diagnosis and treatment of patients with cardiovascular pathology with a current and evidence-based approach to ensure optimal care of the critically ill patient





## Specific Objectives

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- Describe the procedure for cardiovascular monitoring of critically ill patients for the assessment of the hemodynamic status of critically ill patients
- Explain the management of the diagnostic and therapeutic means of the most frequent and relevant pathologies that affect the hemodynamic status of the patient
- Address the current management of cardiogenic shock
- Describe the role of echocardiography in the hemodynamic management of critically ill patients
- Point out the key points in the current postoperative period of cardiac surgery
- Address the current management of acute coronary syndrome
- Indicate the treatment of arrhythmias in the ICU
- Point out the key points in acute aortic pathology
- Analyze the use of blood derivatives in critically ill patients
- Indicate the indications, advantages, disadvantages and reversal of the new anticoagulants
- Explain the prevention and treatment of thromboembolic disease in the ICU
- Describe the current use of extracorporeal membrane oxygenation



*Expand your knowledge through this program in Cardiovascular Pathology in the critically ill patient”*

03

# Structure and Content

The structure of the contents has been designed by the team of professionals aware of the implications of constant updating in the management of Severe Trauma Patients, conscious of the relevance of this training in the professional.



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*The Postgraduate Certificate in Cardiovascular Pathology in Critically Ill Patients contains the most complete and updated scientific program on the market”*

**Module 1.** Current Hemodynamic Monitoring: from SwanGanz to the Present Day

- 1.1. Fundamentals of Hemodynamic Monitoring
- 1.2. Current Utility of SwanGanz in Intensive Care Medicine
- 1.3. Minimally Invasive Hemodynamic Monitoring
- 1.4. Practical Approach to Hemodynamic Monitoring

**Module 2.** Current Management of Acute Heart Failure and Cardiogenic Shock

- 2.1. Medical treatment
- 2.2. Mechanical Assistance: Balloon Counterpulsation and Ventricular Assist Devices
- 2.3. Etiological Treatment

**Module 3.** Role of Echocardiography in the Hemodynamic Management of the Critically Ill Patient

- 3.1. Preload Assessment
- 3.2. Assessing Ventricular Function
- 3.3. The Echocardiogram in Severe Cardiology Patients
- 3.4. Echocardiogram in the Non-Cardiologic Critically Ill Patient

**Module 4.** Key Points in Today's Postoperative Cardiac Surgery

- 4.1. Coronary Revascularization Surgery
- 4.2. Valve Replacement Surgery

**Module 5.** Current Management of Acute Coronary Syndrome (ACS)

- 5.1. ACS Without ST Elevation
- 5.2. ACS With ST Elevation. The Heart Attack Code
- 5.3. Complications of Acute Myocardial Infarction in the Acute Phase



## Module 6. Treatment of Arrhythmias in the ICU

- 6.1. Bradyarrhythmias
- 6.2. Tachyarrhythmias

## Module 7. Key Points in Acute Aortic Pathology

- 7.1. Aortic dissection
- 7.2. Aortic Aneurysms

## Module 8. Use of Blood Derivatives in Critically Ill Patients

- 8.1. Transfusion Policy
- 8.2. Critical Hemorrhage
- 8.3. Assessment of Coagulation in Critically Ill Patients

## Module 9. New Anticoagulants

- 9.1. Dabigatran
- 9.2. Rivoraxaban
- 9.3. Apixaban
- 9.4. Indications, Advantages, Disadvantages and Reversal

## Module 10. Venous Thromboembolic Disease

- 10.1. Prevention in Critically Ill Patients
- 10.2. Treatment in the ICU

## Module 11. Current Use of Extracorporeal Membrane Oxygenation (ECMO)

- 11.1. Devices
- 11.2. Indications



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

04

# 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. 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.

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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 relearn). 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.



05

# Certificate

The Postgraduate Certificate in Cardiovascular Pathology in Critically Ill Patients guarantees you, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Technological University.







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*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This **Postgraduate Certificate in Cardiovascular Pathology in Critically Ill Patients** contains the most complete and up-to-date scientific program on the market.

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

The certificate 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 Cardiovascular Pathology in Critically Ill Patients**

Official N° of hours: **175 h.**



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

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



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