

# Postgraduate Certificate

## Advanced Nursing Care in the Cardiovascular Patient



## Postgraduate Certificate Advanced Nursing Care in the Cardiovascular Patient

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

Website: [www.techtute.com/us/nursing/postgraduate-certificate/advanced-nursing-care-cardiovascular-patient](http://www.techtute.com/us/nursing/postgraduate-certificate/advanced-nursing-care-cardiovascular-patient)

# 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

Improved monitoring devices have led to much more accurate assessment data in cardiovascular patients. In this way, health care professionals have been able to make much more effective decisions, while at the same time improving in-hospital follow-up systems for these clinical cases. This is a wide field of action in which nurses must develop by applying the latest advances in this area. In this sense, TECH contributes to this update through this 100% online Postgraduate Certificate, which will allow the graduate to be aware of the equipment used for monitoring the patient with hemodynamic problems, drug administration and devices used for circulatory assistance. All this, with the best and most innovative multimedia didactic material in the academic panorama.



“

*A 6-week Postgraduate Certificate that offers you the most complete update in Advanced Nursing Care in the Cardiovascular Patient”*

In recent years, improvements in the equipment used for patient monitoring in Intensive Care Units have led to a much more accurate assessment, especially in patients with hemodynamic problems. At the same time, scientific research has led to a deeper understanding of the effectiveness of the protocols of action, as well as the use of vasoactive drugs used in hemodynamic support and blood pressure control.

In this scenario, nursing professionals are constantly updating their skills in order to integrate the latest healthcare advances into their practice. This Postgraduate Certificate in Advanced Nursing Care in the Cardiovascular Patient is a 6-week course designed and developed by an excellent teaching team with extensive experience in this field.

A syllabus that offers the graduate a theoretical-practical perspective and that provides a real response to their motivation to update their knowledge. Thus, the syllabus includes an approach to advanced monitoring, an in-depth study of PiCCO, VolumeView, LiDCO and Vigileo, and an in-depth study of percutaneous and non-percutaneous circulatory assistance. In addition, detailed videos, specialized readings and clinical case studies provide the graduate with a much more complete and dynamic update.

Furthermore, the Relearning system, used by TECH in all its degrees, will help the nursing professional to consolidate the main concepts, without the need to invest long hours in the process of study and memorization. The student is thus faced with an online and flexible methodology that allows them to take the Postgraduate Certificate comfortably, whenever and wherever they wish. All that is needed is an electronic device with an internet connection to visualize, at any time of the day, the content hosted on the virtual platform.

This **Postgraduate Certificate in Advanced Nursing Care in the Cardiovascular Patient** 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 Intensive Care Nursing and Intensive Care Physicians
- ◆ 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



*Achieve an effective update on the management of Advanced Life Support in different clinical situations"*

“

*This degree will allow you to delve into the technical aspects of assessment, planning and nursing intervention in patients with hemodynamic problems”*

The program’s teaching staff includes professionals from 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.

*Learn from the comfort of your home about the most notorious advances in acute cardiac and circulatory care.*

*Thanks to TECH's Relearning system, you will achieve an effective update, in 180 teaching hours and reducing the hours of study.*



# 02 Objectives

Upon completion of the 6-week Postgraduate Certificate, the nursing professional will have completed an effective update on the management of cardiovascular patients in the ICU. For this purpose, the syllabus presents a theoretical-practical approach and didactic resources that will allow them to integrate the most advanced methodology and practices in the care of this type of patient in various clinical situations. In addition, the proximity of the students will allow you to resolve any questions you may have about the content of this academic proposal.







“

*Integrate into your daily practice the most advanced techniques to successfully manage the patient's post-resuscitation period"*



## General Objectives

---

- Synthesizing data to inform the assessment of the critically ill patient
- Collecting data to inform the assessment of the critically ill patient
- Use data to inform the assessment of the critically ill patient
- Plan care collaboratively and in a patient-centered manner
- Incorporate the latest evidence-based practice in critical care nursing
- Act effectively in pressurized and demanding situations
- Contextualize each action to the situation at hand





## Specific Objectives

---

- ◆ Provide nursing care in Cardiovascular Disorders
- ◆ Manage fluids and vasoactive drugs to aid circulation, including vasopressor and inotropic drugs
- ◆ Initiate and perform appropriate techniques to measure cardiac output and derived hemodynamic variables
- ◆ Perform cardiac pacing with pacemakers
- ◆ Perform cardiopulmonary resuscitation
- ◆ Perform post resuscitation period
- ◆ Perform defibrillation and cardioversion according to resuscitation protocols
- ◆ Cannulate an arterial catheter and remove specimens

“

*Specialized readings, multimedia pills and a host of didactic resources will allow you to carry out this updating process in a dynamic way”*

# 03

## Course Management

The management and teaching staff that make up this university degree have been selected due to their excellent professional background in the healthcare field in Intensive Care Units. Their trajectory in hospital centers and their experience in the management of complex situations is evident in the syllabus to which the students who take this degree will have access. Thus, the graduate will get a complete update of their skills in Advanced Nursing in the Cardiovascular Patient by the hand of real experts.





“

*Elevate your competencies in cardiovascular patient care with real experts in ICU Nursing and Medicine”*

## Management



### Ms. Fernández Lebrusán, Laura

- ◆ Nurse in the Medical ICU at the Puerta De Hierro Hospital
- ◆ ICU Nurse at the Hospital Universitario del Sureste
- ◆ Surgical ICU Nurse at Hospital General Universitario Gregorio Marañón
- ◆ ICU Nurse at the Hospital Quirón Salud
- ◆ Associate Teacher at the University Francisco of Vitoria
- ◆ Graduate in Nursing from the Francisco de Vitoria University Professional Master's Degree in Critical Care and Intrahospital Emergencies
- ◆ HEMS Specialist (*Helicopter Emergency Medical Services*), University of Alicante
- ◆ Advanced Clinical Simulation Instructor by Francisco de Vitoria University

## Professors

### Dr. Domínguez Pérez, Laura

- ♦ Attending physician at the Acute Cardiac Care Unit and Clinical Cardiology Unit at Hospital Universitario 12 de Octubre
- ♦ Research stay at the Montreal Cardiology Institute
- ♦ Specialist in Cardiology at the Carlos III Hospital
- ♦ Doctorate in Medical Sciences from the Complutense University of Madrid
- ♦ Professional Master's Degree in Advances in Cardiology
- ♦ Professional Master's Degree in Acute Cardiac Care
- ♦ Expert in Diabetes Mellitus 2 and Cardiovascular Diseases
- ♦ Expert in Atrial Fibrillation
- ♦ Member of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units

### Ms. Sánchez Hernández, Mónica

- ♦ Nurse in the Post-Surgical Critical Care Unit (UCPQ) at the "Puerta de Hierro" Majadahonda University Hospital
- ♦ Responsible for Patient Safety and referral nurse in Chronic Wound Care
- ♦ Nurse in Primary Care substitutes in several Area V Centers
- ♦ Collaborating Nurse in the Center for Vascular Ulcer Cures (CCUV)
- ♦ Clinical teaching collaborator at the UAM
- ♦ Postgraduate Certificate in Nursing from the Escuela Universitaria de Enfermería Puerta de Hierro, a center attached to the Universidad Autónoma de Madrid
- ♦ Member of: Dermal Ulcers Commission. Pressure Ulcers and Chronic Wounds Commission

### D. Buenavida Camarero, Javier

- ♦ Nurse in the Medical ICU of the Hospital Universitario Puerta de Hierro Majadahonda
- ♦ Nurse at Móstoles University Hospital
- ♦ Nurse at University Hospital of Getafe
- ♦ Professional Master's Degree in Critical Illness and Emergencies given by the University of Barcelona



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

# 04

## Structure and Content

The syllabus of this Postgraduate Certificate has been developed by an exquisite teaching team with extensive experience in Nursing in Intensive Care Units. Their background in this field will allow the graduate to obtain the most comprehensive information on everything that encompasses the hemodynamic status of the patient, invasive and non-invasive monitoring, as well as the management of Advanced Life Support. All this, in addition, with an extensive virtual library, accessible 24 hours a day, from any digital device with internet connection.







“

*TECH adapts to you and that is why it has created a university degree with a 100% online teaching methodology, without classes with timetables”*

**Module 1.** Hemodynamic monitoring and support. Advanced care of the patient with hemodynamic problems

- 1.1. EKG monitoring and telemetry + noninvasive HD monitoring
  - 1.1.1. Electrocardiography
  - 1.1.2. Arrhythmias
  - 1.1.3. Warning signs and alarms
- 1.2. Temperature Monitoring
  - 1.2.1. Temperature measurement: central and peripheral thermometer, SV
  - 1.2.2. Methods to decrease it: Artic Sun and Coolgard, IV
  - 1.2.3. Methods to increase it
- 1.3. Invasive monitoring I
  - 1.3.1. Arterial catheter
  - 1.3.2. Central Venous Pressure (CVP)
  - 1.3.3. Nursing care
- 1.4. Invasive monitoring II: CG, PAP and other parameters
  - 1.4.1. Swan Ganz
  - 1.4.2. PiCCO System
  - 1.4.3. VolumeView
  - 1.4.4. LiDCO
  - 1.4.5. Monitoring
- 1.5. Percutaneous Circulatory Assists: Counterpulsation Balloon (BCiA), Impella CP + 2.5, ECMO VA
  - 1.5.1. Indications
  - 1.5.2. Operation
  - 1.5.3. Assessment and nursing care
- 1.6. Non-percutaneous circulatory assists: HeartMate, Impella 5.0, Levitronix, Berlin-Heart Excor, ECMO VA
  - 1.6.1. Indications
  - 1.6.2. Operation
  - 1.6.3. Assessment and nursing care
- 1.7. Pacemaker
  - 1.7.1. Transcutaneous or external
  - 1.7.2. Transvenous
  - 1.7.3. Epicardial





- 1.8. Advanced Life Support (ALS) in the critically ill patient
  - 1.8.1. Action Protocol
  - 1.8.2. Changes and differences with respect to other units
  - 1.8.3. Post-resuscitation care
- 1.9. The Heart Attack Code. Reception and in-hospital follow-up
  - 1.9.1. Reception of the patient
  - 1.9.2. Primary assessment and intervention
  - 1.9.3. Catheterization
  - 1.9.4. Follow-up and nursing care
- 1.10. Administration of frequently used drugs
  - 1.10.1. Vasoactive drugs: types
  - 1.10.2. Pharmacodynamics and pharmacokinetics
  - 1.10.3. Special considerations in administration and withdrawal

“ *Through this Postgraduate Certificate you will be up to date with the latest recommendations in the administration and withdrawal of drugs in cardiovascular patients* ”

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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing 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. Nurses 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 nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.



*The nurse will learn through real cases and by solving 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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 really 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.



### Nursing 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 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 them as many times as you want.



### 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 suggesting that observing third-party experts can be useful.  
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 Advanced Nursing Care in the Cardiovascular Patient guarantees students, in addition to the most rigorous and up-to-date education, 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 program will allow you to obtain your **Postgraduate Certificate in Advanced Nursing Care in the Cardiovascular Patient** 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.

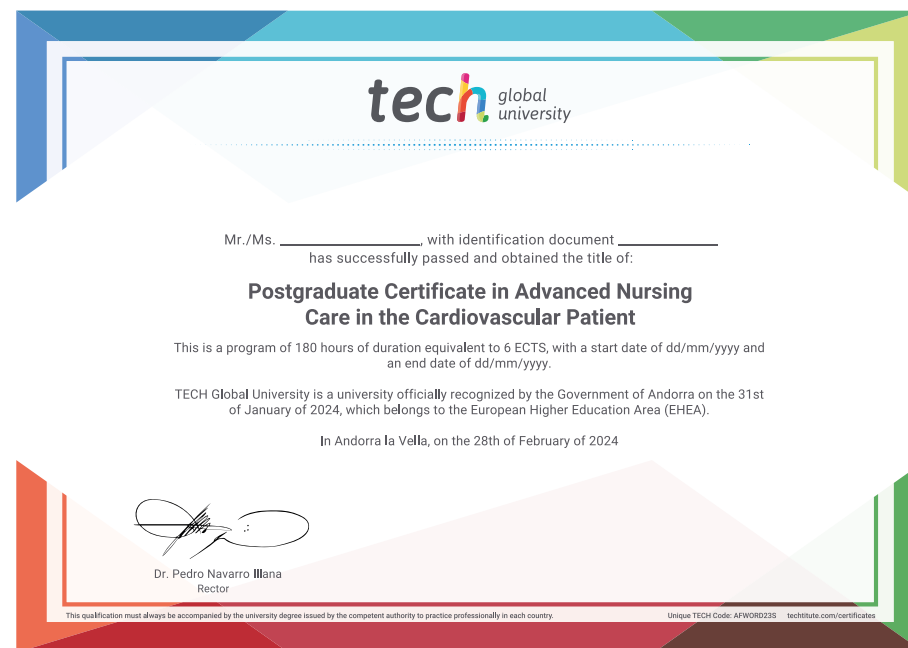
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Advanced Nursing Care in the Cardiovascular Patient**

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  
development language  
virtual classroom



## Postgraduate Certificate Advanced Nursing Care in the Cardiovascular Patient

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

# Postgraduate Certificate

## Advanced Nursing Care in the Cardiovascular Patient