

Postgraduate Diploma Interventional Cardiology Nursing





Postgraduate Diploma Interventional Cardiology Nursing

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-interventional-cardiology-nursing

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01

Introduction

The results of the latest research on deaths due to heart disease leave no one indifferent. It is the leading cause of death in the world, with figures reaching 9 million in recent years. The approach to these diseases through the subspecialty of cardiology allows nurses to update their skills thanks to the latest epidemiological, diagnostic and therapeutic developments. The approach of this program is perfectly compatible with the work and family activity of nursing professionals, since it is delivered 100% online, requiring only an electronic device and an Internet connection to have unlimited access to the syllabus.



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In this program you will have access to the latest developments in electrophysiological differential diagnosis of narrow QRS supraventricular tachycardias”

The updating of concepts and techniques in the healthcare field is so demanding that nursing professionals are constantly recycling their knowledge. The minimally invasive procedures that characterize Interventional Cardiology contemplate the progressive incorporation of new techniques and instruments that optimize the daily results of the interventions performed by hemodynamicists.

Due to the increase in clinical cases with these diseases, health systems must be up to the task and address the growing complexities based on the latest scientific postulates. Nurses who are committed to updating their knowledge in the area of cardiology and with this program in particular, will be able to internalize the most up-to-date concepts that revolve around the main cardiovascular diseases, among which diseases of the myocardium and pericardium stand out.

With this Postgraduate Diploma in Interventional Cardiology Nursing, taught in virtual classroom modality, nursing professionals will be able to delve into very specific features on the latest research in arrhythmias and cardiac electrophysiology. As it is an online program, the compatibility with work and family life is perfect. All multimedia material, self-knowledge exercises and complementary readings will be available to nurses at any time of the day and any day of the week.

This **Postgraduate Diploma in Interventional Cardiology Nursing** 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 Interventional Cardiology Nursing
- ♦ 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 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



You will have access from anywhere, to a library of theoretical and practical content, created by specialists in Interventional Cardiology”

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You will continue to hone your skills in the classification of syncope and its strategies for initial diagnosis in patients with transient loss of consciousness”

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.

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.

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

Delve into the study of sinus node function in the electrophysiology laboratory, and discover the latest techniques in Sinus Node Ablation.

You will get an up-to-date view on the pathophysiology of atherosclerosis and its characteristics of coronary lesions.



02 Objectives

The quality assurance of the educational content of the program is, with the support of TECH, guided by the teaching team of active nurses that make up the program, which is an indicator of rigor in order to achieve the objectives expected by the nurses. The most innovative tools in the study and application of techniques in prevention, diagnosis and treatment of patients with heart disease are detailed throughout the 3 modules that make up this program, allowing nursing professionals to update their knowledge in the specialty of interventional cardiology.



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Thanks to the teaching methodology of the Postgraduate Diploma, you will not have to give up your daily routine as the entire qualification is 100% online”



General Objectives

- Provide students with the theoretical knowledge and practical resources necessary for the performance of their healthcare activity
- Deliver comprehensive patient care to solve health problems individually or as members of a team, with efficiency and quality criteria
- Apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study
- Be able to acquire a comprehensive and up-to-date vision in the field of acute and critical cardiac care that combines hospital care, primary care and socio-health care of patients



Discover the latest advances in research on the pathophysiology of atherosclerosis and the characteristics of coronary lesions”





Specific Objectives

Module 1. Cardiac Arrhythmias and Electrophysiology

- ♦ Incorporate the necessary knowledge for the adequate periodicity and quality control of patients with implantable devices (insertable Holter, pacemakers, ICDs and resynchronizers)
- ♦ Provide the student with the necessary knowledge to guarantee the care of patients with arrhythmias

Module 2. Coronary Artery Disease. Hemodynamics

- ♦ Gain an in-depth knowledge of the indications and contraindications of percutaneous interventional procedures, surgery and medical treatment, as well as to have experience in the prevention, diagnosis and treatment of possible complications of the procedures (coronary dissection, perforation, No Reflow phenomenon, hemorrhagic and vascular complications, etc.)
- ♦ Gain an in-depth knowledge of techniques for the treatment of non-coronary heart disease, usually included under the heading of structural heart disease
- ♦ Acquire a comprehensive and up-to-date vision of the operation of hemodynamic and interventional units

Module 3. Acute Cardiac Care

- ♦ Get to know the hospital management of the main acute cardiovascular syndromes such as acute coronary syndromes, left and right heart failure, arrhythmias, cardiac arrest, acute aortic syndromes and acute complications of valvular, myocardial and pericardial diseases
- ♦ Obtain the essential knowledge to understand, prevent and manage the most frequent complications and comorbidities in patients with critical cardiac disease (hydroelectrolytic, metabolic, respiratory, renal and infectious)
- ♦ Acquire basic knowledge of the techniques and procedures most commonly used in these patients, such as vascular punctures, hemodynamic monitoring and circulatory support systems, induced hypothermia systems, orotracheal intubation and invasive and non-invasive mechanical ventilation, pericardiocentesis, insertion of pacemakers and other electrical devices, and extrarenal depuration systems, as well as nutritional support and concomitant medication

03

Course Management

This qualification has the commitment, from TECH and the teaching team that composes it, to offer nursing professionals the latest developments in Interventional Cardiology. The faculty has an impressive professional and academic background, and has been carefully chosen to achieve, along with nurses, the theoretical and practical notions leading the international health care field. This program addresses the entire syllabus from the study of cardiovascular disease in a deep and up-to-date way, seeking its practical application and using study techniques that facilitate understanding for its development in the care activity by nurses in the different areas of cardiology.



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The teaching staff of this Postgraduate Diploma is made up of active professionals in Interventional Cardiology, committed to providing you with the most innovative techniques in the field of heart disease diagnosis”

Management



Ms. Capote Toledo, María Luz

- ♦ Coordinator of the Hemodynamics and Arrhythmia Room at the Hospital Príncipe de Asturias and Hospital Severo Ochoa, in Madrid
- ♦ Supervisor of Heart Failure, Cardiac Rehabilitation, Cardiopulmonary Explorations (Imaging, Ergometry and Holter) and High-Resolution Cardiology Consultations at San Carlos Clinical Hospital in Madrid
- ♦ Supervisor of Hemodynamics and Electrophysiology at San Carlos Clinical Hospital, in Madrid
- ♦ Graduate in Nursing at the Complutense University of Madrid
- ♦ Master's Degree in Health Care Quality, Rey Juan Carlos University in Madrid in collaboration with the Laín Entralgo Agency

Professors

Ms. Ropero, Rosa

- ♦ Nurse of the ICU-Hemodynamics Department at the University Hospital Príncipe de Asturias in Madrid
- ♦ Intensive Care Unit Nurse. University Hospital Principe de Asturias, Alcalá de Henares, Madrid
- ♦ Main tutor of clinical internships in ICU for 3rd and 4th year students of the Nursing Degree at the University of Alcalá de Henares
- ♦ Head trainer of the nursing team of the Hemodynamics Unit of HUPA
- ♦ Nurse in the Intensive Care Unit at the 12 de Octubre Hospital, Madrid
- ♦ Nurse of hospitalization and central services, 12 de Octubre University Hospital, Madrid
- ♦ Support to Scientific Research of the Community of Madrid in the Department of Biochemistry and Molecular Biology of the University of Alcalá
- ♦ Diploma in Nursing at the University of Castilla-La Mancha
- ♦ ICU Specific Postgraduate Training
- ♦ Interventional Cardiology Postgraduate Training
- ♦ Advanced CPR expert level courses at HUPA, Madrid
- ♦ Mechanical Ventilation courses at HUPA, Madrid
- ♦ Courses of Continuous Extracorporeal Depuration Techniques at the 12 de Octubre Hospital, Madrid

04

Structure and Content

The Postgraduate Diploma in Interventional Cardiology Nursing is made up of 3 modules that will be taught progressively throughout the 6 months of the program. The syllabus provides nurses with a global and specialized vision of the latest techniques, non-invasive or minimally invasive, in diagnostic and treatment procedures in patients with cardiological diseases. TECH is committed to the Relearning study method, which guarantees its effectiveness thanks to the acquisition of knowledge by repeating the concepts in the different contexts that take place throughout the program.



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TECH's educational methodology is based on Relearning, thanks to this technique, nurses will improve their skills in an organic and progressive way”

Module 1. Cardiac Arrhythmias and Electrophysiology

- 1.1. Bradyarrhythmias
 - 1.1.1. Study of Sinus Function in the Electrophysiology Laboratory. Sinus Node Ablation
 - 1.1.2. Electrophysiology of Atrioventricular Conduction. AV Node Radiofrequency Ablation
- 1.2. Supraventricular Tachycardias I
 - 1.2.1. Electrophysiological Differential Diagnosis of Narrow QRS Complex Supraventricular Tachycardias
 - 1.2.2. Intranodal Reentrant Tachycardia
 - 1.2.3. Accessory Pathways: Classification and/or Electrocardiographic Identification
 - 1.2.4. Accessory Pathways Ablation
 - 1.2.5. Atrial tachycardia
- 1.3. Supraventricular Tachycardias II
 - 1.3.1. Atrial Flutter
 - 1.3.2. Atrial Fibrillation
- 1.4. Ventricular Tachycardias (VT)
 - 1.4.1. Differential Diagnosis of Wide QRS Complex Tachycardia
 - 1.4.2. VT in Ischemic Heart Disease. Invasive Treatment
 - 1.4.3. VT in Non-Ischemic Heart Disease
 - 1.4.4. VT without Structural Heart Disease
- 1.5. Extrasystoles. Antiarrhythmic Drugs
- 1.6. Syncope
 - 1.6.1. Classification
 - 1.6.2. Initial Diagnostic Strategy in Patients with Transient Loss of Consciousness
 - 1.6.3. Tests Aimed at Diagnosing an Arrhythmic Etiology of Syncope
 - 1.6.4. Patient Strategy with Syncope of Unknown Etiology
- 1.7. Non-Invasive Tests in Electrophysiology
 - 1.7.1. Tilt Table Test
 - 1.7.2. Ambulatory Electrocardiogram Monitoring
- 1.8. Electrophysiology Devices. Device Implantation Techniques
 - 1.8.1. Pacemaker
 - 1.8.1.1. Implant Indications, Types and Programming
 - 1.8.1.2. Components of a Cardiac Pacing System
 - 1.8.1.3. Pacing Modes, Letter Code
 - 1.8.1.4. Selection of the Stimulation Mode, Programmable Parameters
 - 1.8.1.5. Monitoring a Patient with a Pacemaker. Complications
 - 1.8.1.6. Questions and Tests
 - 1.8.1.7. Frequency of Monitoring
 - 1.8.1.8. Remote Transtelephonic Monitoring
 - 1.8.2. Implantable Cardioverter-Defibrillator (IAD)
 - 1.8.2.1. Implant Indications, Types and Programming
 - 1.8.2.2. Types of ICDs: Choosing Devices
 - 1.8.2.3. Programming of ICDs
 - 1.8.2.4. ICD Patient Monitoring
 - 1.8.2.5. Recommendations for ICD Patients
 - 1.8.2.6. Complications in Patients with ICDs
 - 1.8.3. Cardiac Resynchronization
 - 1.8.3.1. Indications for Implantation, Types and Device Programming
 - 1.8.3.2. Monitoring a Patient with a Resynchronizer
 - 1.8.3.3. Pre-Discharge Management
 - 1.8.3.4. Post-Discharge and Long-Term Monitoring
- 1.9. Arrhythmias and Sport. Sudden Death
 - 1.9.1. Cardiovascular Adaptations to Exercise
 - 1.9.2. Sudden Death in Athletes
 - 1.9.3. Recommendations on Recreational and Competitive Sports Practice in Cardiopathic Patients
 - 1.9.4. Pediatric Arrhythmias
- 1.10. The Nurse, a Key Figure in Arrhythmia Units
 - 1.10.1. Scope of Action in Arrhythmia Units

Module 2. Coronary Artery Disease. Hemodynamics

- 2.1. Pathophysiology of Atherosclerosis
 - 2.1.1. Characteristics of Coronary Arterial Lesions
- 2.2. Stable Angina
- 2.3. Acute Coronary Syndrome: With and without ST Elevation
 - 2.3.1. Non-ST Segment Elevation ACS
 - 2.3.2. ST Segment Elevation ACS
- 2.4. Treatment of Coronary Heart Disease
- 2.5. Right Heart Catheterization
- 2.6. Percutaneous Interventions in Structural Heart Disease
 - 2.6.1. Percutaneous Aortic Valve Interventions: Aortic Valvuloplasty + TAVI Implantation
 - 2.6.2. Percutaneous Mitral Valve Interventions
- 2.7. Drugs Associated with Coronary Interventionism
- 2.8. Vascular Access Routes
- 2.9. Hemostasis Methods
- 2.10. Nursing Care for Patients Undergoing Catheterization

Module 3. Acute Cardiac Care

- 3.1. Initial Management of Patients with Suspected ACS
 - 3.1.1. Patients with Non ST-Elevation Acute Coronary Syndrome
 - 3.1.2. Diagnosis, Risk Stratification and Treatment
 - 3.1.2. Prevention and Management of Complications
 - 3.1.4. Lipid-Lowering Drugs and Other Secondary Prevention Measures
 - 3.1.5. Initial Management of Patients with Non ST-Elevation Acute Coronary Syndrome
 - 3.1.6. Diagnosis, Risk Stratification and Treatment
 - 3.1.7. Prevention and Management of Complications
 - 3.1.8. Antithrombotic Drugs for ACS
- 3.2. Heart Failure and Pulmonary Edema
 - 3.2.1. Decompensation of Congenital Heart Disease
 - 3.2.2. Pharmacological Treatment of Acute Heart Failure
 - 3.2.3. Non-Invasive and Invasive Ventilation

- 3.3. Cardiogenic Shock
 - 3.3.1. Hemodynamic Monitoring
 - 3.3.2. Mechanical Circulatory Support
- 3.4. Cardiac Arrest
 - 3.4.1. Initial Management of Cardiac Arrest
 - 3.4.2. Neurological Protection and Prognostic Assessment
- 3.5. Arrhythmias
 - 3.5.1. Atrial Fibrillation and Supraventricular Tachyarrhythmias
 - 3.5.2. Ventricular Tachyarrhythmias and ICD Dysfunction
 - 3.5.3. Bradyarrhythmias Pacemaker Implantation. Pacemaker Malfunction
- 3.6. Acute Vascular, Myocardial, Pericardial, and Valvular Syndromes
 - 3.6.1. Acute Aortic Syndromes
 - 3.6.2. Pulmonary Embolism
 - 3.6.3. Acute Pericarditis, Myocarditis, Stress-Induced Cardiomyopathy (Takotsubo Syndrome)
 - 3.6.4. Severe Pericardial Effusion. Cardiac Tamponade. Pericardiocentesis
 - 3.6.5. Acute Infectious and Non-Infectious Valvular Disease
- 3.7. General Principles of Cardiovascular Critical Care
 - 3.7.1. Prophylaxis, Nutrition, End-of-Life Support
 - 3.7.2. Postoperative Care after Cardiac Surgery
 - 3.7.3. Acute Respiratory Distress Syndrome
 - 3.7.4. Acute Renal Failure and Renal Support Therapy
- 3.8. Diabetes Management
 - 3.8.1. Blood Glucose Disorders
 - 3.8.2. Electrolyte and Acid-Base Balance Disorders
 - 3.8.3. Bleeding, Anemia and Blood Transfusion
 - 3.8.4. Infectious Complications in Cardiac Intensive Care
- 3.9. Nursing Care in the Different Techniques and Procedures Performed in the Coronary Unit
 - 3.9.1. Nursing Care for Vascular Cannulation
 - 3.9.2. Orotracheal Intubation and Tracheotomy
- 3.10. Accompanying the Terminally Ill Patient in the Coronary Unit

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.





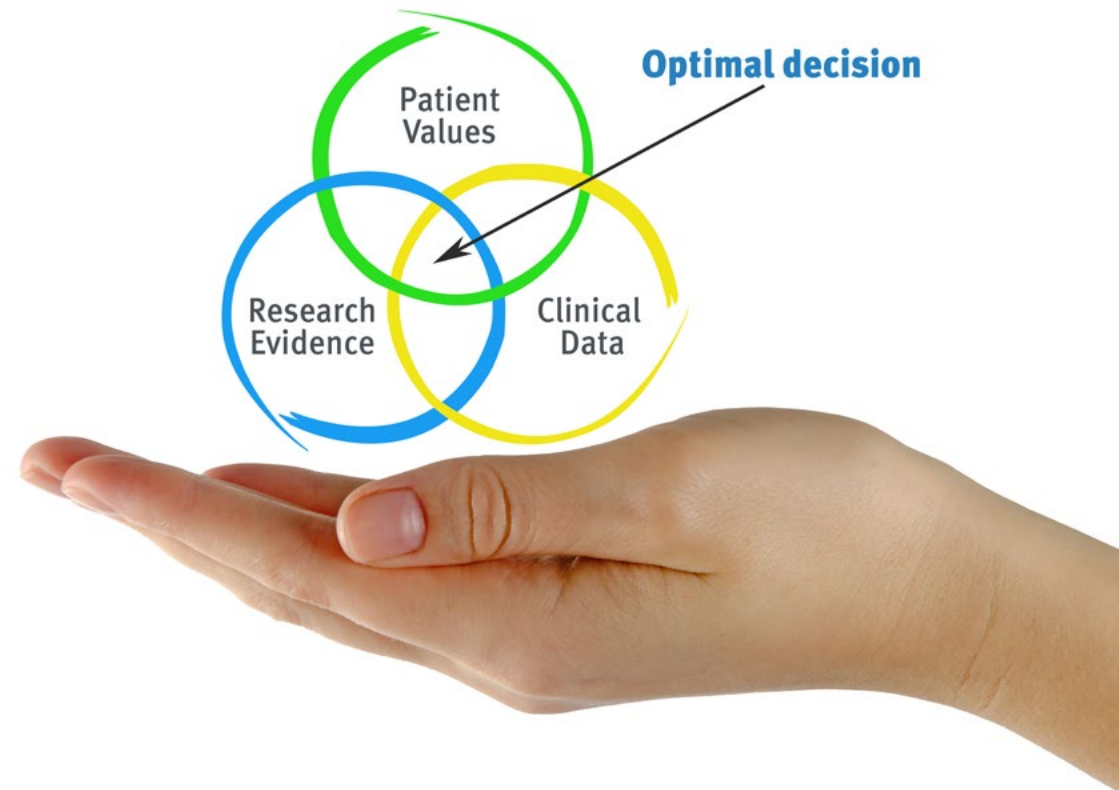
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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH 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.

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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:

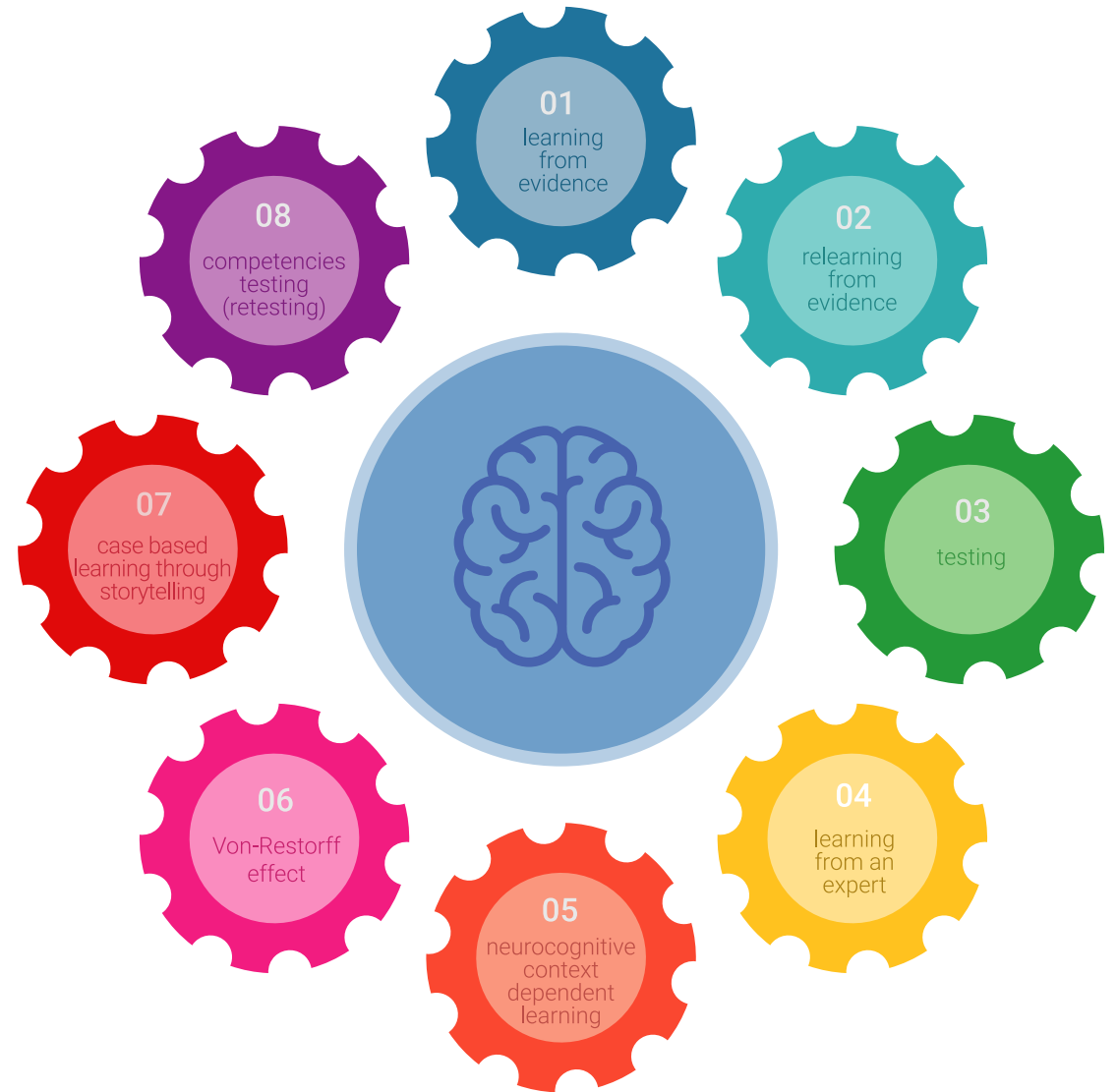
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into 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.

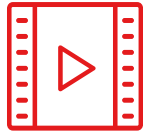
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

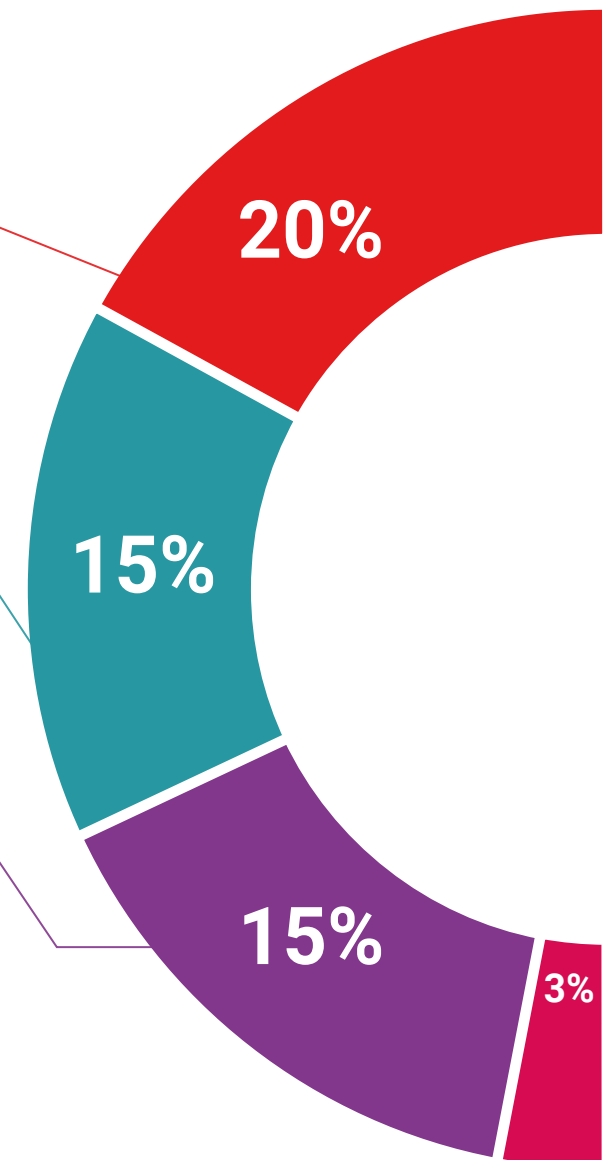
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

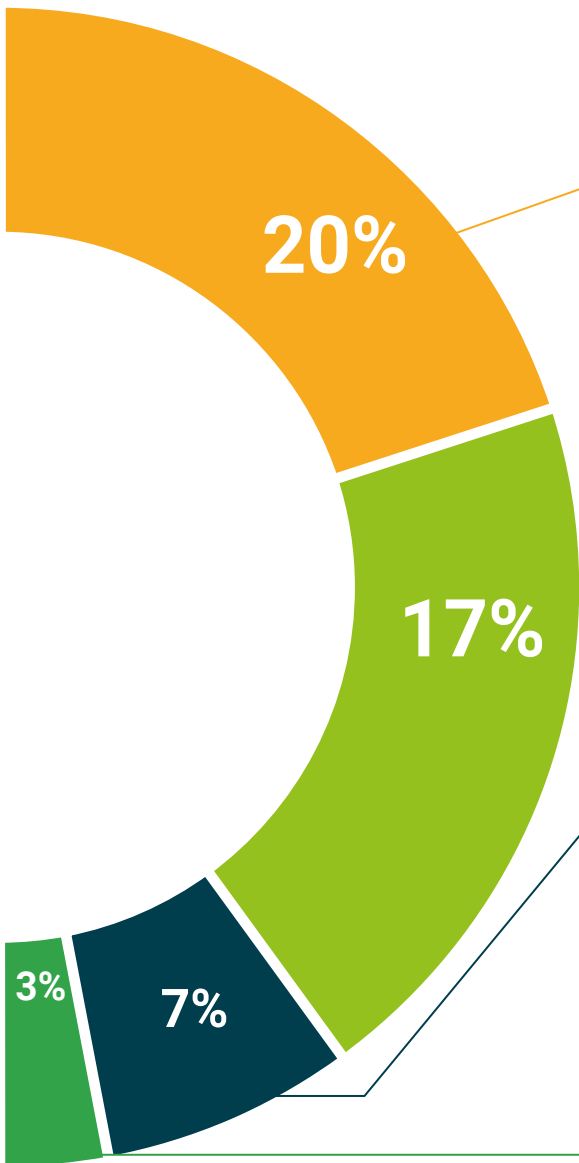
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 Diploma in Interventional Cardiology Nursing guarantees students, in addition to the most rigorous and up-to-date education program, access to a Postgraduate Diploma 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 private qualification will allow you to obtain a **Postgraduate Diploma in Interventional Cardiology Nursing** 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 Diploma in Interventional Cardiology Nursing**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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



Postgraduate Diploma Interventional Cardiology Nursing

- » Modality: online
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