

# Postgraduate Certificate Arrhythmias and Cardiac Electrophysiology for Nursing



## Postgraduate Certificate Arrhythmias and Cardiac Electrophysiology for Nursing

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

Website: [www.techtute.com/in/nursing/postgraduate-certificate/arrhythmias-cardiac-electrophysiology-nursing](http://www.techtute.com/in/nursing/postgraduate-certificate/arrhythmias-cardiac-electrophysiology-nursing)

# 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

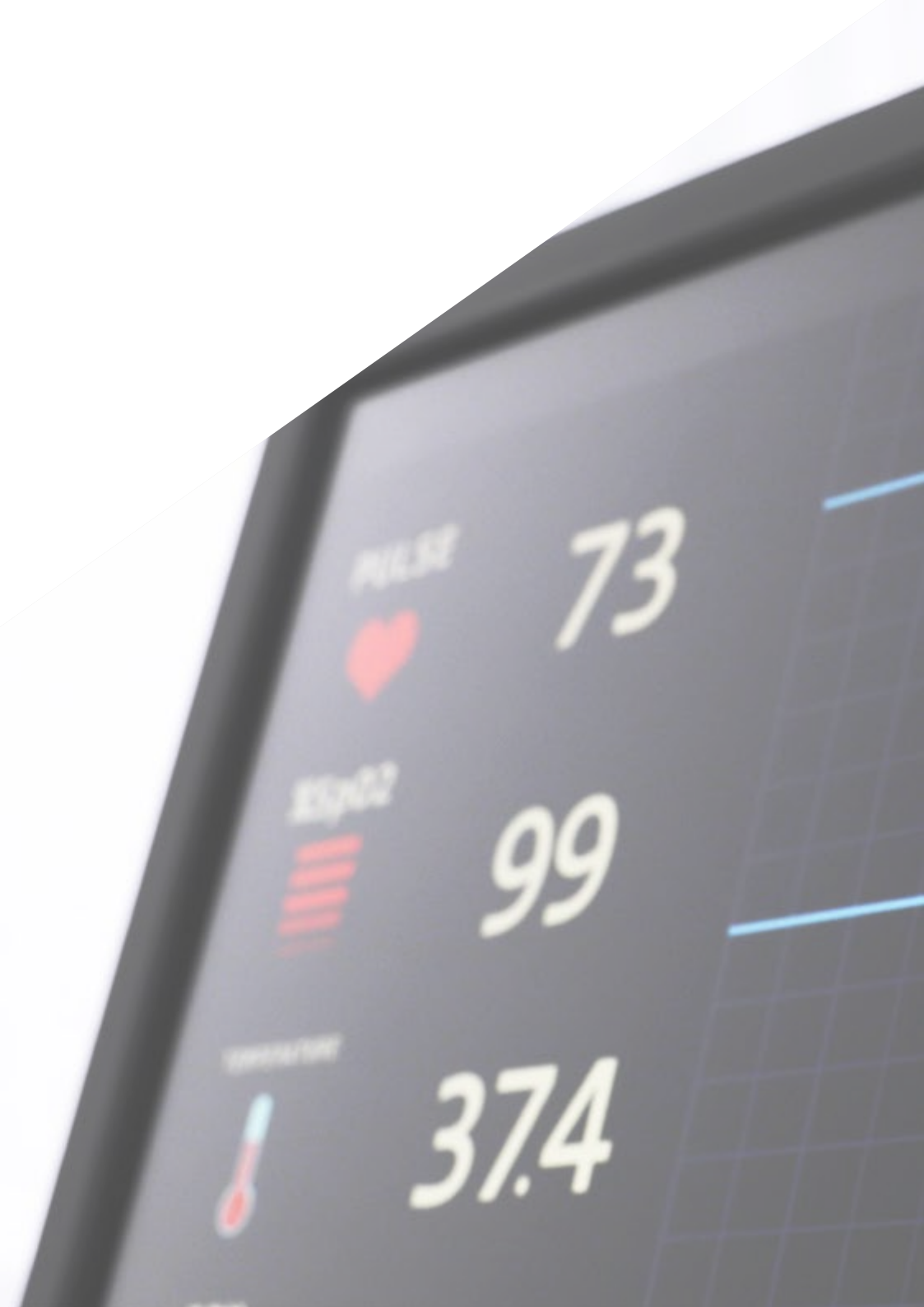
---

*p. 28*

# 01

# Introduction

Identifying the specific mechanism of cardiac arrhythmias can sometimes be difficult for the clinician and requires invasive electrophysiological study. Differentiating and understanding the underlying mechanism can be crucial to develop a correct diagnostic and therapeutic strategy and to administer the necessary care to the patient. This 100% online program provides the nursing professional with the most up-to-date knowledge in this field, thanks to the innovative teaching material provided by the specialized teaching team that teaches the syllabus. All this, so that students are aware of the most recent scientific advances that have occurred in this field.



“

*This program is designed to renew your knowledge in arrhythmia units in a more agile way”*

Cardiovascular disease is the leading cause of death worldwide, and its prevalence and economic and social cost are constantly increasing in developed and developing countries, despite the fact that the main risk factors that cause and aggravate it are well known. Faced with this scenario, the nursing professional must be constantly updated on the advances in this field.

This Postgraduate Certificate delves into arrhythmias and cardiac electrophysiology through an intensive syllabus to which you will have access during the 6 weeks of this qualification. A program taught exclusively online, which will allow you to deepen and update your knowledge in bradyarrhythmias, tachycardias, electrophysiological differential diagnosis, syncope or non-invasive tests in electrophysiology.

TECH offers teaching material that is at the academic forefront, consisting of video summaries, videos in detail, complementary readings or real clinical cases, so that students can acquire up-to-date education in a more visual, enjoyable and agile way. That is why the nursing professional who takes this qualification will have an intensive syllabus as well as multimedia material to advance and renew their knowledge in the field of cardiology.

A flexible program that allows you to access the study plan from and when you want, comfortably. All you need is an electronic device (computer, tablet or cell phone) with an internet connection to connect to the virtual platform where you will find the syllabus developed by the specialized faculty that teaches this qualification. This will allow you to distribute the teaching load according to your needs. In addition, the Relearning system allows you to reduce the long hours of study.

The **Postgraduate Certificate in Arrhythmias and Cardiac Electrophysiology for 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 Cardiology
- ♦ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ 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



*Download the syllabus and view all the advanced content on arrhythmias and electrophysiology offered by this online program"*



“

*This 100% online program allows you to keep abreast of progress in electrophysiology of atrioventricular conduction"*

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.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. This will be done with the help of an innovative interactive video system created by renowned experts.

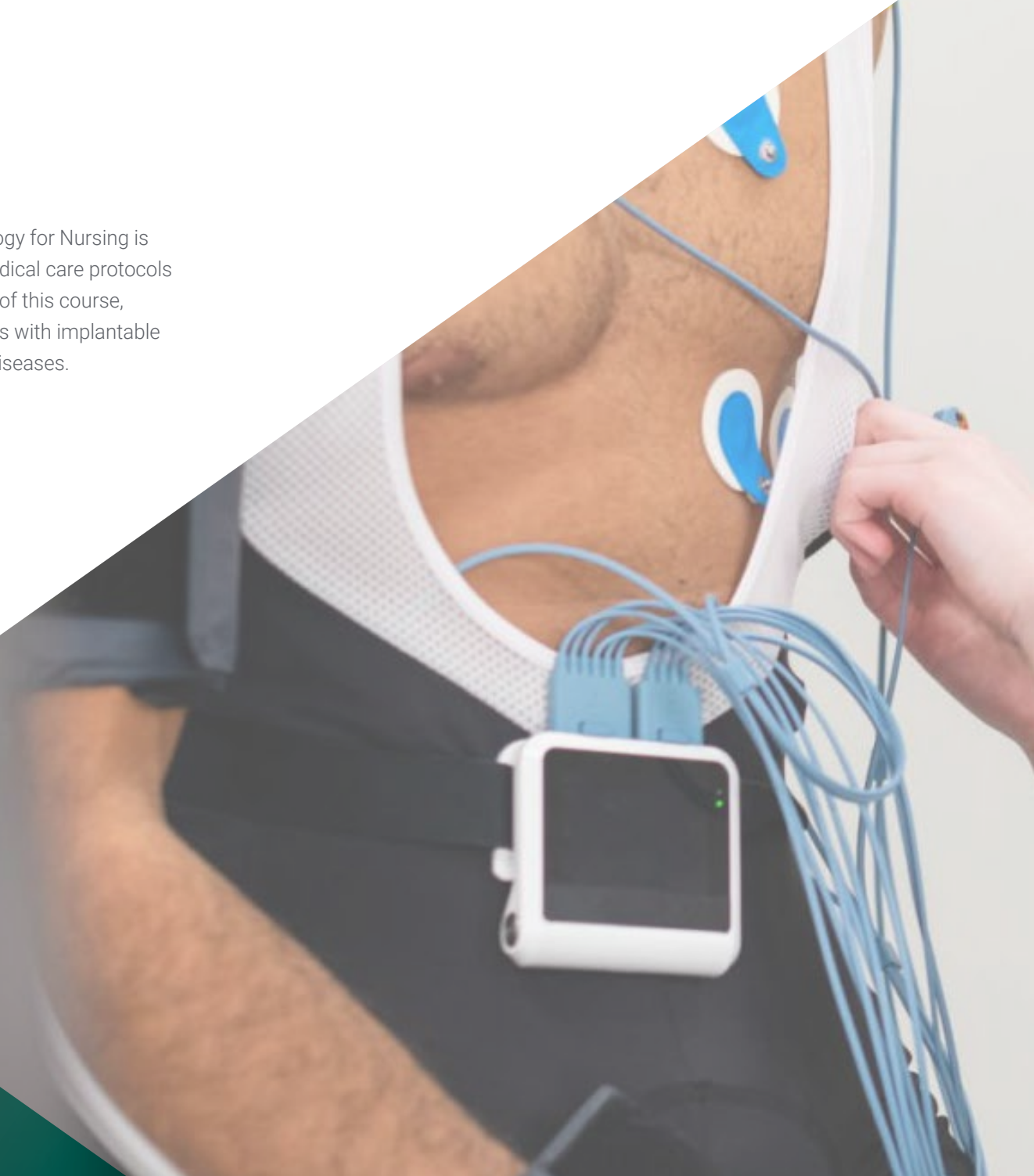
*Access 24 hours a day to the multimedia content that makes up this university qualification.*

*It provides an in-depth study of the antiarrhythmic drugs most commonly used in clinical practice.*



# 02 Objectives

The Postgraduate Certificate in Arrhythmias and Cardiac Electrophysiology for Nursing is designed primarily for healthcare professionals to renew and update medical care protocols for patients with rhythmic abnormalities. During the 150 teaching hours of this course, students will renew their knowledge of the appropriate control of patients with implantable devices, as well as the care to be provided to people with cardiological diseases.







“

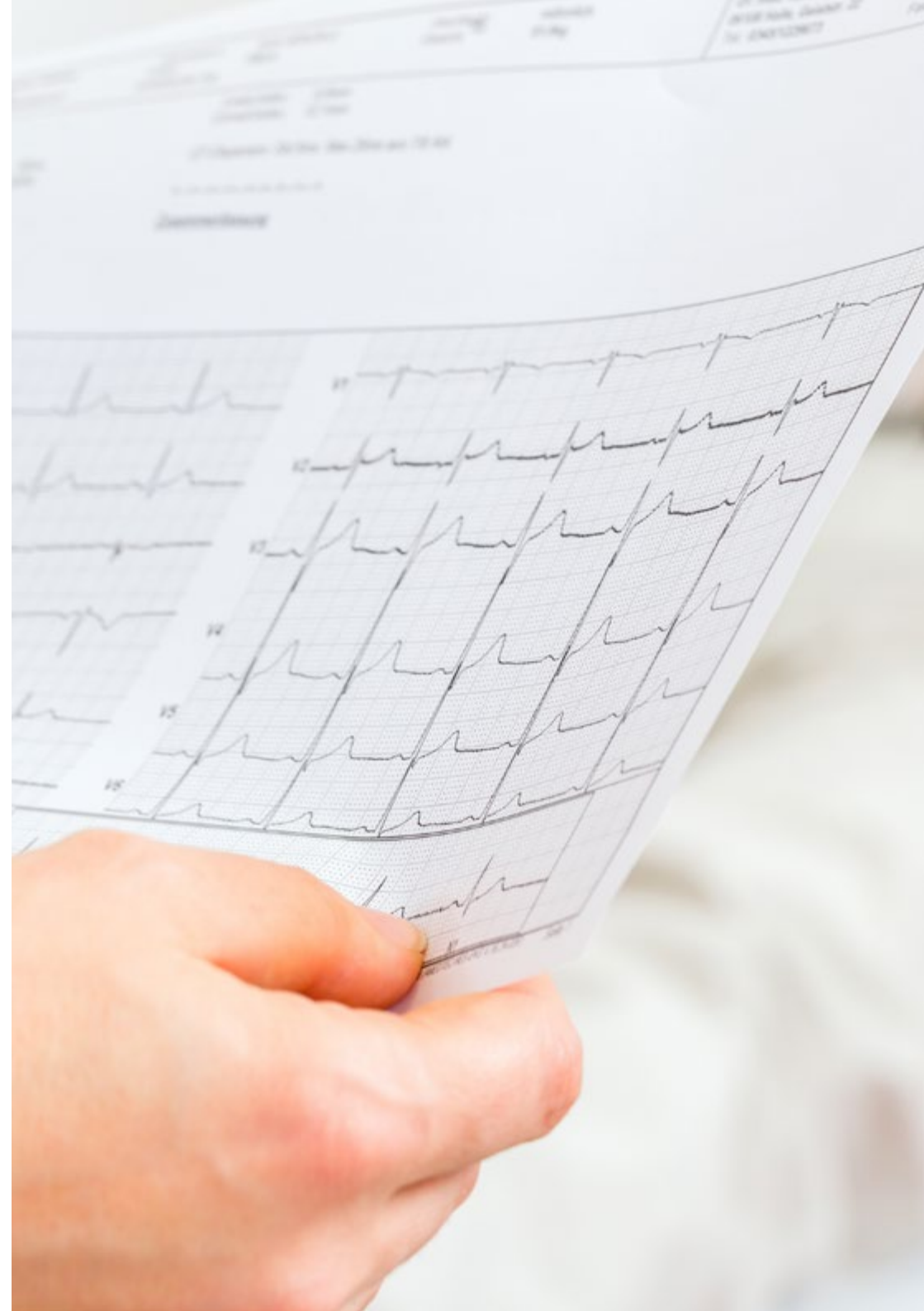
*Update your knowledge about  
tachycardias and syncope”*



## General Objectives

---

- To provide students with the theoretical knowledge and the necessary practical resources for the performance of their healthcare activity
- Provide comprehensive patient care to solve, individually or as members of a team, health problems with efficiency and quality criteria





## Specific Objectives

---

- 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

“

*An ideal academic option to renew your knowledge in implantable devices while combining it with your work responsibilities”*

03

# Course Management

TECH's philosophy is based on offering students who take its qualifications a high-level education within everyone's reach. With this philosophy has selected the teaching team that teaches this qualification. That is why the nursing professional who takes this program will have at his disposal a faculty with experience in cardiology in reference hospitals. Their extensive experience will also serve to transfer the latest knowledge in arrhythmias and cardiac electrophysiology.



“

*A teaching team with experience in relevant hospital centers will guide you through the 6 weeks of this program"*

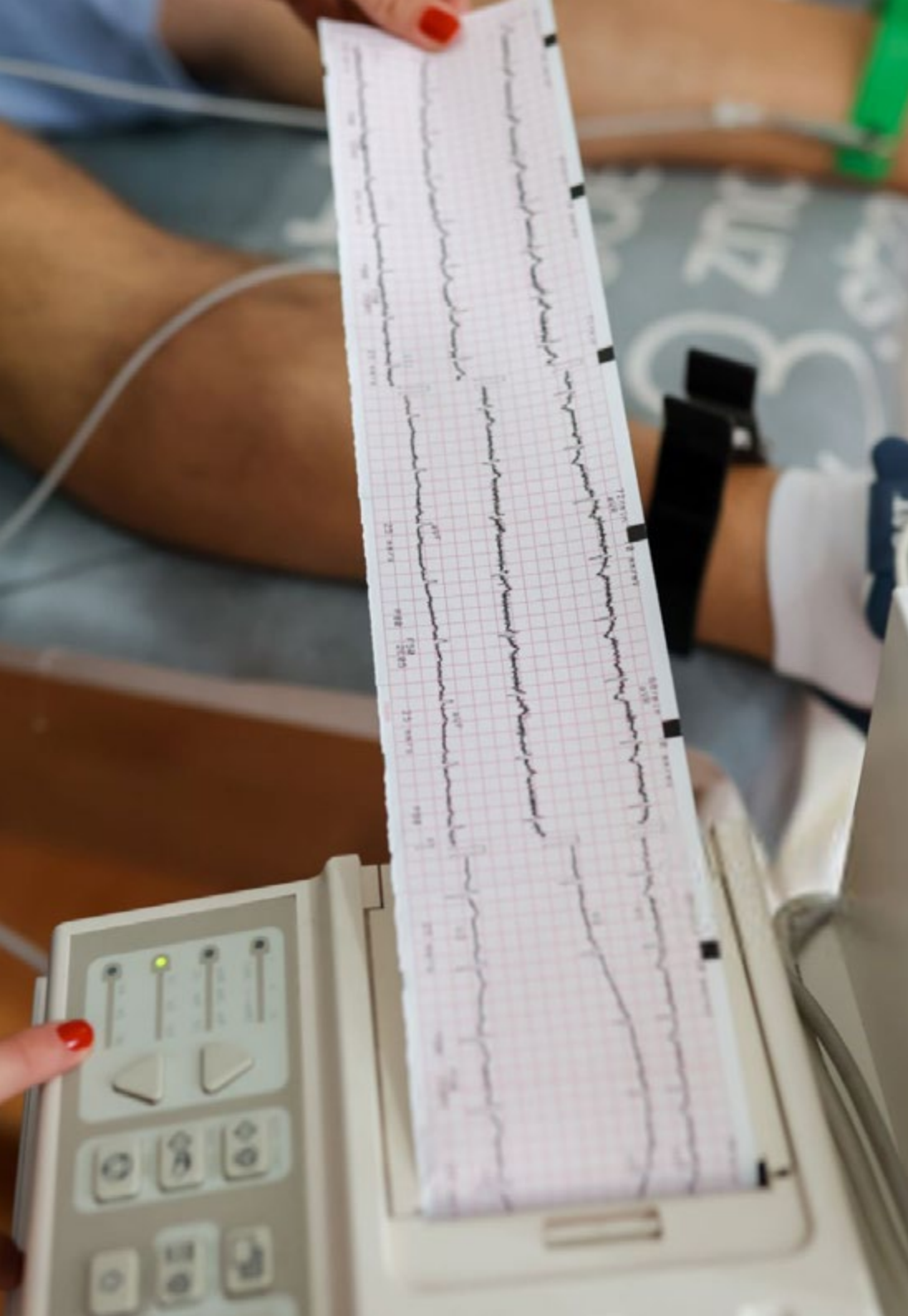
## Management



### 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 Clinical Hospital San Carlos 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. López Yaguez, María

- ◆ Intensive Care Nurse
- ◆ Nurse in Intensive Care Unit at Clinical Hospital San Carlos in Madrid
- ◆ Post-operative education nurse for patients undergoing cardiac surgery in Hospital Clínico Universitario San Carlos
- ◆ Nurse in Heart Failure Unit
- ◆ Nurse collaborator of practical teaching
- ◆ Diploma in Nursing from the Complutense University of Madrid
- ◆ Expert in Heart Failure for Nurses at the Francisco de Vitoria University, UFV, in Madrid
- ◆ Refresher course and multidisciplinary management in HF by decommission of Ongoing Training of Health Professionals, Madrid
- ◆ Course in Cardiorespiratory Nursing by Alfonso X El Sabio University in Madrid

“

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

# 04

## Structure and Content

The Relearning system, which TECH applies in all its university courses, allows students to progress in a more natural way, in addition to achieving with the repetition of content a much more agile updating of knowledge, which allows them to reduce hours of study. A system that, together with the online format, is perfect for the professional who wishes to combine their personal responsibilities with a high-level education. Thus, in this syllabus, which consists of one module, you will study bradyarrhythmias, tachycardias or electrophysiology devices and their implantation techniques in depth. All this through content developed by an expert teaching team in this field.



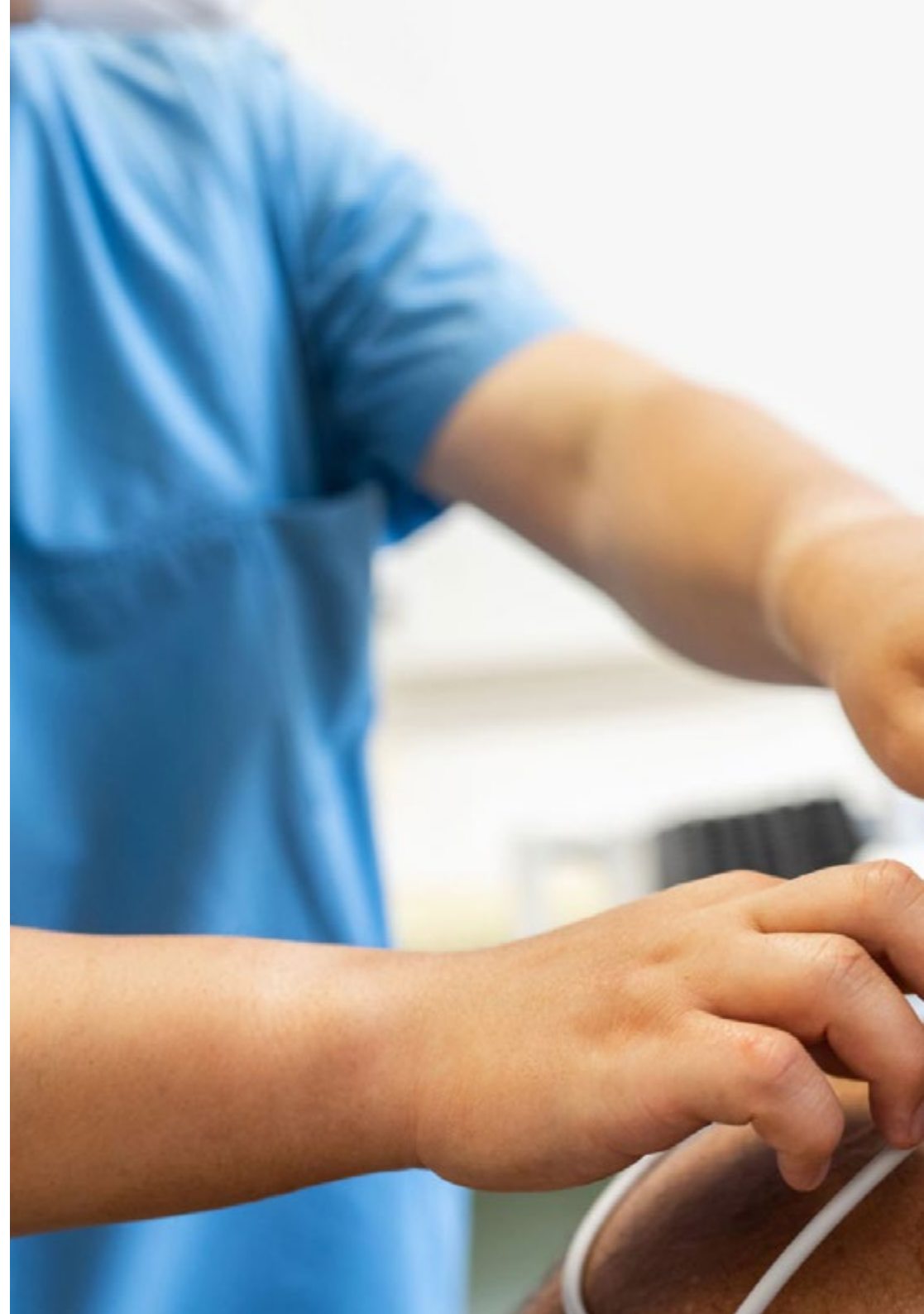


“

*A syllabus in which you will be able to get up to date on the recommendations on recreational and competitive sports practice in the cardiac patient"*

## 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



# 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 Arrhythmias and Cardiac Electrophysiology in Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





“

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

The **Postgraduate Certificate in Arrhythmias and Cardiac Electrophysiology for Nursing** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, 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 Arrhythmias and Cardiac Electrophysiology for Nursing**

Official N° of Hours: **150 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.



**Postgraduate Certificate**  
Arrhythmias and Cardiac  
Electrophysiology for Nursing

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



# Postgraduate Certificate Arrhythmias and Cardiac Electrophysiology for Nursing

