



## Postgraduate Diploma

## Cardiac Rehabilitation Nursing

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-cardiac-rehabilitation-nursing

## Index

 $\begin{array}{c|c} 01 & 02 \\ \hline & & \\ \hline &$ 

06

Certificate

p. 30

# 01 Introduction

According to the World Heart Federation (WHF), almost 18 million deaths per year worldwide are due to cardiovascular disease. Despite being a fundamentally preventable pathology, the social trend towards bad consumption habits, smoking and sedentary lifestyles are not at all conducive to reversing these results. Cardiac Rehabilitation acquires a primordial role in the application of new scientific methods and techniques, which allow the patient to return, as far as possible, the maximum of his physical and mental possibilities after having suffered a cardiac event. In this program, the latest updates of empirical results and multidisciplinary techniques integrated in Cardiac Rehabilitation are contemplated. The recycling of skills in the field of cardiac nursing is possible thanks to the 100% online methodology followed in this course.



## tech 06 | Introduction

The WHO estimates that the incidence of cardiovascular disease would be reduced by almost half if obesity, blood pressure and cholesterol levels in the population were reduced. Thanks to the latest advances, the area of cardiac rehabilitation not only presents new techniques in the approach to pathologies through pharmacological therapies, but also explores new psychosocial and educational programs and stimulation through physical exercise for the patient.

The field of nursing dedicated to cardiac rehabilitation encompasses a multidisciplinary treatment, since among its objectives are the promotion of the relationship between nurse and patient, close dialogue that allows the patient to learn about his or her disease, or the improvement of his or her autonomy and self-confidence. For this reason, keeping up to date with new techniques in the pathophysiology of heart failure is an indispensable requirement for continuing to offer the best medical practice.

Studies confirm that there is no more efficient intervention after a cardiovascular event than the inclusion of the patient in a cardiac rehabilitation program, and the role of the cardiac nurse specialist is crucial to achieve the goals of reducing the overall mortality rate currently in place. Delving into the latest advances in cardiac rehabilitation and making it compatible with daily professional practice is possible thanks to the 100% online methodology offered by TECH in this Postgraduate Diploma in Cardiac Rehabilitation Nursing.

This **Postgraduate Diploma in Cardiac Rehabilitation Nursing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in in Cardiac Rehabilitation Nursing
- 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



You will be accompanied throughout the course by the tutors of each module, you can ask them your questions about the audiovisual material, and be supported by an updated library of complementary readings"



Get up to date on the incidence of ICD and cardiac resynchronization therapies in HF, with the most prestigious professionals in Cardiac Rehabilitation Nursing in the national and international scene"

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. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

Discover the latest developments that revolve around the phases of the rehabilitation program, applying the latest techniques in the control of risk factors and monitored exercise.

You will continue to perfect the techniques of invasive treatment, depending on whether it is Intravenous Fibrinolysis or Coronary Angioplasty.





## tech 10 | Objectives



## **General Objectives**

- To provide the student with the necessary theoretical knowledge and the necessary practical resources for the performance of his/her healthcare activity
- Provide 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
- To be able to acquire a comprehensive and updated vision in the field of acute and critical cardiac care that combines hospital, primary and social-health care of patients



Update your knowledge on the functioning of Cardiac Rehabilitation Units and diagnoses according to genetic studies of HF patients with familial cardiomyopathies"







#### Module 1. Heart Failure

- Acquire competence in performing a clinical examination and evaluating treatment effects.
- Provide the student with a comprehensive knowledge of HF, its causes, natural
  history, prevention, diagnosis and treatments based on scientific evidence, including
  pharmacological and non-pharmacological therapies; devices and surgery, with special
  emphasis on drug titration
- Acquire skills in assessing educational and psychosocial needs and providing patient education and psychosocial support

#### Module 2. Cardiac Rehabilitation

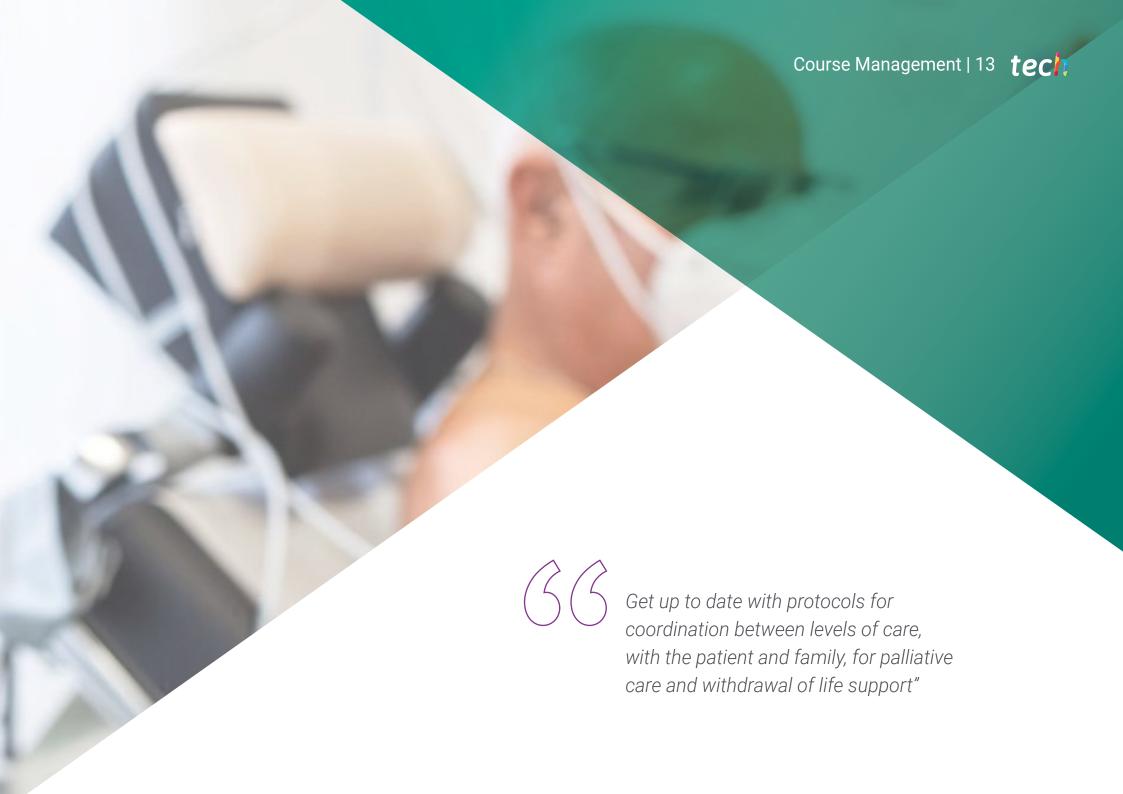
- Analyze the functioning of Cardiac Rehabilitation Units and the different functions of the professionals
- Detect the different cardiovascular risk factors and know the guidelines for their control
- Learn the diagnostic techniques when classifying the prognostic risk of patients
- Know the benefits and application of cardiac rehabilitation programs

## Module 3. Organizational, Diagnostic and Therapeutic Innovation in Endovascular Care

- Emphasize the importance of the nurse's attitude and the way of relating to the patient as a necessary condition to favor the process of change and development of the human being
- In-depth knowledge of the principles of ethics applied to cardiovascular interventions
- Assume the dignity of the person as a central value







## tech 14 | Course Management

## 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



## Course Management | 15 tech

#### **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 the Commission of continuing education of the health professions of the community of Madrid
- Course in Cardiorespiratory Nursing by Alfonso X El Sabio University in Madrid

#### Dr. Baigorri Ruiz, Elda

- Supervisor of the Material Resources Area of the Hospital Clínico San Carlos
- Nurse at the Clinical Hospital San Carlos, in Madrid
- Nurse belonging to the Pain Commission at Clinical Hospital San Carlos, Madrid
- PhD in Nursing and Health Care at the Complutense University of Madrid
- Degree in Nursing at European University of Madrid
- Master's Degree in Health Management and Planning, European University of Madrid
- Master's Degree in Emergency and Critical Care Nursing, European University of Madrid
- Specialist university in Emergency Nursing and Outpatient Emergencies from the European University of Madrid





## tech 18 | Structure and Content

#### Module 1. Heart Failure

- 1.1. General Epidemiology of Heart Failure
  - 1.1.1. Prevalence, Incidence, Hospitalizations and Mortality Due to Heart Failure
  - 1.1.2. Demographic and Clinical Characteristics
- 1.2. Heart Failure Pathophysiology
  - 1.2.1. Pathophysiological Mechanisms: Residual Congestion
  - 1.2.2. Etiology
  - 1.2.3. Classification of Heart Failure
  - 1.2.4. Clinical Manifestations
  - 1.2.5. Prognosis and Risk Stratification
- 1.3. Diagnosis of Heart Failure
  - 1.3.1. Diagnostic Elements: Imaging Techniques
  - 1.3.2. Biomarkers in the Diagnosis and Prognosis of HF
  - 1.3.3. Clinical Assessment of the Hemodynamic Profile
  - 1.3.4. Hemodynamics, Coronary Angiography and Endomyocardial Biopsy
  - 1.3.5. Genetic Study of Patients with HF: Familial Cardiomyopathies
- 1.4. HF Treatment
  - 1.4.1. Non-Pharmacological Treatment. Cardiovascular Education. The Role of the Nurse
  - 1.4.2. Medical Treatment of Chronic HF
  - 1.4.3. Medical Treatment of Acute HF
  - 144 Treatment of HF with Preserved FF
- 1.5. Most Relevant Comorbidities in HF
  - 1.5.1. Metabolic Cardiomyopathies: HF and Diabetes
  - 1.5.2. Cardiorenal Syndrome: Anemia and HF
  - 1.5.3. COPD
  - 1.5.4. HF in Elderly Patients
  - 1.5.5. Congenital Heart Disease in Adults: HF of Valvular Origin
  - 1.5.6. Assessment of Frailty in Patients with HF

- .6. Implantable Devices
  - 1.6.1. Cardiac Arrhythmias and their Treatment for Patients with Heart Failure: Ablation Techniques in HF
  - 1.6.2. Incidence of ICD and Cardiac Resynchronization Therapy in HF
  - 1.6.3. Nursing Care of Patients with Devices
  - 1.6.4. Operation, Alarms and Monitoring of the HF Patient
  - 1.6.5. Remote Monitoring of the HF Patient with these Types of Devices
- 1.7. Advanced HF: Mechanical Circulatory Assistance and Cardiac Transplantation
  - 1.7.1. Ventricular Assist Device: Implantation Types, Techniques and Short-Term Complications
  - 1.7.2. Nursing Care for Patients with a Ventricular Assist Device.
  - 1.7.3. Complications of Ventricular Assist Devices
  - 1.7.4. Ventricular Remodeling Surgery and Revascularization in HF
  - 1.7.5. Cardiac Transplantation
- 1.8. Palliative and Terminal Care
  - 1.8.1. Refractory HF: Pharmacological and Non-Pharmacological Treatment
  - 1.8.2. Palliative Care. Identification of the Terminal Patient
  - 1.8.3. Ethical Conflicts or Dilemmas in the Care of the Terminally III Patient
  - 1.8.4. Coordination between Levels of Care and with the Patient and Family for Palliative Care: Withdrawal of Life Support
- 1.9. The Day Hospital within the HF Unit and New Consultations
  - 1.9.1. Cardio-oncology
  - 1.9.2. Inherited Heart Disease
  - 1.9.3. Pulmonary Hypertension in HF
  - 1.9.4. Cardiorenal
  - 1.9.5. Cardiac Rehabilitation
  - 1.9.6. Sexology



## Structure and Content | 19 tech

- 1.10. The HF Unit Nurse as the Leader of the Entire Care Process
  - 1.10.1. Organization of the Nurse's Consultation: Taking the Clinical History and Patient Assessment
  - 1.10.2. Education and Communication: Conflict Resolution with Patients and Family
  - 1.10.3. Drug Titration: Starting and Target Doses of Each Drug. Problems in Each One of Them and Solutions to Follow
  - 1.10.4. Geriatric Heart Failure, Palliative Care, Coordination and Continuity of Care, Telemedicine and Telemonitoring
  - 1.10.5. Nurse Case Manager
  - 1.10.6. Care Process Management

#### Module 2. Cardiac Rehabilitation

- 2.1. Cardiac Rehabilitation: Evidence and Rationale
  - 2.1.1. Indications
  - 2.1.2. Personal
  - 2.1.3. Material
- 2.2. Risk Factors and Risk Management
  - 2.2.1. High Blood Pressure
  - 2.2.2. Dyslipidemia and Atherosclerosis
  - 2.2.3. Obesity
  - 2.2.4. Diabetes
  - 2.2.5. Sedentary Lifestyle
  - 2.2.6. Tobacco and Other Toxic Habits
  - 2.2.7. Stress and Factors
- 2.3. Diagnostic Tests
  - 2.3.1. ECG

  - 2.3.2. Ergometry
  - 2.3.3. Ergospirometry
  - 2.3.4. Imaging Tests
  - 2.3.5. Catheterization

## tech 20 | Structure and Content

- 2.4. Risk-Based Cardiac Rehabilitation Stratification and Programs
  - 2.4.1. Ischemic Heart Disease
  - 2.4.2. High-Risk
  - 2.4.3. HF
  - 2.4.4. Valvulopathies
  - 2.4.5. Devices (Pacemaker, ICD, CRS)
  - 2.4.6. Heart Attack
  - 2.4.7. Treatments
- 2.5. Phases and Objectives of the Cardiac Rehabilitation Program
  - 2.5.1. Phase 1 During Admission
  - 2.5.2. Phase 2 Outpatient
  - 2.5.3. Phase 3 Maintenance
- 2.6. Cardiac Rehabilitation Exercises
  - 2.6.1. Physical Activity, Exercise and Training
  - 2.6.2. Physiology of Exercise
  - 2.6.3. Principles of Exercise
  - 2.6.4. Prescription of Exercise
- 2.7. Outpatient Cardiac Rehabilitation
  - 2.7.1. Outpatient Cardiac Rehabilitation Models
  - 2.7.2. Programs Guided by Primary Care Teams
  - 2.7.3. Home-Based Programs: Telecare and Virtual CR
- 2.8. Treatments Most Commonly Used by Patients in Cardiac Rehabilitation
  - 2.8.1. Drugs Most Commonly Used by Patients in Cardiac Rehabilitation Programs
    - 2.8.1.1. Nitrates
    - 2.8.1.2. ACE Inhibitors (Angiotensin-Converting Enzyme Inhibitors)
    - 2.8.1.3. Beta-Blockers
    - 2.8.1.4. Calcium Antagonists
    - 2.8.1.5. Platelet Aggregation Inhibitors
    - 2.8.1.6. Anticoagulants
    - 2.8.1.7. Statins



- 2.8.2. Invasive Treatment
  - 2.8.2.1. Intravenous Fibrinolysis
  - 2.8.2.2. Coronary Angioplasty
  - 2.8.2.3. Cardiac Surgery
- 2.9. Advantages of Cardiac Rehabilitation
  - 2.9.1. Benefits of Cardiac Rehabilitation over Conventional Treatment
  - 2.9.2. Working in Multicultural Teams
  - 2.9.3. Work with Groups of Patients
  - 2.9.4. Individualized Work for Each Patient
- 2.10. Results of Rehabilitation Programs
  - 2.10.1. Quality of Life and Prognosis
  - 2.10.2. Return to Daily Life
  - 2.10.3. Adherence to Treatment and Long-Term Lifestyle Changes.
  - 2.10.4. Normalizing the Patient's New Situation
    - 2.10.4.1. Social and Family Relationships
    - 2.10.4.2. Work Relationships
    - 2.10.4.3. Sexuality
    - 2.10.4.4. Sports

## **Module 3.** Organizational, Diagnostic and Therapeutic Innovation in Endovascular Care

- 3.1. Patient Safety
  - 3.1.1. Developing a Culture of Safety
  - 3.1.2. Leading and Supporting Staff
  - 3.1.3. Integrating Risk Management
  - 3.1.4. Promoting Reporting
  - 3.1.5. Engaging and Communicating with Patients and the Public
  - 3.1.6. Learning and Sharing Safety Lessons
  - 3.1.7. Implementing Solutions to Prevent Harm
- 3.2. Health Organizations
- 3.3. Health Management Models
  - 3.3.1. Management Systems Based on the UNE EN ISO 9001 Series of Standards
  - 3.3.2. Joint Commission on Accreditation of Healthcare Organizations (JCAHO) Model
  - 3.3.3. EFQM European Model

- 3.4. Quality Management or Quality in Management
- 3.5. Telemedicine and Health Information System ICT
  - 3.5.1. Electronic Medical Records
  - 3.5.2. Health Information and Data Protection Law
  - 353 Telemedicine
- 3.6. Bioethics and Health Law
  - 3.6.1. Keys to the Nurse-Patient Relationship at the Present Time
  - 3.6.2. Responsibilities in the Civil and Criminal Field
- 3.7. Personalized Care from the Point of View of Autonomy and Independence
  - 3.7.1. We Work with People. We Recognize their Uniqueness
  - 3.7.2. We Work with People. We Promote their Autonomy
  - 3.7.3. We Work with People. Flexible Environments, Facilitators and Support Providers are Created
- 3.8. Person-Centered Cardiovascular Care
  - 3.8.1. Shared Care Processes Between Primary Care and Cardiology
- 3.9. Most Efficient Strategy
  - 3.9.1. Programs that Enable People to Take a More Active Role in Managing Their Health
  - 3.9.2. Providing the Support and Resources Needed to Accept and Implement the Changes
- 3.10. The Patient at the Center of the Organization



You will get an up-to-date diagnosis on restrictive cardiomyopathies and hypertrophic cardiomyopathy, their symptoms, treatments and prognosis"



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.



## tech 24 | Methodology

## 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:

- 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.



## Methodology | 27 tech

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.







## tech 32 | Certificate

This **Postgraduate Diploma in Cardiac Rehabilitation 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 Diploma** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Cardiac Rehabilitation Nursing Official N° of hours: **450 h.** 



Cardiac Rehabilitation Nursing

This is a qualification awarded by this University, equivalent to 450 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Cutal

Guevara Navarro

Dean

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

health confidence people
leducation information tutors
guarantee accreditation teaching
institutions technology learning



# Postgraduate Diploma Cardiac Rehabilitation Nursing

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

