

Postgraduate Certificate

Clinical Fundamentals of Diagnostic Imaging for Nursing





Postgraduate Certificate Clinical Fundamentals of Diagnostic Imaging for Nursing

- » 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/clinical-fundamentals-diagnostic-imaging-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

Diagnostic imaging techniques in cardiology have acquired a more relevant role in recent years thanks to the development of computer technology, which has made it possible to significantly shorten image acquisition times, an essential aspect in the case of an organ in continuous movement, such as the heart. These advances require healthcare professionals who are up to date with the latest developments. With this aim in mind, this 100% online program has been created to enable students to update their knowledge through a teaching team specialized in the field of cardiology.





“

A 6-week course that will allow you to deepen your knowledge of Doppler echocardiography in different cardiac pathologies"

Since the 1980s, the field of diagnostic imaging techniques in cardiology has progressed in both modalities: cardiac magnetic resonance (CMR) and computed cardio-tomography (CTC). This progress has accelerated in recent decades with technological advances. This program, aimed at nursing professionals, seeks as its main objective the updating of knowledge in this field.

That is why this program, taught in 100% online mode, delves into the pathophysiological bases of heart disease, its clinical manifestations and conventional diagnostic techniques. In addition, with innovative multimedia material, the professional will delve into the basic radiological, physical and clinical practice aspects.

The team of expert teachers who teach this university qualification will provide students with simulations of real cases that will be of great use in the usual clinical application. Also, the Relearning system, based on the reiteration of content that TECH applies in all its teachings, will allow you to progress during the 6 weeks of duration of this program, in a more natural way.

An opportunity presented by this educational institution to all professionals who wish to update their knowledge in a more agile and comfortable way. Thus, students who take this qualification will only need an electronic device with internet connection to access the entire syllabus, without attendance or fixed schedules. This will allow you to better distribute the teaching load and make your work responsibilities compatible with a program of high educational level.

This **Postgraduate Certificate in Clinical Fundamentals of Diagnostic Imaging 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



The simulations of real cases in this program will be very useful in your regular clinical practice"

“

Update your knowledge in diagnostic imaging with the help of a highly qualified teaching team"

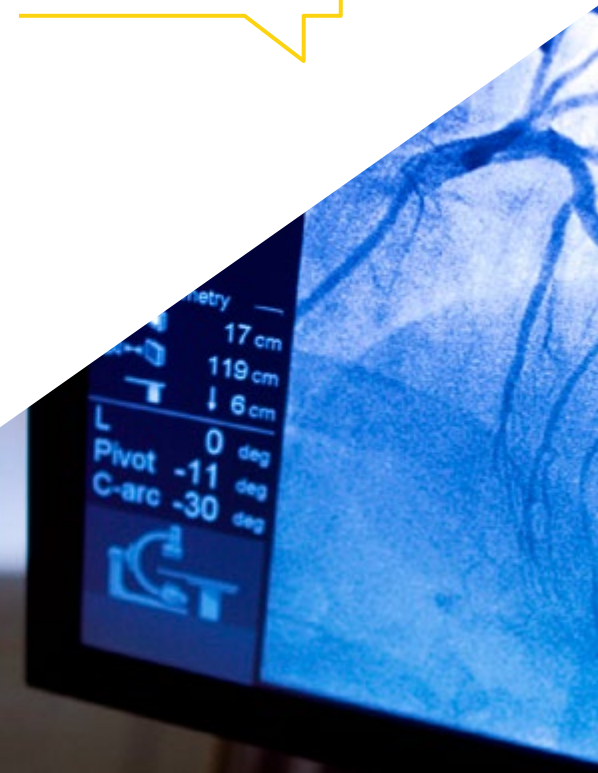
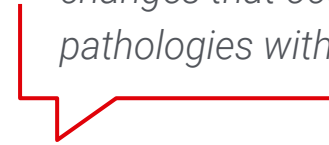
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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, students will be assisted by an innovative interactive video system developed by renowned experts.

In-depth knowledge in the pathophysiological changes that occur in the different cardiac pathologies with a 100% online program.

This is an educational option that will allow you to learn more about chest X-rays while combining it with your work.



02 Objectives

The program aims to provide all students with the most current knowledge on the clinical fundamentals of diagnostic imaging in nursing. Thus, at the end of this course, students will have acquired a renewal of their knowledge about Doppler echocardiography in the different cardiac pathologies and the different types of nuclear cardiology studies. All this with a Relearning system, which will allow you to reduce the long hours of study.



“

Get an up-to-date view on the fundamentals and diagnostic imaging in patients with valvular disease”

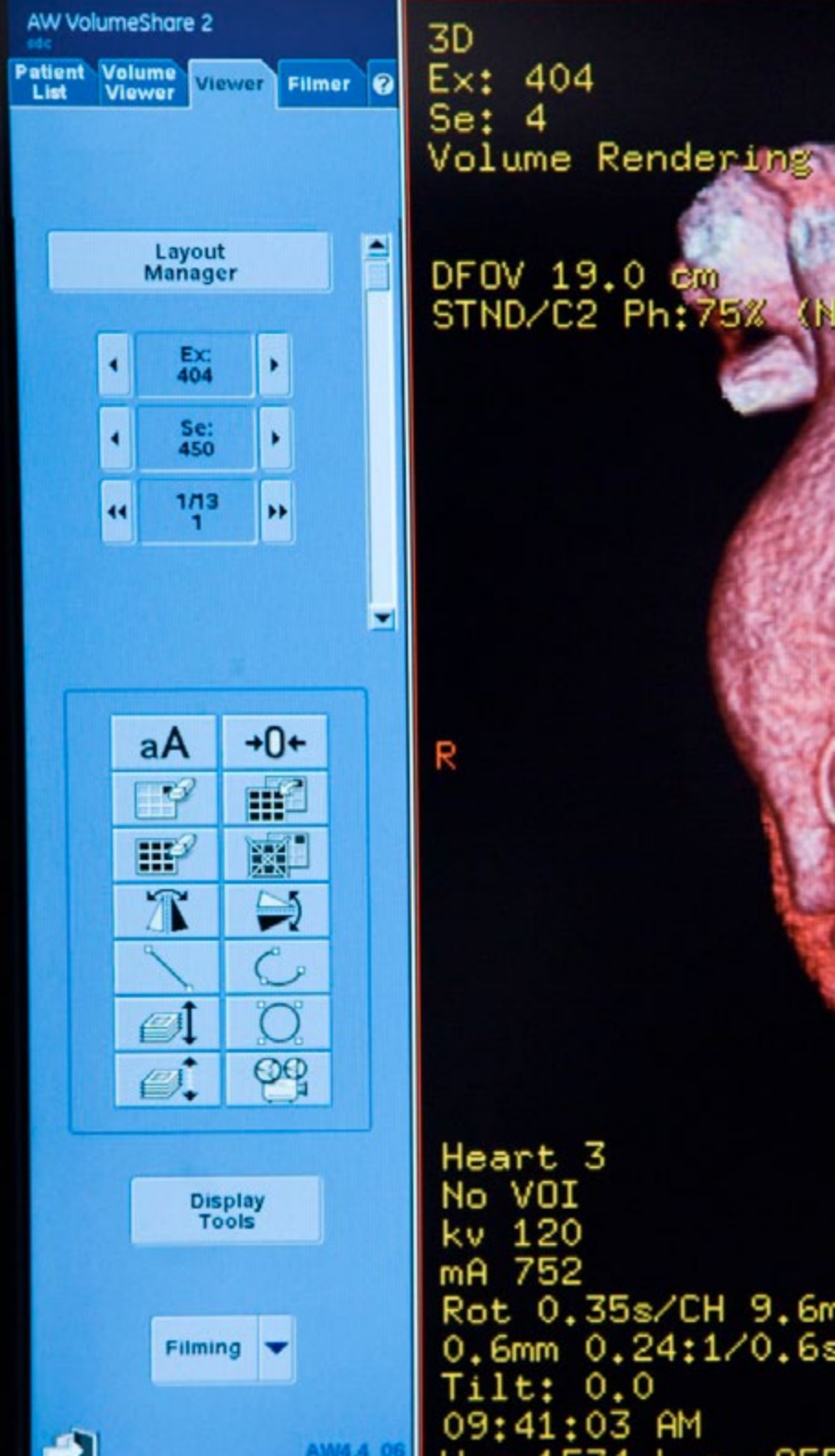


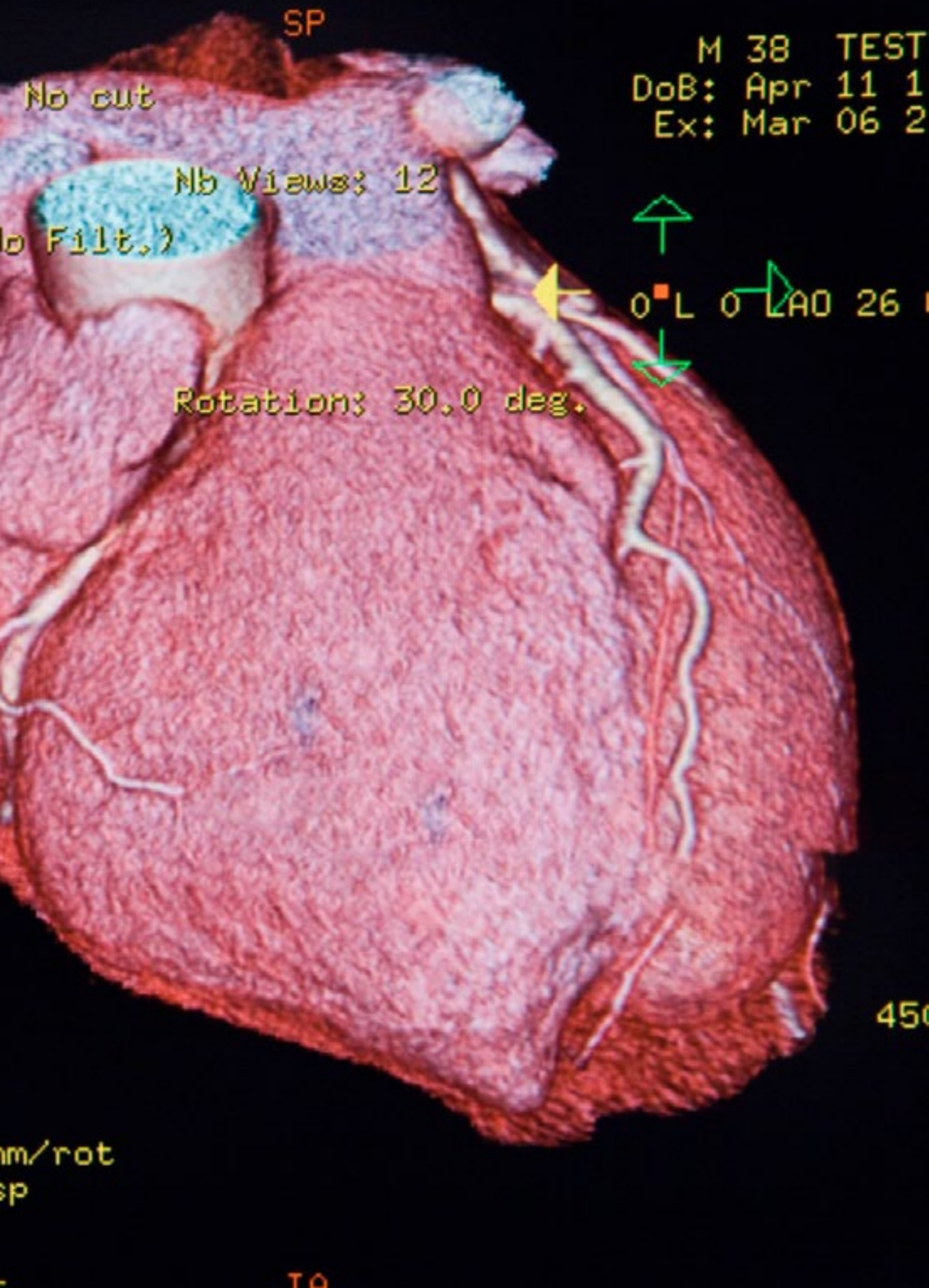
General Objectives

- 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



You have a 24-hour-a-day agenda to keep you up to date on the different types of studies and indications for nuclear cardiology"





Specific Objectives

- Understand the basic anatomical planes that define an echocardiographic study
- In-depth knowledge in the pathophysiological changes that occur in the different cardiac pathologies
- Have notions about the basic aspects to be analyzed with Doppler echocardiography in the different cardiac pathologies
- Learn more about the different types of studies and indications of nuclear cardiology

03

Course Management

TECH rigorously selects the entire teaching team that teaches each of its qualifications with the aim of offering students a high-level education that is accessible to all. In keeping with this philosophy, a highly qualified faculty with extensive experience in the field of care for patients with cardiological problems has been incorporated into this program. The human quality and closeness of the teaching staff will be vital in the progress of this program and in the achievement of the participants' objectives.





“

A specialized teaching team will accompany you over the 180 teaching hours that make up 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

Mr. López García, David

- ♦ Coronary and Hemodynamic Care Nurse Practitioner
- ♦ Nurse at Clinical Hospital San Carlos in Madrid
- ♦ Degree in Nursing at the Francisco de Vitoria University
- ♦ Course of Clinical Electrocardiography. Diagnosis and Treatment of Cardiac Arrhythmias at Clinical Hospital San Carlos in Madrid
- ♦ Course of Essential Concepts in the Hemodynamics Room at Medtronic
- ♦ Course on Coronary and Structural -CSC 21- Nursing at Clinical Hospital San Carlos

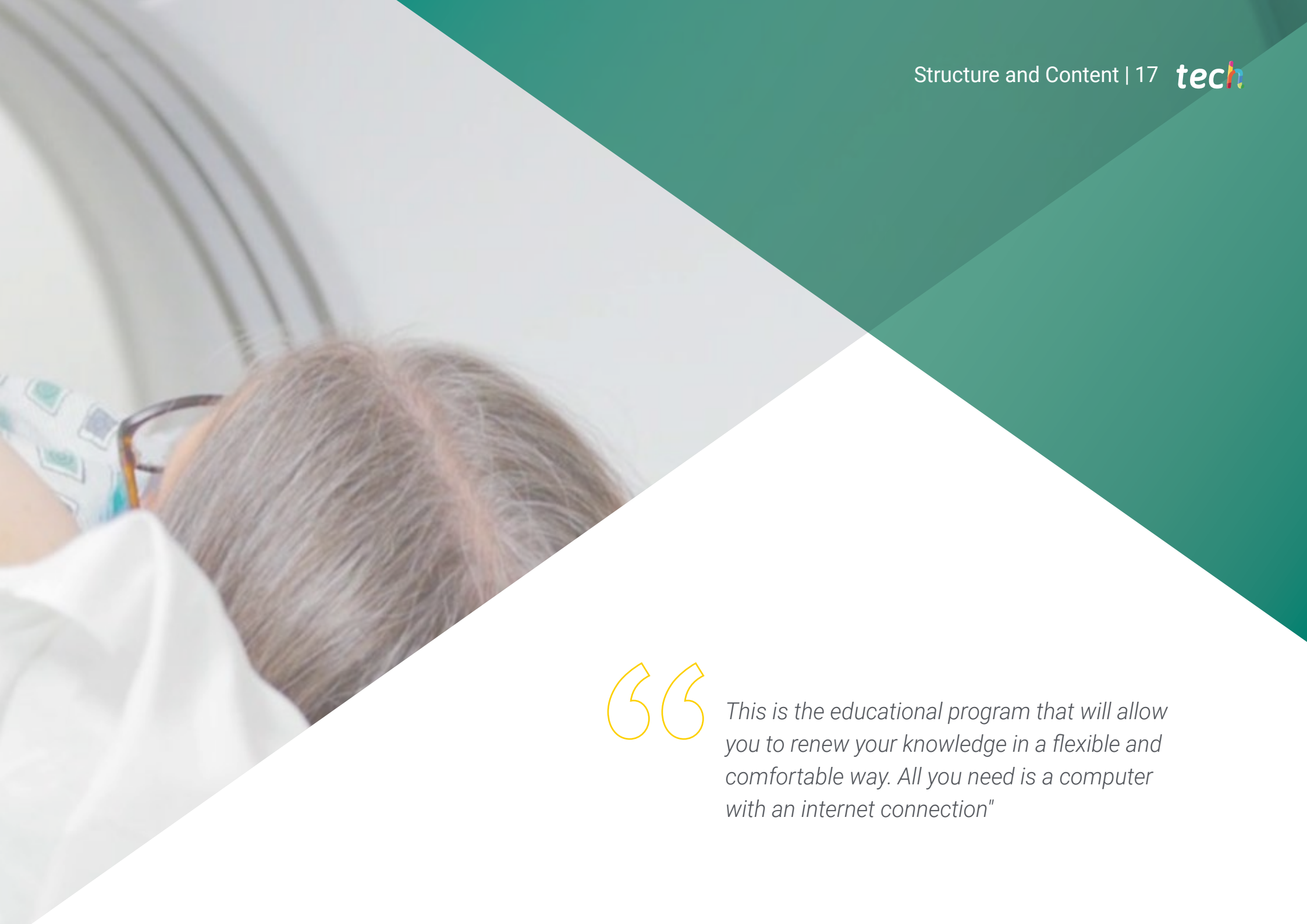


04

Structure and Content

The syllabus of this program is made up of video summaries, specialized readings and real clinical cases, which will allow the nursing professional to acquire an update in a more visual, entertaining and agile way. A process of deepening that will be developed over 6 weeks through the basics of Doppler echocardiography, echocardiography in different cardiac pathologies, the basics in cardioresonance or cardiac CT basics. The complementary material will also allow to extend the syllabus of this program.





“

This is the educational program that will allow you to renew your knowledge in a flexible and comfortable way. All you need is a computer with an internet connection"

Module 1. Clinical Fundamentals of Diagnostic Imaging in Cardiology:
Imaging Techniques

- 1.1. Chest X-Ray
- 1.2. Fundamentals of Doppler Echocardiography
- 1.3. Complete Transthoracic Echocardiography
- 1.4. Transesophageal Echocardiogram
 - 1.4.1. Main Indications
- 1.5. Echocardiogram in the Different Cardiac Pathologies
 - 1.5.1. Echocardiogram in Valvular Diseases
 - 1.5.2. Echocardiogram in Ischemic Heart Disease
 - 1.5.3. Echocardiogram in Emergency Situations
 - 1.5.4. Other Pathologies
- 1.6. Stress Echocardiogram
 - 1.6.1. Indications
- 1.7. Contrast Echocardiogram
 - 1.7.1. Indications
- 1.8. Fundamentals of Nuclear Cardiology
 - 1.8.1. Main Indications
- 1.9. Fundamentals of Cardioresonance
 - 1.9.1. Clinical Applications
- 1.10. Fundamentals of Cardiac CT
 - 1.10.1. Clinical Applications





“

Access to the latest advances in contrast echocardiography and stress echocardiography, thanks to this program"

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.





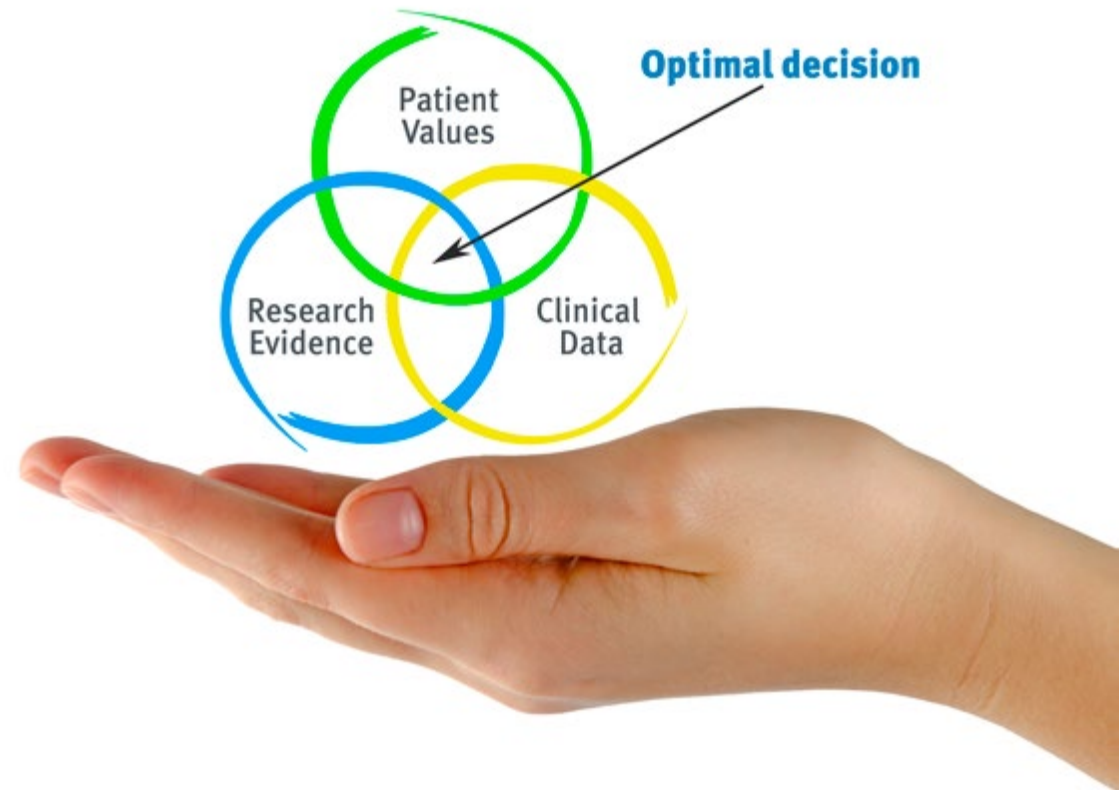
“

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

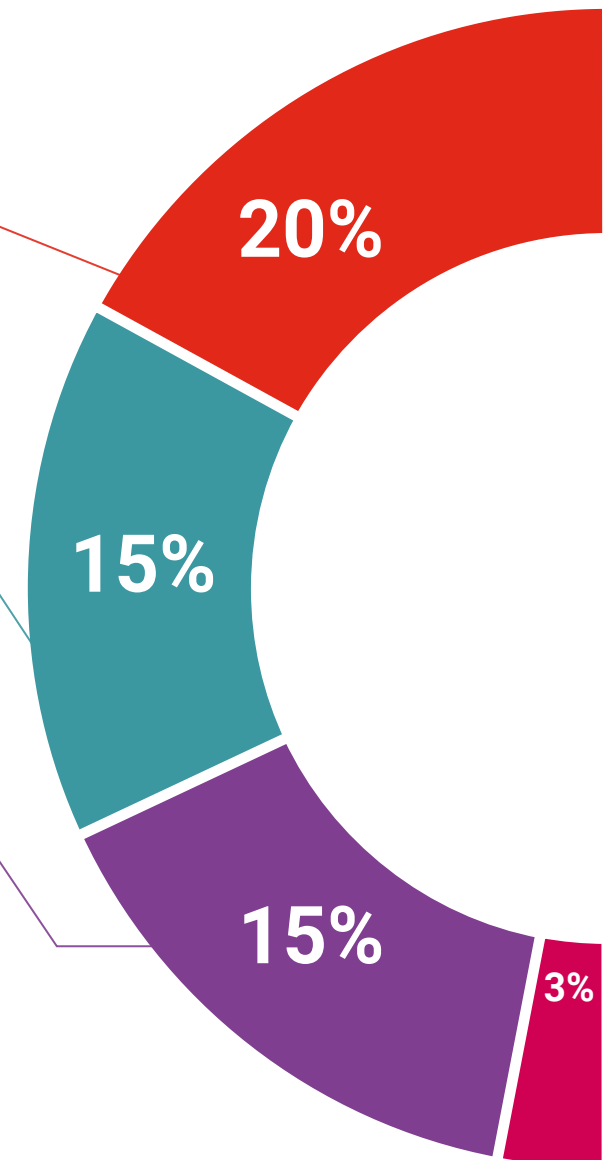
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

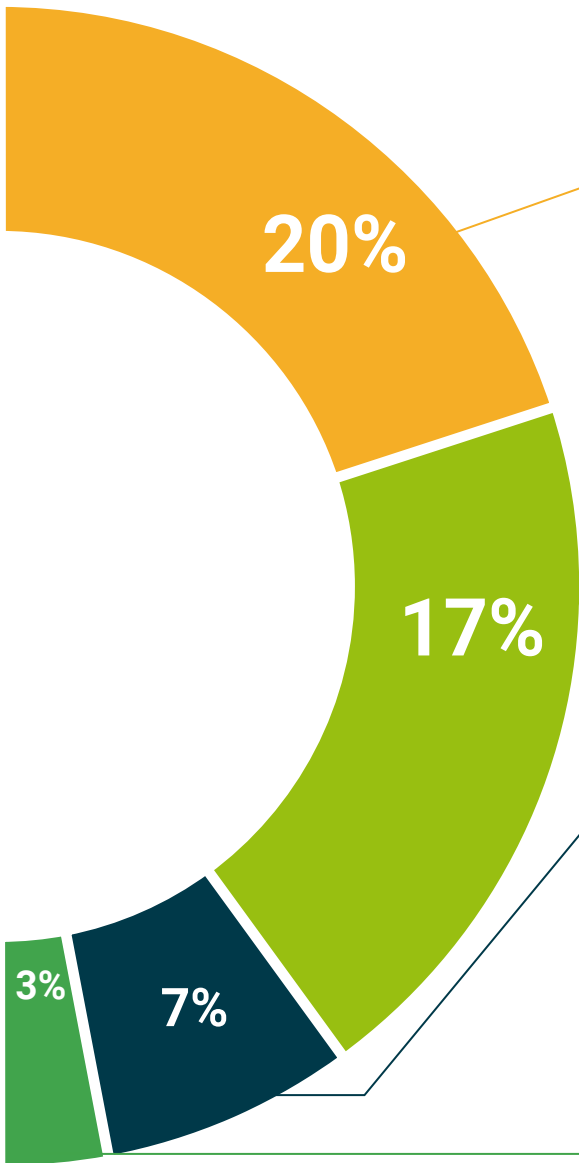
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 Clinical Fundamentals of Diagnostic Imaging for Nursing 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 Clinical Fundamentals of Diagnostic Imaging for 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.

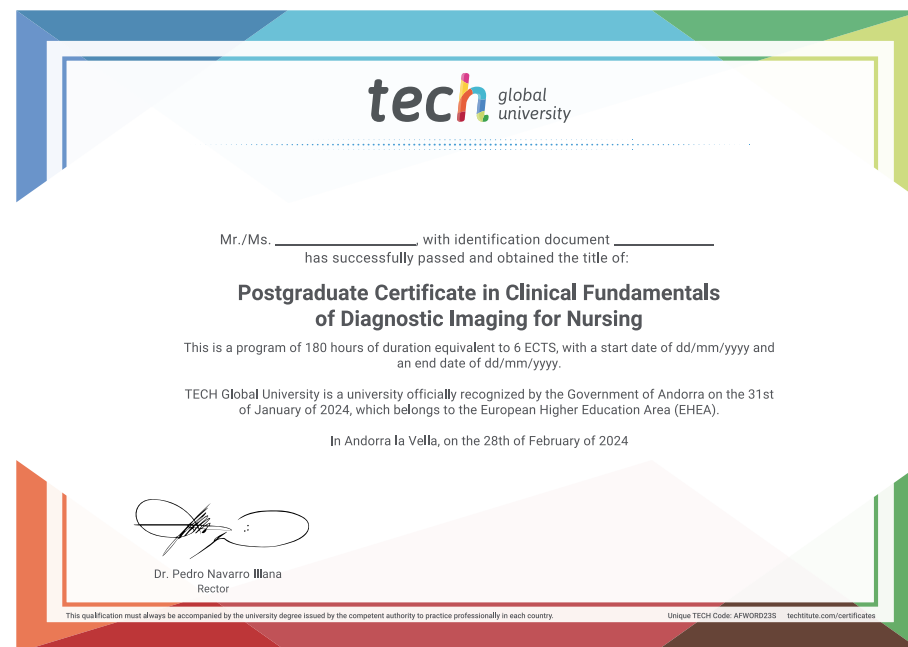
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Clinical Fundamentals of Diagnostic Imaging for Nursing**

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 Clinical Fundamentals of Diagnostic Imaging for Nursing

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

Postgraduate Certificate

Clinical Fundamentals of Diagnostic Imaging for Nursing

