

# Postgraduate Certificate

## Guided Procedures in Radiological Nursing





## Postgraduate Certificate Guided Procedures in Radiological Nursing

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

Website: [www.techtitute.com/pk/nursing/postgraduate-certificate/guided-procedures-radiological-nursing](http://www.techtitute.com/pk/nursing/postgraduate-certificate/guided-procedures-radiological-nursing)

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# 01

# Introduction

Radiological nursing has become a field that is in constant evolution, and within it, guided processes have become a fundamental part, thanks to the various techniques that allow carrying out therapeutic procedures and diagnoses under the guidance of radiological images. In this way, more precise and safer techniques can be performed for the patient, considerably reducing any risk of complications and possible errors at the time of care. Taking into account the above, TECH presents a 100% online program with which nurses will acquire the latest techniques and advances for an efficient assistance from guided procedures.



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*This program will boost your professional career and will help you to offer a more complete and comprehensive patient care, as it includes the latest scientific advances in ultrasound guided procedures"*

Radiological guided procedures are a very useful tool in nursing today. That is why the program is designed for professionals seeking to update their skills and gain new knowledge in performing image-guided procedures. Focusing on the teaching of specialized techniques in medical imaging, the study of ultrasound and the use of high frequency sound waves to create an image from them, handling of advanced equipment for tomography and great technological advances that are available to health care to improve this important field.

The students will not only obtain basic knowledge, but will also perfect skills and the ability to interpret and analyze, take currently known techniques and improve them to give a more effective diagnosis, providing good assistance and constantly seeking an advance in the field.

Undoubtedly, the academic proposal provides high value and is concerned with the development of integral professionals who perform successfully and with great knowledge in the field of radiological procedures; additionally, it satisfies the needs of innovation in nursing professionals, through a flexible program and without the need to follow a fixed schedule, since the graduates have the freedom to self-manage their study time and personal activities.

This **Postgraduate Certificate in Guided Procedures in Radiological Nursing** contains the most complete and up-to-date scientific program on the market.

- The development of case studies presented by experts in Nursing in the area of Diagnostic and Imaging Treatment.
- 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



*The program in Guided Procedures in Radiological Nursing is designed for professionals like you, who are looking to update their skills and gain new knowledge in this field"*

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*You will be able to contribute to the advancement of the field and healthcare in general, by being able to apply the most advanced and up-to-date techniques”*

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

Its multimedia content, developed with the latest educational technology, will provide the professionals with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

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

*You will hone your skills and improve your ability to interpret and analyze radiological images.*

*You will be able to improve and optimize existing procedures to achieve a more efficient diagnosis.*



# 02 Objectives

The design of the program will allow the students to perfect the imaging techniques for the proper diagnosis and treatment of different pathologies, making the student a highly qualified professional to practice in different areas of radiological nursing procedures. Likewise, the professionals will notice that their assistance and analysis skills will be favorably strengthened, completely dominating all the techniques that are applied in the field.







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*Join TECH and achieve all your professional goals in the area of Radiological Nursing”*



## General Objectives

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- ◆ Promote work strategies based on the practical knowledge of a tertiary level hospital and its application in Diagnostic Imaging services
- ◆ Favor the enhancement of technical skills and abilities through care procedures and case studies
- ◆ Provide nurses with a process of updating their knowledge in the field of Radiology
- ◆ Be up to date with the care management and organization of the Diagnostic Imaging and Treatment Area, in order to optimize the operation of the Radiology Service
- ◆ Develop skills and competencies in nurses for their performance in the nursing consultation in the Diagnostic Imaging and Treatment Department (DTI)
- ◆ Expand nurses' knowledge of radiation oncology, interventional vascular radiology and neuroradiology to improve patient care in these specific areas
- ◆ Develop nurses' skills in performing image-guided procedures, including breast and brachytherapy, to improve the quality of patient care and optimize clinical outcomes





## Specific Objectives

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- ◆ Discover ultrasound-guided interventionism, as well as the nursing procedures performed
- ◆ Update knowledge on the radiological techniques developed in Telemando
- ◆ Delve into the Optical Coherence Tomography
- ◆ Delve into X-ray absorptiometry, its indication, preparation, results and benefits
- ◆ Value the importance of imaging in hemodynamics
- ◆ Be up to date in the different nursing techniques that are performed with ultrasound: catheterization, vascular access, etc
- ◆ Describe what a Cholangiopancreatography is and the role of imaging in the development of lithotripsy
- ◆ Delve into the archiving tools widely used nowadays in imaging services, PACs, image archiving and communication systems

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*This academic program will allow you to update you on the latest advances in guided procedures in Radiological Nursing. Don't wait any longer and enroll"*

03

# Course Management

TECH has provided for the development of the Postgraduate Certificate in Guided Procedures in Radiological Nursing to highly reputable professionals, which makes it a program of high academic and pedagogical rigor. Considering the challenges presented in the professional field, it is important to highlight that these professionals have participated in important research projects and throughout their careers have been committed to the health service.





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*You will have the support and experience of highly qualified professionals who have participated in major research projects”*

## Management



### Ms. Viciano Fernández, Carolina

- Nurse in the Radiodiagnosis and Nuclear Medicine
- Postgraduate Certificate in Nursing
- Professional Master's Degree in Pediatric Nursing
- University Specialist in Emergency and Catastrophe Nursing
- University Specialist in Nursing in the Surgical Area
- Nuclear Medicine Radioactive Installations Operator License by the Nuclear Safety Council



### Ms. García Argüelles, MARÍA Noelia

- Area Supervisor of Diagnostic Imaging and Treatment at the Asturias University Central Hospital
- Professor in the Department of Medicine at the University of Oviedo
- Professor at numerous conferences and congresses, including the Congress of the Society of Radiological Nursing
- Postgraduate Certificate in Nursing
- Professional Master's Degree in Prevention Management in the Company
- Professional Master's Degree in Urgency, Emergencies and Catastrophes
- Member of the panel of auditors authorized by the Quality Assessment Unit of the Health Service of the Principality of Asturias
- Certificate of Pedagogical Aptitude for Secondary Education Teachers
- Radioactive Facilities Operator License in Nuclear Medicine by the Nuclear Safety Council

## Professors

### Mr. Castaño Pérez, Jesús

- ♦ Nurse in the Interventional Vascular Radiology Service at Central University Hospital of Asturias
- ♦ Tutor of MIR Residents in the Specialty of Family and Community Medicine
- ♦ Honorary Collaborator at the University of Oviedo, attached to the Department of Medicine
- ♦ University Diploma in Nursing
- ♦ Specialist Technician in Radiodiagnosis
- ♦ Postgraduate Diploma in Surgical Fields in Nursing
- ♦ Specialist in Family and Community Nursing
- ♦ Nuclear Safety Council Radioactive Facilities Operator's License

### Ms. Rodríguez Manzano, María Ángeles

- ♦ Supervisor of the Radiation Oncology Service at the Central University Hospital of Asturias
- ♦ Teaching collaborator in AGORASTUR, training in theoretical and practical workshops for auxiliary nursing care technicians
- ♦ Postgraduate Certificate in Nursing
- ♦ Postgraduate Diploma in Hemotherapy
- ♦ Specialist in Intensive Care Nursing
- ♦ Postgraduate Diploma in Dialysis
- ♦ Specialist in Family and Community Nursing
- ♦ Radioactive Facilities Operator License in Radiotherapy. Nuclear Safety Council
- ♦ Teaching collaborator in AGORASTUR, training in theoretical and practical workshops for auxiliary nursing care technicians

### Ms. Busta Díaz, Mónica

- ♦ Supervisor of the Nuclear Medicine Service at the Central University Hospital of Asturias
- ♦ Postgraduate Certificate in Nursing
- ♦ Bachelor's Degree in History
- ♦ Postgraduate Diploma in Intensive Care Unit Nursing
- ♦ Postgraduate Diploma in in Dialysis Nursing
- ♦ Postgraduate Diploma in Surgical Fields in Nursing
- ♦ Postgraduate Diploma in Hemotherapy
- ♦ Nuclear Medicine Radioactive Installations Operator's License. Nuclear Safety Council
- ♦ Member of: Scientific Committee during the XX Congress of the Spanish Society of Radiological Nursing 2022

### Ms. Álvarez Noriega, Paula

- ♦ Supervisor of the Radiodiagnostics Service at the Central University Hospital of Asturias
- ♦ Honorary Collaborator attached to the Department of Medicine of the University of Oviedo and the Adolfo Posada Institute
- ♦ Postgraduate Certificate in Nursing
- ♦ Professional Master's Degree in Prevention Management in the Company
- ♦ Professional Master's Degree in Support Treatment and Palliative Care in Oncology Patients
- ♦ Postgraduate Diploma from in Hemotherapy Nursing
- ♦ Nuclear Medicine Radioactive Installations Operator License by the Nuclear Safety Council

# 04

## Structure and Content

The syllabus of this Postgraduate Certificate in Guided Procedures in Radiological Nursing includes modules that offer a broad spectrum of topics such as microbubble contrast ultrasound, ultrasound-guided nursing techniques and optical coherence tomography. Other relevant aspects are dual energy X-ray absorptiometry, hemodynamics, cholangiopancreatography, lithotripsy and PACs (Picture Archiving and Communication Systems). This module is therefore useful for those seeking to broaden their knowledge of image-guided procedures and acquire skills to perform them.







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*The key to your learning success is an expertly designed syllabus and quality content”*

## Module 1. Other Image-Guided Procedures

- 1.1. Ultrasound-Guided Interventions. Part One
  - 1.1.1. Principles of Ultrasound
  - 1.1.2. Pediatric radiology
    - 1.1.2.1. Echocystography
    - 1.1.2.2. Intussusception (invaginations)
    - 1.1.2.3. PAAF and BAG
  - 1.1.3. Thyroid FNA
  - 1.1.4. MSK BAG (musculoskeletal)
  - 1.1.5. Ultrasound-guided fine needle interventionism and ultrasound-guided lavage of shoulder calcifications
- 1.2. Ultrasound-Guided Interventions. Second part. Core Needle Ultrasound Guided Interventional Procedures in Hepatic and Renal Pathology.
  - 1.2.1. Hepatic BAG
  - 1.2.2. Renal BAG
    - 1.2.2.1. Native kidney
    - 1.2.2.2. Renal graft
- 1.3. Other ultrasound procedures
  - 1.3.1. Ultrasound with Microbubble contrast
  - 1.3.2. Ultrasound-guided nursing techniques
  - 1.3.3. Ultrasound with Prostaglandin or Cavernosography
- 1.4. Radiological tests in the remote control
  - 1.4.1. Retrograde cystourethrograms
  - 1.4.2. Hysterosalpingography
  - 1.4.3. Gastroduodenal esophageal transit (GORD) and intestinal transit.
  - 1.4.4. Opaque enema
  - 1.4.5. Videodeglutition
  - 1.4.6. Trans-Kher cholangiography
  - 1.4.7. Myelography
- 1.5. Optical Coherence Tomography(OCT)
  - 1.5.1. The eye as an image-forming system
  - 1.5.2. Principles of OCT
  - 1.5.3. Role of Nurses





- 1.6. Dual-energy X-ray absorptiometry or bone density examination (DEXA or DXA)
  - 1.6.1. Osteoporosis and Indications of the Technique
  - 1.6.2. DXA preparation and examination
  - 1.6.3. Results and benefits
- 1.7. Hemodynamics
  - 1.7.1. Introduction
  - 1.7.2. Indications
  - 1.7.3. Nursing Care
- 1.8. Cholangiopancreatography (CPR)
  - 1.8.1. Introduction
  - 1.8.2. Indications
  - 1.8.3. Nursing Care
- 1.9. Lithotripsy
  - 1.9.1. Introduction
  - 1.9.2. Indications
  - 1.9.3. Nursing Care
- 1.10. PACs, Picture Archiving and Communication Systems
  - 1.10.1. Definition and objectives
  - 1.10.2. Components
    - 1.10.2.1. Image Acquisition
    - 1.10.2.2. Communication Networks
  - 1.10.3. Image Management, Visualization and Processing
  - 1.10.4. Types of Storage
  - 1.10.5. Image production classification



*We offer you the latest in academics to make you a first-class professional"*

# 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.



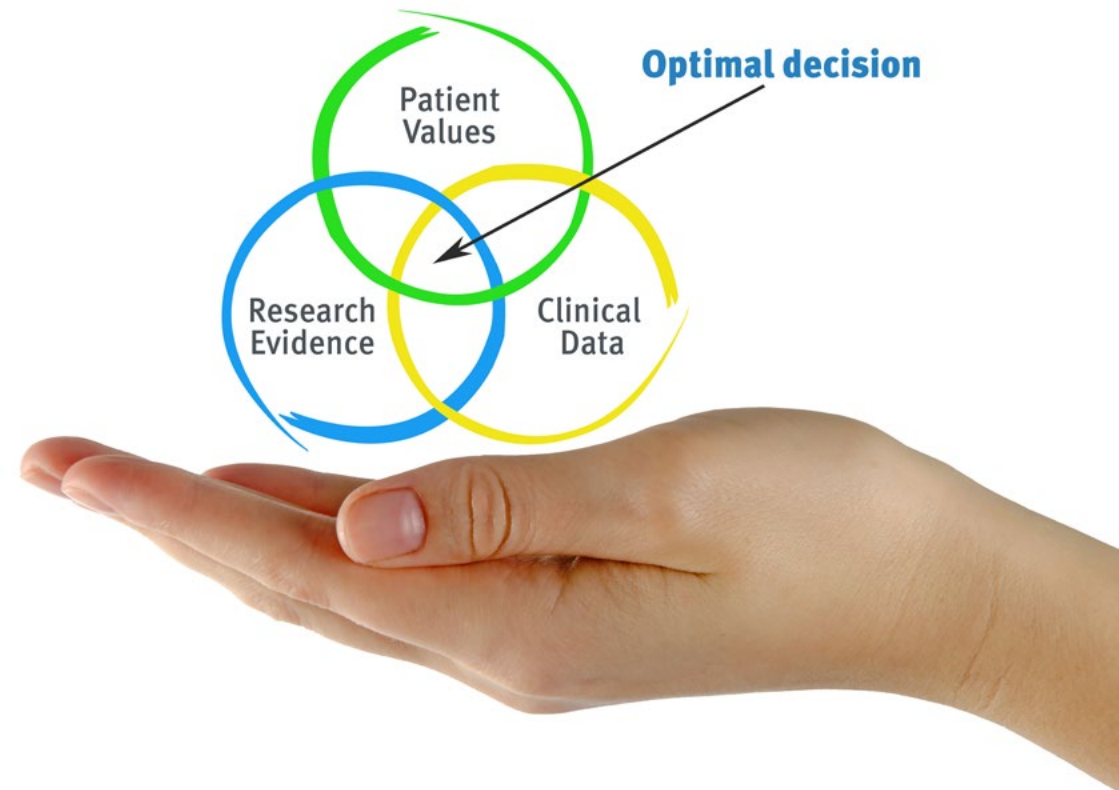
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## 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.

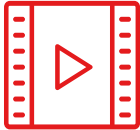
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

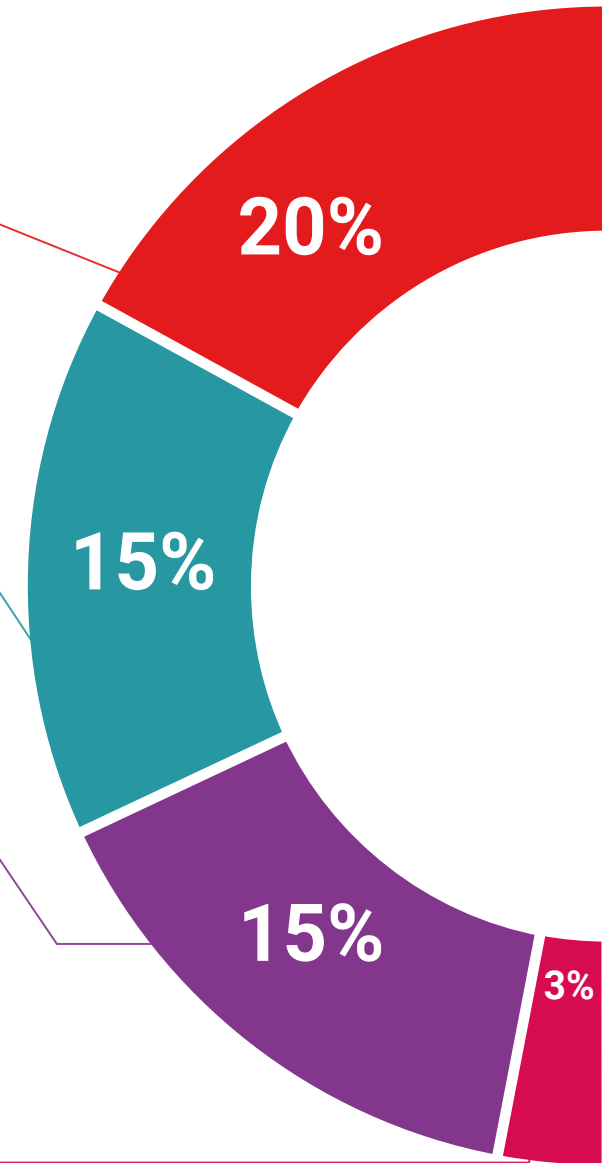
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

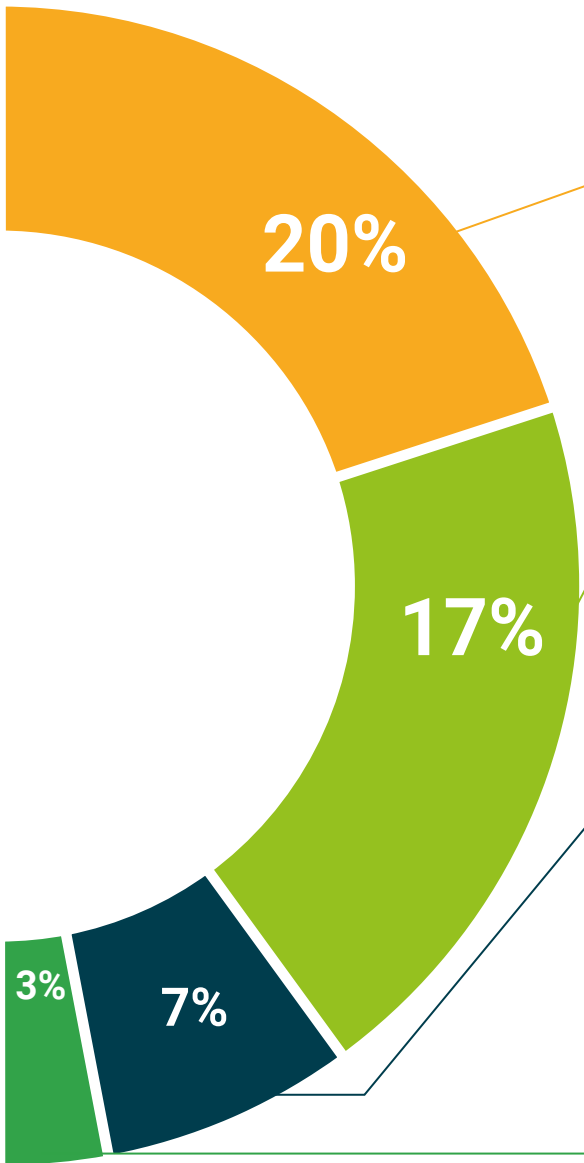
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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



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

This **Postgraduate Certificate in Guided Procedures in Radiological Nursing** contains the most complete and up- in-date scientific program on the market.

After the students have 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 Guided Procedures in Radiological Nursing**

Official No. 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.

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



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