



Postgraduate Certificate

Single Photon Emission Nuclear Medicine

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

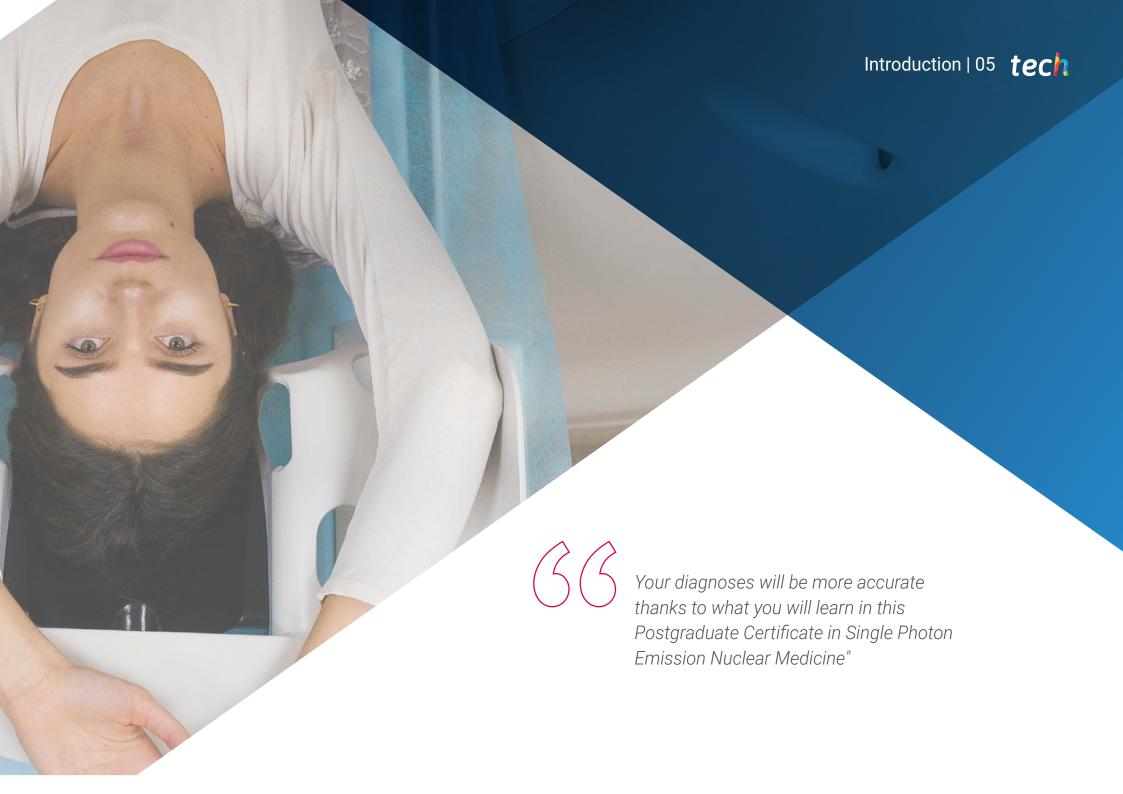
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tech 06 | Introduction

Nuclear Medicine can provide numerous solutions for diagnosis and treatment. One of the aspects for which it is most valued is its precision, since it presents more concrete information than other observation methods. In addition, their methods are often minimally invasive, which is a great advantage for patients.

This is the case with single photon emission tomography, which provides accurate data using a minimally invasive technique. This makes it a procedure that today's physicians want to master, since it is useful and Nuclear Medicine services require specialized professionals who know how to use it properly.

For that reason, this Postgraduate Certificate in Single Photon Emission Nuclear Medicine is a great opportunity for all those physicians who wish to advance in this area, either by updating their knowledge or by learning new skills that will give them access to a great Nuclear Medicine service.

To this end, this qualification, which follows a 100% online learning method that adapts to the circumstances of each student, offers content that focuses on the application of this technique to monitor organs and cardiological, osteoarticular or pneumological pathologies, as well as oncological diseases, thromboembolisms or transplants. In this way, students completing the qualification will be able to advance their careers thanks to the wealth of new skills they will gain from it.

This **Postgraduate Certificate in Single Photon Emission Nuclear Medicine** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- The development of case studies presented by experts in Nuclear Medicine and in the specialty of Single Photon Emission
- The graphic, schematic, and eminently 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



Specialization is the key in Nuclear Medicine. Take this Postgraduate Certificate and become a great expert in Single Photon Emission Tomography"



The best Nuclear Medicine services in the country will want to have you when you have completed this excellent program"

The program's teaching staff includes professionals from the sector who contribute their work experience to this training 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 training programmed to train 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 during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

With this Postgraduate Certificate you will be able to update your knowledge to continue being a great specialist in Nuclear Medicine.

Achieve progress in your Nuclear Medicine service thanks to what you will learn in this qualification.







tech 10 | Objectives



General Objectives

- Update the specialist in Nuclear Medicine
- Perform and interpret functional tests in an integrated and sequential manner
- Achieve diagnostic guidance for patients
- Assist in deciding the best therapeutic strategy, including radiometabolic therapy, for each patient
- Learn about the new therapies of Nuclear Medicine







Specific Objectives

- Show characteristic imaging patterns for new pathologies
- Know the causes of diagnostic error
- Update on advances in conventional Nuclear Medicine in a practical way

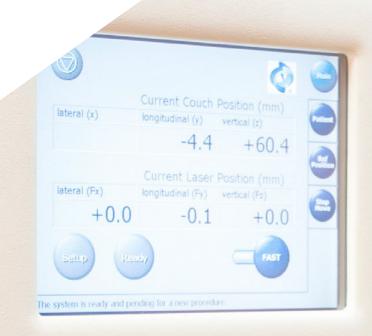


Enroll now and watch your prestige increase thanks to your new skills in Nuclear Medicine"

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Course Management

This Postgraduate Certificate in Single Photon Emission Nuclear Medicine is taught by real experts in the field and they will provide all their knowledge to the students. Thus, they will be able to learn the skills that are currently required in the field of Nuclear Medicine, being able to apply them directly in their professional environments. For that reason, this qualification has a practical approach that facilitates the learning process for students.







Learn from the best how to perform single photon emission tomography and diagnose with great precision numerous pathologies"

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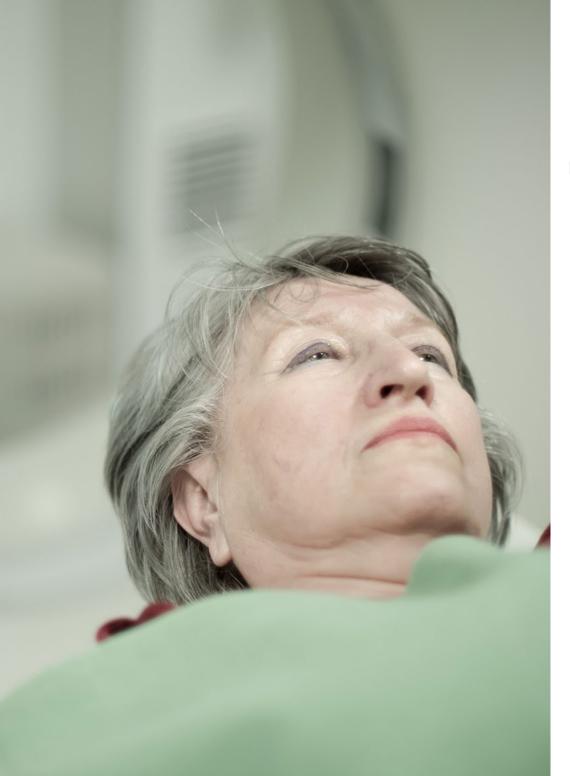
Management



Dr. Mitjavila, Mercedes

- Head of Nuclear Medicine Service Puerta de Hierro University Hospital Majadahonda, Madrid
- Project Manager of the Nuclear Medicine Unit in the Diagnostic Imaging Department of the Alcorcón Foundation University Hospital
- Head of Service of Nuclear Medicine of the Puerta de Hierro Hospital, Majadahonda, Competitive examination BOCM
- Degree in Medicine and General Surgery from the University of Alcalá de Henares
- MIR in Nuclear Medicine Specialist by the MIR System
- PhD in Medicine and General Surgery from the University of Alcalá de Henares
- Interim Physician of the Nuclear Medicine Service of the Ramón y Cajal Hospital
- Interim Physician in the Nuclear Medicine Unit at Getafe University Hospital





Professors

Dr. Paniagua Correa, Cándida

- Medical Specialist in Nuclear Medicine with practice at Getafe Hospital
- Professional practice as a Nuclear Medicine Specialist in the Nuclear Medicine Department of the Quirón Madrid University Hospital
- Collaborating professor in the training of residents in the specialty of Nuclear Medicine at the Getafe Hospital
- Degree in Medicine and Surgery from the Complutense University
- Specialist in Nuclear Medicine. MIR at the University Hospital of Getafe
- PhD in Dermatology Complutense University of Madrid
- Radioactive Facilities Supervisor License issued by the Nuclear Safety Council
- Member of Spanish Society of Nuclear Medicine





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Module 1. Single Photon Emission Nuclear Medicine: "Pearls and Pitfalls"

1.1. Pneumology

- 1.1.1. Perfusion/Ventilation
- 1.1.2. Pulmonary Thromboembolism
- 1.1.3. Pulmonary Hypertension
- 1.1.4. Lung Transplant
- 1.1.5. Pleuroperitoneal Fistula: Cirrhotic Patient, Peritoneal Dialysis

1.2. Cardiology

- 1.2.1. Perfusion: Ischemic Heart Disease, Cellular Viability, Contribution
- 1.2.2. GATED, Myocarditis
- 1.2.3. Shunt: Left-Right, Right-Left
- 1.2.4. Ventricular Function: Ischemic Cardiopathy, Cardiotoxicity
- 1.2.5. Cardiac Innervation: Cardiac Pathology, Neurological Pathology

1.3. Vascular and Lymphatic System

- 1.3.1. Peripheral Endothelial Function
- 1.3.2. Lower Limb Perfusion
- 1.3.3. Lymphogrammagraphy

1.4. Osteoarticular

- 1.4.1. Primary Benign and Malignant Tumor Pathology: Planar Imaging
- 1.4.2. Hybrid Image Contribution
- 1.4.3. Bone Metastasis: Contributions of SPECT and SPECT/CT, Usefulness in Diagnosis and Monitoring
- 1.4.4. Benign Pathology: Metabolic Disease, Sports Pathology

1.5. Nephrourology

- 1.5.1. Assessment of Renal Malformations
- 1.5.2. Obstructive Pathology: Hydronephrosis in Pediatric Age: Diagnosis and Monitoring, Adult Hydronephrosis, Urinary Diversion Study
- 1.5.3. Pyelonephritis: Initial Diagnosis, Evolution
- 1.5.4. Renal Transplantation: Rejection, Tubular Necrosis, Nephrotoxicity, Urinary Leakage
- 1.5.5. Vasculorenal Hypertension: Diagnosis, Monitoring
- 1.5.6. Glomerular Filtration and Effective Renal Plasma Flow
- 1.5.7. Cystogammagraphy: Direct and Indirect in the Diagnosis and Monitoring of





Structure and Content | 19 tech

Vesicoureteral Reflux

- 1.6. Gastroenterology
 - 1.6.1. Salivary Glands: Autoimmune Pathology, Post-radiation Damage, Salivary Gland Tumors
 - 1.6.2. Digestive Transit: Esophageal Transit, Gastroesophageal Reflux, Pulmonary Aspiration, Gastric Emptying
 - 1.6.3. Gastrointestinal Bleeding: Study with Labeled Red Blood Cells, Study with Radiocolloids
 - 1.6.4. Hepatobiliary Pathology: Aliasic Cholecystitis, Hepatic Functional Reserve Assessment, Hepatic Transplantation (Rejection, Biliary Leakage), Biliary Tract Atresia
 - 1.6.5. Bile Acid Malabsorption
 - 1.6.6. Inflammatory Bowel Disease: Diagnosis, Monitoring and Complications
 - 1.6.7. Hepatic Space-Occupying Lesion: Hepatic Hemangioma, Focal Nodular Hyperplasia vs. Adenoma
 - 1.6.8. Cell Labeling: Method and Indications
 - 1.6.9. Red Blood Cells: In Vivo, In Vitro, In Vivitro
 - 1.6.10. Leukocytes
- 1.7. Splenic Pathology
 - 1.7.1. Hepatic Space-Occupying Lesions: Hemangioma, Hamartoma
 - 1.7.2. Splenosis: Study with Denatured Labeled Red Cells
 - 1.7.3. Cell Hijacking
- 1.8. Endocrinology
 - 1.8.1. Thyroid: Hyperfunctioning Thyroid (Autoimmune, Thyroiditis), Thyroid Nodule, Differentiated Thyroid Carcinoma
 - 1.8.2. Parathyroid: Hyperfunctioning Gland Location
 - 1.8.3. Adrenal Glands: Adrenal Cortex Pathology (Hypercortisolism, Hyperaldosteronism), Adrenal Medulla Pathology (Hyperplasia, Pheochromocytoma), Adrenal Incidentaloma
- 1.9. Neurology SPECT vs. PET:
 - 1.9.1. Cognitive Impairment: Characteristic Patterns and Differential Diagnosis
 - 1.9.2. Movement Disorders: Parkinson's Disease, Parkinson Plus and Differential Diagnosis
 - 1.9.3. Epilepsy: Preoperative Assessment, Acquisition Protocols
- 1.10. Oncology: Tumor Viability, Radionecrosis vs. Progression
 - 1.10.1. Brain Death
 - 1.10.2. Cerebrospinal Fluid (CSF)-Cysternogammography Kinetics: Hydrocephalus, CSF Leakage





tech 22 | Methodology

At TECH we use the Case Method

What should a professional do in a given situation? 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. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning 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, trying to recreate the real conditions in the physician's professional 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:

- Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
- 2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
- 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 Harvard case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



Methodology | 25 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, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. 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.

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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 highly 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.



Surgical Techniques and Procedures on Video

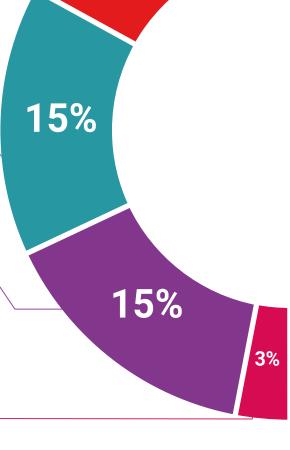
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



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 multimedia content presentation training Exclusive system 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 your goals.



Classes

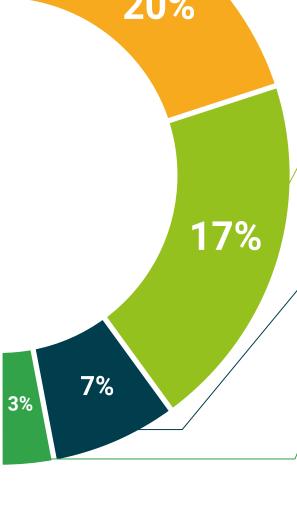
There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



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.









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This **Postgraduate Certificate in Single Photon Emission Nuclear Medicine** contains the most complete and up-to-date educational program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma 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 Single Photon Emission Nuclear Medicine
Official N°of Hours: 150 h.



^{*}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.

technological university

Postgraduate Certificate

Single Photon Emission **Nuclear Medicine**

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

