

# Postgraduate Certificate Nuclear Medicine in Pediatrics



## Postgraduate Certificate Nuclear Medicine In Pediatrics

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

Website: [www.techtute.com/pk/medicine/postgraduate-certificate/nuclear-medicine-pediatrics](http://www.techtute.com/pk/medicine/postgraduate-certificate/nuclear-medicine-pediatrics)

# 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

Children's health is one of the most important issues in society. For that reason, new treatments, techniques and areas of specialization focused on pediatrics such as Nuclear Medicine often emerge. This discipline has highly effective techniques for detecting and combating pathologies affecting children. Thus, Nuclear Medicine services are increasingly looking for specialists in this area, so this qualification can be a great professional opportunity to achieve a significant professional advancement thanks to the new skills acquired in the field of Nuclear Medicine applied to Pediatrics.



“

*Apply the best Nuclear Medicine procedures to pediatric patients and increase your prestige thanks to this Postgraduate Certificate”*

Children represent an important segment of the population, not only numerically but also socially. Children represent the present and future of every region, and their young age makes them especially vulnerable to various threats and dangers. For this reason, it is important to have the best tools in the field of health that can respond to the different problems that may arise in this regard.

Nuclear Medicine is one of the areas with the greatest development in medicine in recent years, and offers very precise, effective and minimally invasive diagnostic procedures and treatments, which makes it a very attractive and promising specialization for many doctors.

This Postgraduate Certificate in Nuclear Medicine in Pediatrics offers its students the possibility of becoming experts in this discipline, so that they can have access to up-to-date knowledge in the field and to the best Nuclear Medicine services in the country thanks to the new skills they have acquired.

Thus, throughout this qualification, students will be able to delve into issues such as non-FDG tracers, procedures such as PET-CT and PET-MRI applied to children and young adults, and will learn how to monitor cardiopulmonary pathologies, the endocrine system or the gastrointestinal system in these types of patients. All this new knowledge will bring students closer to success and professional prestige, thus providing a great opportunity to advance their careers in the field of medicine.

In addition, thanks to TECH's innovative 100% online teaching methodology, students will be able to combine their studies with their personal lives and jobs, while learning in a fluid and direct way through the use of case studies and dynamic exercises with which they will be able to develop a wealth of new competencies and skills.

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

- ◆ The development of case studies presented by experts in Nuclear Medicine and Pediatrics
- ◆ 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



*Nuclear Medicine has numerous applications in pediatric patients: specialize in this booming area now"*

“ *Nuclear Medicine is minimally invasive, which makes it perfect for pediatric patients. Enroll now and improve your professional skills*”

*When you finish this qualification, you will have increased your medical prestige thanks to what you will learn throughout its development.*

*Nuclear Medicine is the present and the future: do not miss this opportunity and take this complete program now.*

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.



# 02 Objectives

The main goal of this Postgraduate Certificate in Nuclear Medicine in Pediatrics is to turn its students into prestigious physicians who master the practical applications of this field in children, so that they can offer the best diagnoses and treatments in their offices. Thus, at the end of this qualification, students will be in a position to advance professionally and be able to access some of the best Nuclear Medicine services in the country thanks to everything they will have learned.







“

*Specialize in Nuclear Medicine applied to Pediatrics and achieve all your professional goals”*



## General Objectives

---

- ◆ Understand the particularities of Nuclear Medicine applied to pediatric patients
- ◆ Update the specialist in Nuclear Medicine
- ◆ Perform and interpret functional tests in an integrated and sequential manner
- ◆ Achieve diagnostic guidance for patients
- ◆ Apply clinical and biochemical criteria for the diagnosis of infections and inflammations
- ◆ Learn about the new therapies of Nuclear Medicine



*Do not miss this opportunity to position yourself as a great specialist in Nuclear Medicine applied to Pediatrics with this high-level qualification”*





## Specific Objectives

---

- ◆ Delve into the specific characteristics of Nuclear Medicine studies in pediatrics
- ◆ Cover aspects of test indication, acquisition protocols with appropriate choice of radiopharmaceutical and instrumentation characteristics
- ◆ Optimization of dosimetric parameters
- ◆ Interpret images and know the different pathologies by organs and systems and differential diagnosis
- ◆ Understand the best diagnostic strategy with proper sequencing of tests while minimizing radiation
- ◆ Avoid tests that do not provide information for the management of the child

03

# Course Management

The teachers who teach this Postgraduate Certificate in Nuclear Medicine in Pediatrics are great experts in the field and will provide students with all the keys to the profession, so that they can apply them directly to their professional field. This ensures that the learning process of this qualification is carried out smoothly and immediately, facilitating the implementation of the skills acquired.





“

*Reach professional success with the best  
specialists in Nuclear Medicine applied to  
Pediatrics”*

## 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. García Cañamaque, Lina

- ◆ Head of Service, Sanchinarro Hospital
- ◆ Start-up of three Nuclear Medicine services (Nuestra Señora de América Hospital, Sanchinarro Hospital and Puerta del Sur Hospital).
- ◆ Specialist in Nuclear Medicine
- ◆ Official Doctoral Program in Biomedicine and Pharmacy San Pablo CEU University
- ◆ Supervisor of 2nd category radioactive facilities Nuclear Safety Council

# 04

## Structure and Content

The contents of this Postgraduate Certificate in Nuclear Medicine in Pediatrics have been designed by leading experts in these subjects and have taken into account the latest scientific advances. In this way, students who complete this qualification will acquire new knowledge, becoming true specialists in Nuclear Medicine applied to Pediatric patients. For that reason, at the end of this program students will be in the best position to progress professionally and be able to access prestigious Nuclear Medicine services around the world.





“

*You will find the most up-to-date contents on  
Nuclear Medicine applied to pediatrics here"*

## Module 1. Nuclear Medicine in Pediatrics

- 1.1. Pediatric Nuclear Medicine
  - 1.1.1. Management of the Child in Nuclear Medicine: Information to Parents and/or Guardians, Preparation and Scheduling, Appropriate Environments
  - 1.1.2. Dose Optimization
  - 1.1.3. Sedation and Anaesthesia
  - 1.1.4. Physical Aspects in Pediatric Patients: Image Acquisition and Processing
- 1.2. PET/PET-CT/PET-MRI in Pediatric and Young Adult Patients
  - 1.2.1. Protocol Optimization
  - 1.2.2. Indications
  - 1.2.3. Non-FDG Tracers
- 1.3. Central Nervous System/LCR
  - 1.3.1. Brain Maturation Patterns
  - 1.3.2. Epilepsy and Vascular Disorders
  - 1.3.3. Brain Tumors
  - 1.3.4. Hydrocephalus and Cerebrospinal Fluid Fistula
- 1.4. Endocrine
  - 1.4.1. Thyroid Pathology: Hypothyroidism, Hyperthyroidism, Thyroid Nodule
  - 1.4.2. Hyperinsulinism
- 1.5. Cardiopulmonary
  - 1.5.1. Congenital Heart Disease: *Shunt* Right-Left, *Shunt* Left-Right
  - 1.5.2. Bronchopulmonary Pathology: Congenital and Acquired
- 1.6. Gastrointestinal System
  - 1.6.1. Dynamic Esophagogastric Studies
  - 1.6.2. Gastroesophageal Reflux, Bronchopulmonary Aspiration
  - 1.6.3. Hepatobiliary Gammagraphy: Biliary Tract Atresia
  - 1.6.4. Intestinal Bleeding: Mekel's Diverticulum, Intestinal Duplication
- 1.7. Nephrourology
  - 1.7.1. Hydronephrosis Assessment
  - 1.7.2. Renal Cortical Assessment: in Infections, Ectopy
  - 1.7.3. Vesicoureteral Reflux: Diagnosis and Monitoring
  - 1.7.4. Others: Renal Malformations, Renal Transplantation, Kidney Transplantation



- 1.8. Osteoarticular System
  - 1.8.1. Benign Lesions in Pediatric Patients: Fractures, Tumors
  - 1.8.2. Avascular Necrosis: Perthes' Disease and Others
  - 1.8.3. Sympathetic - Reflex Dystrophy
  - 1.8.4. Low Back Pain
  - 1.8.5. Infection: Osteomyelitis, Spondylodiscitis
- 1.9. Neuroblastoma
  - 1.9.1. Diagnostic Studies: Bone Scintigraphy, MIBG and other PET Radiotracers
  - 1.9.2. Radiometabolic Treatment: MIBG, <sup>177</sup>Lu-DOTATATE
- 1.10. Other Tumours
  - 1.10.1. Osteosarcoma: Diagnosis, Response Assessment and Monitoring
  - 1.10.2. Bone Tracers and <sup>18</sup>F-FDG-PET/CT PET/CT Study
  - 1.10.3. Ewing's Disease: Diagnosis, Response Assessment and Monitoring
  - 1.10.4. Bone Tracers and <sup>18</sup>F-FDG-PET/CT Study
  - 1.10.5. Lymphoma: <sup>18</sup>F-FDG PET/CT in Diagnosis, Response Assessment, Monitoring
  - 1.10.6. Rhabdomyosarcoma and Soft Tissue Sarcomas: <sup>18</sup>F-FDG PET/CT in Diagnosis, Response Assessment and Monitoring



*Learn the most advanced diagnostic methods in Nuclear Medicine and apply them to pediatric patients with great efficiency thanks to this Postgraduate Certificate"*



05

# Methodology

This training program provides you with 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 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:

1. 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.*





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.



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.



# 06 Certificate

The Postgraduate Certificate in Nuclear Medicine in Pediatrics guarantees, in addition to the most rigorous and update training, access to a Postgraduate Certificate issued by TECH Technological University..



“

*Successfully complete this training and receive your university degree without travel or laborious paperwork”*

This **Postgraduate Certificate in Nuclear Medicine in Pediatrics** contains the most complete and update program on the market.

After you have passed the evaluations, you will receive your corresponding by **Postgraduate Certificate diploma** 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 from career evaluation committees.

Title: **Postgraduate Certificate in Nuclear Medicine in Pediatrics**

Official N° of Hours: **150 hours**.



\*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

online training

development languages

virtual classroom

**tech** technological  
university

**Postgraduate Certificate**  
Nuclear Medicine In Pediatrics

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

# Postgraduate Certificate Nuclear Medicine in Pediatrics

