

Postgraduate Certificate

Neurological Emergencies in the PICU





Postgraduate Certificate Neurological Emergencies in the PICU

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

Website: www.techtute.com/us/medicine/postgraduate-certificate/neurological-emergencies-picu

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

Neurological Emergencies in the PICU represent a significant challenge for healthcare professionals, given the increase in cases of conditions such as Seizures, Head Trauma and Stroke in the pediatric population. Therefore, early detection, proper management and specialized care are crucial to improve the outcomes and quality of life of these patients. In addition, the development of new technologies and therapeutic approaches has made it possible to address these emergencies more effectively and accurately. In this context, TECH has developed a comprehensive, fully online, and highly flexible program, which only requires an electronic device with an Internet connection to access the educational materials. In addition, it employs the innovative Relearning methodology.



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With this 100% online program, you will gain in-depth, up-to-date knowledge on the management of specific Neurological Emergencies in children, allowing for more accurate and effective care in critical settings"

Neurological Emergencies in Pediatric Intensive Care Units (PICU) represent a significant clinical challenge, with a variety of conditions that can endanger the life and brain function of children. Therefore, rapid identification of symptoms, proper airway management and specialized intensive care are critical to improve outcomes in these vulnerable patients.

This is how this program was born, which will address the identification and proper management of Seizures and Status Epilepticus in pediatric patients. Therefore, physicians will be able to recognize the different types of Seizures, assess their severity and apply effective treatments to control them, therefore contributing to preserve brain function and stability of the child.

Likewise, professionals will be specialized in the diagnosis and treatment of the causes of altered state of consciousness, such as Pediatric Coma. In addition, they will be able to perform an exhaustive evaluation to identify possible etiologies, from traumatic injuries to metabolic disorders, as well as to implement appropriate therapeutic strategies for each clinical situation.

Finally, specialized knowledge will be provided on the recognition and response to signs of increased Intracranial Pressure and Cerebral Herniation, as well as the identification and treatment of Central Nervous System Infections, such as Meningitis and Encephalitis. Skills will also be acquired in neuroprotection techniques, to minimize secondary brain damage, as well as in the evaluation and management of acute complications of Chronic Neurological Diseases in children.

In this scenario, TECH has developed a complete online program, customized to meet the individual needs of students, eliminating obstacles such as travel to a physical location or the obligation to follow a fixed schedule. Additionally, it is based on the revolutionary Relearning methodology, which involves the repetition of essential concepts to guarantee an optimal and organic understanding of the contents.

This **Postgraduate Certificate in Neurologic Emergencies in the PICU** 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 Neurological Emergencies in the PICU
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out 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



This comprehensive approach will prepare you to effectively coordinate multidisciplinary care and rehabilitation, ensuring optimal care for pediatric patients who have experienced Neurological Emergencies"

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You will apply neuroprotective techniques to minimize secondary brain damage, critical to improving outcomes in pediatric patients with Neurological Emergencies. What are you waiting to enroll?"

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

You will acquire specialized skills to identify and properly manage Seizures and Status Epilepticus in children, from the best digital university in the world, according to Forbes.

You will delve into the diagnosis and treatment of the causes of altered state of consciousness, including Pediatric Coma, thanks to the best didactic materials, at the forefront of technology and education.



02 Objectives

This program will seek to specialize physicians in the identification and proper management of Specific Neurological Emergencies, such as Epileptic Seizures, Pediatric Coma, increased Intracranial Pressure and Cerebral Herniation, as well as Central Nervous System Infections. In addition, the application of neuroprotective techniques to minimize secondary brain damage, and the evaluation and management of acute complications of Chronic Neurological Diseases in children will be discussed.



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The objectives of this program have been designed to provide you with specialized and updated qualification in the management of critical situations affecting the Nervous System in children”



General Objectives

- ♦ Gain profound Pediatric Neurological knowledge, expanding knowledge of neurological anatomy and pathophysiology to enhance the evaluation and treatment of neurological emergencies in children
- ♦ Promote Comprehensive Neurological Management, including initial assessment, emergency interventions, long-term follow-up and family support



The ultimate goal will be to equip you with the skills necessary to provide comprehensive, quality care to pediatric patients facing Neurological Emergencies, improving clinical outcomes”





Specific Objectives

- Identify and appropriately manage seizures and status epilepticus in children
- Diagnose and treat causes of altered consciousness, including pediatric coma
- Recognize and respond to signs of increased Intracranial Pressure and Brain Herniation
- Identify and treat central nervous system infections, such as Meningitis and Encephalitis
- Apply neuroprotective techniques to minimize secondary brain damage
- Evaluate and manage acute complications of Chronic Neurological Diseases in children
- Coordinate multidisciplinary care and rehabilitation for pediatric patients who have experienced neurologic emergencies
- Identify and treat Idiopathic Intracranial Hypertension and other emergency conditions that may present with neurologic symptoms

03

Course Management

The faculty of this university program are highly qualified and experienced experts in the field of Pediatric Neurology and Pediatric Intensive Care. In addition, they are actively involved in research and clinical practice, which will enable them to share up-to-date, evidence-based information on the latest advances in the field. Indeed, their commitment to educational excellence and interdisciplinary approach will ensure an enriching and relevant learning experience for graduates seeking to enhance their skills in the management of Neurological Emergencies in the PICU.



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The faculty have been carefully selected for their extensive knowledge and clinical experience in the management of neurological emergencies in children, as well as for their ability to convey this effectively"

Management



Dr. Ocete Hita, Esther

- ♦ Head of the Pediatric Hospitalization Section of Virgen de las Nieves University Hospital of Granada
- ♦ FEA Pediatrics in the Pediatric Intensive Care Unit of Virgen de las Nieves University Hospital of Granada
- ♦ Associate Professor in the Faculty of Medicine at the University of Granada
- ♦ Specialist Pediatrician
- ♦ Doctor of Medicine
- ♦ Degree in Medicine

Professors

Dr. De la Cruz Moreno, Jesús

- ♦ Chief of the Pediatrics Service at the Jaén Hospital Complex
- ♦ Specialist Pediatric Physician at the Jaen Hospital Complex
- ♦ Pediatric Specialist Physician at the National Health Institute and the San Pedro de Alcántara Hospital
- ♦ Specialist Pediatrician
- ♦ Degree in Medicine and Surgery from the University of Granada
- ♦ Member of: IAVANTE Foundation

Dr. Martínez Pardo, Luz María

- ♦ Pediatric Area Specialist at the University Hospital of Jaén
- ♦ Doctor in Pediatrics and Child Care by the University of Granada
- ♦ Instructor of Basic and Advanced Pediatric and Neonatal CPR
- ♦ Specialist in Pediatrics and specific areas by the Virgen de las Nieves University Hospital
- ♦ Degree in Medicine and Surgery in 2006 by the University of Granada

Dr. Viedman Chamorro, Gloria

- ♦ FEA in Pediatrics at the University Hospital of Jaén
- ♦ FEA in Pediatrics at the Jaén Hospital Complex
- ♦ FEA in Nephrology at the Jaén Hospital Complex
- ♦ Specialist in Pediatrics and its Specific Areas at the Jaén Maternal-Children's Hospital
- ♦ Specialist in Nephrology at the Jaén Hospital Complex
- ♦ Accreditation of Professional Competences in Hospital Care Pediatrics, Advanced Level, by the Health Quality Agency of Andalusia
- ♦ University Expert in Hemodialysis for Nephrology Specialist by the Complutense University of Madrid
- ♦ University Expert in Pediatric Nephrology from the University of Oviedo
- ♦ Degree in Medicine and Surgery from the University of Granada

Dr. Vidaurreta del Castillo, María Esther

- ♦ FEA in Pediatrics in the Pediatric Intensive Care Unit of the University Hospital of Jaén
- ♦ FEA in Pediatrics at the Maternal-Children's Hospital of Malaga
- ♦ Rotator in Pediatrics at the Reina Sofia University Hospital, Cordoba
- ♦ Rotation in Pediatrics at the University Hospital della Misericordia, Italy
- ♦ Specialist in Pediatrics and its Specific Areas at the University Hospital of Jaén
- ♦ University Expert in Pediatric Emergency Medicine by Editorial Médica Panamericana
- ♦ Degree in Medicine, University of Córdoba

Dr. Jiménez Jurado, Beatriz

- ♦ FEA in Pediatrics in the Pediatric ICU of the Jaen University Hospital
- ♦ Member of the Working Group of Stabilization and Transport of the Critical Child and Neonate in the Spanish Society of Pediatric Intensive Care
- ♦ Researcher in the European Pediatric Transfusion Practices in PICU Study (E-PETRA Study)
- ♦ Researcher in the Study of Neurological Impact and Neurobiochemical Biomarkers in Neonatal SARS-CoV-2 Infection
- ♦ Specialist in Pediatrics and its Specific Areas, subspecialty in Pediatric Intensive Care, by the University Hospital of Jaén
- ♦ Master's Degree in Pediatric Infectious Diseases from the Cardenal Herrera University
- ♦ University Expert in Pediatric Emergencies from the Catholic University of Valencia San Vicente Martir
- ♦ Degree in Medicine and Surgery from the University of Cordoba
- ♦ Awards for the Best Original Paper and Best Clinical Case Report at the Congress of the Pediatric Society of Eastern Andalusia
- ♦ Member of: Spanish Society of Pediatric Intensive Care

04

Structure and Content

From the identification and management of Seizures, to the treatment of Acute and Chronic Neurological Illnesses, the program will provide comprehensive specialization in the diagnosis, evaluation and therapeutic interventions necessary to deal with neurological emergencies in children. Participants will acquire expertise in recognizing and responding to signs of increased intracranial pressure, as well as in the management of central nervous system infections, applying neuroprotective techniques to minimize secondary brain damage.





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The content of this program in Neurological Emergencies in the PICU will cover a wide range of topics fundamental to the specialized care of pediatric patients in these critical situations”

Module 1. Neurological Emergencies in the Pediatric Intensive Care Unit

- 1.1. Management of the Pediatric Patient with Traumatic Brain Injury
 - 1.1.1. Evaluation and Stabilization of Pediatric Patients with Head Trauma Following Current Trauma Protocols
 - 1.1.2. Strategies for Monitoring and Management of Intracranial Pressure in Traumatic Head Injury
 - 1.1.3. Long-term Multidisciplinary Management Plan to Improve Neurological Outcomes after Traumatic Brain Injury in Children
- 1.2. Seizures and Status Epilepticus in the ICU
 - 1.2.1. Management of Seizures and Status Epilepticus in Critically Ill Pediatric Patients
 - 1.2.2. Electroencephalographic (EEG) Monitoring to Guide the Management of Seizures and Status Epilepticus
 - 1.2.3. Antiepileptic Treatment of the Pediatric ICU Patient
- 1.3. Pediatric Stroke
 - 1.3.1. Stroke in Children and Response with Rapid Diagnostic Evaluations
 - 1.3.2. Acute Treatments for Pediatric Ischemic and Hemorrhagic Stroke Based on Current Recommendations
 - 1.3.3. Continuity of Care and Rehabilitation Planning for Pediatric Post-stroke Patients
- 1.4. Meningitis and Encephalitis in Children
 - 1.4.1. Early Diagnosis of Meningitis and Encephalitis in Pediatric ICU by using Clinical Protocols and Laboratory Techniques
 - 1.4.2. Administration of Antimicrobial Therapy and Supportive Care for the Treatment of Meningitis and Encephalitis
 - 1.4.3. Monitoring and Management of Short and Long term Complications associated with Meningitis and Encephalitis in Children
- 1.5. Intracranial Hypertension Management
 - 1.5.1. Intracranial Hypertension in Pediatric Patients Causes and Clinical Signs
 - 1.5.2. Techniques for Management of Intracranial Hypertension Optimization of Head Position and Pharmacotherapy
 - 1.5.3. Integration of Intracranial Pressure Monitoring in Clinical Decision Making and Treatment Adjustment



- 1.6. Neurological Monitoring in ICU
 - 1.6.1. Implementation and Analysis of Continuous Neurological Monitoring to Guide Clinical Management: EEG and other Biomarkers
 - 1.6.2. Assessment of Brain Function through Various Monitoring Modalities and Treatment Adjustment
 - 1.6.3. Use of Neurological Monitoring Data for Prevention and Detection of Secondary Complications in the Pediatric ICU
- 1.7. Neuroprotection and Post-resuscitation Care
 - 1.7.1. Neuroprotection Strategies to Minimize Secondary Brain Damage after Events such as Cardiac Arrest
 - 1.7.2. Management of Temperature Control Therapy and other Post-resuscitation Care to Optimize Neurological Outcomes
 - 1.7.3. A Multidisciplinary Approach to Rehabilitation and Family Support after Successful Resuscitation
- 1.8. Neuromuscular Diseases in the ICU
 - 1.8.1. Diagnosis and Management of Acute and Chronic Neuromuscular Diseases in the PICU Setting
 - 1.8.2. Ventilatory and Nutritional Support for Patients with Neuromuscular Diseases
 - 1.8.3. Long-term Care Coordination and Transition Planning for Children with Neuromuscular Disease Requiring Intensive Care
- 1.9. Sedation and Analgesia in Neurointensivists
 - 1.9.1. Application of Pharmacology Principles for the Safe and Effective Administration of Sedatives and Analgesics in Critically Ill Pediatric Patients with Neurological Conditions
 - 1.9.2. Ongoing Assessment of the Level of Sedation and Pain in Pediatric Patients using Validated Scales to Ensure Appropriate Pain Management and Comfort
 - 1.9.3. Development of Sedation and Sedation Withdrawal Protocols that Minimize the Risk of Delirium and other Side Effects and Promote Optimal Neurologic Recovery
- 1.10. Neurological Rehabilitation in the ICU
 - 1.10.1. Implementation of Individualized Early Rehabilitation Programs for Pediatric Patients in the ICU that Address Specific Motor, Cognitive and Emotional Needs
 - 1.10.2. Collaboration with a Multidisciplinary Team, including Physiotherapists and Occupational Therapists, to Integrate Neurological Rehabilitation into the Intensive Care Plan
 - 1.10.3. Regular Assessment and Reporting of Progress in Neurological Rehabilitation, adjusting Treatment Strategies in Accordance with the Patient's Clinical Progress and Recovery Goals



You will address multidisciplinary care coordination and rehabilitation to ensure comprehensive and optimal care for pediatric patients facing Neurological Emergencies”

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 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.

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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. 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 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.

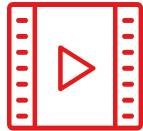
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

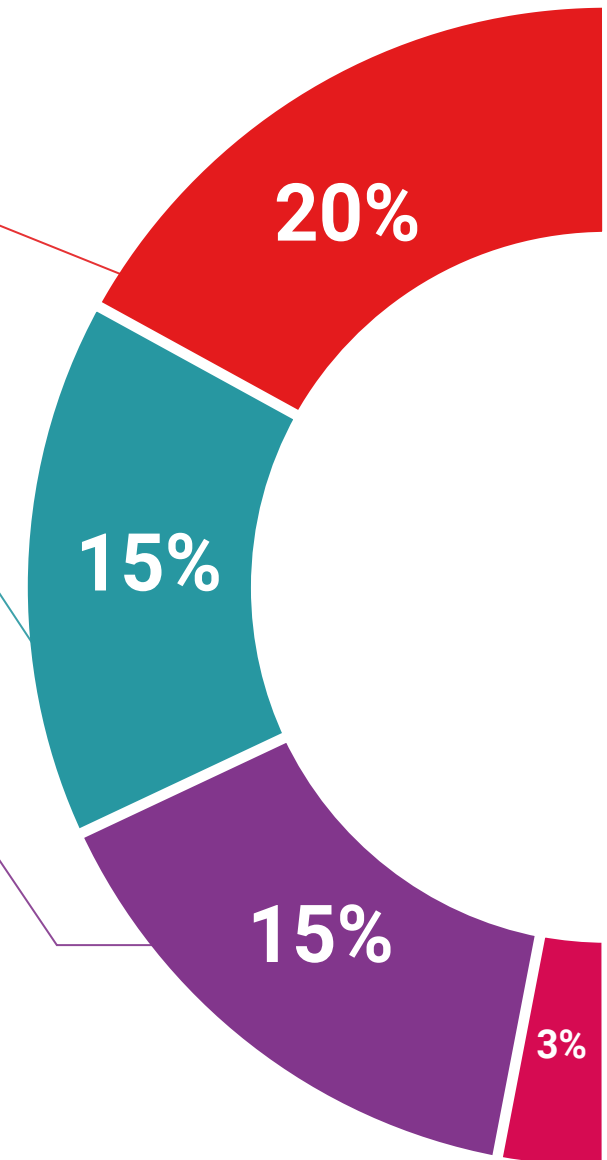
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

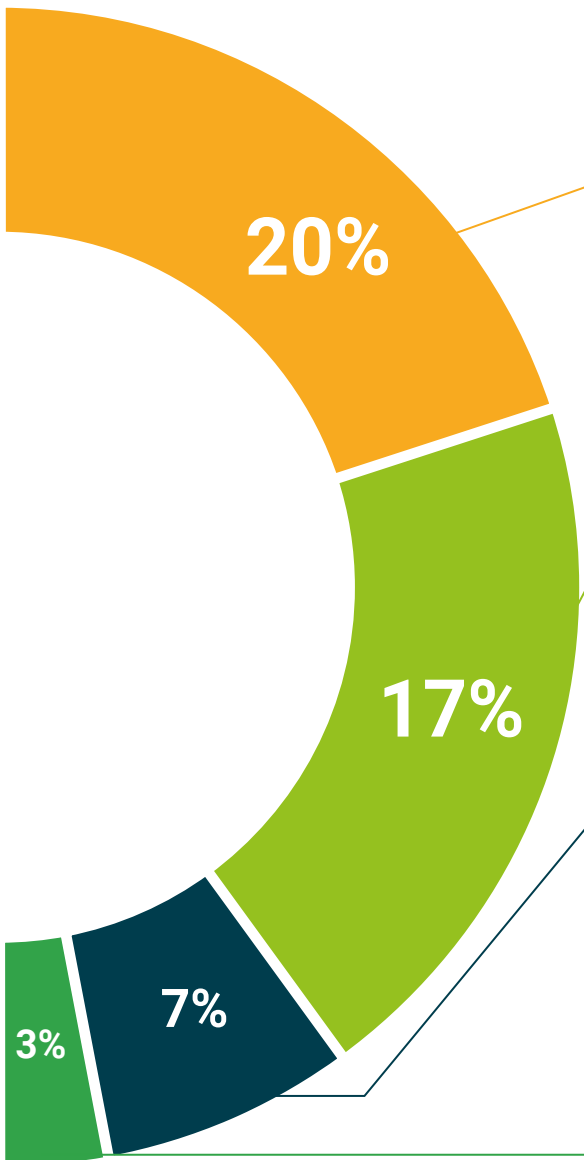
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 on the usefulness of learning by observing experts. The system known as 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 Neurological Emergencies in the PICU guarantees, in addition to the most accurate and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This private qualification will allow you to obtain a **Postgraduate Certificate in Neurological Emergencies in the PICU** 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** private qualification 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 Neurological Emergencies in the PICU**

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
knowledge present quality
online
development languages
virtual classro



Postgraduate Certificate

Neurological Emergencies in the PICU

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

Neurological Emergencies in the PICU

