

Postgraduate Certificate
Neonatal Renal
and Hematological
Nursing Care





Postgraduate Certificate Neonatal Renal and Hematological Nursing Care

Course Modality: Online

Duration: 8 weeks

Certificate: TECH Technological University

7 ECTS

Teaching Hours: 175 hours.

Website: www.techtute.com/nursing/postgraduate-certificate/neonatal-renal-hematological-nursing-care

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01

Introduction

Neonatology is one of the most complex areas of pediatrics, and it requires specialized professionals to be able to care for the newborn patient adequately. For this reason, constant updating of knowledge is essential for the development of the professional. This Postgraduate Certificate is designed to update the professional in neonatal renal and hematologic nursing care in a practical way.

The role of the nursing professional is key in the care of renal and hematologic pathology in the newborn patient.



“

With the Postgraduate Certificate in Neonatal Renal and Hematological Nursing Care you have the opportunity to update your knowledge in a practical way and without renouncing to the maximum scientific rigor, to incorporate the latest advances in critical nursing care of the newborn"

Neonatology is a constantly evolving discipline, which is highly dependent on technology and new pharmacological treatments. This context makes the updating of procedures in neonatal critical care, both those performed in the Neonatal ICU and in other care settings outside the ICU (emergency units, primary care centers...), of paramount importance to maintain the provision of care based on the latest scientific evidence and to ensure the safety of the baby.

This program includes nursing care in the neonatal patient with renal and hematologic pathology. In addition, it presents an update on nursing procedures for urinary tract infection, as well as NICU admission procedures and nursing care.

This Postgraduate Certificate in Neonatal Renal and Hematological Nursing Care is oriented to facilitate the updating of the most used procedures, in a practical way, to contribute with quality and safety to the recovery of the newborn, to improve its prognosis and to avoid serious pathology sequelae.

This Postgraduate Certificate in Neonatal Renal and Hematological Nursing Care contains the most complete and up to date scientific program on the market. The most important features of the program include:

- ♦ Development of clinical cases presented by experts in the different specialties. 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.
- ♦ New developments in nursing care and assessment of the critically ill newborn patient.
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ♦ All of this will be complemented by 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



Improve the care of your newborn patients with the training offered by the Postgraduate Certificate in Neonatal Renal and Hematological Nursing Care"



This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Neonatal Renal and Hematological Care for Nurses, you will obtain a Postgraduate Certificate from TECH Technological University"

Its teaching staff includes renowned specialists in the field of neonatology, who bring the experience of their work in the country's leading medical centres to this training.

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 an immersive training program to train in real situations.

The design of this program is based on Problem-Based Learning, by means of which the nursing professional must try to solve the different practice situations that arise throughout the Postgraduate Certificate. For this purpose, the professional will be assisted by an innovative interactive video system developed by renowned experts in neonatal critical patient care and with extensive teaching experience.

The Postgraduate Certificate allows training in simulated environments, which provide immersive learning programmed to train for real situations.

It includes clinical cases to bring the program's degree as close as possible to the reality of care in Nursing.



02

Objectives

This Postgraduate Certificate is oriented to achieve an effective update of the nursing professional's knowledge and procedures for the newborn, in order to provide quality care, based on the latest scientific evidence that guarantees patient safety.



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This refresher program will provide you with the skills to act safely in the provision of neonatal care, which will help you grow both personally and professionally"



General Objective

- Update the professional in nursing care in the neonatal patient with kidney and hematologic pathology, and interventions to the newborn in the neonatal intensive care unit.



Take the opportunity and take the step to get up to speed on the latest developments in Neonatal Renal and Hematologic Care for Nurses"





Specific Objectives

- ♦ Update nursing care oriented to the satisfaction of the needs derived from the newborn's health problems and the prevention of complications, guaranteeing a safe and quality practice.
- ♦ Analyze the importance of providing comprehensive care to the newborn from an ethical and legal perspective.
- ♦ Update the procedures, diagnostic tests and treatments derived from the different health problems in the newborn taking into account the different levels of care.
- ♦ Update the integral care of the neonate with a surgical process to help in the optimal restoration of health and identify, intervene and/or refer for possible complications.
- ♦ Review the indication of medical devices and/or drugs, evaluating the expected benefits and associated risks.
- ♦ Develop the ability to apply theoretical knowledge in daily practice.
- ♦ Identify the differences between the neonate, child and adolescent (pediatric ages).
- ♦ Differentiate between neonatal stages, as well as neonatal stages by gestational age and neonatal stages by birth weight.
- ♦ Describe the anatomical and physiological characteristics of the normal newborn infant.
- ♦ Explain the somatometry of the newborn, as well as its morphological and physiological characteristics.
- ♦ Assess the complete examination, sequence of physical examination and complete physical examination of the newborn, focusing primarily on the head and neck region, trunk region and extremities region.
- ♦ Update the procedures for performing the complete neurological examination.
- ♦ Evaluate the structure and organization of the neonatology service, as well as its location, the necessary equipment and materials, and the necessary human resources.
- ♦ Describe the Neonatal Intensive Care Unit (NICU).
- ♦ Calculate the layout of the cribs, the physical space needs, the equipment and materials, and the human resources required.
- ♦ Define the profiles and positions of the "nursing team" as well as its operating system: "Primary Nursing" (Main Nurse)
- ♦ Review generalities in neonatal hematology.
- ♦ Update diagnostic procedures for neonatal anemia.
- ♦ Describe a fetal hydrops
- ♦ Update the parameters of neonatal hyperbilirubinemia.
- ♦ Explain other pathologies of neonatal hematology: polycythemia and thrombocytopenia.
- ♦ Update the indications for blood transfusion and its derivatives in the neonatal period, as well as the technique for transfusion.
- ♦ Explain the generalities in neonatal nephrology: embryology and anatomy of the renal system.
- ♦ Update procedures for neonatal bladder catheterization technique.
- ♦ Describe the nephrourological pathology in the newborn.

03

Course Management

This program includes in its teaching staff renowned nursing professionals from neonatal intensive care units, who develop their clinical practice in major hospitals, and who bring the experience of their work to this training. In addition, medical specialists who are members of national and international scientific societies participate in its design and development, complementing the teaching staff in an interdisciplinary manner.



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Learn from leading professionals
the latest advances in neonatal
renal and hematological care.”

International Guest Director

Dr. Roxana Diehl is a leading neonatologist of international renown, who has held high positions of great responsibility, such as Deputy Director of the Neonatal Intensive Care Unit (NICU) at the Lyon University Hospital in France. Indeed, this expert has been a key player in the field of Neonatology, with a solid academic training and an exemplary professional career, contributing significantly in the clinical field.

Throughout her career, she has held several relevant positions in prestigious institutions. For example, she has served as a Hospital Physician in Neonatology, also at the University Hospital of Lyon, also excelling during her Fellowship in Neonatology, at the Saint-Étienne Nord Hospital, where she has been recognized for her dedication to intensive neonatal care. In addition to this, she has experience as a pediatrician at the Marie Curie Hospital in Bucharest, Romania.

In addition to her clinical practice, Dr. Roxana Diehl has been an influential figure in the development of policies and protocols within the NICU. As a referring physician in the Prenatal Diagnostic Center and a member of the Ethics Committee, she has played a crucial role in making complex medical decisions and promoting ethical standards in neonatal care. Likewise, her commitment to the continuous improvement of medical care has led her to actively participate in innovative projects, including her role as referring physician for the Mobile Neonatal Unit.

Additionally, her academic merits have been equally impressive, having earned multiple university degrees in specialized areas such as Neonatal Developmental Care, Fetal Medicine and Psychoperinatal Care. These academic achievements, coupled with her clinical experience, have established her as an expert in her field, capable of influencing and improving neonatal practices globally.



Dra. Diehl, Roxana

- Deputy Director of Neonatal Intensive Care, Lyon University Hospital, France
- Hospital Physician in Neonatology, NICU, Lyon University Hospital, France
- Fellowship in Neonatology at the Hôpital Saint-Étienne Nord, France
- Pediatrician at Marie Curie Hospital in Bucharest, Romania
- University Degree in Neonatal Developmental Care from the University of Lyon
- University Degree in Fetal Medicine, University of Lyon, France
- University Degree in Psychoperinatal Care, University of Montpellier, France
- University Degree in Neonatology from the University of Saint-Étienne
- Residency in Pediatrics from the University of Saint-Étienn

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Thanks to TECH, you will be able to learn with the best professionals in the world”

Management



Dr. López Ruiz, María Amparo

- ♦ Degree in Medicine and Surgery from the University of Valencia
- ♦ Doctor of Medicine "Cum Laude" from the University CEU Cardenal Herrera with the Thesis: "Analysis of medication in pediatric population attending an Emergency Department."
- ♦ Postgraduate in Neonatology: "Care in the Preterm Newborn."
- ♦ University Professor of Nursing, Medicine and Pharmacy. Faculty of Biomedical Sciences. CEU Cardenal Herrera University - Moncada (Valencia)
- ♦ Professor of the online Master in Pediatric Emergencies for Nurses. CEU Cardenal Herrera University -- Health Class
- ♦ Professor of the Professional Master's Degree in Advanced Esthetic and Laser Techniques. CEU Cardenal Herrera University - Moncada (Valencia) and NISA Hospitals Foundation (Valencia)
- ♦ Postgraduate course director: "Diploma in neonatal nursing and neonatal intensive care". CEU Cardenal Herrera University - Moncada (Valencia) and NISA Hospitals Foundation (Valencia)
- ♦ Postgraduate course coordinator: "First Aid, Cardiopulmonary Resuscitation and Emergency Situations Course". CEU Cardenal Herrera University - Moncada (Valencia)
- ♦ Erasmus coordinator for Medicine. CEU Cardenal Herrera University
- ♦ Personal tutor for international medical students. CEU Cardenal Herrera University - Moncada (Valencia)
- ♦ Entrepreneurship tutor for Medicine. CEU Cardenal Herrera University - Moncada (Valencia)
- ♦ Practice coordinator for Medicine. CEU Cardenal Herrera University - Moncada (Valencia)
- ♦ Coordinator for Medicine. CEU Cardenal Herrera University - Moncada (Valencia)
- ♦ NESTLÉ Award for Best Oral Communication, XXIV National Congress of the Spanish Society of Outpatient and Primary Care Pediatrics.

Professors

Alfaro Ramírez, Concepción

- ◆ Diploma in Nursing.
- ◆ Pediatric nurse. NICU and PICU
- ◆ Nursing supervisor. 9 de Octubre NISA Hospital. Valencia

Dr. Bendala Tufanisco, Elena

- ◆ Degree in Medicine and Surgery
- ◆ Degree in Biology
- ◆ Doctor in Biochemistry and Molecular Biology from the University of Valencia.
- ◆ Professor, Department of Biomedical Sciences, Faculty of Health Sciences, Cardenal Herrera-CEU University.

Dobón García, Ana María

- ◆ Law Degree
- ◆ Lawyer specializing in Medical and Health Law

Iranzo Cobo del Cabo, Rosana

- ◆ Degree in Nursing
- ◆ Professor of Nursing at Cardenal Herrera CEU University.

Juan Hidalgo, Alicia

- ◆ Degree in Psychology
- ◆ Clinical Psychologist
- ◆ Professor, Faculty of Psychology, University of Valencia.



Dr. Julve Chover, Natalia

- ◆ Degree in Medicine and Surgery
- ◆ Doctor of Medicine, University of Valencia
- ◆ Specialist in Child Neurology
- ◆ Associate Doctor of the Pediatrics Service and PICU-Neonatal. NISA
- ◆ Postgraduate in Neonatology

Dr. López Peña, Rafael

- ◆ Degree in Medicine and Surgery
- ◆ PhD in Medicine from the University of Valencia
- ◆ Specialist in Pediatrics, Subspecialist in PICU and NICU
- ◆ Postgraduate in Neonatology

Dr. Moreno, Lucrecia

- ◆ Degree in Pharmacy
- ◆ Vice-Dean of Pharmacy of the University Cardenal Herrera CEU
- ◆ Doctor in Pharmacy from the University of Valencia.
- ◆ Professor at Cardenal Herrera University CEU

Dr. Navarro Marí, Rosa María

- ◆ Degree in Medicine and Surgery
- ◆ Pediatrician.
- ◆ Associate Doctor of the Pediatrics Service and PICU-Neonatal. NISA
- ◆ Postgraduate in Neonatology



Ribes Roldán, Sandra

- ◆ Degree in Nursing
- ◆ Nurse in Accident and Emergency department.
- ◆ 9 de Octubre NISA Hospital. Valencia, Spain

Dr. Rojas Otero, Lucila

- ◆ Degree in Medicine and Surgery
- ◆ Specialist in Pediatrics, Subspecialist in PICU and NICU
- ◆ Postgraduate in Neonatology

Roldán del Amo, Adela

- ◆ Diploma in Nursing.
- ◆ Pediatric nurse. NICU and PICU.
- ◆ 9 de Octubre NISA Hospital. Valencia, Spain

Dr. Sanahuja Santafé, M^a Amparo

- ◆ Degree in Pharmacy
- ◆ Professor at the University Cardenal Herrera CEU
- ◆ Doctor in Pharmacy from the University of Valencia.

Silvestre Castelló, Dolores

- ◆ Graduate in Chemistry
- ◆ Associate Professor of Nutrition and Bromatology at Cardenal Herrera CEU University.
- ◆ Doctor in Chemical Sciences from the University of Valencia.
- ◆ Graduate in Food Technology (Superior Council of Scientific Research)
- ◆ Postgraduate Degree in Nutrition, Dietetics and Diet Therapy from the University of Navarra.

04

Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the importance of training for daily nursing practice in the NICU and are aware of the relevance of current training for professionals. This program ensures that the main issues in the current development of critical newborn patients are addressed.



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Module 1. Important Aspects of Neonatology

- 1.1. Differences between Neonate, Child and Adolescent
- 1.2. Neonatal Stages
 - 1.2.1. Neonatal States by Gestational Age
 - 1.2.2. Neonatal Status by Birth Weight
 - 1.2.3. Preterm Newborn
 - 1.2.4. Post Term Newborn
- 1.3. Anatomical and Physiological Characteristics of the Normal Newborn
 - 1.3.1. Newborn Somatometry
 - 1.3.2. Morphological Characteristics
 - 1.3.3. Physiological Characteristics
- 1.4. Complete Newborn Physical Exam and Examination
 - 1.4.1. Physical Examination Sequence
 - 1.4.2. General Observation
 - 1.4.3. Head and Neck Region
 - 1.4.4. Trunk Region
 - 1.4.5. Extremity Region
 - 1.4.6. Neurological Examination
- 1.5. Structure and Organization of a Neonatology Service
 - 1.5.1. Location of the Neonatology Service
 - 1.5.2. Equipment and Material
 - 1.5.3. Human Resources.
 - 1.5.4. Concept of Neonatal Intensive Care Unit (NICU)
 - 1.5.4.1. Calculation and Layout of Cradles
 - 1.5.4.2. Physical Space in the Neonatal Intensive Care Unit
 - 1.5.4.3. Equipment and Material in Neonatal Intensive Care Unit
 - 1.5.4.4. Human Resources in the Neonatal Intensive Care Unit
 - 1.5.4.5. Profiles and Roles: "Nursing Team"
 - 1.5.4.6. Operating System "Primary Nursing" (Main Nurse)



Module 2. Hematological Disorders in Neonatology.

- 2.1. General Information in Hematology
- 2.2. Neonatal Anemia
- 2.3. Hidrops Fetal
- 2.4. Neonatal Hiperbilirrubinemia
- 2.5. Polycythemia
- 2.6. Thrombocytopenia
- 2.7. Transfusion of Blood and Blood Derivatives in the Neonatal Period

Module 3. Renal Disorders in Neonatology.

- 3.1. Neonatal Nephrology Generalities
 - 3.1.1. Embryology of the Renal System
 - 3.1.2. Recall of the Anatomy of the Renal System
- 3.2. Nephrourological Pathology in the Neonate
 - 3.2.1. Neonatal Bladder Catheterization
- 3.3. Urinary Tract Infection in the Newborn
- 3.4. Peritoneal Dialysis in Newborns



A unique, key, and decisive training experience to boost your professional development”

05

Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: Re-learning.

This teaching system is used 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.



A person wearing a blue shirt is looking down at a document. The image is partially obscured by a diagonal split between a light blue and a dark teal background.

“

Discover Re-learning, 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 clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, 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. Gervas, 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 university program.



Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success, in all specialties regardless of from the workload. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

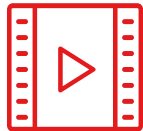
Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current nursing procedures and techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

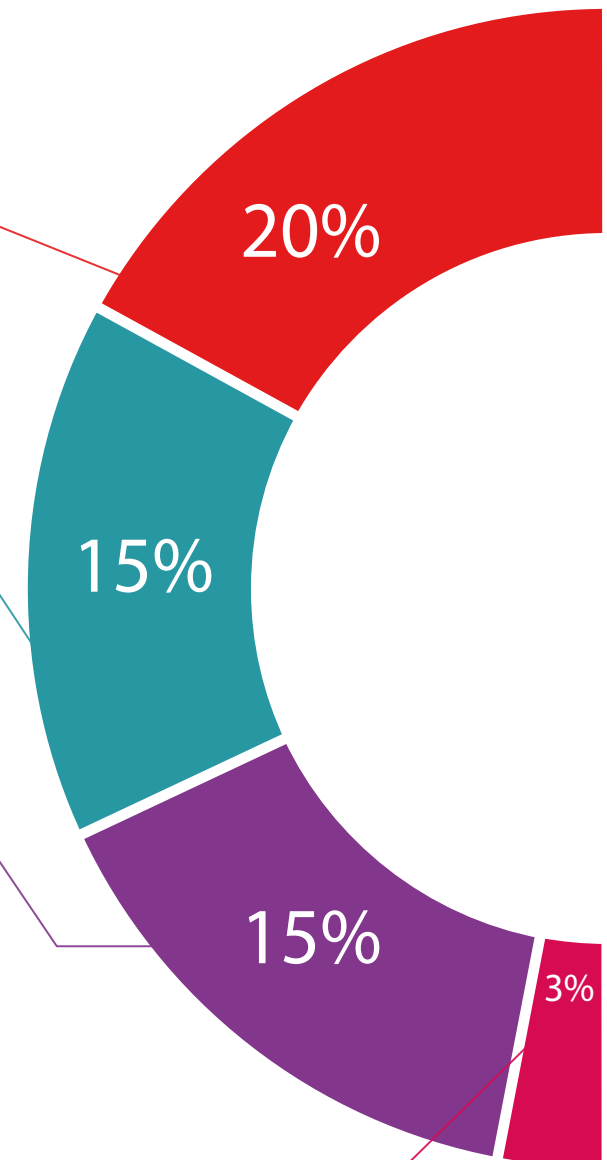
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

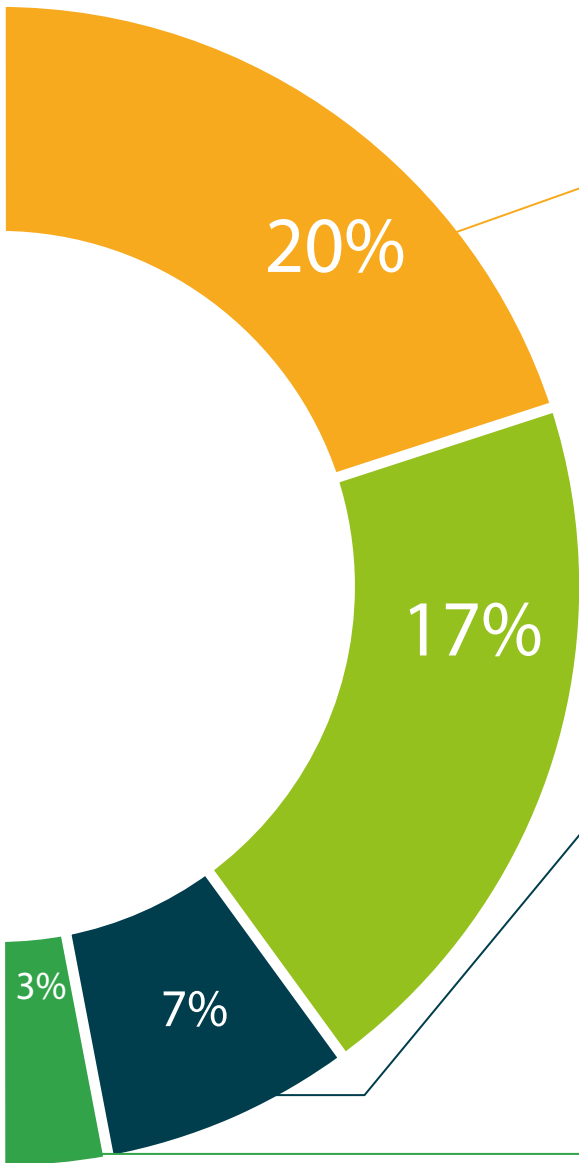
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides. In our virtual library you will have access to everything you need to complete your training.





Expert-led case studies and case analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through the development of attention and the resolution of different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



Classes

There is scientific evidence on the usefulness of third-party expert observation. Learning from an expert strengthens knowledge and memory, and generates confidence in our difficult future decisions.



Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

Certificate

The Postgraduate Certificate in Neonatal Renal and Hematological Nursing Care guarantees you, in addition to the most rigorous and up to date training, access to a Postgraduate Certificate issued by TECH Technological University.



“

Successfully complete this training
and receive your diploma without
the hassle of travel or paperwork”

This Postgraduate Certificate in Neonatal Renal and Hematological Nursing Care contains the most complete and up to date scientific program on the market.

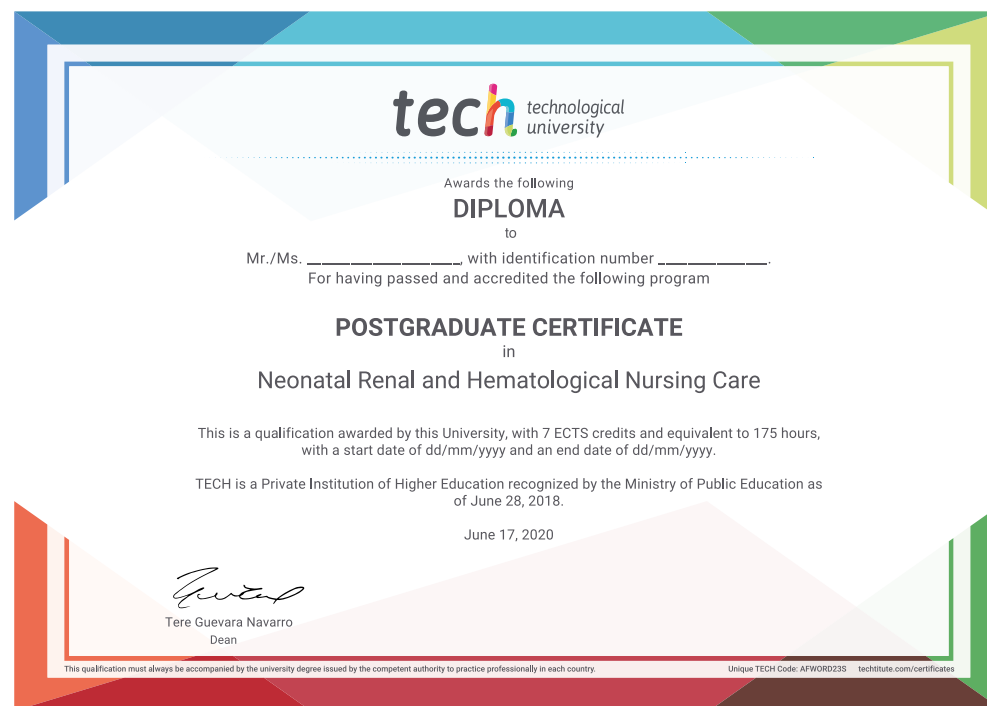
After students have passed the assessments, they will receive their Postgraduate Certificate issued by TECH Technological University.

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 Neonatal Renal and Hematological Nursing Care

ECTS: 7

Number of teaching hours: 175



*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.

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



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