



# Postgraduate Certificate

# Neonatal Pain and Sedation for Nursing

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Accreditation: 5 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/nursing/postgraduate-certificate/neonatal-pain-sedation-nursing

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> 06 Certificate





# tech 06 | Introduction

Neonatology is a discipline in constant evolution, 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, etc.), of utmost importance to maintain the provision of care based on the latest scientific evidence and to ensure the safety of the baby.

This program includes the most important aspects of newborn care, pain measurement procedures and their management, as well as the sedation measures used in neonatal intensive care units to facilitate the recovery of the neonatal patient and reduce the possible sequelae of the pathology.

The Postgraduate Certificate in Neonatal Pain and Sedation for Nursing 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, improve its prognosis and avoid the sequelae of severe pathology.

This Postgraduate Certificate in Neonatal Pain and Sedation for Nursing contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of clinical cases presented by experts in the different specialties
- The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- New developments in nursing care and assessment of the critically ill newborn patient
- Includes the most commonly used access techniques in the NICU for medication administration
- 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 qualification offered in the Postgraduate Certificate in Neonatal Pain and Sedation for Nursing"

# Introduction | 07 tech



This Postgraduate Certificate may be the best investment you can make when choosing a refresher program, for two reasons: in addition to updating your knowledge in Neonatal Pain and Sedation for Nursing, you will obtain a qualification endorsed by TECH Global University"

Its teaching staff includes renowned specialists in the field of neonatology, who bring to this program their work experience in international leading medical centers.

Thanks to its multimedia content developed with the latest educational technology, they will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning programmed to prepare for real situations.

The design of this program is based on Problem-Based Learning, through which the nursing professional must try to solve the different professional practice situations that arise throughout the program. 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.

This Postgraduate Certificate offers specialization in simulated environments, which provides an immersive learning experience designed to prepare you for real-life situations.

It includes clinical cases to bring the development of the program as close as possible to the reality of nursing care.





# tech 10 | Objectives



# **General Objective**

• Allow the nursing professional to gain up-to-date knowledge of the procedures for optimal care of a newborn. This knowledge, alongside a current and evidence-based approach, should enable us to deal with the stabilization, nursing diagnosis and care of newborns who usually require intensive care



Make the most of this opportunity and take the step to get up to date on the latest developments in Neonatal Pain and Sedation for Nursing"





#### **Specific Objectives**

- Categorize neonatal stages, as well as neonatal stages by gestational age and neonatal stages by weight at birth
- Determine the differences which exist in the pediatric age group between a newborn, a child and an adolescent
- Revise the anatomical and physiological characteristics of a normal newborn
- Establish the techniques for measuring the somatometry of a 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
- Describe the process of a complete neurological examination on a newborn
- Evaluate the structure and organization of a Neonatology Service, as well as its location, the necessary equipment and materials; and the necessary human resources
- Acquire up-to-date knowledge of the arrival of a newborn in the neonatal ward, the admission criteria, its objectives and the necessary nursing interventions

- Incorporate new techniques in the physical examination of a newborn on its arrival in the neonatal ward
- Describe thermal management in the newborn, its thermoregulation and the use of a neutral thermal environment
- Incorporate newborn temperature assessment guidelines into nursing practice
- Implement hypothermia in a newborn with hypoxic-ischaemic encephalopathy as a neuroprotective measure, as well as the neuroprotective mechanisms of action of hypothermia
- Differentiate the indications and contraindications of hypothermia
- Describe the exit criteria once hypothermia has been initiated
- Assess pain control in a newborn as well as the short and long term consequences
  of the pain
- Evaluate the different techniques for measuring pain in a newborn
- Predict the onset of withdrawal syndrome in the newborn and how to manage it





# tech 14 | Course Management

#### Management



#### Dr. López Ruiz, María Amparo

- University Professor in Nursing, Medicine and Pharmacy of the Department of Biomedical Sciences at CEU Cardenal Herrera University
- Degree in Medicine and Surgery from the University of Valencia
- Doctor of Medicine Cum Laude from the CEU Cardenal Herrera University. Thesis: "Analysis of Medication in Pediatric Population Who Attend the Emergency Department"
- University expert in Neonatology: "Care in the Preterm Newborn."
- Professor of the Online Master's in Emergency Pediatrics for Nursing, CEU Cardenal Herrera University
- Professor of the Master's Degree in Advanced Aesthetic and Laser Techniques at CEU Cardenal Herrera University and NISA Hospitals Foundation
- Postgraduate course coordinator: "First Aid, Cardiopulmonary Resuscitation and Emergency Situations Course". CEU Cardenal Herrera University, Moncada
- Erasmus Coordinator for Medicine at the University CEU Cardenal Herrera
- NESTLÉ Award for Best Oral Communication, XXIV National Congress of the Spanish Society of Outpatient and Primary Care Pediatrics for: "Analysis of the use of Analgesic-Antipyretics in pediatric patients attending an emergency department"





#### **Professors**

#### Dr. López Peña, Rafael

- Pediatrician, specialist in PICU and NICU
- Degree in Medicine and Surgery from the University of Valencia
- Doctor of Medicine "Cum Laude" from the University of Valencia
- Postgraduate Diploma in Neonatology

#### Dr. Rojas Otero, Lucila

- Pediatrician, specialist in PICU and NICU
- Degree in Medicine and Surgery from the University of Zaragoza
- Postgraduate Diploma in Neonatology

#### Dr. Moreno, Lucrecia

- Vice Dean of Pharmacy, Cardenal Herrera University CEU
- Degree in Pharmacy from the University of Valencia
- Doctor of Medicine "Cum Laude" from the University of Valencia
- PhD in Pharmacy from the Cardenal Herrera University CEU

#### Dr. Sanahuja Santafé, Maria Amparo

- Degree in Pharmacy from the University of Valencia
- University Professor at CEU Cardenal Herrera University
- Doctor of Medicine "Cum Laude" from the University of Valencia

#### Ms. Iranzo Cobo del Cabo, Rosana

- Professor of the Degree in Nursing at the CEU Cardenal Herrera University
- Graduate in Nursing

# tech 16 | Course Management

#### Dr. Bendala Tufanisco, Elena

- Department of Biomedical Sciences of the Faculty of Health Sciences at CEU Cardenal Herrera University.
- Degree in Medicine and Surgery from the University of Valencia
- Degree in Biology from the University of Valencia
- Doctor of Biochemistry and Molecular Biology "Cum Laude" from the University of Valencia.

#### Ms. Roldán del Amo, Adela

- Pediatric Nurse in the NICU and PICU in the Emergency Department of the NISA 9 de Octubre Hospital (Valencia).
- Diploma in Nursing

#### Ms. Ribes Roldán, Sandra

- Emergency Nurse at NISA 9 de Octubre Hospital (Valencia)
- Degree in nursing

#### Dr. Julve Chover, Natalia

- \* Attending Physician. Pediatrics and PICU-Neonatal Service, NISA
- Degree in Medicine and Surgery from the University of Valencia
- Doctor of Medicine "Cum Laude" from the University of Valencia.
- Specialist in Child Neurology
- Postgraduate Diploma in Neonatology

#### Ms. Alfaro Ramírez, Concepción

- Pediatric Nurse at UCIN and UCIP
- Diploma in Nursing
- Nursing Supervisor at NISA 9 de Octubre Hospital





# Course Management | 17 tech

#### Dr. Navarro Marí, Rosa María

- Pediatrician
- \* Attending Physician. Pediatrics and PICU-Neonatal Service, NISA
- Degree in Medicine and Surgery from the University of Valencia
- Postgraduate Diploma in Neonatology

#### Ms. Dobón García, Ana María

- Lawyer specializing in Medical and Health Law
- Degree in Law from the University of Valencia

#### Ms. Juan Hidalgo, Alicia

- University professor in the Psychology Faculty, University of Valencia
- Degree in Psychology from the University of Valencia
- Clinical Psychology

#### Mr. Martínez Dolz, Jesús

- Assistant Nurse in Pediatric and Neonatal Intensive Care Units in the city of Valencia in the following centres: Nisa 9 Octubre Hospital, Virgen del Consuelo Hospital, Clinical University Hospital and La Fe Polytechnic and University Hospital
- Degree in Nursing
- Specialist in Neonatal and Pediatric Nursing Care

#### Ms. Silvestre Castelló, Dolores

- Associate Professor of Nutrition and Bromatology at CEU Cardenal Herrera University.
- Degree in Chemistry from the University of Valencia
- Doctor of Chemical Sciences "Cum Laude" from the University of Valencia.
- Diploma in Food Technology from the Spanish National Scientific Research Council
- Postgraduate Degree in Nutrition, Dietetics and Diet Therapy, University of Navarra





### tech 20 | Structure and Content

#### Module 1. Important Aspects of Neonatology

- 1.1. Differences between Newborn, Child and Adolescent
- 1.2. Neonatal Stages
  - 1.2.1. Neonatal Stages by Gestational Age
  - 1.2.2. Neonatal Stages by Birth Weight
  - 1.2.3. Premature Newborns
  - 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 Physical Examination of the Newborn
  - 1.4.1. Physical Examination Process
  - 1.4.2. General Observation
  - 1.4.3. Head and Neck Region
  - 1.4.4. Torso Region
  - 1.4.5. Limb Region
  - 1.4.6. Neurological Examination
- 1.5. Structure and Organization of the Neonatal Service
  - 1.5.1. Location of the Neonatology Service
  - 1.5.2. Equipment and Materials
  - 1.5.3. Human Resources
  - 1.5.4. Concept of Neonatal Intensive Care Unit (NICU)
    - 1.5.4.1. Calculation and Layout of Cribs
    - 1.5.4.2. Physical Space in a Neonatal Intensive Care Unit
    - 1.5.4.3. Equipment and Material in a Neonatal Intensive Care Unit
    - 1.5.4.4. Human Resources in a Neonatal Intensive Care Unit
    - 1.5.4.5. Profiles and Roles: "Nursing Team"
    - 1.5.4.6. Operating System: Primary Nursing





### Structure and Content | 21 tech

#### Module 2. Thermal Management, Pain Control and Sedation of the Newborn

- 2.1. Thermal Management in a Newborn
  - 2.1.1. Introduction of Thermoregulation
  - 2.1.2. Neutral Thermal Environment
  - 2.1.3. First Hours of Life
  - 2.1.4. Effects of Thermal Environment on a Newborn
  - 2.1.5. Guidelines for Assessing the Temperature of a Newborn
  - 2.1.6. Hypothermia in a Newborn with Hypoxic-ischemic Encephalopathy as a Neuroprotective
    - 2.1.6.1. Mechanisms of Action for Hypothermia
    - 2.1.6.2. Neuroprotection with Cerebral Hypothermia After Hypoxic-ischemic Occurs
    - 2.1.6.3. Indications of Hypothermia
    - 2.1.6.4. Contraindications of Hypothermia
    - 2.1.6.5. Exit Criteria Once Hypothermia has Begun
- 2.2. Pain Management in a Newborn
  - 2.2.1. Physiology of Pain in a Newborn
  - 2.2.2. Short and Long-Term Consequences of Pain
  - 2.2.3. Measurement of Pain in a Newborn
  - 2.2.4. Treatment of Pain in a Newborn
  - 2.2.5. Pain Management in Some Common Procedures in the NICU
- 2.3. Sedation of a Newborn
  - 2.3.1. Anesthetic Drugs
  - 2.3.2. Hypnotic/ Sedative Drugs
  - 2.3.3. Withdrawal Syndrome in a Newborn



A unique, key, and decisive educational experience to boost your professional development"



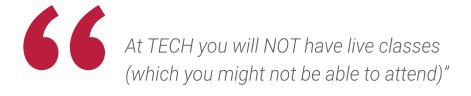


#### The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.









#### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

# tech 26 | Study Methodology

#### Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



#### Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.





#### A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

#### 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 assess 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.

### Study Methodology | 29 tech

#### The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

As such, the best educational materials, thoroughly prepared, will be available in this program:



#### **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.

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.



#### **Practicing Skills and Abilities**

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### **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 exclusive educational system for presenting multimedia content 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 education.

**Case Studies** 

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Testing & Retesting** 

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



**Classes** 

There is scientific evidence suggesting that observing third-party experts can be useful.

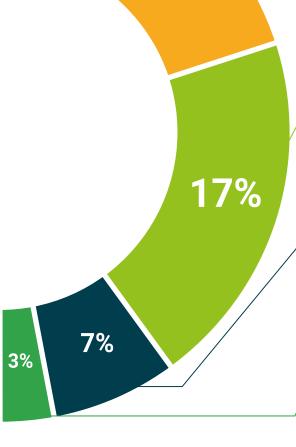


Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.

**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.







# tech 34 | Diploma

This private qualification will allow you to obtain a diploma for the **Postgraduate**Certificate in Neonatal Pain and Sedation for Nursing 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 Neonatal Pain and Sedation for Nursing

Modality: online

Duration: 6 weeks

Accreditation: 5 ECTS



has successfully passed and obtained the title of:

#### Postgraduate Certificate in Neonatal Pain and Sedation for Nursing

This is a private qualification of 150 hours of duration equivalent to 5 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024





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