

# Professional Master's Degree Neonatal Intensive Care and Neonatal Nursing

Endorsed by:





## Professional Master's Degree Intensive Care Neonatal and Neonatal Nursing

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nursing/professional-master-degree/master-intensive-care-neonatal-neonatal-nursing](http://www.techtute.com/us/nursing/professional-master-degree/master-intensive-care-neonatal-neonatal-nursing)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Skills

---

*p. 18*

04

Course Management

---

*p. 22*

05

Structure and Content

---

*p. 28*

06

Methodology

---

*p. 38*

07

Certificate

---

*p. 46*

01

# Introduction

In the immediate care of a newborn, everything must be in place to ensure adequate care and development of the baby, with the aim of reducing its vulnerability during the first days in the neonatal transition period. This Professional Master's Degree is designed to keep nursing professionals well-trained and up to date so that they can provide quality and safe nursing care to the newborn.





“

*With the Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing you have the opportunity to update your knowledge in a practical way and without renouncing the maximum scientific rigor, to incorporate the latest advances in newborn nursing care in the Neonatal Intensive Care Unit"*



Neonatology is the continuously evolving speciality within pediatrics, that focuses on the first month of life of a newborn. In recent years, new specialized units have been created in the majority of maternity and children's hospitals, equipped with the latest technology to provide quality care. This has contributed, to a large extent, to the decrease in neonatal morbidity and mortality. It is vital that the staff performing their duties in these units are trained and up-to-date on the latest scientific evidence.

However, university programs in neonatology are very scarce, which is why it's necessary to implement training programs that offer health care professionals the possibility to update and broaden their knowledge and skills, in order to provide safe and high-quality nursing care for newborns.

It should also be noted that there are no other postgraduate programs like this available at a national level. Its broad and in-depth content makes this the benchmark program in the discipline. The different modules are taught in sessions with an eminently practical approach, using the latest educational technology, which allows for learning in a practical way, adapting to the needs of the professional. Therefore, you will be able to study this Professional Master's Degree in a 100% online format, which means this program is even compatible with a full-time job.

This **Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ◆ More than 100 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
- ◆ The latest information on the nursing care of a newborn patient in intensive care
- ◆ Presentation of practical workshops on procedures, nursing care and diagnosis and treatment techniques
- ◆ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ◆ Practical guides on different pathologies. These guides follow the scientific and pedagogical criteria of the main scientific reference
- ◆ 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 patients with training offered by the Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing"*

“

*This Professional Master's Degree is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in neonatology, you will obtain a Professional Master's Degree 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 program.

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.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the academic program. In order to do this, the nursing professional will be assisted by an innovative interactive video system, created by renowned and experienced experts in treating critical neonatal patients and with extensive teaching experience.

*Increase your professional opportunities by taking the professional master's degree in Neonatal Intensive Care and Neonatal Nursing.*

*It includes real clinical cases to bring the development of the program closer to everyday practice.*



02

# Objectives

This Professional Master's Degree is oriented towards effectively updating nurses' knowledge of the procedures for dealing with a newborn, in order to provide quality care based on the latest scientific evidence that guarantees patient safety.





“

*This refresher program will generate a sense of security when providing neonatal care, which will help you grow both personally and professionally”*



### General Objective

---

- Allow the nursing professional to gain up-to-date knowledge of the procedures for optimal care of a newborn. This knowledge should enable the stabilization, nursing diagnosis and care of neonates who routinely require intensive care to be addressed in a current, evidence-based approach



*Make the most of this opportunity and take the step to get up to date on the latest developments in Neonatal Intensive Care and Neonatal Nursing”*





## Specific Objectives

---

### Module 1. Important Aspects of Neonatology

- ♦ 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

### Module 2. Admission of a Newborn in the Neonatal Ward or in the NICU

- ♦ Determine how to structure a neonatal intensive care unit (NICU), as well as the calculation and arrangement of the cribs, the necessary physical space needed, the necessary equipment and materials; and the necessary human resources
- ♦ Identify the profiles and roles of the "nursing team" as well as its operating system: Primary Nursing
- ♦ Describe the guidelines for drug administration in neonatology
- ♦ Establish the criteria and objectives for admission of a newborn to the NICU; as well as the necessary nursing interventions
- ♦ Identify and classify the types of neonatal transport, its objectives and its purpose
- ♦ Select the necessary team and equipment to provide appropriate neonatal transport
- ♦ Acquire up-to-date knowledge of the therapeutic measures for treating pain in newborns, as well as how to manage the pain in some of the procedures in the NICU

### Module 3. Neonatal Resuscitation

- ♦ Form a resuscitation team and select the necessary equipment to perform neonatal resuscitation
- ♦ Gain up-to-date knowledge of resuscitation procedures
- ♦ Incorporate the latest information on the recommendations for neonatal resuscitation techniques, acknowledging the neonatal risk factors, as well as general procedures in the lead-up to birth
- ♦ Identify special resuscitation situations as well as the basic principles for a successful resuscitation
- ♦ Describe the possible complications that can arise during neonatal resuscitation

#### **Module 4 Pharmacology in Neonatology**

- ◆ Incorporate the basic principles of newborn sedation, anesthetic drugs and sedative/hypnotics into nursing
- ◆ Incorporate the principles of drug administration in the Neonatal Unit, as well as the use of the different routes: enteral, rectal, intramuscular, subcutaneous and intravenous routes, into nursing practice
- ◆ Differentiate the specific ways of administering drugs, the necessary equipment and its procedure
- ◆ Incorporate the different dosage guidelines applicable to nursing practice
- ◆ Gain up-to-date knowledge of the different drug administration routes and their characteristics
- ◆ Identify excipients used in neonatal formulations
- ◆ Gain up-to-date knowledge of the different therapeutic guidelines applicable to neonatology
- ◆ Classify and describe drug interactions, the different types of interactions that exist and how to prevent the risk of interactions
- ◆ Gain up-to-date knowledge on the use of drugs in neonatology

#### **Module 5. Principles of Drug Administration and Vascular Access in Neonatology**

- ◆ Acquire up-to-date knowledge of the necessary techniques for maintaining the line, removal of the line and the occurrence of possible complications
- ◆ Determine the precautions and contraindications as well as the appearance of possible complications that can occur with each of the specific ways of administering drugs
- ◆ Describe the different techniques to cannulate the umbilical artery or vein in a newborn
- ◆ Assess the contraindications and the complications of umbilical cannulation
- ◆ Gain up-to-date knowledge of the catheter removal procedure, the precautions which should be taken, its contraindications and complications

#### **Module 6. Premature Child**

- ◆ Describe the etiopathogenesis of prematurity
- ◆ Assess the differential diagnosis of premature newborns
- ◆ Incorporate the procedures for the reception of underweight premature newborns in the NICU
- ◆ Describe the clinical features and complications of the premature newborn
- ◆ Determine the different types of pathologies specific to a premature newborn including those relating to respiratory, neurological, ophthalmological, cardiovascular, digestive,

immunological, metabolic, hematological and endocrinological pathologies

- ♦ Assess the complications, the management and prognosis of a premature newborn
- ♦ Differentiate the sequelae that could appear, as well as their monitoring
- ♦ Control all aspects of the premature newborn's recovery period, the procedure for discharging them from hospital and their subsequent care
- ♦ Establish rules of conduct, nutrition, necessary pharmacological supplements, as well as neuropsychological and somatometric monitoring, and preventive measures against respiratory infections
- ♦ Acquire up-to-date knowledge of premature newborn vaccination programs

### **Module 7. Thermal Management, Pain Control and Sedation of the Newborn**

- ♦ 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

### **Module 8. Water, Electrolyte and Metabolic Disorders of a Newborn**

- ♦ Establish the management of fluids and electrolytes in the newborn, to maintain a hydroelectrolytic balance, controlling the insensible loss of water and electrolytes (sodium, potassium, calcium)
- ♦ Control the water balance in neonatal admitted to the intensive care unit
- ♦ Acquire up-to-date knowledge of newborn monitoring procedures
- ♦ Identify which are the main objectives for fluid management in newborns weighing less than 1.500g
- ♦ Establish the procedures for calculating water balance in a critically ill newborn
- ♦ Calculate insensible losses or insensible gains in a newborn with weight gain or weight loss
- ♦ Differentiate between very premature and hyperosmolar state
- ♦ Identify when fluids should be restricted in a very premature newborn
- ♦ Identify when the need for fluids should be increased in a very premature newborn

### **Module 9. Newborn Feeding: Breastfeeding/Formula Feeding and Feeding of the Hospitalized Infant**

- ♦ Explain what a newborn diet consists of
- ♦ Describe the requirements and feeding objectives of the breastfeeding infant
- ♦ Gain up-to-date knowledge of the process and the benefits of breastfeeding
- ♦ Classify the types of feeding used in the Neonatal Unit and NICU such as enteral nutrition and parenteral nutrition



- ♦ Determine the indications and contraindications of enteral nutrition and parenteral nutrition
- ♦ Acquire up-to-date knowledge of recommendations for the use of both enteral and parenteral nutrition routes of administration
- ♦ Differentiate the components of parenteral nutrition
- ♦ Describe the preparation and administration of parenteral nutrition
- ♦ Gain up-to-date knowledge of the guidelines for the withdrawal of parenteral nutrition

#### **Module 10. Nursing Interventions: Family Care, Perinatal Death and Neonatal Development**

- ♦ Explain family-centred care, as well as the ways to promote and rebuild the family bond
- ♦ Evaluate the importance of family in the neonatal unit and NICU
- ♦ Establish coping strategies for perinatal death, the intervention of professionals if it occurs, the grieving process and the stages
- ♦ Relate the influence of the impact of the NICU environment on newborn development
- ♦ Target neonatal care which is focused on the development, as well as the interventions, regarding the macro- and micro-environment of the newborn
- ♦ Acquire up-to-date knowledge of the nursing staff's own involvement when discharging patients from hospital

#### **Module 11. Respiratory Pathophysiology and Respiratory Disorders in Neonatology**

- ♦ Identify the modalities of respiratory assistance
- ♦ Revise the process of lung development, lung embryology and lung anatomy
- ♦ Review the respiratory physiology of a newborn
- ♦ Assess the respiratory problems of a newborn
- ♦ Establish the involvement of nursing staff in treating a newborn with a respiratory disorder
- ♦ Describe the mechanical ventilation and non-invasive ventilation techniques, as well as the nursing care involved in mechanical ventilation and the ventilation modes
- ♦ Incorporate endotracheal intubation and extubation techniques
- ♦ Acquire up-to-date knowledge of the cricothyroidotomy or coniotomy procedures
- ♦ Describe the procedure to perform a tracheotomy

#### **Module 12. Cardiac Disorders and Congenital Heart Disease in Neonatology**

- ♦ Gain up-to-date knowledge of the cardiac massage technique
- ♦ Identify the differences in the response to a neonatal cardiopulmonary arrest and one in an older pediatric patient
- ♦ Revise the general aspects of the cardiovascular system, embryology and cardiac anatomy

- ♦ Distinguish between the different types of congenital cardiopathies
- ♦ Evaluate the involvement of the nursing professional in treating a newborn with congenital cardiopathy
- ♦ Learn how to create a nursing care plan
- ♦ Gain an understanding of preoperative and postoperative care in cardiac surgery
- ♦ Gain up-to-date knowledge of the nursing procedure for addressing bacterial endocarditis

### **Module 13. Neonatal Neurological Disorders**

- ♦ Revise the general aspects of neonatal neurology, embryology and the nervous system anatomy
- ♦ Acquire up-to-date knowledge of the intervention procedures in a newborn with neonatal seizures
- ♦ Identify the most common neurological pathologies: neonatal intracranial hemorrhages and hydrocephalus

### **Module 14. Neonatal Digestive Disorders**

- ♦ Revise the general aspects of neonatal gastroenterology: embryology and the anatomy of the digestive tract
- ♦ Gain up-to-date knowledge of the procedures for handling nasogastric and orogastric tubes
- ♦ Describe the principal signs and symptoms of gastroesophageal reflux

- ♦ Identify the symptoms of esophageal atresia
- ♦ Determine how to treat necrotizing enterocolitis
- ♦ Incorporate Ostomy care techniques into nursing practice

### **Module 15. Hematologic Disorders in Neonatology**

- ♦ Revise the general aspects of neonatal hematology
- ♦ Describe fetal hydrops
- ♦ Gain up-to-date knowledge of the range analysis of neonatal hyperbilirubinemia parameters
- ♦ Describe other pathologies of neonatal hematology: polycythemia and thrombocytopenia
- ♦ Acquire up-to-date knowledge of the indications of blood transfusion and its by-products in the neonatal period, as well as the technique for transfusion itself

### **Module 16. Renal Disorders in Neonatology**

- ♦ Revise the general aspects of neonatal nephrology: embryology and anatomy of the renal system
- ♦ Gain up-to-date knowledge of the neonatal bladder catheterization technique
- ♦ Describe nephrological pathology in a newborn
- ♦ Initiate peritoneal dialysis in a newborn

### Module 17. Neonatal Shock

- ♦ Describe the main signs of neonatal shock
- ♦ Differentiate the distinct phases of neonatal shock and the types of shock
- ♦ Identify clinical signs of neonatal shock
- ♦ Gain up-to-date knowledge on how to address neonatal shock, as well as the basics of its treatment
- ♦ Incorporate neonatal shock nursing interventions into nursing practice
- ♦ Explain the algorithm for managing neonatal shock
- ♦ Describe how neonatal sepsis can occur, its etiopathogenesis, etiology, clinical symptoms, diagnosis and treatment

### Module 18. Neonatal Preoperative and Postoperative Care

- ♦ Establish nursing care in neonatal surgery: general preoperative and postoperative care
- ♦ Highlight the most common types of surgery: choanal atresia, esophageal atresia with tracheoesophageal fistula, diaphragmatic hernia, abdominal wall defects, necrotizing enteritis and imperforate anus
- ♦ Determine the nursing involvement required in neonatal preoperative and postoperative care

### Module 19. General Skin Care in Neonatology

- ♦ Revise the general aspects of neonatal dermatology; its embryology and histiology
- ♦ Establish newborn skin care practices
- ♦ Differentiate the transient benign skin lesions: erythema toxicum neonatorum, transient neonatal pustular melanosis, milia, miliaria, neonatal acne, subcutaneous fat necrosis, mongolian or Baltz spot, telangiectatic nevus or maternal nevi etc.
- ♦ Identify the most common skin infections in newborns: oral candidiasis (thrush), neonatal cutaneous candidiasis, impetigo neonatorum, staphylococcal scalded skin syndrome and neonatal chickenpox

### Module 20. Other Neonatal Pathologies: Metabolopathies, Chromosomopathies and Neonatal Oncology

- ♦ Differentiate the various metabolopathies
- ♦ Establish the different criteria for listing a metabolopathy in neonatal screening
- ♦ Acquire up-to-date knowledge of screening techniques, as well as the procedure to follow for the heel prick test
- ♦ Differentiate the types of screening for the various metabolopathies
- ♦ Distinguish the most frequent chromosomopathies
- ♦ Deal with neonatal oncology and the different types of tumors typical of the neonatal period: neuroblastoma, Wilms' tumor and teratomas



MON3

22:07

Screen 0

141

97

81/44  
(59)

(5)

100

50

30

15

0

→0←



# 03 Skills

After passing the assessments on the Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing, the nursing professional will have acquired the necessary professional skills to provide quality and up-to-date care, based on the most recent scientific evidence.





“

*With this program, you will be able to provide nursing care to premature newborns based on the latest scientific evidence, achieving a quality nursing practice in the neonatal intensive care unit"*



## General Skills

---

- ♦ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ♦ Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the area of study
- ♦ Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- ♦ Know how to communicate conclusions, knowledge, and supporting arguments to specialized and non-specialized audiences in a clear and unambiguous way
- ♦ Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner



## Transversal skills

---

- ♦ Develop within the profession in terms of working with other health professionals, acquiring skills to work as a team
- ♦ Recognize the need to maintain your professional skills and keep them up to date, with special emphasis on autonomous and continuous learning of new information
- ♦ Develop the capacity for critical analysis and research in your professional field



*Take advantage of this opportunity and take the step to get up to date on the latest developments in premature newborn intensive care practices”*



## Specific Skills

---

- ♦ Provide nursing care oriented to satisfying the needs of a newborn with health problems as well as preventing complications, all while guaranteeing safe and quality practice
- ♦ Provide comprehensive nursing care to the newborn from an ethical and legal perspective, with respect, tolerance, sensitivity to cultural diversity and without judgement. You will guarantee the right to privacy, confidentiality, information, participation, autonomy and informed consent in decision making; guaranteeing professional secrecy and the quality of the records
- ♦ Effectively and efficiently establish the different procedures that are required, select the diagnostic tests and administer the treatments needed for the different health problems in the newborn, taking into account the different levels of care
- ♦ Assess the needs of the newborn and provide comprehensive care during the surgical process, in order to optimize their recovery and to identify, intervene and/or refer them as a result of possible complications
- ♦ Incorporate the use and indication of medical devices and/or medications, evaluating the expected benefits, as well as the risks and/or effects, associated with their administration and consumption in the neonatal nursing care
- ♦ Apply theoretical knowledge in daily practice

04

# Course Management

The program's teaching staff includes renowned specialists in neonatal intensive care, who carry out their clinical practice in the leading hospital centers, and who bring the experience of their work to this training.

In addition, recognized nursing professionals and specialist nurses who are members of national and international scientific societies, participate in its design and preparation.



“

*Learn about the latest advances in neonatal nursing care from leading professionals”*



## 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."
- ♦ University expert 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

### Ms. Alfaro Ramírez, Concepción

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

### Dr. Bendala Tufanisco, Elena

- ◆ 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
- ◆ Faculty of Biomedical Sciences. Faculty of Health Sciences. Cardenal Herrera University - CEU

### Ms. Dobón García, Ana María

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

### Ms. Iranzo Cobo del Cabo, Rosana

- ◆ Degree in nursing
- ◆ University Professor, Cardenal Herrera University CEU

### Dr. Julve Chover, Natalia

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

### Ms. Juan Hidalgo, Alicia

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

### Dr. López Peña, Rafael

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

### Mr. Martínez Dolz, Jesús

- ◆ Degree in Nursing
- ◆ Expert in neonatal and pediatric nursing care
- ◆ Assistant Nurse in Pediatric and Neonatal Intensive Care Units in the city of Valencia
- ◆ Nisa 9 Octubre Hospital, Virgen del Consuelo Hospital, Clinical University Hospital and La Fe Polytechnic and University Hospital

### Dr. Moreno, Lucrecia

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

**Dr. Navarro Marí, Rosa María**

- ◆ Degree in Medicine and Surgery from the University of Valencia
- ◆ Pediatrician
- ◆ Attending Physician. Pediatrics and PICU-Neonatal Service, NISA

Expert degree in Neonatology

**Dr. Rojas Otero, Lucila**

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

**Dr. Sanahuja Santafé, Maria Amparo**

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

**Ms. Silvestre Castelló, Dolores**

- ◆ Degree in Chemistry from the University of Valencia
- ◆ Associate Professor of Nutrition and Bromatology, Cardenal Herrera University CEU
- ◆ Doctor of Chemical Sciences "Cum Laude" from the University of Valencia
- ◆ Diploma in Food Technology Spanish National Research Council (Consejo Superior Investigaciones Científicas)
- ◆ Postgraduate Degree in Nutrition, Dietetics and Diet Therapy, University of Navarra



**Ms. Roldán del Amo, Adela**

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

**Ms. Ribes Roldán, Sandra**

- ◆ Degree in nursing
- ◆ Nurse in Accident and Emergency department
- ◆ 9 de Octubre NISA Hospital in Valencia



05

# 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.







“

*This Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing contains the most complete and up-to-date scientific program on the market”*

## Module 1. Important Aspects of Neonatology

- 1.1. Differences between Newborn, Child and Adolescent
- 1.2. Neonatal Stages
  - 1.2.1. Neonatal Stages at Gestational Age
  - 1.2.2. Neonatal Stages for Birthweight
  - 1.2.3. Premature Newborns
  - 1.2.4. Post-Term Newborn
- 1.3. Anatomical and Physiological Characteristics of the 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 Organisation 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



## Module 2. Admission of a Newborn in the Neonatal Ward or in the NICU

- 2.1. Arrival of the Newborn (NB) in the Neonatal
  - 2.1.1. Admission Criteria
  - 2.1.2. Admission Objectives
  - 2.1.3. Nursing Interventions
  - 2.1.4. Physical Examination of the Newborn
- 2.2. Arrival of the Newborn (NB) in the NICU
  - 2.2.1. Admission Criteria
  - 2.2.2. Admission Objectives
  - 2.2.3. Nursing Interventions
  - 2.2.4. Physical Examination of the Newborn
- 2.3. Neonatal Transport
  - 2.3.1. Transfer of the Pregnant Woman
  - 2.3.2. Neonatal Transfer
  - 2.3.3. Neonatal Transport Team
  - 2.3.4. Neonatal Transport Equipment

## Module 3. Neonatal Resuscitation

- 3.1. Neonatal Resuscitation
  - 3.1.1. Neonatal Risk Factors
  - 3.1.2. General Procedures in the Moments Prior to Delivery
- 3.2. Resuscitation Team
- 3.3. Neonatal Resuscitation Equipment
- 3.4. Resuscitation Procedures
- 3.5. Respiratory Assistance Methods
- 3.6. Cardiac Massage
- 3.7. Administration of Medication: Drugs and Fluids
- 3.8. Neonatal Cardiorespiratory Arrest Care
- 3.9. Special Situations for Resuscitation
- 3.10. Basic Principles for a Successful Resuscitation and Possible Complications that Could Arise During the Resuscitation

## Module 4. Pharmacology in Neonatology

- 4.1. General Aspects of Neonatal Pharmacology
- 4.2. Modifications in the Reaction of Drugs in Newborns
- 4.3. Pharmacokinetics in Neonatology
  - 4.3.1. Absorption of Drugs
  - 4.3.2. Distribution of Drugs
  - 4.3.3. Binding of Drug to Plasma Proteins According to Development
  - 4.3.4. Metabolism or Biotransformation of Drugs in the Child
  - 4.3.5. Excretion of Drugs in Neonatology
- 4.4. Pharmacodynamics in Neonatology
- 4.5. Dosage Guidelines
  - 4.5.1. Excipients Used in Neonatal Formulations
  - 4.5.2. Therapeutic Guidelines
- 4.6. Drug Interactions
  - 4.6.1. Types of Pharmacological Interactions
  - 4.6.2. Interaction Risk Prevention
- 4.7. Use of Drugs in Neonatology

## Module 5. Principles of Drug Administration and Vascular Access in Neonatology

- 5.1. Principles of Drug Administration in the NICU
  - 5.1.1. Enteral Route
  - 5.1.2. Rectal Route
  - 5.1.3. Intramuscular Route
  - 5.1.4. Subcutaneous Route
  - 5.1.5. Intravenous Route
- 5.2. Specific Ways to Administer Drugs I: Rapid Intravenous Route
- 5.3. Specific Ways to Administer Drugs II: Intravenous Route with a Specific Infusion
- 5.4. Specific Ways to Administer Drugs III: Continuous Intravenous Route

- 5.5. Specific Ways of Administering Drugs IV: Peripheral Venous Route
  - 5.5.1. Necessary Equipment
  - 5.5.2. Procedure
  - 5.5.3. Maintaining the Line
  - 5.5.4. Removing the Line
  - 5.5.5. Possible Complications that Could Arise
- 5.6. Specific Ways of Administering Drugs V: Percutaneous Venous Route
  - 5.6.1. Indications
  - 5.6.2. Necessary Equipment
  - 5.6.3. Procedure
  - 5.6.4. Precautions
  - 5.6.5. Contraindications
  - 5.6.6. Complications
- 5.7. Specific Ways to Administer Drugs VI: Cannulation of the Umbilical Artery and Vein
  - 5.7.1. Indications
  - 5.7.2. Necessary Equipment
  - 5.7.3. Preparation
  - 5.7.4. Common Procedure for the Umbilical Artery and Umbilical Vein
  - 5.7.5. Contraindications
  - 5.7.6. Complications
- 5.8. Specific Ways to Administer Drugs VII: Cannulation of the Peripheral Artery
  - 5.8.1. Indications
  - 5.8.2. Necessary Equipment
  - 5.8.3. Procedure
  - 5.8.4. Extraction of a Catheter
  - 5.8.5. Precautions
  - 5.8.6. Contraindications
  - 5.8.7. Complications

## Module 6. Premature Child

- 6.1. Etiopathogenesis of Prematurity
- 6.2. Differential Diagnosis of Premature Newborns
- 6.3. Arrival of an Underweight Premature Newborn
- 6.4. Clinical Features and Complications of a Premature Newborn
  - 6.4.1. Respiratory Pathology
  - 6.4.2. Neurological Pathology
  - 6.4.3. Ophthalmologic Pathology
  - 6.4.4. Cardiovascular Pathology
  - 6.4.5. Digestive Pathology
  - 6.4.6. Immunological Pathology
  - 6.4.7. Metabolic Pathology
  - 6.4.8. Hematologic Pathology
  - 6.4.9. Endocrinologic pathology
  - 6.4.10. Complications
- 6.5. Care Procedure and Prognosis of a Premature Newborn
  - 6.5.1. Sequelae and Follow-up Monitoring
- 6.6. Aspects to be Monitored During the Recovery Period, Discharge and Post Care
  - 6.6.1. Hospital Discharge
  - 6.6.2. Rules of Conduct
  - 6.6.3. Feeding
  - 6.6.4. Pharmacological Supplements
  - 6.6.5. Neuropsychological and Somatometric Monitoring
  - 6.6.6. Prevention of Respiratory Infections
  - 6.6.7. Vaccinations for Premature Newborns



## Module 7. Thermal Management, Pain Control and Sedation of the Newborn

- 7.1. Thermal Management in a Newborn
  - 7.1.1. Introduction of Thermoregulation
  - 7.1.2. Neutral Thermal Environment
  - 7.1.3. First Hours of Life
  - 7.1.4. Effects of Thermal Environment on a Newborn
  - 7.1.5. Guidelines for Assessing the Temperature of a Newborn
  - 7.1.6. Hypothermia in a Newborn with Hypoxic-ischemic Encephalopathy as a Neuroprotective
    - 7.1.6.1. Mechanisms of Action for Hypothermia
    - 7.1.6.2. Neuroprotection with Cerebral Hypothermia Afterwards Hypoxic-Ischemic
    - 7.1.6.3. Indications of Hypothermia
    - 7.1.6.4. Contraindications of Hypothermia
    - 7.1.6.5. Exit Criteria Once Hypothermia has Begun
- 7.2. Pain Management in a Newborn
  - 7.2.1. Physiology of Pain in a Newborn
  - 7.2.2. Short and Long-Term Consequences of Pain
  - 7.2.3. Measurement of Pain in a Newborn
  - 7.2.4. Treatment of Pain in a Newborn
  - 7.2.5. Pain Management in Some Common Procedures in the NICU
- 7.3. Sedation of a Newborn
  - 7.3.1. Anesthetic Drugs
  - 7.3.2. Hypnotic/ Sedative Drugs
  - 7.3.3. Withdrawal Syndrome in a Newborn



## Module 8. Water, Electrolyte and Metabolic Disorders of a Newborn

- 8.1. Fluids and Electrolytes in a Newborn
  - 8.1.1. Hydroelectrolyte Balance
  - 8.1.2. Imsensible Water Loss
  - 8.1.3. Electrolytes
    - 8.1.3.1. Sodium (Na)
    - 8.1.3.2. Potassium (K)
    - 8.1.3.3. Calcium (Ca)
  - 8.1.4. Glucose
- 8.2. Water Balance in Neonatals Admitted to the ICU
  - 8.2.1. Patient Monitoring
  - 8.2.2. Adequate Water Balance
  - 8.2.3. Objectives for the Management of Fluids in Newborns Weighing Less Than 1.500g
  - 8.2.4. Different Stages during the Management of Fluids in Newborns Weighing Less Than 1.500g
  - 8.2.5. Alternative Ways of Calculating Water Balance in a Critically Ill
    - 8.2.5.1. Calculation of Insensible Losses (IL) or Insensible Gains (IG)
    - 8.2.5.2. Calculation of Insensible Losses (IL) with Weight Gain
    - 8.2.5.3. Calculation of Insensible Losses (IL) with Weight Loss
- 8.3. Very Premature Newborns and Hyperosmolar State
  - 8.3.1. When Should Fluids be Restricted in a Very Premature Newborn?
  - 8.3.2. When Should the Need for Fluids be Increased in a Very Premature Newborn?

## Module 9. Newborn Feeding: Breastfeeding/Formula Feeding and Feeding of the Hospitalized Infant

- 9.1. General Aspects of a Newborn's diet
- 9.2. Requirements and Feeding Objectives of the Breastfeeding Infant
- 9.3. Breastfeeding
- 9.4. Enteral Nutrition
  - 9.4.1. Indications for Enteral Feeding
  - 9.4.2. Contraindications for Enteral Feeding
  - 9.4.3. Enteral Feeding Methods

- 9.5. Parenteral Nutrition
  - 9.5.1. Indications for Parenteral Feeding
  - 9.5.2. Contraindications for Parenteral Feeding
  - 9.5.3. Vein Administration Routes
  - 9.5.4. Recommendations for the Monitoring of Administration Routes
  - 9.5.5. Components of Parenteral Nutrition
  - 9.5.6. Preparation and Administration of Parenteral Nutrition
  - 9.5.7. Controls
  - 9.5.8. Complications
  - 9.5.9. Withdrawal of Parenteral Nutrition

## Module 10. Nursing Interventions: Family Care, Perinatal Death and Neonatal Development

- 10.1. Family-Centred Care: Ways to Promote and Rebuild Family
- 10.2. The Family in the Neonatal Unit and NICU Setting
- 10.3. Nursing Interventions in the Neonatal Unit and NICU Setting
- 10.4. Perinatal Death: the Pain and the Grieving Process
- 10.5. The Intervention of Professionals in the NICU in Perinatal Death
- 10.6. Impact of the NICU Environment on Development
- 10.7. Neonatal Care Focused on Development
- 10.8. Interventions on the Macroenvironment of the Newborn
- 10.9. Interventions on the Microenvironment of the Newborn
- 10.10. Involvement of Nurses in Hospital Discharge

## Module 11. Respiratory Pathophysiology and Respiratory Disorders in Neonatology

- 11.1. Pulmonary Development
  - 11.1.1. Pulmonary Embryology
  - 11.1.2. Review of Pulmonary Anatomy
- 11.2. Respiratory Physiology
- 11.3. Newborn Respiratory Problems
- 11.4. Involvement of Nursing Staff in Treating a Newborn with a Respiratory Disorder

- 11.5. Mechanical Ventilation
  - 11.5.1. Nursing Care in Mechanical Ventilation
  - 11.5.2. Forms of Ventilation
    - 11.5.2.1. Non-Invasive Ventilation (NIV)
    - 11.5.2.2. Invasive Ventilation
- 11.6. Types of Materials for Administering Oxygen
- 11.7. Endotracheal Intubation and Extubation
  - 11.7.1. Endotracheal Intubation
  - 11.7.2. Extubation Process
- 11.8. Cricothyroidotomy or Coniotomy
- 11.9. Tracheotomy

## Module 12. Cardiac Disorders and Congenital Heart Disease in Neonatology

- 12.1. General Aspects of the Cardiovascular System
  - 12.1.1. Cardiac Embryology
  - 12.1.2. Reminder of Cardiac Anatomy
- 12.2. Syndromic Classification of Congenital Heart Disease
  - 12.2.1. Cyanotic Congenital Heart Disease
  - 12.2.2. Congenital Heart Disease Without Cyanosis
  - 12.2.3. Congenital Heart Disease Leading to Cardiogenic Shock
- 12.3. "Getting to Know" Congenital Heart Disease
  - 12.3.1. Transposition of the Main Arteries
  - 12.3.2. Isolated Ventricular Inversion or Corrected Transposition of the Main Arteries
  - 12.3.3. Tetralogy of Fallot
  - 12.3.4. Hypoplastic Left Heart Syndrome
  - 12.3.5. Infradiaphragmatic Total Pulmonary Venous Drainage
  - 12.3.6. Interruption of the Aortic Arch
  - 12.3.7. Aortic Coarctation
  - 12.3.8. Aortic Stenosis
  - 12.3.9. Pulmonary Stenosis
  - 12.3.10. Ebstein Disease

- 12.3.11. Complex Heart Disease with Heart Failure Without Pulmonary Stenosis
- 12.3.12. Congenital Heart Diseases with Left-Right Short Circuits
- 12.4. Nursing Care in Neonatal Heart Disease
  - 12.4.1. Evaluation and Interventions of the Nursing Staff in Treating a Patient with Congenital Heart Disease
  - 12.4.2. Nursing Care Plans
- 12.5. Preoperative and Postoperative Cardiac Surgery
  - 12.5.1. Preoperative Care
  - 12.5.2. Postoperative Care
  - 12.5.3. Bacterial Endocarditis

## Module 13. Neonatal Neurological Disorders

- 13.1. General Aspects of Neonatal Neurology
  - 13.1.1. Embryology of the Nervous System
  - 13.1.2. Basic Notions of the Nervous System Anatomy
- 13.2. Neonatal Neurological Examination
- 13.3. Neonatal Seizures
- 13.4. Neonatal Intracranial Hemorrhages
- 13.5. Hydrocephalus
- 13.6. Cerebral Hypothermia
- 13.7. Hypoxic-Ischemic Encephalopathy

## Module 14. Neonatal Digestive Disorders

- 14.1. General Aspects of Neonatal Gastroenterology
  - 14.1.1. Embryology of the Digestive System
  - 14.1.2. Reminder of the Anatomy of the Digestive System
- 14.2. Procedures for Handling Nasogastric and Orogastic Tubes
- 14.3. Gastroesophageal Reflux
- 14.4. Esophageal Atresia
- 14.5. Necrotizing Enterocolitis
- 14.6. Ostomy Care

### Module 15. Hematologic Disorders in Neonatology

- 15.1. General Aspects of Hematology
- 15.2. Neonatal Anemia
- 15.3. Fetal Hydrops
- 15.4. Neonatal Hiperbilirubinemia
- 15.5. Polycythemia
- 15.6. Thrombocytopenia
- 15.7. Blood Transfusion and Blood By-Products in the Neonatal Period

### Module 16. Renal Disorders in Neonatology

- 16.1. General Aspects of Neonatal Nephrology
  - 16.1.1. Embryology of the Renal System
  - 16.1.2. Review of the Anatomy of the Renal System
- 16.2. Nephrological Pathology in a Newborn
  - 16.2.1. Neonatal Bladder Catheterization
- 16.3. Urine Infection in a Newborn
- 16.4. Peritoneal Dialysis in a Newborn

### Module 17. Neonatal Shock

- 17.1. Introduction to Neonatal Shock
- 17.2. Phases of Neonatal Shock
- 17.3. Types of Shock
- 17.4. Clinical Signs of Neonatal Shock
- 17.5. How to Address Neonatal Shock
- 17.6. Basis of Treatment for Neonatal Shock
- 17.7. Nursing Interventions for Neonatal Shock
  - 17.7.1. Algorithm for Managing Neonatal Shock

- 17.8. Neonatal Sepsis and Septic Shock
  - 17.8.1. Introduction to Neonatal Sepsis
  - 17.8.2. Aetiopathogenesis
  - 17.8.3. Etiology
  - 17.8.4. Clinical symptoms
  - 17.8.5. Diagnosis
  - 17.8.6. Treatment

### Module 18. Neonatal Preoperative and Postoperative Care

- 18.1. Nursing Care in Neonatal Surgery
  - 18.1.1. General Preoperative Care
  - 18.1.2. General Postoperative Care
- 18.2. Most Common Surgical Procedures
  - 18.2.1. Choanal Atresia
  - 18.2.2. Esophageal Atresia with Tracheoesophageal Fistula
  - 18.2.3. Diaphragmatic Hernia
  - 18.2.4. Abdominal Wall Defects
  - 18.2.5. Necrotizing Enteritis
  - 18.2.6. Imperforate Anus
- 18.3. Nursing Involvement in Neonatal Preoperative and Postoperative Care

**Module 19. General Skin Care in Neonatology**

- 19.1. General Aspects of Neonatal Dermatology
  - 19.1.1. Embryological Recall
  - 19.1.2. Histologic Recall
- 19.2. Newborn Skin Care Practices
- 19.3. Transient Benign Skin Lesions
  - 19.3.1. Erythema Toxicum Neonatorum
  - 19.3.2. Transient Neonatal Pustular Melanosis
  - 19.3.3. Milia
  - 19.3.4. Miliaria
  - 19.3.5. Neonatal Acne
  - 19.3.6. Subcutaneous Fat Necrosis
  - 19.3.7. Dermal Melanocytosis
  - 19.3.8. Telangiectatic Nevus or Maternal Nevi
  - 19.3.9. Harlequin Coloring
- 19.4. Infections in a Newborn
  - 19.4.1. Oral Candidiasis (Thrush)
  - 19.4.2. Neonatal Cutaneous Candidiasis
  - 19.4.3. Neonatal Impetigo
  - 19.4.4. Staphylococcal Scalded Skin Syndrome
  - 19.4.5. Neonatal Chickenpox

**Module 20. Other Neonatal Pathologies: Metabolopathies, Chromosomopathies and Neonatal Oncology**

- 20.1. Metabolopathies
  - 20.1.1. Criteria for Listing a Metabolopathy in Neonatal Screening
  - 20.1.2. Screening Techniques: Procedure for the Heel Prick Test
  - 20.1.3. Different Types of Screening for the Various Metabolopathies
- 20.2. Most Common Chromosomopathies
  - 20.2.1. Aneuploidies
    - 20.2.1.1. Trisomy 21 (Down Syndrome)
    - 20.2.1.2. Trisomy 18 (Edwards Syndrome)
    - 20.2.1.3. Trisomy 13 (Patau's Syndrome)
    - 20.2.1.4. Turner Syndrome (45XO) or Monosomy X
    - 20.2.1.5. Klinefelter Syndrome (47XXY)
  - 20.2.2. Major Structural Changes
  - 20.2.3. Study of Chromosomal Alterations
- 20.3. Neonatal Oncology
  - 20.3.1. Neuroblastoma
  - 20.3.2. Wilms Tumor
  - 20.3.3. Teratomas

# 06

# 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.





“

*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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. 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.

“

*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 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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of 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 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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 relearn). 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 really 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.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, 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 them as many times as you want.



### 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 suggesting that observing third-party experts can be useful.

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.



07

# Certificate

The Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing guarantees you, in addition to the most rigorous and updated training, access to a Professional Master's Degree issued by TECH Technological University.



“

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



This **Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing** contains the most complete and updated scientific program on the market.

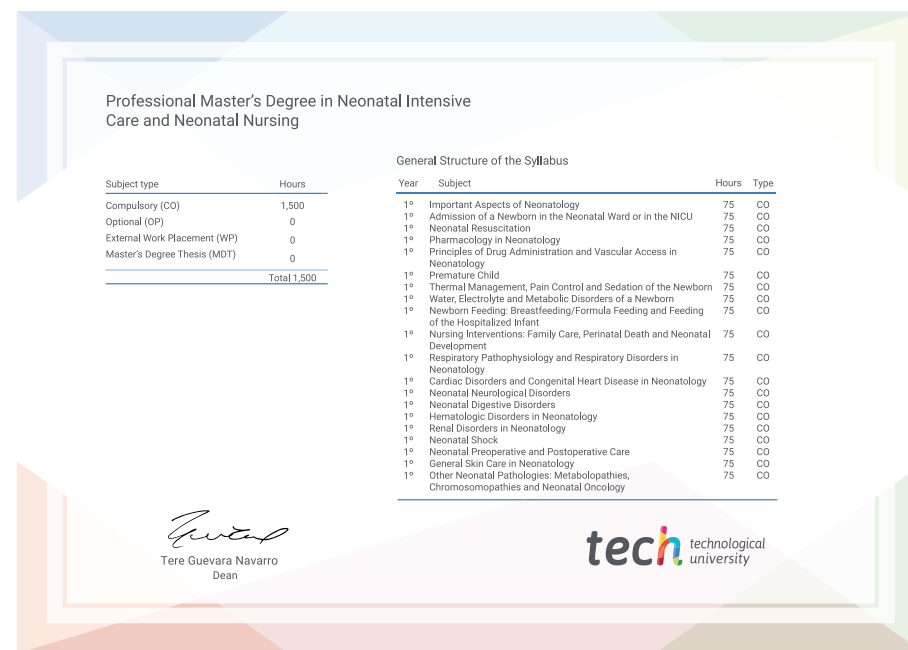
After the student has passed the evaluations, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Professional Master's Degree in Neonatal Intensive Care and Neonatal Nursing**

Official N° of hours: **1,500 h.**

Scientifically Endorsed by the Spanish Society of Intensive Care Nursing and Coronary Units (SEEIUC).



\*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.



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



## Professional Master's Degree

Intensive Care Neonatal and Neonatal Nursing

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Professional Master's Degree Neonatal Intensive Care and Neonatal Nursing

Endorsed by:

