

# Postgraduate Certificate Preterm Infant





## Postgraduate Certificate Preterm Infant

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

Website: [www.techtitute.com/us/medicine/postgraduate-certificate/preterm-infant](http://www.techtitute.com/us/medicine/postgraduate-certificate/preterm-infant)

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# 01

# Introduction

Prematurity is one of the leading causes of infant mortality worldwide. According to the World Health Organization, approximately 15 million babies are born prematurely each year, representing about 10% of all births. These children are at higher risk for long-term health complications, requiring specialized care. Given this reality, it is becoming increasingly necessary for health professionals to be trained in this area in order to provide quality care. It is in this context that TECH offers a 100% online academic proposal aimed at health professionals who wish to specialize in the comprehensive care of premature newborns.



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*Are you passionate about caring for premature babies? Learn from the best experts in this Postgraduate Certificate in Preterm Infants and acquire unique skills to provide quality care to the smallest and most vulnerable”.*

Preterm infants are those born before 37 weeks gestation and are usually at higher risk for medical complications than full-term infants. These little ones require specialized care to prevent, detect and treat possible pathologies that may arise, so it is essential that health professionals are trained to provide them with the best possible care.

For this reason, TECH addresses all aspects necessary to understand the etiopathogenesis of prematurity, fetal causes, assessment of respiratory pathologies. Topics such as neurological, ophthalmological, digestive, hematological and endocrinological, resuscitation of low birth weight premature infants, nutrition and other important topics during the development of this Postgraduate Certificate.

The program will provide an in-depth look at the latest techniques and procedures for the care of the preterm newborn and discuss the latest research in the field. Experts in the field will teach the classes, including neonatology physicians and other health professionals with experience in the care of these premature infants.

The program will be taught 100% online, and multimedia resources will be used to facilitate the understanding and assimilation of the concepts. Practical sessions will be included in which real situations will be simulated and clinical cases will be solved so that participants can apply the knowledge acquired in real situations.

This **Postgraduate Certificate in Preterm Infant** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of case studies presented by medical experts focused on Neonatology
- ◆ 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
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*With this program you will have access to multimedia and multichannel resources to facilitate your learning. Learn in an innovative way and connect with your vocation!"*

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*This Postgraduate Certificate in Preterm Infant will provide you with up-to-date knowledge on the latest advances in the care of preterm infants"*

The program's teaching staff includes professionals from sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its 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 education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. This will be done with the help of an innovative system of interactive videos made by renowned experts.

*Discover how to identify and treat premature infants with the best teachers in Neonatology.*

*Learn how to sustainably manage water catchment and water resources to contribute to the progress of humanity.*



# 02 Objectives

Preterm infants present a series of particularities and complications that must be approached individually and with a thorough knowledge of their etiopathogenesis, pathologies and clinical management. In this way, this program seeks to provide participants with the necessary knowledge to identify, evaluate and adequately treat premature infants, as well as to establish criteria for hospital discharge and long-term follow-up. All this in order to improve the quality of life and prognosis of these little patients.







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*Discover the skills needed for neonatal organ and device care and become a complete professional”*



## General Objectives

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- ◆ Delve into preterm neonates and their implications
- ◆ Update knowledge of the indications for prevention in sick neonates
- ◆ Be aware of the protocols that optimize the treatment of the sick neonate
- ◆ Describe the main characteristics of the healthy newborn and its basic care
- ◆ Systematize the main problems, disorders and diseases of the newborn, such as weight gain and metabolic development, prematurity, congenital malformations, respiratory or cardiac pathology, metabolic and blood disorders, or digestive or nutritional complications
- ◆ List and describe the main common procedures in neonatology
- ◆ Deepen in the therapeutic activities in the pathologies of the neonate
- ◆ Delve into the basic and specific aspects of complementary examinations in this subspecialty and how to perform them
- ◆ Investigate the knowledge of the different procedures of neonatal nutrition
- ◆ Analyze the follow-up of the newborn once it has been controlled in the acute period
- ◆ Illustrate and reflect on the different moments of care in the models of assistance to the newborn, both healthy and with pathology requiring hospital treatment
- ◆ Explain the various systems of care for the sick neonate, delimiting the continuity between the neonatal period of acute illness and its subsequent follow-up
- ◆ Describe all the accompaniment that the technology means for the adequate monitoring and follow-up of these children, being able to be coupled to the various guides and protocols to finally obtain a global health concept
- ◆ Deepen all the possibilities of on-site and even remote monitoring to achieve a very early and optimal performance on the impact of the disease on the neonate
- ◆ Delve into all aspects of the concepts of complementary knowledge that allow understanding perinatology as a complete subspecialty, from the fetal period to long-term follow-up in outpatient clinics
- ◆ Detail the parameters that will indicate the correct acquisition of all the developmental items of the various organs and apparatuses in order to obtain an optimal long-term result
- ◆ Specify all the elements of the pathological conditions of the sick neonate in order to be able to establish work routines with results at the level of medical excellence



## Specific Objectives

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- ◆ Identify the various types of Preterm Infant
- ◆ Delve into the exploration and categorization process of these children
- ◆ Describe triggering of prematurity
- ◆ Deepen in the assessment of their various pathologies
- ◆ Inquire into the care by organs and devices in neonatal
- ◆ Addressing possible sequels
- ◆ Establish criteria for hospital discharge

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*Learn how to manage the possible sequels in preterm infants with the Postgraduate Certificate in Preterm Infants"*

# 03

# Course Management

TECH has brought together the best specialists in the area of Neonatology to provide a complete and updated training on the subject. This exceptional team of experts has extensive care, research and teaching experience in the care of neonatal patients in Intensive Care Units, as well as in the study of neurological pathologies and in vaccinology. The agenda of this course addresses the different types of preterm infants, the process of exploration and categorization of these infants, the assessment of their various pathologies, the care by organs and devices in neonates. All this, with the objective of providing students with complete and updated knowledge that will allow them to provide quality care to neonatal patients.





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*With the help of the best experts in the sector and thanks to this Postgraduate Certificate in Preterm Infants, you will learn to explore and categorize preterm newborns and ensure their health.*

## Management



### Dr. Baca Cots, Manuel

- Head of the Pediatrics and Neonatology Service at Hospital Quirón Málaga
- Head of Neonatology at Hospital Clínica Dr. Gálvez
- Head of Neonatology at Hospital Qurón of Murcia
- Head of Andalusian Health Service (SAS)
- Principal investigator of international multi-center projects
- Degree in Medicine from the University of Granada



## Professors

### Dr. Pérez, Maribel

- ◆ Neonatologist at the Neonatal Unit of Hospital Quirón Salud de Málaga
- ◆ Pediatric Critical Care Transport
- ◆ Degree in Medicine from the University of Granada

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

# 04

## Structure and Content

Thanks to this program, professionals can deepen their knowledge of the clinical characteristics and comprehensive management of the premature newborn. This is achieved through the structure of the program, which addresses aspects ranging from the etiopathogenesis of prematurity, its assessment and prevention, to long-term follow-up and chronic problems that may arise. The different pathologies that can affect the preterm infant, such as respiratory, cardiovascular, neurological, ophthalmological, digestive, hematological, endocrinological and metabolic pathologies, are also analyzed. Likewise, TECH's pedagogical methodology, *Relearning* and the flexibility to organize academic resources are unique features of this 100% online program.





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*Gain valuable skills for the care of premature neonates and stand out in the field of neonatal medicine with this program"*

## Module 1. Preterm/Premature Child

- 1.1. Etiopathogenesis of Prematurity
  - 1.1.1. Definition and Types of Prematurity
  - 1.1.2. Morphological Assessment
  - 1.1.3. Calculation of Gestational Age
  - 1.1.4. Viability Criteria
  - 1.1.5. Ethical and Legal Considerations
- 1.2. Evaluation of the fetal causes of prematurity
  - 1.2.1. Prevention of Prematurity
  - 1.2.2. Antenatal corticosteroids to accelerate fetal maturation
  - 1.2.3. New indications and neuroprotection in the preterm newborn
  - 1.2.4. Pre-term Care Results
- 1.3. Arrival of an Underweight Premature Newborn
  - 1.3.1. Initial Stabilization
  - 1.3.2. Resuscitation Equipment and Organization
  - 1.3.3. Neonatal Resuscitation Equipment
  - 1.3.4. Special Situations
- 1.4. Respiratory Pathology and Cardiovascular
  - 1.4.1. Preterm Respiratory Pathology and Oxygen Administration
  - 1.4.2. Respiratory Physiology and Mechanical Ventilation
  - 1.4.3. Non-Invasive Ventilation (NIV)
  - 1.4.4. Principles of preterm cardiology
- 1.5. Neurological and Ophthalmological Pathology
  - 1.5.1. Neonatal Seizures
  - 1.5.2. Neonatal intracranial hemorrhages and perinatal cerebral infarction
  - 1.5.3. Hypoxic-Ischemic Encephalopathy and Hypothermia
  - 1.5.4. Main ophthalmologic pathology in preterm infants





- 1.6. Digestive and its nutrition Pathologies
  - 1.6.1. Esophageal Atresia
  - 1.6.2. Necrotizing Enterocolitis
  - 1.6.3. Breastfeeding with mother's milk
  - 1.6.4. Parenteral feeding in the preterm neonate
- 1.7. Hematologic Pathology
  - 1.7.1. Neonatal Anemia
  - 1.7.2. Neonatal Hiperbilirrubinemia
  - 1.7.3. Platelet Alterations
  - 1.7.4. Hemorrhages and Coagulation Disorder
- 1.8. Endocrinologic and metabolic pathology
  - 1.8.1. Metabolopathies
  - 1.8.2. Screening
  - 1.8.3. Thyroid and adrenal glands
  - 1.8.4. Glucose Homeostasis
- 1.9. Hospital Discharge
  - 1.9.1. Feeding
  - 1.9.2. Pharmacological Supplements
  - 1.9.3. Neuropsychological and Somatometric Monitoring
  - 1.9.4. Prevention of Respiratory Infections
  - 1.9.5. Vaccinations for Premature Newborns
- 1.10. Long-term follow-up and chronic problems of premature infants
  - 1.10.1. At-risk premature infant follow-up programs
  - 1.10.2. Surgical schedule
  - 1.10.3. Bronchopulmonary dysplasia and chronic lung disease
  - 1.10.4. Early Care Units

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. 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, trying to recreate the real conditions in the physician's professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*





At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

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

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



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

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

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



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 06 Certificate

The Postgraduate Certificate in Preterm Infant guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Preterm Infant** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

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 Preterm Infant**  
Official N° of Hours: **150 h.**



\*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.



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## Preterm Infant

