



### Postgraduate Diploma

### **Neonatal Disorders**

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 24 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-neonatal-disorders

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### tech 06 | Introduction

The evolution of the Neonatology Units in recent years is in line with the relevance of this area for patient survival and the work carried out in the field of scientific research. In this sense, early detection and treatment of certain Neonatal Disorders are fundamental for the improvement of the patient's prognosis.

Therefore, it is essential for the specialist to be aware of the most recent scientific studies that delve into the etiology, diagnosis and approach to necrotizing enterocolitis, hypoxic-ischemic encephalopathy and hypothermia or heart rhythm disorders, among others. In this line, this Postgraduate Diploma in Neonatal Disorders, which offers specialists a complete update in this field from the hand of a faculty that has made an advanced and rigorous agenda.

A program that will lead the graduate to be aware of the most relevant advances in the management of patients with Shock and Neonatal Sepsis, Congenital Heart Disease or Neurological exploration in neonates. In addition, through video summaries of each topic, videos in detail, clinical case studies or essential readings, students will be able to delve into the most relevant Digestive Disorders, as well as the Nutrition factor, including breastfeeding or the indication for the use of probiotics.

Likewise, thanks to the *Relearning* method, based on the reiteration of the most important content, the physician will advance through the program in a natural way, consolidating it in a simple manner and thus reducing the long hours of study so frequent in other academic systems.

In addition, the absence of attendance and classes with fixed schedules provides greater freedom of access to the curriculum and allows the reconciliation of professional and personal daily activities with a quality university program.

This **Postgraduate Diploma in Neonatal Disorders** contains the most complete and upto-date scientific program on the market. The most important features include:

- The development of practical cases presented by experts in Pediatrics and 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 assignments
- Content that is accessible from any fixed or portable device with an Internet connection



A university certification that adapts to your schedule and allows you to reconcile your professional activities with a quality education"



The multimedia pills and clinical case studies will allow you to obtain a much more direct and closer vision of the approach to the neonate with Digestive Disorders" You will be aware of the most effective procedures for the stabilization of the neonate who has suffered a Sepsis.

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

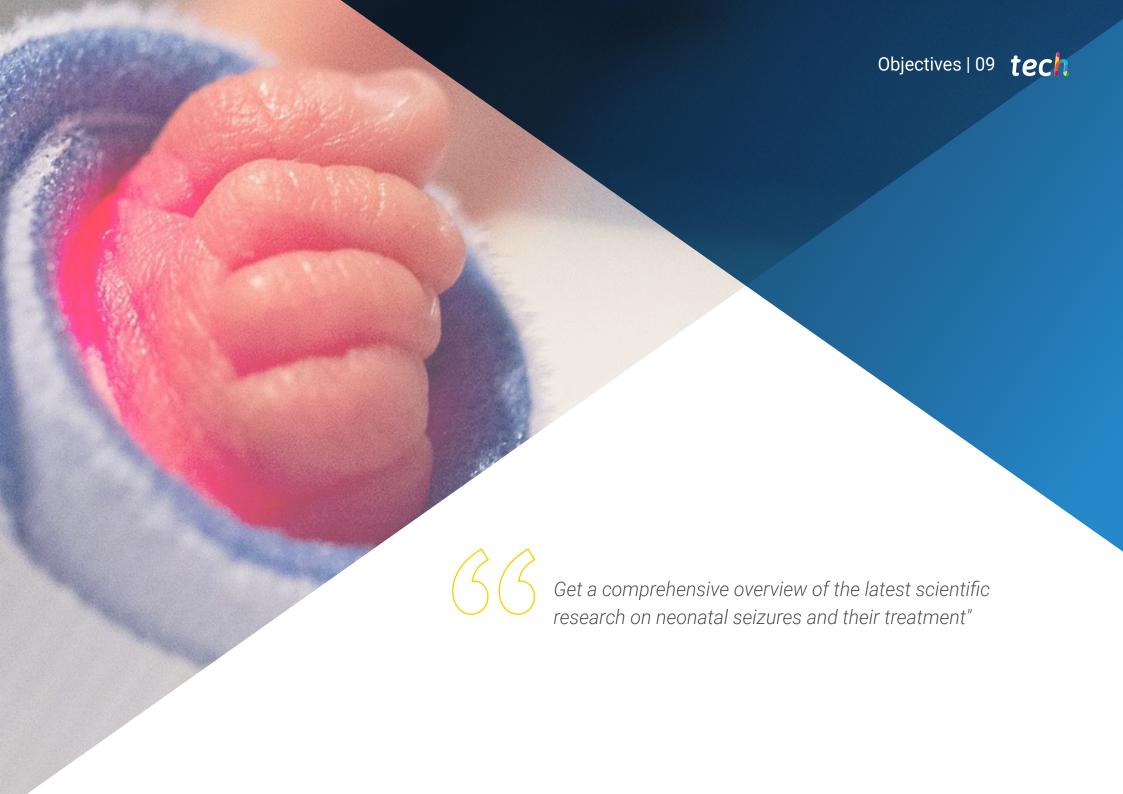
Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

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. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

A program in which you will comfortably delve from hypoxic-ischemic encephalopathy to the meaning and expression of neonatal seizures.







### tech 10 | Objectives



### **General Objectives**

- Delve into preterm neonates and their implications
- Update knowledge of the indications for prevention of the sick neonate
- 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

- Delve into 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



Obtain through this program, the latest information on the diagnosis and treatment of patients with Necrotizing Enterocolitis"





### **Specific Objectives**

#### Module 1. Cardiac Disorders and Congenital Heart Disease in Neonatology

- Deepen in cardiac embryology and development
- Delve into cardiac pathophysiology
- Describe Cardiovascular pathology

#### Module 2. Neonatal Shock and Sepsis

- Delve in the assessment of Sepsis
- Gain an in-depth understanding about Pathophysiology of shock
- Inquire into the attitude towards the different phases of shock
- Establish the necessary equipment for stabilization of the newborn baby
- Delimit Neonatal Sepsis

#### Module 3. Neurological Disorders in Neonatology

- Gain in-depth knowledge about the fundamental neurological centers
- Describe the fundamental items of Hypoxic-Ischemic Encephalopathy
- Discern in the classification and attitude towards neonatal seizures
- Identify Neuromuscular Pathology in the neonatal period

#### Module 4. Digestive Disorders and Nutrition in Neonatology

- Update systematized knowledge of Digestive Pathology
- Delve into each of the items in the Pathophysiology of the Digestive System
- Point out the attitudes to be taken, from the point of view of food and nutrition, to improve the evolution of these patients
- Deepen in nutrition as an essential element for long-term health





### tech 14 | Course Management

#### Management



#### Dr. Baca Cots, Manuel

- Head of the Pediatrics and Neonatology Service at Quirón Hospital of Málaga
- Head of Neonatology at Dr. Gálvez Clinical Hospital
- 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. Saldaña, Natalia

- Neonatologist at the Regional Hospital of Malaga
- Neonatologist in the Andalusian Health Service
- Neonatology at Torrevieja Hospital
- Neonatologist at the Neonatal Unit of the Quirón Salud Hospital of Málaga
- PhD in Medicine, University of Malaga
- Master's Degree in Neonatology from UCAM University
- Master's Degree in Pediatric Cardiology and Congenital Cardiology Treatment of TECH

#### Dr. García-Alix, Alfredo

- Neonatologist at the Sant Joan de Déu Hospital in Barcelona
- \* Neonatology at the Gran Canaria Maternal-Child Hospital
- Neonatology at the La Paz University Hospital of Madrid
- Associate Professor of Pediatrics at the University of Barcelona, the University of Gran Canaria and the Autonomous University of Madrid
- Internship at the Neonatal Neurology Research Program of the Washington University
- Doctor of Medicine



### Course Management | 15 tech

#### Dr. Valverde, Eva

- Head of Neonatology at the La Paz University Hospital
- \* Associate Professor of Pediatrics, UAM, Madrid
- Specialist in Pediatrics at La Paz University Hospital
- \* Doctorate in Medicine from the Autonomous University Madrid
- Degree in Medicine from the Complutense University of Madrid
- Member of: the European Working Group on Neonatal Brain Ultrasonography (EUruS.Brain)

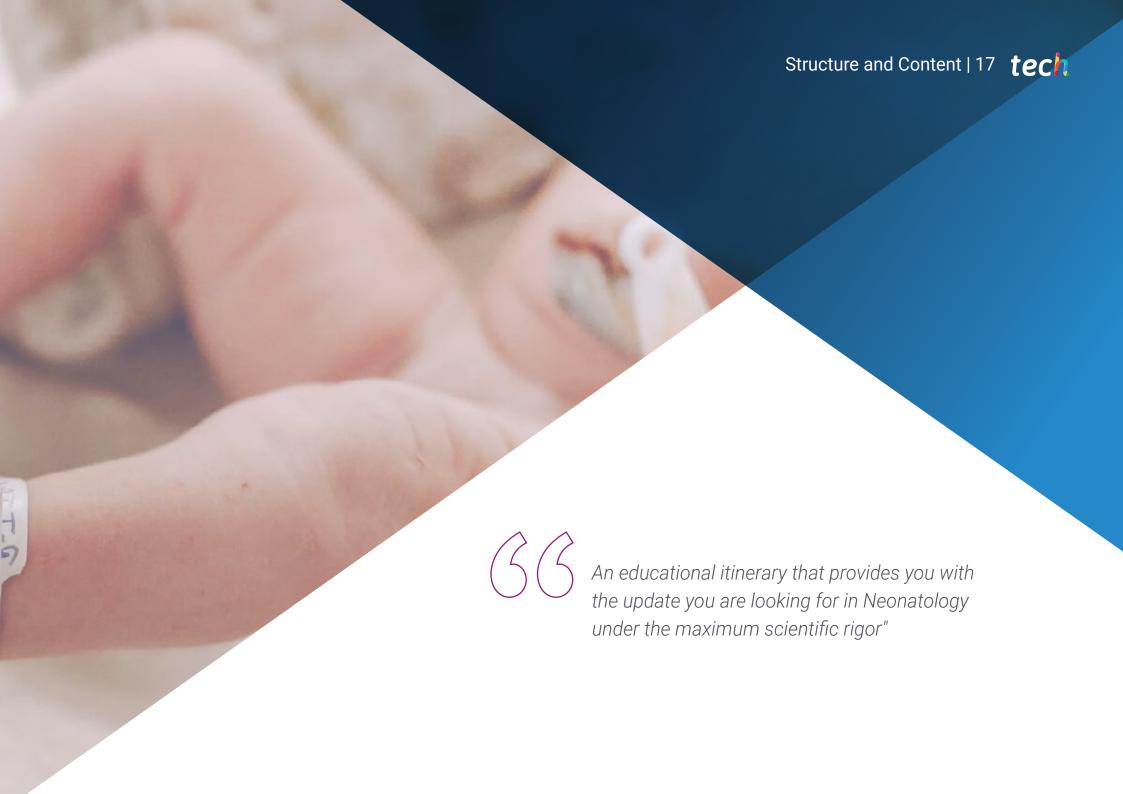
#### Dr. Ramón Salguero, José Manuel

- Director of Pediatrics in the Andalusian Health Service
- Degree in Medicine from the University of Granada



A unique specialization course that will enable you to acquire superior education for development in this field"





### tech 18 | Structure and Content

#### Module 1. Cardiac Disorders and Congenital Heart Disease in Neonatology

- 1.1. General information on the cardiovascular system: embryology, anatomy and physiology
  - 1.1.1. Embryology and anatomy of the cardiovascular system
  - 1.1.2. Cardiovascular System Physiology
  - 1.1.3. Lung development
  - 1.1.4. Extrauterine adaptation
- 1.2. Syndromic Classification of Congenital Heart Disease
  - 1.2.1. Cyanotic Congenital Heart Disease
  - 1.2.2. Congenital Heart Disease Without Cyanosis
  - 1.2.3. Congenital Heart Disease Leading to Cardiogenic Shock
  - 1.2.4. Other Cardiopathies
- 1.3. Cyanotic Congenital Heart Disease
  - 1.3.1. Procedures
  - 1.3.2. Diagnosis
  - 1.3.3. Treatment
  - 1.3.4. Monitoring
- 1.4. Congenital heart diseases without cyanosis
  - 1.4.1. Procedures
  - 1.4.2. Diagnosis
  - 1.4.3. Treatment
  - 1.4.4. Monitoring
- 1.5. Congenital Heart Disease Leading to Cardiogenic Shock
  - 1.5.1. Procedures
  - 1.5.2. Diagnosis
  - 1.5.3. Treatment
  - 1.5.4. Monitoring
- 1.6. Other Cardiopathies
  - 1.6.1. Transposition of the Main Arteries
  - 1.6.2. Tetralogy of Fallot
  - 1.6.3. Hypoplastic Left Heart Syndrome
  - 1.6.4. Miscellaneous

- 1.7. El Arco Aórtico
  - 1.7.1. Interruption of the Aortic Arch
  - 1.7.2. Aortic Coarctation
  - 1.7.3. Aortic Stenosis
  - 1.7.4. Other stenosis
- 1.8. Congenital Heart Diseases with Left-Right Short Circuits
  - 1.8.1. Procedures
  - 1.8.2. Diagnosis
  - 1.8.3. Treatment
  - 1.8.4. Monitoring
- 1.9. Cardiac Rhythm Abnormalities
  - 1.9.1. Bacterial Endocarditis
  - 1.9.2. Diagnosis of arrhythmias
  - 1.9.3. Arrhythmia Treatment
  - 1.9.4. Arrhythmia follow-up
- 1.10. Neonatal Pulmonary Hypertension
  - 1.10.1. Procedures
  - 1.10.2. Diagnosis
  - 1.10.3. Treatment
  - 1.10.4. Monitoring

#### Module 2. Neonatal Shock and Sepsis

- 2.1. Neonatal Shock
  - 2.1.1. Pathophysiology
  - 2.1.2. Diagnosis
  - 2.1.3. Treatment
  - 2.1.4. Singularities of the different types
- 2.2. Types and Phases of Neonatal Shock
  - 2.2.1. Types of Shock
  - 2.2.2. Monitoring
  - 2.2.3. Phases of Neonatal Shock
  - 224 Evolution

### Structure and Content | 19 tech

- 2.3. Etiology and Clinical Symptoms of Neonatal Shock
  - 2.3.1. Concept
  - 2.3.2. Pathophysiology
  - 2.3.3. Neonatal specificities
  - 2.3.4. The Overview
- 2.4. Manage and Treatment for Neonatal Shock
  - 2.4.1. Monitoring
  - 2.4.2. Etiological Treatment
  - 2.4.3. Drugs
  - 2.4.4. Special Situations
- 2.5. Neonatal Sepsis and Septic Shock
  - 2.5.1. Concepts
  - 2.5.2. Pathophysiology
  - 2.5.3. Specificities of the diagnosis
  - 2.5.4. The Overview
- 2.6. Etiopathogenesis of Neonatal Sepsis
  - 2.6.1. Concepts
  - 2.6.2. Pathophysiology
  - 2.6.3. Etiopathogenesis of Neonatal Sepsis
  - 2.6.4. Monitoring
- 2.7. Etiology of Sepsis
  - 2.7.1. Hypovolemia
  - 2.7.2. Pain
  - 2.7.3. Neonatal Sepsis
  - 2.7.4. Miscellaneous
- 2.8. Clinical Symptoms of Sepsis
  - 2.8.1. According to Etiology
  - 2.8.2. Clinical data
  - 2.8.3. Monitoring data
  - 2.8.4. Results

- 2.9. Diagnosis of Sepsis
  - 2.9.1. According to Etiology
  - 2.9.2. Clinical data
  - 2.9.3. Monitoring data
  - 2.9.4. Laboratory Data
- 2.10. Treatment of Sepsis
  - 2.10.1. According to Etiology
  - 2.10.2. Vasoactive drugs
  - 2.10.3. Evolution
  - 2.10.4. The aftereffects

#### Module 3. Neurological Disorders in Neonatology

- 3.1. Neonatal Neurology
  - 3.1.1. Embryology
  - 3.1.2. Anatomy of the Nervous System
  - 3.1.3. Physiology
  - 3.1.4. Anatomical-physiological Refresher Course
- 3.2. Neonatal Neurological Examination
  - 3.2.1. Central Nervous System
  - 3.2.2. Peripheral Nervous System
  - 3.2.3. Conscience
  - 3.2.4. Cranial nerves
- 3.3. Neonatal Seizures
  - 3.3.1. Semiology
  - 3.3.2. Classification
  - 3.3.3. Syndromes
  - 3.3.4. Treatment
- 3.4. Neonatal intracranial hemorrhages and perinatal cerebral infarction
  - 3.4.1. Neonatal Intracranial Hemorrhages
  - 3.4.2. Perinatal cerebral stroke
  - 3.4.3. Diagnosis
  - 3.4.4. Treatment

### tech 20 | Structure and Content

- 3.5. Alterations in the size of the skull: from Microcephaly to Hydrocephaly and Macrocephaly
  - 3.5.1. Microcephaly
  - 3.5.2. Hydrocephalus
  - 3.5.3. Macrocephaly
  - 3.5.4. Other Alterations
- 3.6. Hypoxic-Ischemic Encephalopathy and Hypothermia
  - 3.6.1. Semiology
  - 3.6.2. Classification and scales
  - 3.6.3. Diagnosis
  - 3.6.4. Hypothermia treatment
- 3.7. Malformations of the CNS. Neurologic Malformation Syndromes. Neuronal Migration Effects
  - 3.7.1. Genital Malformation Syndromes
  - 3.7.2. Specific CNS malformations
  - 3.7.3. Diagnosis
  - 3.7.4. Monitoring
- 3.8. Neuromuscular Diseases
  - 3.8.1. Semiology
  - 3.8.2. Classification
  - 3.8.3. Diagnosis
  - 3.8.4. Treatment
- 3.9. Criteria for brain death
  - 3.9.1. According to Etiology
  - 3.9.2. Clinical data
  - 3.9.3. Monitoring data
  - 3.9.4. Results Therapeutic Effort Limitation
- 3.10. Basis for the implementation of Neonatal Unit Care
  - 3.10.1. Care in Neonatal Units
  - 3.10.2. Kangaroo Method
  - 3.10.3. Neonatal Early Discharge Programs
  - 3.10.4. Results



#### Module 4. Digestive Disorders and Nutrition in Neonatology

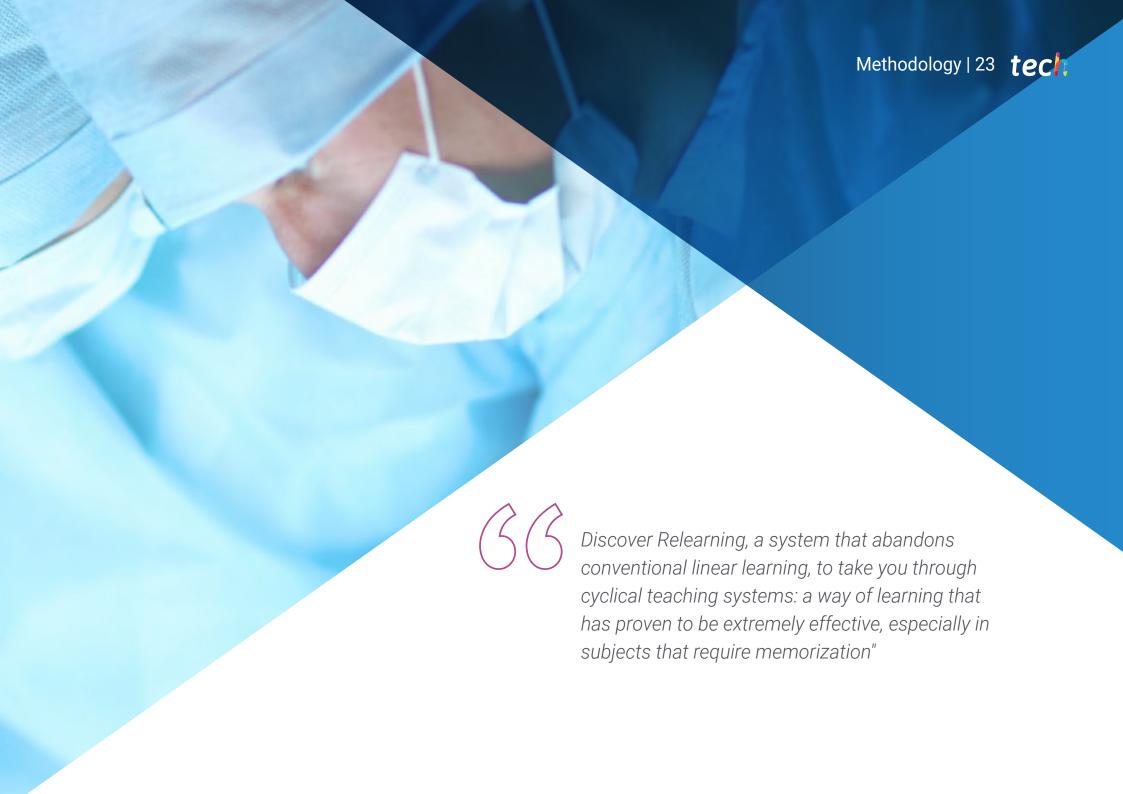
- 4.1. Generalities, embryology and anatomy of the digestive system
  - 4.1.1. Embryology
  - 4.1.2. Anatomy of the Nervous System
  - 4.1.3. Physiology
  - 4.1.4. Anatomical-physiological Refresher Course
- 4.2. Gastroesophageal Reflux
  - 4.2.1. Ethology
  - 4.2.2. Diagnosis
  - 4.2.3. Treatment
  - 4.2.4. Monitoring
- 4.3. Esophageal Atresia
  - 4.3.1. Classification
  - 4.3.2. Diagnosis
  - 4.3.3. Treatment
  - 4.3.4. Monitoring
- 4.4. Necrotizing Enterocolitis
  - 4.4.1. Ethology
  - 4.4.2. Diagnosis
  - 4.4.3. Treatment
  - 4.4.4. Monitoring
- 4.5. Requirements and Feeding Objectives of the Breastfeeding Infant. Breastfeeding: measures to promote breastfeeding
  - 4.5.1. Breastfeeding
  - 4.5.2. Measurements to Inhibit Breastfeeding
  - 4.5.3. Nutrients
  - 4.5.4. Objectives
- 4.6. Milk Banks. Composition of Breast Milk
  - 4.6.1. Milk Banks
  - 4.6.2. Composition of Breast Milk
  - 4.6.3. Traceability
  - 4.6.4. Security/Safety

- 4.4. Parenteral feeding in the preterm neonate
  - 4.7.1. Carbohydrates
  - 4.7.2. Amino Acids
  - 4.7.3. Lipids
  - 4.7.4. Remaining composition
- 4.8. Enteral Diet Formula milk for premature infants. Trophic feeding
  - 4.8.1. Enteral Feeding
  - 4.8.2. Premature infant formula
  - 4.8.3. Trophic feeding
  - 4.8.4. Other situations
- 4.9. Feeding monitoring: growth charts. Biochemical control parameters
  - 4.9.1. Growth charts
  - 4.9.2. Biochemical parameters
  - 4.9.3. Evolution
  - 4.9.4. Other situations
- 4.10. Probiotics: possible indications and uses
  - 4.10.1. Fundamentals of probiotic knowledge
  - 4.10.2. Indications
  - 4.10.3. Specific utilities
  - 4.10.4. Forms of use



In this university program, it deepens in the proper management of oxygen therapy in neonatal patients with cardiac or respiratory problems"





### tech 24 | Methodology

#### At TECH we use the Case Method

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

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



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.



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:

- 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.



### Methodology | 27 tech

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.

### tech 28 | Methodology

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.









### tech 32 | Certificate

This program will allow you to obtain your **Postgraduate Diploma in Neonatal Disorders** 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** title 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 Diploma in Neonatal Disorders

Modality: online

Duration: 6 months

Accreditation: 24 ECTS



Mr./Ms. \_\_\_\_\_, with identification document \_\_\_\_\_ has successfully passed and obtained the title of:

#### Postgraduate Diploma in Neonatal Disorders

This is a program of 600 hours of duration equivalent to 24 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



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

health confidence people
leducation information tutors
guarantee accreditation teaching
institutions technology learning
community commitment



## Postgraduate Diploma Neonatal Disorders

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