

Professional Master's Degree Neonatology





Professional Master's Degree Neonatology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/medicine/master/master-neonatology

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01

Introduction

Advances in the field of technology, pharmacology, and family-focused care in Neonatology Units have made it possible to increase the prognosis of many premature children or those with pathologies present at birth. Thus, the evolution in this area leads pediatricians and health professionals to constantly update their knowledge. For this reason, TECH brings together in this educational proposal the most rigorous and exhaustive information on the approach to the main cardiac, pulmonary, neuronal, endocrine pathologies, among others in newborns. A 100% online intensive program lasting 12 months, prepared by true specialists with extensive experience in this field and with top-level teaching tools.





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A Professional Master's Degree 100% online that will take you to update yourself in the main Endocrine, Neurological, Respiratory or Cardiac Disorders in neonatal patients”

Scientific advances have made it possible in recent years to incorporate the most precise pharmacology to Neonatal Units to address Respiratory, Neurological, Sepsis or congenital malformations pathologies, which nevertheless continue to be the main causes of death in this type of patient. Likewise, the promotion of good family-centered care practices, the promotion of breastfeeding and progress in specific formulas for premature infants have significantly influenced their survival and patient satisfaction.

In this sense, professionals engaged in this specialty face a daily challenge in dealing with neonates that present from very frequent pathologies such as jaundice to diseases considered rare in which significant advances have been made. In this line, TECH has decided to create this 12-month Professional Master's Degree in Neonatology and prepared by an excellent team of experts in this field.

This is an intensive program that will lead the graduate to carry out a complete update on work methods in Neonatology, the assessment of preterm infants, development and pulmonary physiopathology, the proper management of oxygen therapy, the approach to extreme situations and the singularities in the case of neonatal sepsis.

All this, in addition, with a syllabus designed with a theoretical-practical perspective and numerous complementary didactic material based on video summaries of each topic, detailed videos, scientific research readings and case studies that you can easily access, at any time. of the day, from a mobile phone, tablet or computer with an Internet connection.

A university program that does not require attendance at centers, nor does it have classes with restricted schedules, so the professional will have greater freedom to self-manage their access time and reconcile their daily activities with quality teaching.

This **Professional Master's Degree in Neonatology** contains the most complete and up-to-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 self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions for 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



This university program brings you closer to the new clinical criteria for the approach to premature and preterm infants”

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The Relearning method will allow you to reduce study hours and focus on the most outstanding concepts of this degree in Neonatology”

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 designed 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 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.

The clinical cases of this program will allow you to be up to date on Neonatal Resuscitation procedures.

It delves into the Pharmacology of neonatal pain and the therapeutic options currently available.



02

Objectives

This Professional Master's Degree has been designed with the premise of offering medical professionals a complete update in Neonatology. To achieve this goal, TECH not only provides top-notch pedagogical tools, but also provides graduates with an excellent team of specialists with extensive experience in Neonatology who will answer any questions they may have about the content of this degree. A unique opportunity to update through the largest digital university in the world.





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Obtain a theoretical-practical vision of the most recent advances in the field of Neonatology throughout the 1,500 teaching hours”



General Objectives

- Delve into preterm neonates and their implications
- To update the knowledge of the prevention indications for the sick neonate
- Be aware of the protocols that represent an optimization in the treatment of the sick neonate
- Describe the main characteristics of the healthy newborn and their 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 abnormalities, or digestive or nutritional complications
- List and describe the main usual procedures in neonatology
- Delve into therapeutic activities in neonatal pathologies
- Delve into the basic and specific aspects of the complementary exams in this subspecialty and how to carry them out
- Inquire into the knowledge of the various neonatal nutrition procedures
- Analyze the follow-up of the newborn once it has been controlled in the acute period
- Illustrate and reflect on the various moments of care in the care models for the newborn, both healthy and with a pathology that requires 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 technology means for the adequate monitoring and follow-up of these children, being able to be coupled with the various guides and protocols to finally obtain a concept of global health
- Delve into all the possibilities of face-to-face and even remote monitoring to achieve very early and optimal performance on the repercussion of the disease in the newborn
- Deepen 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 development items of the various organs and apparatus in order to obtain an optimal long-term result
- Specify all the elements of the pathological pictures of the sick neonate in order to be able to establish work routines with results at the level of medical excellence



Specific Objectives

Module 1. Aspects of the initial moments highlighted in Neonatology

- ♦ Update initial assessment protocols
- ♦ Delve into the classification and assignment of neonatal groups
- ♦ Assess the risk, maturity and morphology of the neonate
- ♦ Identify entry criteria
- ♦ Describe the material needed to care for neonates
- ♦ Delve into the newborn reception protocol in the various Neonatology Units
- ♦ Delve into the bases of neonatal transport
- ♦ Identify the different aspects of thermoregulation
- ♦ Update knowledge on newborn analgesia

Module 2. The Preterm/Premature Child

- ♦ Identify the various types of preterm infants
- ♦ Delve into the process of exploration and categorization of these children
- ♦ Describe the triggers for prematurity
- ♦ Deepen the assessment of its various pathologies
- ♦ Investigate care for organs and systems in neonates
- ♦ Address potential sequelae
- ♦ Establish criteria for hospital discharge

Module 3. Respiratory Pathophysiology and Respiratory Disorders in Neonatology

- ♦ Delve into the Pulmonary Physiopathology
- ♦ Establish the categorization of Neonatal Respiratory Pathology
- ♦ Delve into Oxygen Therapy
- ♦ Deepen the monitoring of neonates
- ♦ Describe the modalities of respiratory support

Module 4. Cardiac Disorders and Congenital Heart Disease in Neonatology

- ♦ Delve into embryology and cardiac development
- ♦ Delve into cardiac pathophysiology
- ♦ Describe cardiovascular pathology

Module 5. Shock and Neonatal Sepsis

- ♦ Delve into the assessment of Sepsis
- ♦ Deepen Physiopathology of shock
- ♦ Investigate the attitude towards the different phases of *shock*
- ♦ Establish the essential material for the stabilization of the neonate
- ♦ Delimit Neonatal Sepsis

Module 6. Neonatal Neurological Disorders

- ♦ Delve into the fundamental neurological centers
- ♦ Describe the fundamental items of Hypoxic-Ischemic Encephalopathy
- ♦ Discerning the classification and attitude towards neonatal seizures
- ♦ Identify Neuromuscular Pathology in the neonatal period

Module 7. Update systematized knowledge of Digestive Pathology

- ♦ Delve into each of the items in the Pathophysiology of the Digestive System
- ♦ Point out the attitudes to take, from the point of view of food and nutrition, to
- ♦ improve the evolution of these patients
- ♦ Deepen nutrition as a fundamental element in adequate long-term health

Module 8. Hematologic Disorders in Neonatology

- ♦ Delve into Hematology as a foundation for the assumption of the various states of health
- ♦ Inquire into hematology as a foundation for the improvement of various disease states
- ♦ Indicate the systematization of the various moments of intervention through the component elements of blood
- ♦ Delve into the expansion of data on everything that currently represents the transfusion of biological elements of blood to the newborn
- ♦ Update knowledge about hyperbilirubinemia and its measurement
- ♦ Describe the different modalities of jaundiced newborn



Module 9. Renal Disorders in Neonatology and in the Internal Environment

- ♦ Update knowledge on the mechanisms of Physiology and Physiopathology of the Internal Environment and the Kidney
- ♦ Delve into the outstanding anatomy for Nephrourological pictures
- ♦ To update the knowledge about Renal Infectious Pathology in the newborn
- ♦ Describe each of the normal and altered hydroelectrolytic situations
- ♦ Delve into the measurement of the Internal Environment: balance sheets

Module 10. Neonatal Endocrinology, Dysmorphology and Oncology

- ♦ Delve into the systematization of the assessment of Dysmorphological problems
- ♦ Delve into the diagnosis of Dysmorphological problems
- ♦ Identify the essential points in the proper handling of this type of situation
- ♦ Describe the hormonal balance of the neonate
- ♦ Delimit the fundamental points in the various modalities of neonatal screening



Get up to date in the management of special situations in neonatal patients with Dysmorphological problems thanks to TECH”

03 Skills

From the performance of mechanical ventilation, the transfer of the newborn patient, to the most effective and recent pharmacology guidelines are treated with exquisite rigor in this program. All this will allow the graduate to increase their abilities and skills for the care of newborn patients and their families in delicate moments in the first days of life of minors. To further facilitate the strengthening of these capacities, this academic option provides case studies that show the work methodology and the action required in each clinical situation.





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Get up to date in the management of special situations in neonatal patients with Dysmorphological problems thanks to TECH”



General Skills

- Carries out the categorization of Critically Ill Children
- Apply pharmacotherapy in Convulsive Syndromes
- Promote family-centered care for a neonatal patient
- Establish an adequate arrangement of the form of follow-up neonatal Hematological situations
- Perform early diagnosis in neonatal endocrinology
- Interpret tests in neonatal endocrinology



Expand your skills to care for families with children in Neonatal Units”





Specific Skills

- ♦ Develop Neonatal Life resuscitation
- ♦ Managing respiratory failure in neonates
- ♦ Perform tracheotomy in borderline situations
- ♦ Master medical and surgical treatments in neonates with Cardiac Disorders
- ♦ Apply the treatment guidelines for neonatal sepsis
- ♦ Perform a neurological examination of the neonate applying the latest advances in this field
- ♦ Carry out a correct long-term follow-up of children with Neurological Disorders with or without sequelae
- ♦ Strengthen skills for the treatment of neonatal hyperbilirubinemia
- ♦ Apply the most suitable solutions for hydroelectrolytic imbalances
- ♦ Apply the most recent endocrinological treatments

04

Course Management

TECH has brought together authentic specialists in Neonatology with accumulated care, research and teaching experience in this Master's Degree. An exceptional team due to its competence characteristics in the care of neonatal patients in Critical Care Units, in the study of neurological pathologies or in Vaccinology. A wide field of action that is reflected in the agenda of this university degree that will lead the graduate to obtain an update from the best experts.





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Authentic experts in Neonatology with extensive clinical, research and teaching experience make up this excellent Master's Degree in Neonatology”

Management



Dr. Baca Cots, Manuel

- ♦ Head of the Neurology and Neonatology Service at Hospital Quirón Málaga
- ♦ Head of Neonatology at Hospital Clínica Dr. Gálvez
- ♦ Head of Neonatology at Hospital of Murcia
- ♦ Head of Service at the(SAS Health Department)
- ♦ Principal investigator in several international multicenter studies
- ♦ Bachelor of Medicine from the University of Granada

Professors

Dr. Concheiro Guisán, Ana

- ♦ Head of the Pediatric Service at the Hospital Álvaro Cunqueiro de Vigo
- ♦ Coordinator of Clinical Teaching in the Grado en Medicina en el Complejo Hospitalario Universitario de Vigo
- ♦ Doctor of Medicine from the University of Barcelona
- ♦ Coordinator of the Rare Diseases and Pediatric Medicine Group of the Galicia Sur Health Research Institute (ISGS)
- ♦ Member of: Vice President of the Galician Bioethics Council

Dr. Ruiz Ramos, María Jose

- ♦ Pediatric assistant at Hospital Quirón Málaga
- ♦ Bachelor of Medicine from the University of Malaga with a specialty in Pediatrics

Dr. Ramón Salguero, José Manuel

- ♦ Director of pediatrics at the Andalusian Health Service
- ♦ Bachelor of Medicine from the University of Granada

Dr. Porta Ribera, Roser

- ♦ Neonatologist in the Neonatal Unit at the Germans Trias i Pujol University Hospital
- ♦ Neonatologist at the Dexeus Hospital
- ♦ Coordinator of the Neonatal Unit at the Germans Trias i Pujol University Hospital
- ♦ Pediatrician in Neonatology at the Germans Trias I Pujol Hospital
- ♦ Associate Professor of Pediatrics at the Autonomous University of Barcelona
- ♦ Degree in Medicine and Surgery from the University of Barcelona
- ♦ Diploma and instructor in Neonatal CPR by the SENeo
- ♦ Diploma in pediatric CPR by the European Resuscitation Council Neonatology in the Neonatal Unit at the Germans Trias i Pujol University Hospital

Dr. Perez, Maribel

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

Dr. Díez Delgado, Javier

- ♦ Neonatologist at the Hospital de Torrecárdenas
- ♦ Head of the Pediatric Critical Care and Emergency Unit of the Pediatric Service of the Torrecárdenas Hospital in Almería
- ♦ Instructor in Pediatric and Neonatal CPR CPR
- ♦ Principal investigator or collaborator in the lines of vaccinology and Neonatology
- ♦ Teacher in the Master of Emergency Medicine at the UAL
- ♦ Bachelor of Medicine and Surgery from the Faculty of Medicine of the University of Granada Instructor in pediatric and neonatal
- ♦ Member of: SPAO Board of Directors, Neonatal Transport Working Group of the SENEQ, Spanish Vaccinology Association

Dr. Valverde, Eva

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





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Make the most of this opportunity to learn about the latest advances in this subject to apply it to your daily practice”

05

Structure and Content

Thanks to the effectiveness of the Relearning method, used by this academic institution in all its degrees, the graduate will progress naturally through the syllabus, consolidating in a much easier way the most outstanding concepts on diagnostic and therapeutic procedures in neonatal patients. In addition, with the extensive Virtual Library made up of avant-garde didactic material, the medical professional will obtain greater dynamism in this 12-month updating process in Neonatology.





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An educational itinerary that provides you with the update you are looking for in Neonatology under the highest scientific rigor”

Module 1. Aspects of the initial moments highlighted in Neonatology

- 1.1. Neonatal Assessments
 - 1.1.1. By gestational age
 - 1.1.2. By birth weight
 - 1.1.3. Premature Newborns
 - 1.1.4. Complete Physical Examination of the Newborn
- 1.2. Anatomical and Physiological Characteristics of the Newborn
 - 1.2.1. Newborn Somatometry
 - 1.2.2. Morphological Characteristics
 - 1.2.3. Physiological Characteristics
 - 1.2.4. Monitoring and Follow-Up
- 1.3. Admission of the Newborn (NB) in the Neonatal Unit
 - 1.3.1. Admission Criteria and Objectives
 - 1.3.2. Organization of the Neonatal Unit
 - 1.3.3. Equipment and Materials
 - 1.3.4. Distribution of Personnel and Functions
- 1.4. Neonatal Transport
 - 1.4.1. Equipment Neonatal Transport Team
 - 1.4.2. Types of Transport
 - 1.4.3. Respiratory Support
 - 1.4.4. Monitoring
- 1.5. Neonatal Resuscitation
 - 1.5.1. Initial Stabilization
 - 1.5.2. Resuscitation Equipment and Organization
 - 1.5.3. Neonatal Resuscitation Equipment
 - 1.5.4. Special Situations





- 1.6. Thermal Management in a Newborn
 - 1.6.1. Neutral Thermal Environment
 - 1.6.2. Equipment and Neutral Thermal Environment
 - 1.6.3. Thermoregulation Skin Care
 - 1.6.4. Commissioning
- 1.7. Hypothermia in a Newborn with Hypoxic-ischemic Encephalopathy as a protect
 - 1.7.1. Commitment of Fetal Well-being
 - 1.7.2. Forms of Hypothermia
 - 1.7.3. Concept of Neuro Protection
 - 1.7.4. Aggressiveness Management
- 1.8. Pain Management in a Newborn
 - 1.8.1. Neonatal Pain Scales
 - 1.8.2. Pharmacology of Pain Neonatal
 - 1.8.3. Main Frames for the Treatment of Pain
 - 1.8.4. Other Ways to Treat Pain
- 1.9. Newborn Skin Basic Elements
 - 1.9.1. Neonatal Skin Signs
 - 1.9.2. Newborn Skin Care
 - 1.9.3. Neonatal Skin and Syndromes
 - 1.9.4. Skin in the Prematurity
- 1.10. Child of Mother with Uncontrolled Pregnancy
 - 1.10.1. Son in Smoking Mother
 - 1.10.2. Fetal Alcohol Syndrome
 - 1.10.3. Son of a Drug-Consuming Mother
 - 1.10.4. Neonatal Abstinence Syndrome

Module 2. The Preterm/Premature Child

- 2.1. Etiopathogenesis of Prematurity
 - 2.1.1. Definition and Types of Prematurity
 - 2.1.2. Morphological Assessment
 - 2.1.3. Calculation of Gestational Age
 - 2.1.4. Viability Criteria
 - 2.1.5. Ethical and Legal Considerations
- 2.2. Assessment of Fetal Causes of Prematurity
 - 2.2.1. Prevention of Prematurity
 - 2.2.2. Antenatal Corticosteroids to Accelerate Fetal Maturation
 - 2.2.3. New Indications and Neuroprotection in the Premature Newborn
 - 2.2.4. Pre-term Service Results
- 2.3. Arrival of an Underweight Premature Newborn
 - 2.3.1. Initial Stabilization
 - 2.3.2. Resuscitation Equipment and Organization
 - 2.3.3. Neonatal Resuscitation Equipment
 - 2.3.4. Special Situations
- 2.4. Respiratory Pathology and Cardiovascular
 - 2.4.1. Respiratory Pathology of the Preterm and the Administration of Oxygen
 - 2.4.2. Respiratory Physiology and Mechanical Ventilation
 - 2.4.3. Non-Invasive Ventilation (NIV)
 - 2.4.4. Principles of Preterm Cardiology
- 2.5. Neurological and Ophthalmological Pathology
 - 2.5.1. Neonatal Seizures
 - 2.5.2. Neonatal Intracranial Hemorrhages and Perinatal Cerebral Infarction
 - 2.5.3. Hypoxic-Ischemic Encephalopathy and Hypothermia
 - 2.5.4. Main Ophthalmological Pathology of the Preterm
- 2.6. Digestive and its Nutrition Pathologies
 - 2.6.1. Esophageal Atresia
 - 2.6.2. Necrotizing Enterocolitis
 - 2.6.3. Breastfeeding with Breast Milk
 - 2.6.4. Parenteral Nutrition in the Premature Newborn
- 2.7. Hematologic Pathology
 - 2.7.1. Neonatal Anemia
 - 2.7.2. Neonatal Hiperbilirubinemia
 - 2.7.3. Platelet Alterations
 - 2.7.4. Hemorrhages and Coagulation DISORDER
- 2.8. Endocrinological and Metabolic Pathology
 - 2.8.1. Metabolopathies
 - 2.8.2. Screening
 - 2.8.3. The Thyroid and Adrenal Glands
 - 2.8.4. Glucose Homeostasis
- 2.9. Hospital Discharge
 - 2.9.1. Feeding
 - 2.9.2. Pharmacological Supplements
 - 2.9.3. Neuropsychological and Somatometric Monitoring
 - 2.9.4. Prevention of Respiratory Infections
 - 2.9.5. Vaccinations for Premature Newborns
- 2.10. Long-term Follow-up and Chronic Problems of the Premature Infant
 - 2.10.1. Follow-up Programs for Premature Infants at Risk
 - 2.10.2. Surgical Calendar
 - 2.10.3. Bronchopulmonary Dysplasia and Chronic Lung Disease
 - 2.10.4. Early Care Units

Module 3. Respiratory Pathophysiology and Respiratory Disorders in Neonatology

- 3.1. Lung Development, Embryology, Anatomy and Physiology
 - 3.1.1. Lung Development
 - 3.1.2. Lung Embryology
 - 3.1.3. Lung Physiology
 - 3.1.4. Extrauterine Adaptation
- 3.2. Respiratory Pathology in Recent Newborns
 - 3.2.1. Acute Respiratory Failure
 - 3.2.2. Apneas
 - 3.2.3. Pulmonary Hypertension
 - 3.2.4. Chronic Lung
- 3.3. Respiratory Physiology and Mechanical Ventilation
 - 3.3.1. Indications
 - 3.3.2. Mechanical Ventilation Methods
 - 3.3.3. Complications
 - 3.3.4. Extubation
- 3.4. Non-Invasive Ventilation (NIV)
 - 3.4.1. Indications
 - 3.4.2. Non-invasive Ventilation Methods
 - 3.4.3. Complications
 - 3.4.4. Following Up
- 3.5. Invasive Ventilation
 - 3.5.1. Different Pathologies
 - 3.5.2. Gasometric Objectives
 - 3.5.3. High Frequency Ventilation
 - 3.5.4. Results
- 3.6. Oxygen Administration
 - 3.6.1. Indications
 - 3.6.2. Form of Administration
 - 3.6.3. Complications
 - 3.6.4. Following Up
- 3.7. Endotracheal Intubation
 - 3.7.1. Material and Method for Intubation
 - 3.7.2. Indications
 - 3.7.3. The Care of Tubed Children
 - 3.7.4. Complications
- 3.8. Endotracheal Intubation
 - 3.8.1. Material and Method for Extubation
 - 3.8.2. Shapes
 - 3.8.3. The Care of Tubed Children
 - 3.8.4. Results
- 3.9. Extubation Process
 - 3.9.1. Attitude towards the Child impossible to Extubate
 - 3.9.2. Care of the Chronically Intubated Child
 - 3.9.3. Other Care in the Child with Tracheostomy
 - 3.9.4. Ondine Syndrome
- 3.10. Cricothyroidotomy and Tracheostomy
 - 3.10.1. Tracheostomy Indications
 - 3.10.2. Tracheostomy Care
 - 3.10.3. Different Pathologies and Tracheostomy
 - 3.10.4. Home Care

Module 4. Cardiac Disorders and Congenital Heart Disease in Neonatology

- 4.1. Generalities of the Cardiovascular System: Embryology, Anatomy and Physiology
 - 4.1.1. Embryology and anatomy cardiovascular system
 - 4.1.2. Cardiovascular System Physiology
 - 4.1.3. Lung Development
 - 4.1.4. Extrauterine Adaptation
- 4.2. Syndromic Classification of Congenital Heart Disease
 - 4.2.1. Cyanotic Congenital Heart Disease
 - 4.2.2. Congenital Heart Disease Without Cyanosis
 - 4.2.3. Congenital Heart Disease Leading to Cardiogenic Shock
 - 4.2.4. Other Heart Diseases
- 4.3. Cyanotic Congenital Heart Disease
 - 4.3.1. Procedures
 - 4.3.2. Diagnosis
 - 4.3.3. Treatment
 - 4.3.4. Monitoring
- 4.4. Congenital Heart Disease Without Cyanosis
 - 4.4.1. Procedures
 - 4.4.2. Diagnosis
 - 4.4.3. Treatment
 - 4.4.4. Monitoring
- 4.5. Congenital Heart Disease Leading to Cardiogenic Shock
 - 4.5.1. Procedures
 - 4.5.2. Diagnosis
 - 4.5.3. Treatment
 - 4.5.4. Monitoring
- 4.6. Other Heart Diseases
 - 4.6.1. Transposition of the Main Arteries
 - 4.6.2. Tetralogy of Fallot
 - 4.6.3. Hypoplastic Left Heart Syndrome
 - 4.6.4. Miscellaneous
- 4.7. Aortic Arch
 - 4.7.1. Interruption of the Aortic Arch
 - 4.7.2. Aortic Coarctation
 - 4.7.3. Aortic Stenosis
 - 4.7.4. Other Strictures
- 4.8. Congenital Heart Diseases with Left-Right Short Circuits
 - 4.8.1. Procedures
 - 4.8.2. Diagnosis
 - 4.8.3. Treatment
 - 4.8.4. Monitoring
- 4.9. Cardiac Rhythm Abnormalities
 - 4.9.1. Bacterial Endocarditis
 - 4.9.2. Arrhythmia Diagnose
 - 4.9.3. Arrhythmia Treatment
 - 4.9.4. Arrhythmia Monitoring
- 4.10. Neonatal Pulmonary Hypertension
 - 4.10.1. Procedures
 - 4.10.2. Diagnosis
 - 4.10.3. Treatment
 - 4.10.4. Monitoring

Module 5. Shock and Neonatal Sepsis

- 5.1. Neonatal shock
 - 5.1.1. Pathophysiology
 - 5.1.2. Diagnosis
 - 5.1.3. Treatment
 - 5.1.4. Different Types of Singularities
- 5.2. Types and Phase Symptoms for Neonatal Shock
 - 5.2.1. Types of Shock
 - 5.2.2. Monitoring
 - 5.2.3. Phases of Neonatal Shock
 - 5.2.4. Evolution
- 5.3. Etiology and Clinical Symptoms for Neonatal Shock
 - 5.3.1. Concept
 - 5.3.2. Pathophysiology
 - 5.3.3. Newborn Specifications
 - 5.3.4. The Overview
- 5.4. Manage and Treatment for Neonatal Shock
 - 5.4.1. Monitoring
 - 5.4.2. Etiological Treatment
 - 5.4.3. Drugs
 - 5.4.4. Special Situations
- 5.5. Neonatal Sepsis and Septic Shock
 - 5.5.1. Concepts
 - 5.5.2. Pathophysiology
 - 5.5.3. Diagnose Specifications
 - 5.5.4. The Overview
- 5.6. Etiopathogenesis of Neonatal Sepsis
 - 5.6.1. Concepts
 - 5.6.2. Pathophysiology
 - 5.6.3. Etiopathogenesis of Neonatal Sepsis
 - 5.6.4. Monitoring
- 5.7. Sepsis Etiology
 - 5.7.1. Hypovolemia
 - 5.7.2. Pain
 - 5.7.3. Neonatal Sepsis
 - 5.7.4. Miscellaneous
- 5.8. Clinical Sepsis
 - 5.8.1. According to Etiology
 - 5.8.2. Clinical Data
 - 5.8.3. Monitoring Data
 - 5.8.4. Results
- 5.9. Diagnosis of Sepsis
 - 5.9.1. According to Etiology
 - 5.9.2. Clinical Data
 - 5.9.3. Monitoring Data
 - 5.9.4. Laboratory Data
- 5.10. Treatment of Sepsis
 - 5.10.1. According to Etiology
 - 5.10.2. Vasoactive Drugs
 - 5.10.3. Evolution
 - 5.10.4. Sequels

Module 6. Neonatal Neurological Disorders

- 6.1. Neonatal Neurology
 - 6.1.1. Embryology
 - 6.1.2. Anatomy of the Nervous System
 - 6.1.3. Physiology
 - 6.1.4. Anatomical-physiological Refresher Course
- 6.2. Neonatal Neurological Examination
 - 6.2.1. Central Nervous System
 - 6.2.2. Peripheral Nervous System
 - 6.2.3. Conscience
 - 6.2.4. Cranial Nerve Pairs
- 6.3. Neonatal Seizures
 - 6.3.1. Semiology
 - 6.3.2. Classification
 - 6.3.3. Syndromes
 - 6.3.4. Treatment
- 6.4. Neonatal Intracranial Hemorrhages and Perinatal Cerebral Infarction
 - 6.4.1. Neonatal Intracranial Hemorrhages
 - 6.4.2. Perinatal Cerebral Infarction
 - 6.4.3. Diagnosis
 - 6.4.4. Treatment
- 6.5. Alterations in the Size of the Skull: from Microcephaly to Hydrocephaly and Macrocephaly
 - 6.5.1. Microcephaly
 - 6.5.2. Hydrocephalus
 - 6.5.3. Macrocephaly
 - 6.5.4. Other Alterations
- 6.6. Hypoxic-Ischemic Encephalopathy and Hypothermia
 - 6.6.1. Semiology
 - 6.6.2. Classification and Scales
 - 6.6.3. Diagnosis
 - 6.6.4. Hypothermia Treatment
- 6.7. Malformations of the CNS. Neurologic Malformation Syndromes. Neuronal Migration Effects
 - 6.7.1. Genital Malformation Syndromes
 - 6.7.2. Specific CNS Malformations
 - 6.7.3. Diagnosis
 - 6.7.4. Monitoring
- 6.8. Neuromuscular Diseases
 - 6.8.1. Semiology
 - 6.8.2. Classification
 - 6.8.3. Diagnosis
 - 6.8.4. Treatment
- 6.9. Brain Death Criteria
 - 6.9.1. According to Etiology
 - 6.9.2. Clinical Data
 - 6.9.3. Monitoring Data
 - 6.9.4. Results Therapeutic Effort Limitation
- 6.10. Bases for the Implementation of Care in Neonatal Units
 - 6.10.1. Care in Neonatal Units
 - 6.10.2. Babysitting Method
 - 6.10.3. Early Neonatal Discharge Programs
 - 6.10.4. Results

Module 7. Update Systematized Knowledge of Digestive Pathology

- 7.1. Generalities, Embryology and Anatomy of the Digestive System
 - 7.1.1. Embryology
 - 7.1.2. Anatomy of the Nervous System
 - 7.1.3. Physiology
 - 7.1.4. Anatomical-physiological Refresher Course
- 7.2. Gastroesophageal Reflux
 - 7.2.1. Ethology
 - 7.2.2. Diagnosis
 - 7.2.3. Treatment
 - 7.2.4. Monitoring
- 7.3. Esophageal Atresia
 - 7.3.1. Classification
 - 7.3.2. Diagnosis
 - 7.3.3. Treatment
 - 7.3.4. Monitoring
- 7.4. Necrotizing Enterocolitis
 - 7.4.1. Ethology
 - 7.4.2. Diagnosis
 - 7.4.3. Treatment
 - 7.4.4. Monitoring
- 7.5. Requirements and Feeding Objectives of the Breastfeeding Infant. Breastfeeding, Measurements to Inhibit Breastfeeding
 - 7.5.1. Breastfeeding
 - 7.5.2. Measurements to Inhibit Breastfeeding
 - 7.5.3. Nutrients
 - 7.5.4. Objectives
- 7.6. Milk Banks Composition of Breast Milk
 - 7.6.1. Milk Banks
 - 7.6.2. Composition of Breast Milk
 - 7.6.3. Traceability
 - 7.6.4. Security/Safety
- 7.7. Parenteral Nutrition in the Premature Newborn
 - 7.7.1. Carbohydrates
 - 7.7.2. Amino Acids
 - 7.7.3. Lipids
 - 7.7.4. Rest Composition
- 7.8. Enteral Diet Premature Formula Milk. Trophic Feeding
 - 7.8.1. Enteral Feeding
 - 7.8.2. Premature Formula
 - 7.8.3. Trophic Feeding
 - 7.8.4. Other Situations
- 7.9. Feeding Monitoring: Growth Charts. Biochemical Control Parameters
 - 7.9.1. Growth Charts
 - 7.9.2. Biochemical Parameters
 - 7.9.3. Evolution
 - 7.9.4. Other Situations
- 7.10. Probiotics: Possible Indications and Uses
 - 7.10.1. Fundamentals of Knowledge About Probiotics
 - 7.10.2. Indications
 - 7.10.3. Specific Utilities
 - 7.10.4. Way to Use It

Module 8. Hematologic Disorders in Neonatology

- 8.1. General Aspects of Hematology
 - 8.1.1. The Development of the Hematopoietic System
 - 8.1.2. Embryology
 - 8.1.3. Pathophysiological Bases
 - 8.1.4. Extrauterine Adaptation
- 8.2. Neonatal Anemia
 - 8.2.1. Classification
 - 8.2.2. Diagnosis
 - 8.2.3. Treatment
 - 8.2.4. Monitoring
- 8.3. Fetal Hydrops
 - 8.3.1. Fundamentals
 - 8.3.2. Diagnosis
 - 8.3.3. Treatment
 - 8.3.4. Monitoring
- 8.4. Neonatal Hiperbilirubinemia
 - 8.4.1. Fundamentals
 - 8.4.2. Diagnosis
 - 8.4.3. Classification
 - 8.4.4. Monitoring
- 8.5. Treating Excreta
 - 8.5.1. Fundamentals
 - 8.5.2. Types of Treatment
 - 8.5.3. Exchange Transfusion
 - 8.5.4. Monitoring
- 8.6. Polycythemia
 - 8.6.1. Fundamentals
 - 8.6.2. Diagnosis
 - 8.6.3. Treatment
 - 8.6.4. Monitoring
- 8.7. Platelet Alterations
 - 8.7.1. Fundamentals
 - 8.7.2. Diagnosis
 - 8.7.3. Treatment
 - 8.7.4. Monitoring
- 8.8. Blood Transfusion and Blood By-Products in the Neonatal Period
 - 8.8.1. Fundamentals
 - 8.8.2. Types of Transfusions
 - 8.8.3. Monitoring
 - 8.8.4. Monitoring
- 8.9. Hemorrhages and Coagulation DISORDER
 - 8.9.1. Fundamentals
 - 8.9.2. Types
 - 8.9.3. Treatment
 - 8.9.4. Monitoring
- 8.10. Immunodeficiencies
 - 8.10.1. Classification
 - 8.10.2. Diagnosis
 - 8.10.3. Treatment
 - 8.10.4. Monitoring

Module 9. Renal Disorders in Neonatology and in the Internal Environment

- 9.1. Embryology of the Renal System and Bases of the Anatomy of the Renal System
 - 9.1.1. The Development of the Genito-Urinary System
 - 9.1.2. Embryology
 - 9.1.3. Pathophysiological Bases
 - 9.1.4. Extrauterine Adaptation
- 9.2. Nephrological Pathology in a Newborn
 - 9.2.1. Classification
 - 9.2.2. Diagnosis
 - 9.2.3. Treatment
 - 9.2.4. Monitoring
- 9.3. Urinary Infections
 - 9.3.1. Urinary Infections
 - 9.3.2. Vesicoureteral Reflux
 - 9.3.3. Hydronephrosis
 - 9.3.4. Renal Dysplasia and Neonatal Polycystic Disease
- 9.4. Peritoneal Dialysis in a Newborn
 - 9.4.1. Fundamentals
 - 9.4.2. Types
 - 9.4.3. Way to Do It
 - 9.4.4. Monitoring
- 9.5. Assessment of Renal Function Acute Renal Failure. Neonatal Nephrotic Syndrome Renal Tubular Acidosis
 - 9.5.1. Assessing Renal Function
 - 9.5.2. Acute Kidney Failure
 - 9.5.3. Nephrotic Syndrome
 - 9.5.4. Renal Tubular Acidosis
- 9.6. Neonatal Arterial Hypertension
 - 9.6.1. Classification
 - 9.6.2. Diagnosis
 - 9.6.3. Treatment
 - 9.6.4. Monitoring
- 9.7. Hydroelectrolytic and Metabolic Disorders in the Newborn. Imperceptible Water Losses
 - 9.7.1. Classification
 - 9.7.2. Diagnosis
 - 9.7.3. Treatment
 - 9.7.4. Monitoring
- 9.8. Electrolytes Sodium (Na+); Potassium (K+); Calcium (Ca++)
 - 9.8.1. Classification
 - 9.8.2. Diagnosis
 - 9.8.3. Treatment
 - 9.8.4. Monitoring
- 9.9. Glucose
 - 9.9.1. Classification
 - 9.9.2. Diagnosis
 - 9.9.3. Treatment
 - 9.9.4. Monitoring
- 9.10. Water Balance in Neonatals Admitted to the ICU: Patient Monitoring
 - 9.10.1. Classification
 - 9.10.2. Diagnosis
 - 9.10.3. Treatment
 - 9.10.4. Monitoring

Module 10. Neonatal Endocrinology, Dysmorphology and Oncology

- 10.1. Metabolopathies
 - 10.1.1. Classification
 - 10.1.2. Diagnosis
 - 10.1.3. Treatment
 - 10.1.4. Monitoring
- 10.2. Different Types of Screening for the Various Metabolopathies. Criteria for Listing a Metabolopathy in Neonatal Screening
 - 10.2.1. Classification of Susceptible Diseases screening
 - 10.2.2. Criteria for Listing a Metabolopathy in Neonatal Screening
 - 10.2.3. Clinical Data
 - 10.2.4. Way to Do It
- 10.3. Screening Techniques: Procedure for the Heel Prick Test
 - 10.3.1. Way to Do It
 - 10.3.2. Diagnosis Classification
 - 10.3.3. Organisation
 - 10.3.4. Specific Centers for Metabolopathies
- 10.4. Chromosomopathies
 - 10.4.1. Trisomy 21 (Down Syndrome)
 - 10.4.2. Trisomy 18 (Edwards Syndrome)
 - 10.4.3. Trisomy 13 (Patau's Syndrome)
 - 10.4.4. Turner Syndrome (45XO), Klinefelter Syndrome (47XXY)
- 10.5. Study of Chromosomal Alterations
 - 10.5.1. Classification
 - 10.5.2. Clinical diagnosis
 - 10.5.3. Laboratory Diagnosis
 - 10.5.4. Monitoring
- 10.6. Major Structural Changes
 - 10.6.1. Classification
 - 10.6.2. Diagnosis
 - 10.6.3. Subspecialty Intervention
 - 10.6.4. Monitoring



- 10.7. General Aspects of Neonatal Oncology
 - 10.7.1. Fundamentals
 - 10.7.2. Tumor Types
 - 10.7.3. Staging
 - 10.7.4. Monitoring
- 10.8. Neuroblastoma
 - 10.8.1. Etiological Bases
 - 10.8.2. Diagnosis
 - 10.8.3. Treatment
 - 10.8.4. Monitoring
- 10.9. Wilms Tumor
 - 10.9.1. Etiological Bases
 - 10.9.2. Diagnosis
 - 10.9.3. Treatment
 - 10.9.4. Monitoring
- 10.10. Teratomas
 - 10.10.1. Etiological Bases
 - 10.10.2. Diagnosis
 - 10.10.3. Treatment
 - 10.10.4. Monitoring



Extend your knowledge about Nephrourological Pathology in the newborn with a unique university program”

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.



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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. 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.

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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.



07 Certificate

The Professional Master's Degree in Neonatology guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Global University.



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

This program will allow you to obtain your **Professional Master's Degree diploma in Neonatology** 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: **Professional Master's Degree in Neonatology**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



*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.

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

tech global
university

Professional Master's Degree

Neonatology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

knowledge present

online training

development

languages

virtual classroom

Professional Master's Degree Neonatology

