Professional Master's Degree

Pediatric Intensive Care Medicine

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Pediatric Intensive Care Medicine

- 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/professional-master-degree/master-pediatric-intensive-care-medicine**

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01

Introduction

Pediatric Intensive Care Medicine has undergone significant advances today, driven by technological innovations and a better understanding of critical pathologies in children. In fact, new treatments and protocols have been developed that improve the survival and quality of life of critically ill pediatric patients. In addition, telemedicine and remote monitoring tools are enabling more continuous and accurate surveillance, facilitating early and personalized intervention. In this context, TECH has developed a comprehensive program, 100% online and totally flexible, which will only require an electronic device with Internet connection to access the didactic materials. In addition, it is based on the revolutionary learning methodology known as Relearning.

Thanks to this 100% online Professional Master's Degree, you will acquire advanced skills and critical knowledge for the management of pediatric patients in emergency and intensive care situations"

Pediatric Intensive Care Medicine has experienced significant advances in recent years, driven by the development of new technologies and innovative therapeutic approaches. Currently, it focuses on the personalization of treatment, using advanced monitoring tools and life support techniques that improve accuracy in the care of critically ill patients.

In this context, this Professional Master's Degree in Pediatric Intensive Care Medicine is presented, a program designed to provide physicians with the necessary competencies to offer specialized care in the Pediatric Intensive Care Unit (PICU) of any hospital center. Therefore, it has been structured in ten modules, focused on the theoretical knowledge and practical skills essential for the management of the most complex pathologies affecting pediatric patients in critical situations.

Therefore, throughout the program, essential topics will be developed, from advanced management of the airway and life support, to communication strategies with families and ethical decision making. The most advanced techniques and best practices in the treatment of critical conditions will also be addressed, as well as the latest advances in medical technology and pharmacology. Likewise, the multidisciplinary approach necessary for the integral care of patients will be emphasized.

Finally, research and critical analysis will be studied in depth, preparing professionals to contribute to the advancement of Pediatric Intensive Care Medicine through innovation and continuous improvement of clinical practice. In addition, the syllabus will follow a logical sequence, allowing graduates to build their knowledge and skills progressively.

At this juncture, TECH has designed a complete 100% online program, adapted to the individual needs of students, avoiding inconveniences such as traveling to a physical center or adjusting to a pre-established schedule. Additionally, it is supported by the innovative Relearning methodology, consisting of the repetition of key concepts for an optimal and organic assimilation of the contents.

This **Professional Master's Degree in Pediatric Intensive Care Medicine** 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 Pediatric Intensive Care Medicine
- The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- Practical exercises where self-assessment can be used 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

You will be trained in the identification and management of infectious emergencies, Sepsis, and neurological and endocrinological conditions, along with an in-depth understanding of Neonatology. What are you waiting for to enroll?"

You will address assessment of nutritional needs and fluid management in critically ill children, recognizing pain as the fifth constant in Pediatrics. With all the TECH quality guarantees!"

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

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will become familiar with the most advanced techniques of mechanical ventilation, hemodynamic monitoring and management of congenital heart disease, through the extensive library of multimedia resources offered by TECH.

Bet on TECH! You will gain profound pediatric neurological knowledge, promoting a comprehensive management from initial evaluation to long-term follow-up and family support.

02

Objectives

The university program will aim to provide a comprehensive understanding of the essential principles in pediatric intensive care. Therefore, professionals will be specialized to recognize and evaluate Acute Respiratory Failure, familiarizing them with Invasive and Non Invasive Mechanical Ventilation modes. In addition, advanced specialization will be provided in the diagnosis, management and treatment of Congenital Heart Disease in the Pediatric Intensive Care Unit, preparing Pediatric specialists to perform critical interventions such as Cardiorespiratory Resuscitation and the use of specialized pharmacological agents.

You will gain comprehensive knowledge in hemodynamic monitoring techniques and tools specific to the pediatric population from the world's best digital university, according to Forbes"

General Objectives

- Provide a comprehensive understanding of the essential principles of pediatric intensive care
- Recognize and evaluate Acute Respiratory Failure
- Become familiar with the modes of Invasive and Non Invasive Mechanical Ventilation
- Integrate Intervention Protocols based on best scientific evidence
- Provide a comprehensive understanding of hemodynamic monitoring techniques and tools specific to the pediatric population
- Provide advanced specialization on the diagnosis, management and treatment of Congenital Heart Disease in the Pediatric Intensive Care Unit
- Prepare pediatric specialists to perform critical interventions, including Cardiorespiratory Resuscitation and the use of specialized pharmacological agents in the intensive care setting
- Gain profound Pediatric Neurological knowledge, expanding knowledge of neurological anatomy and pathophysiology to enhance the evaluation and treatment of neurological emergencies in children
- Promote Comprehensive Neurological Management, including initial assessment, emergency interventions, long-term follow-up and family support
- Specialize professionals to rapidly and accurately identify and assess infectious emergencies and Sepsis in children
- Promote understanding of infection and Sepsis prevention strategies, as well as educate in the promotion of healthy practices and infection control measures.
- Learn to assess the nutritional status and needs of critically ill children
- Achieve adequate fluid management by detecting abnormal situations.
- Value pain as the 5th constant in pediatrics
- Develop expertise in pediatric endocrinologic emergencies, such as Diabetic Ketoacidosis and Adrenal Crisis
- Develop a thorough understanding of the principles and practices of Neonatology, including neonatal physiology and the management of specific medical conditions
- Foster a multidisciplinary and patient-centered approach to neonatal care, involving neonatologists, neonatal nurses and other health care professionals
- Acquire a thorough knowledge of neonatal physiology and pathologies, as well as the peculiarities of neonatal care

You will integrate intervention protocols based on the best scientific evidence, thanks to the best didactic materials on the market, at the technological and educational forefront"

Specific Objectives

Module 1. Pediatric Intensive Care

- Develop the fundamental principles and importance of pediatric intensive care, including ethics and evidence-based decision making
- Perform a meticulous initial assessment of the critically ill pediatric patient, rapidly identifying signs of life-threatening illness and prioritizing care
- Apply advanced knowledge of hemodynamics to optimize Cardiovascular Support through the appropriate use of fluids, inotropic drugs, vasopressors, and continuous monitoring
- Select and administer critical drugs with thorough understanding of their pharmacokinetics and pharmacodynamics in children, as well as manage potential drug-drug interactions and side effects
- Navigate the ethical challenges present in the PICU, participating in patient- and family-centered decision making, and managing sensitive communications about prognosis and treatment options
- Foster an environment of collaboration and respect on the intensive care team, enhance communication skills with patients' families, and contribute to a climate of teamwork that supports the delivery of high quality care

Module 2. Respiratory Emergencies in the Pediatric Intensive Care Unit

- Recognize the signs and symptoms of Acute Respiratory Failure in pediatric patients
- Implement airway management in emergency situations, including Endotracheal Intubation
- Manage the complications associated with Chronic Respiratory Disease in the context of an emergency
- Interpret the results of diagnostic tests, including arterial blood gases and imaging studies
- Develop the most frequent ventilatory modes in VMC
- Determine the indications and contraindications of NIV
- Understand the pathophysiology of bronchiolitis and the pathophysiology of status asthmaticus
- Identify Pediatric Acute Respiratory Distress Syndrome
- Become familiar with the patient with Chronic Respiratory Pathology in PICU
- Understand the pathophysiology and treatment of Pulmonary Hypertension

Module 3. Hemodynamic Emergencies in the Pediatric Intensive Care Unit

- Accurately interpret Electrocardiograms (ECGs) in children, identifying key differences between pediatric and adult ECG patterns
- Instruct in advanced strategies for the management of pediatric shock, including optimization of blood volume, the use of inotropic and vasopressor agents and airway management
- Provide in-depth knowledge for the diagnosis of Heart Failure in children, using diagnostic tools such as Chest X-rays, Echocardiography and laboratory tests
- Specialize in the integral management of Pediatric Heart Failure, ranging from pharmacological treatment to the consideration of Mechanical Ventricular Assist and Cardiac Transplantation, when appropriate

Module 4. Cardiac Emergencies in the Pediatric Intensive Care Unit

- Analyze initial management strategies for congenital heart disease, including stabilization and preparation for additional interventions
- Apply advanced management protocols for patients with Congenital Heart Disease in the ICU, including life support and specialized monitoring
- Identify and treat acute conditions, such as Myocarditis and Cardiomyopathies, applying the latest research
- Manage complications such as pericarditis and pericardial effusion, including diagnostic techniques and therapeutic options
- Implement effective postoperative care after Pediatric Cardiac Surgery, focusing on recovery and prevention of sequelae
- Interpret PICU Echocardiography studies to guide clinical decision making and patient management

Module 5. Neurological Emergencies in the Pediatric Intensive Care Unit

- Identify and appropriately manage seizures and status epilepticus in children
- Diagnose and treat causes of altered consciousness, including pediatric coma
- Recognize and respond to signs of increased Intracranial Pressure and Brain Herniation
- Identify and treat central nervous system infections, such as Meningitis and Encephalitis
- Apply neuroprotective techniques to minimize secondary brain damage
- Evaluate and manage acute complications of Chronic Neurological Diseases in children
- Coordinate multidisciplinary care and rehabilitation for pediatric patients who have experienced neurologic emergencies
- Identify and treat Idiopathic Intracranial Hypertension and other emergency conditions that may present with neurologic symptoms

Module 6. Infectious Emergencies and Sepsis in the Pediatric Intensive Care Unit

- Identify the early signs of Sepsis and Septic Shock in children and apply rapid response protocols
- Implement initial management strategies, including fluid resuscitation and appropriate use of antimicrobials
- Understand and apply current guidelines for the management of pediatric sepsis and severe infections
- Perform differential diagnosis of common PICU infectious diseases
- Manage common complications associated with severe infections and Sepsis, such as multiple organ failure
- Interpret laboratory studies and radiological findings relevant to the evaluation of infections and Sepsis
- Recognize and treat emerging and re-emerging infections in the pediatric setting

Module 7. Digestive, Renal and Neurosurgical Emergencies in the Pediatric Intensive Care Unit

- Reflective assessment of blood product transfusions in the critical child
- Analyze the uremic-hemolytic syndrome and the differential diagnosis of the critically ill patient
- Update knowledge on Neuromonitoring of the critically ill child
- Determine the difficulties in the postoperative management of the difficult airway

Module 8. Toxicology and Endocrinology in the Pediatric Intensive Care Unit

- Identify common signs and symptoms of exposure to toxins and poisonings in children
- Manage acute complications of Endocrinologic Disorders
- Utilize laboratory and diagnostic techniques to evaluate and monitor Poisonings and Endocrine Disorders
- Coordinate care with pharmacists and toxicologists to optimize detoxification therapy and use of antidotes
- Identify and timely treat endocrinologic emergencies such as Hyperglycemic Crisis and Adrenal Insufficiency
- Participate in research studies and case analyses to advance knowledge and practice in pediatric toxicology and endocrinology
- Address ethical and legal issues in the management of toxicologic and endocrinologic cases in children
- Promote a collaborative, team-based approach to improve patient outcomes in emergency toxicologic and endocrinologic emergencies

Module 9. Neonatal Intensive Care

- Examine the major techniques of neonatal monitoring
- Determine noninvasive and invasive respiratory support in the neonatal stage.
- Manage the nutrition of the pathological neonates
- Comprehensive management of the preterm neonate

Module 10. Index Advanced Aspects of Neonatal Intensive Care

- Understanding the pathophysiology of HME and learning how to provide comprehensive care to affected neonates
- Manage Persistent Pulmonary Hypertension (PPH), developing skills in its diagnosis and treatment in neonatology
- Identify and effectively treat neonatal sepsis, including antibiotic administration and monitoring
- Acquire skills in the care and management of extremely preterm neonates, including nutritional and respiratory care
- Recognize and address congenital heart disease in newborns, including coordination with pediatric cardiac surgery
- Identify and treat neurological disorders in neonatology, including seizures and hypoxic-ischemic encephalopathy

03

Skills

The competencies of the program will include the ability to recognize and evaluate Acute Respiratory Failure, as well as expertise in the use of Mechanical Ventilation, both Invasive and Non Invasive. Likewise, graduates will acquire a deep knowledge of hemodynamic monitoring techniques and will develop competencies in the diagnosis and treatment of Congenital Heart Disease in Intensive Care settings. In addition, comprehensive management of neurological, infectious and endocrinological emergencies, such as Sepsis and Diabetic Ketoacidosis, along with pain management and nutritional needs of patients will be emphasized.

This academic program will equip you with the advanced and specialized competencies crucial to the care of critically ill pediatric patients, always supported by the revolutionary Relearning methodology"

General Skills

- Specialize healthcare professionals to perform effective initial assessment and acute management of critically ill pediatric patients
- Develop practical skills in advanced life support and critical decision making in an intensive care setting
- Apply airway management techniques in patients with severe pediatric emergencies
- Specialize students in the identification and management of respiratory emergencies in children
- Develop prevention strategies to reduce the incidence and severity of respiratory emergencies in children
- Develop advanced skills in the diagnosis and management of Pediatric Shock, including early recognition and appropriate therapeutic interventions, as well as the management of Heart Failure in children
- Strengthen competency in the diagnosis and management of Arrhythmias and Blood Pressure problems in Pediatrics, including a thorough understanding of Bradyarrhythmias and Tachyarrhythmias in the intensive care setting
- Equip healthcare professionals with knowledge and practical skills for the use of Mechanical Circulatory Support and the management of cardiac complications in children
- Develop rapid and effective intervention skills in a variety of pediatric neurological emergencies
- Develop skills for the effective clinical management of severe infections and Sepsis, including administration of specific therapies and life support
- Achieve adequate nutrition of the critically ill patient during the PICU stay, avoiding malnutrition
- Acquire skills to evaluate, diagnose and treat Acute Poisoning and poisoning in children, including the use of antidotes and decontamination techniques
- Acquire advanced skills in the management of neonates in intensive care, including respiratory, cardiovascular and metabolic support
- Develop skills to identify, diagnose and treat critical neonatal pathologies, including respiratory diseases, infections and metabolic disorders

Specific Skills

- Master pediatric airway management techniques, ensuring adequate oxygenation and ventilation, as well as proficiency in intubation procedures and management of respiratory emergencies
- Effectively manage ventilatory support, customizing mechanical ventilation and other respiratory support modalities to suit the varying clinical conditions of pediatric patients
- Effectively utilize the monitoring technologies available in the pediatric intensive care unit to monitor patient progress and adjust interventions in real time
- Develop and implement enteral and parenteral nutrition plans that meet the metabolic needs of critically ill pediatric patients, adjusting for tolerance and clinical improvement
- Apply effective ventilatory support techniques, both invasive and noninvasive
- Diagnose and manage conditions such as Acute Asthma, Bronchiolitis and Pneumonia
- Integrate into clinical practice the guidelines for pediatric respiratory emergencies.
- Master the Rapid Intubation Sequence (RIS)
- Establish the differential diagnosis of pleural pathologies
- Perform effective hemodynamic monitoring in pediatric patients, including the use and interpretation of technologies such as Pulmonary Artery Catheter, Echocardiography and Non Invasive Blood Pressure Monitors
- Develop skills for early recognition of signs and symptoms of shock in pediatric patients, differentiating between the various types of shock to enable rapid and effective therapeutic responses
- Educate in the identification and treatment of Arrhythmias in the Pediatric Intensive Care Unit, including the management of Bradyarrhythmias and Tachyarrhythmias, as well as the appropriate use of antiarrhythmic medication, cardioversion and implantable defibrillation/cardioversion devices
- Develop competencies for the diagnostic orientation of Congenital Heart Disease in the Pediatric Intensive Care Unit
- Acquire skills in the management of mechanical circulatory support, including ventricular assist devices and extracorporeal circulation techniques
- Use vasopressors, vasodilators and inotropic drugs effectively and safely in the treatment of hemodynamic disturbances in children
- Use neuroimaging and electrophysiological diagnostic tests appropriately
- Use hemodynamic and respiratory support techniques in children with Sepsis
- Apply treatment protocols for specific poisonings, including drug overdose and exposure to hazardous chemicals
- Master the evaluation and management of Hyaline Membrane Disease (HMD)
- Learn advanced techniques of Mechanical Ventilation in Neonatology, including High Frequency Oscillatory Ventilation (HFOV)

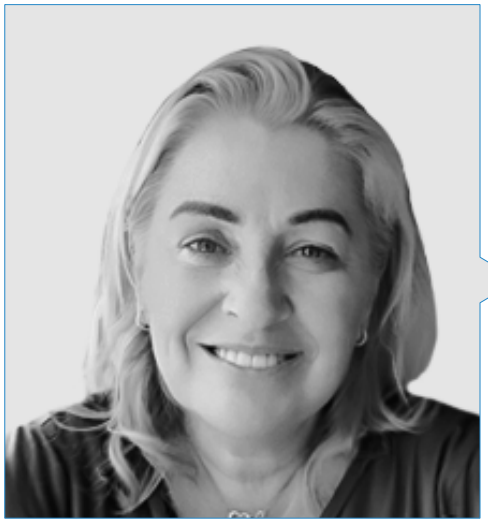
04

Course Management

The faculty are highly qualified and recognized professionals in their field, with vast clinical and academic experience. In fact, this team of experts includes pediatric intensive care physicians, neonatologists, cardiologists, neurologists and other specialists who bring a comprehensive and multidisciplinary perspective to the program. Therefore, their participation will not only ensure evidence-based specialization and best practices, but will also enrich learning with real clinical cases and first-hand experience. In addition, the combination of their theoretical knowledge and practical skills will provide graduates with a solid and applied preparation.

Faculty are also involved in cutting-edge research and the development of new technologies and treatments, allowing you to stay abreast of the latest advances and trends in Pediatric Intensive Care Medicine"

Management



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- Specialist Pediatrician
- Doctor of Medicine
- Degree in Medicine

Professors

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- Degree in Medicine from the University of Seville

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- FEA in Pediatrics in the Intensive Care Unit of the Vall d'Hebron University Hospital, Barcelona
- FEA in Pediatrics at the Quirón Dexeus University Hospital, Barcelona
- FEA in Pediatrics in the Intensive Care Unit of the Doctor Josep Trueta University Hospital, Girona
- Specialist in Pediatrics at the Regional University Hospital of Malaga
- Master's Degree in Neonatology from the Spanish Society of Neonatology (SENEO)
- Expert Level of Hospital Care Pediatrician by the Accreditation Program of Professional Competence
- Degree in Medicine from the University of Cordoba

Dr. Vidaurreta del Castillo, María Esther

- FEA in Pediatrics at the Maternal-Children's Hospital of Malaga
- Rotator in Pediatrics at the Reina Sofia University Hospital, Cordoba
- Rotation in Pediatrics at the University Hospital della Misericordia, Italy
- Specialist in Pediatrics and its Specific Areas at the University Hospital of Jaén
- University Expert in Pediatric Emergency Medicine by Editorial Médica Panamericana
- Degree in Medicine, University of Córdoba

Dr. Sanchíz Cárdenas, Sonia

- Assistant Specialist Physician in the Pediatric Intensive Care Unit of the Virgen de la Arrixaca Laboratory University Hospital, Murcia
- Specialist in Pediatrics and its Specific Areas by the Regional University Hospital of Malaga
- Master's Degree in Research in Social and Health Sciences from San Antonio de Murcia Catholic University
- Master's Degree in Pediatric Emergencies from the San Vicente Mártir Catholic Univeristy, Valencia
- University Expert in Pediatric Emergency Medicine, San Vicente Mártir Catholic Univeristy, Valencia
- Degree in Medicine from the University of Malaga

Dr. Ortiz Pérez, María

- FEA in Pediatrics at the Hospital de Poniente, Almería
- Pediatrician at the Hospital Torrecárdenas, Almeria
- Coordinator of the Refresher Course in the Management of Pediatric Emergencies at Hospital Torrecárdenas, Almería Accredited by the ACSA
- Critical Patient Transport at Hospital General Yagüe, Burgos
- Rotation in the PICU of the Vall d'Hebron Maternal Hospital, Barcelona
- Rotation in the Pediatric and Neonatal ICU, Hospital Torrecárdenas, Almería
- Specialist in Pediatrics and its Specific Areas by the Torrecárdenas Hospital, Almeria
- Degree in Medicine and Surgery from the University of Granada
- Member of: Spanish society of Pediatric Intensive Care, Spanish Society of Pediatrics, Pediatric Society of Pediatrics of Eastern Andalusia

Dr. Jiménez Jurado, Beatriz

- Member of the Working Group of Stabilization and Transport of the Critical Child and Neonate in the Spanish Society of Pediatric Intensive Care
- Researcher in the European Pediatric Transfusion Practices in PICU Study (E-PETRA Study)
- Researcher in the Study of Neurological Impact and Neurobiochemical Biomarkers in Neonatal SARS-CoV-2 Infection
- Specialist in Pediatrics and its Specific Areas, subspecialty in Pediatric Intensive Care, by the University Hospital of Jaén
- Master's Degree in Pediatric Infectious Diseases from the Cardenal Herrera University
- University Expert in Pediatric Emergencies from the Catholic University of Valencia San Vicente Martir
- Degree in Medicine and Surgery from the University of Cordoba
- Awards for the Best Original Paper and Best Clinical Case Report at the Congress of the Pediatric Society of Eastern Andalusia
- Member of: Spanish Society of Pediatric Intensive Care

Dr. Quiralte Castillo, Joaquín

- FEA in Pediatric Emergency Medicine and Pediatric and Neonatal Intensive Care at Juan Ramón Jiménez Hospital, Huelva
- FEA in Pediatric Intensive Care at the by the Hospital Insular- Maternal-Children's Hospital Complex, Las Palmas de Gran Canaria
- Advanced Neonatal and Pediatric CPR Instructor by the GERCPPYN
- Specialist in Pediatrics and its Specific Areas, subspecialty in Pediatric Intensive Care, by the Hospital Insular- Maternal-Children's Hospital Complex, Las Palmas de Gran Canaria
- Graduate of Medicine from the University of Seville

Dr. Millán Zamorano, José Antonio

- Pediatrician in the Pediatrics Department of the Infanta Elena Hospital, Huelva
- Specialist in Pediatrics and its Specific Areas, Virgen del Rocío University Hospital, Seville
- Degree in Medicine from the University of Seville

Dr. Luzón Avivar, Alba

- International Collaborator at Pablo Horstmann Pediatric Hospital, Kenya
- Rotation in the Pediatric Intensive Care Unit of the Hospital Virgen del Rocío, Seville
- Rotation in the Treatments Intensive Care Unit of the Hospital Vall d'Hebron, Barcelona
- Specialist in Pediatrics and its specific areas at the Torrecárdenas University Hospital, Almería
- Master's Degree in Pediatric Emergencies from the CEU - Cardenal Herrera University
- University Expert in Critical Pediatric Patient by the CEU-Cardenal Herrera University
- University Expert in Pediatric Trauma by the CEU-Cardenal Herrera University
- University Expert in Pediatric Emergencies for Specialized Care Physicians by CEU-Cardenal Herrera University
- University Expert in Pediatric Urgent Care by CEU-Cardenal Herrera University
- Graduate in Medicine from the University of Granada

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- FEA in Pediatrics in the Pediatric Intensive Care Unit of the Virgen de la Arrixaca Laboratory University Hospital, Murcia
- Specialist in Pediatrics and its Specific Areas, subspecialty in Pediatric Intensive Care, Maternal Hospital of Málaga
- Master's Degree in Clinical Reasoning and Clinical Practice, Alcalá University
- Master's Degree in Neonatology from the Catholic University of San Antonio de Murcia
- University Expert in Pediatric Emergency Medicine from the Catholic University of Valencia
- Graduate in Medicine from the University of Granada

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- Specialist in Pediatrics and Specific Areas, subspecialty in Pediatric Intensive Care Cardiac, by the Regional University Hospital of Malaga
- Master's Degree in Diagnosis and Treatment in Pediatric Cardiology and Cardiopathologies by the CEU-Cardenal Herrera University
- University Expert in Surgery, Anesthesia and Intensive Care of Congenital Heart Diseases from the CEU - Cardenal Herrera University
- University Expert in Fetal and Pediatric Cardiophysiology by the CEU-Cardenal Herrera University
- University Expert in Pediatric and Adolescent Cardiology and Cardiac Catheterization from the CEU - Cardenal Herrera University
- University Expert in Noninvasive Pediatric Cardiology by the CEU-Cardenal Herrera University
- Degree in Medicine from the University of Salamanca

Dr. Castro González, Laura

- FEA in Pediatrics in the Pediatric Intensive Care Section of the Virgen Macarena Laboratory University Hospital, Seville
- Medical Coordinator at Meki Catholic Pediatric Clinic, as part of the Project of the Pablo Horstmann Foundation, Ethiopia
- Rotation in Cardiovascular PICU at Juan P. Garrahan Hospital, Buenos Aires
- Rotation in Pediatric Cardiology at the Gregorio Marañón University Hospital, Madrid
- Specialist in Pediatrics and its Specific Areas by the Virgen del Rocío University Hospital, Seville
- Master's Degree in Pediatric Emergencies by the Catholic University of Valencia
- Professional Master's Degree in Diagnosis and Treatment in Pediatric Cardiology and Congenital Cardiopathies from CEU Cardenal Herrera University
- Expert in Basic Pediatric Infectious Diseases by the Rey Juan Carlos University
- Graduate in Medicine and Surgery from the University of Seville

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- Pediatrician in the Emergency Department of the Hispalense Institute of Pediatrics
- Specialist in Pediatrics and its Specific Areas, subspecialty in Pediatric Intensive Care, Virgen del Rocío University Hospital, Seville
- Master's Degree in Pediatric Emergencies and Emergencies by the International University of Andalusia(UNIA)
- Master's Degree in Anesthesiology, Pain Management and Pediatric Perioperative Intensive Care by the International University of La Rioja
- Degree in Medicine from the University of Seville

Dr. Quesada Ortega, Úrsula

- FEA in Pediatrics in the PICU of the Hospital La Paz, Madrid
- Specialist in Pediatric Intensive Care from the Virgen del Rocío Hospital, Seville
- Specialist in Pediatrics and its Specific Areas by the La Paz Hospital, Madrid
- Master's Degree in Palliative Care Treatments from the University of La Rioja
- Degree in Medicine from the University of Granada

Dr. Armenteros López, Ana Isabel

- Head of the Peripheral Center of the Virgen de las Nieves Milk Bank at Hospital Torrecárdenas, Almería
- Specialist in Neonatology at Hospital La Fe, Valencia, and Hospital Puerta del Mar, Cádiz
- Specialist in Pediatrics and Specific Areas at Hospital Torrecárdenas, Almería
- Master's Degree in Neonatology of the SENEO by the Catholic University of Valencia
- Medical Degree from the University of Cadiz.

Dr. Pacheco Sánchez-Lafuente, Francisco Javier

- Area Specialist in Pediatric Emergency Unit at the Virgen de las Nieves University Hospital
- Neonatology Expert
- Specialist in Pediatrics and its specific areas
- Degree in Medicine and Surgery from the University of Granada

Dr. Pavón López, Tamara

- EBAP Pediatrician in the District of Granada
- Lead Researcher in the ICLIDES Research Study: Clinical impact of the implementation of an opioid weaning protocol in a neonatal intensive care unit
- Collaborator in the ICMOP Research Study: Clinical Impact of the implementation of a diagnostic-therapeutic protocol for meconium obstruction in prematurity
- Collaborator in the Research Study: Sedonalgesia in neonates based on non-pharmacological feeding and restraint measures
- Rotation in the Neonatal Intensive Care Unit from La Paz Maternal Hospital, Madrid
- Specialist in Pediatrics and its Specific Areas by the University Health Care Complex of Salamanca
- Accreditation of Professional Competences in Hospital Care Pediatrics, Advanced Level, by the Health Quality Agency of Andalusia
- Master's Degree in Neonatology from the Catholic University of Valencia San Vicente Mártir
- Degree in Medicine from the University of Córdoba
- Member of: Spanish Society of Neonatology, Castrillo Hospitals Group (Network of Surveillance and Study of Peri-Neonatal Infections), RED NeoKISSEs (Epidemiological Surveillance System in Neonates in Spain)

Dr. Aguilera Rodríguez, Esther
- Specialist in Pediatrics and its Specific Areas, San Cecilio University Hospital, Granada
- Degree in Medicine from the University of Granada
- Member of: Spanish Society of Neonatology

Dr. Gil Fenoy, Ana María
- Specialist in Neonatology at the Virgen de las Nieves University Hospital
- Specialist in Pediatrics and its Specific Areas, Hospital Universitario Virgen de las Nieves
- Master's Degree in Genetic, Nutritional and Environmental Determinants of Growth and Development by the University of Granada
- Master's Degree in Neonatology from the Catholic University of Valencia San Vicente Mártir
- Expert in Pediatric Emergencies by the Catholic University of Valencia San Vicente Mártir
- Degree in Medicine from the University of Granada

Dr. Rodríguez Benjumea, Margarita
- Master's Degree in Neonatology by the Catholic University of Valencia
- Specialist in Pediatrics and its Specific Areas by the Juan Ramón Jiménez Hospital
- Expert in Neonatology: Premature Newborn Care by the Catholic University of Valencia
- Expert in Pediatric Infectious Diseases by the University of Barcelona
- Graduate in Medicine and Surgery from the University of Seville

Dr. Moreno Salgado, José Luis
- Specialist Physician in Pediatrics and Specific Areas
- University Expert in Pediatric Emergency Medicine from the Catholic University of Valencia
- Expert in Pediatric Intensive Care, Neonatal and mixed ICU
- Master's Degree in Neonatology by the Catholic University of Valencia
- Graduate in Medicine from the University of Córdoba

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- Doctor in Pediatrics and Child Care by the University of Granada
- Instructor of Basic and Advanced Pediatric and Neonatal CPR
- Specialist in Pediatrics and specific areas by the Virgen de las Nieves University Hospital
- Degree in Medicine and Surgery in 2006 by the University of Granada

Dr. Maldonado Martín, María Belén
- Expert in Continuous Extrarenal Depuration in the critical child by the Hospital Sant Joan de Deu
- Expert in Advanced Life Support in Pediatric Trauma by the Hospital Sant Joan de Deu
- Expert in Basic and Advanced Pediatric and Neonatal Mechanical Ventilation
- Medical Specialist in Pediatrics and its specific areas by the Torrecárdenas University Hospital
- Graduate in Medicine from the University of Cadiz

Dr. Alés Palmer, María Luisa

- Specialist in the Neonatology Unit of the Virgen de las Nieves University Hospital
- Master's Degree in Genetic, Nutritional and Environmental Determinants of Growth and Development by the University of Granada
- University Expert in Pediatric Emergency Medicine from the Catholic University of Valencia
- Degree in Medicine and Surgery from the University of Granada
- Graduate in Pharmacy from the University of Granada

Dr. Ruiz Frías, Ángela

- Area Specialist in Pediatrics with practice in Neonatology, Emergency and Neonatal Intensive Care at Hospital Quirón Málaga
- Specialist in Pediatrics and specific areas at Hospital Torrecárdenas
- Master's Degree in Genetic, nutritional and environmental determinants in growth and development from the University of Granada
- Degree in Medicine from the University of Malaga

Dr. Palacios Mellado, María de los Desamparados

- FEA of Pediatrics in the Hospital de Poniente, El Ejido
- Responsible for the Pediatric Endocrinology and Childhood Diabetes Clinic at the Regional Hospital of Baza, Andalusian Health Service
- Rotation in the Neonatal Intensive Care Unit, Hospital San Joan de Deu, Barcelona
- Rotation in the Pediatric Intensive Care Unit, Hospital Reina Sofia, Cordoba
- Specialist in Pediatrics and its Specific Areas, San Cecilio University Hospital Granada
- Master's Degree in Neonatology Preterm Care Newborn Care at Term
- Postgraduate Diploma in Pediatric Emergencies
- Degree in Medicine from the University of Granada

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Structure and Content

This Professional Master's Degree in Pediatric Intensive Care Medicine has a highly specialized study plan, which will cover critical and cutting-edge aspects of Pediatric Medicine, such as the management of rare and acute diseases, advanced resuscitation techniques and the application of genetic and cellular therapies in clinical practice.

In addition, an interprofessional approach to learning will be incorporated, meaning that graduates will collaborate closely with experts in areas such as Pharmacology, Nutrition and Social Work to provide comprehensive care to the pediatric patient.

This Professional Master's Degree in Pediatric Intensive Care Medicine has been designed to provide you with comprehensive and specialized specialization in the management of critically ill pediatric patients"

Module 1. Pediatric Intensive Care

1.1. Pediatric Intensive Care
- 1.1.1. Pediatric Physiology and Pathophysiology in the Context of Intensive Care
- 1.1.2. Pediatric and Adult Patients in the ICU Key Differences
- 1.1.3. Principles of Bioethics and Evidence-based Decision Making in the Pediatric Intensive Care Unit

1.2. Initial Assessment of the Critically Ill Pediatric Patient
- 1.2.1. Comprehensive and Systematic Assessment
- 1.2.2. Signs of Severity and Stabilization of Vital Functions
- 1.2.3. Prioritization of Interventions According to Immediate Clinical Needs

1.3. Airway Management in Pediatrics
- 1.3.1. Airway Patency and Ventilatory Management
- 1.3.2. Endotracheal Intubation and Management of Complications
- 1.3.3. Selection and Use of Noninvasive Airway Support Devices

1.4. Monitoring in the Pediatric Intensive Care Unit
- 1.4.1. Implementation of Advanced Monitoring Techniques
- 1.4.2. Interpretation of Data to Adjust Patient Management
- 1.4.3. Monitoring Technologies to Improve Patient Safety

1.5. Pediatric Intensive Care Pharmacology
- 1.5.1. Pharmacotherapy Management in Emergency and Intensive Care Situations
- 1.5.2. Pharmacokinetics and Pharmacodynamics in the Pediatric Patient
- 1.5.3. Identification and Management of Drug Interactions and Adverse Drug Effects

1.6. Nutrition in the Critically Ill Pediatric Patient
- 1.6.1. Assessment of Nutritional Status and Requirements in the Critically Ill Patient
- 1.6.2. Implementation of Enteral and Parenteral Nutrition Strategies
- 1.6.3. Monitoring and Adjustment of Nutrition Based on Clinical Response

1.7. Ethical Aspects in Pediatric Intensive Care
- 1.7.1. Specific Ethical Dilemmas in Pediatric Intensive Care
- 1.7.2. Communicating Bad News in a Compassionate and Effective Manner
- 1.7.3. Participation in End-of-life Decisions and Palliative Care

1.8. Communication with Families and Teamwork
- 1.8.1. Development of Communication Skills with Families During Stress
- 1.8.2. Shared Decision Making with Caregivers
- 1.8.3. Team Approach to Interdisciplinary Care

1.9. Prevention of Healthcare-associated Infections in the Pediatric Intensive Care Unit
- 1.9.1. Protective Barriers and Isolation
- 1.9.2. Appropriate Use of Antibiotics
- 1.9.3. Infection Surveillance and Control Strategies

1.10. Intrahospital Transport in the Pediatric Critically Ill Patient
- 1.10.1. Planning and Coordination
- 1.10.2. Equipment and Monitoring
- 1.10.3. Safety and Risk Minimization

Module 2. Respiratory Emergencies in the Pediatric Intensive Care Unit

2.1. Acute Respiratory Failure
- 2.1.1. Gas Exchange Hypoxemia and Hypercapnia
- 2.1.2. Oxygenation Techniques
- 2.1.3. Respiratory Monitoring
- 2.1.4. Respiratory Therapies Heliox Nitric Oxide

2.2. Airway Management
- 2.2.1. Tracheal Intubation Rapid Intubation Sequence (RIS)
- 2.2.2. Difficult Airway
- 2.2.3. Tracheotomy and Cryostomy
- 2.2.4. Videolaryngoscopy and Bronchoscopy

2.3. Invasive Mechanical Ventilation
- 2.3.1. Respiratory Physiology
- 2.3.2. Ventilatory Modes
- 2.3.3. Programming of Mechanical Ventilation

2.4. Non-Invasive Mechanical Ventilation
- 2.4.1. General Information on NIV Material
- 2.4.2. NIV Programming
- 2.4.3. Programming Analysis

2.5. Bronchiolitis
- 2.5.1. Epidemiology
- 2.5.2. Pathophysiology
- 2.5.3. Treatment
- 2.5.4. Invasive and Non-Invasive Mechanical Ventilation
- 2.5.5. Obstructive and Restrictive Pattern

2.6. Asthmatic Status
- 2.6.1. Epidemiology
- 2.6.2. Pathophysiology
- 2.6.3. Treatment
- 2.6.4. Invasive and Non-Invasive Mechanical Ventilation
- 2.6.5. Aerial Entrapment

2.7. Pediatric Acute Respiratory Distress Syndrome (ARDS)
- 2.7.1. Epidemiology
- 2.7.2. Pathophysiology
- 2.7.3. Diagnosis. Differential Diagnosis
- 2.7.4. Treatment
- 2.7.5. Prognosis

2.8. Chronic Respiratory Diseases in Intensive Care
- 2.8.1. The Chronic and Complex Chronic Patient in PICU
- 2.8.2. Exacerbations of Chronic Respiratory Diseases
- 2.8.3. Care of the Tracheostomized Patient
- 2.8.4. Switching to Home Mechanical Ventilation
- 2.8.5. Complementary Treatments

2.9. Pleural Effusion Chylothorax. Pneumothorax
- 2.9.1. Pleural Effusion
- 2.9.2. Chylothorax.
- 2.9.3. Pneumothorax
- 2.9.4. Drainage System: Use and Care

2.10. Pulmonary Hypertension Drowning Smoke Inhalation
- 2.10.1. Pulmonary Hypertension
- 2.10.2. Drowning
- 2. 10.3. Smoke Inhalation Hemodynamic Emergencies in the Pediatric Intensive Care Unit

Module 3. Hemodynamic Emergencies in the Pediatric Intensive Care Unit

3.1. Hemodynamic Monitoring in Pediatrics
- 3.1.1. Hemodynamic Monitoring in the Critically Ill Pediatric Patient
- 3.1.2. Interpretation of Hemodynamic Data for the Identification and Treatment of Cardiovascular Function Alterations
- 3.1.3. Evaluation of the Effectiveness of Therapeutic Interventions with Advanced Monitoring Techniques

3.2. The Electrocardiogram (ECG) in Pediatrics
- 3.2.1. The Pediatric ECG Physiological Differences According to Age
- 3.2.2. Diagnosis of Electrolyte Disorders, Congenital Heart Disease and Cardiomyopathies through ECG Analysis
- 3.2.3. Management of Urgent Pediatric Arrhythmias based on ECG Presentation

3.3. Shock in Pediatrics: Early Recognition
- 3.3.1. Identification of Early Signs and Symptoms of Shock in Children for Rapid interventions
- 3.3.2. Shock in Pediatric Patients: Hypovolemic, Distributive, Cardiogenic, Obstructive
- 3.3.3. Hemodynamic Monitoring Parameters for Early Detection of Shock

3.4. Shock Management in Pediatrics
- 3.4.1. Evidence-based Resuscitation Protocols for the Treatment of Shock in Children
- 3.4.2. Use of Fluid Therapy, Inotropes and Vasopressors in the Management of Pediatric Shock
- 3.4.3. Assessment of Response to Treatment and Adjustment of Life Support Therapy according to the Individual Patient's Needs

3.5. Diagnosis of Heart Failure in Children
- 3.5.1. Use of Imaging Techniques and Biomarkers for Early Diagnosis of Heart Failure in Pediatrics
- 3.5.2. Acute and Chronic Heart Failure in Children: Clinical Manifestations
- 3.5.3. Underlying Causes of Heart Failure in the Pediatric Population for Appropriate Etiological Management

3.6. Management of Heart Failure in Pediatrics
- 3.6.1. Implementation of Medical Management Strategies: Optimal Pharmacotherapy for Heart Failure in Children
- 3.6.2. Surgical Management: Circulatory Assist Devices and Transplantation
- 3.6.3. Monitoring and Management of Side Effects and Complications of Heart Failure Treatment

3.7. Bradyarrhythmias in the Intensive Care Unit
- 3.7.1. Causes of Bradyarrhythmia in critical pediatric patients
- 3.7.2. Management of Emergencies Associated with Bradyarrhythmias: Use of Temporary Pacemakers
- 3.7.3. Continuous Monitoring and ECG Interpretation in the Management of Bradyarrhythmias

3.8. Tachyarrhythmias in the Intensive Care Unit
- 3.8.1. Tachyarrhythmias Based on the Clinical Presentation and ECG Findings in Children
- 3.8.2. Implementation of Acute Management Protocols for Tachyarrhythmias: Antiarrhythmic Medication and Cardioversion
- 3.8.3. Long-term Management Planning for Pediatric Patients with Recurrent Tachyarrhythmias

3.9. Hypertension in Pediatrics
- 3.9.1. Diagnosis and Evaluation of Hypertension in Children: Identification of Secondary Hypertension
- 3.9.2. Management of Pediatric Hypertension with Lifestyle Modifications and Pharmacotherapy
- 3.9.3. Monitoring of the Efficacy and Safety of Therapeutic Interventions in Children with Hypertension

3.10. Thrombosis and Anticoagulation in Pediatrics
- 3.10.1. Antithrombotic Prophylaxis in the PICU
- 3.10.2. Treatment of Thrombosis in Pediatrics
- 3.10.3. Indications for Anticoagulation in Pediatrics

Module 4. Cardiologic Emergencies in the Pediatric Intensive Care Unit

4.1. Diagnostic Orientation of Congenital Heart Diseases in Pediatric Intensive Care Units
- 4.1.1. Clinical Presentations of Congenital Heart Disease in PICU
- 4.1.2. Interpretation of Specific Diagnostic Test Findings for Congenital Heart Disease
- 4.1.3. Integration of the Clinical History with Imaging and Laboratory Findings to Establish an Initial Diagnostic Plan

4.2. Management of Congenital Heart Disease in the ICU
- 4.2.1. Coordination of the Multidisciplinary Management of Patients with Congenital Heart Disease in the ICU
- 4.2.2. Monitoring and Adjustment of Specific Pharmacological Treatment for Each Type of Congenital Heart Disease
- 4.2.3. Implementation of Strategies to Prevent Complications Associated with Congenital Heart Disease in the ICU

4.3. Mechanical Circulatory Support
- 4.3.1. Evaluation of the Indication for Mechanical Circulatory Support in Critical Pediatric Patients
- 4.3.2. Management of Ventricular Assist Devices Operation and Complications
- 4.3.3. Monitoring of the Patient's Response to Circulatory Support and Adjustments According to Clinical Evolution

4.4. Cardiac Tamponade
- 4.4.1. Early Recognition of Signs and Symptoms
- 4.4.2. Mastery of Diagnostic Techniques for Cardiac Tamponade
- 4.4.3. Effective Implementation of Emergency Interventions

4.5. Myocarditis and Cardiomyopathies
- 4.5.1. Signs and Symptoms of Myocarditis and Cardiomyopathies in Children and Young Adults
- 4.5.2. Interpretation of Imaging and Laboratory Studies for Diagnostic Confirmation of Myocarditis and Cardiomyopathies
- 4.5.3. Implementation of Specific Treatments for Myocarditis and Cardiomyopathies Management of Heart Failure

4.6. Pericarditis and Pericardial Effusion
- 4.6.1. Diagnosis of Pericarditis and Pericardial Effusion using Clinical and Echocardiographic Tools
- 4.6.2. Management of Acute Pericarditis and Pericardial Effusion Pericardiocentesis
- 4.6.3. Prevention of Long-term Complications of Pericarditis and Pericardial Effusion: Pericardial Constriction

4.7. Postoperative Management of Pediatric Cardiac Surgery
- 4.7.1. Supervision of Immediate Postoperative Hemodynamic and Respiratory Stabilization
- 4.7.2. Detection and Treatment of Common Postoperative Complications in Pediatric Cardiac Surgery
- 4.7.3. Recovery and Rehabilitation: Comprehensive Postoperative Care Plan

4.8. Echocardiography in PICU
- 4.8.1. Performing and Interpreting Echocardiograms to Guide Real-time Intensive Care Management
- 4.8.2. Echocardiography to Monitor Ventricular Function and Assess for the Presence of of Structural Abnormalities
- 4.8.3. Use of Echocardiography to Assess the Efficacy of Treatment and the Need for Therapeutic Adjustments

4.9. Vasopressors, Vasodilators and Inotropic Agents in Pediatrics
- 4.9.1. Selection and Dosing of Vasopressors, Vasodilators and Inotropic Agents for Different Clinical Scenarios
- 4.9.2. Monitoring of Cardiovascular Response and Adjustment of Pharmacological Therapy According to the Patient's Evolution
- 4.9.3. Recognition and Management of Side Effects and Drug-drug Interactions of these Agents

4.10. Basic and Advanced Cardiorespiratory Resuscitation
- 4.10.1. Performance of Basic Cardiorespiratory Resuscitation in Pediatric Patients: Application of Chest Compressions and Assisted Ventilation
- 4.10.2. Advanced Cardiac Life Support Techniques in Children Airway Management, Vascular Access, Drug Administration and Use of Defibrillators
- 4.10.3. Analysis and Response to the Different Possible Scenarios of Pediatric Cardiac Arrest

Module 5. Neurological Emergencies in the Pediatric Intensive Care Unit

5.1. Management of the Pediatric Patient with Traumatic Brain Injury
- 5.1.1. Evaluation and Stabilization of Pediatric Patients with Head Trauma Following Current Trauma Protocols
- 5.1.2. Strategies for Monitoring and Management of Intracranial Pressure in Traumatic Head Injury
- 5.1.3. Long-term Multidisciplinary Management Plan to Improve Neurological Outcomes after Traumatic Brain Injury in Children

5.2. Seizures and Status Epilepticus in the ICU
- 5.2.1. Management of Seizures and Status Epilepticus in Critically Ill Pediatric Patients
- 5.2.2. Electroencephalographic (EEG) Monitoring to Guide the Management of Seizures and Status Epilepticus
- 5.2.3. Antiepileptic Treatment of the Pediatric ICU Patient

5.3. Pediatric Stroke
- 5.3.1. Stroke in Children and Response with Rapid Diagnostic Evaluations
- 5.3.2. Acute Treatments for Pediatric Ischemic and Hemorrhagic Stroke Based on Current Recommendations
- 5.3.3. Continuity of Care and Rehabilitation Planning for Pediatric Post-stroke Patients

5.4. Meningitis and Encephalitis in Children
- 5.4.1. Early Diagnosis of Meningitis and Encephalitis in Pediatric ICU by using Clinical Protocols and Laboratory Techniques
- 5.4.2. Administration of Antimicrobial Therapy and Supportive Care for the Treatment of Meningitis and Encephalitis
- 5.4.3. Monitoring and Management of Short and Long term Complications associated with Meningitis and Encephalitis in Children

5.5. Intracranial Hypertension Management
- 5.5.1. Intracranial Hypertension in Pediatric Patients Causes and Clinical Signs
- 5.5.2. Techniques for Management of Intracranial Hypertension Optimization of Head Position and Pharmacotherapy
- 5.5.3. Integration of Intracranial Pressure Monitoring in Clinical Decision Making and Treatment Adjustment

5.6. Neurological Monitoring in ICU
- 5.6.1. Implementation and Analysis of Continuous Neurological Monitoring to Guide Clinical Management: EEG and other Biomarkers
- 5.6.2. Assessment of Brain Function through Various Monitoring Modalities and Treatment Adjustment
- 5.6.3. Use of Neurological Monitoring Data for Prevention and Detection of Secondary Complications in the Pediatric ICU

5.7. Neuroprotection and Post-resuscitation Care
- 5.7.1. Neuroprotection Strategies to Minimize Secondary Brain Damage after Events such as Cardiac Arrest
- 5.7.2. Management of Temperature Control Therapy and other Post-resuscitation Care to Optimize Neurological Outcomes
- 5.7.3. A Multidisciplinary Approach to Rehabilitation and Family Support after Successful Resuscitation

5.8. Neuromuscular Diseases in the ICU
- 5.8.1. Diagnosis and Management of Acute and Chronic Neuromuscular Diseases in the PICU Setting
- 5.8.2. Ventilatory and Nutritional Support for Patients with Neuromuscular Diseases
- 5.8.3. Long-term Care Coordination and Transition Planning for Children with Neuromuscular Disease Requiring Intensive Care

5.9. Sedation and Analgesia in Neurointensivists
- 5.9.1. Application of Pharmacology Principles for the Safe and Effective Administration of Sedatives and Analgesics in Critically Ill Pediatric Patients with Neurological Conditions
- 5.9.2. Ongoing Assessment of the Level of Sedation and Pain in Pediatric Patients using Validated Scales to Ensure Appropriate Pain Management and Comfort
- 5.9.3. Development of Sedation and Sedation Withdrawal Protocols that Minimize the Risk of Delirium and other Side Effects and Promote Optimal Neurologic Recovery

5.10. Neurological Rehabilitation in the ICU
- 5.10.1. Implementation of Individualized Early Rehabilitation Programs for Pediatric Patients in the ICU that Address Specific Motor, Cognitive and Emotional Needs
- 5.10.2. Collaboration with a Multidisciplinary Team, including Physiotherapists and Occupational Therapists, to Integrate Neurological Rehabilitation into the Intensive Care Plan
- 5.10.3. Regular Assessment and Reporting of Progress in Neurological Rehabilitation, adjusting Treatment Strategies in Accordance with the Patient's Clinical Progress and Recovery Goals

Module 6. Infectious Emergencies and Sepsis in the Pediatric Intensive Care Unit

6.1. Sepsis and Septic Shock in Pediatrics
- 6.1.1. Diagnostic Criteria for Sepsis and Septic Shock in Pediatric Patients for a Timely and Accurate Diagnosis
- 6.1.2. Hemodynamic Resuscitation of Children with Septic Shock: Optimizing Tissue Perfusion and Administration of Fluids and Vasopressors
- 6.1.3. Response to Antimicrobial Therapy in Pediatric Patients with Sepsis and Septic Shock Adjustment of Therapies according to Culture and Sensitivity Test Results

6.2. Management of Severe Infections and Antibiotics
- 6.2.1. Appropriate Selection and Prescription of Antimicrobials in Pediatric Patients with Severe Infections: Local Microbiology, Age and Weight of Patient and Pediatric Pharmacokinetics
- 6.2.2. Comprehensive Management Strategies for Patients with Serious Infections: Monitoring of Vital Signs, Interpretation of Laboratory Tests and Ongoing Clinical Evaluation
- 6.2.3. Implementation of Protocols for Appropriate Antimicrobial Use in the PICU: Duration of Treatment and Escalation of Antimicrobials when Necessary

6.3. Opportunistic Infections in ICU
- 6.3.1. Opportunistic Infections that can Affect Pediatric Patients in the ICU, especially those with Underlying Medical Conditions or Immunosuppression
- 6.3.2. Design and Implementation of Effective Strategies for Prevention and Control of Opportunistic Infections in the ICU: use of Barrier Measures and Antimicrobial Prophylaxis as Needed
- 6.3.3. Risk Assessment and Management of Opportunistic Infections in Immunocompromised Patients: Management Strategies According to the Individual Needs of Each Patient

6.4. Nosocomial Infection Prevention and Control
- 6.4.1. Design and Implementation of Effective Strategies to Prevent Transmission of Nosocomial Infections in the Pediatric ICU: Hand Hygiene, Asepsis and and Proper Management of Medical Devices
- 6.4.2. Infection Prevention Practices in the ICU by Monitoring Infection Rates and of Infection Rates and Identification of Areas for Improvement
- 6.4.3. Training of Healthcare Personnel and Patient Caregivers on Nosocomial Infection Prevention Measures, Promoting a Culture of Safety and Prevention

6.5. Tropical Diseases in ICU
- 6.5.1. Recognition and Diagnosis of Tropical Diseases in Pediatric Patients Admitted to the ICU, especially those with a History of Travel to Endemic Areas
- 6.5.2. Specific Management Plans for Tropical Diseases: Selection and Administration of Anti-parasitic and Antiviral Treatments
- 6.5.3. Prevention Strategies to Reduce Patient Exposure to Tropical Diseases in the ICU: Protection Against Vectors and Education to Patients and their Families

6.6. Immunodeficiencies and ICU Management
- 6.6.1. Clinical Management of Pediatric Patients with Immunodeficiencies Requiring Intensive Care
- 6.6.2. Management Protocols in the Administration of Immunoglobulins and Prophylaxis of Opportunistic Infections in Patients with Severe Immunodeficiencies
- 6.6.3. Collaboration with Immunology Specialists to Optimize the Management of Pediatric Immunodeficiency Patients: Planning of Stem Cell Replacement Therapies if Necessary

6.7. Management of the Immunosuppressed Patient
- 6.7.1. Causes and Degree of Immunosuppression in Pediatric Patients: Patients who have Received Organ Transplantation or Immunosuppressive Therapies to Customize their Clinical Management
- 6.7.2. Infection Prevention Strategies in Immunosuppressed Patients: Administration of Antimicrobial Prophylaxis and Education on Hygiene Measures and Risk Avoidance
- 6.7.3. Collaboration with Transplant Teams and Immunology Specialists: Coordination and Supervision of the Comprehensive Care of Immunosuppressed Pediatric Patients in the ICU

6.8. Central Nervous System Infections.
- 6.8.1. Central Nervous System Infections in Pediatric Patients, Meningitis and Encephalitis, by Interpretation of Clinical Findings and Laboratory and Neuroimaging Studies
- 6.8.2. Development of Specific Management Plans for Patients with Central Nervous System Infections: Choice and Dosage of Antimicrobials and Neurological Support Therapies
- 6.8.3. Neurological Evolution of Pediatric Patients with Central Nervous System Infections: Treatment Strategies

6.9. Severe Viral Diseases
- 6.9.1. Severe Viral Diseases in Pediatric Patients in the ICU: Serious Viral Respiratory Infections and Emerging Viral Diseases
- 6.9.2. Management of Viral Diseases: Antiviral Administration, Advanced Respiratory Support and Viral Load Monitoring in Critically Ill Patients
- 6.9.3. Viral Disease Prevention and Control Strategies in the ICU: Application of Isolation Protocols and Protective Measures for Medical and Nursing Staff

6.10. Isolation Protocols and Barriers
- 6.10.1. Isolation Protocols in the Pediatric ICU to Prevent the Transmission of Infectious Diseases: Route of Transmission, Duration of Isolation and Specific Precautions
- 6.10.2. Isolation Measures and Appropriate use of Personal Protective Equipment (PPE) to Minimize the Risk of Infection
- 6.10.3. Evaluating the Effectiveness of Isolation Protocols and Making Adjustments to Improve Patient Safety

Module 7. Digestive, Renal, and Neurosurgical Emergencies in the Pediatric Intensive Care Unit

7.1. Assessment and Monitoring of the Nutritional Situation and Calculation of Nutritional Needs Enteral and Parenteral Nutrition in the Critically Ill Child
- 7.1.1. Nutritional Status and Calculation of Nutritional Needs
- 7.1.2. Enteral Nutrition
- 7.1.3. Parenteral Nutrition

7.2. Major Burns and their Management in the ICU
- 7.2.1. Diagnosis of % scq
- 7.2.2. Calculation of Water Needs
- 7.2.3. Need for Mechanical Ventilation in Large Burn Injuries

7.3. Diabetes Insipidus, Syndrome of Inadequate Antidiuretic Hormone Secretion and Brain Salt Loss Syndrome
- 7.3.1. Adequate Fluid Management
- 7.3.2. Differential
- 7.3.3. Specific Treatment of Diabetes Insipidus, Syndrome of Inadequate Antidiuretic Hormone Secretion and Brain Salt Loss Syndrome.

7.4. Pain Management in Pediatrics
- 7.4.1. Assessment of Pain in the Critically Ill Child Pain Scales
- 7.4.2. Pain 5th Constant in Pediatrics
- 7.4.3. Zero Pain Protocol

7.5. Thrombotic Microangiopathy Uremic-Hemolytic Syndrome
- 7.5.1. Thrombi in Children
- 7.5.2. Small Vessel Thrombi
- 7.5.3. Management of Uremic-haemolytic Syndrome in Critically Ill Children

7.6. Post Renal Transplant Critical Care
- 7.6.1. Indications for TX in Children
- 7.6.2. Evaluation of the Recipient
- 7.6.3. Management of Renal TX in PICU

7.7. Hemorrhage and Transfusion Management
- 7.7.1. Critical Bleeding
- 7.7.2. Patient Assessment
- 7.7.3. Transfusion Management in the Critical Child

7.8. Childhood Stroke
- 7.8.1. Diagnosis of Stroke in Children
- 7.8.2. Multidisciplinary Assessment of the Child with Clinical Suspicion of Stroke
- 7.8.3. Treatment of Stroke

7.9. Neuromonitoring in Critically Ill Patients
- 7.9.1. Neuromonitoring in Critical Patients
- 7.9.2. Available Resources
- 7.9.3. Assessment of Critical Neuromonitoring

7.10. Difficult Airway Postoperative Period
- 7.10.1. Indications for EC in VAD
- 7.10.2. VAD Coagulation
- 7.10.3. Postoperative Management of VAD

Module 8. Toxicology and Endocrinology in the Pediatric Intensive Care Unit

8.1. Diabetic Ketoacidosis
- 8.1.1. Underlying Causes of Diabetic Ketoacidosis
- 8.1.2. Diagnosis of Diabetic Ketoacidosis by Interpretation of Clinical Symptoms and Laboratory Results
- 8.1.3. Effective Treatment Strategies: Management and Prevention of Diabetic Ketoacidosis in Patients with Diabetes

8.2. Electrical Trauma Injuries
- 8.2.1. Types of Electrical Trauma Injuries according to Mechanism of Action and Severity
- 8.2.2. Immediate and Long-term Signs and Symptoms Associated with Electrical Trauma Injuries
- 8.2.3. First Aid and Medical Treatment Protocols for Victims of Electrical Trauma

8.3. Alterations in Water-electrolyte Metabolism
- 8.3.1. Functions of the Main Electrolytes in the Body Importance for Water-electrolyte Balance
- 8.3.2. Common Causes and Clinical Signs of Disturbances in Water-Electrolyte Balance
- 8.3.3. Management of Disturbances in Water-electrolyte Metabolism by Appropriate Therapeutic Interventions

8.4. Acute Adrenal Insufficiency
- 8.4.1. Risk Factors and Precipitating Causes of Acute Adrenal Insufficiency
- 8.4.2. Characteristic Clinical Signs and Symptoms of Acute Adrenal Insufficiency for Early Diagnosis
- 8.4.3. Urgent Management Strategies for the Treatment of Acute Adrenal Insufficiency: Cortisol Replenishment

8.5. Disorders of the Thyroid Gland
- 8.5.1. Disorders of the Thyroid Gland, Hypothyroidism and Hyperthyroidism: Clinical Features and Laboratory Findings
- 8.5.2. Clinical Implications of Autoimmune Thyroid Disorders: Disease and Hashimoto's Thyroiditis on the Physiology and Well-being of the Patient
- 8.5.3. Diagnostic and Therapeutic Approach to Thyroid Disorders: Medical, Surgical Treatment and the Management of Complications

8.6. Inhalation Injuries
- 8.6.1. Types of Inhalation Injuries: Thermal, Chemical and Smoke Inhalation Injuries and their Mechanisms of Injury
- 8.6.2. Immediate and Long-term Signs and Symptoms Associated with Inhalation Injuries: Early and Accurate Diagnosis
- 8.6.3. Treatment and Management Strategies for Patients with Inhalation Injuries: Respiratory Support and Specific Therapies for Toxic Agents

8.7. Inherited Metabolic Diseases
- 8.7.1. Principles of Genetics and Inheritance of Metabolic Diseases with Identification of Commonly Affected Metabolic Pathways
- 8.7.2. Clinical Signs and Symptoms of the Inherited Metabolic Diseases: Early Diagnosis
- 8.7.3. Management Strategies and Specific Treatment for Inherited Metabolic Diseases: Special Diets, Enzyme Supplementation and Gene Therapies

8.8. Antidotes and their Use in Pediatrics
- 8.8.1. Specific Antidotes in Pediatrics for the most Common Intoxications: Mechanisms of Action
- 8.8.2. Indications, Dosage and Routes of Administration of Antidotes in the Management of Acute Poisonings in Children
- 8.8.3. Protocols of Action in Emergency Situations with the Use of Antidotes: Pharmacokinetic and Pharmacodynamic Particularities in the Pediatric Population

8.9. Carbon Monoxide Poisoning
- 8.9.1. Pathophysiology of Carbon Monoxide Poisoning: how it Affects the Body Focusing on its High Affinity for Hemoglobin and the Resulting Systemic Effects
- 8.9.2. Clinical Signs and Symptoms of Carbon Monoxide Poisoning: Acute and Potential Long-term Neurological and Cardiovascular Health Effects
- 8.9.3. Treatment Strategies for Carbon Monoxide Poisoning: Administration of 100% Oxygen and Hyperbaric Therapy in Appropriate Cases

8.10. Acute Poisoning
- 8.10.1. Toxic Agents Responsible for Acute Poisoning: Drugs, Industrial and Household Chemicals and Natural Toxins
- 8.10.2. Clinical Signs and Symptoms associated with Acute Intoxications for Rapid and Accurate Diagnosis
- 8.10.3. Initial Management of Acute Poisonings: Stabilization of the Patient, Decontamination Techniques and Administration of Specific Antidotes when Indicated

Module 9. Neonatal Intensive Care

9.1. Neonatal Intensive Care
- 9.1.1. Immediate Life Support Measures in Neonates
- 9.1.2. Thermoregulation Management in the NICU
- 9.1.3. Prevention of Nosocomial Infections in Neonates

9.2. Oxygen Therapy and Noninvasive Ventilation in the NB
- 9.2.1. Oxygen Therapy: Adjustment of Oxygen Concentrations
- 9.2.2. Noninvasive Ventilation Techniques for Different Neonatal Conditions
- 9.2.3. Monitoring and Prevention of Complications Related to Oxygen Therapy and Noninvasive Ventilation

9.3. Enteral Nutrition in the Sick NB
- 9.3.1. Criteria for Initiation and Progression of Enteral Nutrition
- 9.3.2. Management of Complications of Enteral Feeding in Sick Neonates
- 9.3.3. Adaptation of Enteral Nutrition Regimens According to the Specific Needs of the Sick NB

9.4. Parenteral Nutrition in NICU
- 9.4.1. Formulation of Parenteral Nutrition Mixtures According to the Individual Requirements of the NB
- 9.4.2. Monitoring the Efficacy and Safety of Parenteral Nutrition: Prevention of Complications
- 9.4.3. Protocols for Transition from Parenteral to Enteral Nutrition

9.5. Screening and Management of the NB with Suspected Congenital Heart Disease
- 9.5.1. Neonatal Screening Strategies for Congenital Heart Disease
- 9.5.2. Clinical Signs and Diagnostic Findings in Neonatal Cardiopathies
- 9.5.3. Initial Management of Neonates with Congenital Heart Disease

9.6. Management of the Newborn (NB) with Suspected Infection Newborn with Septic Shock
- 9.6.1. Early Signs of Infection and Septic Shock in Neonates
- 9.6.2. Application of Empirical and Supportive Antimicrobial Management Protocols in Septic Shock
- 9.6.3. Monitoring of the Response to Treatment and Adjustment of Management according to Clinical Evolution

9.7. Pain and Stress Management in the NICU
- 9.7.1. Assessment of Pain and Stress in Neonates using Validated Scales
- 9.7.2. Implementation of Pharmacological and Non-pharmacological Measures for Pain and Stress Management
- 9.7.3. Strategies for the Minimization of Pain and Stress during Invasive Procedures

9.8. General Management of the Extreme Preterm Newborn (ELN)
- 9.8.1. Specific Respiratory and Nutritional Support Strategies for the Extreme Preterm Newborn
- 9.8.2. Prevention and Management of Complications Associated with Extreme Prematurity
- 9.8.3. Implementation of Developmental Care and Family Support in the Management of the Extreme Preterm NB

9.9. Management of the Most Frequent Hydroelectrolyte Disorders of the NB Neonatal Hypoglycemia
- 9.9.1. Treatment of Electrolyte Imbalances in Neonates
- 9.9.2. Diagnosis and Management of Neonatal Hypoglycemia according to Current Guidelines
- 9.9.3. Monitoring and Adjustment of Fluid and Electrolyte Management in Response to Clinical and Laboratory Changes

9.10. Severe Hyperbilirubinemia of the NB Exchange Transfusion
- 9.10.1. Identification of Risk Factors and Signs of Severe Hyperbilirubinemia
- 9.10.2. Application of Protocols for the Treatment of Hyperbilirubinemia Phototherapy and Exchange Transfusion
- 9.10.3. Prevention of Long-term Complications Associated with Severe Hyperbilirubinemia Treatment

Module 10. Advanced Aspects in Neonatal Intensive Care Index

10.1. Hemodynamic Management of the Sick NB Severe PHT in the NB
- 10.1.1. Signs of Hemodynamic Instability and PHT in the NB
- 10.1.2. Hemodynamic Management Strategies including Inotropic Support and Management of PHT
- 10.1.3. Monitoring of the Response to Treatment and Adjustment according to the Clinical Evolution of the NB

10.2. Neonatal Mechanical Ventilation Conventional MV VAFO
- 10.2.1. Indications for Conventional Mechanical Ventilation and High Frequency Oscillatory Ventilation (HFOV)
- 10.2.2. Adjustment of Ventilation Parameters to Optimize Oxygenation and Ventilation while Minimizing the Risk of Lung Injury
- 10.2.3. Monitoring and Management of Complications Associated with Mechanical Ventilation

10.3. Management of Hyaline Membrane Disease (HMD)
- 10.3.1. Identification of Risk Factors and Clinical Signs of HME in the NB
- 10.3.2. Management Strategies including Respiratory Support and Surfactant Administration
- 10.3.3. Evaluation of Response to Treatment and Prevention of Complications Associated with HME

10.4. Newborn (NB) with Congenital Diaphragmatic Hernia (CDH)
- 10.4.1. Clinical Presentation and Diagnosis of CDH
- 10.4.2. Management including Respiratory Support and Preoperative Hemodynamic Stabilization
- 10.4.3. Surgical Management and Specific Postoperative Care for NB with CDH

10.5. Management of the NB with Perinatal Asphyxia
- 10.5.1. Identification and Classification of the Severity of Perinatal Asphyxia
- 10.5.2. Life Support Interventions and Management of Therapeutic Hypothermia if Indicated
- 10.5.3. Monitoring of Neurological Sequelae and other Complications Associated with Perinatal Asphyxia

10.6. Neurological Disorders in the Newborn (NB) Requiring NICU
- 10.6.1. Early Signs of Neurological Disorders in the Newborn
- 10.6.2. Strategies for Neurological Evaluation and Management of Specific Neurological Conditions
- 10.6.3. Multidisciplinary Care for the Comprehensive Management of Neurological Disorders

10.7. Severe Metabolic Diseases in the Newborn (NB)
- 10.7.1. Clinical and Laboratory Signs Suggestive of Severe Metabolic Diseases
- 10.7.2. Acute Management of Metabolic Decompensation and Specific Diagnostic Tests
- 10.7.3. Implementation of Long-term Management Plans and Follow-up for Diagnosed Metabolic Conditions

10.8. Most Common Neonatal Surgical Pathology Postoperative Care
- 10.8.1. Surgical Indications in Common Neonatal Pathologies
- 10.8.2. Implementation of Preoperative Care and Preparation for Neonatal Surgeries
- 10.8.3. Specific Postoperative Care to Optimize Recovery and Prevent Complications

10.9. Management of Necrotizing Enterocolitis (NEC)
- 10.9.1. Identification of Early Signs and Risk Factors for NEC
- 10.9.2. Application of Conservative Management Protocols and Criteria for Surgical Intervention
- 10.9.3. Monitoring Recovery and Management of Long-term Complications of NEC

10.10. Critical Neonatal Transport
- 10.10.1. Preparation of the Critically Ill Newborn for Safe Transport: Stabilization and Life Support
- 10.10.2. Coordination of Logistics and Effective Team Communication for Neonatal Transport
- 10.10.3. Monitoring and Management of the NB during Transport: Prevention and Response to Complications

06

Methodology

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

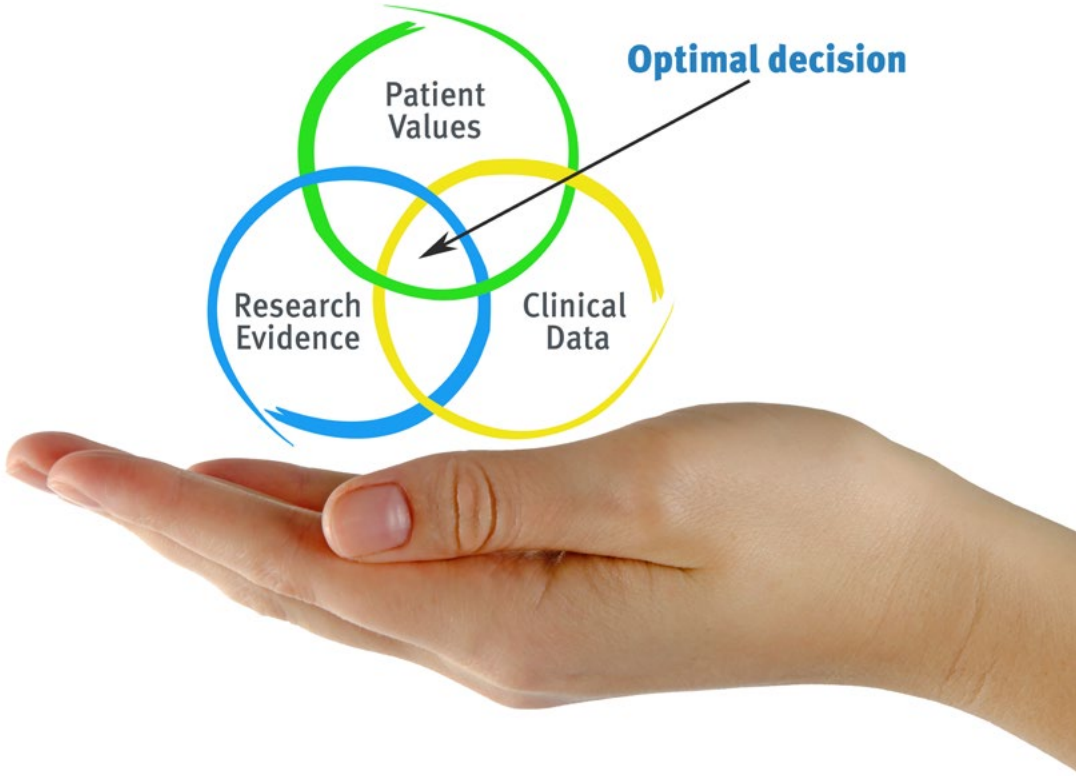
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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

At TECH 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:

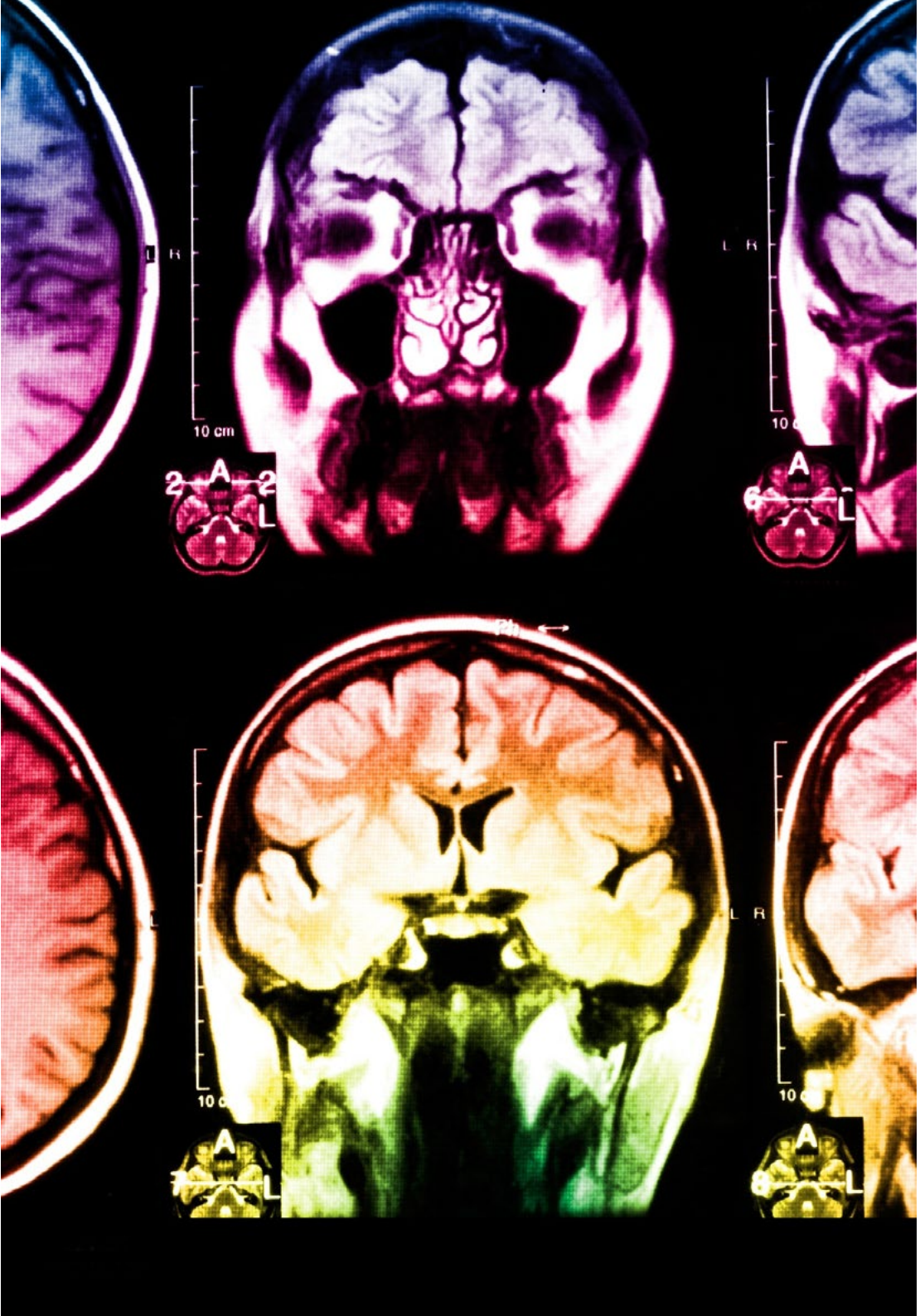
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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.

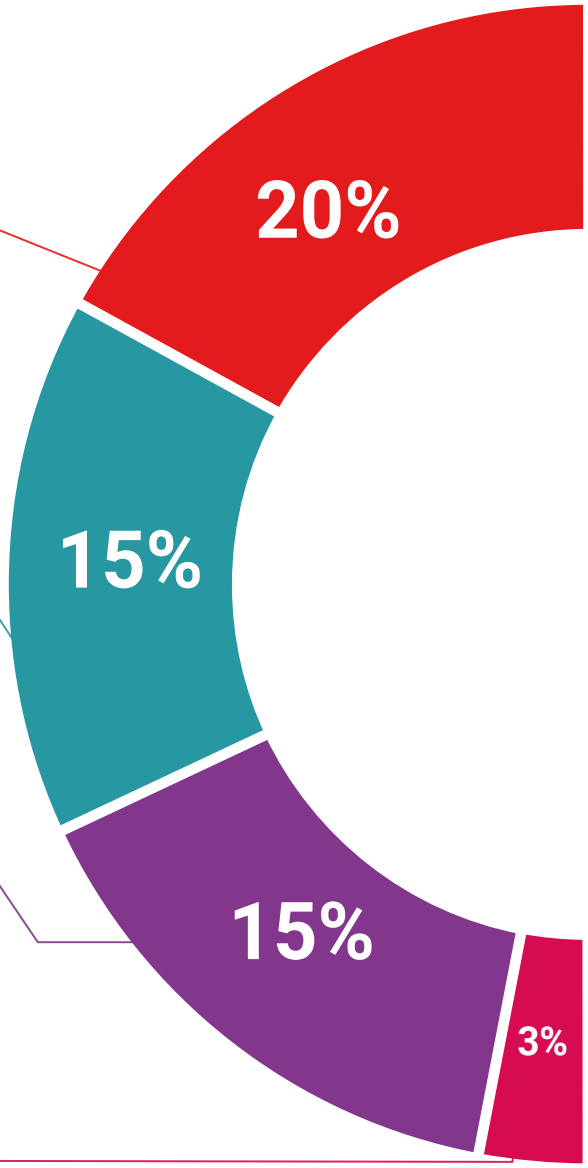
Interactive Summaries

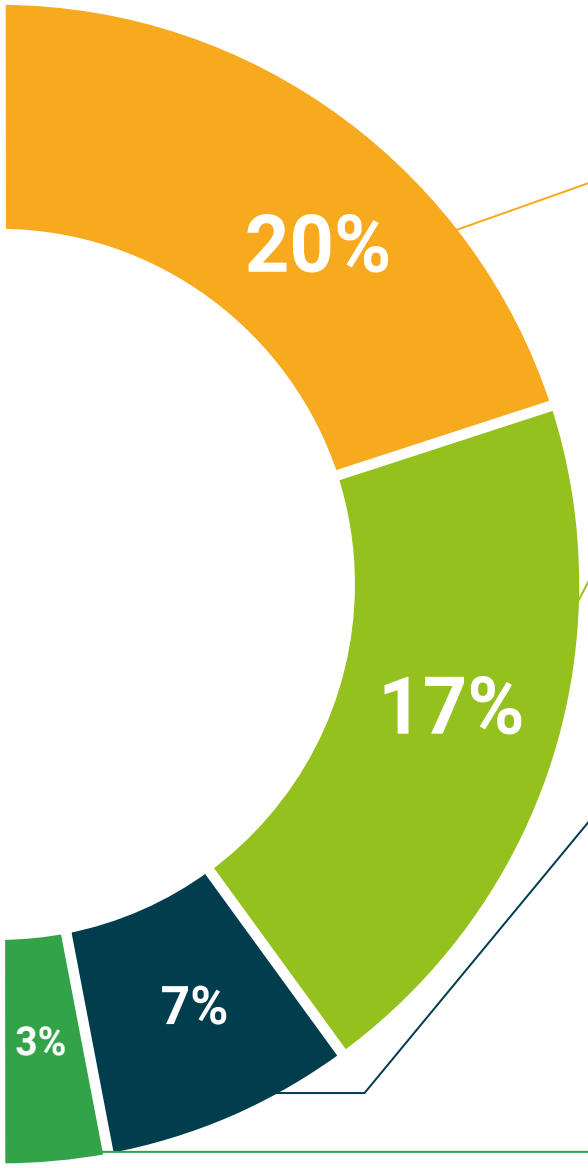
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Pediatric Intensive Care Medicine 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.

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 in Pediatric Intensive Care Medicine** 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 Pediatric Intensive Care Medicine**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**

tech global university

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

Professional Master's Degree in Pediatric Intensive Care Medicine

This is a private qualification of 1,800 hours of duration equivalent to 60 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

Dr. Pedro Navarro Illana
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

Professional Master's Degree in Pediatric Intensive Care Medicine

General Structure of the Syllabus

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Pediatric Intensive Care	6	CO
1º	Respiratory Emergencies in the Pediatric Intensive Care Unit	6	CO
1º	Hemodynamic Emergencies in the Pediatric Intensive Care Unit	6	CO
1º	Cardiac Emergencies in the Pediatric Intensive Care Unit	6	CO
1º	Neurological Emergencies in the Pediatric Intensive Care Unit	6	CO
1º	Infectious Emergencies and Sepsis in the Pediatric Intensive Care Unit	6	CO
1º	Digestive, Renal and Neurosurgical Emergencies in the Pediatric Intensive Care Unit	6	CO
1º	Toxicology and Endocrinology in the Pediatric Intensive Care Unit	6	CO
1º	Neonatal Intensive Care	6	CO
1º	Index Advanced Aspects of Neonatal Intensive Care	6	CO

Dr. Pedro Navarro Illana
Dean

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*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.

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Professional Master's Degree

Pediatric Intensive Care Medicine

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

Professional Master's Degree

Pediatric Intensive Care Medicine

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