Hybrid Professional Master's Degree

Hospital Pediatrics

tech technological university

tech technological university

Hybrid Professional Master's Degree

Hospital Pediatrics

Modality: **Hybrid (Online + Clinical Internship)**
Duration: **12 months**
Certificate: **TECH Technological University**
Teaching Hours: **1,620 h.**
Website: **www.techtitute.com/us/medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-hospital-pediatrics**

Index

01

Introduction

In a few years, Hospital Pediatrics has expanded its horizons by providing new clinical procedures for addressing neurological, cardiac, or respiratory disorders in children and adolescents. Furthermore, medical devices used in this discipline are becoming increasingly tailored to the anatomical characteristics of early ages. Staying up-to-date on their implementation is a priority for specialists. For that reason, TECH offers them an innovative academic format, consisting of two distinct study periods. The first involves theoretical analysis of these innovations, through a 100% online learning platform. Then, in a highly rigorous clinical practice, the professional will gain practical skills in an in-person and intensive setting alongside highly experienced healthcare experts.

Stay up-to-date with TECH on the latest infant and juvenile patients who require specific care in intensive care units"

For several years now, medical sciences have aimed to provide more personalized hospital care to pediatric patients. As a result, numerous innovations have emerged in areas such as pediatric pharmacology, seeking methods of drug administration that ensure proper absorption and minimize potential side effects. Simultaneously, technological advances have led to the development of devices that increasingly align with the anatomical characteristics of children and adolescents. However, paradoxically, specialists are often not adequately prepared to incorporate all these innovations into their daily professional practice. This is due, among other reasons, to the fact that many programs address these advancements in a theoretical manner and overlook their practical applications.

Therefore, TECH's Hybrid Professional Master's Degree stands out from this context by offering a program with two distinct stages. First, specialists will access up-to-date knowledge through a 100% online format. The learning process will take place on a high-performance platform with multimedia resources such as infographics, videos, and interactive summaries. In addition, innovative teaching methods such as Relearning will be available.

Likewise, in a second phase, this academic modality includes an intensive, in-person practical period. During this phase, physicians will be able to directly apply all their new knowledge in the treatment of real patients with various pathologies. At all times, they will be supervised by experts with a distinguished track record in Hospital Pediatrics, who will assist them in gaining new experiences. Furthermore, the clinical practice will take place in a top-tier healthcare setting equipped with the latest technologies for conducting state-of-the-art procedures. This study period will consist of 3 weeks during which the graduate will be guided by a well-known and highly qualified mentor.

This **Hybrid Professional Master's Degree in Hospital Pediatrics** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of more than 100 clinical cases presented by in Hospital Pediatrics professionals
- 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
- Comprehensive systematized action plans for the main pathologies in Hospital Pediatrics
- Presentation of practical workshops on procedures, diagnosis, and treatment techniques in pediatric patients
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Practical clinical guides on approaching different pathologies
- All this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection
- Furthermore, you will be able to carry out a clinical internship in one of the best hospital centers

Enhance the theoretical learning of this Hybrid Professional Master's Degree with the assistance of innovative educational tools such as infographics, videos, interactive summaries, and other multimedia resources"

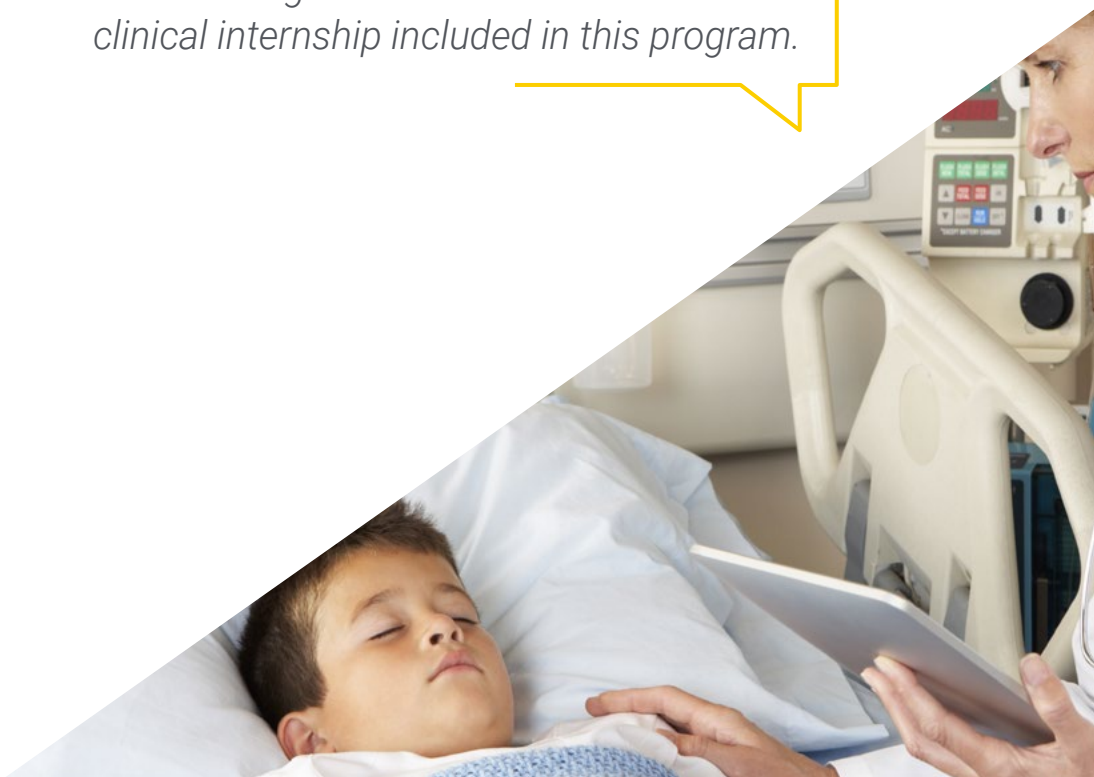
In 3 weeks of intensive on-site practice, TECH ensures your complete mastery of the most sophisticated diagnostic and therapeutic devices in Hospital Pediatrics"

Do not wait any longer and become part of this Hybrid Professional Master's Degree where you will examine the latest surgical approaches for the treatment of epilepsy in children and adolescents.

Obtain the most up-to-date program, for the use of extensive diagnostic instruments, such as Lumbar Puncture, through the intensive and immersive clinical internship included in this program.

In this proposal for Master's degree, the program is aimed at the professional development of Pediatric Hospital specialists who require a high level of qualification. The contents are based on the latest scientific evidence and oriented in a didactic way to integrate theoretical knowledge into medical practice, and the theoretical knowledge in medical practice, and the theoretical-practical elements will facilitate the updating of knowledge and will allow decision-making in patient management

Thanks to its multimedia content developed with the latest educational technology, they will allow the health professional to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system developed by renowned experts.



02

Why Study this Hybrid Professional Master's Degree?

The theoretical and practical mastery of Hospital Pediatric is imperative in the clinical landscape. That is why TECH wants its specialists to acquire the most advanced knowledge in this regard and provides them with an excellent educational modality. This Hybrid Professional Master's Degree, composed of two well-defined stages, dedicates 1500 hours to the study of new concepts, symptom analysis, and pediatric disease pathophysiology, among other approaches. Following that, it includes an intensive in-person stay of rigor, where the health professional will develop the necessary skills for the most updated medical practice.

Enroll in this Hybrid Professional Master's Degree and add the latest advancements in pediatric pharmacology to your knowledge of Hospital Pediatrics"

1. Updating from the Latest Technology Available

The inclusion of new and complex medical devices in pediatric intensive care units has contributed to the development of more comprehensive and effective healthcare procedures. To stay up-to-date on all these aspects, TECH will provide the specialist with a degree that integrates, like no other in the educational market, the most innovative theoretical and practical competencies.

2. Gaining In-depth Knowledge from the Experience of Top Specialists

Throughout this Hybrid Professional Master's Degree, a large team of experts will accompany health professionals. Initially, members of an excellent faculty will help them become familiar with theoretical concepts and criteria of interest. Then, in the in-person and practical stage of the program, high-caliber specialists will assist them in acquiring competencies and skills through the direct analysis and approach to real cases.

3. Entering First-Class Clinical Environments

In this program, pediatricians will have access to the most innovative medical technology and procedures from the perspective of hospital care for children and adolescents. This is made possible by TECH, which, with the aim of providing a comprehensive update for its graduates, has coordinated the clinical internship of this Hybrid Professional Master's Degree in a healthcare setting of the highest quality and with the best resources.

4. Combining the Best Theory with State-of-the-Art Practice

From the first minute of this Hybrid Professional Master's Degree, the physician will have access to real patients and will put into practice everything learned in the theoretical phase of this academic modality. In this way, TECH sets itself apart from its competitors in the educational market by providing a rigorous and demanding qualification where specialists will not have to worry about any lag in the development of new skills.

5. Expanding the Boundaries of Knowledge

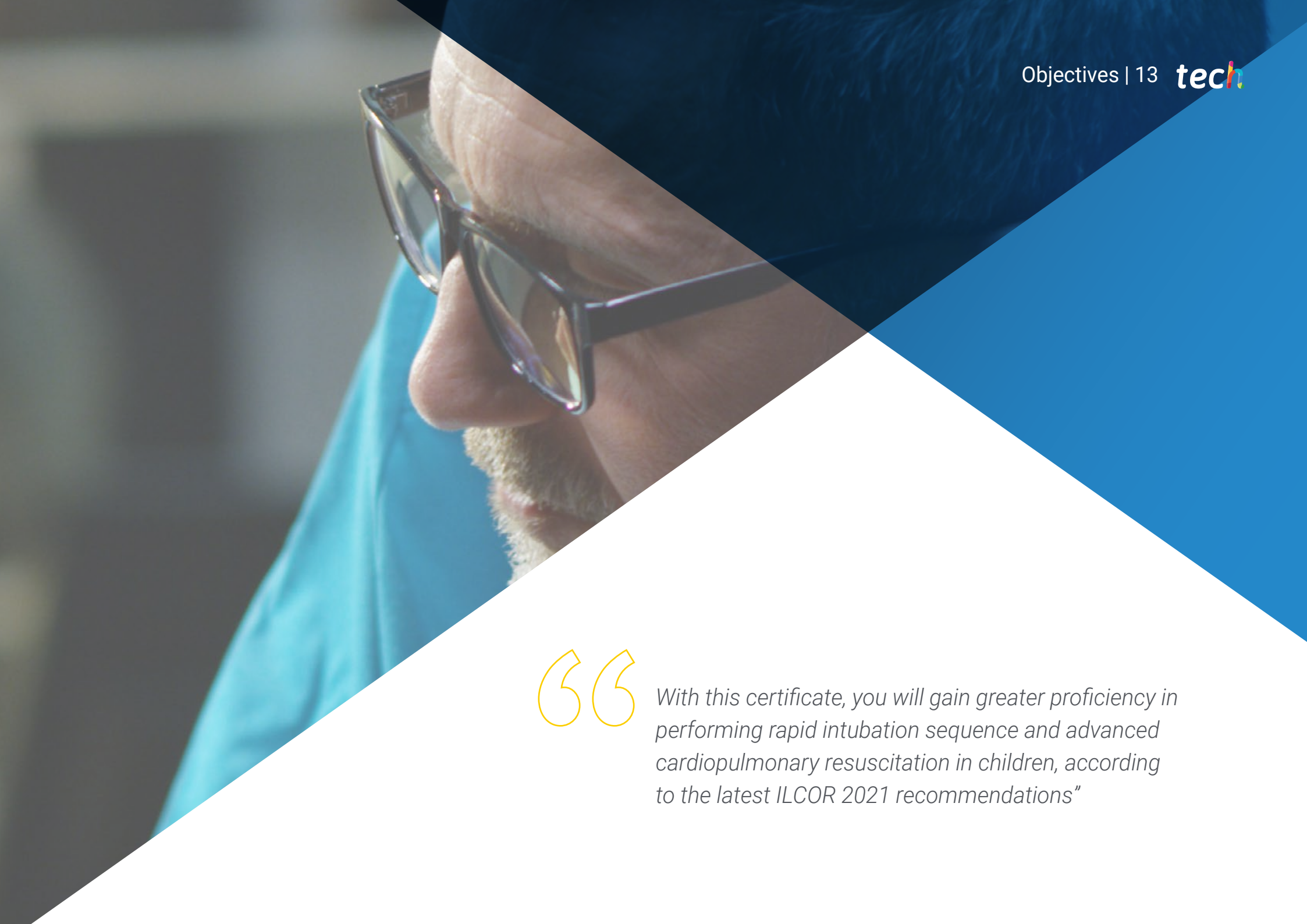
For this learning mode, TECH provides doctors with the opportunity to study in international hospital centers located in various geographic locations. This convenience is only possible thanks to its extensive network of contacts and agreements, established with the aim of expanding the horizons of pediatric professionals to the highest level.

You will have full practical immersion at the center of your choice"

03

Objectives

This program aims to achieve several academic objectives with the premise of providing the specialist with a rigorous update in the field of Hospital Pediatrics. Over the course of 1620 hours of learning, the doctor will be able to access the most up-to-date content in this discipline, both in theory and in practice. This is made possible by TECH, which, in its effort to provide its graduates with the best clinical competencies, has designed a pioneering learning program consisting of two well-differentiated phases, bringing together the most modern criteria and skills for the management of the latest devices.



With this certificate, you will gain greater proficiency in performing rapid intubation sequence and advanced cardiopulmonary resuscitation in children, according to the latest ILCOR 2021 recommendations"

General Objective

- This Hybrid Professional Master's Degree in Hospital Pediatrics will assist the specialist in mastering the latest techniques and modern knowledge related to the care of children and adolescents within medical facility settings. This will enable them to have a high proficiency in managing different pathologies, ensuring the highest quality and safety throughout these processes. Furthermore, these competencies will be developed based on the latest scientific evidence, making them a health professional prepared to deal with the use of innovative devices and protocols in personalized patient care

This Hybrid Professional Master's Degree will enhance your knowledge related to the Endocrine System and metabolic activity in children in accordance with the latest scientific evidence"

Specific Objectives

Module 1. Treating Critically Ill Children Not in the Pediatric Intensive Care Unit

- Delve deeper into the different hospital practices regarding initial child management in life-threatening situations due to acute hemodynamic, respiratory and/or neurological involvement
- Update rapid intubation sequence and advanced cardiopulmonary resuscitation in children according to the latest ILCOR 2021 recommendations
- Practical diagnosis and therapy management for children disconnected from the environment
- Know the algorithm of action in case of status convulsus
- Deal with allergic reactions and anaphylaxis, oxygen therapy, fluid therapy, ECG, analgesia and sedation, and be introduced to thoracic ultrasound

Module 2. Infectious Diseases in Pediatrics

- Focus on key issues such as antibiotic policy and isolation measures
- Analyze the most frequent infectious pathologies through new algorithms and protocols, as well as traveler and immigrant infections and new emerging viruses

Module 3. Respiratory Diseases in Pediatrics

- Delve deeper into chronic respiratory pathologies of frequent hospitalization such as bronchopulmonary dysplasia, interstitial lung disease, cystic fibrosis, patients with neuromuscular pathology
- Master the latest diagnosis and monitoring procedures and new therapies

Module 4. Digestive System Diseases in Pediatrics

- Take a deeper look into clinical cases and different algorithms in the diagnosis, management and updated therapeutic measures for different pathologies, some very frequent such as abdominal pain and gastroesophageal reflux, and other emerging ones such as eosinophilic esophagitis and biliary lithiasis
- Manage chronic diarrhea, whose etiology is varied and which can be the expression of a benign process or of a serious disease
- Update on inflammatory bowel disease and hepatic dysfunction, which require a high diagnostic suspicion, since they can cause, if detection is delayed, important complications causing a decline in patient quality of life
- Delve into gastrointestinal bleeding which, although infrequent, can have potentially severe consequences

Module 5. Neurological Disorders in Pediatrics

- Develop the diagnostic approach and practical aspects of antiepileptic drugs, as well as the diagnostic approach to hypotonic infants and the most frequent conditions such as headaches, or acute conditions such as ataxia, pediatric stroke, or demyelinating diseases, among others

Module 6. Cardiac Diseases in Pediatrics

- Discover new diagnostic modalities in pediatric cardiology: echocardiographic strain, transesophageal echocardiography, among others
- Delve deeper into the differential diagnosis for suspected heart disease in newborns, early diagnosis and initial stabilization treatment
- Know the clinical approach to heart disease given current regulations, as well as cardiac flow obstruction pictures, the key ideas behind arrhythmias detection, pathologies acquired in childhood, and suspected heart failure in infants and children and new challenges

Module 7. Endocrine System, Metabolism and Nutrition in Pediatrics

- Delve deeper into nutritional assessment and the most frequent alterations observed during hospital admission, early diagnosis and therapeutic lines
- Adopt a critical attitude toward new trends in diet and the possible deficiencies they can generate
- Know when to suspect the presence of a metabolic disease, as well as different clinical pictures, some of which frequent, such as hypoglycemia, diabetic onset and control using new technologies, polyuria, polydipsia and suspected adrenal insufficiency

Module 8. Nephrology and Electrolyte Disorders in Pediatrics

- Offer a global vision of the most frequent pathologies found in hospital admissions through clinical cases, deepening in hematuria-proteinuria, nephrotic syndrome and acute renal damage, arterial hypertension and renal lithiasis, which are becoming more and more common
- Bring new diagnostic and therapeutic algorithms to the nephrological area

Module 9. Pediatric Hemato-Oncology

- Using updated algorithms and clinical cases, explore simple approaches to the most common conditions such as anemia, purpura and neutropenia
- Know the indications for transfusions and anticoagulation
- Approach oncologic emergencies and the differential diagnosis of adenomegaly, hepato-splenomegaly and macrophage activity syndrome

Module 10. Other Pediatric Processes

- Interpret skin lesions and apparent lethal episodes
- Manage complex pediatric patients
- Address pediatric intensive care, palliative care, maltreatment and sexual abuse
- Master standard procedures and new technologies
- Delve into the mental health and safety of pediatric patients in a hospital setting

04

Skills

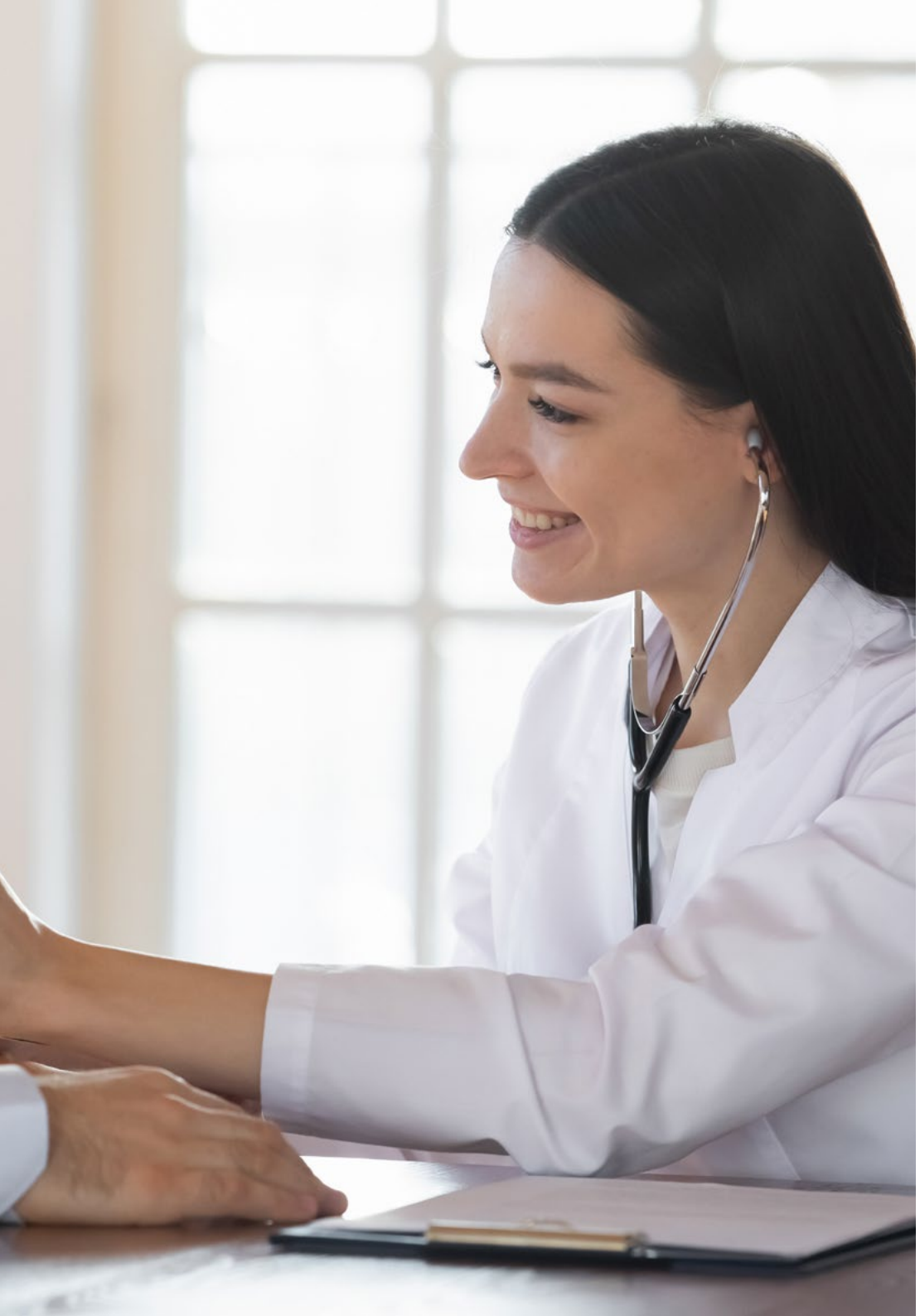
After the theoretical and practical approach to the latest advances in the field of Hospital Pediatrics, the physician will be ready to implement these advancements in their daily professional practice. Through them, they will gain prestige and will be able to provide their patients with the highest level of care and quality in their treatments.

You will be able to handle the most sophisticated clinical ultrasound tools for diagnosing conditions such as Otitis and Sinusitis upon completion of this program"

General Skills

- Manage the latest diagnostic and treatment tools in pediatrics
- Know the advances in specific patient management in hospital pediatrics
- Master the behavior of the most common pathologies belonging to the subspecialties of pediatric nephrology, oncology or digestive medicine, among others
- Incorporate new technologies to diagnostic processes

Gain the most innovative practical and theoretical competencies through this certificate, which integrates, like no other, online study with an intensive and in-person stay"



Specific Skills

- Manage the most common infectious pathologies and new emerging viruses according to new algorithms and protocols
- Treat common chronic respiratory pathologies such as interstitial lung disease or cystic fibrosis
- Address the most prevalent digestive diseases such as eosinophilic esophagitis
- Learn about the latest developments in antiepileptic drugs, and the most frequent neurological processes such as headache, acute conditions such as ataxia or pediatric stroke
- Diagnose heart disease in newborns
- Detect the presence of a metabolic disease in pediatric patients
- Master the particularities of hematuria-proteinuria, nephrotic syndrome and acute renal damage, arterial hypertension
- Possess all the current tools to safely manage pediatric patients

05

Course Management

For this Hybrid Professional Master's Degree, TECH has assembled a faculty with extensive experience in the field of Hospital Pediatrics. All these instructors are up to date on the latest protocols in this medical discipline and have achieved significant success in its application. Based on the knowledge gained over the course of their careers, they have designed a rigorous and demanding academic program where specialists will expand their professional practice and achieve the highest possible care excellence.

The instructors at TECH have designed highly rigorous didactic modules where you will update yourself on innovative pharmacological treatment strategies for hospitalized children and adolescents"

Management

Dr. García Cuartero, Beatriz

- Chief of the Pediatrics Service and coordinator of the Pediatric Endocrinology and Diabetes Unit at Ramón y Cajal University Hospital
- Specialist Physician in Pediatrics at Severo Ochoa University Hospital
- Primary in Care Pediatrician, Area 4, Madrid
- Associate Professor of Pediatrics in the University of Alcalá
- Social Security Research Fund (FISS) Grant at the Steno Diabetes Center Copenhagen and the Hagedorn Research Laboratory: Pancreatic beta cell destruction mechanism and free radicals in type 1 diabetes mellitus
- PhD from the Autonomous University of Madrid
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Specialist in Pediatrics, MIR accreditation at the Infantil Niño Jesús University Hospital
- Member of CAM, AEP, SEEP, SED, SEEN, ISPAD, ESPE, PHP

Professors

Dr. Buenache Espartosa, Raquel

- Specialist Physician in Pediatrics and Specialized Areas with a focus on Neuropediatrics at the Ramón y Cajal University Hospital
- Faculty Specialist in Pediatrics and its specific areas at the Fundación Alcorcón University Hospital
- Assistant Doctor with a Profile in neuropediatrics and Specialized Areas at the Henares University Hospital
- Specialist Doctor in Neuropediatrics at La Zarzuela University Hospital
- Doctoral Studies in the Area of Pediatrics, as part of the Medical Specialties Doctoral Program at the University of Alcalá
- Bachelor in Medicine and Surgery from the Autonomous University of Madrid
- MIR Training as a Specialist in Pediatrics and Subspecialization in Neuropediatrics at Ramón y Cajal University Hospital

Dr. Blitz Castro, Enrique

- Pediatric Specialist in the Management of Cystic Fibrosis Patients
- Pediatric Pulmonologist in the Pediatrics Service and Cystic Fibrosis Unit at Ramón y Cajal University Hospital
- Responsible for the Cystic Fibrosis Neonatal Screening Program at Ramón y Cajal University Hospital
- Doctorate in Health Sciences, University of Alcala
- Members of the Foundation for Biomedical Research of the Ramón y Cajal University Hospital

Dr. Morales Tirado, Ana

- Specialist in Pediatrics at Ramón y Cajal University Hospital
- Specialist in Pediatrics at the 12 de Octubre University Hospital
- Specialist in Pediatrics at Móstoles Hospital
- Specialist in Pediatrics at San Rafael Hospital
- Degree in Medicine from the Complutense University of Madrid

Ms. Yelmo Valverde, Rosa

- Nurse Educator in Pediatric Diabetes at Ramón y Cajal University Hospital
- Diabetes Nurse Educator and Telemedicine Unit at San Rafael Hospital
- Primary Care Nurse at Nuestra Señora de Fátima Health Center
- Vocational Program Instructor for EMAS and Motiva Formación
- Department of Extractions and Prevention and Occupational Risks Service at La Paz University Hospital
- Internal Medicine Department and Palliative Care Unit at Hospital San Rafael (Madrid)
- Diploma in Nursing from Pontificia de Comillas University
- Diploma in Company Nurse from Carlos III Institute and Ciudad Real Nursing University
- Master's Degree in Obesity and its Comorbidities: Prevention, Diagnosis and Integral Treatment at the University of Alcalá
- Master's Degree in Bases for the Care and Education of People with Diabetes from the University of Barcelona

Dr. Toledano Navarro, María

- Pediatric Cardiology Specialized in Congenital Heart Disorders
- Head of the Family Heart Disease Clinic and Hemodynamic Specialist at Ramón y Cajal University Hospital
- Specialist Attachments in Pediatric Cardiology at the Ramón y Cajal University Hospital
- PhD in Medicine and Surgery from the Complutense University of Madrid
- Member of: European Society of Cardiology and European Resuscitation Council

Dr. Vázquez Martínez, José Luís

- Head of the Pediatric Intensive Care Unit at Ramón y Cajal University Hospital
- Associate Professor at the University of Alcalá
- Winfocus Iberia professor
- PhD in Medicine and Surgery from the Autonomous University of Madrid
- Degree in Medicine and Surgery from the University of Oviedo
- Postgraduate Diploma in Pediatrics and Specific Areas at the La Paz Infant Hospital
- Member of the Pediatric Ultrasound Working Group

Dr. De Tejada Barasoain, Enrique Otheo

- Doctor Adjunct in Pediatric Department at the Ramón y Cajal University Hospital
- Pediatric Emergencies and Hospitalization Coordinator in the Ramón y Cajal University Hospital
- Hospital Pediatric Internal Medicine and Pediatric Infectious Diseases, and General Pediatric Consultation for Pediatric Infectious Diseases
- Doctor Cum Laude in Medicine from the University of Alcalá
- Degree in Medicine from the Autonomous University of Madrid
- Member of: SEPIH, SEIP, Antimicrobial Policy Committee of Ramón y Cajal University Hospital

Dr. Vicente Santamaría, Saioa

- Pediatric Gastroenterologist Assistant in the Cystic Fibrosis Unit
- Specialist Attachments in Pediatric Gastroenterology Department at Ramón y Cajal University Hospital
- Graduate in Medicine and Surgery from Universidad de Navarra
- Master's Degree in Pediatric Gastroenterology and Hepatology from CEU Cardenal Herrera University
- Master's Degree in Clinical Nutrition in Pediatrics from CEU Cardenal Herrera University
- Postgraduate Course in Pediatric Nutrition from Boston University School Medicine
- Postgraduate Diploma in Malnutrition and Digestive Pathology in Children from CEU Cardenal Herrera University

Ms. Clemente Linares, Raquel

- Nurse in Pediatric Hospitalization at Ramón y Cajal University Hospital
- Nurse in Adult Hospitalization in various departments at Ramón y Cajal University Hospital
- Nursing Consultation and Health Promotion at Quirónprevención for the Consejo Superior de Deportes (Superior Sports Council)
- Nurse in the Meliá Hotels International Medical Service
- Nurse at the Medical Service of El Corte Inglés Empresa, Hipercor
- Medical examinations including ECG, vision control, audiometry, and other nursing tests at Quirónprevención for the Consejo Superior de Deportes (Superior Sports Council)
- University Diploma in Nursing from the Europe University of Madrid

Dr. Rekarte García, Saray

- Specialist in Pediatric Neurology and Neurodevelopment
- Faculty Specialist in Pediatric and Neuropediatric at Ramón y Cajal University Hospital
- Faculty Specialist in Pediatric and Neuropediatric at University Hospital
- Infanta Cristina
- Faculty Specialist in Pediatric and Neuropediatric at Sanitas La Moraleja University Hospital
- Faculty Specialist in Pediatric and Neuropediatric at Milenium Center
- Costa Rica de Sanitas
- Degree in Medicine from the University of Oviedo
- MIR Resident Intern in Pediatrics and Specialized Areas at Asturias Central University Hospital
- Master's Degree in Pediatric Neurology and Neurodevelopment by CEU Cardenal Herrera University
- University Expert in Advances in Motor and Paroxysmal Disorders in Pediatric Neurology by CEU Cardenal Herrera University

Dr. Quintero Calcaño, Víctor

- Faculty Specialist in Pediatric Department at Ramón y Cajal University Hospital
- Clinical Fellow in the Hematology Department at Birmingham Children's Hospital
- Faculty Specialist in Pediatrics at Infanta Sofía University Hospital
- Doctorate in Medicine from the Autonomous University Madrid
- Medical Surgeon from Central University of Venezuela

Dr. Alkadi Fernández, Khusama

- Specialist in Pediatrics and Clinical Research
- Specialist Physician in Pediatrics Ramón y Cajal University Hospital
- Specialist Physician in Pediatrics Puerta De Hierro Hospital
- Incap Project Puerta de Hierro Majadahonda Health Research Institute
- Doctor of Medicine. Official Doctoral Program in Medicine. Autonomous University of Madrid
- Bachelor in Medicine and Surgery. University of Seville
- Internship at Allgemeines Krankenhaus Hospital Linz, Austria
- Internship at University Hospital Universitätsklinikum Freiburg of the Albert Ludwig University in Freiburg im Breisgau, Germany
- Internship in the Dermatology Service. Unispital Zürich Hospital, Zurich, Switzerland. Zurich, Switzerland

Dr. Tabares González, Ana

- Pediatric Specialist in Emergencies and Gastroenterological Disorders
- Medical Associate in the Emergency, Hospitalization, and Consultation Department at Ramón y Cajal University Hospital
- Specialist in Pediatric Gastroenterology Consultation at Clínica San Rafael University Hospital
- Medical Associate in the Pediatric Emergency and Hospitalization Department at Severo Ochoa University Hospital, Leganés, Spain
- Master's Degree in Immunonutrition from Catholic University of Valencia

Dr. Armero Pedreira, Paula

- Pediatric Specialist in Palliative Care and Complex Pathology
- Pediatrician in the Pediatric Emergency Department at Puerta de Hierro Majadahonda University Hospital
- Pediatrician with Professional Activity in the Social Pediatrics Consultation at San Rafael Hospital
- Pediatrician in the Pediatric Palliative Care Unit at the Vianorte-Laguna Foundation
- Pediatrician at Casa de los Niños Children's La Residence, a center for the protection of minors belonging to the General Directorate of Childhood and Family in the Community of Madrid
- Professor in Pediatric Palliative Care
- Degree in Medicine from the Complutense University of Madrid
- Pediatrics Resident Physician with Subspecialization in the Complex Pathology Unit at La Paz Children's Hospital and in the Palliative Care Unit of the Community of Madrid
- Master's Degree in Pediatric Palliative Care from the International University of La Rioja
- Postgraduate Degree in Social Pediatrics from the University of Barcelona

Dr. Stanescu, Sinziana

- Pediatric Specialist in Metabolic Diseases and Intensive Care
- Specialist in the Pediatric Metabolic Diseases Unit at Ramón y Cajal University Hospital
- Medical Specialist in Pediatric Intensive Care at Ramón y Cajal University Hospital
- Collaborator at Alcalá de Henares University Hospital

Dr. Vázquez Ordóñez, Carmen

- Pediatric Nephrology and Pediatric Emergencies Specialist
- Faculty Specialist in Pediatric Nephrology and Pediatric Emergencies at Ramón y Cajal University Hospital
- Teaching Collaborator for 4th and 6th Pediatric Nephrology and Pediatric Emergencies at Ramón y Cajal University Hospital
- Seminars in Medicine at the University of Alcalá
- Rotation in the Pediatric Nephrology Department at 12 de Octubre University Hospital
- Pediatrics Resident at Ramón y Cajal University Hospital
- Bachelor in Medicine and Surgery from the University of Navarra

Dr. Pando Velasco, María Fuencisla

- Specialist Physician in Charge of the Youth Psychiatry Program at Ramón y Cajal University Hospital
- Child and Adolescent Psychiatrist at Blue HealthCare Clinic
- Honorary Professor of Psychiatry in the University of Alcalá
- Specialist Physician in Psychiatry at Hermanas Hospitalarias del Sagrado Corazón de Jesús
- Specialist Physician in Psychiatry at the National Health System Managing Entity
- Degree in Medicine and Surgery from the Autonomous University of Madrid
- Advanced Studies Diploma in Psychiatry from the University of Alcalá
- Specialist in Psychiatry from Ramón y Cajal University Hospital
- Master's in Child and Adolescent Psychiatry from the CEU University
- Expert in Child and Adolescent Neurodevelopment from the Autonomous University of Barcelona

06

Educational Plan

The syllabus of the online stage of this Hybrid Professional Master's Degree offers a comprehensive up-to-date on the most common cardiac, respiratory, endocrine, and neurological pathologies in children and adolescents. It provides specialists with the latest diagnostic and therapeutic criteria for addressing these conditions. Additionally, it examines the most recent protocols for action in pediatric intensive care units. All of this content is organized into rigorous academic modules that the physician can access 100% online through an interactive platform with various multimedia resources.

For the mastery of this certificate, you will rely on innovative didactic methods such as Relearning"

Module 1. Treating Critically Ill Children Not in the Pediatric Intensive Care Unit

1.1. Warning Signs and Symptoms
- 1.1.1. Hemodynamic
- 1.1.2. Respiratory
- 1.1.3. Metabolic
- 1.1.4. Neurologic
- 1.1.5. Hematologic
- 1.1.6. Decompensation in Critically Ill Children
- 1.1.7. Monitoring: Instrumental Monitoring Clinic Clinical Ultrasound
- 1.1.8. Cardiocirculatory Arrest
  - 1.1.8.1. Prevention
  - 1.1.8.2. Caring for Children in Arrest
  - 1.1.8.3. Stabilization
  - 1.1.8.4. Transport Intrahospital and Interhospital
- 1.1.9. Humanized Care for Critically Ill Children
  - 1.1.9.1. The Family
  - 1.1.9.2. Music Therapy
  - 1.1.9.3. Others
- 1.1.10. Difficult Decisions
  - 1.1.10.1. Therapeutic Effort Limitation
  - 1.1.10.2. Critically Ill Children
  - 1.1.10.3. Asystole Donation

1.2. Cerebral Crisis
- 1.2.1. Initial Assessment
- 1.2.2. Differential Diagnosis
- 1.2.3. Acute Treatment

1.3. Acute Respiratory Failure. Oxygen Therapy
- 1.3.1. Acute Respiratory Failure
- 1.3.2. Pathophysiology
- 1.3.3. Classification
- 1.3.4. Diagnosis
- 1.3.5. Treatment

1.4. Allergic Reactions: Anaphylaxis
- 1.4.1. Allergic and Clinical Reaction
- 1.4.2. Etiology
- 1.4.3. Diagnosis
- 1.4.4. Treatment
- 1.4.5. Prevention

1.5. Blood Gas Interpretation
- 1.5.1. Blood Gas Interpretation
- 1.5.2. Pathophysiology
- 1.5.3. Basic Elements to Interpret Acid-Base Balance
- 1.5.4. General Diagnosis
- 1.5.5. Approach to Acid-Base Balance Disturbances

1.6. Analgesia and Sedation
- 1.6.1. Analgesia and Sedation
- 1.6.2. Pain Assessment and Management
- 1.6.3. Sedo Analgesia
  - 1.6.3.1. Adverse Effects
  - 1.6.3.2. Candidate Patients
  - 1.6.3.3. Necessary Personnel and Supplies
  - 1.6.3.4. Non-Pharmacological Measures in Pain Control and Anxiety
  - 1.6.3.5. Drugs and Antidotes
  - 1.6.3.6. Sedoanalgesia Procedures and Strategies
  - 1.6.3.7. Necessary Documentation
  - 1.6.3.8. Monitoring

1.7. Fluid Therapy
- 1.7.1. Body Fluid Composition
- 1.7.2. Main Mechanisms for Volume Regulation, Osmolarity and Acid-Base Balance
- 1.7.3. Calculating Basal Needs
- 1.7.4. Treating Dehydration: Rehydration Routes (Indications, Serums used)
- 1.7.5. Treating the Main Hydroelectrolyte and Acid-Base Balance Disorders

1.8. Electrocardiogram
- 1.8.1. General Aspects
- 1.8.2. Electrical Changes during Childhood Development
- 1.8.3. Sequential ECG Analysis: P Wave, PR Interval, QRS Complex, Q Wave, ST Segment, T Wave
- 1.8.4. Characteristics of Atypical ECGs with NoPathological Findings

1.9. Thoracic Ultrasound Scan
- 1.9.1. Clinical Ultrasound (POCUS)
- 1.9.2. Artifacts and Botonology
- 1.9.3. Pulmonary Ultrasound Semiology
- 1.9.4. POCUS Diagnosis
  - 1.9.4.1. Consolidated Pneumonia
  - 1.9.4.2. Alveolo-Interstitial Pneumonia
  - 1.9.4.3. Entrapment
  - 1.9.4.4. Heart Failure
  - 1.9.4.5. Pleural Effusion
  - 1.9.4.6. Pneumothorax

Module 2. Infectious Diseases in Pediatrics

2.1. Healthcare-Associated Infections (HAIs) Measures to Prevent the Transmission of Infections
- 2.1.1. Repercussions in a Pediatric Inpatient Ward
- 2.1.2. Epidemiology and Incidence
- 2.1.3. Types of IRAS
- 2.1.4. Preventing the Transmission of Infections
  - 2.1.4.1. Types of Isolation and Indications for Specific Microorganisms
  - 2.1.4.2. Hand Hygiene
  - 2.1.4.3. Other Measures

2.2. The Laboratory in the Diagnosis of Infectious Diseases: Taking Microbiological Samples
- 2.2.1. Biochemical and Hematologic Findings in Infectious Diseases
- 2.2.2. Clinical Considerations Prior to Microbiological Sampling
- 2.2.3. Recommended Biological Samples for the Diagnosis of the Most Frequent Infections: Conventional Microbiology, Rapid and Molecular Techniques
- 2.2.4. Available Microbiological Techniques and their Indications
- 2.2.5. Sample Transport and Storage

2.3. Empirical Antibiotic Therapy: Appropriate Use of Antibiotics
- 2.3.1. General Principles in Antibiotic Treatment: Structured Clinical Rationale
- 2.3.2. How to Adequately Select Antibiotics?
- 2.3.3. When Is an Antibiotic Changed? Targeted Antibiotic Therapy
- 2.3.4. What Is an Adequate Use of Antibiotics? Importance and Repercusions
- 2.3.5. The Role of New Antibiotics in Hospital Pediatrics

2.4. Special Fever Situations: Recurrent Fever, Prolonged Fever, Fever in Patients Returning from the Tropics
- 2.4.1. Recurrent and Periodic Fevers
  - 2.4.1.1. Causes
  - 2.4.1.2. Diagnostic Attitude
- 2.4.2. Prolonged Fever
  - 2.4.2.1. Causes
  - 2.4.2.2. Assessment
- 2.4.3. Fever in Patients Returning from the Tropics
  - 2.4.3.1. General Considerations (Traveler, Immigrant and Adopted Children)
  - 2.4.3.2. Most Common Causes
  - 2.4.3.3. Assessment

2.5. Community-Acquired Pneumonia (CAP): Etiological Diagnosis and Antibiotic Therapy Complicated Pneumonia Therapy
- 2.5.1. Etiology According to Age Group
- 2.5.2. Diagnostic Attitude
- 2.5.3. CAP Therapy in Home Patients
- 2.5.4. Diagnostic Attitude to "POneumonia that Does Not Look Good"
- 2.5.5. Complicated Pneumonia
  - 2.5.5.1. Types: Parapneumonic Pleural Effusion, Necrotizing Pneumonia, Lung Abscess
  - 2.5.5.2. Diagnostic and Therapeutic Attitude

2.6. Skin and Soft Tissue Infections (SSTIs): Osteoarticular Infection (OAI)
- 2.6.1. SSTI: Diagnostic and Therapeutic Attitude
  - 2.6.1.1. Impetigo
  - 2.6.1.2. Cellulitis and Erysipelas
  - 2.6.1.3. Folliculitis and Boils
  - 2.6.1.4. Omphalitis
  - 2.6.1.5. Staphylococcal Scalded Skin Syndrome
  - 2.6.1.6. Ectima
  - 2.6.1.7. Necrotizing Fasciitis
  - 2.6.1.8. Bites
- 2.6.2. OAI: Diagnostic and Therapeutic Attitude
  - 2.6.2.1. Incidence, Pathophysiology in Different Locations and Etiology According to Age Group
  - 2.6.2.2. Septic Arthritis
  - 2.6.2.3. Osteomyelitis

2.7. Genital Infection in Children and Adolescents
- 2.7.1. Implications and Frequency of Sexually Transmitted Infections (STIs) in Adolescence
- 2.7.2. STI Syndromes
  - 2.7.2.1. Genital Ulcers
  - 2.7.2.2. Inguinal Lymphadenopathy
  - 2.7.2.3. Condylomas
  - 2.7.2.4. Urethritis
- 2.7.3. Microbiological Diagnosis and Treatment for STIs
- 2.7.4. Vulvovaginitis in Girls and Adolescents: Bacterial Vaginosis
- 2.7.5. Pelvic Inflammatory Disease
- 2.7.6. Orchitis and Epididymitis

2.8. Central Venous Catheter (CVC) Related Infections
- 2.8.1. Types of CVC
- 2.8.2. Common Etiological Agents
- 2.8.3. Clinical, Research and Diagnostic Criteria
- 2.8.4. Treating CVC Related Infections

2.9. Infections in Immunocompromised Patients
- 2.9.1. Most Frequent Etiologic Agents According to the Type of Immune System Involvement
- 2.9.2. General Diagnostic Approach to Suspected Infection in Immunocompromised Children
- 2.9.3. Antibiotic Prophylaxis in Children with Primary or Secondary Immunodeficiencies
- 2.9.4. Patients Presenting Febrile Neutropenia

2.10. Emerging Virus Infections: SARS-CoV-2
- 2.10.1. Changes to Hospital Pediatrics Organization in the Context of the COVID-19 Pandemic
- 2.10.2. Diagnosis and Treatment of Acute SARS-CoV-2 Infection
- 2.10.3. Multisystem Syndrome Temporally Related to COVID-19 (MIS-C or PMIS)
- 2.10.4. Considerations Regarding Future Epidemic Outbreaks

2.11. Systemic Inflammatory Response Syndrome (SIRS): Sepsis, Severe Sepsis and Septic Shock
- 2.11.1. Clinical Examination
- 2.11.2. Microorganisms Causing Sepsis: Diagnostic Attitude
- 2.11.3. Initial Therapy for SIRS, Sepsis, Severe Sepsis and Septic Shock
- 2.11.4. Toxic Shock Syndrome

Module 3. Respiratory Diseases in Pediatrics

3.1. Acute Bronchiolitis
- 3.1.1. Acute Bronchiolitis
- 3.1.2. Etiology
- 3.1.3. Epidemiology
- 3.1.4. Clinical Symptoms
- 3.1.5. Diagnosis
- 3.1.6. Treatment
- 3.1.7. Prevention

3.2. Asthma Attacks
- 3.2.1. Asthma Attacks
- 3.2.2. Epidemiology
- 3.2.3. Pathophysiology
- 3.2.4. Clinical Symptoms
- 3.2.5. Diagnosis
- 3.2.6. Treatment
- 3.2.7. Educational

3.3. Chronic cough
- 3.3.1. Persistent Bacterial Bronchitis
- 3.3.2. Postinfectious Cough
- 3.3.3. Psychogenic Cough
- 3.3.4. Atelectasis: Middle Lobe
- 3.3.5. Non-Cystic Fibrosis (CF) Bronchiectasis

3.4. Bronchopulmonary Dysplasia
- 3.4.1. Bronchopulmonary Dysplasia
- 3.4.2. Epidemiology
- 3.4.3. Prevention
- 3.4.4. Pathophysiology
- 3.4.5. Clinical Symptoms
- 3.4.6. Treatment

3.5. Interstitial Lung Diseases
- 3.5.1. Classification
- 3.5.2. Neuroendocrine Cell Hyperplasia
- 3.5.3. Surfactant Protein Deficiency
- 3.5.4. Pulmonary Interstitial Glycogenosis
- 3.5.5. Hypersensitivity Pneumonitis

3.6. Respiratory Management in Neuromuscular Patients
- 3.6.1. Pathophysiology
- 3.6.2. Complementary Respiratory Tests
- 3.6.3. Treatment

3.7. Cystic Fibrosis Respiratory Pathology
- 3.7.1. Respiratory Pathology
- 3.7.2. Pathophysiology
- 3.7.3. Respiratory Exacerbation
- 3.7.4. Pneumothorax
- 3.7.5. Hemoptysis
- 3.7.6. Allergic Bronchopulmonary Aspergillosis
- 3.7.7. Atelectasis

3.8. Obstructive Sleep Apnea
- 3.8.1. Obstructive Sleep Apnea
- 3.8.2. Epidemiology
- 3.8.3. Pathophysiology
- 3.8.4. Clinical Symptoms
- 3.8.5. Diagnosis
- 3.8.6. Treatment

3.9. Inhalation Systems
- 3.9.1. Inhalation Systems
- 3.9.2. Metered Dose Inhaler (MDI), Dry Powder, Nebulizers

3.10. Pneumology Procedures
- 3.10.1. Forced Spirometry
- 3.10.2. Bronchoscopy

Module 4. Digestive System Diseases in Pediatrics

4.1. Abdominal Pain
- 4.1.1. Acute Abdominal Pain in Children: Clinical Picture Diagnosis and Treatment
- 4.1.2. Chronic Abdominal Pain. Incidence. Etiology
  - 4.1.2.1. Organic Abdominal Pain
  - 4.1.2.2. Functional Abdominal Pain: Treatment
- 4.1.3. Gastritis. Peptic Ulcers in Pediatrics
  - 4.1.3.1. Gastritis
  - 4.1.3.2. Peptic Ulcers: Clinical Presentation. Diagnosis and Treatment
  - 4.1.3.3. Helicobacter pylori gastritis. Clinical Presentation. Digestive and Extradigestive Manifestations Diagnosis and Treatment

4.2. Constipation
- 4.2.1. Constipation
- 4.2.2. Pathophysiology
- 4.2.3. Etiology
- 4.2.4. Triggering Factors
- 4.2.5. Organic Constipation Causes
- 4.2.6. Functional Constipation: Clinical Diagnosis
- 4.2.7. Treatment
  - 4.2.7.1. Lifestyle modifications
  - 4.2.7.2. Pharmacological Treatment: Disimpaction Maintenance Treatment Other treatments

4.3. Gastroesophageal Reflux
- 4.3.1. Gastroesophageal Reflux
- 4.3.2. Pathophysiology
- 4.3.3. Clinical Symptoms
  - 4.3.3.1. Warning Signs and Symptoms
  - 4.3.3.2. Digestive Manifestations
  - 4.3.3.3. Extradigestive Manifestations
- 4.3.4. Diagnosis
  - 4.3.4.1. PH / Esophageal Impedance
  - 4.3.4.2. Upper Digestive Endoscopy
  - 4.3.4.3. Other Diagnostic Tests
- 4.3.5. Treatment
  - 4.3.5.1. Non-pharmacological methods
  - 4.3.5.2. Medical Treatment
  - 4.3.5.3. Surgical Management
- 4.3.6. Therapeutic Diagnostic Approach according to Age

4.4. Eosinophilic Esophagitis
- 4.4.1. Eosinophilic Esophagitis
- 4.4.2. Epidemiology
- 4.4.3. Pathogenesis
  - 4.4.3.1. Environmental Factors
  - 4.4.3.2. Genetic Factors
- 4.4.4. Clinical Symptoms

4.4.5. Diagnosis
4.4.5.1. Endoscopic Findings
4.4.5.2. Histological Findings
4.4.5.3. Natural History
4.4.6. Treatment
4.4.6.1. Proton Pump Inhibitors
4.4.6.2. Topical corticosteroids
4.4.6.3. Dietary Treatment
4.4.6.4. Endoscopic Dilatation
4.4.6.5. Other treatments
4.5. Digestive and Nutritional Considerations for CF
4.5.1. Digestive and Nutritional Considerations
4.5.2. Gastrointestinal Tract Involvement in CF Patients
4.5.2.1. Gastroesophageal Reflux
4.5.2.2. Distal Obstruction Syndrome / Constipation
4.5.2.3. Abdominal Pain
4.5.2.4. Meconium Ileus
4.5.2.5. Bowel Intussusception
4.5.3. Pancreatic Involvement
4.5.3.1. Exocrine Pancreatic Insufficiency
4.5.3.2. Pancreatitis
4.5.3.3. Cystic Fibrosis (CF) Related Diabetes
4.5.4. Hepatobiliary Disease in CF Patients
4.5.4.1. CF-Related Liver Disease
4.5.4.2. Gallbladder Alterations
4.5.5. Nutritional Involvement
4.5.5.1. Chronic Malnutrition
4.5.5.2. Fat-Soluble Vitamin Deficiency
4.6. Chronic Diarrhea: Malabsorption
4.6.1. Pathophysiology
4.6.1.1. Osmotic Diarrhea
4.6.1.2. Secretory Diarrhea
4.6.1.3. Inflammatory Diarrhea
4.6.1.4. Intestinal Motility Alteration
4.6.2. Etiology
4.6.2.1. Functional Diarrhea
4.6.2.2. Organic Diarrhea
4.6.2.2.1. Diarrhea due to Infection Mechanism
4.6.2.2.2. Diarrhea due to Immune Mechanism
4.6.2.2.3. Diarrhea due to Carbohydrate Intolerance
4.6.2.2.4. Diarrhea due to Exocrine Pancreatic Insufficiency and Hepatobiliary Dysfunction
4.6.2.2.5. Diarrhea due to Anatomical Alteration
4.6.2.2.6. Diarrhea due to Altered Motility
4.6.2.2.7. Diarrhea due to Enterocyte Structural Defects
4.6.2.2.8. Diarrhea due to Metabolic Errors
4.6.2.2.9. Other Causes of Diarrhea
4.6.3. Diagnosis
4.6.4. Treatment
4.7. Inflammatory Bowel Disease
4.7.1. Ulcerative Colitis and Unclassified Inflammatory Bowel Disease
4.7.1.1. Inflammatory Bowel Disease
4.7.1.2. Etiology
4.7.1.3. Incidence
4.7.1.4. Classification
4.7.1.5. Symptoms and Physical Examination
4.7.1.6. Complementary Tests: Laboratory and Imaging Tests Endoscopy with Biopsy
4.7.1.7. Diagnosis
4.7.1.8. Activity Indexes
4.7.1.9. Onset Treatment and Maintenance
4.7.1.10. Complications during Hospital Admission and Treatment

4.7.2. Crohn's Disease
4.7.2.1. Crohn's Disease
4.7.2.2. Etiology
4.7.2.3. Incidence
4.7.2.4. Classification
4.7.2.5. Symptoms and Physical Examination
4.7.2.6. Complementary Tests: Laboratory and Imaging Tests Endoscopy with Biopsy
4.7.2.7. Diagnosis
4.7.2.8. Activity Indexes
4.7.2.9. Onset Treatment and Maintenance
4.7.2.10. Complications during Hospital Admission and Treatment

4.8. Biliary Lithiasis. Cholestasis
4.8.1. Biliary Lithiasis
4.8.2. Diagnosis
4.8.2.1. Anamnesis and Physical Examination
4.8.2.2. Complementary Tests: Laboratory and Imaging Tests Other Complementary Tests
4.8.3. Treatment
4.8.4. Newborn and Infant Neurological Examination
4.8.5. Cholestasis in Older Children
4.8.5.1. Cholestasis Secondary to Hepatocellular Injury
4.8.5.2. Cholestasis due to Biliary Tract Involvement

4.9. Acute Liver Failure, Hepatic Dysfunction
4.9.1. Hepatic Dysfunction: Hypertransaminasemia
4.9.1.1. Acute Liver Failure
4.9.1.2. Diagnosis
4.9.1.3. Differential Diagnosis of Pathologies Presenting Hypertransaminasemia Infectious hepatitis. Wilson's Disease. Autoimmune Hepatitis. Other Causes of Hypertransaminemia in Pediatrics
4.9.2. Acute Liver Failure
4.9.2.1. Liver Failure
4.9.2.2. Acute Hepatic Failure Diagnosis in Pediatric Patients
4.9.2.3. Therapeutic Approach
4.9.2.4. Differential Diagnosis of Pathologies Presenting Liver Failure

4.10. Gastrointestinal bleeding
- 4.10.1. Upper Gastrointestinal Bleeding
  - 4.10.1.1. Gastrointestinal Bleeding
  - 4.10.1.2. Etiology
  - 4.10.1.3. Diagnosis
  - 4.10.1.4. Medical and Endoscopic Treatments: Esophageal Varices
- 4.10.2. Lower Gastrointestinal Bleeding
  - 4.10.2.1. Lower Gastrointestinal Bleeding
  - 4.10.2.2. Diagnosis. Differential Diagnosis of Lower Gastrointestinal Bleeding
  - 4.10.2.3. Treatment

Module 5. Neurological Disorders in Pediatrics

5.1. Febrile and Parainfectious Crises
- 5.1.1. Febrile Crises
- 5.1.2. Epidemiology
- 5.1.3. Etiology
- 5.1.4. Clinical Symptoms
- 5.1.5. Diagnosis
- 5.1.6. Treatment
- 5.1.7. Prognosis

5.2. Epileptic Syndromes in Pediatric Patients: Practical Considerations in Antiepileptic Drug Management
- 5.2.1. Epileptic Syndromes Classification and Diagnostic Approach
- 5.2.2. Epileptic Syndromes in Infants and Preschoolers
- 5.2.3. Epileptic Syndromes in School Children and Adolescents
- 5.2.4. Practical Considerations in Antiepileptic Drug Management

5.3. Non-Epileptic Paroxysmal Disorders
- 5.3.1. Non-Epileptic Paroxysmal Disorders
- 5.3.2. Clinical and Etiological Characteristics
- 5.3.3. Differential Diagnosis: Epileptic Seizures

5.4. Infant Hypotonia and the Most Common Neuromuscular Disorders in Infancy
- 5.4.1. Non-Paralytic or Central Hypotonia in Infants
- 5.4.2. Paralytic or Peripheral Hypotonia in Infants
- 5.4.3. Most Common Neuromuscular Disorders in Childhood: Spinal Muscular Atrophy, Hereditary Sensory-Motor Neuropathies, Myasthenias, Infantile Botulism and Myopathies

5.5. Guillain-Barré Syndrome
- 5.5.1. Guillain-Barré Syndrome and Classification
- 5.5.2. Pathophysiology
- 5.5.3. Clinical Symptoms
- 5.5.4. Diagnostic Criteria
- 5.5.5. Treatment
- 5.5.6. Prognosis

5.6. Headache
- 5.6.1. Headaches
- 5.6.2. Etiology
- 5.6.3. Classification. Primary and Secondary Headaches: Migraines, Tension and Trigemino-Autonomic Headaches, and Others
- 5.6.4. Anamnesis and Physical Examination
- 5.6.5. Admission Criteria and Warning Signs
- 5.6.6. Complementary Evaluations
- 5.6.7. In-hospital Migraine Management
- 5.6.8. Acute and Chronic Treatment

5.7. Acute Ataxia
- 5.7.1. Vestibular Ataxia and Cerebellar Ataxia
- 5.7.2. Main Etiologic Differential Diagnosis in Children Admitted for Acute Ataxia Episodes
- 5.7.3. Practical Management Protocols

5.8. Pediatric Stroke
- 5.8.1. Epidemiology. Etiology and Risk Factors
- 5.8.2. Pediatric Stroke Clinical Manifestations
- 5.8.3. Stroke Mimics
- 5.8.4. Pediatric Stroke Code Protocol and Hospital Diagnostic Approach

5.9. Acute Encephalitis
- 5.9.1. Acute Encephalitis / Encephalopathy and Classification
- 5.9.2. Infectious Encephalitis / Meningoencephalitis
- 5.9.3. Immune-Mediated Encephalitis
- 5.9.4. Toxic-Metabolic Encephalitis

5.10. Demyelinating Diseases:
- 5.10.1. Acute Demyelinating Injuries in Pediatrics
- 5.10.2. Acute Disseminated Encephalomyelitis
- 5.10.3. Multiple Sclerosis in Childhood: Diagnostic Criteria. Initial Therapeutic Approach

Module 6. Cardiac Diseases in Pediatrics

6.1. Suspected Heart Disease in Newborns
- 6.1.1. Past, Present and Future of Congenital Heart Disease in Pediatrics
- 6.1.2. Fetal and Postnatal Circulation: Newborn Adaptation
- 6.1.3. Physical Examination and Vital Signs
- 6.1.4. Differential Diagnosis for Congenital Heart Disease in Newborns
- 6.1.5. Prostaglandin Use

6.2. Diagnostic Tools for Pediatric Cardiac Pathology
- 6.2.1. Basic Tools Utility for Diagnosing Congenital Heart Disease: ECG and Chest X-Ray
- 6.2.2. Advances in Echocardiography
- 6.2.3. Fetal Echocardiography
- 6.2.4. Advanced Imaging Techniques for Diagnosing Congenital Heart Disease: CAT and MRI
- 6.2.5. Diagnostic Cardiac Catheterization

6.3. Congenital Heart Disease Classification: Pulmonary Hypertension
- 6.3.1. Segmental Classification for Congenital Heart Disease
- 6.3.2. Congenital Heart Disease Pathophysiology: Hemodynamic Principles
- 6.3.3. Pulmonary Hypertension, Classification and Diagnosis
- 6.3.4. Pulmonary Hypertension associated with Congenital Heart Disease and Eisenmenger's Syndrome
- 6.3.5. Therapeutic Advances in Pulmonary Hypertension Treatment

6.4. Cyanogenic Heart Disease
- 6.4.1. Main Artery Transposition
- 6.4.2. Truncus Arteriosus
- 6.4.3. Anomalous Pulmonary Venous Drainage
- 6.4.4. Fallot's Tetralogy and Variants
- 6.4.5. Tricuspid Atresia
- 6.4.6. Complete Septal Pulmonary Atresia
- 6.4.7. Ebstein Disease

6.5. Non-Cyanogenic Heart Disease
- 6.5.1. Atrial Septal Defect
- 6.5.2. Ventricular Septal Defect
- 6.5.3. Persistent Ductus Arteriosus
- 6.5.4. Atrioventricular Canal

6.6. Conditions Obstructing Cardiac Flow and Other Less Common Congenital Heart Diseases
- 6.6.1. Pulmonary Stenosis
- 6.6.2. Aortic Stenosis
- 6.6.3. Coarctation of Aorta
- 6.6.4. Alcapa Syndrome
- 6.6.5. Vascular Rings

6.7. Childhood-Acquired Heart Disease
- 6.7.1. Pericarditis
- 6.7.2. Myocarditis
- 6.7.3. Infectious Endocarditis
- 6.7.4. Kawasaki Disease
- 6.7.5. Rheumatic Fever

6.8. Heart Rate and Electrical Conduction Abnormalities in Children
- 6.8.1. Supraventricular Tachycardia
- 6.8.2. Ventricular Tachycardias
- 6.8.3. Atrioventricular (AV) Block
- 6.8.4. Cartography and Catheter Ablation
- 6.8.5. Pacemakers and Automatic Implantable Defibrillators

6.9. Heart Failure in Infants and Children
- 6.9.1. Etiological and Pathophysiological Characteristics
- 6.9.2. Clinical Characteristics. Diagnostic Tools in Heart Failure
- 6.9.3. Medical Treatment for Pediatric Heart Failure
- 6.9.4. Ventricular Assist Devices and Other Technical Advances
- 6.9.5. Pediatric Heart Transplantation

6.10. Pediatric Familial Heart Disease: Genetic Alterations
- 6.10.1. Clinical Genetic Evaluation
- 6.10.2. Cardiomyopathies: Hypertrophic, Dilated, Arrhythmogenic and Restrictive Dysplasia
- 6.10.3. Connectivopathies
- 6.10.4. Canalopathies
- 6.10.5. Syndromes related to Heart Disease: Down Syndrome, DiGeorge Syndrome, Turner Syndrome, Williams Beuren Syndrome and Noonan Syndrome

Module 7. Endocrine System, Metabolism and Nutrition in Pediatrics

7.1. Nutritional Status Assessment
- 7.1.1. Nutritional Status Assessment
- 7.1.2. Medical History, Nutritional Anamnesis and Physical Examination
- 7.1.3. Body Composition Evaluation: Anthropometry, Weight / Height Ratio Indexes: Body composition
- 7.1.4. Nutritional Screening

7.2. Healthy Children Diet
- 7.2.1. Breastfeeding
- 7.2.2. Artificial Breastfeeding
- 7.2.3. Healthy Children Diversification

7.3. Enteral Nutrition at and Parenteral
- 7.3.1. Detecting Patients in Need of Nutritional Support
- 7.3.2. Requirement Calculations
- 7.3.3. Choosing Artificial Nutrition Options
- 7.3.4. Enteral Nutrition
  - 7.3.4.1. Access Routes
  - 7.3.4.2. Enteral Nutrition Formulas used in Pediatrics
  - 7.3.4.3. Monitoring and Complications
- 7.3.5. Parenteral Nutrition
  - 7.3.5.1. Access Routes
  - 7.3.5.2. Monitoring and Complications
- 7.3.6. Refeeding Syndrome

7.4. Deficiencies caused by New Forms Nutrition: New Diet Trends
- 7.4.1. Types of Vegetarian Diets
- 7.4.2. Macro- and Micro-Nutrients at Risk in Vegetarian Diets
- 7.4.3. Vegetarian or Vegan Diet Recommendations according to Age
- 7.4.4. Dietary Mistakes in Infants: Vegetable Drinks
- 7.4.5. Information Sources

7.5. Approaching Patients with Suspected Inborn Errors of Metabolism (IEM)
- 7.5.1. Inborn Errors of Metabolism (IEM)
- 7.5.2. Clinical Approach
  - 7.5.2.1. IEM: Acute Presentation in the Neonatal Period and in Children <1 Year of Age
  - 7.5.2.2. EIM: Recurrent Seizures
  - 7.5.2.3. IEM: Chronic or Progressive Clinical Course
- 7.5.3. Diagnostic Procedures
- 7.5.4. Treatment
  - 7.5.4.1. Emergency Treatment
  - 7.5.4.2. Pharmacological Treatments and Cofactors
  - 7.5.4.3. Nutrition
  - 7.5.4.4. Others (Extrarenal Depuration Techniques. Organ Transplantation, etc...)

7.6. Hypoglycemia
- 7.6.1. Hypoglycemia
- 7.6.2. Directed Initial Evaluation: Anamnesis, Physical Examination
- 7.6.3. Complementary Examinations during Hypoglycemia Episodes
- 7.6.4. Differential Diagnosis
- 7.6.5. Treatment

7.7. Polydipsia-Polyuria
- 7.7.1. Polyuria in Pediatric Patients: Normal Diuresis by Age Group
- 7.7.2. Etiopathogenesis
  - 7.7.2.1. Aqueous Diuresis: Osmotic Diuresis
  - 7.7.2.2. Osmotic Diuresis: Most Frequent Causes

7.7.3. Clinical Practice for Polyuric States
7.7.4. Diagnosis
7.7.4.1. Anamnesis and Physical Examination
7.7.4.2. Complementary Tests. Water Restriction Test or Miller's Test Indications. Limitations Arginine Vasopressin (AVP) and Copeptin Imaging and Other Tests
7.7.5. Treatment. Side Effects and Precautions
7.7.6. Current Lines of Research
7.8. Diabetes Mellitus
7.8.1. Introduction
7.8.2. Epidemiology
7.8.3. Etiopathogenesis
7.8.3.1. Type 1 Diabetes (T1D)
7.8.3.2. Type 2 Diabetes (T2D)
7.8.3.3. Monogenic Diabetes: Type Maturity Onset Diabetes of the Young (MODY) Diabetes Neonatal Diabetes
7.8.3.4. Cystic Fibrosis (CF) Related Diabetes
7.8.3.5. Other Specific Types
7.8.4. Diagnostic Criteria
7.8.5. Clinical Presentation of T1D and Action
7.8.5.1. Diabetic ketoacidosis
7.8.5.2. Hyperglycemia with / without Ketosis
7.8.5.3. Hyperglycemia in Asymptomatic Patients
7.8.6. T1D Treatment and Monitoring
7.8.6.1. Glycemic Targets
7.8.6.2. Diabetic Education
7.8.6.3. Insulin Therapy
7.8.6.4. Feeding
7.8.6.5. Physical exercise
7.8.6.6. Glycemic Monitoring
7.8.6.7. Screening for Acute and Chronic Complications
7.8.7. T2D Treatment and Monitoring
7.8.8. MODY Treatment and Monitoring
7.8.9. Other Types of Diabetes
7.9. Adrenal Insufficiency
7.9.1. Adrenal Insufficiency
7.9.2. Etiological classification
7.9.2.1. Primary or Adrenal
7.9.2.2. Secondary-Tertiary or Hypothalamo-Pituitary
7.9.3. Clinical Manifestations
7.9.3.1. Acute Adrenal Gland Failure: Determination of the Degree of Severity
7.9.3.2. Chronic Adrenal Gland Insufficiency
7.9.4. Diagnosis
7.9.4.1. Adrenal Crisis: Lab Findings
7.9.4.2. Hypocortisolism: Suspicion of Adrenal Insufficiency Analytical Determinations
7.9.4.2.1. Initial Complementary Tests: Cortisol and Plasma Corticotropin (ACTH) Reference Values
7.9.4.2.2. Stimulus Hormone Tests: ACTH Test Insulin Hypoglycemia Test Other Tests
7.9.4.2.3. Second Level Complementary Tests: Imaging, Microbiology, Pathological Anatomy, Immunology and Genetic Tests
7.9.5. Differential Diagnosis for Hypocortisolism: Relevant Entities
7.9.5.1. Primary Forms
7.9.5.2. Secondary and Tertiary Forms
7.9.6. Treatment
7.9.6.1. Adrenal Crisis
7.9.6.2. Replacement Therapy
7.9.6.3. Adrenal Crisis Management and Prevention
7.9.6.4. Chronic Corticosteroid Therapy Withdrawal
7.9.6.5. Pre- and Postoperative Management
7.9.6.6. Patient and Family Education

Module 8. Nephrology and Electrolyte Disorders in Pediatrics

8.1. Urinary Tract Infections
- 8.1.1. Urinary Tract Infections
- 8.1.2. Other Meanings
- 8.1.3. Etiology
- 8.1.4. Clinical Symptoms
- 8.1.5. Diagnosis
- 8.1.6. Treatment
- 8.1.7. Monitoring

8.2. Urinary Tract Congenital Abnormalities
- 8.2.1. Urinary Tract Congenital Abnormalities
- 8.2.2. Etiology
- 8.2.3. Classification (Hypodysplasia and Single Kidney, Obstructive Uropathies, Ureteral Vesico-ureteral Reflux)
- 8.2.4. Pre- and Postnatal Diagnosis
- 8.2.5. Treatment
- 8.2.6. Scarring Nephropathy

8.3. Hematuria-Proteinuria
- 8.3.1. Hematuria-Proteinuria
- 8.3.2. Diagnosis
- 8.3.3. Clinical Symptoms
- 8.3.4. Differential Diagnosis
- 8.3.5. Treatment

8.4. Post-Streptococcal Glomerulonephritis
- 8.4.1. Post-Streptococcal Glomerulonephritis
- 8.4.2. Etiology
- 8.4.3. Clinical Symptoms
- 8.4.4. Diagnosis. Practical Approach
- 8.4.5. Treatment
- 8.4.6. Prognosis

8.5. Nephrotic Syndrome
- 8.5.1. Nephrotic Syndrome
- 8.5.2. Pathophysiology
- 8.5.3. Etiology
- 8.5.4. Clinical Symptoms
- 8.5.5. Diagnosis. Practical Approach
- 8.5.6. Treatment: Onset and Relapses Maintenance
- 8.5.7. Prognosis

8.6. Hydroelectrolytic Alterations and Acid-Base Balance
- 8.6.1. Hydroelectrolytic Alterations and Acid-Base Balance
- 8.6.2. Water and Sodium Alterations
- 8.6.3. Potasium Alterations
- 8.6.4. Phosphocalcium Metabolism and Alterations
- 8.6.5. Acid-base Equilibrium

8.7. Acute Renal Damage
- 8.7.1. Acute Renal Damage
- 8.7.2. Epidemiology
- 8.7.3. Classification
- 8.7.4. Diagnosis
- 8.7.5. Treatment. Practical Approach
- 8.7.6. Prognosis

8.8. Arterial Hypertension
- 8.8.1. High Blood Pressure
- 8.8.2. Classification
- 8.8.3. Clinical Symptoms
- 8.8.4. Diagnosis
- 8.8.5. Treatment
- 8.8.6. Hypertensive Crisis and Emergency
- 8.8.7. Monitoring

8.9. Renal Lithiasis
- 8.9.1. Introduction
- 8.9.2. Etiology and Pathophysiology
- 8.9.3. Clinical Symptoms
- 8.9.4. Diagnosis
- 8.9.5. Renal Colic Treatment
- 8.9.6. Long-Term Monitoring and Treatment Consultation

Module 9. Pediatric Hemato-Oncology

9.1. Diagnosing Anemia in Pediatric Patients
- 9.1.1. Anemia
- 9.1.2. Anemia Pathophysiology
- 9.1.3. Diagnostic Tests in Anemic Patients
- 9.1.4. Differential Diagnosis in Anemic Pediatric Patients
- 9.1.5. Clinical Cases

9.2. Iron Deficiency Anemia
- 9.2.1. Iron Deficiency Anemia
- 9.2.2. Iron Deficiency Epidemiology
- 9.2.3. Iron Deficiency Anemia Pathophysiology
- 9.2.4. Differential Diagnosis for Iron Deficiency Anemia
- 9.2.5. Diagnostic Tests for Iron Deficiency Anemia
- 9.2.6. Iron Deficiency Anemia Treatment
- 9.2.7. Clinical Cases

9.3. Sickle Cell Anemia
- 9.3.1. Sickle Cell Anemia Pathophysiology
- 9.3.2. Epidemiology
- 9.3.3. Diagnosis
- 9.3.4. Neonatal Screening
- 9.3.5. Sickle Cell Disease Treatment
- 9.3.6. Most Common Complications in Sickle Cell Anemia
- 9.3.7. Clinical Cases

9.4. Purpura
- 9.4.1. Purpura
- 9.4.2. Basic Principles in Studying Patients with Excessive Bleeding
- 9.4.3. Diagnostic Tests
- 9.4.4. Differential Diagnosis
- 9.4.5. Clinical Cases

9.5. Immune Thrombocytopenia Purpura (ITP)
- 9.5.1. Immune Thrombocytopenia Purpura (ITP)
- 9.5.2. ITP Pathophysiology
- 9.5.3. Diagnostic tests
- 9.5.4. Differential Diagnosis
- 9.5.5. Acute ITP Treatment
- 9.5.6. Chronic / Persistent ITP Treatment
- 9.5.7. Clinical Cases

9.6. Neutropenia
- 9.6.1. Neutropenia
- 9.6.2. Differential Diagnosis of Neutropenias
- 9.6.3. Chronic Neutropenia vs. Reactivity vs. Secondary
- 9.6.4. Diagnostic Tests
- 9.6.5. Chronic Neutropenia
- 9.6.6. Chronic Neutropenia Treatment
- 9.6.7. Clinical Cases

9.7. Adenomegaly and Hepatosplenomegaly
- 9.7.1. Differential Diagnosis for Adenopathies
- 9.7.2. Differential Diagnosis for Splenomegaly

9.8. Oncologic Emergencies
- 9.8.1. Tumor Lysis Syndrome
- 9.8.2. Hyperuricemia
- 9.8.3. Hypercalcemia
- 9.8.4. Hypercalcemia
- 9.8.5. Hyperphosphatemia
- 9.8.6. Hyperleukocytosis
- 9.8.7. Mediastinal Mass and Superior Vena Cava Syndrome
- 9.8.8. Acute Medullary Compression
- 9.8.9. Endocranial Hypertension
- 9.8.10. Fever in Hematooncology Patients
- 9.8.11. Disseminated Intravascular Coagulation (DIC)
- 9.8.12. Hemorrhages

9.9. Transfusion Therapy in Pediatric Patients
- 9.9.1. Transfusion Therapy in Pediatric Patients
- 9.9.2. Common Blood Products
- 9.9.3. Indications for Platelet Transfusion
- 9.9.4. Indications for Platelet Transfusion
- 9.9.5. Indications for Plasma Transfusion
- 9.9.6. Complications in Transfusion Therapy

9.10. Anticoagulation in Pediatric Patients
- 9.10.1. Anticoagulation Indications
- 9.10.2. Anticoagulation in Children
- 9.10.3. Anticoagulation Monitoring

Module 10. Other Pediatric Processes

10.1. Most Common Injuries
- 10.1.1. Etiology
- 10.1.2. Diagnostic Approach
- 10.1.3. Febrile and Afebrile Exanthema
- 10.1.4. Vesicular Exanthem
- 10.1.5. Purpuric Exanthem
- 10.1.6. Morbilliform Exanthem
- 10.1.7. Kawasaki Disease
- 10.1.8. Scarlet Fever
- 10.1.9. Steven - Johnson Syndrome

10.2. Lactating Infant Presenting Apparent Life-Threatening Event (ALTE) or BRUE (Brief Reported Unexplained Event)
- 10.2.1. Lactating Infant Presenting ALTE
- 10.2.2. Epidemiology
- 10.2.3. Risk Factors
- 10.2.4. Hospital Diagnosis and Management
- 10.2.5. Hospital Discharge Criteria

10.3. The Role of Nursing during Pediatric Hospitalization
- 10.3.1. Illness in Childhood: Psychological Reactions and Attitude toward Hospital Admission
- 10.3.2. Nursing Care during Hospitalization
  - 10.3.2.1. Objectives According to Age
  - 10.3.2.2. Parental Care / Interventions
  - 10.3.2.3. Environment Care / Interventions
- 10.3.3. Hospitalization Procedures
  - 10.3.3.1. Measuring Vital Signs according to Age, Anthropometric Parameters and Capillary Measurements
  - 10.3.3.2. Secretion and Foreign Body Aspiration
  - 10.3.3.3. Clamping Techniques
  - 10.3.3.4. Probes
  - 10.3.3.5. Sample Collection
  - 10.3.3.6 Medication Administration, Reconstitution and Dosage Calculation
  - 10.3.3.7. Vesiculo-Vacuolar Organelle (VVO) Channeling
  - 10.3.3.8. Bandages
  - 10.3.3.9. Cardiopulmonary Resuscitation in Pediatrics

10.4. Nursing Care in Managing Diabetic Children upong Onset: Diabetic Education
- 10.4.1. Patient and Family Needs upon Onset: Empowerment
- 10.4.2. Capillary Ganglion Cell Layer (GCL) and Continuous Glucose Monitoring (CGM)
- 10.4.3. Injection Technique, Rotational Zones
- 10.4.4. Insulin: Storage and Maintenance

10.4.5. Day-to-Day Diabetes Management
10.4.5.1. Acute Complications, Hypoglycemia and Hyperglycemia Management (Symptoms, Prevention and Correction)
10.4.5.2. Diabetes during Illness: Diabetic Ketoacidosis (DKA) PreventionPrevention of CAD
10.4.5.3. Blood Glucose and Diet: Carbohydrate (CH) Quantification Glycemic Index Label Reading
10.4.5.4. Attitude toward Exercise
10.4.5.5. Children at School: Necessary Supplies
10.5. General Postoperative Patient Care
10.5.1. Hospital Pediatrician Role in Cases of Children and Adolescents undergoing Surgery
10.5.2. General Postoperative Care
10.5.2.1. Controlling Temperature
10.5.2.2. Liquids and Electrolytes
10.5.2.3. Nausea and Vomiting
10.5.2.4. Postoperative Nutrition
10.5.2.5. Respiratory Function Recovery
10.5.2.6. Early Rest and Mobilization
10.5.2.7. Surgical Antibiotic Prophylaxis
10.5.2.8. Controlling Postoperative Pain
10.6. Complex Pediatric Patients
10.6.1. Chronicity and Complexity: Defining Populations
10.6.2. Special Health Needs
10.6.3. Technology Dependency: Nutritional, Respiratory and Cardiac Support
10.7. Home Hospitalization
10.7.1. Home Hospitalization
10.7.2. Historical journey
10.7.3. Subsidiary Patients and Families
10.7.3.1. Benefits for Patients and Family
10.7.3.2. Benefits for the National Health System
10.7.4. Organization: Resources and Coordination
10.8. Pediatric Palliative Care
10.8.1. Palliative Care and Patient Classification
10.8.2. End-of-Life Patient and Family Care
10.8.2.1. Decision Making
10.8.2.2. Communication with Patients and Families
10.8.3. Palliative Medicine: Treatment and Support
10.8.3.1. Pain Treatment
10.8.3.2. Palliative Sedation
10.8.3.3. Care during and after Death
10.9. Child Abuse
10.9.1. Types of Child Maltreatment
10.9.2. Epidemiology
10.9.3. Clinical Manifestations
10.9.4. Approach to Suspected Child Abuse in Pediatrics
10.10. Liaison and Interconsultation Psychiatry
10.10.1. The Child and the Family in the Face of Illness and Hospitalization
10.10.2. Chronic Diseases
10.10.3. Psychopathology associated with Physical Pathologies
10.10.4. Delirium
10.10.5. Pain
10.10.6. Psychosomatics
10.10.7. Suicidal Behavior
10.10.8. Psychopharmacology
10.11. Pediatric Patient Safety in a Hospital Setting
10.11.1. Safety as a Critical Objective in Quality Care
10.11.2. Adverse Events (AEs) in Pediatric Hospitalization
10.11.2.1. Most Frequent Causes
10.11.2.2. Most Frequent AEs in Pediatrics
10.11.2.3. Prevention
10.11.3. Patient Safety Culture
10.11.4. Information Sources. Information and Record Systems
10.11.5. Analysis Systems
10.11.6. Safety Strategies: Safe Practices

07

Clinical Internship

Upon completing the online phase of this Hybrid Professional Master's Degree, the physician will have the opportunity to undertake a high-level clinical practice. This placement will allow them to apply their new knowledge in a face-to-face, intensive, and immersive didactic strategy offered exclusively by TECH in the educational market.

The Internship Program in this TECH program offers you an intensive in-person experience where you will handle the most cutting-edge technological devices for Hospital Pediatric"

The clinical practice component of this Hybrid Professional Master's Degree will last for 120 hours, distributed across intensive learning days from Monday to Friday, spanning a total of 3 weeks. During this educational process, the physician will have the opportunity to work with the most advanced devices related to Hospital Pediatrics and, thus, directly update their skills in the care of real patients.

Likewise, you will have the guidance of leading experts with extensive experience in managing these strategies. Additionally, you will be supervised by an associate tutor. The personalized guidance from this pedagogical figure will enable you to acquire a high-level professional practice and apply the latest protocols in your everyday diagnostic and therapeutic practice.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for medical practice (learning to be and learning to relate).

The procedures described below will form the basis of the practical part of the internship, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

Module	Practical Activity
New Technologies in the Diagnosis of Pathologies Addressed by Hospital Pediatric	Identify the causes of Encephalitis, Sepsis, or fever without focus in neonates and infants through Lumbar Puncture
	Place pleural drainage tubes using Thoracentesis techniques to obtain air or fluid for diagnostic analysis
	Introduce a needle into the abdominal cavity for Paracentesis, capable of targeting discomforts like chronic Ascites based on clinical deterioration
	Apply different ultrasound techniques to identify different health complications in children and adolescents, including diseases such as Sinusitis and Otitis
New strategies in the intrahospital management of pediatric critical patient	Implement the rapid sequence intubation and advanced cardiopulmonary resuscitation in children, according to the latest updated ILCOR recommendations
	Execute the algorithm of action in the event of convulsive status in children and adolescents
	Perform various continuous monitoring procedures, including Pulse Oximetry and Capnography
	Extract synovial fluid for therapeutic purposes in musculoskeletal pathologies through arthrocentesis
Latest Trends in Pediatric Pharmacology	Reduce inaccuracies in medication prescriptions for the pediatric population through Therapeutic Drug Monitoring
	Prescribe the rectal route of medication administration for pediatric patients who have difficulty absorbing drugs by other route
	Develop therapeutic protocols for intramuscular route, taking into account the advantages and disadvantages of this strategy due to the relatively low blood flow and low muscle mass in younger children
	Consider the changes in intestinal and gastric flora and biliary function caused by specific medications in children before oral administration
The latest approaches to cardiovascular, respiratory, and neurological diseases in Pediatrics	Apply therapeutic techniques for fluid extraction in children with signs of cardiac flow obstruction
	Perform surgical interventions on children or adolescents with clear symptoms and a diagnosis of epileptic pathology
	Use Monoclonal antibodies against the respiratory syncytial virus responsible for Bronchopulmonary Dysplasia, in addition to other combined therapies such as nutritional supplements and fluid restriction, and diuretics

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieving this, there is a response to any incident that may occur during the entire teaching and learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This professional liability insurance policy for practicing professionals will have extensive coverage and will be subscribed prior to the start of the practical training period. This means that the professional will not have to worry if they are faced with an unexpected situation and will be covered until the end of the practical internship program at the center.

General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

Where Can I Do the Clinical Internship?

This Hybrid Professional Master's Degree concludes with a rigorous clinical internship at a prestigious hospital entity. For this purpose, TECH has selected facilities equipped with the latest medical technology and a distinguished team of experts. Additionally, the specialist will have the opportunity to choose the center that best suits their geographical location since, for the internship, institutions located in different regions have been considered, providing doctors with the best international academic update for the field of health care.

Completing this Hybrid Professional Master's Degree will keep you up to date on the latest criteria for implementing pharmacotherapy and their various routes of administration tailored to the pediatric or adolescent body"

The student will be able to complete the practical part of this Hybrid Professional Master's Degree at the following centers:

Hospital Maternidad HM Belén

Country: Spain
City: La Coruña

Address: R. Filantropía, 3, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update in Assisted Reproduction
- Hospitals and Health Services Management

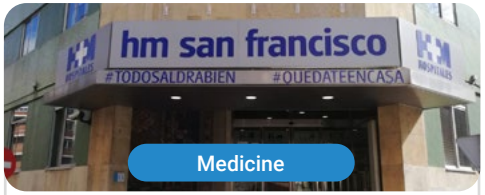
Hospital HM Rosaleda

Country: Spain
City: La Coruña

Address: Rúa de Santiago León de Caracas, 1, 15701, Santiago de Compostela, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Hair Transplantation
- Orthodontics and Dentofacial Orthopedics



Hospital HM San Francisco

Country: Spain
City: León

Address: C. Marqueses de San Isidro, 11, 24004, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update in Anesthesiology and Resuscitation
- Nursing in the Traumatology Department

Hospital HM Regla

Country: Spain
City: León

Address: Calle Cardenal Landázuri, 2, 24003, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update on Psychiatric Treatment in Minor Patients

Hospital HM Montepríncipe

Country: Spain
City: Madrid

Address: Av. de Montepríncipe, 25, 28660, Boadilla del Monte, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Palliative Care
- Aesthetic Medicine

Hospital HM Torrelodones

Country: Spain
City: Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

Hospital HM Sanchinarro

Country: Spain
City: Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

Hospital HM Nuevo Belén

Country: Spain
City: Madrid

Address: Calle José Silva, 7, 28043, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- General and Digestive System Surgery
- Clinical Nutrition in Medicine

Hospital HM Puerta del Sur

Country: Spain
City: Madrid

Address: Av. Carlos V, 70, 28938, Móstoles, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Palliative Care
- Clinical Ophthalmology

Hospital HM Vallés

Country: Spain
City: Madrid

Address: Calle Santiago, 14, 28801, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Gynecologic Oncology
- Clinical Ophthalmology

Policlínico HM Cruz Verde

Country: Spain
City: Madrid

Address: Plaza de la Cruz Verde, 1-3, 28807, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Advanced Clinical Podiatry
- Optical Technologies and Clinical Optometry

Policlínico HM Moraleja

Country: Spain
City: Madrid

Address: P.º de Alcobendas, 10, 28109, Alcobendas, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Rehabilitation Medicine in Acquired Brain Injury Management

Policlínico HM Sanchinarro

Country: Spain
City: Madrid

Address: Av. de Manoteras, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
-Hospital Pediatrics

Policlínico HM Imi Toledo

Country: Spain
City: Toledo

Address: Av. de Irlanda, 21, 45005, Toledo

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Electrotherapy in Rehabilitation Medicine
- Hair Transplantation

09

Methodology

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

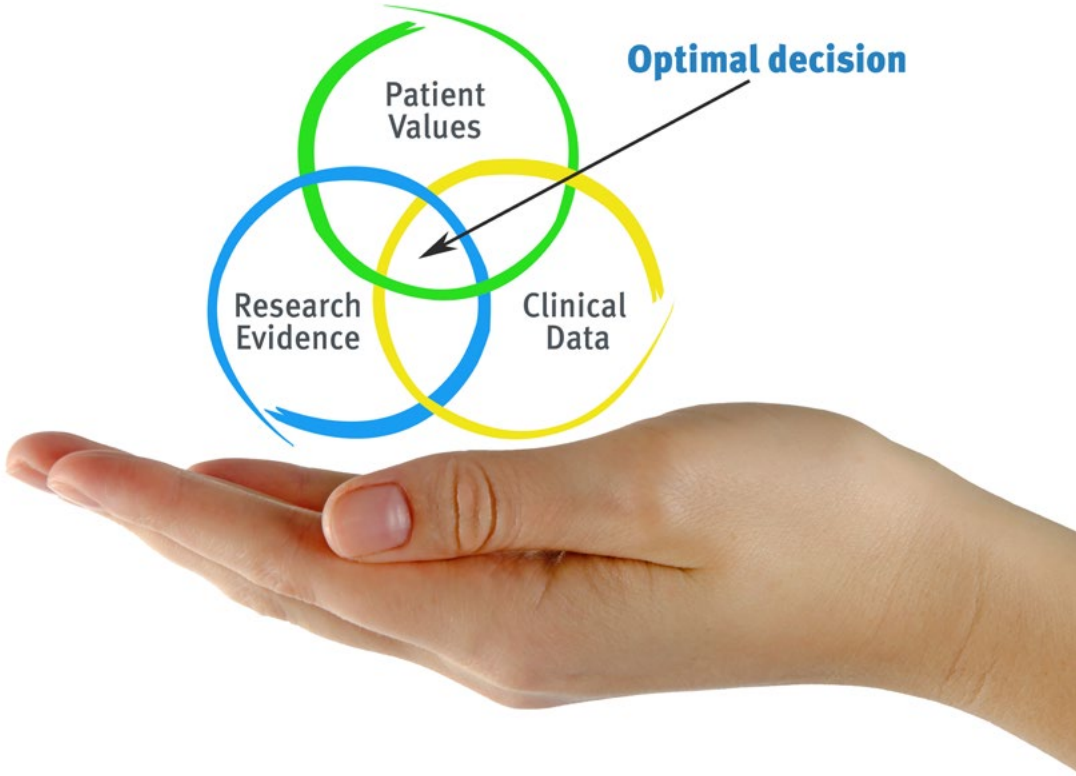
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

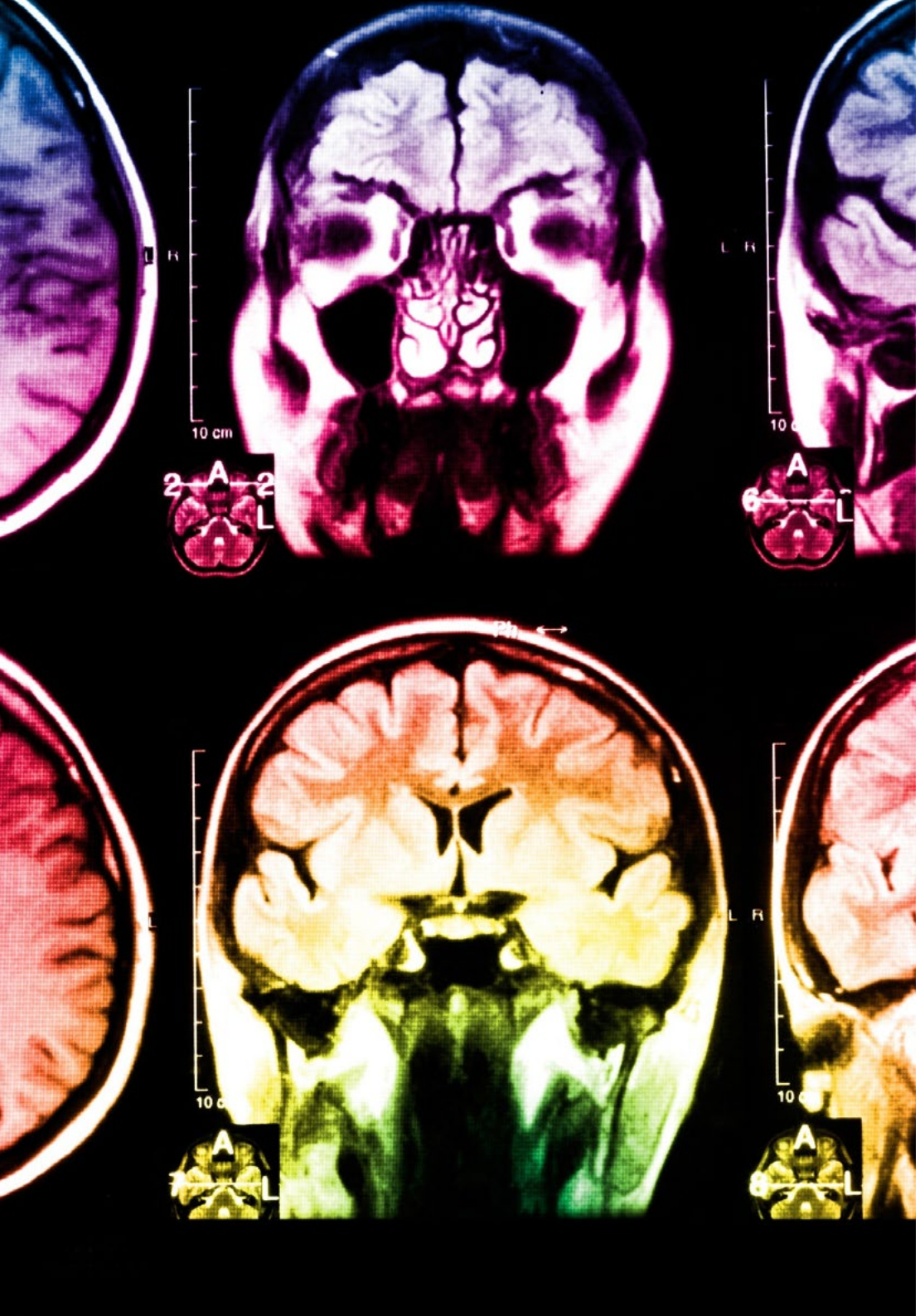
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

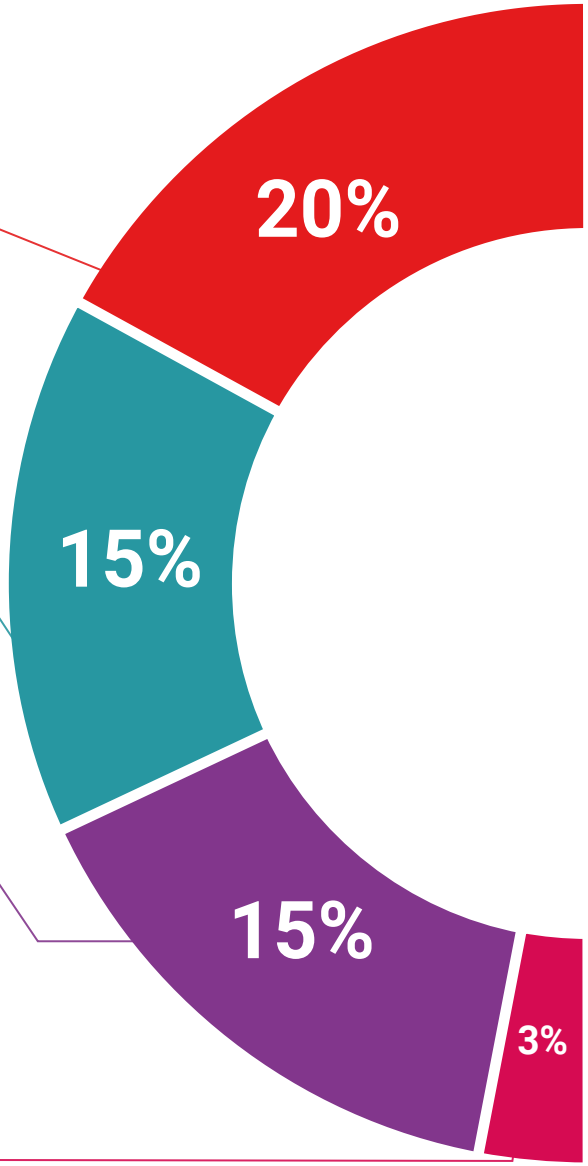
Interactive Summaries

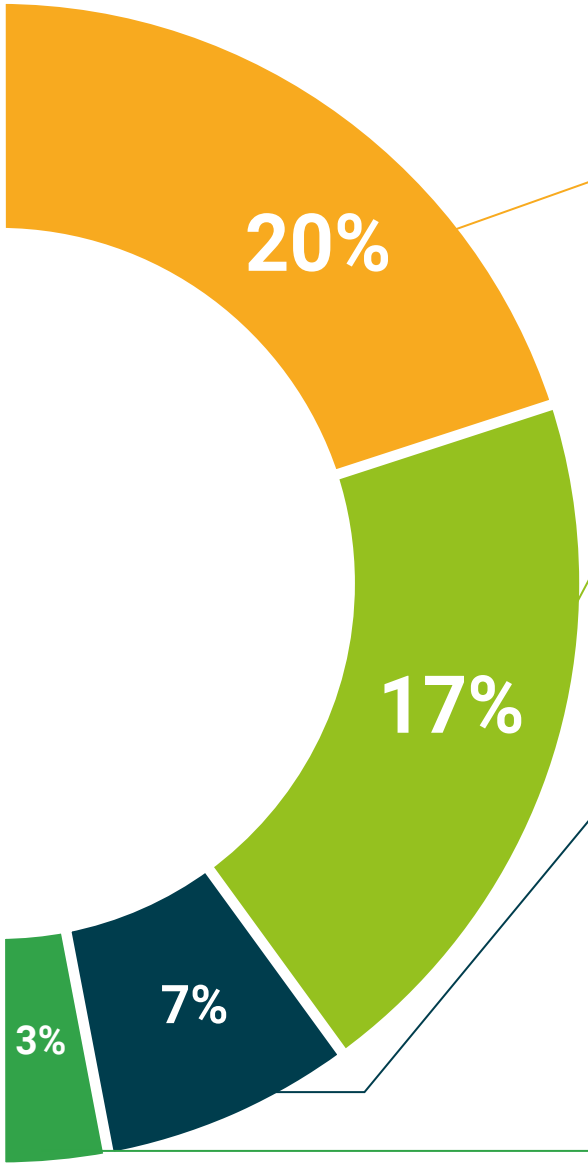
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

10

Certificate

The Hybrid Professional Master's Degree in Hospital Pediatrics guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree qualification issued by TECH Technological University.

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

This **Hybrid Professional Master's Degree in Gynecoesthetics** contains the most complete and up-to-date program on the professional and educational field.

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

In addition to the diploma, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

Title: **Hybrid Professional Master's Degree in Hospital Pediatrics**

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 h.**

tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

HYBRID PROFESSIONAL MASTER'S DEGREE

in

Hospital Pediatrics

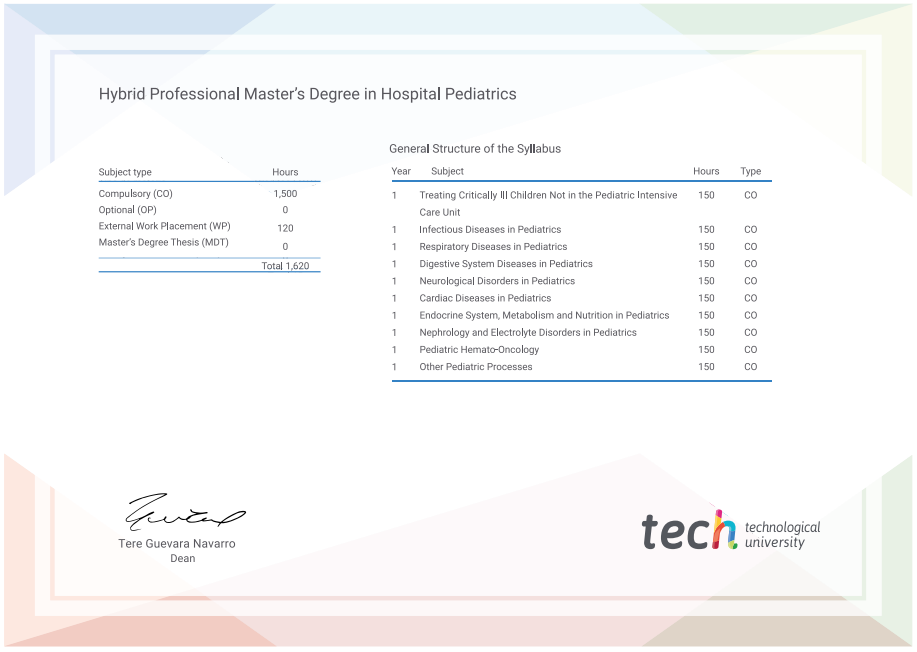
This is a qualification awarded by this University, with a duration of 1,620 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
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



Hybrid Professional Master's Degree in Hospital Pediatrics

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	120
Master's Degree Thesis (MDT)	0
	Total 1,620

General Structure of the Syllabus

Year	Subject	Hours	Type
1	Treating Critically Ill Children Not in the Pediatric Intensive Care Unit	150	CO
1	Infectious Diseases in Pediatrics	150	CO
1	Respiratory Diseases in Pediatrics	150	CO
1	Digestive System Diseases in Pediatrics	150	CO
1	Neurological Disorders in Pediatrics	150	CO
1	Cardiac Diseases in Pediatrics	150	CO
1	Endocrine System, Metabolism and Nutrition in Pediatrics	150	CO
1	Nephrology and Electrolyte Disorders in Pediatrics	150	CO
1	Pediatric Hemato-Oncology	150	CO
1	Other Pediatric Processes	150	CO

Tere Guevara Navarro
Dean

tech technological university

*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

tech technological university

Hybrid Professional Master's Degree

Hospital Pediatrics

Modality: **Hybrid (Online + Clinical Internship)**
Duration: **12 months**
Certificate: **TECH Technological University**
Teaching Hours: **1620 h.**

Hybrid Professional Master's Degree

Hospital Pediatrics

tech technological university