

# Postgraduate Diploma

## Most Prevalent Pathologies in Hospital Pediatrics





## Postgraduate Diploma Most Prevalent Pathologies in Hospital Pediatrics

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

Website: [www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-most-prevalent-pathologies-hospital-pediatrics](http://www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-most-prevalent-pathologies-hospital-pediatrics)

# Index

01

Introduction

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*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 18*

05

Methodology

---

*p. 26*

06

Certificate

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*p. 34*

# 01

# Introduction

Respiratory diseases, digestive system disorders, neurology and nephrology are among the most prevalent pathologies in pediatrics. There are constant advances being made in all these specialties, so pediatric specialists must have access to the latest discoveries and scientific evidence on interstitial lung diseases, inflammatory bowel disease, renal lithiasis and pediatric stroke, among others. This TECH program compiles the most recent research on these health problems and other highly prevalent pathologies in the pediatric setting, making it an excellent option for all specialists seeking to update their knowledge on the most prevalent pathologies in hospital pediatrics.





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*You will learn about the most recent advances in acute ataxia, constipation and urinary tract congenital anomalies”*

A specialist who knows about the most prevalent pathologies in hospital pediatrics must have access to the most recent scientific studies on them in order to continue offering the best possible care.

With this in mind, TECH Technological University has brought together a group of leading specialists in the pediatric field to develop a program that compiles the latest developments in the most urgent specialist areas.

This Postgraduate Diploma includes, among others, advances in febrile crises, digestive hemorrhages, acute renal damage and inhalation systems.

All this is provided in a modern and avant-garde program, which makes use of the most powerful educational technology so specialists can make the most of all the up-to-date knowledge provided.

It should be noted that the course is 100% online, which allows students to easily balance it with the most demanding work and life rhythms. All the teaching material can be downloaded from any device with an Internet connection and can be studied at any time.

This **Postgraduate Diploma in Most Prevalent Pathologies in Hospital Pediatrics** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- » Practical case studies presented by experts in hospital pediatrics
- » The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- » Practical exercises where the self-assessment process can be carried out to improve learning
- » Special emphasis on innovative methodologies in the approach to pneumological affections
- » 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 give a significant boost to your career thanks to the advanced content on pediatrics found in this Postgraduate Diploma”*



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*You will constantly be supported by technical and academic personnel committed to aiding you in updating and refreshing your knowledge of the most prevalent pathologies of pediatrics”*

*Access recent advances in the treatment of urinary tract infections (UTIs), congenital urinary tract anomalies, acute kidney injury and more pediatric nephrotic pathologies*

*Study wherever, whenever and however it suits you on a program that gives you the flexibility that specialists like you need*

The program's teaching staff includes professionals in the sector who contribute their work experience to this 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 an immersive program designed 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 academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.



# 02 Objectives

Knowing that the most prevalent pathologies in hospital pediatrics are particularly important for specialists, TECH aims to provide the best possible up-to-date information in this area with this highly rigorous Postgraduate Diploma. The program contents include successful studies and procedures discovered in recent years, as well as all the complementary information necessary to ensure an efficient and state-of-the-art course.





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*You will achieve your professional objectives with the support of a teaching staff of the highest academic prestige”*



## General Objectives

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- » Master the latest techniques and knowledge in modern hospital pediatrics
- » Become highly fluent in pediatric patient management, ensuring maximum quality and safety during the process
- » Develop exemplary skills to provide high quality care, guaranteeing patient safety based on the latest scientific evidence
- » Gain up-to-date knowledge of hospital pediatrics





## Specific Objectives

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### Module 1. Respiratory 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 2. Digestive System Diseases in Pediatrics

- » Take a deeper look into clinical cases and different algorithms in the diagnosis, management and up-to-date 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 can be the expression of a benign process or of a serious disease
- » Gain up-to-date knowledge 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 3. 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 4. Nephrology and Water and Electrolyte Disorders in Pediatrics

- » Offer a global vision of the most frequent pathologies found in hospital admissions through clinical cases, deepening understanding of 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



*By choosing TECH, you will be opting for the largest online academic institution, which guarantees an unmatched level of quality across the entire academic scene”*

# 03

# Course Management

Thanks to the extensive professional experience of the professors in charge of this program, the teaching material benefits not only from the most prestigious scientific theses, but also from an indispensable practical point of view when updating the knowledge of any specialist. This Postgraduate Diploma has a remarkable quality guarantee, with entire topics devoted to hypertension (HT), hematuria-proteinuria, headaches and COVID-19 infection.







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*Benefit from the experience of experts who are already applying the most advanced methodology and theses in the field of pediatrics”*



## Management



### Dr. García Cuartero, Beatriz

- Chief of the Pediatrics Service and coordinator of the Pediatric Endocrinology and Diabetes Unit Ramón y Cajal University Hospital, Madrid, Spain
- Specialist Physician in Pediatrics at Severo Ochoa, Leganés University Hospital, Madrid
- Primary Care Pediatrician, Area 4, Madrid
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Specialist Degree in Pediatrics, MIR accreditation at the Infantil Niño Jesús University Hospital, Madrid Specific Training Area: Pediatric Endocrinology
- PhD from the Autonomous University of Madrid (UAM) Expression of manganese superoxide dismutase, heme oxygenase and nitric oxide synthase enzymes in cultured pancreatic islets with interleukin 1 by in situ hybridization Unanimous Cum Laude Award
- Associate Professor of Pediatrics, Faculty of Medicine Alcalá de Henares University
- Social Security Research Fund (FISS) Grant, Steno Diabetes Center, Copenhagen/Hagedorn Research Laboratory Project: Pancreatic beta cell destruction mechanism and free radicals in type 1 diabetes mellitus

## Professors

### Dr. Blitz Castro, Enrique

- » Specialist Physician in Pediatrics and Specialized Areas in the Pediatrics Service and Cystic Fibrosis Unit, providing the main care as a Pediatric Pneumologist at the Ramón y Cajal University Hospital
- » Supervisor in charge of the Cystic Fibrosis Neonatal Screening Program at Ramón y Cajal University Hospital
- » Resident Intern in Pediatrics and Specialized Areas at Ramón y Cajal University Hospital (Madrid, Spain) and in the Neonatology Department at La Paz University Hospital (Madrid, Spain), devoting the last year of residency completely to the subspecialty of Pediatric Pneumology
- » Degree in Medicine from the Complutense University of Madrid. Clinical training at Gregorio Marañón University Hospital in Madrid
- » PhD student on the Doctoral Program in Health Sciences at the University of Alcalá de Henares and Doctoral Thesis Results on the Neonatal Screening Program for Cystic Fibrosis in the Community of Madrid since its implementation in 2009 to 2022
- » Researcher at the Biomedical Research Foundation, Ramón y Cajal University Hospital, contributing to ongoing research projects in the Cystic Fibrosis Unit at Ramón y Cajal University Hospital

### Dr. Morales Tirado, Ana

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

### Dr. Vicente Santamaría, Saioa

- » Faculty Area Specialist Ramón y Cajal University Hospital
- » Degree in Medicine and Surgery Navarra University
- » Master's Degree in Pediatric Gastroenterology and Hepatology Cardenal Herrera University
- » Master's Degree in Clinical Nutrition in Pediatrics Cardenal Herrera University
- » Postgraduate Course in Pediatric Nutrition Boston University School Medicine
- » Expert Diploma in Malnutrition and Digestive Pathology in Children, Cardenal Herrera University

### Dr. Tabares González, Ana

- » Assistant Pediatric Physician in the Emergency Department, Hospitalization and Consultations at Ramón y Cajal University Hospital (Madrid)
- » Assistant Pediatric Physician in Emergency Department, Hospitalization and Consultations of Child Gastroenterology at San Rafael Hospital (Madrid)
- » Assistant Pediatric Physician in the Pediatric Gastroenterology Consultation Area at Ramón y Cajal University Hospital (Madrid)
- » Attending Pediatric Physician in the Pediatric Emergency and Hospitalization Area at Severo Ochoa Hospital in Leganés (Madrid)
- » Degree in Medicine Autonomous University of Madrid
- » Postgraduate Diploma in Immunonutrition, San Vicente Mártir Catholic University

**Dr. Rekarte García, Saray**

- » Ramón y Cajal University Hospital Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician
- » Infanta Cristina Hospital Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician
- » Sanitas La Moraleja University Hospital Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician
- » Area Specialist Physician in Pediatrics and Specialized Areas Neuropediatrician, Sanitas Centro Milenium, Costa Rica
- » Degree in Medicine from the University of Oviedo
- » Resident Intern in Pediatrics and Specialized Areas at Asturias Central University Hospital
- » Master's Degree in Pediatric Neurology and Neurodevelopment Cardenal Herrera University
- » Postgraduate Diploma in Advances in Motor and Paroxysmal Disorders in Pediatric Neurology, Cardenal Herrera University

**Dr. Vázquez Ordóñez, Carmen**

- » Faculty Specialist in Pediatric Nephrology and Pediatric Emergencies Ramón y Cajal University Hospital
- » Rotation in the Pediatric Nephrology Service 12 de Octubre University Hospital
- » Pediatric Resident Ramón y Cajal University Hospital
- » Degree in Medicine and Surgery Navarra University
- » Teaching Collaborator for 4th and 6th year in Medicine at the University of Alcalá de Henares
- » Seminars in Medicine at the University of Alcalá de Henares





**Dr. Buenache Espartosa, Raquel**

- » Specialist Physician in Pediatrics and Specialized Areas with a focus on Neuropediatrics Ramón y Cajal University Hospital, Neuropediatrics Profile
- » Specialist Physician in Pediatrics and Specialized Areas Alcorcón Foundation University Hospital
- » Resident Doctor in Pediatrics and Specialized Areas Ramón y Cajal University Hospital
- » Associate Specialist Physician in Pediatrics and Specialized Areas Henares University Hospital, Neuropediatrics Profile
- » Specialist Physician in Neuropediatrics, La Zarzuela Hospital
- » Degree in Medicine and Surgery Autonomous University of Madrid
- » Specialist in Pediatrics and Specialized Areas MIR training at Ramón y Cajal University Hospital, Subspecialization in Neuropediatrics
- » Doctorate Studies Diploma in Advanced Doctoral Studies, which accredits research proficiency, with a qualification of outstanding in the area of Pediatrics in the doctoral program Medical Specialties at the University of Alcalá



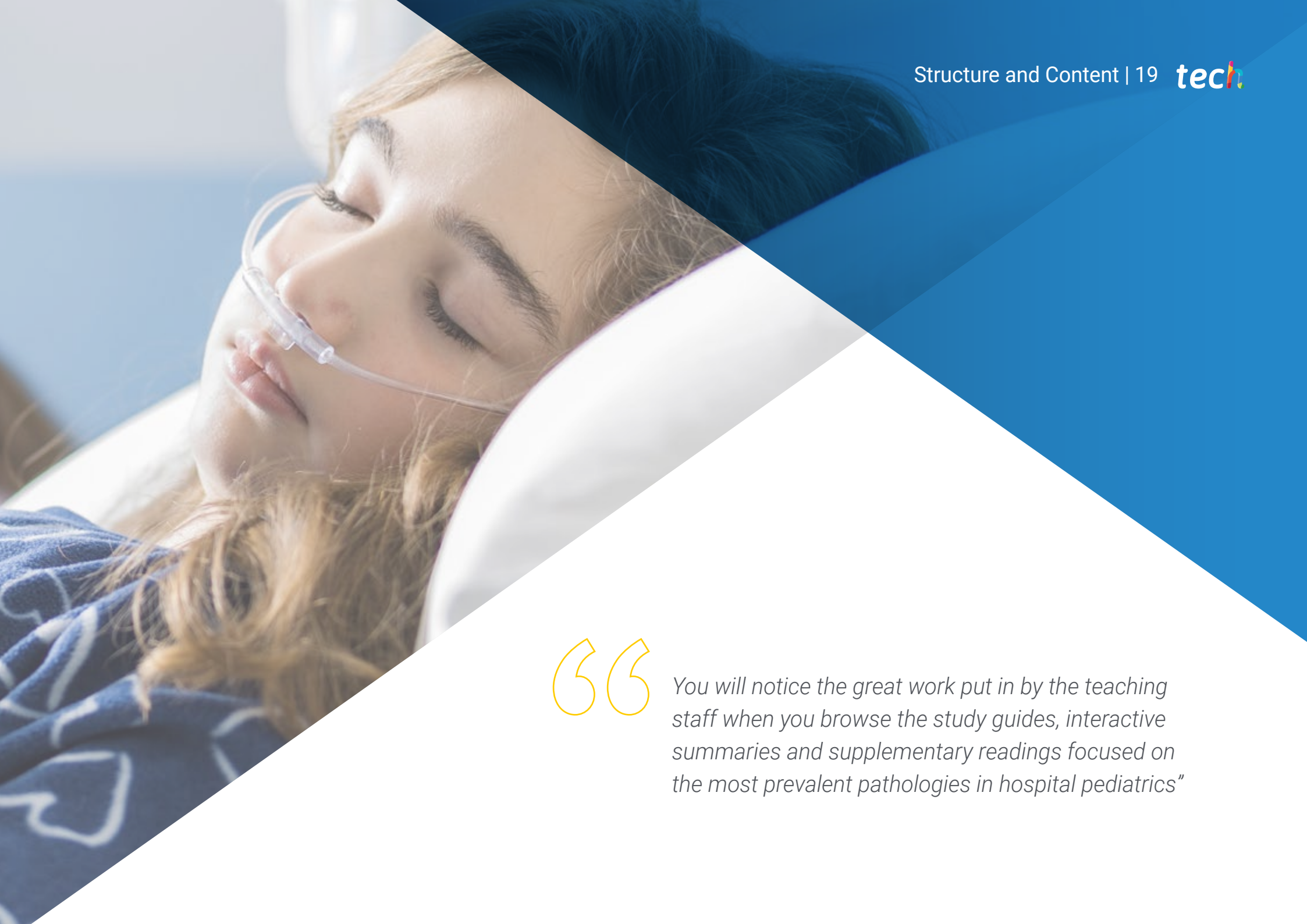
# 04

## Structure and Content

In order to guarantee an efficient learning process, TECH makes use of one of the most innovative methodologies in the academic scene, Relearning. By elaborating all its contents based on this structure, specialists can apply all the up-to-date knowledge to their daily practice in a gradual and progressive manner. This makes the most of the hours and efforts invested in the course.







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*You will notice the great work put in by the teaching staff when you browse the study guides, interactive summaries and supplementary readings focused on the most prevalent pathologies in hospital pediatrics”*

## Module 1. Respiratory Diseases in Pediatrics

- 1.1. Acute Bronchiolitis
  - 1.1.1. Acute Bronchiolitis
  - 1.1.2. Etiology
  - 1.1.3. Epidemiology
  - 1.1.4. Clinical symptoms
  - 1.1.5. Diagnosis
  - 1.1.6. Treatment
  - 1.1.7. Prevention
- 1.2. Asthma Attacks
  - 1.2.1. Asthma Attacks
  - 1.2.2. Epidemiology
  - 1.2.3. Pathophysiology
  - 1.2.4. Clinical Symptoms
  - 1.2.5. Diagnosis
  - 1.2.6. Treatment
  - 1.2.7. Educational
- 1.3. Chronic Cough
  - 1.3.1. Persistent Bacterial Bronchitis
  - 1.3.2. Postinfectious Cough
  - 1.3.3. Psychogenic Cough
  - 1.3.4. Atelectasis: Middle Lobe
  - 1.3.5. Non-Cystic Fibrosis (CF) Bronchiectasis
- 1.4. Bronchopulmonary Dysplasia
  - 1.4.1. Bronchopulmonary Dysplasia
  - 1.4.2. Epidemiology
  - 1.4.3. Prevention
  - 1.4.4. Pathophysiology
  - 1.4.5. Clinical Symptoms
  - 1.4.6. Treatment
- 1.5. Interstitial Pulmonary Diseases
  - 1.5.1. Classification
  - 1.5.2. Neuroendocrine Cell Hyperplasia
  - 1.5.3. Surfactant Protein Deficiency
  - 1.5.4. Pulmonary Interstitial Glycogenosis
  - 1.5.5. Hypersensitivity Pneumonitis
- 1.6. Respiratory Management in Neuromuscular Patients
  - 1.6.1. Pathophysiology
  - 1.6.2. Complementary Respiratory Tests
  - 1.6.3. Treatment
- 1.7. Cystic Fibrosis Respiratory Pathology
  - 1.7.1. Respiratory Pathology
  - 1.7.2. Pathophysiology
  - 1.7.3. Respiratory Exacerbation
  - 1.7.4. Pneumothorax
  - 1.7.5. Hemoptysis
  - 1.7.6. Allergic Bronchopulmonary Aspergillosis
  - 1.7.7. Atelectasis
- 1.8. Obstructive Sleep Apnea
  - 1.8.1. Obstructive Sleep Apnea
  - 1.8.2. Epidemiology
  - 1.8.3. Pathophysiology
  - 1.8.4. Clinical Symptoms
  - 1.8.5. Diagnosis
  - 1.8.6. Treatment
- 1.9. Inhalation Systems
  - 1.9.1. Inhalation Systems
  - 1.9.2. Metered Dose Inhaler (MDI), Dry Powder, Nebulizers
- 1.10. Pneumology Procedures
  - 1.10.1. Forced Spirometry
  - 1.10.2. Bronchoscopy

## Module 2. Digestive System Diseases in Pediatrics

- 2.1. Abdominal Pain
  - 2.1.1. Acute Abdominal Pain in Children: Clinical Picture Diagnosis and Treatment
  - 2.1.2. Chronic Abdominal Pain: Incidence Etiology
    - 2.1.2.1. Organic Abdominal Pain
    - 2.1.2.2. Functional Abdominal Pain: Treatment
  - 2.1.3. Gastritis: Peptic Ulcers in Pediatrics
    - 2.1.3.1. Gastritis
    - 2.1.3.2. Peptic Ulcers: Clinical Presentation Diagnosis and Treatment
    - 2.1.3.3. Helicobacter Pylori Gastritis: Digestive and Extradigestive Manifestations. Diagnosis and Treatment
- 2.2. Constipation
  - 2.2.1. Constipation
  - 2.2.2. Pathophysiology
  - 2.2.3. Etiology
  - 2.2.4. Triggering Factors
  - 2.2.5. Organic Constipation Causes
  - 2.2.6. Functional Constipation: Clinical Diagnosis
  - 2.2.7. Treatment
    - 2.2.7.1. Lifestyle Modifications
    - 2.2.7.2. Pharmacological Treatment: Maintenance Treatment Other Treatments
- 2.3. Gastroesophageal Reflux
  - 2.3.1. Gastroesophageal Reflux
  - 2.3.2. Pathophysiology
  - 2.3.3. Clinical Symptoms
    - 2.3.3.1. Warning Signs and Symptoms
    - 2.3.3.2. Digestive Manifestations
    - 2.3.3.3. Extradigestive Manifestations
- 2.3.4. Diagnosis
  - 2.3.4.1. pH / Esophageal Impedance
  - 2.3.4.2. Upper Digestive Endoscopy
  - 2.3.4.3. Other Diagnostic Tests
- 2.3.5. Treatment
  - 2.3.5.1. Non-Pharmacological Methods
  - 2.3.5.2. Medical Treatment
  - 2.3.5.3. Surgical Management
- 2.3.6. Therapeutic Diagnostic Approach according to Age
- 2.4. Eosinophilic Esophagitis
  - 2.4.1. Eosinophilic Esophagitis
  - 2.4.2. Epidemiology
  - 2.4.3. Pathogenesis
    - 2.4.3.1. Environmental Factors
    - 2.4.3.2. Genetic Factors
  - 2.4.4. Clinical Symptoms
  - 2.4.5. Diagnosis
    - 2.4.5.1. Endoscopic Findings
    - 2.4.5.2. Histological Findings
    - 2.4.5.3. Natural History
  - 2.4.6. Treatment
    - 2.4.6.1. Proton Pump Inhibitors
    - 2.4.6.2. Topical Corticosteroids
    - 2.4.6.3. Dietary Treatment
    - 2.4.6.4. Endoscopic Dilatation
    - 2.4.6.5. Other Treatments

- 2.5. Digestive and Nutritional Considerations for CF
    - 2.5.1. Digestive and Nutritional Considerations
    - 2.5.2. Gastrointestinal Tract Involvement in CF Patients
      - 2.5.2.1. Gastroesophageal Reflux
      - 2.5.2.2. Distal Obstruction Syndrome / Constipation
      - 2.5.2.3. Abdominal Pain
      - 2.5.2.4. Meconium Ileus
      - 2.5.2.5. Bowel Intussusception
    - 2.5.3. Pancreatic Involvement
      - 2.5.3.1. Exocrine Pancreatic Insufficiency
      - 2.5.3.2. Pancreatitis
      - 2.5.3.3. Cystic Fibrosis (CF) Related Diabetes
    - 2.5.4. Hepatobiliary Disease in CF Patients
      - 2.5.4.1. CF-Related Liver Disease
      - 2.5.4.2. Gallbladder Alterations
    - 2.5.5. Nutritional Involvement
      - 2.5.5.1. Chronic Malnutrition
      - 2.5.5.2. Fat-Soluble Vitamin Deficiency
  - 2.6. Chronic Diarrhea: Malabsorption
    - 2.6.1. Pathophysiology
      - 2.6.1.1. Osmotic Diarrhea
      - 2.6.1.2. Secretory Diarrhea
      - 2.6.1.3. Inflammatory Diarrhea
      - 2.6.1.4. Intestinal Motility Alteration
    - 2.6.2. Etiology
      - 2.6.2.1. Functional Diarrhea
      - 2.6.2.2. Organic Diarrhea
        - 2.6.2.2.1. Diarrhea due to Infection Mechanism
        - 2.6.2.2.2. Diarrhea due to Immune Mechanism
        - 2.6.2.2.3. Diarrhea due to Carbohydrate Intolerance
        - 2.6.2.2.4. Diarrhea due to Exocrine Pancreatic Insufficiency and Hepatobiliary Dysfunction
        - 2.6.2.2.5. Diarrhea due to Anatomical Alteration
        - 2.6.2.2.6. Diarrhea due to Altered Motility
        - 2.6.2.2.7. Diarrhea due to Enterocyte Structural Defects
        - 2.6.2.2.8. Diarrhea due to Metabolic Errors
        - 2.6.2.2.9. Other Causes of Diarrhea
  - 2.6.3. Diagnosis
  - 2.6.4. Treatment
- 2.7. Inflammatory Bowel Disease
  - 2.7.1. Ulcerative Colitis and Unclassified Inflammatory Bowel Disease
    - 2.7.1.1. Inflammatory Bowel Disease
    - 2.7.1.2. Etiology
    - 2.7.1.3. Incidence
    - 2.7.1.4. Classification
    - 2.7.1.5. Symptoms and Physical Examination
    - 2.7.1.6. Complementary Tests: Laboratory and Imaging Tests Endoscopy with Biopsy
    - 2.7.1.7. Diagnosis
    - 2.7.1.8. Activity Indexes
    - 2.7.1.9. Onset Treatment and Maintenance
    - 2.7.1.10. Complications during Hospital Admission and Treatment
  - 2.7.2. Crohn's Disease
    - 2.7.2.1. Crohn's Disease
    - 2.7.2.2. Etiology
    - 2.7.2.3. Incidence
    - 2.7.2.4. Classification
    - 2.7.2.5. Symptoms and Physical Examination
    - 2.7.2.6. Complementary Tests: Laboratory and Imaging Tests Endoscopy with Biopsy
    - 2.7.2.7. Diagnosis
    - 2.7.2.8. Activity Indexes
    - 2.7.2.9. Onset Treatment and Maintenance
    - 2.7.2.10. Complications during Hospital Admission and Treatment

- 2.8. Biliary Lithiasis. Cholestasis
  - 2.8.1. Biliary Lithiasis
  - 2.8.2. Diagnosis
    - 2.8.2.1. Anamnesis and Physical Examination
    - 2.8.2.2. Complementary Tests: Laboratory and Imaging Tests Other Complementary Tests
  - 2.8.3. Treatment
  - 2.8.4. Newborn and Infant Neurological Examination
  - 2.8.5. Cholestasis in Older Children
    - 2.8.5.1. Cholestasis Secondary to Hepatocellular Injury
    - 2.8.5.2. Cholestasis due to Biliary Tract Involvement
- 2.9. Acute Liver Failure, Hepatic Dysfunction
  - 2.9.1. Hepatic Dysfunction: Hypertransaminasemia
    - 2.9.1.1. Acute Liver Failure
    - 2.9.1.2. Diagnosis
    - 2.9.1.3. Differential Diagnosis of Pathologies Presenting Hypertransaminasemia, Infectious Hepatitis, Wilson's Disease, Autoimmune Hepatitis, Other Causes of Hypertransaminemia in Pediatrics
  - 2.9.2. Acute Liver Failure
    - 2.9.2.1. Liver Failure
    - 2.9.2.2. Acute Hepatic Failure Diagnosis in Pediatric Patients
    - 2.9.2.3. Therapeutic Approach
    - 2.9.2.4. Differential Diagnosis of Pathologies Presenting Liver Failure
- 2.10. Gastrointestinal Bleeding
  - 2.10.1. Upper Gastrointestinal Bleeding
    - 2.10.1.1. Gastrointestinal Bleeding
    - 2.10.1.2. Etiology
    - 2.10.1.3. Diagnosis
    - 2.10.1.4. Medical and Endoscopic Treatments: Esophageal Varices
  - 2.10.2. Lower Gastrointestinal Bleeding
    - 2.10.2.1. Lower Gastrointestinal Bleeding
    - 2.10.2.2. Diagnosis: Differential Diagnosis of Lower Gastrointestinal Bleeding
    - 2.10.2.3. Treatment

### Module 3. Neurological Disorders in Pediatrics

- 3.1. Febrile and Parainfectious Crises
  - 3.1.1. Febrile Crises
  - 3.1.2. Epidemiology
  - 3.1.3. Etiology
  - 3.1.4. Clinical Symptoms
  - 3.1.5. Diagnosis
  - 3.1.6. Treatment
  - 3.1.7. Prognosis
- 3.2. Epileptic Syndromes in Pediatric Patients: Practical Considerations in Antiepileptic Drug Management
  - 3.2.1. Epileptic Syndromes Classification and Diagnostic Approach
  - 3.2.2. Epileptic Syndromes in Infants and Preschoolers
  - 3.2.3. Epileptic Syndromes in School Children and Adolescents
  - 3.2.4. Practical Considerations in Antiepileptic Drug Management
- 3.3. Non-Epileptic Paroxysmal Disorders
  - 3.3.1. Non-Epileptic Paroxysmal Disorders
  - 3.3.2. Clinical and Etiological Characteristics
  - 3.3.3. Differential Diagnosis: Epileptic Seizures
- 3.4. Infant Hypotonia and the Most Common Neuromuscular Disorders in Infancy
  - 3.4.1. Non-Paralytic or Central Hypotonia in Infants
  - 3.4.2. Paralytic or Peripheral Hypotonia in Infants
  - 3.4.3. Most Common Neuromuscular Disorders in Childhood: Spinal Muscular Atrophy, Hereditary Sensory-Motor Neuropathies, Myasthenias, Infantile Botulism and Myopathies
- 3.5. Guillain-Barré Syndrome
  - 3.5.1. Guillain-Barré Syndrome and Classification
  - 3.5.2. Pathophysiology
  - 3.5.3. Clinical Symptoms
  - 3.5.4. Diagnostic Criteria
  - 3.5.5. Treatment
  - 3.5.6. Prognosis



- 3.6. Headaches
  - 3.6.1. Headaches
  - 3.6.2. Etiology
  - 3.6.3. Classification: Primary and Secondary Headaches: Migraines, Tension and Trigemino-Autonomic Headaches, and Others
  - 3.6.4. Anamnesis and Physical Examination
  - 3.6.5. Admission Criteria and Warning Signs
  - 3.6.6. Complementary Evaluations
  - 3.6.7. In-hospital Migraine Management
  - 3.6.8. Acute and Chronic Treatment
- 3.7. Acute Ataxia
  - 3.7.1. Vestibular Ataxia and Cerebellar Ataxia
  - 3.7.2. Main Etiologic Differential Diagnosis in Children Admitted for Acute Ataxia Episodes
  - 3.7.3. Practical Management Protocols
- 3.8. Pediatric Stroke
  - 3.8.1. Epidemiology: Etiology and Risk Factors
  - 3.8.2. Pediatric Stroke Clinical Manifestations
  - 3.8.3. *Stroke Mimics*
  - 3.8.4. Pediatric Stroke Code Protocol and Hospital Diagnostic Approach
- 3.9. Acute Encephalitis
  - 3.9.1. Acute Encephalitis / Encephalopathy and Classification
  - 3.9.2. Infectious Encephalitis / Meningoencephalitis
  - 3.9.3. Immune-Mediated Encephalitis
  - 3.9.4. Toxic-Metabolic Encephalitis
- 3.10. Demyelinating Diseases:
  - 3.10.1. Acute Demyelinating Injuries in Pediatrics
  - 3.10.2. Acute Disseminated Encephalomyelitis
  - 3.10.3. Multiple Sclerosis in Childhood: Diagnostic Criteria Initial Therapeutic Approach

## Module 4. Nephrology and Water and Electrolyte Disorders in Pediatrics

- 4.1. Urinary Tract Infections
  - 4.1.1. Urinary Tract Infections
  - 4.1.2. Other Meanings
  - 4.1.3. Etiology
  - 4.1.4. Clinical Symptoms
  - 4.1.5. Diagnosis
  - 4.1.6. Treatment
  - 4.1.7. Monitoring
- 4.2. Urinary Tract Congenital Abnormalities
  - 4.2.1. Urinary Tract Congenital Abnormalities
  - 4.2.2. Etiology
  - 4.2.3. Classification (Hypodysplasia and Single Kidney, Obstructive Uropathies, Ureteral Vesico-Ureteral Reflux)
  - 4.2.4. Pre- and Post-Natal Diagnosis
  - 4.2.5. Treatment
  - 4.2.6. Scarring Nephropathy
- 4.3. Hematuria-Proteinuria
  - 4.3.1. Hematuria-Proteinuria
  - 4.3.2. Diagnosis
  - 4.3.3. Clinical Symptoms
  - 4.3.4. Differential Diagnosis
  - 4.3.5. Treatment
- 4.4. Post-Streptococcal Glomerulonephritis
  - 4.4.1. Post-Streptococcal Glomerulonephritis
  - 4.4.2. Etiology
  - 4.4.3. Clinical Symptoms
  - 4.4.4. Diagnosis: Practical Approach
  - 4.4.5. Treatment
  - 4.4.6. Prognosis

- 4.5. Nephrotic Syndrome
  - 4.5.1. Nephrotic Syndrome
  - 4.5.2. Pathophysiology
  - 4.5.3. Etiology
  - 4.5.4. Clinical Symptoms
  - 4.5.5. Diagnosis: Practical Approach
  - 4.5.6. Treatment: Onset and Relapses Maintenance
  - 4.5.7. Prognosis
- 4.6. Hydroelectrolytic Alterations and Acid-Base Balance
  - 4.6.1. Hydroelectrolytic Alterations and Acid-Base Balance
  - 4.6.2. Water and Sodium Alterations
  - 4.6.3. Potassium Alterations
  - 4.6.4. Phosphocalcium Metabolism and Alterations
  - 4.6.5. Acid-Base Equilibrium
- 4.7. Acute Renal Damage
  - 4.7.1. Acute Renal Damage
  - 4.7.2. Epidemiology
  - 4.7.3. Classification
  - 4.7.4. Diagnosis
  - 4.7.5. Treatment: Practical Approach
  - 4.7.6. Prognosis
- 4.8. High Blood Pressure
  - 4.8.1. High Blood Pressure
  - 4.8.2. Classification
  - 4.8.3. Clinical Symptoms
  - 4.8.4. Diagnosis
  - 4.8.5. Treatment
  - 4.8.6. Hypertensive Crisis and Emergency
  - 4.8.7. Monitoring
- 4.9. Nephrolithiasis
  - 4.9.1. Introduction
  - 4.9.2. Etiology and Pathophysiology
  - 4.9.3. Clinical Symptoms
  - 4.9.4. Diagnosis
  - 4.9.5. Renal Colic Treatment
  - 4.9.6. Long-Term Monitoring and Treatment Consultation



*Continue to offer the best professional practice thanks to a program designed for you, covering your academic and personal interests”*

05

# Methodology

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

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



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

## At TECH we use the Case Method

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

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



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



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

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

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



## Relearning Methodology

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

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



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

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

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

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

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

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





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



#### Study Material

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

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



#### Surgical Techniques and Procedures on Video

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



#### Interactive Summaries

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

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



#### Additional Reading

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





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

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



#### Testing & Retesting

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



#### Classes

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



#### Quick Action Guides

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





# 06 Certificate

The Postgraduate Diploma in Most Prevalent Pathologies in Hospital Pediatrics guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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

This **Postgraduate Diploma in Most Prevalent Pathologies in Hospital Pediatrics** contains the most complete and up-to-date scientific program on the market.

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

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in the Most Prevalent Pathologies in Hospital Pediatrics**

Official N° of hours: **600 h.**



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

future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

**tech** technological  
university

personalized service innovation

knowledge present

online training

development language

virtual classroom

## Postgraduate Diploma

### Most Prevalent Pathologies in Hospital Pediatrics

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



# Postgraduate Diploma

Most Prevalent Pathologies  
in Hospital Pediatrics

