

# Postgraduate Diploma Pediatric Surgery and Urology





## Postgraduate Diploma Pediatric Surgery and Urology

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

Website: [www.techtitute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-pediatric-surgery-urology](http://www.techtitute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-pediatric-surgery-urology)

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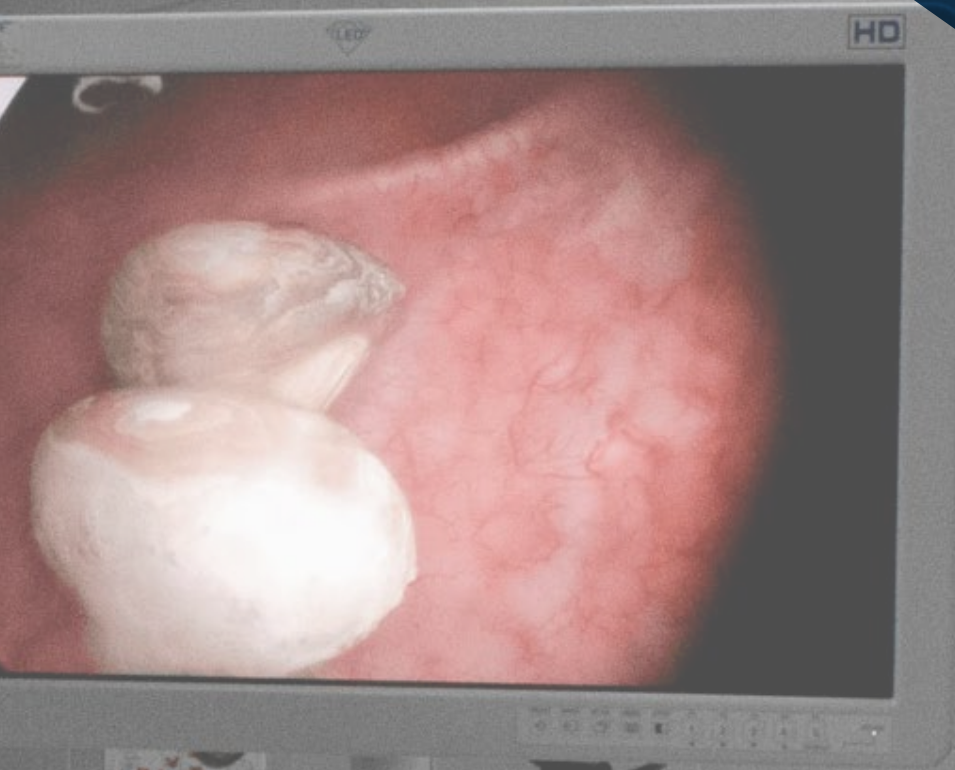
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# 01

# Introduction

The infant and adolescent population is exposed to a multitude of congenital malformations and acquired diseases that directly affect the genitourinary system. As a result, malformations of the genitourinary tract constitute the second place in the total number of detected congenital malformations, only surpassed by those of the central nervous system. This adds a significant pressure to the specialists in the area, who must have updated knowledge in diagnosis, follow-up and treatment of patients with these clinical pictures. This program aims to address precisely this issue, offering an exhaustive update on renal anomalies and pediatric ureteroscopy, among others. Its 100% online format also makes it possible to combine it with even the most demanding responsibilities.





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*It provides an adequate in-depth study of the most current Pediatric Surgery and Urology, backed by the scientific rigor of a teaching staff of experts in the field"*

In the past, conditions such as myelodysplasia had a considerable mortality rate. However, recent advances in neurosurgical management, early closure of the spinal defect and the use of shunt valves have considerably increased the survival of patients with these pathologies in developed countries.

At the same time, mortality from meningitis, ventricular hemorrhage and hydrocephalus has decreased dramatically and hydrocephalus has decreased drastically, being now when the long-term urological complications of this pathology become more evident. Given that the proper management of this type of pathology is essential for any specialist in Pediatric Urology, TECH has developed a complete university program that, in addition, delves into the developments brought about by robotic surgery.

In this way, the specialist will have access to a didactic syllabus with the most up-to-date content on urodynamic studies, urethral malformations and robotic surgical procedures in Pediatric Urology classified according to the location of the condition. This material is prepared by a teaching staff of leading experts in the field, which guarantees both its quality and its adaptation to the most rigorous clinical practice.

The format of the program is completely online, eliminating both face-to-face classes and preset schedules. It is the student himself who decides how to distribute the teaching load, being able to adapt it according to his own priorities or preference.

This **Postgraduate Diploma in Pediatric Surgery and Urology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in Pediatric Surgery
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Get updated on the most relevant current developments in Pediatric Urological Surgery, including pelvic and upper urinary tract surgery"*

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*Explore the most rigorous scientific postulates in renal anomalies, pyeloureteral stenosis, urinary incontinence and neurogenic bladder”*

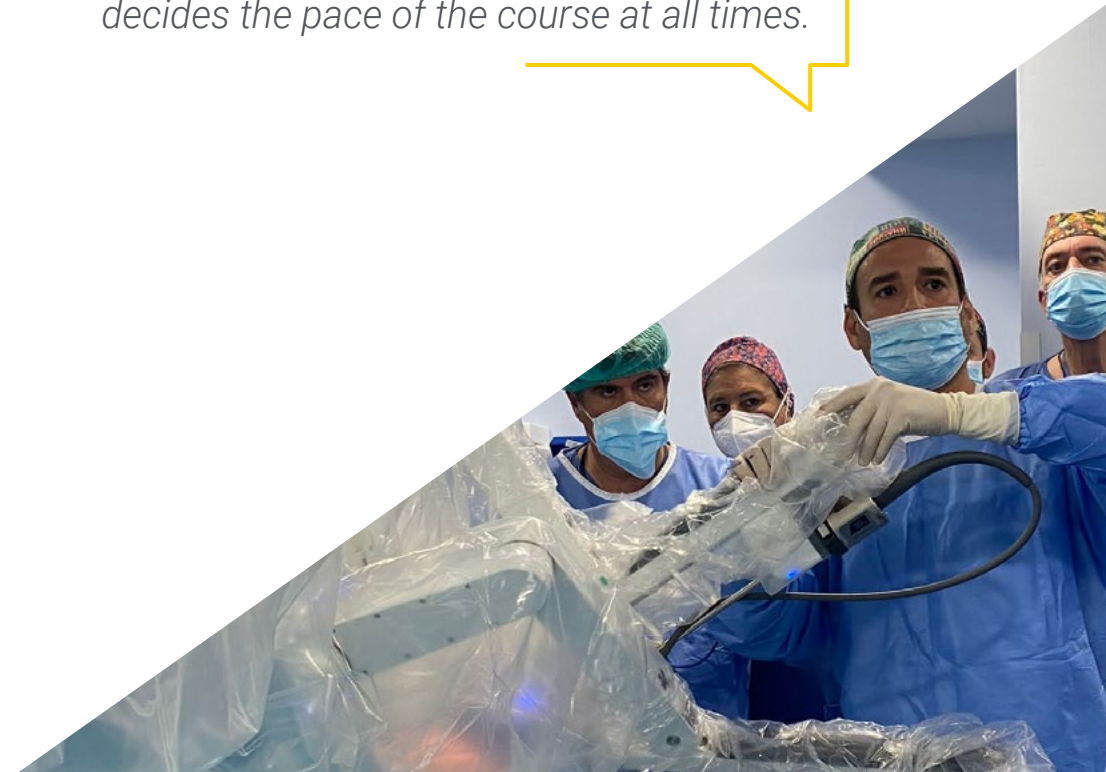
The program's teaching staff includes professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, in other words, a simulated environment that will provide an immersive training programmed to train in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*The Virtual Campus is available 24 hours a day from any device with an internet connection, giving you free access whenever you want.*

*You will not have to adapt to pre-established schedules, as you will be the one who decides the pace of the course at all times.*



02

# Objectives

As Pediatric Urology is one of the most relevant fields of action in the area, it is necessary for specialists to be updated on the basis of the most important and current surgical advances. The Postgraduate Diploma precisely the answer to this situation, with the aim of offering the latest scientific postulates and clinical practice available, backed by an exceptional teaching staff.







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*Incorporate into your daily practice the most efficient work methodology in the area of urology, supported by an experienced teaching team"*



## General Objectives

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- ◆ Develop specialized knowledge and current treatments in pediatric surgery
- ◆ Compile the different diagnostic methods, as well as the different therapeutic options, both medical and surgical depending on the pathology
- ◆ Expose the possible associated complications and the prognosis of these diseases
- ◆ Establish the current treatment guidelines for each of the pathologies described

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*Develop superior critical thinking through a multitude of practical examples and real clinical analysis”*





## Specific Objectives

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### Module 1. Pediatric Surgery Surgical Patient Management Trauma. Robotics in Pediatric Surgery

- ◆ Generate knowledge in health care bioethics
- ◆ Analyze the most recent advances in laparoscopic and robotic surgery
- ◆ Determine the pre and post-operative nutritional management of the surgical patient
- ◆ Acquire the necessary knowledge to establish the different modes of special, enteral, parenteral and other feeding routes
- ◆ Establish the concept of bioethics Establishment of therapeutic effort limitation and palliative care
- ◆ Review the latest updates in laparoscopic surgery and share initial experiences in the introduction of robotic surgery applied to pediatric surgery, as well as in the fields that it applies

### Module 2. Pediatric Urology I. Upper urinary tract Pathology and Surgical Techniques

- ◆ Determine the management of pathologies in pediatric urology (theoretical-practical) through the approach in the diagnosis, treatment and follow-up of the patient in the prenatal and postnatal period
- ◆ Analyze the knowledge and management of the different surgical techniques (endoscopic, laparoscopic and percutaneous) for the care of patients with pediatric urological pathology

- ◆ Determine the most frequent congenital pathologies of the kidney
- ◆ Differentiate between obstructive and reflux pathology
- ◆ Generate knowledge in renal surgery
- ◆ Examine percutaneous, pneumovesicoscopic and retroperitoneoscopic renal surgery
- ◆ Evaluate the different methods of percutaneous approach access in the pediatric patient
- ◆ Develop the different types of lithotripsy used in renal lithiasis

### Module 3. Pediatric Urology II. Pathology of the Lower Urinary Tract

- ◆ Determine the management of pathologies in pediatric urology (theoretical-practical) through the approach in the diagnosis, treatment and follow-up of the patient in the prenatal and postnatal period
- ◆ Develop the pediatric neuropathic bladder
- ◆ Differentiate diagnostic and therapeutic techniques used to resolve congenital and acquired pathologies
- ◆ Examine the current status of pediatric neuropathic bladder
- ◆ Analyze the pathophysiology of the pathology
- ◆ Determine the management of bladder exstrophy and epispadias
- ◆ Present the genital pathology of the child

# 03

## Course Management

The teaching staff involved in the creation of this Postgraduate Diploma has extensive experience in the treatment of all types of urological complications and pathologies. These are recognized specialists in their field, with an international clinical experience and a professional career in some of the most important centers and hospitals in the pediatric area. All this experience is reflected in the syllabus itself through a multitude of examples and simulated cases based on real cases.





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*You will have a teaching adapted to you and will be able to consult directly with the teachers about all possible doubts”*

## Management



### Dr. Paredes Esteban, Rosa María

- Service Manager and Director of the Pediatric Surgery Clinical Management Unit of the Reina Sofia Hospital
- Specialist in Pediatric Surgery at the Reina Sofia Hospital
- Specialist in Pediatric Surgery at the Medical-Surgical Hospital of Jaén
- Responsible for Pediatric Surgery training at the Reina Sofia Hospital
- President of the Spanish Society of Pediatric Surgery
- Coordinator of the Bioethics Commission of the Spanish Society of Pediatric Surgery
- Coordinator of the Vascular Anomalies Committee of the Reina Sofia University Hospital
- Coordinator of the Living Donor Transplant Commission (Renal and Hepatic) of Córdoba
- Doctor of Medicine and Surgery from the University of Granada
- Graduate in Medicine and Surgery from the University of Granada
- Member of: European Society of Pediatric Endoscopic Surgery, Spanish Society of Pediatric Surgery, Editorial Committee of the journal of the Spanish Society of Pediatric Surgery and Scientific Evaluation Committee of the Spanish Society of Pediatric Surgery

## Professors

### Dr. Pérez Bertólez, Sonia

- ◆ Consultant in Pediatric Surgery, Neonatal Surgery and Pediatric Urology at Teknon Medical Center
- ◆ Specialist in the Pediatric Urology Section at the Sant Joan de Déu Children's Hospital
- ◆ Specialist in Pediatric Surgery at the Virgen del Rocío Children's Hospital
- ◆ Specialist in Pediatric Surgery at the Toledo Medical Center
- ◆ Doctor of Medicine and Surgery at the University of Malaga
- ◆ Graduate in Medicine and Surgery from the University of Santiago de Compostela
- ◆ Specialty of Pediatric Surgery at the University of Carlos Haya Medical Center
- ◆ Master's Degree in Pediatric Urology
- ◆ Postgraduate Diploma in Pediatric Surgery
- ◆ Fellow of the European Board of Pediatric Surgery

### Dr. Álvarez García, Natalia

- ◆ Pediatric Surgery Service Coordinator of the Parc Tauli Health Corporation
- ◆ Specialist in Pediatric Surgery at the Parc Tauli Health Corporation
- ◆ Resident tutor and full professor at the UAB
- ◆ Doctor of Medicine from the University of Zaragoza
- ◆ Graduate in Medicine from the University of Zaragoza
- ◆ Specialty in Pediatric Surgery at Miguel Servet University Hospital
- ◆ Master's Degree in Bioethics and Law from the University of Barcelona

### Dr. Cadaval Gallardo, Carlos

- ◆ Specialist in the Pediatric Digestive Surgery Unit at the Virgen del Rocío University Hospital
- ◆ Specialist in the Oncological, Neonatal and Liver Surgery Unit of the Vall d'Hebron University Hospital
- ◆ Specialist in Pediatric Surgery at the Universitari Dexeus Hospital
- ◆ Specialist in Pediatric Surgery at Teknon Medical Center
- ◆ Specialist in Pediatric Surgery at the Hospital of Quirónsalud Barcelona
- ◆ Specialist in Pediatric Surgery at the Maternal Child Hospital of Badajoz
- ◆ Graduate in Medicine at the University of Extremadura
- ◆ Master's Degree in Pediatric Urology at the International University of Andalusia
- ◆ Master's Degree in Minimally Invasive Surgery in Pediatrics at CEU Cardenal Herrera University

### Dr. Ortiz Rodríguez, Rubén

- ◆ Specialist in Pediatric Surgery at the Hospital of San Rafael
- ◆ Specialist in Pediatric Urology at the Gregorio Marañón University Hospital
- ◆ Specialist in Pediatric Surgery at the Torrejón University Hospital
- ◆ Graduate in Medicine from the University of Castilla La Mancha
- ◆ Specialty in Pediatric Surgery at La Paz University Hospital
- ◆ Master's Degree in Pediatric Urology at the International University of Andalusia

**Dr. Angulo Madero, José María**

- ◆ Chief of the Pediatric Urology Section at the Gregorio Marañón Hospital in Madrid
- ◆ Pediatric Surgeon at the Nuestra Señora de Aranzazu Hospital
- ◆ Specialist in Pediatric Surgery at the Hospital of Puerta del Mar
- ◆ Graduate in Medicine and Surgery from the Autonomous University of Madrid
- ◆ Specialty in Pediatric Surgery at the Gregorio Marañón Hospital
- ◆ Honorary Member of the Cadiz Association of Spina Bifida and Hydrocephalus
- ◆ Member of: Spanish Society of Pediatric Surgery, Spanish Society of Urology, Founder of the Spanish Society of Emergency Surgery, SIUP and ESPES

**Dr. García González, Miriam**

- ◆ Specialist in the department of Pediatric Urology of La Coruña University Medical Center
- ◆ Specialist in Pediatric Surgery at the HM Modelo-Belén Hospital
- ◆ Coordinator of medical students of the Pediatric Surgery Service of La Coruña University Medical Center
- ◆ Teaching Collaborator at the University of Santiago de Compostela
- ◆ Doctor in Medicine and Surgery from the University of La Coruña.
- ◆ Graduate in Medicine and Surgery from the University of Oviedo.
- ◆ Specialist in Pediatric Surgery at La Coruña University Medical Center
- ◆ Master's Degree in Health Care and Research in the Specialty of Clinical Research by the University of La Coruña
- ◆ Master's in Pediatric Urology by the University of Andalusia







**Dr. Parente Hernández, Alberto**

- ◆ Specialist in Pediatric Surgery at Reina Sofia University Hospital
- ◆ Specialist in Pediatric Surgery at Torrejón University Hospital
- ◆ Specialist in Pediatric Surgery in the Pediatric Urology Section of Gregorio Marañón Children's Hospital
- ◆ Doctor of Medicine from the Complutense University of Madrid
- ◆ Graduate in Medicine from the University of Valladolid
- ◆ Specialist in Pediatric Surgery.
- ◆ Master's Degree in Clinical Management and Medical and Healthcare Management from the University
- ◆ Cardenal Herrera CEU
- ◆ Master's in Pediatric Urology by the International University of Andalusia
- ◆ Member of: European Society of Pediatric Urology

**Dr. Tordable Ojeda, Cristina**

- ◆ Specialist in Pediatric Surgery at the Pediatric Urology Unit of the 12 de Octubre Hospital
- ◆ Specialist in Pediatric Surgery at the Pediatric Urology Unit of the 12 de Octubre Hospital
- ◆ Graduate in Medicine from the Complutense University of Madrid
- ◆ Specialty in Pediatric Surgery at the 12 de Octubre Hospital
- ◆ Master's Degree in Pediatric Urology at the International University of Andalusia
- ◆ Master's Degree in Minimally Invasive Surgery in Pediatrics by TECH Technological University
- ◆ Internship in the Pediatric Urology Service at Great Ormond Street Hospital in London

**Dr. Cabezalí Barbancho, Daniel**

- ◆ Specialist in Pediatric Surgery at the 12 de Octubre Hospital
- ◆ Specialist in Pediatric Surgery at the hospital's La Moraleja, La Zarzuela, Rúber Internacional and the Navara University Clinic
- ◆ Doctor of Medicine and Surgery from the Complutense University of Madrid.
- ◆ Graduate in Medicine from the Complutense University of Madrid
- ◆ Specialist in Pediatric Urology at the 12 Octubre Hospital
- ◆ Member of the European Society of Pediatric Urology (ESPU), Member of the Spanish Society of Laparoscopic Surgery (SECLA), Member of the Spanish Society of Pediatric Surgery (SECP)

**Dr. Bada Bosch, Isabel**

- ◆ Specialist in Pediatric and Minimally Invasive Surgery
- ◆ Specialist in Pediatric and Minimally Invasive Surgery
- ◆ Specialist at the Children's Hospital and Minimally Invasive Surgery Center of the Federico II University of Naples
- ◆ Teacher of the suture workshop at several conferences of the Spanish Society of Pediatric Emergency Medicine
- ◆ Collaborator in practical teaching at the Public Health and Mother and Child Department of the Complutense University of Madrid
- ◆ Graduate in Medicine and Surgery from the Autonomous University of Madrid
- ◆ Specialty in Pediatric Surgery at the General University Gregorio Marañón Hospital

**Dr. González Cayón, Jesús**

- ◆ Specialist in Pediatric Surgery at Reina Sofia University Hospital
- ◆ Specialty in Pediatric Surgery at La Paz Hospital
- ◆ Specialist in the Medical Team of the Spain Heading South Expedition in Dominican Republic
- ◆ Graduate of Medicine from the University of Seville
- ◆ Postgraduate Diploma in Palliative Care from the International University of La Rioja
- ◆ Expert in Vascular Anomalies in Childhood from the International University of La Rioja

**Dr. García Aparicio, Luis**

- ◆ Head of the the Pediatric Urology Unit at Sant Joan de Déu Hospital
- ◆ Specialist in Pediatric Surgery and Urology at the Sant Joan de Déu Hospital
- ◆ Doctor of Medicine from the University of Barcelona
- ◆ Graduate in Medicine and Surgery from the University of Barcelona
- ◆ Fellowship in Pediatric Urology at Miami Children's Hospital
- ◆ Fellow by the European Board of Pediatric Surgery (FEBPS)
- ◆ Fellow by the European Academy of Pediatric Surgery (FEAPU)
- ◆ Specialist in Pediatric Surgery (at the Sant Joan de Déu clinical Hospital)

**Dr. Vargas Cruz, Verónica**

- ◆ Specialist in Pediatric Surgery at Reina Sofia University Hospital
- ◆ Graduate in Medicine and Surgery from the University of Cordoba
- ◆ Specialty in Pediatric Surgery at Reina Sofia University Hospital
- ◆ Member of: Spanish Society of Pediatric Surgery

**Dr. Martín Solé, Oriol**

- ◆ Pediatric Urology Coordinator at the de Nens de Barcelona Hospital
- ◆ Pediatric Urology Coordinator at the de Nens de Barcelona Hospital
- ◆ Specialist in the Pediatric Urology Unit at the Sant Joan de Déu Children's Hospital
- ◆ Doctor of Medicine from the University of Barcelona
- ◆ Graduate in Medicine from the Autonomous University of Barcelona
- ◆ Fellow in Pediatric Surgery by UEMS
- ◆ Master's Degree in Research Methodology, Design and Statistics in Health Sciences from the Autonomous University of Barcelona
- ◆ Diploma in Statistics in Health Sciences at the Autonomous University of Barcelona

**Dr. Ordóñez, Javier**

- ◆ Specialist in Pediatric Surgery at the Gregorio Marañón University Hospital
- ◆ Specialist in Pediatric Surgery at the General Hospital of Villalba and Jiménez Díaz Foundation
- ◆ Specialist in Infant Urology at the Gregorio Marañón University Hospital
- ◆ Specialist in Pediatric Surgery at the QuirónSalud Toledo and San Rafael Hospital
- ◆ Graduate in Medicine and Surgery from the University of Santiago de Compostela
- ◆ Specialty in Pediatric Surgery at the Gregorio Marañón General University Hospital
- ◆ Member of: Spanish Society of Pediatric Surgery and European Pediatric Surgeons' Association

**Dr. Martínez Urrutia, María José**

- ◆ Head of the Pediatric Surgery Section at La Paz Children's Hospital
- ◆ Chief of the Pediatric Surgery Section (Urogenital Reconstructive Surgery and Renal Transplant) at La Paz Children's Hospital
- ◆ Specialist in Pediatric Surgery and Infant Urology at the Hospital La Paz
- ◆ Specialist in Pediatric Surgery at the Hospital General Yagüe.
- ◆ Doctor in Medicine from the Autonomous University of Madrid
- ◆ Graduate in Medicine and Surgery from the University of Granada
- ◆ Specialty in Pediatric Surgery at the Hospital La Paz
- ◆ Fellow of the European Academy of Pediatric Urology

**Dr. Fernández-Bautista, Beatriz**

- ◆ Specialist in Pediatric Surgery at the Gregorio Marañón Children's Hospital
- ◆ Specialist in Pediatric Surgery at the Hospital of San Rafael
- ◆ Graduate in Medicine from the Complutense University of Madrid
- ◆ Specialist in Pediatric Surgery
- ◆ Member of: Scientific Review Committee of the "Archivos Españoles de Urología" Journal

**Dr. Somoza Argibay, Iván**

- ◆ Coordinator of the Pediatric Urology and Urodynamics Unit of the CHUAC
- ◆ Specialist in Pediatric Surgery at La Coruña University Medical Center
- ◆ Chief Resident at Juan Canalejo Hospital
- ◆ Doctor by the University of La Coruña
- ◆ Specialty in Pediatric Surgery at Juan Canalejo Hospital
- ◆ Fellowships in Pediatric Urology at La Paz Hospital, Our Lady's Hospital For Sick Children and the Medical Research Centre in Dublin

**Dr. Romero Ruíz, Rosa María**

- ◆ Head of the Pediatric Urological Surgery Section at the Virgen del Rocío University Hospital
- ◆ Specialist in Pediatric Urology at Oxford University Hospitals NHS Foundation Trust
- ◆ Specialist in Pediatric Urology at St. George's Hospital NHS Trust
- ◆ Specialist in Pediatric Urology at Evelina London Children's Hospital
- ◆ Specialist in Pediatric Surgery at the Son Dureta Hospital
- ◆ Graduate in Medicine and Surgery from the Complutense University of Madrid
- ◆ Specialist in Pediatric Surgery
- ◆ Fellowship in Pediatric Hepatobiliary Surgery and General Pediatric Surgery at King's College Hospital in London

**Dr. De Diego, Marta**

- ◆ President of the Spanish Society of Pediatric Surgery Head of the Pediatric Surgery Service of the Germans Trias i Pujol Hospital
- ◆ Director of the continuing education program in Pediatric Surgery at the Germans Trias i Pujol Hospital
- ◆ Organizer of the twelfth European Congress of the European Society of Pediatric Surgeons
- ◆ Graduate in Medicine and Surgery from the Central University of Barcelona
- ◆ Specialty in Pediatric Surgery at the Vall d'Hebron Hospital
- ◆ Member of: Board of the Iberoamerican Society of Pediatric Surgery

**Dr. Rivas Vila, Susana**

- ◆ Specialist in Pediatric Urology at the La Paz University Hospital
- ◆ Specialist in Pediatric Surgery at the Gregorio Marañón University Hospital
- ◆ Specialist in Pediatric Surgery at the Madrid Montepíncipe and Madrid Torrelodones Hospital
- ◆ Lecturer in a multitude of practical courses and advanced degrees
- ◆ Graduate in Medicine and Surgery from the Autonomous University of Madrid
- ◆ Specialty in Pediatric Surgery at La Paz University Hospital

**Dr. Burgos Lucena, Laura**

- ◆ Specialist in Pediatric Surgery at the Montepíncipe University Hospital of Madrid
- ◆ Specialist in Pediatric Surgery at the Niño Jesús University Hospital of Madrid
- ◆ Specialist in Pediatric Urology at the Gregorio Marañón University Hospital
- ◆ PhD from the Autonomous University of Madrid
- ◆ Graduate in Medicine and Surgery, University of Malaga
- ◆ Specialty in Pediatric Surgery at La Paz Children's University Hospital
- ◆ Member of: Review Committee of the Archivos Españoles de Urología journal



**Dr. López Pereira, Pedro**

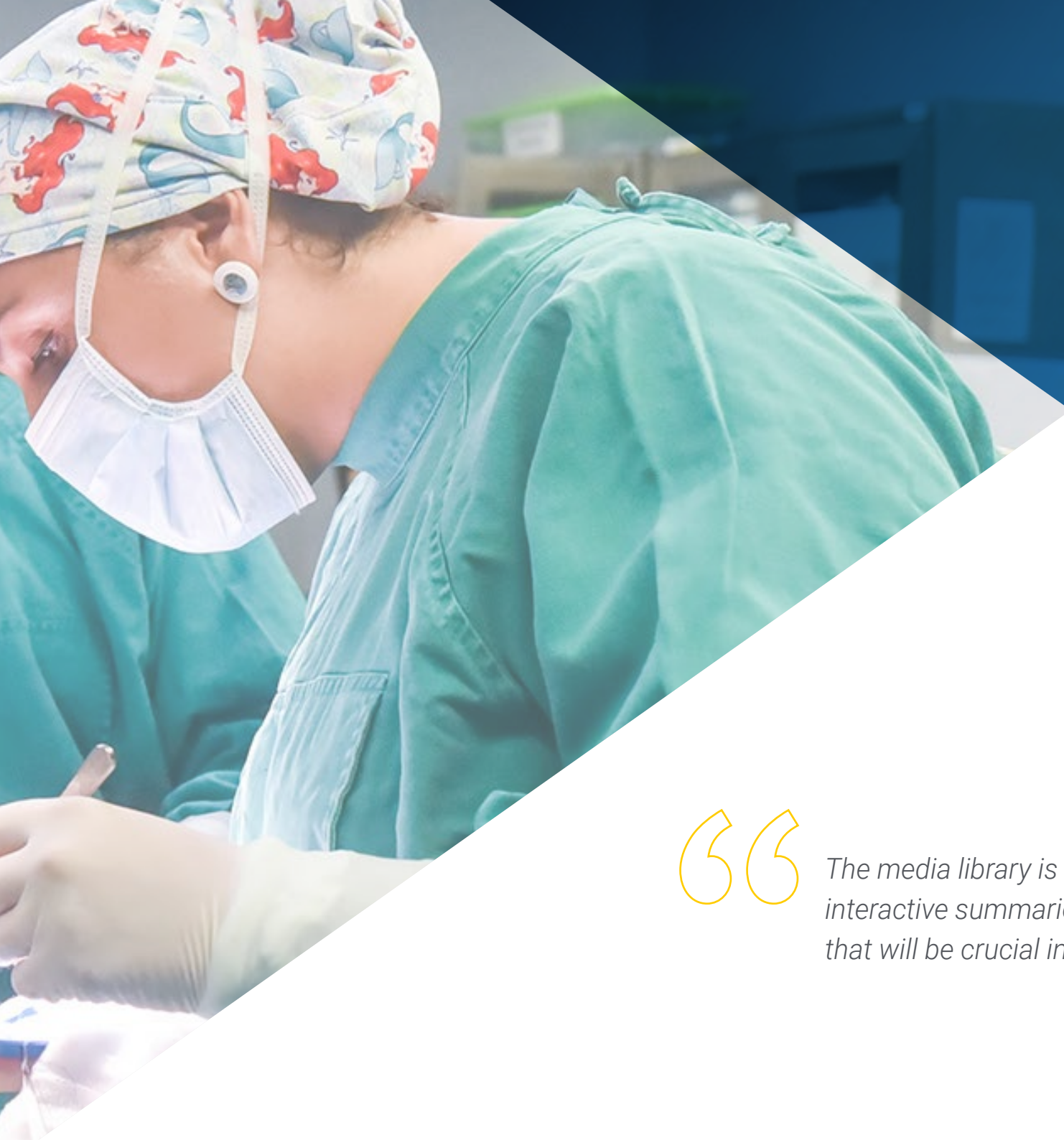
- ◆ Chief of the Pediatric Urology Service at La Paz University Hospital
- ◆ Chief of the Pediatric Urology Service at La Paz University Hospital
- ◆ Chief Resident of the Department of Pediatric Surgery at La Paz Children's Hospital
- ◆ Specialist in Pediatric Surgery at La Candelaria Hospital
- ◆ Specialist in the area of Infant Urology and Renal Transplant at La Paz University Hospital
- ◆ Head of the Pediatric Surgery and Urology Section of Area V of Specialized Care in Madrid
- ◆ Graduate in Medicine and Surgery from the University of Santiago de Compostela
- ◆ Specialist in Pediatric Surgery
- ◆ Fellow of the European Academy of Pediatric Urology

# 04

## Structure and Content

In order to promote as much as possible a smooth and effective academic experience, TECH Technological University has developed all the contents of the Postgraduate Diploma using the Relearning methodology in which it is a pioneer. This means that the key concepts in Pediatric Surgery and Urology are given repeatedly and gradually throughout the syllabus, implying a considerable reduction in the hours of study necessary to assimilate them.





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*The media library is filled with in-depth videos, interactive summaries and self-awareness exercises that will be crucial in your pediatric update”*

## Module 1. Pediatric Surgery Surgical Patient Management Trauma. Robotics in Pediatric Surgery

- 1.1. Nutrition in the Surgical Child. Assessment of Nutritional Status. Nutritional Requirements Special Nutrition: Enteral and Parenteral
  - 1.1.1. Calculation of Water and Electrolyte Requirements in Pediatrics
  - 1.1.2. Calculation of Caloric Needs in Pediatrics
    - 1.1.2.1. Assessment of Nutritional Status
    - 1.1.2.2. Nutritional Requirements
  - 1.1.3. Nutrition in the Surgical Child
  - 1.1.4. Enteral Nutrition
    - 1.1.4.1. Indications and Contraindications
    - 1.1.4.2. Access Routes
    - 1.1.4.3. Routes of Administration
    - 1.1.4.4. Formulas
    - 1.1.4.5. Complications
  - 1.1.5. Parenteral Nutrition
    - 1.1.5.1. Indications and Contraindications
    - 1.1.5.2. Access Routes
    - 1.1.5.3. Composition
    - 1.1.5.4. Production
    - 1.1.5.5. Form of Administration
    - 1.1.5.6. Complications
- 1.2. Ethical Considerations in the Neonate and Pediatric Patient. Child Law
  - 1.2.1. Ethical Considerations in the Neonate and Pediatric Patient
    - 1.2.1.1. Ethics in Pediatric Practice
    - 1.2.1.2. Ethical Considerations in Pediatric Newborn Care
    - 1.2.1.3. Ethics and Clinical Research in Pediatrics
- 1.3. Palliative Care in Pediatric Surgery
  - 1.3.1. Palliative Care in Pediatrics. Ethical Aspects
  - 1.3.2. Bioethics in End-of-life Neonatology
    - 1.3.2.1. Decision-making in Neonatal Intensive Care Units
  - 1.3.3. Complex Chronic Patient
    - 1.3.3.1. Therapeutic Effort Limitation
    - 1.3.3.2. The Surgeon's Role
- 1.4. Child Trauma Evaluation and Initial Care of the Polytraumatized Child
  - 1.4.1. Criteria for Activation of the Initial Care Team for Polytraumatized Patients (PPT)
  - 1.4.2. PPT Patient Care Room Preparation
  - 1.4.3. Staged Clinical Management of the PPT Patient
  - 1.4.4. Patient Transfer
  - 1.4.5. Primary Recognition and Initial Resuscitation
  - 1.4.6. Secondary Recognition
- 1.5. Management of Hepatic, Splenic and Pancreatic Trauma in the Pediatric Patient
  - 1.5.1. Abdominal Trauma in Pediatric Patients
  - 1.5.2. Epidemiology
  - 1.5.3. Pediatric Abdomen. Features
  - 1.5.4. Etiopathogenesis and Classification
    - 1.5.4.1. Blunt Abdominal Trauma
      - 1.5.4.1.1. Direct Impact or Abdominal Compression
      - 1.5.4.1.2. Deceleration
  - 1.5.5. Open or Penetrating Abdominal Trauma
    - 1.5.5.1. Firearm
    - 1.5.5.2. Weapons
    - 1.5.5.3. Penetrating Impalement Wounds
  - 1.5.6. Diagnosis
    - 1.5.6.1. Clinical Examination
    - 1.5.6.2. Laboratory Tests
      - 1.5.6.2.1. Blood Count
      - 1.5.6.2.2. Urinalysis
      - 1.5.6.2.3. Biochemistry
      - 1.5.6.2.4. Cross-match Testing
    - 1.5.6.3. Imaging Tests
      - 1.5.6.3.1. Simple Abdominal X-ray
      - 1.5.6.3.2. Abdominal and FAST Ultrasound
      - 1.5.6.3.3. Abdominal CT Scan
    - 1.5.6.4. Peritoneal Lavage-Puncture



- 1.5.7. Treatment
  - 1.5.7.1. Blunt Abdominal Trauma Treatment
    - 1.5.7.1.1. Hemodynamically Stable Patients
    - 1.5.7.1.2. Hemodynamically Unstable Patients
    - 1.5.7.1.3. Conservative Approach in Solid Visceral Lesions
  - 1.5.7.2. Open Abdominal Trauma Treatment
  - 1.5.7.3. Embolization
- 1.5.8. Organ-Specific Injuries
  - 1.5.8.1. Bladder
  - 1.5.8.2. Liver
  - 1.5.8.3. Pancreas
  - 1.5.8.4. Hollow Visceral Injuries
    - 1.5.8.4.1. Stomach
    - 1.5.8.4.2. Duodenum
    - 1.5.8.4.3. Jejunum-ileum
    - 1.5.8.4.4. Large Intestine: Colon, Rectum and Sigmoid
  - 1.5.8.5. Diaphragmatic Injuries
- 1.6. Renal Trauma in Children
  - 1.6.1. Renal Trauma in Children
  - 1.6.2. Imaging Tests
  - 1.6.3. Retrograde Pyelography, Percutaneous Nephrostomy and Perinephric Drainage Indications
  - 1.6.4. Renal Trauma Management
  - 1.6.5. Renal Vascular Injuries
  - 1.6.6. Trauma-Induced Renal Vascular Hypertension
  - 1.6.7. Chronic Post-Traumatic Low Back Pain
  - 1.6.8. Recommendations for Activities in Single-kidney Patients
  - 1.6.9. Disruption of the Pyeloureteral Union in Patients with Previous Hydronephrosis
  - 1.6.10. Urethral Trauma
- 1.7. Vesicourethral and Genital Trauma Management
  - 1.7.1. Bladder Trauma
    - 1.7.1.1. General Aspects
    - 1.7.1.2. Diagnosis
    - 1.7.1.3. Classification and Treatment
  - 1.7.2. Urethral Trauma
    - 1.7.2.1. General Aspects
    - 1.7.2.2. Diagnosis
    - 1.7.2.3. Treatment
    - 1.7.2.4. Complications
  - 1.7.3. Genital Trauma
    - 1.7.3.1. Penile Trauma
    - 1.7.3.2. Scrotal and Testicular Trauma
    - 1.7.3.3. Vulvar Trauma
- 1.8. Major Pediatric Outpatient Surgery
  - 1.8.1. Abdominal Wall Hernia
    - 1.8.1.1. Umbilical Hernia
    - 1.8.1.2. Epigastric Hernia
    - 1.8.1.3. Spiegel
    - 1.8.1.4. Lumbar
  - 1.8.2. Inguinal and Scrotal Region Hernia
    - 1.8.2.1. Direct and Indirect Inguinal Hernia
    - 1.8.2.2. Femoral Hernia
    - 1.8.2.3. Hydrocele
    - 1.8.2.4. Surgical Techniques
    - 1.8.2.5. Complications
  - 1.8.3. Cryptorchidism
  - 1.8.4. Testicular Anorchia

- 1.9. Hypospadias Phimosis
  - 1.9.1. Hypospadias
    - 1.9.1.1. Embryology and Penile Development
    - 1.9.1.2. Epidemiology and Etiology. Risk Factors
    - 1.9.1.3. Hypospadias Anatomy
    - 1.9.1.4. Classification and Clinical Assessment of Hypospadias. Associated Anomalies
    - 1.9.1.5. Treatment
      - 1.9.1.5.1. Reconstruction and Therapeutic Goal Indications
      - 1.9.1.5.2. Pre-operative Hormonal Treatment
      - 1.9.1.5.3. Surgical Defects. Repair in Short Time. Staged Reconstruction
    - 1.9.1.6. Other Technical Aspects Bandages. Urinary Diversion
    - 1.9.1.7. Immediate Postoperative Complications
    - 1.9.1.8. Progress and Follow-up
  - 1.9.2. Phimosis
    - 1.9.2.1. Incidence and Epidemiology
    - 1.9.2.2. Definition. Differential Diagnosis. Other Foreskin Alterations
    - 1.9.2.3. Treatment
      - 1.9.2.3.1. Medical Treatment
      - 1.9.2.3.2. Surgical Treatment. Preputialplasty and Circumcision
    - 1.9.2.4. Postoperative Complications and Sequels
- 1.10. Robotic Surgery in Pediatrics
  - 1.10.1. Robotic Systems
  - 1.10.2. Pediatric Procedures
  - 1.10.3. General Technique of Robotic Surgery in Pediatric Urology
  - 1.10.4. Surgical Procedures in Pediatric Urology Classified According to Localization
    - 1.10.4.1. Upper Urinary Tract
    - 1.10.4.2. Pediatric Pelvic Surgery
  - 1.10.5. Surgical Procedures in Pediatric General Surgery
    - 1.10.5.1. Fundoplication
    - 1.10.5.2. Splenectomy
    - 1.10.5.3. Cholecystectomy

## Module 2. Pediatric Urology I. Upper urinary tract Pathology and Surgical Techniques

- 2.1. Renal Abnormalities. Horseshoe Kidney
  - 2.1.1. Renal Abnormalities of Position, Shape and Fusion
    - 2.1.1.1. Simple Renal Ectopia or Ectopic Kidney
    - 2.1.1.2. Crossed Renal Ectopia
    - 2.1.1.3. Horseshoe Kidney
  - 2.1.2. Renal Abnormalities of Number and Size
    - 2.1.2.1. Renal Agenesis
    - 2.1.2.2. Small kidney
    - 2.1.2.3. Megacaliosis
  - 2.1.3. Renal Cystic Abnormalities
    - 2.1.3.1. Autosomal Dominant Polycystic Kidney Disease (adult)
    - 2.1.3.2. Autosomal Recessive Polycystic Kidney Disease (Infant)
    - 2.1.3.3. Malformative Syndromes with Renal Cysts
      - 2.1.3.3.1. Tuberous Sclerosis
      - 2.1.3.3.2. Von Hippel-Lindau Disease
    - 2.1.3.4. Dysplastic Multicystic Kidney
    - 2.1.3.5. Cystic Nephroma
    - 2.1.3.6. Simple Renal Cyst
    - 2.1.3.7. Acquired Cystic Kidney Disease
    - 2.1.3.8. Calyceal Diverticulum
- 2.2. Pyeloureteral Stenosis
  - 2.2.1. Introduction
  - 2.2.2. Embryology
  - 2.2.3. Etiopathogenesis.
    - 2.2.3.1. Intrinsic Factors
    - 2.2.3.2. Extrinsic Factors
    - 2.2.3.3. Functional factors
  - 2.2.4. Clinical Symptoms



- 2.2.5. Diagnosis
  - 2.2.5.1. Ultrasound
  - 2.2.5.2. CAT
  - 2.2.5.3. Magnetic Resonance
  - 2.2.5.4. Renogram
- 2.2.6. Indications
- 2.2.7. Treatment
  - 2.2.7.1. Open Pyeloplasty
    - 2.2.7.1.1. Anderson-hynes
    - 2.2.7.1.2. Other Techniques
  - 2.2.7.2. Transperitoneal Pyeloplasty
    - 2.2.7.2.1. Transperitoneal Pyeloplasty by Dropping the Colon
    - 2.2.7.2.2. Transmesocolic Pyeloplasty
    - 2.2.7.2.3. Vascular Hitch
  - 2.2.7.3. Retroperitoneal Pyeloplasty
    - 2.2.7.3.1. Retroperitoneal Pyeloplasty
    - 2.2.7.3.2. Laparoscopic Retroperitoneal Pyeloplasty
- 2.3. Ureteral Duplicity. Ureterocele. Ectopic Ureter
  - 2.3.1. Ureteral Duplicity
  - 2.3.2. Ureterocele
  - 2.3.3. Ectopic ureter
  - 2.3.4. Contributions of Endourology
- 2.4. Obstructive Megaureter
  - 2.4.1. Incidence
  - 2.4.2. Etiopathogenesis.
  - 2.4.3. Pathophysiology
  - 2.4.4. Diagnosis
    - 2.4.4.1. Ultrasound
    - 2.4.4.2. V.C.U.G
      - 2.4.4.2.1. Diuretic Renogram
      - 2.4.4.2.2. Other Diagnostic Tests

- 2.4.5. Differential Diagnosis
  - 2.4.5.1. Treatment
  - 2.4.5.2. Conservative Management
  - 2.4.5.3. Surgical Management
    - 2.4.5.3.1. Ureterostomy
    - 2.4.5.3.2. Refluxing Ureteral Reimplantation
    - 2.4.5.3.3. Ureteral Catheter Placement
  - 2.4.5.4. Ureteral Reimplantation.
    - 2.4.5.4.1. Endourological Treatment
    - 2.4.5.4.2. Postoperative Aftercare
- 2.5. Vesicoureteral Reflux
  - 2.5.1. Definition, Types and Classification of Vesicoureteric Reflux (VUR)
  - 2.5.2. Epidemiology of Primary VUR
    - 2.5.2.1. Prevalence of VUR
    - 2.5.2.2. Urinary Tract Infections and VUR
    - 2.5.2.3. VUR Nephropathy
    - 2.5.2.4. Vesicoureteral Reflux and End Stage Renal Disease (ESRD)
  - 2.5.3. Ureterovesical Junction Embryology
  - 2.5.4. VUR Pathophysiology
    - 2.5.4.1. Primary Vesicoureteral Reflux
    - 2.5.4.2. VUR / Urinary Tract Infection / Kidney Damage
  - 2.5.5. Clinical diagnosis of VUR
    - 2.5.5.1. Prenatal Hydronephrosis
    - 2.5.5.2. Urinary Tract Infections
  - 2.5.6. Diagnostic Imaging of the VUR
    - 2.5.6.1. Serial Voiding Cystourethrogram. (SVCU)
    - 2.5.6.2. Direct Cystogram (DRC)
    - 2.5.6.3. Indirect Cystogram (IRC)
    - 2.5.6.4. Voiding Cystourethrogram (VGUC)
    - 2.5.6.5. Renal Ultrasound Scan
    - 2.5.6.6. Nuclear medicine
- 2.5.7. VUR Treatment Options
  - 2.5.7.1. Observational
  - 2.5.7.2. Antibiotic Prophylaxis
  - 2.5.7.3. Surgical treatment: Open Surgery, Endoscopic Surgery, Laparoscopic/ Robotic Surgery
- 2.6. Renal Lithiasis
  - 2.6.1. Epidemiology and Risk Factors
  - 2.6.2. Clinical Presentation and Diagnosis
    - 2.6.2.1. Clinical Presentation
    - 2.6.2.2. Diagnosis
  - 2.6.3. Treatment
    - 2.6.3.1. Acute Episode Treatment
    - 2.6.3.2. Medical Treatment
    - 2.6.3.3. Surgical Management
      - 2.6.3.3.1. Extracorporeal Shock Wave Lithotripsy
      - 2.6.3.3.2. Percutaneous Nephrolithotomy
      - 2.6.3.3.3. Ureterorenoscopy
      - 2.6.3.3.4. Open, Laparoscopic and Robotic Surgery
  - 2.6.4. Long Term Follow-up and Recurrence Prevention
- 2.7. Renal Transplant
  - 2.7.1. Renal Transplant Surgery
    - 2.7.1.1. Kidney Procurement
      - 2.7.1.1.1. Multi-organ (Cadaveric Donor)
      - 2.7.1.1.2. Living Donor Nephrectomy
    - 2.7.1.2. Bench Surgery
    - 2.7.1.3. Kidney Implant
    - 2.7.1.4. Surgical Complications
  - 2.7.2. Factors Affecting Renal Graft Survival
    - 2.7.2.1. Donor
      - 2.7.2.1.1. Donor Source
      - 2.7.2.1.2. Donor Age
      - 2.7.2.1.3. Histocompatibility

- 2.7.2.2. Receptor
  - 2.7.2.2.1. Recipient's Age
  - 2.7.2.2.2. Early Transplant (Pre-Dialysis)
  - 2.7.2.2.3. Urological Pathology
  - 2.7.2.2.4. Previous Vascular Problems
  - 2.7.2.2.5. Primary Kidney Disease
- 2.7.2.3. Delayed Initial Graft Function
- 2.7.2.4. Immunosuppressive Treatments
- 2.7.2.5. Rejection
- 2.7.3. Renal Transplant Results
  - 2.7.3.1. Short and Long-Term Graft Survival
  - 2.7.3.2. Morbidity and Mortality
- 2.7.4. Graft Loss
  - 2.7.4.1. Transplactectomy
- 2.7.5. Kidney Transplant Combined with Other Organs
  - 2.7.5.1. Hepatorenal Transplant
  - 2.7.5.2. Cardiorenal Transplant
- 2.7.6. Controversies
- 2.7.7. Future Perspectives Challenges
- 2.8. Current Status of Transperitoneal Urological Laparoscopy
  - 2.8.1. Transperitoneal Urological Laparoscopy
  - 2.8.2. Surgical Techniques.
    - 2.8.2.1. Nephrectomy.
    - 2.8.2.2. Heminephrectomy
    - 2.8.2.3. Pyeloplasty
    - 2.8.2.4. Vesicoureteral Reflux Correction
    - 2.8.2.5. Congenital Obstructive Megaureter
    - 2.8.2.6. Undescended Testicle Sexual Differentiation Disorder
- 2.9. Pediatric Percutaneous Kidney Surgery
  - 2.9.1. Endourology
  - 2.9.2. Historical Recollection
  - 2.9.3. Objectives Presentation
  - 2.9.4. Surgical Technique
    - 2.9.4.1. Surgical Planning
    - 2.9.4.2. Patient Positioning
    - 2.9.4.3. Percutaneous Puncture Details
    - 2.9.4.4. Access Methods
  - 2.9.5. Surgical Indications
    - 2.9.5.1. Renal Lithiasis
    - 2.9.5.2. Recurrent Pyeloureteral Stenosis
    - 2.9.5.3. Other Specifications
  - 2.9.6. Literature Review
    - 2.9.6.1. Pediatric Urology Experience
    - 2.9.6.2. Instrumentation Miniaturization
    - 2.9.6.3. Current Indications
- 2.10. Pediatric Pneumovesicoscopy and Retroperitoneoscopy
  - 2.10.1. Pneumovesicoscopy
  - 2.10.2. Technique
  - 2.10.3. Vesical Diverticulectomy
  - 2.10.4. Ureteral Reimplantation.
  - 2.10.5. Bladder Neck Surgery
  - 2.10.6. Retroperitoneoscopy

### Module 3. Pediatric Urology II. Lower Urinary Tract Pathology

- 3.1. Non-neurogenic Bladder Dysfunction Urinary Incontinence
  - 3.1.1. Non-neuropathic Gastrointestinal Dysfunction
    - 3.1.1.1. Epidemiology
    - 3.1.1.2. Etiopathogenesis
  - 3.1.2. Lower Urinary Tract Dysfunction Patterns
    - 3.1.2.1. LUTD Fundamental Patterns
    - 3.1.2.2. Postponing Patient
    - 3.1.2.3. Other LUTD Patterns
  - 3.1.3. Associated Problems
    - 3.1.3.1. Vesicoureteral Reflux and Urinary Tract Infection
    - 3.1.3.2. Psychosocial Problems
  - 3.1.4. Diagnostic Protocol
    - 3.1.4.1. Medical History
    - 3.1.4.2. Physical Examination
    - 3.1.4.3. Micturition Diary
    - 3.1.4.4. Laboratory Tests
    - 3.1.4.5. Imaging Tests
    - 3.1.4.6. Non-invasive Urodynamic Tests
    - 3.1.4.7. Invasive Urodynamic Tests
    - 3.1.4.8. Symptomatology Grading
  - 3.1.5. Therapeutic Approach
    - 3.1.5.1. Urotherapy
    - 3.1.5.2. Pharmacotherapy
    - 3.1.5.3. Botulinum Toxin
    - 3.1.5.4. Intermittent Catheterizations
    - 3.1.5.5. ICCS Therapeutic Recommendations
- 3.2. Neurogenic Bladder
  - 3.2.1. Urinary Tract
    - 3.2.1.1. Innervation
    - 3.2.1.2. Operation
    - 3.2.1.3. Neurogenic Bladder Pathophysiology





- 3.2.2. Neuropathic Bladder
  - 3.2.2.1. Prevalence and Etiology
  - 3.2.2.2. Urinary Tract Function
- 3.2.3. Neuropathic Bladder Pathophysiology
  - 3.2.3.1. Diagnosis
  - 3.2.3.2. Suspected Diagnosis
  - 3.2.3.3. Ultrasound
  - 3.2.3.4. SVCU and DMSA
- 3.2.4. Urodynamic Tests
  - 3.2.4.1. Flowmetry
  - 3.2.4.2. Cystomanometry
  - 3.2.4.3. Pressure-flow Test
- 3.2.5. Medical Treatment
  - 3.2.5.1. Anticholinergics
- 3.3. Urinary Diversion in Pediatric Age
  - 3.3.1. Pathophysiology of Kidney Damage in the Pediatric Age Associated with Uropathies
  - 3.3.2. Dysplasia
    - 3.3.2.1. Congenital Urinary Obstruction
    - 3.3.2.2. Acquired Acute/Chronic Urinary Obstruction
    - 3.3.2.3. Role of Reflux/Scarring Nephropathy Associated with Stroke
    - 3.3.2.4. Secondary Damage to Bladder Dysfunction
  - 3.3.3. Surgical Urinary Diversion
    - 3.3.3.1. Anatomy
    - 3.3.3.2. Surgical Techniques
    - 3.3.3.3. Endourological Techniques
    - 3.3.3.4. Percutaneous Techniques
  - 3.3.4. Clinical Management
    - 3.3.4.1. Initial Management
    - 3.3.4.2. Care and Diversion
  - 3.3.5. Long-Term Results
- 3.4. Pediatric Cystoscopy and Ureteroscopy
  - 3.4.1. Cystoscopes
    - 3.4.1.1. Basic Components

- 3.4.2. Cystourethroscopy
  - 3.4.2.1. Most Common Types
- 3.4.3. Ureteroscopes
  - 3.4.3.1. Basic Components
  - 3.4.3.2. Cystourethroscopy
  - 3.4.3.3. Most Common Types
- 3.5. Female Genital Abnormalities
  - 3.5.1. Embryological Recall
  - 3.5.2. Congenital Disorders
    - 3.5.2.1. Genital Tubercle-dependent Alterations
    - 3.5.2.2. Labioscrotal Fold-dependent Alterations
    - 3.5.2.3. Urogenital Sinus-dependent Alterations
    - 3.5.2.4. Development-dependent Mullerian Structure Alterations
  - 3.5.3. Acquired Alterations
  - 3.5.4. Urinary Tract-dependent Alterations
- 3.6. Urogenital Sinus
  - 3.6.1. Embryological Recall
  - 3.6.2. Urogenital Sinus
    - 3.6.2.1. The Cloaca
    - 3.6.2.2. In Differential Sex Development (DSD)
    - 3.6.2.3. Other Entities
  - 3.6.3. Urogenital Sinus Treatment
- 3.7. Exstrophy-Epispadias Complex
  - 3.7.1. Exstrophy-Epispadias Complex
    - 3.7.1.1. EEC History
    - 3.7.1.2. Epidemiology and Current Situation
    - 3.7.1.3. Embryology and Associated Abnormalities
    - 3.7.1.4. Anatomical Description and EEC Variants
  - 3.7.2. Diagnostic Approach
    - 3.7.2.1. Antenatal Diagnosis
    - 3.7.2.2. Clinical diagnosis
    - 3.7.2.3. Complementary Tests and Examinations According to their Profitability





- 3.7.3. Clinical Management
  - 3.7.3.1. Multidisciplinary Team
  - 3.7.3.2. Prenatal Counseling
  - 3.7.3.3. Initial management of the EEC patient
    - 3.7.3.3.1. Comparative Analysis of Different Surgical Approaches
  - 3.7.3.4. Full Primary Closure
  - 3.7.3.5. Stage Closure
  - 3.7.3.6. Primary Deferred Closing
  - 3.7.3.7. Long-term Management of the EEC Patient
- 3.7.4. Opportunities for New Knowledge Development
- 3.8. Urethral Malformations. Posterior Urethral Valves
  - 3.8.1. Posterior Urethral Valves
    - 3.8.1.1. Epidemiology
    - 3.8.1.2. Embryology and Classification
    - 3.8.1.3. Pathophysiology
    - 3.8.1.4. Clinical Introduction and Diagnosis
    - 3.8.1.5. Treatment
    - 3.8.1.6. Prognosis
    - 3.8.1.7. PUV and Kidney Transplant
  - 3.8.2. Anterior Urethral Valves
    - 3.8.2.1. Classification
    - 3.8.2.2. Embryology and Etiology
    - 3.8.2.3. Clinical Presentation
    - 3.8.2.4. Diagnosis
    - 3.8.2.5. Treatment
  - 3.8.3. Urethral Stricture
    - 3.8.3.1. Etiology
    - 3.8.3.2. Clinical Presentation
    - 3.8.3.3. Diagnosis
    - 3.8.3.4. Treatment
- 3.9. Bladder Diverticulum, Urachal Abnormalities and other Bladder Malformations
  - 3.9.1. Bladder Diverticulum
    - 3.9.1.1. Etiology and Associated Syndromes
    - 3.9.1.2. Clinical Presentation
    - 3.9.1.3. Diagnosis
    - 3.9.1.4. Treatment
  - 3.9.2. Urachal Abnormalities
    - 3.9.2.1. Persistent Urachus
    - 3.9.2.2. Urachal Sinus
    - 3.9.2.3. Urachal Cyst
    - 3.9.2.4. Urachal Diverticulum
    - 3.9.2.5. Diagnosis
    - 3.9.2.6. Treatment
  - 3.9.3. Megabladder
  - 3.9.4. Bladder Hypoplasia
  - 3.9.5. Bladder Duplicity
  - 3.9.6. Bladder Agenesis
  - 3.9.7. Other Bladder Abnormalities
- 3.10. Pediatric Enuresis Management Protocol
  - 3.10.1. Definitions
  - 3.10.2. Pathophysiology
  - 3.10.3. Comorbidities
  - 3.10.4. Examinations
    - 3.10.4.1. Medical History
    - 3.10.4.2. Physical Examination
    - 3.10.4.3. Complementary Tests
  - 3.10.5. Treatment
    - 3.10.5.1. Indications
    - 3.10.5.2. General Recommendations
    - 3.10.5.3. Treatment Algorithms
    - 3.10.5.4. Therapy Options

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.

“

*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

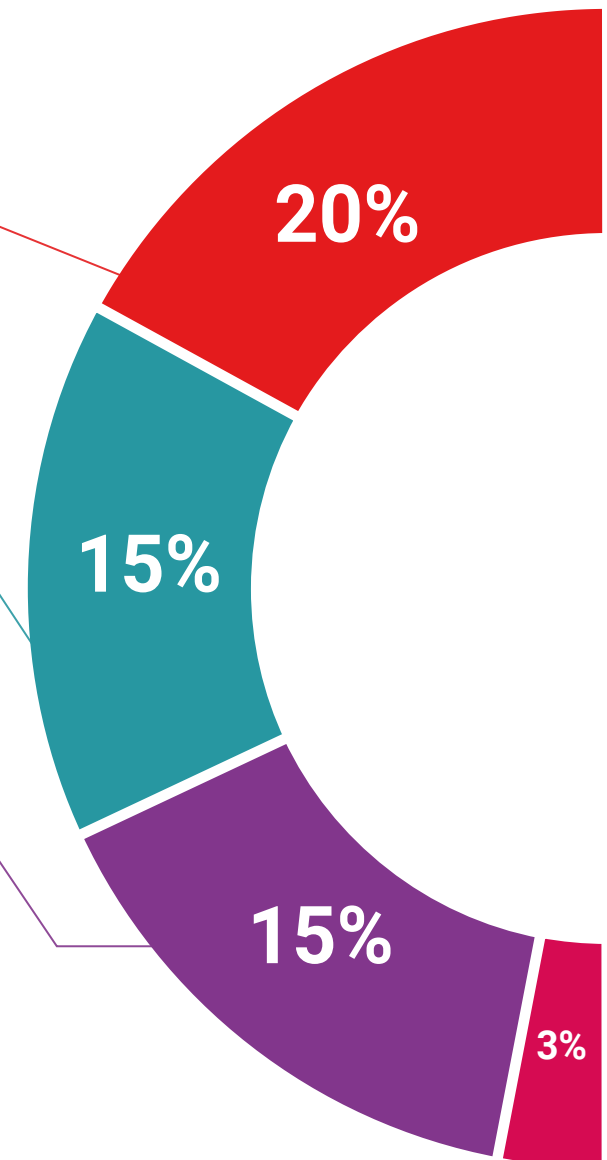
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.



# 06 Certificate

The Postgraduate Diploma in Pediatric Surgery and Urology 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 having to travel or fill out laborious paperwork”*

This **Postgraduate Diploma in Pediatric Surgery and Urology** 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 Pediatric Surgery and Urology**

Official N° of Hours: **450 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  
personalized service innovation  
knowledge present  
online training  
development language  
virtual classroom



**Postgraduate Diploma**  
Pediatric Surgery  
and Urology

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

# Postgraduate Diploma Pediatric Surgery and Urology

