

# Postgraduate Diploma

## Duodenopancreatic Trauma and Pathology





## Postgraduate Diploma Duodenopancreatic Trauma and Pathology

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

Website: [www.techtitute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-duodenopancreatic-trauma-pathology](http://www.techtitute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-duodenopancreatic-trauma-pathology)

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# 01

# Introduction

The need to manage new techniques and keep up to date with medical advances is essential to ensure that patients with Trauma and Duodenopancreatic Pathology receive the best care. Thus, healthcare professionals must adapt and incorporate the latest diagnostic procedures and treatments more quickly. Therefore, this program offers specialists a unique opportunity to learn about the latest challenges in their clinical area of work. To this end, the syllabus focuses on the most cutting-edge resources as well as the most sought-after competencies in the hospital setting. Likewise, the curriculum guarantees a comprehensive update through the innovative Relearning system and a 100% online teaching methodology.







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*With this Postgraduate Diploma you will deepen your knowledge of state-of-the-art techniques for reconstruction in complex lesions in a 100% online study format"*

According to the most recent international medical records, 1 in every 100 to 200 people in the world is affected by Celiac Disease. These numbers not only show an exponential increase in the condition, but have positioned it as one of the duodenopancreatic pathologies with the highest health incidence. On the other hand, the diagnosis of the ailments included in this group is extremely complex since the symptoms often overlap and make it difficult to determine severe trauma with ease. Therefore, it is imperative for gastroenterologists and physicians in general to keep abreast of state-of-the-art techniques for the evaluation and treatment of these conditions.

In this context, TECH will offer its students the opportunity to complete an intensive 6-month academic itinerary. The program will update its graduates in the recognition and management of anatomical variations relevant to surgical interventions, preparing them to deal with diverse clinical situations. In addition, the agenda will include further training in the implementation of diagnostic techniques such as computed tomography and ultrasound. In turn, professionals will address the identification and management of possible complications associated with pancreatic diseases, acquiring a greater ability to prevent and effectively address these complications in their daily practice.

In addition, this Postgraduate Diploma in Trauma and Duodenopancreatic Pathology has a disruptive methodology that will provide flexibility and accessibility to all students. In a 100% online format, the curriculum can be reviewed and analyzed by enrolled physicians from any location, adapting to their schedules and work responsibilities. Moreover, the Relearning system, based on the repetition of key concepts, will reinforce the deep assimilation of knowledge, ensuring that participants not only acquire new skills, but also have a holistic view of the challenges of the healthcare sector.

This **Postgraduate Diploma in Duodenopancreatic Trauma and Pathology** 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 Trauma and Duodenopancreatic Pathology
- ♦ 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



*Take advantage of this academic opportunity to get up to date on the latest trends in traumatic injury management”*

“

*Get updated about online anatomical dissection with a learning system that follows the highest international quality standards”*

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

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

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

*Get up to date in Laparoscopic Liver Surgery at the best digital university in the world according to Forbes.*

*You will have access to a learning system based on repetition, with a natural and progressive teaching throughout the entire syllabus: Relearning.*



# 02 Objectives

The main objective of this academic itinerary is to keep graduates updated in contemporary surgical techniques, focusing on the planning and precise execution of hepatic interventions. Throughout the program, students will be immersed in a curriculum designed to equip them with the necessary skills in the field of Trauma and Duodenopancreatic Pathology. In this regard, this comprehensive approach will also equip healthcare professionals with the most advanced surgical skills, ensuring specialized and effective care in complex clinical situations.







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*Get updated on the development of endoscopic retrograde cholangiopancreatography (ERCP) for a more accurate assessment of your patients”*



## General Objectives

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- ♦ Develop a thorough understanding of the normal anatomy of the liver, including vascular distribution, hepatic segmentation, and anatomical relationships
- ♦ Establish a solid foundation in normal liver physiology to facilitate identification of pathological deviations
- ♦ Establish a thorough understanding of the pathophysiology of benign liver diseases, including steatosis, chronic hepatitis, and other conditions
- ♦ Improve ethical decision making in the selection and application of diagnostic procedures, considering patient safety and well-being
- ♦ Stimulate interest in research on pancreatic diseases and promote constant updating on therapeutic and technological advances



*You will achieve your goals thanks to TECH's didactic tools and its disruptive 100% online methodology"*





## Specific Objectives

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### Module 1. Surgical anatomy of the liver

- ♦ Recognize and manage anatomical variations relevant to surgical interventions, preparing participants for diverse clinical situations
- ♦ Integrate anatomical knowledge with contemporary surgical techniques, facilitating accurate planning and execution of liver interventions
- ♦ Acquire specific skills for laparoscopic liver surgery, considering the anatomy in a minimally invasive environment
- ♦ Encourage active participation through practice in online anatomical dissection, case studies and interactive discussions

### Module 2. Hepatic and duodenopancreatic trauma.

- ♦ Establish a solid understanding of the anatomy and physiology of the hepatic, duodenal and pancreatic region, particularly in the context of traumatic injuries
- ♦ Develop the ability to identify and classify the different mechanisms of injury affecting the liver, duodenum and pancreas in traumatic situations
- ♦ Become familiar with emergency diagnostic techniques, such as computed tomography and ultrasound, for rapid and accurate assessment of traumatic injuries
- ♦ Acquire specific surgical skills for the management of traumatic injuries, including hemostasis techniques and repair of compromised organs
- ♦ Develop skills to anticipate and manage complications that may arise during and after treatment of traumatic injuries in these areas
- ♦ Improve reconstruction techniques in complex lesions, particularly in situations involving the duodenum and pancreas

### Module 3. Pancreatic Disease

- ♦ Establish a thorough understanding of the normal pathophysiology of the pancreas and the imbalances that lead to diseases such as acute and chronic pancreatitis
- ♦ Develop the ability to identify and classify different pancreatic diseases, including benign and malignant tumors
- ♦ Become familiar with advanced diagnostic techniques, such as Endoscopic Retrograde Cholangiopancreatography (ERCP) and pancreatic MRI, for accurate assessment
- ♦ Assess the risk factors associated with pancreatic diseases and to understand the progression of these conditions. and understand the progression of these conditions
- ♦ Identify possible complications associated with pancreatic diseases and learn how to prevent and manage them effectively

# 03

# Course Management

The faculty of this university program is composed of outstanding specialists carefully selected by TECH. In this sense, the faculty brings together the best professionals with extensive and recognized careers, forged in leading hospitals in the field of Trauma and Duodenopancreatic Pathology. Each member of the team brings in-depth, up-to-date clinical experience, ensuring that students will receive high quality theoretical and practical training backed by the latest advances in the discipline. The careful selection of this faculty ensures a practical and specialized perspective that will enrich the learning experience of health professionals.





A photograph of a microscope in a clinical setting, with a person in a white lab coat and blue gloves visible in the background. The image is partially obscured by a blue diagonal graphic element.

“

*Enroll in this Postgraduate Diploma and you will learn the most advanced emergency diagnostic techniques from renowned surgeons"*



## Management



### Dr. Farah Al Shwely Abduljabar

- ♦ Head of the Hepatobiliopancreatic Surgery Unit of the University Hospital of Guadalajara
- ♦ Doctorate in Medicine, University of Alcalá
- ♦ Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- ♦ Astellas Fellowship in Hepatobiliopancreatic Surgery and Liver and Pancreatic Transplantation
- ♦ Master's Degree in Hepatology and Clinical Research from the University of Barcelona
- ♦ Master's Degree in Medical Expertise and Valuation of Bodily Injury by the University of Barcelona
- ♦ Degree in Medicine from the University of Alcalá, Spain
- ♦ Reviewer of the Central European Journal Of Medicine
- ♦ Member of the Spanish Association of Surgeons
- ♦ Editor of: Journal Of Liver and Clinical Research, EC Orthopaedics, Austin Pancreatic Disorders y Annals of Clinical Cytology and Pathology

## Professors

### Dr. Mariam Bajawi

- ◆ Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- ◆ Clinical Professor of General and Digestive System Surgery
- ◆ Dr. in Health and Life Sciences from the University of Alcalá de Henares
- ◆ Master's Degree in Digestive Oncology (Universidad CEU Cardenal Herrera) and Clinical Medicine (Universidad Camilo José Cela)
- ◆ Medical Degree from the University of Jordan

### Dr. Vanessa Catalán Garza

- ◆ Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- ◆ Physician at the San Carlos Clinical Hospital
- ◆ Master's Degree in Pediatrics in Clinical Medicine from the Camilo José Cela University
- ◆ Graduate in Medicine from the University of Zaragoza

### Dr. Aylhin López Marcano

- ◆ Physician in the Hepatobiliopancreatic Surgery Unit of the University Hospital of Guadalajara
- ◆ Doctorate in Medicine, University of Alcala
- ◆ Specialist in General and Digestive System Surgery
- ◆ Graduated from Luis Razetti School of Medicine
- ◆ Medical Degree from Universidad Central de Caracas

### Dr. Ignacio Gemio

- ◆ Specialist in General and Digestive System Surgery
- ◆ Professor the Department of Surgery, Medical and Social Sciences
- ◆ Master's Degree in Major Ambulatory Surgery from the Francisco de Vitoria University
- ◆ Degree in Medicine from the University of Alcalá

### Dr. María Dolores Picardo

- ◆ General and Digestive System Surgeon at the University Hospital of Guadalajara
- ◆ Director of doctoral theses and final projects at University Hospital La Paz
- ◆ R&D&I management and participation in scientific committees
- ◆ Lecturer in programs and seminars aimed at university teacher training
- ◆ Graduate in Medicine from the Universidad Autonoma of Madrid
- ◆ Member of the Technical-Assistance Board of the Integrated Care Management of Guadalajara

### Dr. Begoña González Sierra

- ◆ Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- ◆ Master's Degree General Surgery Updating by the Spanish Confederation of Universities
- ◆ Master's Degree in Integration and Clinical Problem Solving in Medicine from the University of Alcalá, Spain
- ◆ Master's Degree in Aesthetic Medicine, Universidad Rey Juan Carlos, Madrid
- ◆ Degree in Medicine from the Complutense University of Madrid
- ◆ Diploma in Physiotherapy from the Rey Juan Carlos University

# 04

## Structure and Content

TECH's Postgraduate Diploma in Trauma and Duodenopancreatic Pathology offers a rigorous training where students will be able to address different anatomical variations that require surgical interventions. Throughout the program, graduates will be prepared to face diverse clinical situations, acquiring essential skills to deal with trauma and specific pathologies of the duodenum and pancreas. Furthermore, this comprehensive approach provides healthcare professionals with the necessary tools to provide accurate and effective surgical care in a context where a detailed understanding of the anatomy is essential for successful interventions.





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*Get up to date on the latest ultrasound scanning techniques with little effort thanks to the application of the pioneering Relearning method”*



## Module 1. Surgical anatomy of the liver

- 1.1. Liver Anatomy
  - 1.1.1. General Aspects
  - 1.1.2. Embryonic development of the liver of the biliary tract
  - 1.1.3. Conclusions
- 1.2. Anatomical relationships of the liver
  - 1.2.1. Superior Relations
  - 1.2.2. Past Relationships
  - 1.2.3. Lateral Relationships
- 1.3. Hepatic vascularization
  - 1.3.1. Definition
  - 1.3.2. Types
  - 1.3.3. Conclusions
- 1.4. Anatomy of the biliary tree
  - 1.4.1. Organs
  - 1.4.2. Hepatic ducts
  - 1.4.3. Conclusions
- 1.5. Hepatic segmentation
  - 1.5.1. Anatomical segmentation
  - 1.5.2. Eight Segment Division
  - 1.5.3. Clinical Significance
- 1.6. Ultrasound examination of hepatic anatomy
  - 1.6.1. Position of the Patient
  - 1.6.2. Ultrasonic probe
  - 1.6.3. Liver examination
- 1.7. Type of hepatic anatomical approaches
  - 1.7.1. Hepatectomy
  - 1.7.2. Segmentectomy
  - 1.7.3. Wedge resection
- 1.8. Management of bleeding in liver surgery
  - 1.8.1. Use of hemostatics and sealants
  - 1.8.2. Suture technique
  - 1.8.3. Blood transfusion





## 1.9. Vascular control techniques in hepatic surgery

- 1.9.1. Main Techniques
- 1.9.2. Most used techniques
- 1.9.3. Conclusions

## 1.10. Hemostatic agents in liver surgery

- 1.10.1. Hemostatic sponges
- 1.10.2. Absorbable gelatines
- 1.10.3. Tissue adhesives

## Module 2. Hepatic and duodenopancreatic trauma

### 2.1. Injury mechanism of hepatic trauma

- 2.1.1. Degrees of injury
- 2.1.2. Injury management
- 2.1.3. Conclusions

### 2.2. Evaluation, examination and classification of hepatic trauma

- 2.2.1. Assessment
- 2.2.2. Exploration
- 2.2.3. Classification

### 2.3. Conservative management of hepatic trauma

- 2.3.1. Types of Lesions
- 2.3.2. Strategies
- 2.3.3. Conclusions

### 2.4. Surgical management of liver trauma

- 2.4.1. Type of injury
- 2.4.2. Strategy
- 2.4.3. Conclusions

### 2.5. Injuries to the vena cava and suprahepatic veins in hepatic trauma

- 2.5.1. Vena cava
- 2.5.2. Suprahepatic veins
- 2.5.3. Diagnosis and Management

### 2.6. Mechanism of injury in duodenal and pancreatic trauma

- 2.6.1. Trauma
- 2.6.2. Associated injuries
- 2.6.3. Treatment



- 2.7. Evaluation, examination and classification of duodenal and pancreatic trauma
  - 2.7.1. Assessment
  - 2.7.2. Exploration
  - 2.7.3. Classification
- 2.8. Diagnosis of duodenal and pancreatic trauma
  - 2.8.1. Clinical Assessment
  - 2.8.2. Diagnostic Tests
  - 2.8.3. Treatment
- 2.9. Treatment of duodenal and pancreatic trauma
  - 2.9.1. Duodenal trauma
  - 2.9.2. Pancreatic trauma
  - 2.9.3. Special considerations
- 2.10. Complications of duodenal and pancreatic trauma
  - 2.10.1. Management of complications
  - 2.10.2. Evaluation of complications
  - 2.10.3. Conclusions

### Module 3. Pancreatic Disease

- 3.1. Pancreas Anatomy
  - 3.1.1. Location
  - 3.1.2. Divisions of the pancreas
  - 3.1.3. Relationship with other organs
- 3.2. Surgical anatomy of the pancreas
  - 3.2.1. Head
  - 3.2.2. Body
  - 3.2.3. Cola
- 3.3. Embryology of the pancreas
  - 3.3.1. Initial development
  - 3.3.2. Formation of the parties
  - 3.3.3. Conclusions
- 3.4. Vascularization and venous drainage
  - 3.4.1. Pancreatic arteries
  - 3.4.2. Accessory pancreatic arteries
  - 3.4.3. Drainages



- 3.5. Lymphatic drainage (lymph node stations)
  - 3.5.1. Peripancreatic Ganglionic Station
  - 3.5.2. Splenic Hilum Ganglionic Station
  - 3.5.3. Hepatic Hilum Ganglionic Station
- 3.6. Pancreatic physiology
  - 3.6.1. Exocrine Function of the Pancreas
  - 3.6.2. Endocrine Function of the Pancreas
  - 3.6.3. Regulation of endocrine function
- 3.7. Regulation of pancreatic secretion
  - 3.7.1. Neuronal stimulation
  - 3.7.2. Hormonal stimulation
  - 3.7.3. Negative feedback mechanisms
- 3.8. Medical History
  - 3.8.1. Physical Examination
  - 3.8.2. Complementary Tests
  - 3.8.3. Others
- 3.9. Imaging studies of pancreatic pathology
  - 3.9.1. Abdominal Computed Tomography (CT) scan
  - 3.9.2. Magnetic Resonance Imaging (MRI) of the Pancreas
  - 3.9.3. Abdominal ultrasound
- 3.10. Echoendoscopy in the diagnosis of pancreatic disease
  - 3.10.1. Detailed visualization of the pancreas
  - 3.10.2. Evaluation of pancreatic tumors
  - 3.10.3. Detection of small lesions



*With this university program you will have access to the best multimedia content 24 hours a day, 7 days a week”*



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 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 Duodenopancreatic Trauma and Pathology 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 Duodenopancreatic Trauma and Pathology** contains the most complete and up-to-date scientific 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 Duodenopancreatic Trauma and Pathology**

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  
development language  
virtual classroom



**Postgraduate Diploma**  
Duodenopancreatic Trauma  
and Pathology

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

# Postgraduate Diploma

## Duodenopancreatic Trauma and Pathology

