

# Postgraduate Certificate

## Study and Diagnosis of the Biliary Tract



## Postgraduate Certificate Study and Diagnosis of the Biliary Tract

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/study-diagnosis-biliary-tract](http://www.techtute.com/us/medicine/postgraduate-certificate/study-diagnosis-biliary-tract)

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# 01

# Introduction

The study and diagnosis of the biliary tract are essential for the proper management of various diseases that affect the anatomical apparatus. Its analysis allows the identification of obstructions and specific pathologies of the Gallbladder. Likewise, thanks to these clinical evaluations, specialists can determine liver function, monitor chronic ailments and even plan surgical interventions. For this reason, physicians must remain up-to-date on the main innovations in this field. TECH has brought together the latest healthcare criteria and technologies that are gradually making their way into this area of healthcare in a disruptive program. The university program stands out for integrating practical cases with a 100% online methodology, without rigid schedules that graduates will be able to complete from anywhere in the world.





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*You will learn in depth the advantages of the laparoscopic approach to solve biliary pathologies in complex patients through the contents of this program"*

In society, cases of diseases related to the biliary tract are increasing every day. An example of this is Cholangitis, Pancreatitis and Cholangiocarcinomas. Given this, surgeons have a responsibility to research the latest trends in this field in order to provide the best services to patients. However, the most recent scientific evidence on this subject is not always accessible for self-study. Therefore, it is a real challenge for professionals who seek to combine their daily work with academic updating.

In this context, TECH distinguishes itself in the university scene by offering an innovative program that will allow specialists to catch up on the latest trends in anatomy, physiology and pathologies affecting the biliary tract. Under the supervision of a prestigious teaching staff, the syllabus covers in detail the symptoms and fundamental causes of conditions such as the formation of stones in the gallbladder. In this way, students have direct access to the most effective treatments and strategies to personalize therapy for each patient according to their medical history. In addition, the syllabus covers preoperative planning through various advanced techniques such as retrograde cholangiopancreatography.

On the other hand, in order to reinforce these contents, the methodology of this program reinforces its innovative character. TECH offers a 100% online educational environment, tailored to the needs of busy professionals seeking to advance their careers. It also employs the Relearning methodology, based on the repetition of key concepts to fix knowledge and facilitate learning. In this way, the combination of flexibility and a robust pedagogical approach makes it highly accessible. Students will also have access to a library full of multimedia resources in different audiovisual formats.

This **Postgraduate Certificate in Study and Diagnosis of the Biliary Tract** contains the most complete and up-to-date scientific program on the market. The most important features of the include:

- ♦ The development of case studies presented by experts in Study and Diagnosis of Biliary Tract
- ♦ 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



*Expand your knowledge of rare gallbladder tumors with TECH, the world's best digital university according to Forbes"*



*You will achieve your objectives thanks to TECH's didactic tools, among which the explanatory videos and interactive summaries stand out"*

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

Its 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 education programmed to learn 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.

*Do you want to expand your knowledge in Radiology? Master the technique of Transhepatic Percutaneous Cholangiography in only 6 weeks.*

*Learn more about robotic surgery and handle new therapeutic approaches to lithiasic pathology.*



# 02 Objectives

This training will introduce students to a detailed analysis of the anatomy, physiology and pathologies affecting the biliary tract. Focusing on advanced imaging techniques, the syllabus will enable students to accurately assess biliary anatomy and diagnose disorders. To this end, the syllabus will explore the interpretation of liver tests and biomarkers related to biliary function. In addition, clinical cases will be explored in order for students to improve their decision-making skills in the identification of this type of pathology.





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*You will analyze clinical cases under the support of a renowned faculty, to ensure the success of your learning”*



## 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 pathologic 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 welfare
- ♦ Stimulate interest in pancreatic disease research and promote constant updating on therapeutic and technological advances





## Specific Objectives

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- ◆ Establish a solid understanding of the normal anatomy and physiology of the biliary tract, including the gallbladder, bile ducts and sphincter of Oddi
- ◆ Become familiar with specific imaging techniques for the evaluation of the biliary tract, such as cholangiography and cholangioresonance imaging
- ◆ Develop the ability to identify and classify different disorders affecting the duct
- ◆ Become familiar with non-invasive diagnostic methods, such as ultrasound and computed tomography, for a complete evaluation of the biliary tract
- ◆ Understand the interpretation of specific laboratory tests related to bile duct function, such as liver tests and bilirubin levels
- ◆ Keep up-to-date with emerging diagnostic technologies, such as liver elastography, to improve diagnostic accuracy



*Acquire knowledge without geographical limitations or pre-established timing"*

# 03

## Course Management

In keeping with its philosophy of providing the highest quality education, TECH brings together a teaching staff of international prestige. These professionals have extensive professional experience and have worked in renowned hospitals. In this sense, they stand out for their extensive knowledge regarding the study and diagnosis of the biliary tract. In addition, throughout the course they provide the most modern technological tools in this market so that students can enrich their knowledge and acquire new skills. Students have the guarantees they need to expand their knowledge and offer their patients the best services.



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*Stay updated to improve medical practice with your patients. Experience leap in your professional career with TECH!"*

## Management



### Dr. Al Shwely Abduljabar, Farah

- ♦ Head of the Hepatobiliopancreatic Surgery Unit of the University Hospital of Guadalajara
- ♦ PhD 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
- ♦ Official Master's Degree in Hepatology and Clinical Research at the University of Barcelona
- ♦ Official 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 and Annals of Clinical Cytology and Pathology



## Professors

### Dr. Díaz Candelas, Daniel Alejandro

- ◆ Specialist in General and Digestive System Surgery, University Hospital of Guadalajara, Mexico
- ◆ Postgraduate Diploma in Bases in Esophagogastric Surgery
- ◆ Degree in Medicine from the Central University of Venezuela
- ◆ Professor at the University Hospital of Guadalajara

### Dr. Bajawi, Mariam

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



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

## Structure and Content

Through a comprehensive module, this program will promote the practical application of knowledge in clinical situations, including the evaluation of biliary obstructions and preoperative planning. Students will employ the use of new emerging technologies (such as magnetic resonance cholangiopancreatography) to improve diagnostic accuracy. The syllabus will go in depth into the clinical history, emphasizing the medical history and risk factors that contribute to the appearance of this pathology. In addition, it will address the imaging study by means of innovative instruments such as abdominal ultrasound. In this way, students will detect diseases such as cholelithiasis or choledocholithiasis.





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*With the Relearning system you will integrate the concepts in a natural and progressive way”*

## Module 1. Study and Diagnosis of the Biliary Tract

- 1.1. Surgical and vascular anatomy of the biliary tract
  - 1.1.1. Liver
  - 1.1.2. Gallbladder
  - 1.1.3. Cystic duct
- 1.2. Physiology of bile
  - 1.2.1. Production
  - 1.2.2. Storage
  - 1.2.3. Functions
- 1.3. Pathophysiology of the gallbladder and biliary tract
  - 1.3.1. Calculations
  - 1.3.2. Tumours
  - 1.3.3. Others
- 1.4. Clinical history, laboratory tests in the patient with biliary pathology
  - 1.4.1. Medical history
  - 1.4.2. Risk Factors
  - 1.4.3. Conclusions
- 1.5. Imaging study of the biliary tract
  - 1.5.1. Abdominal ultrasound
  - 1.5.2. Cholangiography by Magnetic Resonance (MRCP)
  - 1.5.3. Abdominal Computed Tomography (CT)
- 1.6. Colelitis  
  - 1.6.1. Coledocolitis
  - 1.6.2. Causes
  - 1.6.3. Symptoms





- 1.7. Endoscopic treatment of choledocholithiasis
  - 1.7.1. Endoscopic Retrograde Endoscopic Cholangiopancreatography (ERCP)
  - 1.7.2. Echoendoscopy
  - 1.7.3. Others
- 1.8. Interventional radiology in the diagnosis of biliary tract pathology
  - 1.8.1. Transhepatic Percutaneous Transhepatic Cholangiography (TPC)
  - 1.8.2. Magnetic Resonance Cholangiography (MRCP) with MRI Cholangiography
  - 1.8.3. Endoscopic Retrograde Endoscopic Cholangiopancreatography (ERCP)
- 1.9. Surgical management of lithiasic pathology of the biliary tract
  - 1.9.1. Description
  - 1.9.2. Advantages
  - 1.9.3. Procedures
- 1.10. New therapeutic approaches to biliary tract lithiasic pathology
  - 1.10.1. Laparoscopic approach
  - 1.10.2. Robotic Surgery
  - 1.10.3. Others

“Acquire knowledge without geographical limitations or pre-established timing”

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.

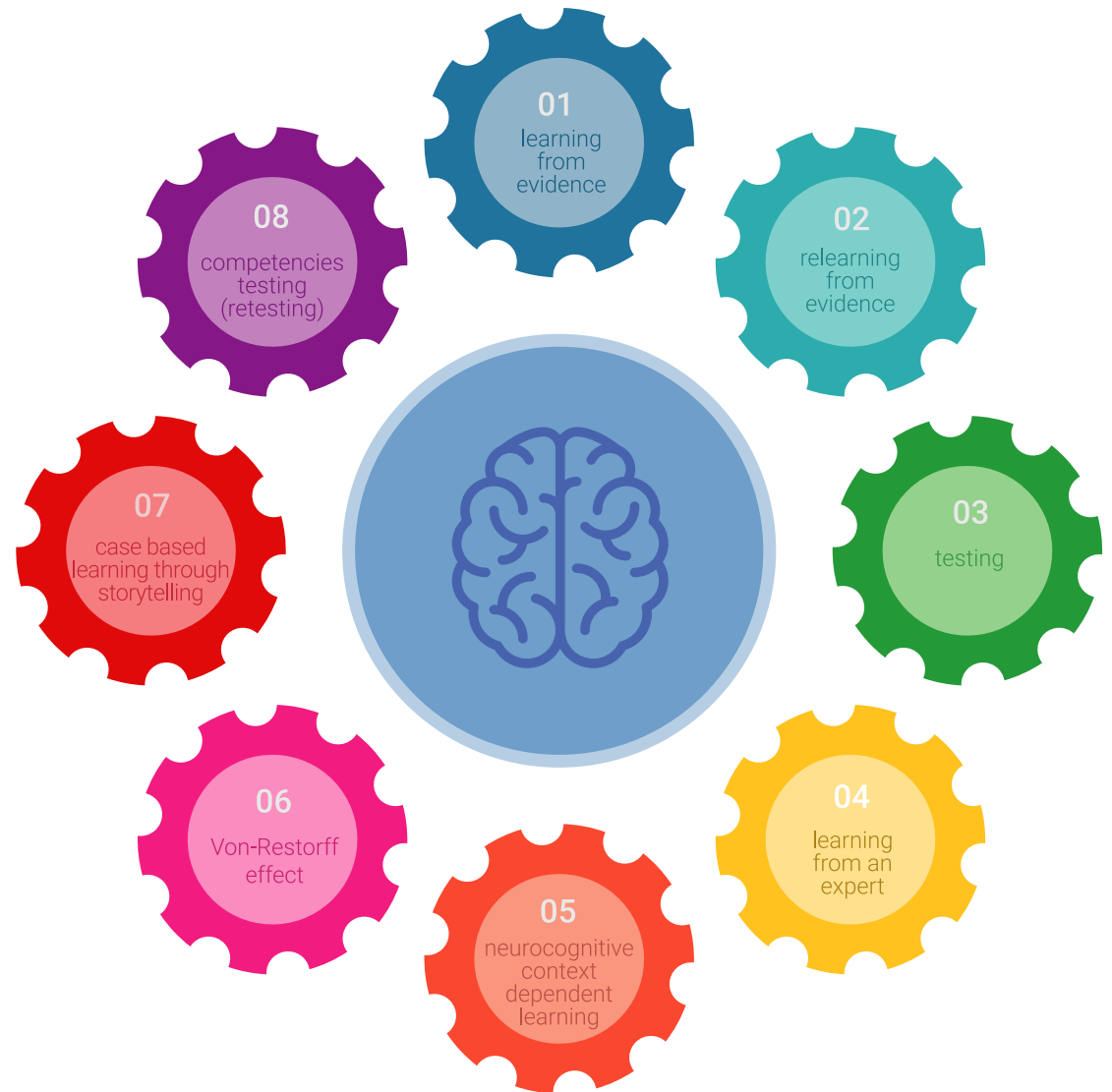


## Relearning Methodology

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.

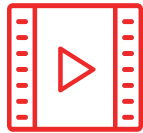
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

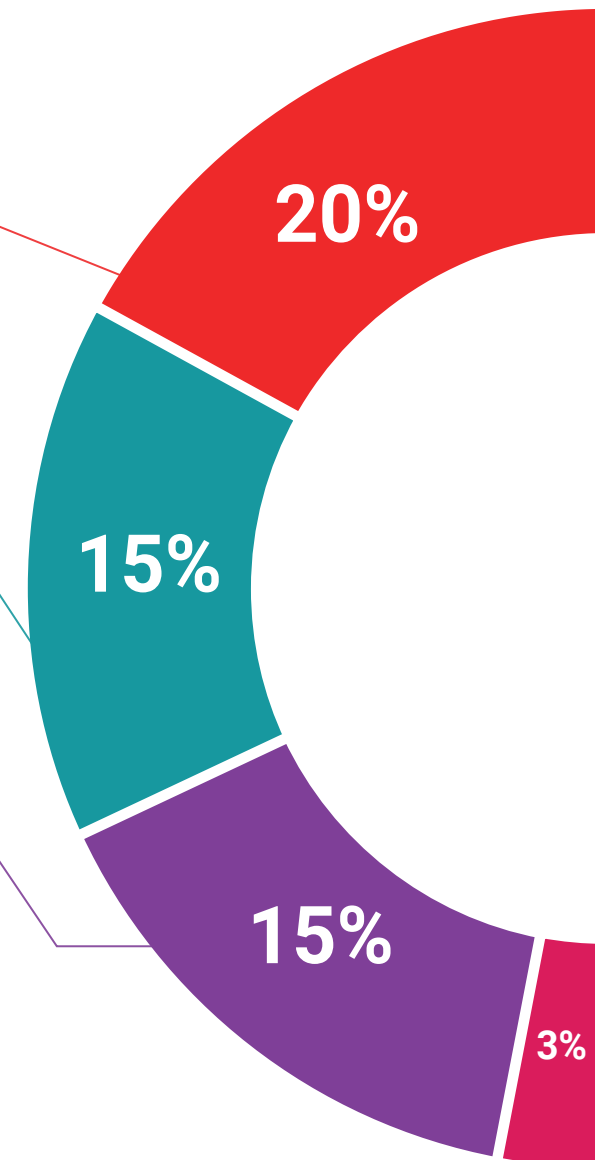
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

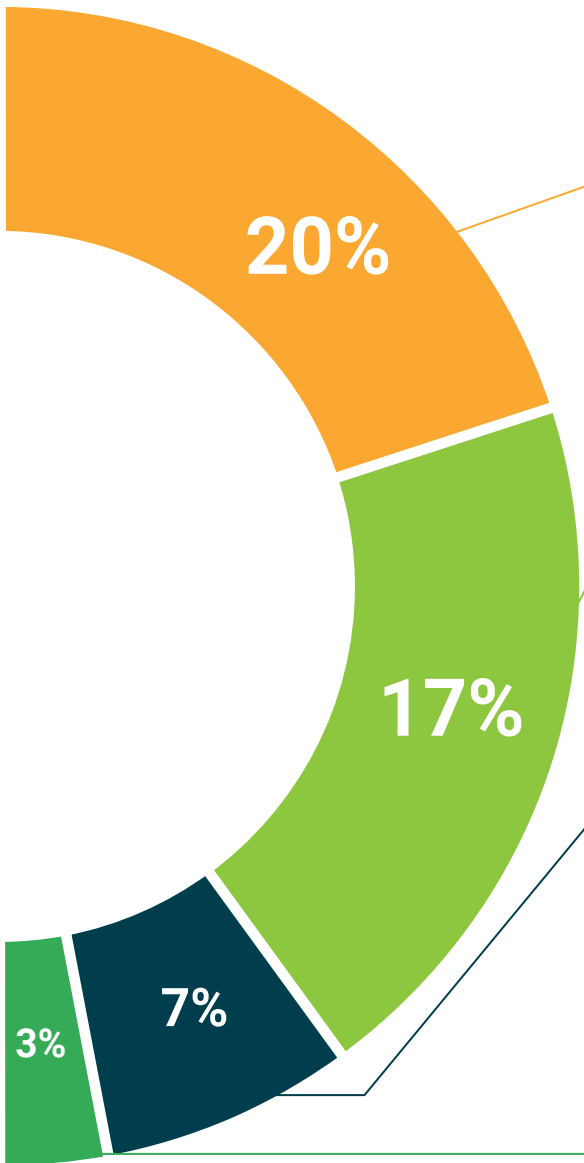
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Certificate in Study and Diagnosis of the Biliary Tract guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in Study and Diagnosis of the Biliary Tract** 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 Certificate** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Study and Diagnosis of the Biliary Tract**

Official N° of Hours: **150 h.**



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



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