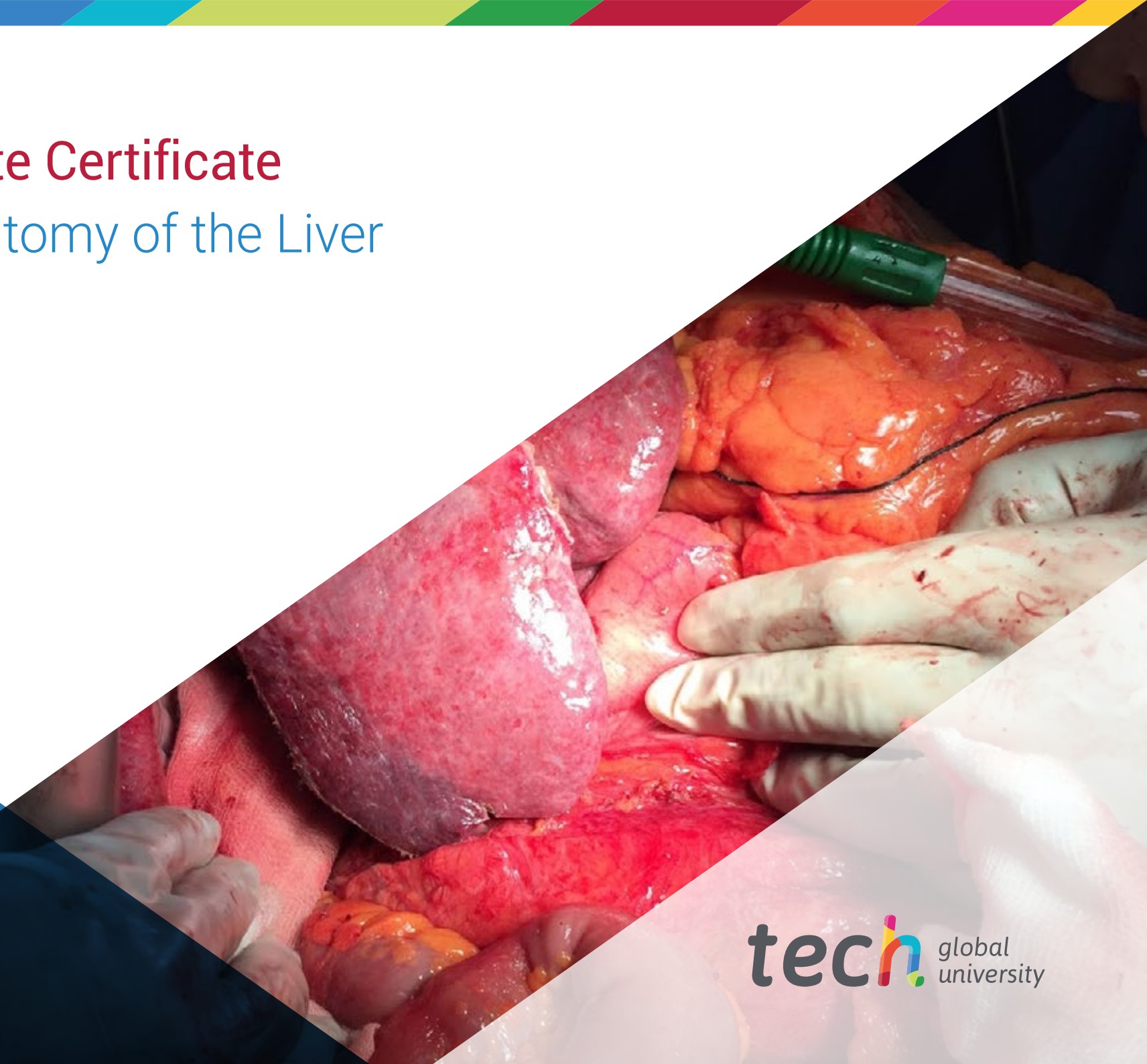


# Postgraduate Certificate

## Surgical Anatomy of the Liver





## Postgraduate Certificate Surgical Anatomy of the Liver

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/surgical-anatomy-liver](http://www.techtute.com/us/medicine/postgraduate-certificate/surgical-anatomy-liver)

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# 01

# Introduction

In a medical context characterized by the growing advance of health technologies, such as robotic surgery, the need for health professionals to keep up to date becomes imperative. In this sense, this type of innovation requires specialists duly specialized in surgical anatomy to take full advantage of it. Under this scenario, this TECH program emerges as a fundamental response to meet this growing demand. The educational itinerary is designed to provide professionals with the specific skills necessary to address the complexities of liver surgery. In addition, the fully online syllabus methodology offers flexibility necessary for professionals to access education without compromising other professional responsibilities.





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*Take advantage of the opportunity and get up to date on the latest trends in hepatic vascularization with TECH's comprehensive syllabus”*

Controlling bleeding or hemostasis in anatomical-surgical processes of the liver is one of the most effective trends to minimize the risk of complications. In order to achieve this reduction of potential bleeding, medical sciences are constantly innovating, searching for more efficient hemostatic agents. Currently, absorbable gelatins and tissue adhesives are cutting-edge exponents in this field that promote coagulation and facilitate healing. However, physicians face difficulties in keeping up to date with these state-of-the-art materials and healthcare resources, which hinders their professional excellence.

For this reason, TECH offers this Postgraduate Certificate in Surgical Anatomy of the Liver. Through it, specialists will expand their mastery of the management of anatomical variations relevant to surgical interventions. This approach not only prepares graduates for diverse clinical situations, but also promotes the planning and execution of more precise techniques. In addition, it covers laparoscopic liver surgery, providing professionals with an exhaustive mastery of the most advanced equipment in this field of medicine.

In terms of study methodology, the university program provides a unique, accessible and completely online updating experience. This modality allows physicians to access the program from anywhere, adapting to their schedules and professional responsibilities. On the other hand, the inclusion of the *Relearning* methodology reinforces the retention of key concepts, ensuring that professionals not only acquire knowledge, but also acquire a holistic view of the most disruptive trends in this field and its most innovative applications.

This **Postgraduate Certificate in Surgical Anatomy of the Liver** 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 Surgical Anatomy of the Liver
- ♦ 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



*You will renew your knowledge  
in the anatomy of the biliary  
tree through 150 hours  
of the best online teaching"*

“

*You will delve into vascular control techniques in liver surgery without geographical limitations or pre-established schedules”*

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 course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Forget about memorizing!  
With the Relearning system  
you will integrate the concepts  
in a natural and progressive way.*

*In this university program you will have  
access 24 hours a day to a library full  
of multimedia resources in different  
audiovisual formats.*



# 02 Objectives

The main objective of this university program is to keep graduates up to date in the use of innovative hemostatic agents in liver surgery. Throughout the program, graduates have the opportunity to delve into a syllabus designed to provide an up-to-date knowledge of the Surgical Anatomy of the Liver. This purpose ensures that health professionals are provided with the most advanced skills and competencies, developing safer and more effective medical practices, as well as the application of the most current technologies.







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*You will address the latest developments in the management of bleeding in liver surgery throughout this very complete educational pathway"*



## General Objectives

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- ◆ Develop a thorough understanding of the normal anatomy of the liver, including vascular distribution, hepatic segmentation and anatomical relations
- ◆ Establish a solid foundation in normal liver physiology in order to facilitate the 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 well-being



*You will achieve your objectives thanks to TECH's teaching tools and a wide range of materials in multimedia format*





## Specific Objectives

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- ◆ 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 hepatic interventions
- ◆ Acquire specific skills for laparoscopic liver surgery, considering the anatomy in a minimally invasive environment
- ◆ Encourage active participation through practice in virtual anatomical dissection, case studies and interactive discussions

# 03

## Course Management

This university program brings together the best specialists, carefully selected by TECH. This faculty is made up of professionals with extensive experience, forged in leading hospitals in the field of liver surgery. Each member of the team brings in-depth, up-to-date clinical experience, ensuring that students receive the highest quality education backed by the latest advances in the surgical anatomy of the liver. The meticulous selection of this faculty ensures a practical and specialized perspective that will enrich the learning experience of healthcare professionals.





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*You will delve into the ultrasound examination of the liver anatomy from the hands of leading experts in the field”*

## International Guest Director

Surgery and liver transplantation are the fields of research to which the eminent French physician and researcher Eric Vibert has devoted his professional career. For almost three decades, this expert has been involved in the holistic approach to primary liver cancer. Based on these interests, he has positioned himself as a true reference in this field, making significant contributions.

Dr. Vibert also leads a consortium called BOPA, which includes the University Paris-Saclay, the Ecole Mines Télécom and the Hepatobiliary Center of the Paul-Brousse Hospital (AP-HP). The aim of this project is to improve safety in operating rooms. To this end, its innovations are based on digital technologies, in gestation or already existing, which make it possible to increase the range of vision, speech and touch of the medical staff before any type of operation. These contributions, first implemented in simulated surgical rooms, have allowed the validation of multiple disruptive procedures.

In addition, this scientific pioneer is committed to connecting professionals from different fields in order to reinvent surgical practices. That is why his teams bring together engineers and computer scientists, as well as physicians, anesthesiologists, nurses and many other specialists. A work strategy that he continually integrates into his responsibilities and into the leadership of the Department of Surgery and Liver Transplantation at the Paul-Brousse de Villejuif Hospital in Paris.

In terms of academic impact, Dr. Vibert has more than 130 communications at international conferences and 30 plenary lectures. He also has an impressive H-index of 43, having authored 212 publications in first impact journals. He is also the author of the book *Droit à l'Erreur, Devoir de Transparence*, which deals with transparency and error management in medicine, and is the creator of the *Week-End de l'Innovation Chirurgicale*, with which he has left an everlasting medical-surgical mark.



## Dr. Vibert, Eric

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- Chief of Surgery and Liver Transplantation at the Paul-Brousse de Villejuif Hospital, Paris, France
- Head of the Surgical Innovation Group at the University of Paris Sud
- Specialist in Liver and Biliary Tract Cancer Surgery
- Head of the Surgical Innovation Group of GH Paris Sud
- Director of Research, Biomedical/Medical Engineering at the University Paris-Sud
- Creator and Organizer of the Week-End de l'Innovation Chirurgicale
- Doctor of Medicine, St. Antoine Faculty of Medicine, University Paris VI

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*Thanks to TECH you will be able to learn with the best professionals in the world”*

## Management



### Dr. Al Shwely Abduljabar, Farah

- ♦ Head of the Hepatobiliopancreatic Surgery Unit at the Puerta de Guadalajara Hospital
- ♦ 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
- ♦ Official Master's Degree in Hepatology and Clinical Research from the University of Barcelona
- ♦ Official Master's Degree in Medical Expertise and Bodily Injury Assessment 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. Catalán Garza, Vanessa

- ◆ 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
- ◆ Degree in Medicine from the University of Zaragoza

### Dr. Bajawi, Mariam

- ◆ Specialist in General and Digestive System Surgery at the University Hospital of Guadalajara
- ◆ General and Digestive System Surgery Clinical Professor
- ◆ Doctorate in Health Sciences, University of Alcalá de Henares
- ◆ 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

### Dr. López Marcano, Aylhin

- ◆ Physician at 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 the Luis Razetti School of Medicine
- ◆ Degree in Medicine from the Central University of Caracas

# 04

## Structure and Content

This Postgraduate Certificate will allow physicians to update their skills specific to laparoscopic liver surgery, emphasizing the crucial consideration of anatomy in a minimally invasive environment. Throughout the course, students will acquire detailed knowledge of liver anatomy and develop precise skills to approach surgical interventions using laparoscopic techniques. This comprehensive approach not only responds to the growing relevance of minimally invasive liver surgery, but also ensures that professionals are prepared with the necessary skills to perform minimally invasive liver surgery.





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*You will master the most relevant aspects related to the pioneering technique of embryonic liver development with this unique university program"*

## 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 Connections of the Liver
  - 1.2.1. Superior Connections
  - 1.2.2. Anterior Connections
  - 1.2.3. Lateral Connections
- 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. Division into Eight Segments
  - 1.5.3. Clinical Significance
- 1.6. Ultrasound Examination of the Liver Anatomy
  - 1.6.1. Position of the Patient
  - 1.6.2. Ultrasonic Probe
  - 1.6.3. Examination of the Liver
- 1.7. Type of Hepatic Anatomical Approaches
  - 1.7.1. Hepatectomy
  - 1.7.2. Segmentectomy
  - 1.7.3. Wedge resection





- 1.8. Bleeding Management in Liver Surgery
  - 1.8.1. Use of Hemostats and Sealants
  - 1.8.2. Suture Techniques
  - 1.8.3. Blood Transfusion
- 1.9. Techniques of Vascular Control in Liver 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 Gelatins
  - 1.10.3. Tissue Adhesives



*A Postgraduate Certificate designed with a 100% online approach with Relearning methodology to provide you with a flexible and effective learning experience"*

# 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 Surgical Anatomy of the Liver guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This program will allow you to obtain your **Postgraduate Certificate in Surgical Anatomy of the Liver** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra (*official bulletin*). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program

Title: **Postgraduate Certificate in Surgical Anatomy of the Liver**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**







## Postgraduate Certificate Surgical Anatomy of the Liver

- » Modality: online
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- » Schedule: at your own pace
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# Postgraduate Certificate

## Surgical Anatomy of the Liver

