

# Advanced Master's Degree Clinical Hepatology





## Advanced Master's Degree Clinical Hepatology

Course Modality: **Online**

Duration: **2 years**

Certificate: **TECH Technological University**

Official N° of hours: **3,000 h.**

Website: [www.techtute.com/medicine/advanced-master-degree/advanced-master-degree-clinical-hepatology](http://www.techtute.com/medicine/advanced-master-degree/advanced-master-degree-clinical-hepatology)

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# 01

# Introduction

Hepatology, together with gastroenterology, is one of the medical disciplines that has undergone the most recent transformations. The rise of fields such as epigenetics, progress in liver transplants and improvements in the management of viral hepatitis have produced numerous changes in these areas, so that specialists now have the opportunity to incorporate the most innovative tools in this field into their work, thanks to this program. Through its 100% online methodology and its prestigious teaching staff, the professional will be completely updated, enjoying at the same time the best multimedia resources such as case studies, video procedures or master classes among others.





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*This program integrates the most advanced knowledge in Clinical Hepatology and gastroenterology, and will allow you to delve into the latest developments in the cardiomyopathy of the cirrhotic"*

The increasing complexity of hepatology and gastroenterology has brought with it a great advance in diagnostic methods, treatments and surgical interventions in these fields. Thus, these disciplines have now integrated numerous highly effective solutions for pathologies that are difficult to treat, making it necessary for specialists to update their knowledge immediately.

For this reason, this program has been designed to incorporate all the innovations in this medical area, providing the professional with a complete update. Thus, throughout this Advanced Master's Degree, it will be possible to learn about the latest developments in issues such as risk factors and screening for hepatocellular carcinoma, clinical manifestations and prognostic models of liver cirrhosis, non-cirrhotic portal hypertension or the role of the gastrointestinal tract in pediatric oncohematology.

All of this is based on an online learning system especially designed for working professionals, as it will adapt to the personal circumstances of the doctor, allowing them to study when and where they wish, without rigid schedules or uncomfortable travel. It will also have the latest content presented through different multimedia formats and will receive the support and guidance of a teaching staff made up of leading experts in these disciplines.

This **Advanced Master's Degree in Clinical Hepatology** contains the most complete and up-to-date scientific program on the market. The most important features include:

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



*You will enjoy the best multimedia resources to get you up to speed quickly: video procedures, case studies, interactive summaries..."*

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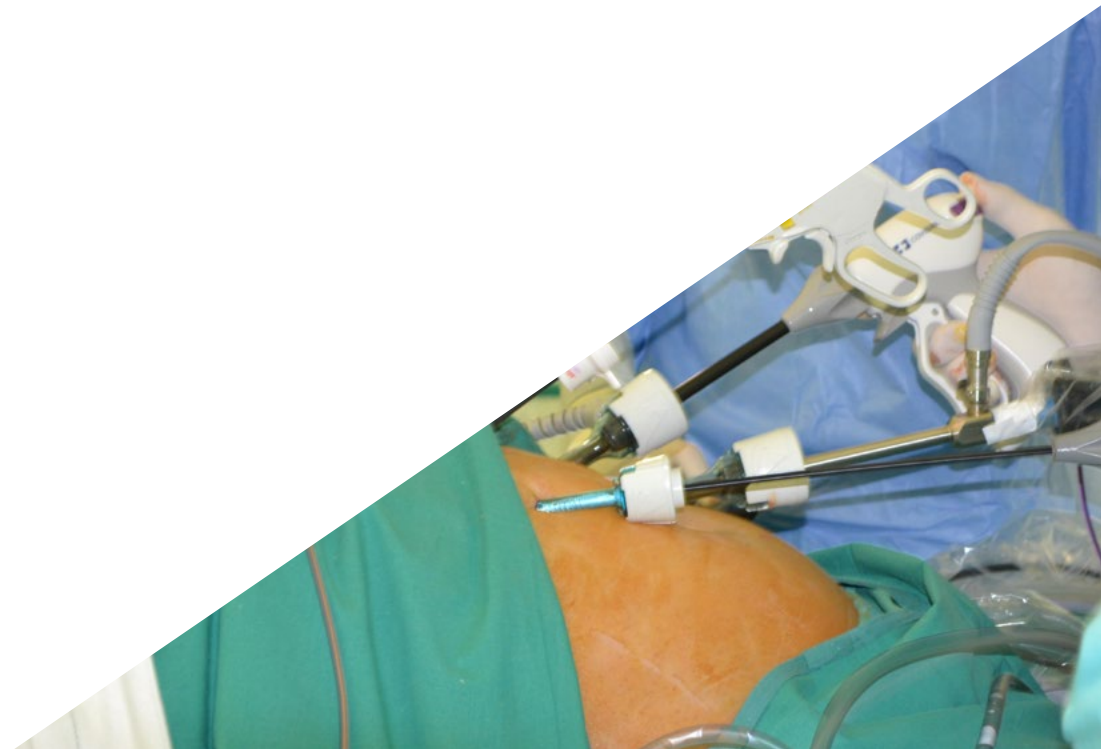
*Update your knowledge in hepatology in a quick and easy way thanks to the online methodology this Advanced Master's Degree, which will allow you to combine your studies with your work without being subject to rigid schedules"*

Its teaching staff includes professionals belonging to the field of medicine, who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

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

*Learn, thanks to this program, the latest developments in acute and chronic rejection in liver transplantation.*

*A teaching staff of great prestige in the field of hepatology will accompany you throughout the learning process.*



# 02 Objectives

The main objective of this Advanced Master's Degree in Clinical Hepatology is to provide the specialist with the most up-to-date knowledge in this area, so that they can immediately integrate it into their daily work. And, to achieve this goal, TECH offers complete and innovative content, a teaching staff of recognized international prestige, an innovative learning methodology and cutting-edge teaching resources.







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*Get up to date from the comfort of your home or office thanks to TECH's innovative methodology"*



## General objectives

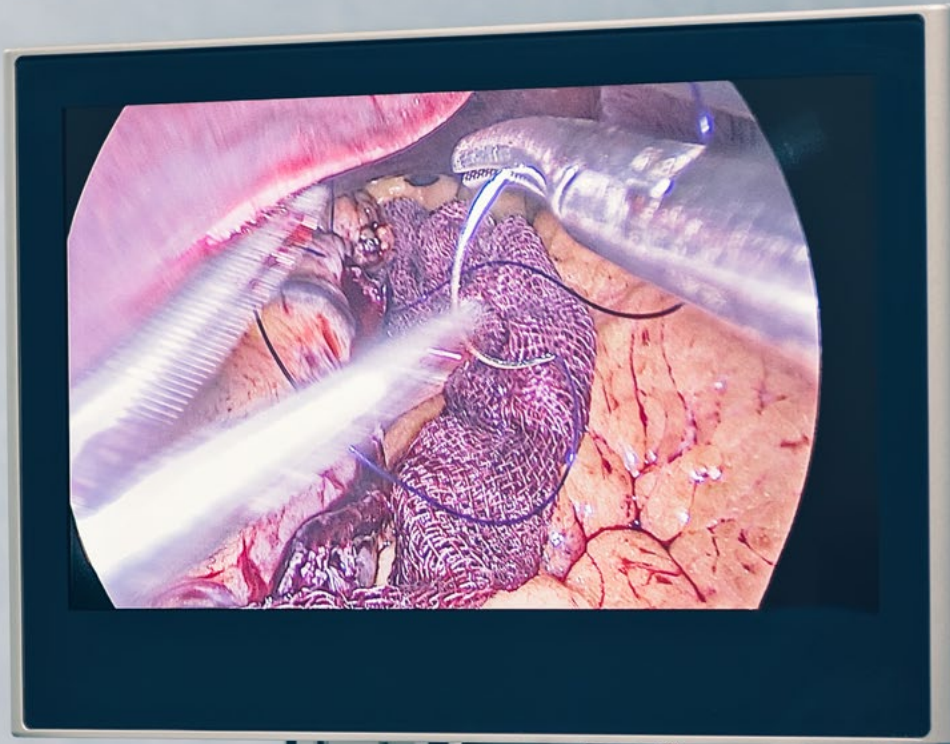
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- ◆ Expand the specialist's knowledge in the management of patients with liver disease, taking into account the latest advances in the field of hepatology, in order to provide quality and safe care and to improve the prognosis of the disease
- ◆ To update the knowledge of the pediatrician with special preparation and interest in the field of pediatric gastroenterology
- ◆ Promote work strategies based on a comprehensive approach to the patient as a standard model for achieving excellent care
- ◆ Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training
- ◆ Encourage professional stimulation through continued education and research



*This program will allow you to get up-to-date in HCC liver resection and immunosuppression in liver transplantation"*





## Specific objectives

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### Module 1. Diagnostic Methods and Research Techniques

- ◆ Identify the updated diagnostic criteria for liver diseases and develop a correct differential diagnosis strategy
- ◆ Explain the main laboratory techniques used in basic research
- ◆ Analyze the different useful imaging techniques in the diagnosis of the main cholestatic diseases and the current treatment options
- ◆ Define the rationale, indications, limitations, and cost-effectiveness of diagnostic tests used in Hepatology

### Module 2. Viral Hepatitis

- ◆ Explain how to manage patients with chronic hepatitis undergoing antiviral treatment
- ◆ Describe the pathogenic basis of viral hepatitis, its diagnosis, and treatment

### Module 3. Autoimmune Hepatitis and Cholangitis

- ◆ Describe the clinical utility of MR Cholangiography

### Module 4. Alcoholic Liver Disease and Metabolic Hepatic Steatosis

- ◆ Know the particularities of the alcoholic liver disease, deepening the knowledge of Cirrhosis OH

### Module 5. Hepatic Cirrhosis I

- ◆ Address the imaging diagnosis of cirrhosis, portal hypertension, and hepatic vascular disease

### **Module 6. Hepatic Cirrhosis II**

- ◆ Point out the recommended and dangerous drugs in liver cirrhosis as well as dietary advice

### **Module 7. Other Metabolic Liver Diseases**

- ◆ Address pathologies such as Wilson's disease or hepatic porphyria

### **Module 8. Liver Tumors**

- ◆ Describe the epidemiology of hepatocarcinoma and its risk factors
- ◆ Analyze the curative treatments for intermediate and advanced hepatocarcinoma

### **Module 9. Liver Transplant**

- ◆ Describe the principles for selecting liver transplant candidates, the surgical basis of transplantation, immunosuppressive drugs, and the short and long-term management of the liver transplant patient
- ◆ Describe the principles for selecting candidates for pediatric liver transplantation and the short and long-term management of the patient
- ◆ Address the coordinated management of liver transplant patients in Primary Care

### **Module 10. Miscellaneous: Hepatic Vascular Diseases, Hepatotoxicity, Hepatic Pathology in Pregnancy**

- ◆ Management of non-cirrhotic portal hypertension
- ◆ Master the approaches to Budd-Chiari syndrome

### **Module 11. Advances in Food Allergy and Eosinophilic Disorders**

- ◆ Update knowledge about the pathophysiology of food allergy
- ◆ Conduct a review of the current global epidemiology of food allergy and its possible clinical presentations
- ◆ Analyze the current diagnostic possibilities of food allergy and update knowledge of international protocols
- ◆ Update knowledge of current and developing therapeutic possibilities in the field of food allergy
- ◆ Know current food allergy prevention measures and the current research base
- ◆ Learn about primary eosinophilic disorders in their pathophysiological, epidemiological, diagnostic, therapeutic and preventive aspects

### **Module 12. Update on Functional Digestive Disorders**

- ◆ Have in-depth knowledge of the pathophysiological, epidemiological, diagnostic, therapeutic and preventive aspects of the food protein-induced enterocolitis syndrome
- ◆ Update the knowledge of functional digestive disorders and the corpus of Neurogastroenterology
- ◆ Learn about the pathophysiology of pediatric functional digestive disorders
- ◆ Understand the behavior and influence of the intestinal ecosystem on disease and health
- ◆ Learn about the influence of sociocultural aspects on functional digestive disorders



- ◆ Delve into functional digestive disorders from a biopsychosocial perspective
- ◆ Individual knowledge of functional digestive disorders in the neonatal stage and in infants
- ◆ Individual knowledge of functional digestive disorders in the school stage and in adolescents
- ◆ Learn about the advances in Pharmacology, Pharmacokinetics and Pharmacogenomics applied to functional digestive disorders in pediatric age

### **Module 13. New Perspectives in celiac disease**

- ◆ Learn about recent advances in the pathophysiology of celiac disease
- ◆ Learn about the current epidemiological situation of celiac disease
- ◆ Learn the clinical manifestations of celiac disease by devices and systems, as well as its associated diseases and complications
- ◆ Analyze in depth the current knowledge regarding non-celiac gluten hypersensitivity
- ◆ Learn about the possibilities and current diagnostic algorithms for celiac disease, as well as future avenues of work
- ◆ Be familiar with the new laboratory tests available in the diagnosis and follow-up of celiac disease
- ◆ Update knowledge on the treatment and prevention of celiac disease
- ◆ Analyze the current avenues of research into future therapeutic strategies in the field of celiac disease

### **Module 14. Inflammatory Bowel Disease. Present and Future**

- ◆ To update knowledge about the pathophysiology of inflammatory bowel disease (IBD)
- ◆ Update the diagnostic criteria for IBD at the clinical and technical level
- ◆ Learn about the existing diagnostic possibilities, their indications and interpretation, in relation to IBD
- ◆ Advanced management of Celiac Disease biomarkers
- ◆ Learn the activity rates of pediatric IBD and its evolution
- ◆ Learn about the pharmacological treatments available for IBD and current avenues of research
- ◆ Refining the nutritional management of inflammatory bowel disease
- ◆ Understanding the uses of probiotics in IBD
- ◆ Learn about updated IBD treatment algorithms

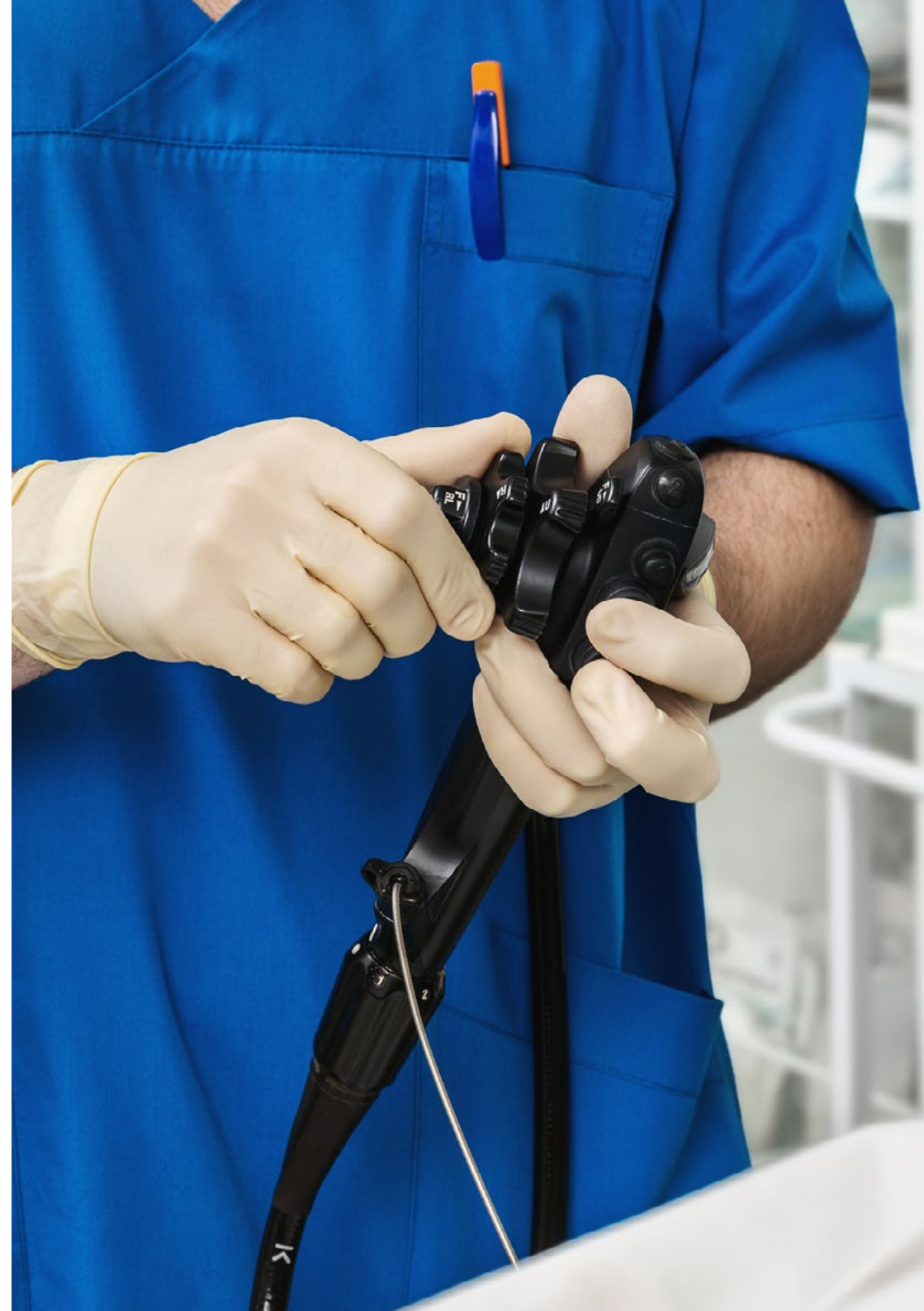
### **Module 15. Challenges in Esophageal and Gastric Pathology**

- ◆ Learn the management of perianal disease and reservoiritis
- ◆ Increase the knowledge about the complications of pediatric IBD and their management
- ◆ Know the extraintestinal manifestations of IBD in depth
- ◆ Update knowledge on the use of vaccines in the context of IBD
- ◆ Implement awareness of the psychosocial aspects of IBD and the use of transitional consultations

- ◆ Increase knowledge about congenital esophagogastric anomalies
- ◆ Define the current protocols for gastroesophageal reflux and esophagitis in pediatric patients
- ◆ In-depth analysis of esophago-gastric motor disorders
- ◆ Describe the guidelines for action in case of trauma, infections and esophagitis due to chemicals
- ◆ Update knowledge about peptic ulcer disease and gastritis
- ◆ Complete the body of knowledge on rare esophagogastric diseases
- ◆ Describe the management of esophago-gastric pathology in pediatric emergencies

#### Module 16. Update in Intestinal Pathology

- ◆ Identify congenital intestinal anomalies and their management
- ◆ To analyze in detail the alterations of digestion and absorption in pediatric age
- ◆ Detail intestinal motility disorders and their management
- ◆ Explain Hirschsprung's disease and intestinal dysplasias
- ◆ Learn how to manage different viral and bacterial intestinal infections in an updated way
- ◆ Learn how to manage in an updated way the different intestinal infections caused by parasites
- ◆ Learn how to manage the different intestinal fungal infections in an updated way
- ◆ Detail the current knowledge on neonatal necrotizing enterocolitis, approach and sequelae
- ◆ Update the available knowledge about intestinal polyps and their management
- ◆ Recognize gastrointestinal manifestations of systemic diseases and other extradigestive entities



**Module 17. Progress in Digestive and Hepatic Oncology**

- ◆ Recognize the importance of the digestive system in Pediatric Oncohematology and the pathophysiologic basis of the processes
- ◆ Detail liver tumors in pediatrics and their management
- ◆ Learn the diagnosis and management of abdominal oncologic emergencies
- ◆ Delve into the management of gastrointestinal complications of chemotherapy in children

**Module 18. Techniques in Pediatric Gastroenterology**

- ◆ Learn about gastrointestinal opportunistic infections and their management
- ◆ Explain pediatric gastrointestinal neoplasms and their management
- ◆ Delve into the nutritional assessment of patients with digestive and hepatopancreatic pathology
- ◆ Detail the possible biochemical determinations in blood, urine, feces and sweat related to Pediatric Gastroenterology and their interpretation
- ◆ Detail upper and lower gastrointestinal endoscopy in pediatric patients, its technique, applications and findings
- ◆ Delve into the pathological anatomy of biopsy specimens, their collection and interpretation
- ◆ Describe the different exhaled air tests available and their interpretation
- ◆ Learn the applications of capsuloendoscopy in pediatrics and how to interpret its findings
- ◆ Explain the applications of endoscopic retrograde cholangiopancreatography
- ◆ Delve into the indication and interpretation of the different radiological techniques at the abdominal level
- ◆ Learn the indications and interpretation of gastrointestinal and hepatobiliary ultrasound

- ◆ Update the knowledge about endorectal ultrasound in pediatrics
- ◆ Update the indications and interpretation of abdominal CT and MRI
- ◆ Learn about radioisotope studies, their indications and possibilities
- ◆ Learn how to interpret anorectal and esophageal manometry extensively
- ◆ Learn how to interpret esophageal pH-metry and impedancemetry extensively
- ◆ Define possible microbiological studies, indications and interpretation in digestive pathology

**Module 19. Gastrohepatology: New Paths Opening the Door to Innovation**

- ◆ Explain new molecular biology techniques and their applications
- ◆ Describe the indications for exploratory laparoscopy
- ◆ Delve into the knowledge of Chronobiology applied to the digestive system, its practical applications and future challenges
- ◆ Expand knowledge on the applications of Epigenetics in Pediatric Gastroenterology
- ◆ Describe the methods of study of the intestinal microbiota and their applications, as well as to delve into probiotic therapy
- ◆ Delve into the molecular, genetic and microbiological aspects of obesity, its current problems and the implication of gastroenterology in its approach
- ◆ Explain current technological advances in diagnostic instrumentation with a special focus on new endoscopic technologies
- ◆ Delve into the applications of Telemedicine for education and monitoring of patients with digestive pathology, with special emphasis on wearable devices
- ◆ Explain the different social networks and their potential usefulness in the field of Pediatric Gastroenterology

# 03 Skills

With this Advanced Master's Degree in Clinical Hepatology the professional will be able to update his competences in this medical discipline, while acquiring skills, tools and new procedures to deal with the different hepatological pathologies. In addition, this program also incorporates gastroenterology contents, so that the specialist will be able to update themselves in a complete and integral way, incorporating the best techniques for each case and patient in their work.







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*Update your skills thanks to this  
Advanced Master's Degree, specially  
designed for the active specialist"*



## General skills

- ◆ Develop within the Profession in terms of working with other Health Professionals, acquiring skills to work as a team
- ◆ Recognize the need to maintain your professional skills and keep them up to date, with special emphasis on autonomous and continuous learning of new information
- ◆ Develop the capacity for critical analysis and research in your professional field
- ◆ Possess knowledge and understanding that provides a basis or opportunity to develop and /or apply original ideas, often in a research context
- ◆ Apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study
- ◆ Integrate knowledge and face the challenge of making judgements based on incomplete or limited information. In addition, include reflections on the social and ethical responsibilities linked to implementing this knowledge and judgement
- ◆ Know how to communicate their conclusions, knowledge and reasons to specialized and non-specialized audiences in a clear and unambiguous way
- ◆ Acquire the learning skills that will enable them to continue studying in a manner that will be largely self-directed or autonomous



*You will learn the most advanced techniques to deal with highly complex hepatological pathologies such as the tumors which can affect this organ"*





## Specific skills

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- ◆ Describe the pathogenic basis of liver diseases
- ◆ Identify the latest advances in the field of hepatology
- ◆ Develop a correct differential diagnosis strategy based on updated diagnostic criteria for liver diseases
- ◆ Explain the treatment plan for the most prevalent acute liver diseases
- ◆ Explain the treatment plan for the most prevalent chronic liver diseases
- ◆ Identify the principles for selecting candidates for liver transplantation
- ◆ Determine the surgical basis of liver transplantation
- ◆ Differentiate the immunosuppressive drugs of choice in the treatment of liver diseases
- ◆ Address the short and long-term management of patients with a liver allograft
- ◆ Describe the indications and limitations of diagnostic tests used in Hepatology
- ◆ Determine the cost-effectiveness of the diagnostic techniques used in the different liver
- ◆ Understand the impact of the immune system on liver disease
- ◆ Manage patients with chronic hepatitis undergoing antiviral treatment
- ◆ Identify the main childhood liver diseases
- ◆ Explain the diagnostic management of the main liver diseases during pregnancy
- ◆ Determine the treatment of choice for pregnant women with liver diseases
- ◆ Manage scientific databases for carrying out reviews and bibliographic searches of scientific studies
- ◆ Formulate, implement, and evaluate standards, action guides and protocols specific to the field of Hepatology
- ◆ Perform a critical and in-depth study on a topic of scientific interest in the field of Hepatology
- ◆ Communicate result findings after having analyzed, evaluated, and synthesized the data
- ◆ Describe the advances in the field of Food Allergy and Eosinophilic Disorders in detail and their applications in routine clinical practice
- ◆ Identify functional digestive disorders and know their characteristics in pediatric age
- ◆ Describe the main characteristics of Celiac Disease in the pediatric age and to incorporate the advances established in recent years
- ◆ Incorporate new knowledge and approaches to pediatric inflammatory bowel disease
- ◆ Perform a comprehensive approach to esophageal and gastric pathology based on current advances
- ◆ Perform an in-depth approach to intestinal pathology according to current knowledge
- ◆ Improve knowledge on hepatobiliopancreatic pathology
- ◆ Identify the main elements of overlap between Pediatric Oncology and Oncohematology and Pediatric Gastroenterology
- ◆ Incorporate digestive pathology management techniques at a technical level in the diagnostic-therapeutic process, as well as in the monitoring of patients
- ◆ Value research and the incorporation of technological advances as the only way to progress in gastroenterology
- ◆ Describe current advances and new perspectives that open new avenues of development within Pediatric Gastroenterology
- ◆ Incorporate new technologies into daily practice, knowing their advances, limitations and future potential

# 04

# Course Management

Although any of the elements of this program could be highlighted, the teaching staff is one of the most important. It is composed of active specialists of great prestige in the area of Clinical Hepatology, and they have been carefully selected by TECH, which always seeks the best learning experience for the student. Thus, with this Advanced Master's Degree, the physician will be in the best hands to update themselves efficiently and quickly.







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*Top specialists will accompany you throughout the learning process, ensuring you get up to speed in the most effective way”*

## International Guest Director

Dr. Doan Y. Dao is an internationally recognized figure in the study and care of patients affected by Hepatitis B virus (HBV). As director of the Center of Excellence for Liver Disease in Vietnam (COE), he leads Johns Hopkins University's initiatives to help address the growing, urgent and significant disease burden of Liver Cancer caused by Hepatitis B in Vietnam.

As CEO, Dr. Dao is responsible for managing projects that contribute to the delivery of medical services to combat these diseases. This is an ongoing collaboration with the Johns Hopkins School of Medicine, where he also fosters scientific research and educational activities related to specialization in diagnosis and effective therapeutic treatments.

As a member of the Board of Directors of V-VHA (Vietnam Viral Hepatitis Alliance), he has played a crucial role in promoting clinical care and international scientific studies in HBV. In addition, he was co-chair of the National Task Force on Hepatitis B: Focus on Asian and Pacific Islander Americans, where he worked tirelessly to raise awareness of the condition.

He has received several awards throughout his career, such as the Hepatitis Fund for the Cure Postdoctoral Research Fellowship (2014), awarded by the American Liver Foundation; or the **Asian Heritage Award in Public Health** (2016), presented by the Asian Heritage Society of California. In addition, he was named **Everyday Hero** (2016) by the **American Liver Foundation**, thanks to his efforts in addressing Hepatitis B, both in the United States and Vietnam. His clinical training in Internal Medicine and Gastroenterology and Hepatology at UT Southwestern Medical Center in Dallas, Texas, along with his commitment to academic medicine, have allowed him to lead **groundbreaking research in search of a cure for HBV.**



## Dr. Dao, Doan Y

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- Director of the Center of Excellence for Liver Disease in Vietnam (COE) at the Johns Hopkins University School of Medicine
- Assistant Professor of Medicine, Division of Gastroenterology and Hepatology, at Johns Hopkins University School of Medicine
- *Co-Chair of the National Task Force on Hepatitis B: Focus on Asian and Pacific Islander Americans*
- Fellow in Internal Medicine, Gastroenterology and Hepatology at UT Southwestern Dallas Medical Center
- Medical Degree from UT Southwestern Medical Center at UT Southwestern Dallas
- Awards Received: *Hepatitis Fund for the Cure Postdoctoral Research Fellowship* (2014), por la *American Liver Foundation*, *Asian Heritage Award in Public Health* (2016), por la *Asian Heritage Society de California* y *Everyday Hero* (2016) por la *American Liver Foundation*
- He is a member of: *V-VHA (Vietnam Viral Hepatitis Alliance)*, *Hepatitis B Foundation* y *Dallas Fort Worth (DFW) Hepatitis B Free*



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

## Management



### Dr. García Samaniego, Javier

- ◆ Head of the Hepatology Department, La Paz University Hospital, Madrid
- ◆ Group Leader and Lead Researcher of the Hepatic and Digestive Diseases at the La Paz University Hospital/IdiPAZ. CIBERehd of the Carlos III Health Institute, Madrid
- ◆ Degree in Medicine from the University of Santiago
- ◆ Doctor from the Autonomous University of Madrid
- ◆ He has participated in numerous nationally and internationally funded research projects
- ◆ FIS and ANEP project evaluator
- ◆ He has been a member of the board of directors of the AEEH and of the Regional Ethics and Clinical Research Committee of the Community of Madrid
- ◆ Coordinator for the Spanish Guidelines for the treatment of hepatitis B promoted by the AEEH
- ◆ Lead investigator in more than 60 international clinical trials on the treatment of viral hepatitis





### **Dr. Negre Policarpo, Sergio**

- ◆ Head of the Pediatric Gastroenterology and Nutrition Section, Quirónsalud Valencia Hospital, Valencia
- ◆ Degree in Medicine from the University of Valencia
- ◆ MIR Specialist in Pediatrics and its specific areas at the La Fe University Hospital, Valencia. End of Residence Award
- ◆ PhD in Medicine and Surgery from the University of Valencia Cum Laude
- ◆ Associate Professor, San Vicente Mártir Catholic University of Valencia
- ◆ Member of the Spanish Society of Pediatric Gastroenterology, Hepatology, and Nutrition
- ◆ Member of the European Society of Pediatric Gastroenterology, Hepatology and Nutrition
- ◆ Member of the Spanish Association of Pediatrics
- ◆ Member of the Valencian Pediatrics Society
- ◆ Head of the Medical R&D Department of Wearables Inteligentes SL

## Professors

### Dr. Abadía, Marta

- ◆ Digestive System Attending. La Paz University Hospital
- ◆ Digestive System Specialist. Residence at La Paz University Hospital
- ◆ External rotation at the Hepatology and Liver Transplant Unit of the Clinic Institute of Digestive and Metabolic Diseases (Hospital Clinic de Barcelona)
- ◆ Degree in Medicine. Navarra University, Faculty of Medicine, Spain
- ◆ PhD from the Autonomous University of Madrid with outstanding mention CUMLAUDE for the thesis on "Non-invasive assessment of hepatic venous pressure gradient in patients with cirrhosis and portal hypertension following recovery from hepatitis C virus"
- ◆ EMILIO MOYANO Award for the best oral presentation at the XXVIII Jornada Nacional de Ecografía Digestiva: "Two-dimensional hepatic elastometry, shear wave, in the assessment of clinically significant portal hypertension"

### Dr. Andaluz, Irene

- ◆ Associate Professor in the Digestive Ultrasound Courses J.M Segura Cabral La Paz UH, Madrid
- ◆ Digestive System Specialist. La Paz University Hospital (Madrid)
- ◆ Degree in Medicine from the Faculty of Medicine at the Complutense University of Madrid
- ◆ Completion of the MIR Examination. Internal Medical Resident of the Digestive System at La Paz University Hospital
- ◆ Training Areas outside the Digestive System: Internal Medicine (5 months), COVID hospital ward (1 month), Emergency Department (1 month). Emergency Department on-call duty (2 years)
- ◆ Master's Degree in Clinical Reasoning and Practice, Alcalá University, Madrid

### Dr. Blesa Baviera, Luis

- ◆ Specialist in Pediatrics, CS Serrería II, Valenciab

### Dr. García Sánchez, Araceli

- ◆ Specialist in Digestive System Medicine. Gregorio Marañón General University Hospital (Madrid, Spain)
- ◆ Resident Medical Intern of Gastroenterology and Hepatology, Gregorio Marañón General University Hospital, Madrid, 1997-2001
- ◆ Graduate in Medicine and Surgery from the Universidad de Navarra
- ◆ Doctoral courses (32 credits) Department of Internal Medicine. Complutense University of Madrid
- ◆ Obtained the research sufficiency in the Department of Internal Medicine with the project: "Evaluation of the occurrence of non-organ-specific autoantibodies after liver transplantation and their implication in the occurrence of graft dysfunction and autoimmune diseases"

### Dr. González de Caldas Marchal, Rafael

- ◆ Infant Liver Transplant Program in the Andalusian Health System

### Dr. Madejón Seiz, Antonio

- ◆ Postdoctoral Researcher, Biomedical Research Networking Center (Centro de Investigación Biomédica en Red (CIBER))
- ◆ Training of medical personnel at drug addiction centers for early diagnosis and prison doctors to update strategies for the treatment approach to chronic hepatitis C in HIV mono- and co-infected patients"
- ◆ Degree in Biology
- ◆ Doctor in Biology from the Autonomous University of Madrid

**Dr. Romero, Miriam**

- ◆ FEA of Digestive System in Carlos III Hospital and La Paz University Hospital
- ◆ Vocal of the Clinical Research Ethics Committee of the the La Paz University Hospital
- ◆ Belongs to the CIBEREHD research network whose lead researcher is Dr. Javier García-Samaniego
- ◆ Lecturer in the AIDS Master's Degree program. Taught two classes: "Other hepatobiliary manifestations" and "Diagnostic algorithms in the HIV+ patient; Digestive syndromes"
- ◆ Specialist in Digestive System (Gastroenterology and Hepatology) at the Gregorio Marañón General University Hospital
- ◆ Doctor of Medicine and Surgery, from the Complutense University of Madrid
- ◆ Master's Degree in Hepatology. University of Alcalá and Autonomous University of Madrid
- ◆ "Expert in Probability and Statistics in Medicine" member of the health program organized by the UNED in collaboration with the University-Business Foundation

**Dr. Rodríguez Herrera, Alfonso**

- ◆ Specialist in Pediatric Gastroenterology, Hispalense Institute of Pediatrics, Pablo de Olavide University, Seville

**Dr. Pereda López, Antonio**

- ◆ Specialist in Pediatric Gastroenterology, La Fe Polytechnic and University Hospital, Valencia, Valencia

**Dr. Quiles Catalá, Amparo**

- ◆ Specialist in Pediatric Gastroenterology, Quirónsalud Valencia Hospital, Valencia

**Dr. Ynga Durand, Mario Alberto**

- ◆ Specialist in Allergy and Clinical Immunology, National Polytechnic Institute, Mexican Academy of Pediatrics
- ◆ Pediatrician Specialist
- ◆ Professor of the National Program for the Prevention of Chronic Degenerative Diseases

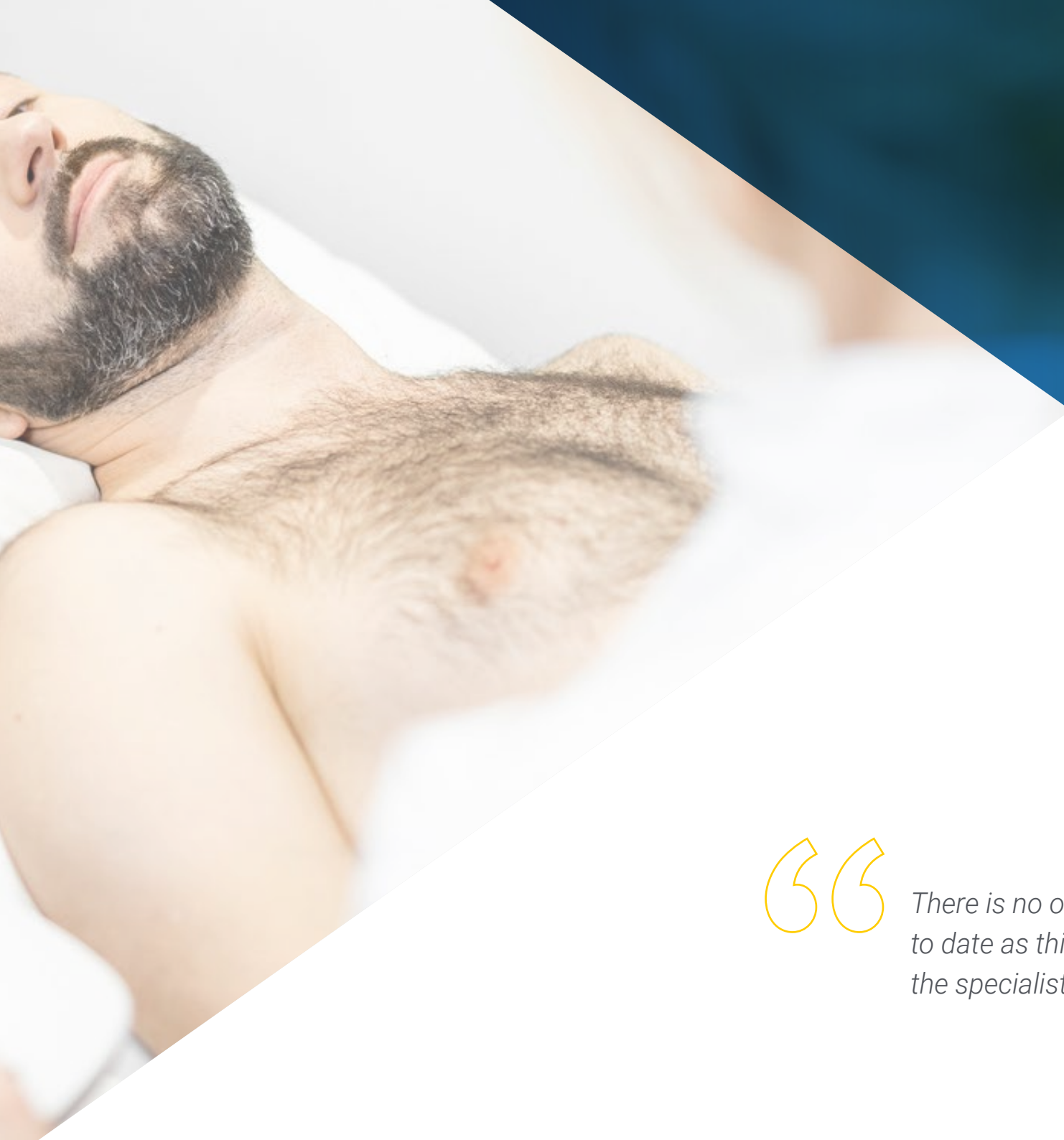
# 05

## Structure and Content

This program has been designed by leading specialists in hepatology and gastroenterology, who have structured it into 19 specialized modules. Thus, through this itinerary, the physician will be able to learn about the most recent advances in aspects such as portal venous thrombosis in patients with cirrhosis, surgical risk assessment in cirrhotic patients, advances in the pathophysiology of pediatric inflammatory bowel disease or epigenetics and pediatric gastroenterology, among others.







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*There is no other program as complete and up to date as this one which is solely focused on the specialist in Clinical Hepatology”*

### Module 1. Diagnostic Methods and Research Techniques

- 1.1. Introduction to Diagnostic Methods Hepatic Function and Prognoses
- 1.2. Hepatic Biopsy
- 1.3. Non-invasive methods for Assessing Hepatic Fibrosis
- 1.4. Diagnostic Imaging: Ultrasound, CT, MRI
- 1.5. Basic and Advanced Endoscopy
- 1.6. Introduction to Research Techniques in Hepatology
- 1.7. Animal and Cellular Models
- 1.8. Immunological Techniques
- 1.9. PCR Techniques: Conventional and Point of Diagnosis
- 1.10. Next-Generation Sequencing Techniques: NGS

### Module 2. Viral Hepatitis

- 2.1. Hepatitis A
- 2.2. Hepatitis B (Epi, Natural H<sup>o</sup> and Diagnosis)
- 2.3. Hepatitis B (Treatment)
- 2.4. Hepatitis B (Special Populations)
- 2.5. Hepatitis D
- 2.6. Hepatitis C (Epi, Natural H<sup>o</sup> and Diagnosis)
- 2.7. Hepatitis C (Treatment)
- 2.8. Hepatitis C (Special Populations)
- 2.9. Hepatitis E
- 2.10. Other Viral Hepatitis

### Module 3. Autoimmune Hepatitis and Cholangitis

- 3.1. HAI (Pathogenesis and Diagnostic Criteria)
- 3.2. HAI (Treatment)
- 3.3. HAI (Treatment in Non-Responders or Intolerant Patients)
- 3.4. HAI vs DILI: Immune-Mediated Hepatitis
- 3.5. Intrahepatic and Extrahepatic Cholestasis: Differential Dx
- 3.6. Primary Biliary Cholangitis (PBC): Pathogenesis and Dx
- 3.7. PBC: Treatment
- 3.8. Primary Sclerosing Cholangitis (PSC): Pathogenesis, Symptoms and Diagnosis
- 3.9. CEP (Treatment)
- 3.10. Overlap Syndromes

### Module 4. Alcoholic Liver Disease and Metabolic Hepatic Steatosis

- 4.1. Alcoholic Liver Disease (ALD): Epi, Clinical Manifestations and Natural H<sup>o</sup>
- 4.2. ALD: Diagnosis and Severity Assessment
- 4.3. Acute Hepatitis
- 4.4. Cirrhosis
- 4.5. Liver Transplantation in ALD
- 4.6. Metabolic Hepatic Steatosis (MetHSS): Definition, Epi and Natural History
- 4.7. MetHSS: Pathogenesis and Role of the Intestinal Microbiota
- 4.8. MetHSS: Diagnosis
- 4.9. METHss: Treatment
- 4.10. Liver Cancer and Transplantation in MetHSS

**Module 5. Hepatic Cirrhosis I**

- 5.1. Definition, Pathophysiology, Natural History
- 5.2. Clinical Manifestations and Prognostic Models
- 5.3. Compensated and Decompensated Cirrhosis
- 5.4. Use of Medication in Cirrhotic Patients
- 5.5. Nutrition in Cirrhosis
- 5.6. Portal Hypertension
- 5.7. Ascites
- 5.8. Renal Failure in Cirrhosis: Classification, Diagnosis and Biomarkers
- 5.9. Treatment of Renal Insufficiency and Hepatorenal Syndrome
- 5.10. The Role of Albumin in the Treatment of Cirrhotic Patients

**Module 6. Hepatic Cirrhosis II**

- 6.1. Upper Gastrointestinal Bleeding (UGH) Secondary to Portal Hypertension
- 6.2. TIPS: Current Indications
- 6.3. Hepatic Encephalopathy (HE): Concept, Pathogenesis and Symptoms. Minimum HE
- 6.4. HE: Treatment
- 6.5. Pulmonary Pathology in Cirrhosis: Hepatopulmonary Syndrome
- 6.6. Pulmonary Pathology in Cirrhosis: Porto-Pulmonary Hypertension
- 6.7. Acute on Chronic Hepatic Failure
- 6.8. Cardiomyopathy of the Cirrhotic Patient
- 6.9. Spontaneous Bacterial Peritonitis
- 6.10. Other Infections in the Cirrhotic Patient

**Module 7. Other Metabolic Liver Diseases**

- 7.1. Hemochromatosis: Epi and Clinical Manifestations
- 7.2. Hemochromatosis: Dx and Treatment
- 7.3. Hemochromatosis Due to Non-Classical Genes
- 7.4. Liver Porphyrias
- 7.5. Wilson's Disease: Epi and Clinical Manifestations
- 7.6. Wilson's Disease: Diagnosis
- 7.7. Wilson Disease: Treatment
- 7.8. Deficiency of Alfa1 Antitrypsin
- 7.9. LPAC
- 7.10. Glycogenesis

**Module 8. Liver Tumors**

- 8.1. Epidemiology, Risk Factors, and Screening for Hepatocellular Carcinoma
- 8.2. Diagnosis, Prognostic Evaluation and Staging of HCC
- 8.3. Hepatic Resection of HCC
- 8.4. Ablative HCC Treatments
- 8.5. Transarterial HCC Treatments
- 8.6. Liver Transplantation and HCC
- 8.7. Systemic HCC Treatment Basic Concepts, Immunotherapy, and Antiangiogenesis
- 8.8. Future Perspectives in HCC Management
- 8.9. Cholangiocarcinoma
- 8.10. Benign Hepatic Tumors

## Module 9. Liver Transplant

- 9.1. Indications, Patient Selection, and Waiting List Management
- 9.2. Expansion of Liver Transplant Criteria. Organ Preservation Strategies
- 9.3. Severe Acute Liver Failure
- 9.4. Liver Transplant Surgery
- 9.5. Infections and Liver Transplantation
- 9.6. Immunosuppression in Liver Transplantation. Acute and Chronic Rejection
- 9.7. Biliary Complications
- 9.8. Long-Term Management of Transplanted Patients
- 9.9. Hepatocarcinoma and De Novo Tumors After Liver Transplantation
- 9.10. Survival in Liver Transplantation. Factors Associated with Early and Late Mortality

## Module 10. Miscellaneous: Hepatic Vascular Diseases, Hepatotoxicity, Hepatic Pathology in Pregnancy

- 10.1. Non-cirrhotic Portal Hypertension
- 10.2. Budd-Chiari Syndrome
- 10.3. Portal Venous Thrombosis in the Patient with Cirrhosis
- 10.4. Portal Venous Thrombosis in the Patient without Cirrhosis
- 10.5. Sinusoidal Obstruction Syndrome
- 10.6. DILI
- 10.7. Surgical Risk Assessment in the Cirrhotic Patient
- 10.8. Fontan-associated Liver Disease
- 10.9. Hepatic Pathology in Pregnancy (I)
- 10.10. Hepatic Pathology in Pregnancy (II)







### Module 11. Advances in Food Allergy and Eosinophilic Disorders

- 11.1. Update on the Pathophysiological Basis of Food Allergy
- 11.2. Epidemiological Review of Food Allergy Clinical Presentations
- 11.3. Clinical Manifestations of Food Allergy and Intolerance
- 11.4. Diagnosis of Food Allergy A Constantly Evolving Challenge
- 11.5. Treatment of Food Allergy Current Outlook
- 11.6. Prevention of Food Allergy Current and Future Approach
- 11.7. Primary Eosinophilic Gastrointestinal Disorders Current Situation
- 11.8. In-depth Analysis of the Food Protein Induced Enterocolitis Syndrome (SEIPA– FPIES)
- 11.9. Diagnosis and Treatment of Eosinophilic Esophagitis and Eosinophilic Gastritis

### Module 12. Update on Functional Digestive Disorders

- 12.1. Functional Digestive Disorders: Neurogastroenterology
- 12.2. Pathophysiology of Functional Digestive Disorders
- 12.3. The Intestinal Ecosystem in Functional Digestive Disorders
- 12.4. Multicultural Aspects of Functional Digestive Disorders
- 12.5. Biopsychosocial Aspects of Functional Digestive Disorders
- 12.6. Functional Digestive Disorders in Neonates and Infants
- 12.7. Functional Digestive Disorders in Children and Adolescents
- 12.8. Diagnostic Studies of Functional Digestive Disorders in Pediatric Ages
- 12.9. Pharmacology, Pharmacokinetics and Pharmacogenomics Applied to Functional Digestive Disorders

### Module 13. New Perspectives in Celiac Disease

- 13.1. Advances in the Pathophysiology of Celiac Disease
- 13.2. Current Epidemiology of Celiac Disease
- 13.3. Digestive and Extradigestive Clinical Manifestations Associated Diseases. Complications of Celiac Disease
- 13.4. Non-Celiac Gluten Sensitivity
- 13.5. Diagnosis of Celiac Disease Current Situation and Future Steps
- 13.6. New Laboratory Tests in Celiac Disease
- 13.7. Celiac Disease Treatment and Prevention
- 13.8. Food, Diet and Nutrition for Celiac Disease
- 13.9. Future Therapeutic Strategies

### Module 14. Inflammatory Bowel Disease. Present and Future

- 14.1. Advances in the Pathophysiology of Pediatric Inflammatory Bowel Disease
- 14.2. Diagnostic Criteria of Pediatric Inflammatory Bowel Disease
- 14.3. Diagnostic Tests of Pediatric Inflammatory Bowel Disease
- 14.4. Biological Markers of Activity and Prognosis
- 14.5. Pediatric Inflammatory Bowel Disease Activity Indices
- 14.6. Treatment of IBD Pharmacological Treatment. Biological Therapy and Biosimilars
- 14.7. Nutritional Treatment. Probiotics
- 14.8. Management of Treatment Algorithms in Ulcerative Colitis and Crohn's Disease
- 14.9. Management of Perianal Disease and Reservoiritis
- 14.10. Complications of Pediatric Inflammatory Bowel Disease
- 14.11. Extraintestinal Manifestations of Pediatric Inflammatory Bowel Disease and IBD-Associated Morbidity
- 14.12. Psychosocial Aspects of Pediatric Inflammatory Bowel Disease Transition Consultation

### Module 15. Challenges in Esophageal and Gastric Pathology

- 15.1. Congenital Esophagogastric Anomalies
- 15.2. New Approaches to Gastroesophageal Reflux and Esophagitis in Pediatrics
- 15.3. Achalasia and Other Esophageal Motility Disorders
- 15.4. Trauma, Infections and Esophagitis Due to Chemicals
- 15.5. Review of Barrett's Esophagus in Pediatric Age
- 15.6. Peptic Ulcer Disease and Gastritis
- 15.7. Other Esophago-Gastric Pathologies
- 15.8. Use of Diagnostic Methods in Esophageal and Gastric Pathologies in Pediatric Ages
- 15.9. Emergencies in Esophago-Gastric Pathology

### Module 16. Update in Intestinal Pathology

- 16.1. Congenital Intestinal Anomalies
- 16.2. Disturbances of Digestion and Absorption
- 16.3. Intestinal Motility Disorders
- 16.4. Hirschsprung's Disease Intestinal Dysplasias
- 16.5. Viral and Bacterial Intestinal Infections
- 16.6. Intestinal Infections due to Parasites
- 16.7. Fungal Intestinal Infections
- 16.8. Neonatal Necrotizing Enterocolitis
- 16.9. Short Bowel Syndrome
- 16.10. Intestinal Polyps
- 16.11. Gastrointestinal Manifestations of Systemic Diseases
- 16.12. Digestive Complications of Congenital Heart Disease
- 16.13. Extraintestinal Manifestations of Digestive Diseases
- 16.14. Enteropathies of Unknown Origin Other Enteropathies
- 16.15. Intestinal Transplant
- 16.16. Emergencies in Intestinal Pathology

**Module 17. Progress in Digestive and Hepatic Oncology**

- 17.1. The Gastrointestinal Tract in Pediatric Oncohematology
- 17.2. Pediatric Gastrointestinal Neoplasms I (Esophagus to Duodenum)
- 17.3. Pediatric Gastrointestinal Neoplasms II (Jejunum to Anus)
- 17.4. Hepatic Tumors in Pediatrics
- 17.5. Primary Peritoneal Tumors and Peritoneal Carcinomatosis in Children
- 17.6. Gastrointestinal Complications of Chemotherapy in Children
- 17.7. Oncologic Abdominal Emergencies
- 17.8. Gastrointestinal Opportunistic Infections
- 17.9. Palliative Care for Children with Digestive Tumors

**Module 18. Techniques in Pediatric Gastroenterology**

- 18.1. Nutritional Assessment
- 18.2. Biochemical Determinations in Blood, Urine, Feces and Sweat
- 18.3. Digestive Endoscopy. Esophago-Gastroscopy and Colonoscopy in Pediatrics
- 18.4. Biopsies
- 18.5. Exhaled Air Test
- 18.6. Capsuloendoscopy in Pediatrics
- 18.7. Endoscopic Retrograde Cholangiopancreatography
- 18.8. Malabsorption and Pancreatic Insufficiency Studies
- 18.9. Gastrointestinal Tract Radiology
- 18.10. Gastrointestinal and Hepatobiliary Ultrasound
- 18.11. Endorectal Ultrasound in Pediatrics
- 18.12. Abdominal Computed Tomography and MRI in Pediatric Gastroenterology
- 18.13. Radioisotope Studies
- 18.14. Anorectal and Esophageal Manometry
- 18.15. Esophageal pH-Metry and Impedance Esophagometry
- 18.16. Microbiological Studies.
- 18.17. Molecular Biology Techniques
- 18.18. Exploratory laparoscopy

**Module 19. Gastrohepatology: New Paths Opening the Door to Innovation**

- 19.1. Chronobiology and Digestive Physiopathology
- 19.2. Epigenetics and Pediatric Gastroenterology
- 19.3. The Role of the Intestinal Microbiota in Children's Health and Disease
- 19.4. Study of the Intestinal Microbiota Probiotic Therapy in Pediatrics
- 19.5. Diet and Microbiota Impact on Health
- 19.6. Obesity and Digestive System Molecular, Genetic and Microbiological Approach to a Current Epidemic
- 19.7. Advances in Diagnostic Instruments Narrow-band Endoscopy Fluorescence Endoscopy Chromoendoscopy, Confocal Endoscopy and 360° Vision
- 19.8. Telemedicine Applications in the Education and Monitoring of Patients With Digestive Pathologies Wearables
- 19.9. Social Media and Pediatric Gastroenterology



*In this program you will have access to the best contents, transmitted by a teaching staff of great international prestige"*

06

# 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.







“

*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.



# 07 Certificate

The Advanced Master's Degree in Clinical Hepatology guarantees, in addition to the most rigorous and update training, access to a Advanced Master's Degree issued by TECH Technological University.





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*Successfully complete this training and receive your university degree without travel or laborious paperwork”*

This **Advanced Master's Degree in Clinical Hepatology** contains the scientific most complete and update program on the market.

After the student has passed the evaluations, they will receive their corresponding **Advanced Master's Degree** issued by **TECH Technological University** via tracked delivery\*..

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional from career evaluation committees.

Title: **Advanced Master's Degree in Clinical Hepatology**  
 Official N° of hours: **3,000 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.

future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present quality

online training  
development language

virtual classroom

**tech** technological  
university

Advanced Master's  
Degree

Clinical Hepatology

Course Modality: Online

Duration: 2 years

Certificate: TECH Technological University

Official N° of hours: 3,000 h.

# Advanced Master's Degree Clinical Hepatology

