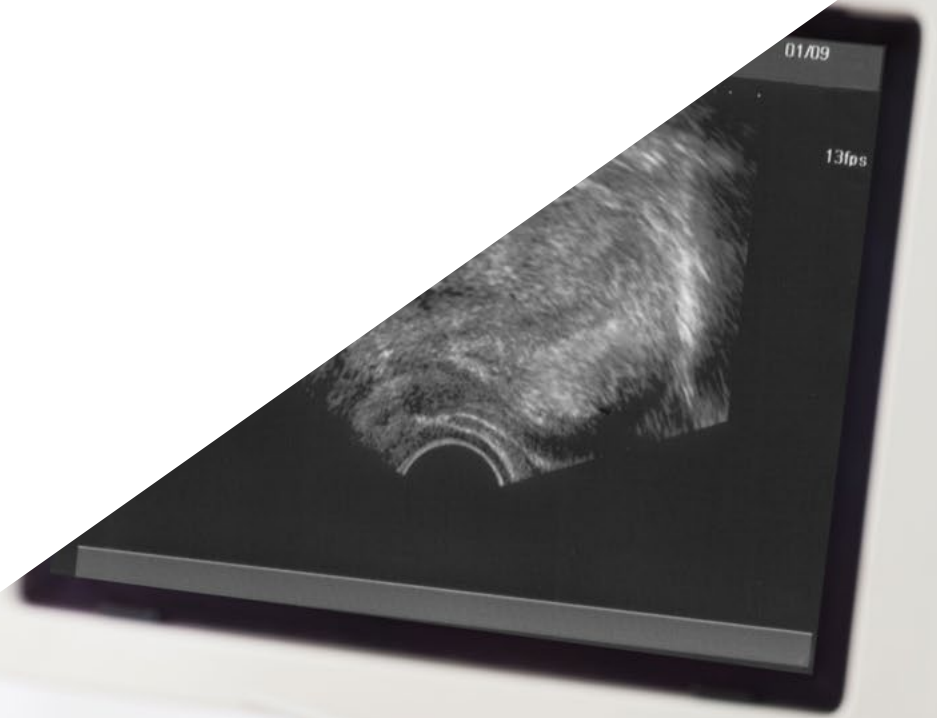


Postgraduate Certificate

Diagnostic Methods and Research Techniques





Postgraduate Certificate Diagnostic Methods and Research Techniques

- » 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/diagnostic-methods-research-techniques

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 18

05

Methodology

p. 22

06

Certificate

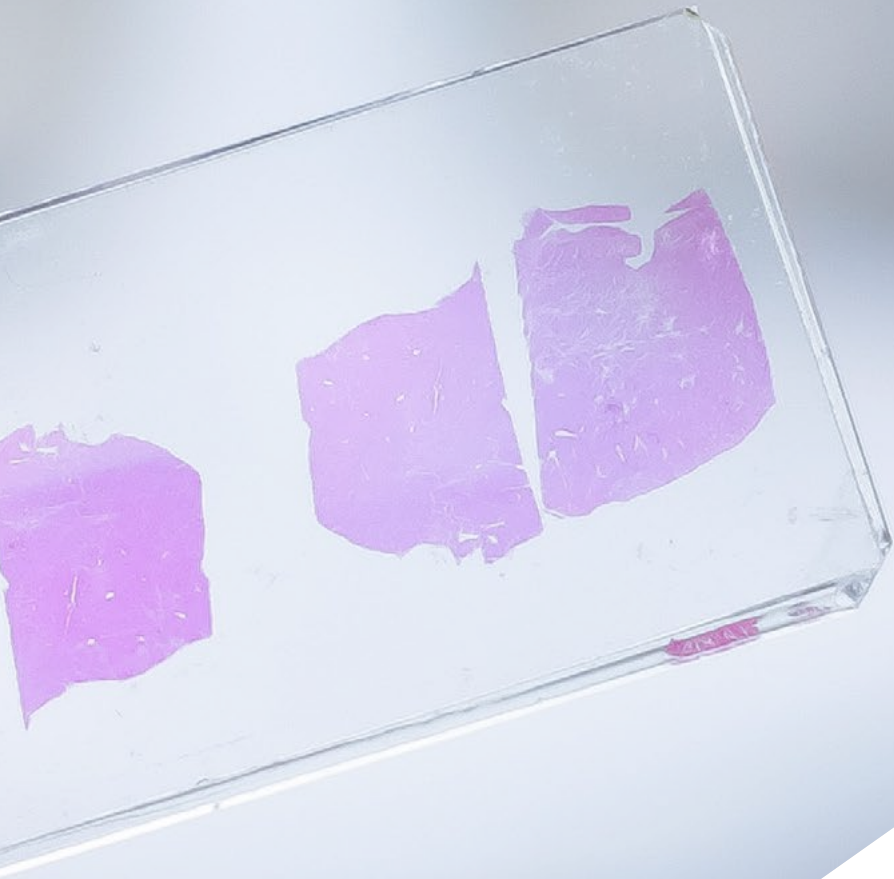
p. 30

01

Introduction

One in three people in the world is exposed to the hepatitis B or C virus, being one of the priority diseases to be eliminated at the 69th World Health Assembly of the WHO, contemplated in the 2030 Agenda. Therefore, hepatology is a specialty that has great relevance in medicine, whose advances demand competent professionals specialized in this medical branch. In this sense, an in-depth knowledge of diagnostic methods is key to preventing further liver damage. For this reason, TECH launches this program in hepatology and the latest techniques for the diagnosis of several liver diseases, making this syllabus the best option for the student to enter the field of hepatobiliary pathology.





“

Hepatology is a specialty that has great relevance in medicine, whose latest advances in diagnostic methods require professionals specialized in this medical branch and that can be you”

The development of diagnostic and therapeutic techniques for liver pathologies has turned hepatology into a field of specific knowledge or training (FSK) that is currently in high demand by medical professionals. Hepatology has undergone major changes in recent years. In terms of diagnosis, we have witnessed the appearance of Ultrasound, Computerized Axial Tomography, Nuclear Magnetic Resonance or FibroScan, among others.

Thus, hepatology today constitutes a specific area of medical practice, which goes beyond the objectives of the training period for digestive system specialists, and which implies the need for education and the existence of professionals focused on this specific organ. Therefore, it is essential that the specialist can respond adequately to the evolution of these events, through an adequate update of their knowledge and the incorporation of these methodological advances in their daily medical practice, which is why TECH has developed this comprehensive program in response to a highly demanded specialty.

In addition, it is a 100% online Postgraduate Certificate, which provides the students with the ease of being able to take it comfortably, wherever and whenever they want. All you need is a device with internet access to take your career one step further. A modality according to the current times, with all the guarantees to position the medical professional in a highly demanded area.

This **Postgraduate Certificate in Diagnostic Methods and Research Techniques** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ More than 80 clinical cases, presented by experts in the different specialties. 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.
- ◆ New diagnoses and treatments for different hepatic pathologies
- ◆ Presentation of practical workshops on procedures, diagnosis, and treatment techniques
- ◆ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ◆ Special emphasis on evidence-based medicine and research methodologies in the field of hepatology
- ◆ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- ◆ Availability of content from any device, fixed or portable, with an Internet connection



You will establish the pathogenic bases of liver diseases, incorporating the latest advances in the field of study, together with the best professionals in hepatology today”

“

You will be able to 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”

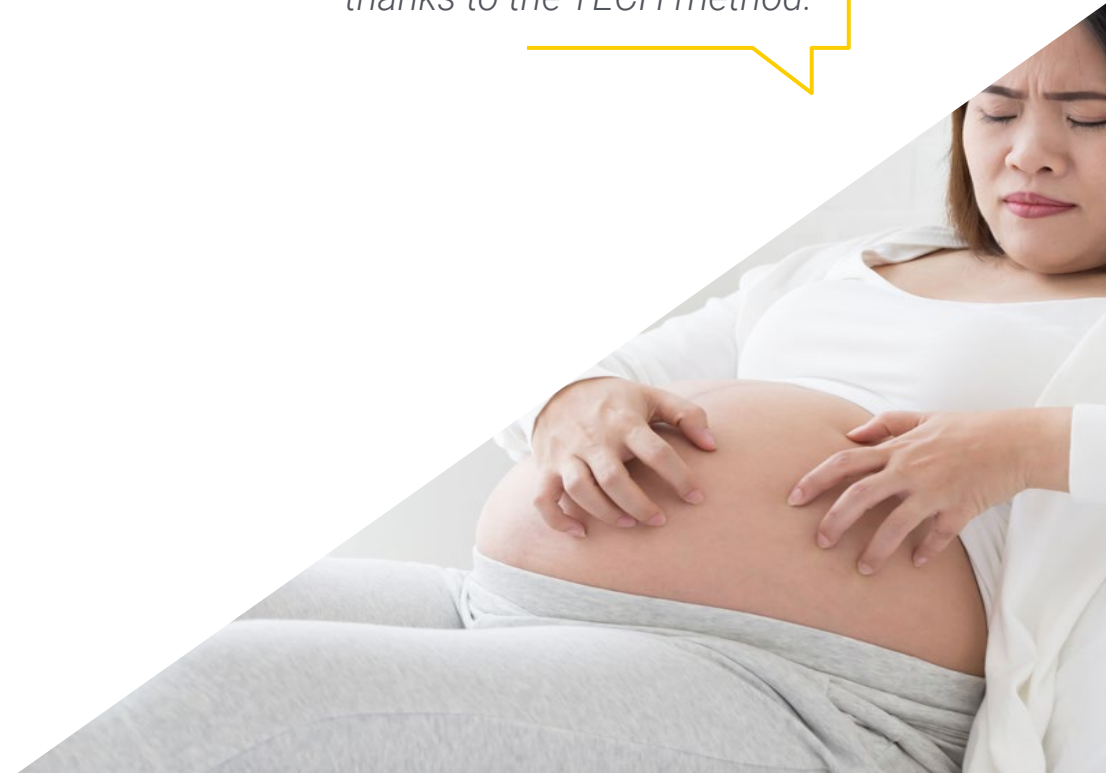
The program's teaching staff includes professionals from sector who contribute their work experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

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 training programmed to train 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system, created by renowned experts.

Identify the up-to-date diagnostic criteria for liver diseases and develop a correct differential diagnosis strategy will be one of the objectives of this course.

You will be able to determine the therapeutic plan for the most prevalent acute and chronic liver diseases, thanks to the TECH method.



02 Objectives

The program of this Postgraduate Certificate, together with a unique teaching methodology, will allow the student to achieve the proposed objectives, in order to update and delve into the medical branch of hepatology, developing optimal skills in the diagnostic procedures of the different liver diseases. To this end, different medical professionals have poured their knowledge into the development of the points of the study plan, which will provide the professional with a complete perspective and a current approach, with full training for the achievement of his or her academic goal. For this reason, TECH establishes a series of general and specific objectives that the future graduate will master after completing this program.





“

Achieve your goal of specializing in Hepatology, thanks to this comprehensive TECH program and boost your career path"



General Objective

- ◆ 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, safe care and to improve the prognosis of the disease

“

In this Postgraduate Certificate you will learn to define invasive and non-invasive methods for diagnosing and quantifying fibrosis and their clinical applicability”





Specific Objectives

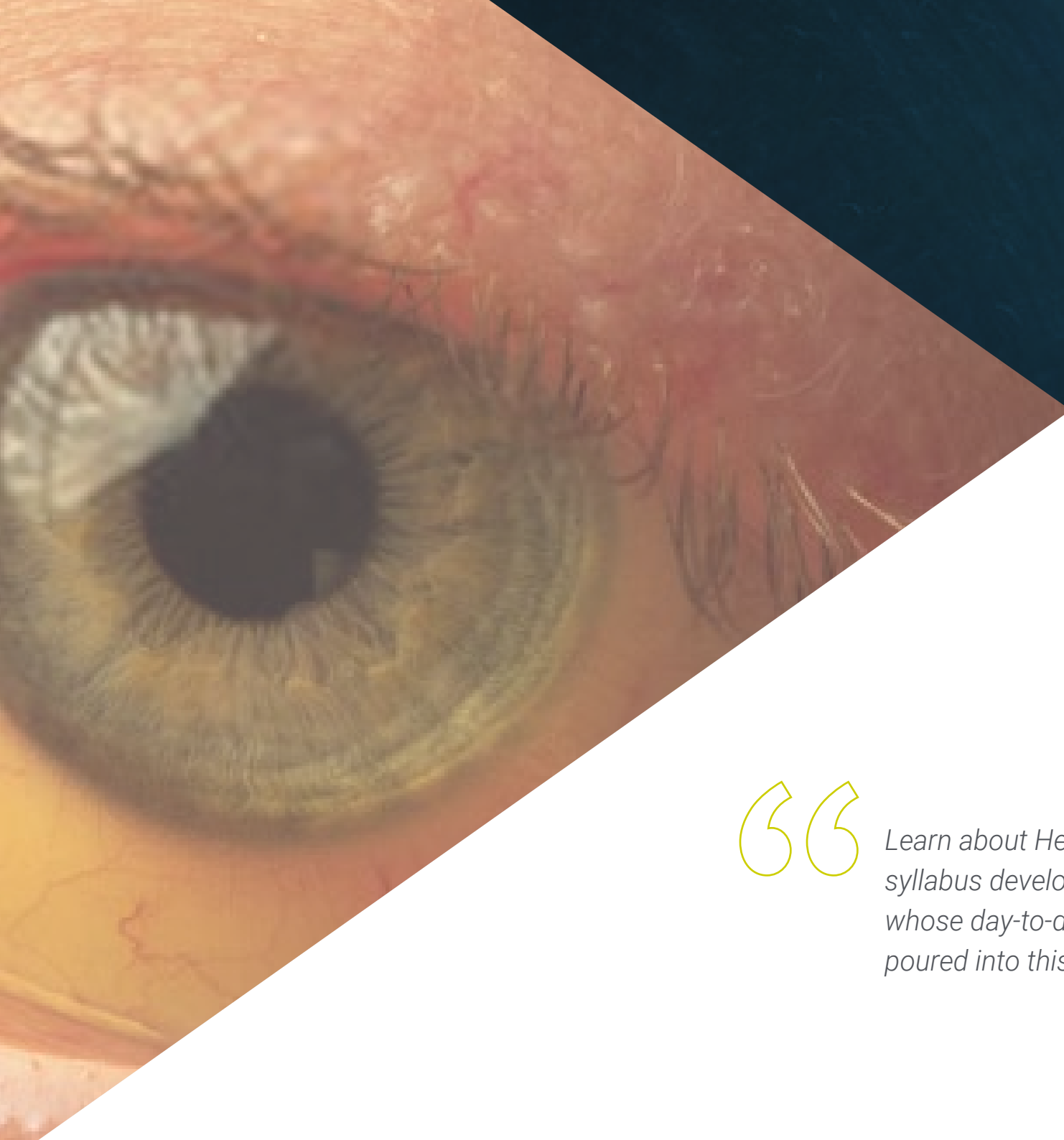
- ◆ Identify the updated diagnostic criteria for liver diseases, and develop a correct differential diagnosis strategy
- ◆ Establish the pathogenic basis of liver diseases, incorporating the latest advances in the field of study
- ◆ Determine the treatment plan for the most prevalent acute and chronic liver diseases
- ◆ 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
- ◆ Define the rationale, indications, limitations, and cost-effectiveness of diagnostic tests used in Hepatology
- ◆ Highlight the impact of the immune system on liver disease.
- ◆ Explain how to manage patients with chronic hepatitis undergoing antiviral treatment
- ◆ Identify the main childhood liver diseases
- ◆ Address the diagnosis and treatment of the main hepatic diseases during pregnancy
- ◆ Develop a correct differential diagnosis strategy for liver diseases
- ◆ Define invasive and non-invasive methods for diagnosing and quantifying fibrosis and their clinical applicability
- ◆ Address the imaging diagnosis of cirrhosis, portal hypertension, and hepatic vascular disease
- ◆ Describe the clinical utility of MRI cholangiography

03

Course Management

TECH University has renowned medical professionals, to help the student acquire solid knowledge in the specialty of hepatology and its diagnostic methods. Therefore, this Postgraduate Certificate has a team of highly qualified teachers, whose extensive experience in this field of medicine brings excellence to the program, resulting in a quality syllabus and the best tools for the student in the development of their skills during the Postgraduate Certificate. In this way, the student has the quality guarantees required to enter the field of hepatology with success.





“

Learn about Hepatology with a quality syllabus developed by expert hepatologists whose day-to-day experience has been poured into this exceptional program"

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

- 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), by the American Liver Foundation
 - Asian Heritage Award in Public Health (2016), by the Asian Heritage Society of California
 - Everyday Hero (2016) by the American Liver Foundation
- He is a member of:
 - V-VHA (Vietnam Viral Hepatitis Alliance).
 - Hepatitis B Foundation
 - 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
- ♦ Trustee of the Biomedical Research Foundation of La Paz University Hospital and member of the Governing Council of IdiPAZ.
- ♦ Coordinator at the Alliance for the Elimination of Viral Hepatitis in Spain (AEHVE)
- ♦ He graduated in medicine from the University of Santiago in 1983 and obtained his PhD in 1996 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
- ♦ He has participated in Guidelines and therapeutic protocols for viral hepatitis: consensus for the treatment of viral hepatitis in HIV-positive patients
- ♦ Coordinator for the Spanish Guidelines for the treatment of hepatitis B promoted by the AEEH (2020).
- ♦ Lead investigator in more than 60 international clinical trials on the treatment of viral hepatitis.
- ♦ Guest lecturer at numerous national and international congresses, as well as in Spanish and international forums, especially on the management of viral hepatitis B and C treatment. He has participated in the elaboration of the AEEH hepatitis C elimination document (2019) and is the coordinator of the hepatitis B treatment guidelines (2020)

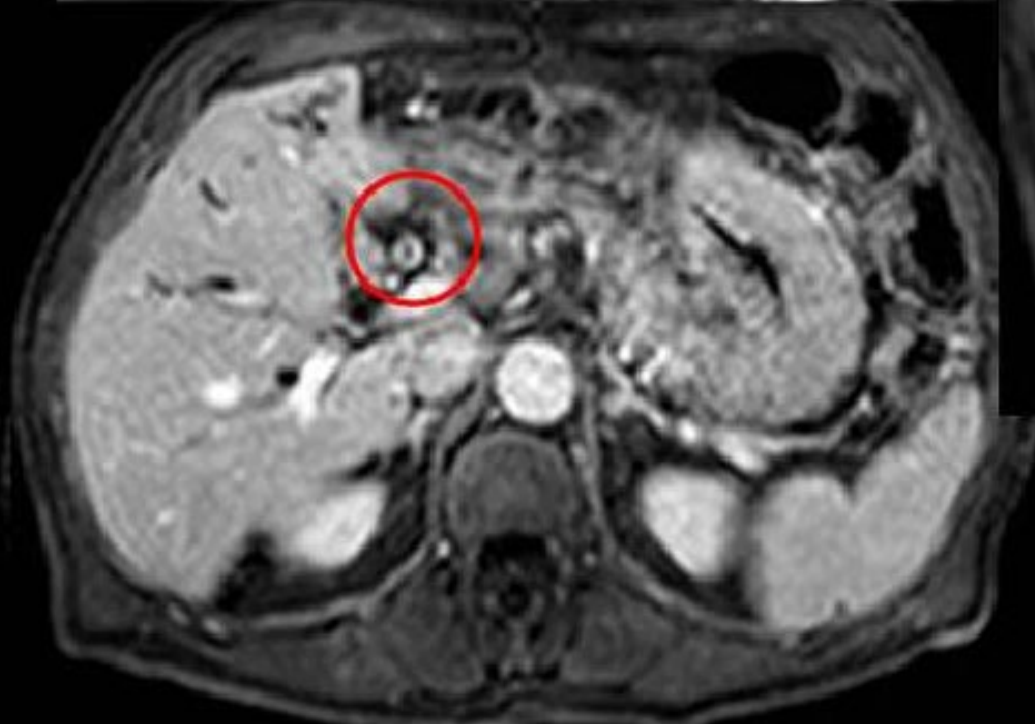
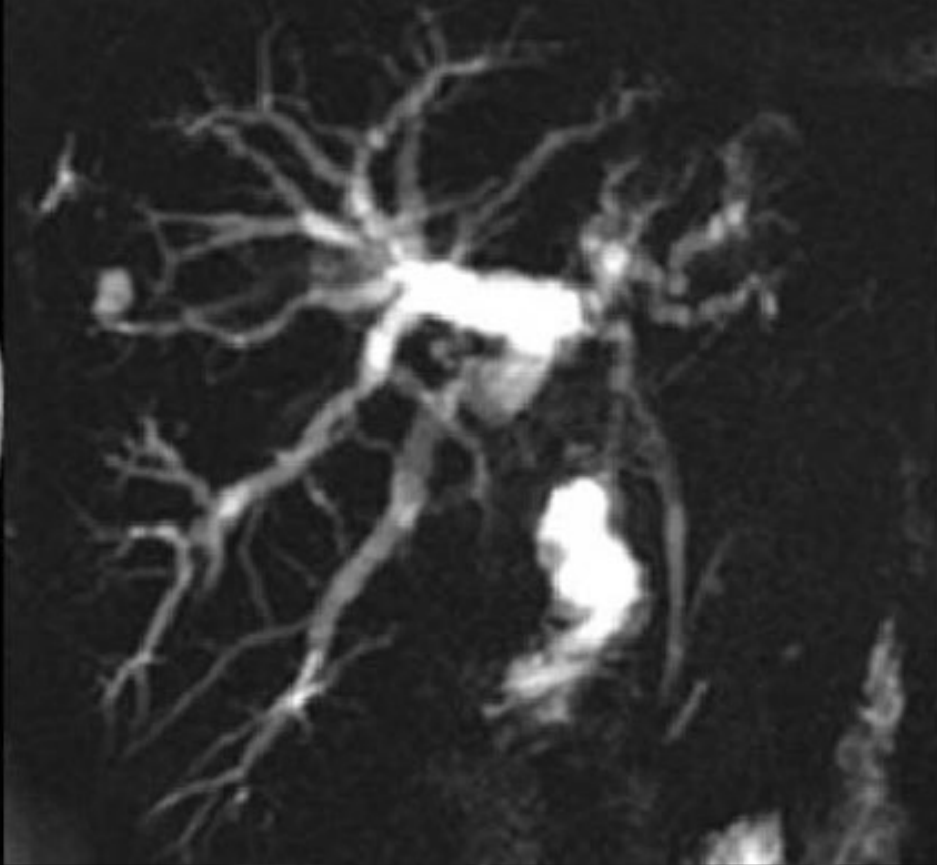
Professors

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"
- ◆ PhD in Biology, Autonomous University of Madrid, 1997.
- ◆ Degree in Biology



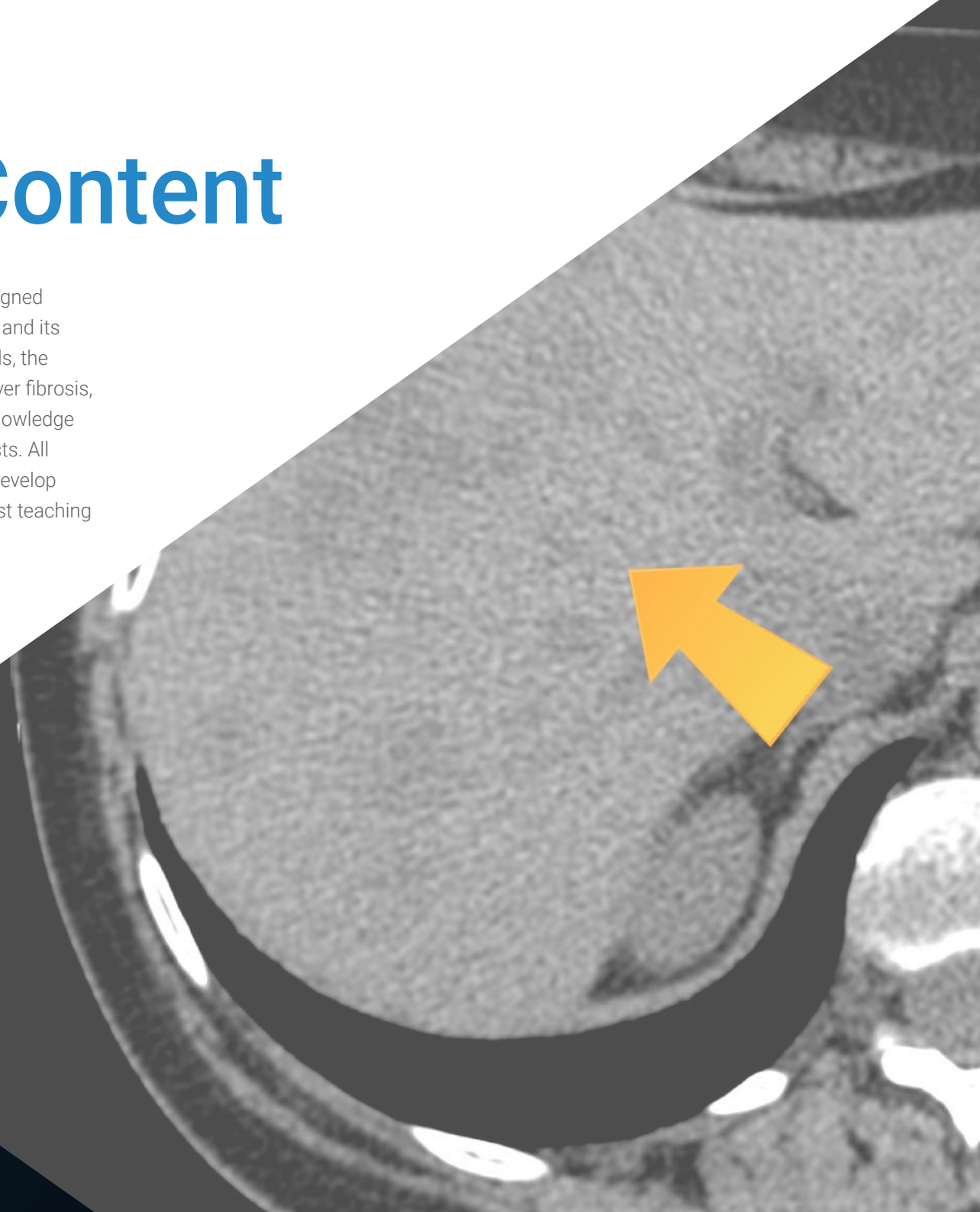
Complete, up-to-date and of high educational efficiency, this Postgraduate Certificate is the opportunity to take a leap in your work capacity and compete among the best in the sector"

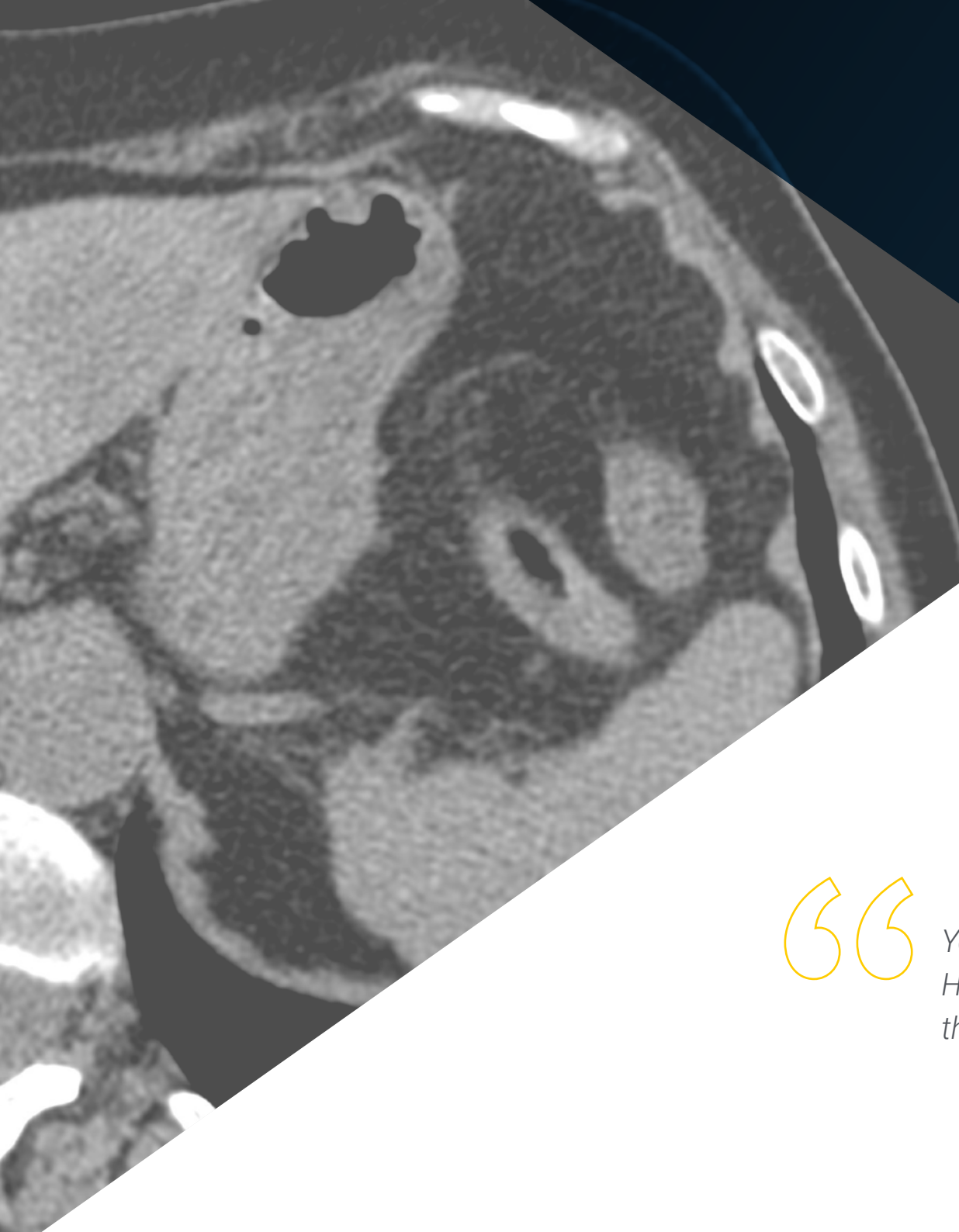


04

Structure and Content

The structure of the contents of this Postgraduate Certificate has been designed in such a way that it introduces the student to the knowledge of hepatology and its different diagnostic methods. Thus, it will address current prognostic models, the usefulness of liver biopsy or non-invasive methods for the assessment of liver fibrosis, among others. In this way, the professional expands and updates his/her knowledge in this field of medicine, thanks to a syllabus prepared by expert hepatologists. All in all, thanks to the proposed syllabus, the student will acquire the skills to develop professionally in this medical specialty thanks to quality content and the best teaching methodology.





“

You will gain in-depth knowledge on Hepatology, like never before, thanks to this TECH Postgraduate Certificate"

Module 1. Diagnostic Methods and Research Techniques

- 1.1. Introduction to the 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, 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





“

Incorporate into your daily practice the prevailing advances in next-generation sequencing techniques NGS”

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.





“

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

“

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



Interactive Summaries

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

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



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06 Certificate

The Postgraduate Certificate in Diagnostic Methods and Research Techniques guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



“

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

This **Postgraduate Certificate in Diagnostic Methods and Research Techniques** 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 Diagnostic Methods and Research Techniques**

Official N° of Hours: **150 hours**.



future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present
development language
virtual classroom



Postgraduate Certificate Diagnostic Methods and Research Techniques

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

Postgraduate Certificate

Diagnostic Methods and Research Techniques

