

**Postgraduate Certificate**  
Hospital Pharmacology of  
the Gastrointestinal System



## Postgraduate Certificate Hospital Pharmacology of the Gastrointestinal System

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

Website: [www.techtute.com/in/pharmacy/postgraduate-certificate/hospital-pharmacology-gastrointestinal-system](http://www.techtute.com/in/pharmacy/postgraduate-certificate/hospital-pharmacology-gastrointestinal-system)

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# 01

# Introduction

The scientific advances that have been developed in the last decades have considerably benefited Medicine and, therefore, the quality of life to which patients with, for example, diseases of the Gastrointestinal System can opt for. It is a collaborative work between Pharmacology and clinical activity to determine formulas and therapeutic guidelines that are adapted to the epidemiology of the pathologies, achieving an effective advance. For this reason, TECH has considered it necessary to develop a program that includes these new developments and serves as a guide for specialists in Hospital Pharmacy to be updated, in this case, in the management of diseases that affect the gastrointestinal system. All this through 150 hours of diverse and 100% online content designed by the best experts.





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*A program that will bring you up to date on the best strategies for the procurement, preparation and administration of time-sensitive therapies in the management of diseases of the Gastrointestinal System”*

The exhaustive knowledge of the epidemiology of the different diseases and conditions that have been identified to date has allowed Pharmacology professionals to develop therapeutic guidelines in accordance with the patient's needs. It is a coordinated and combined work between Medicine and the pharmaceutical area in favor, always, of the benefit of health. In addition, other very important aspects related to the biological imbalances that a certain substance can cause in the human organism come into play. In this sense, the gastrointestinal system and its derived diseases are a focus of attention for these experts, especially because of their intimate relationship with the rest of the nervous and hormonal mechanisms of the human body.

Based on the scientific advances that have been developed lately, TECH and its team of specialists in Pharmacology and Medicine have designed a complete program that gathers, precisely, the most complete information related to the hospital pharmaceutical activity in its intervention for the management of diseases related to the gastrointestinal system. This is a 150-hour Postgraduate Certificate in which the graduates will be able to thoroughly review the epidemiology of liver pathologies, water and electrolyte disorders, the different intra-abdominal infections or the most common syndromes such as irritable bowel syndrome. In addition, you will also learn about the most effective drugs used in nutritional therapy.

For this, you will have 6 weeks of full access to a state-of-the-art Virtual Campus where you will find, in addition to the syllabus, detailed videos, research articles, news, images, self-assessment exercises, dynamic summaries and clinical cases based on real situations. Thus, you will be able to work wherever and whenever you want to improve your professional skills through an academic experience of the highest level adapted not only to your needs, but also to the demands of today's clinical sector.

This **Postgraduate Certificate in Hospital Pharmacology of the Gastrointestinal System** 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 Pharmacy, Hospital Management, among others
- ◆ 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 self-assessment can be used 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 work for 6 weeks to refine your management of the applicability and limitations of published data and reports to patient care"*

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*You will be able to delve into the best strategies for designing pharmacologic treatment plans based on monitoring patient response to initial therapy”*

*Pancreatitis cannot be missing in this Postgraduate Certificate. Therefore, you will find a specific section focused on pharmacological novelties and current trends.*

*No schedules or face-to-face classes: you can access the Virtual Campus from wherever and whenever you want thanks to the flexibility of the 100% online mode offered by TECH.*

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

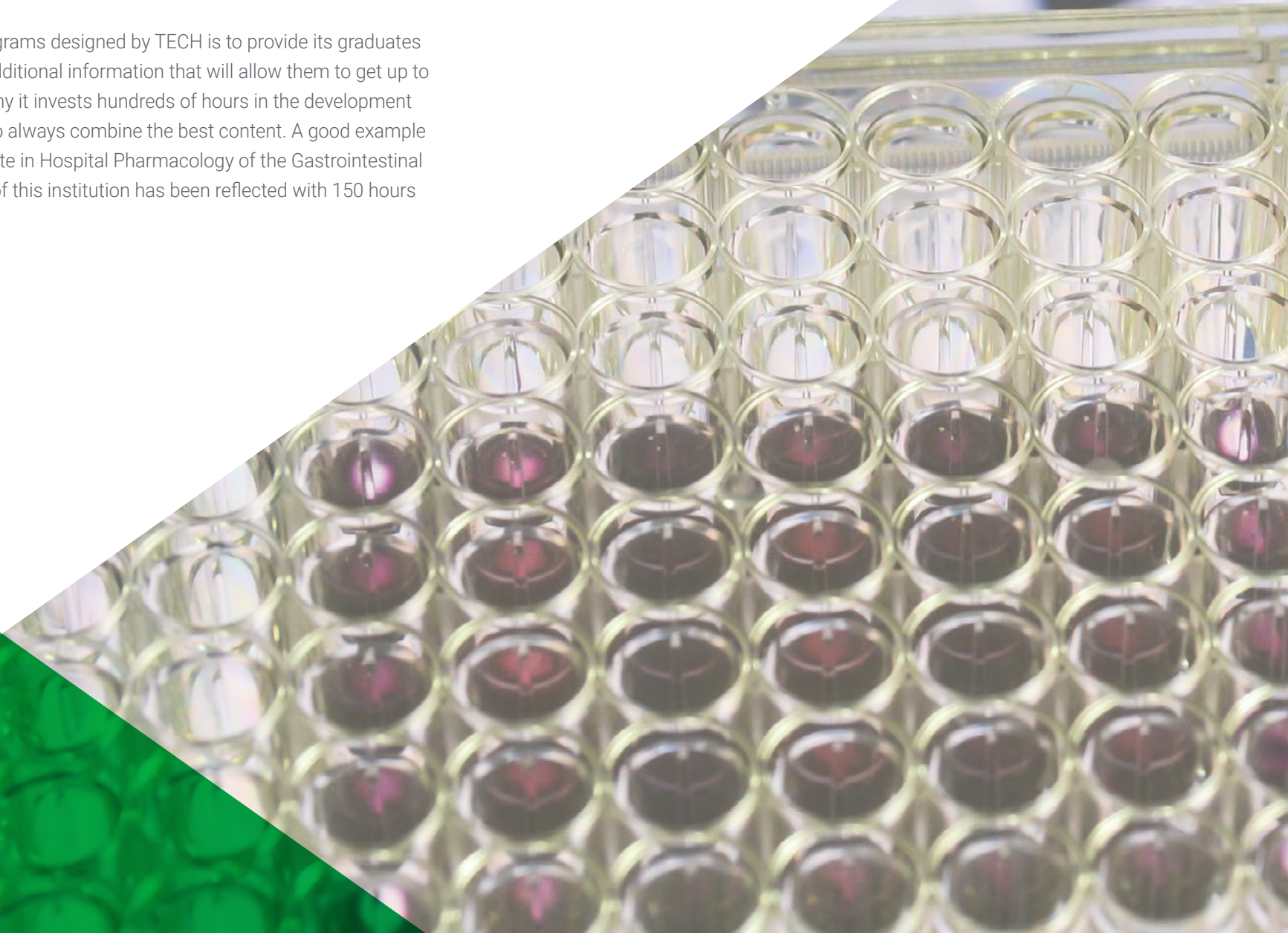
Its multimedia content, developed with the latest educational technology, will provide the professionals with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professionals must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.



# 02 Objectives

The objective of this and all the programs designed by TECH is to provide its graduates with the theoretical, practical and additional information that will allow them to get up to date in a guaranteed way. That is why it invests hundreds of hours in the development of the different programs, in order to always combine the best content. A good example of this is this Postgraduate Certificate in Hospital Pharmacology of the Gastrointestinal System, in which the commitment of this institution has been reflected with 150 hours of the best academic material.







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*Get up to date on the most effective  
drugs used in nutritional therapy  
with this Postgraduate Certificate”*



## General Objectives

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- ◆ Identify management of a wide variety of clinical situations, using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices, prehospital providers)
- ◆ Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data

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*The more demanding your goals  
and the more ambitious you are,  
the more you will be able to get out  
of this Postgraduate Certificate”*





## Specific Objectives

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- ◆ Update knowledge on chronic liver disease, its definition and causes of cirrhosis, diagnosis and initial evaluation, pathophysiology, severity, pharmacology
- ◆ Deepen in upper gastrointestinal bleeding (UGH)
- ◆ Be aware of spontaneous bacterial peritonitis (SBP), its pathophysiology, incidence and management
- ◆ Deepen in the hydroelectrolytic alterations and hyperelectrolytemias, its physiopathology, clinical presentation and treatment
- ◆ Investigate the pathophysiology, risk factors, diagnosis, severity and pharmacological treatment of Clostridium Difficile Infection (CDI)
- ◆ Delve into the pathophysiology, microbiology, diagnosis, risk stratification, and treatment of complicated intra-abdominal infection (Clabc)
- ◆ Be updated on the classification, symptoms, precipitating factors, diagnosis, treatment of Pancreatitis

03

# Course Management

Both the direction and the teaching of this Postgraduate Certificate will be in charge of a highly qualified teaching team within the field of Hospital Pharmacy. This is a group of professionals of the highest level who will share with their graduates the most innovative guidelines and strategies to properly manage the pharmaceutical activity in relation to the management of pathologies of the gastrointestinal system. A unique opportunity to share this experience with active experts.





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*As it is an active teaching team, each of its professionals knows the latest developments in Hospital Pharmacology and will not hesitate to share them with you”*

## Management



### Mr. Ramos Rodríguez, Javier

- ◆ Pharmacist at Hospital Corporación Sanitaria Parc Taulí, Sabadell, Spain
- ◆ Coordinating member of the working group of pharmacists specializing in the Emergency Department (RedFaster)
- ◆ Pharmacist specializing in Hospital Pharmacy at Hospital Mútua de Terrassa
- ◆ Pharmacist specializing in Hospital Pharmacy at Consorci Sanitari Integral
- ◆ Resident Pharmacist at Servicio Canario de la Salud (Canary Health Service)
- ◆ Assistant Pharmacist in Pharmacy María Concepción Gutiérrez
- ◆ Assistant Pharmacist in Pharmacy Marina López González
- ◆ Master in Pharmacotherapeutic Follow-up of HIV/AIDS patients by the University of Granada

## Professors

### Dr. Fendián, Ángel Marcos

- ◆ Assistant Pharmacist at Hospital de la Santa Creu i Sant Joan de Déu
- ◆ Hospital Pharmacist in Intensive Care Unit at Hospital Clinic of Barcelona
- ◆ Assistant pharmacist at Hospital Universitary Joan XXIII
- ◆ Assistant pharmacist at Hospital Pius de Valls
- ◆ PhD in Pharmacy from the Université of Montpellier
- ◆ Master's Degree in Pharmaceutical Oncology by the University of Valencia



# 04

## Structure and Content

The structure of this program has been designed by the teaching team following the guidelines of rigor and completeness that characterize and differentiate TECH from other university centers. Thus, the graduates will be able to guarantee an intensive and complete update, guided by the immediate actuality of Hospital Pharmacology. To this end, they will have 150 hours of the best theoretical, practical and additional content, the latter presented in different formats to add dynamism to the academic experience.







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*A program that adapts to you and your needs through a convenient 100% online format and a program at the forefront of Pharmacology”*

## Module 1. Pharmacology of the Gastrointestinal System

- 1.1. Chronic Hepatic Disease
  - 1.1.1. Diagnosis and classification of chronic liver diseases
  - 1.1.2. Biomarkers and liver function tests in diagnosis and follow-up
  - 1.1.3. Strategies for management and prevention of disease progression
  - 1.1.4. Pharmacological treatment of chronic liver disease
- 1.2. Upper gastrointestinal bleeding (UGH)
  - 1.2.1. Epidemiology and risk factors associated to Upper Gastrointestinal Bleeding
  - 1.2.2. Classification and Etiology of Upper Gastrointestinal Bleeding
  - 1.2.3. Diagnosis and early detection methods of HDA
  - 1.2.4. Pharmacological Treatment of HDA
- 1.3. Spontaneous Bacterial Peritonitis (SBP)
  - 1.3.1. Anatomy and physiology of the peritoneum and its relationship with PBE
  - 1.3.2. Clinical diagnosis and methods of detection of spontaneous bacterial peritonitis
  - 1.3.3. Evaluation and classification of patients with SBP
  - 1.3.4. Pharmacological treatment of spontaneous bacterial peritonitis
- 1.4. Hydroelectrolytic Alterations
  - 1.4.1. Sodium
  - 1.4.2. Chlorine
  - 1.4.3. Potassium
  - 1.4.4. Phosphorus
- 1.5. Clostridium difficile infection (CDI)
  - 1.5.1. Epidemiology and risk factors associated to CDI
  - 1.5.2. CDI Diagnosis
  - 1.5.3. Clinical evaluation of the patient with Clostridium difficile infection
  - 1.5.4. Pharmacological Treatment of CDI
- 1.6. Complicated intra-abdominal infection (CAIbc)
  - 1.6.1. Epidemiology and risk factors associated to complicated intra-abdominal infection
  - 1.6.2. Etiology and pathogenesis of cCBI
  - 1.6.3. Clinical evaluation of the patient with cBAI
  - 1.6.4. Pharmacological treatment of complicated intra-abdominal infection



- 1.7. Pancreatitis
  - 1.7.1. Epidemiology and risk factors associated to Pancreatitis
  - 1.7.2. Etiology and Classification of Pancreatitis
  - 1.7.3. Clinical diagnosis and methods of detection of Pancreatitis
  - 1.7.4. Pharmacological treatment of acute and chronic pancreatitis
- 1.8. Irritable Bowel Syndrome
  - 1.8.1. Anatomy and physiology of the gastrointestinal system related to irritable bowel syndrome
  - 1.8.2. Etiology and pathogenesis of irritable bowel syndrome
  - 1.8.3. Classification and subtypes of IBS
  - 1.8.4. Medical treatment of irritable bowel syndrome
- 1.9. Prokinetics and antiemetics
  - 1.9.1. Anatomy and physiology of the gastrointestinal system and the control of motility
  - 1.9.2. Classification and mechanisms of action of prokinetics and antiemetics
  - 1.9.3. Indications and contraindications for the use of prokinetics and antiemetics
  - 1.9.4. Pharmacological treatment of nausea and vomiting induced by opioids and other drugs
- 1.10. Pharmacology of drugs used in nutritional therapy
  - 1.10.1. Classification and Types of nutritional therapy
  - 1.10.2. Administration of drugs and enteral nutrition: interactions and special considerations
  - 1.10.3. Medications used for the management of malnutrition and nutritional support in critically ill patients
  - 1.10.4. Antibiotics and antifungals in enteral and parenteral nutrition patients



*Enroll now in this program and start working on an update that will mark a before and after in your career”*

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.



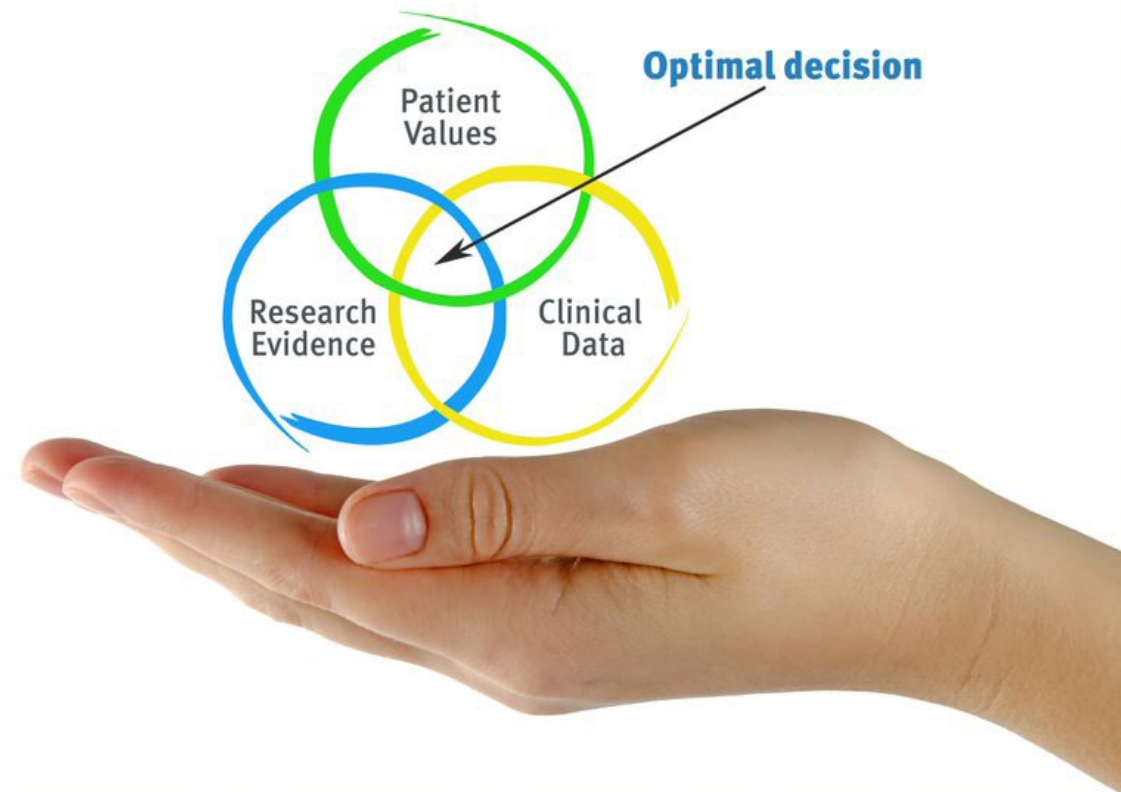


*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly 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. Gervas, 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, attempting to recreate the actual conditions in a pharmacist'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. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their 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.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.

*Pharmacists will learn through real cases and by solving 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 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years.

*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 created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.



### Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.



### 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.

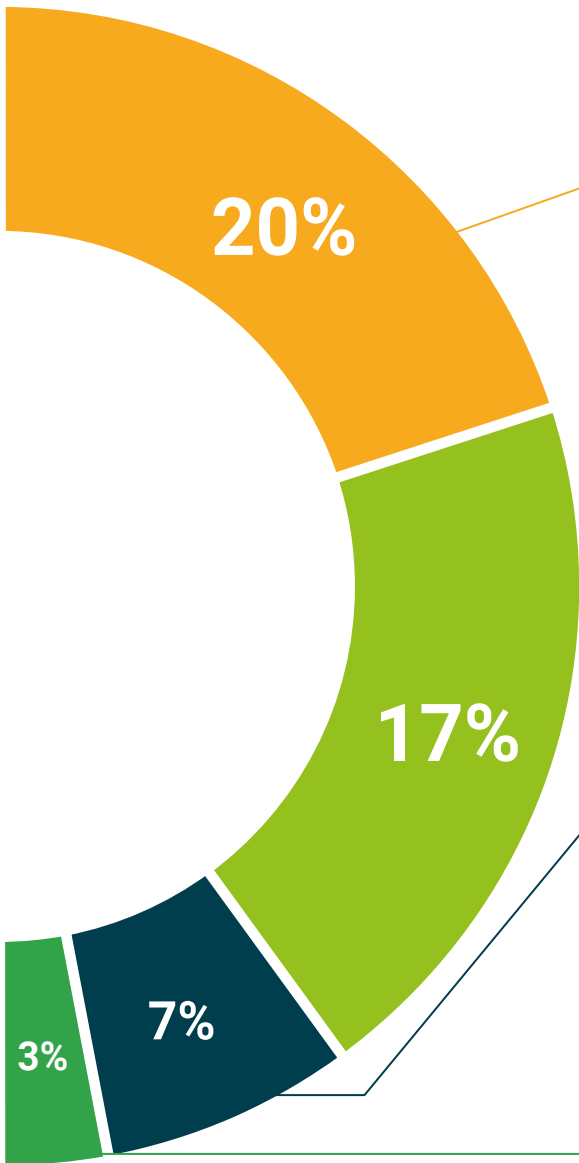
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



### 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, we will present you with real case developments in which the expert will guide you through 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 Hospital Pharmacology of the Gastrointestinal System guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Hospital Pharmacology of the Gastrointestinal System** 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 certificate 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 Hospital Pharmacology of the Gastrointestinal System**

Official N° of Hours: **150 h.**



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

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



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