

# Postgraduate Certificate

## New Technologies Applied to the Pharmaceutical Industry



## Postgraduate Certificate New Technologies Applied to the Pharmaceutical Industry

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

Website: [www.techtute.com/us/pharmacy/postgraduate-certificate/new-technologies-applied-pharmaceutical-industry](http://www.techtute.com/us/pharmacy/postgraduate-certificate/new-technologies-applied-pharmaceutical-industry)

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# 01

# Introduction

The advancement of technologies in the pharmaceutical field is generating unprecedented innovation, improving everything from research to medical care and drug production. This evolution offers the opportunity to increase the efficiency, safety and quality of products. For this reason, it is increasingly important for pharmacists to be at the forefront of digital transformation. Therefore, this 100% online TECH program is born, which leads the graduate to obtain in 180 teaching hours, the most current and comprehensive information on Artificial Intelligence, Robotics, Big Data or Digital Health. All this, with a methodology that provides total freedom for self-management of access time, requiring only a device with Internet connection.



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*Keep up to date with the latest trends in New Technologies Applied to the Pharmaceutical Industry with cutting-edge qualifications that only TECH can offer you"*

New Technologies Applied to the Pharmaceutical Industry are revolutionizing the healthcare field and offering unprecedented opportunities to improve efficiency, quality and safety in this field. These technologies range from Artificial Intelligence and data analysis to telemedicine and 3D printing. A whole transformation that leads professionals to maintain a continuous updating of their knowledge in this field.

Faced with this reality, this academic institution has developed this 6-week Postgraduate Certificate in New Technologies Applied to the Pharmaceutical Industry. This is a program that offers advanced and high quality content on the most notorious technical advances for the today's sector.

In this way, the graduate will delve into clinical analysis, supply chains and digital health, smart medical devices or nanotechnology. Therefore, to achieve this update, TECH provides access to multimedia materials such as video abstracts and clinical cases, hosted in a virtual library.

Undoubtedly, an unparalleled academic experience, which will lead students in just 180 teaching hours to enhance their skills in this field, without having to dispense with the performance of their daily professional and personal activities. And the fact is that, with no classroom attendance or class schedules, you will have greater freedom to access the syllabus, whenever and wherever you want, from a digital device with an Internet connection.

This **Postgraduate Certificate in New Technologies Applied to the Pharmaceutical Industry** contains the most complete and updated educational program on the market. Its most notable features are:

- ◆ The development of practical cases presented by experts in Pharmacy
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where 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



*After 180 teaching hours you will get the most comprehensive information on the use of Artificial Intelligence in the pharmaceutical sector"*

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*You will delve into the revolutionary Blockchain technology and its application in the supply chain and data management in the Pharmaceutical Industry”*

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

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

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

*Increase your Big Data analysis skills and use them to make informed and strategic decisions.*

*You will delve into digital health whenever and wherever you want, from your electronic device with Internet connection.*



# 02 Objectives

The main objective of this university degree is to offer pharmacists the most cutting-edge tools and knowledge in the field of emerging technologies applied to the pharmaceutical field. In this way, the professional will obtain an update of great value for their daily performance in a sector that is characterized by its evaluation and continuous development. For this purpose, TECH provides a large amount of didactic material, prepared by an excellent teaching team specialized in this area.







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*It delves into the increasingly frequent use of new models of smart insulin pumps through the high quality educational material in this program”*



## General Objectives

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- ◆ Acquire specialized knowledge in the Pharmaceutical Industry
- ◆ Deepen your knowledge of the Pharmaceutical Industry
- ◆ Delve into the latest developments in the Pharmaceutical Industry
- ◆ Understand the structure and function of the pharmaceutical industry
- ◆ Understand the competitive environment of the Pharmaceutical Industry
- ◆ Understand market research concepts and methodologies
- ◆ Use market research technologies and tools
- ◆ Develop sales skills specific to the Pharmaceutical Industry
- ◆ Understand the sales cycle in the Pharmaceutical Industry
- ◆ Analyze customer behavior and market needs
- ◆ Develop leadership skills
- ◆ Understand the specifics of management in the Pharmaceutical industry
- ◆ Apply project management techniques
- ◆ Understand the principles and fundamentals of marketing in the pharmaceutical industry





## Specific Objectives

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- ◆ Delve into new technological trends in the Pharmaceutical Industry
- ◆ Analyze the impact of new technologies in the Pharmaceutical Industry
- ◆ Develop skills in the management of technological projects

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*In just 6 weeks you will be up to speed with the advances made in drug manufacturing and the design of complex dosage forms using 3D printing”*

03

# Course Management

In order to provide a process of updating top-level skills, TECH has made a careful selection of each and every one of the teachers that make up this degree. In this way, students have a program designed and developed by pharmaceutical and Digital Marketing experts. In this way, the graduate will have the guarantee of accessing a Postgraduate Certificate that provides the latest information, from the hands of real specialists.



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*Explore, together with TECH's leading specialists in Pharmacy, the infinite possibilities that nanotechnology offers in the field of health"*

## Management



### Mr. Calderón, Carlos

- ♦ Director of Marketing and Advertising at Industrias Farmacéuticas Puerto Galiano S.A.
- ♦ Marketing and Advertising Consultant at Experiencia MKT
- ♦ Director of Marketing and Advertising at Marco Aldany
- ♦ CEO and creative director at C&C Advertising
- ♦ Director of Marketing and Advertising at Elsevier
- ♦ Creative Director at CPM Advertising and Marketing Consultants
- ♦ Advertising Technician by the CEV of Madrid



### Mr. Expósito Esteban, Alejandro

- ♦ Director Digital de Innovation and Business Operation en Merck Group
- ♦ Digital and New Technologies Director at McDonalds Spain
- ♦ Director of Alliances and Channels at Microma The Service Group
- ♦ Director of After Sales Services at Pc City Spain S.A.U.



## Professors

### Mr. González Suárez, Hugo

- ◆ Digital & Product Marketing Manager en Laboratorios ERN S.A.
- ◆ Product Marketing and Project Manager at Amgen
- ◆ Bachelor's degree in Biochemistry and Pharmacology from Cambridge International University
- ◆ Professional Master's Degree in Marketing of the Center for Higher Studies in the Pharmaceutical Industry (CESIF)
- ◆ PROFESSIONAL MASTER'S DEGREE in Business Administration from ESNECA Business School

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

# 04

## Structure and Content

This program brings together the most important concepts in the field of emerging technologies for the Pharmaceutical Industry. In this way, the professional will be updated on Artificial Intelligence, Blockchain technology, Big Data and 3D printing, among other relevant aspects. In this sense, students will have access to innovative content that, combined with the Relearning method, allows them to invest fewer hours in their updating process and memorize concepts in the long term.







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*A personalized program designed with the most efficient educational methodology, the Relearning method"*

## Module 1. New technologies applied to pharmaceutical sector

- 1.1. Artificial Intelligence AI
  - 1.1.1. Drug discovery
  - 1.1.2. Clinical Research
  - 1.1.3. Medical analysis
  - 1.1.4. Personalized therapy
- 1.2. Blockchain Technology
  - 1.2.1. Supply Chain
  - 1.2.2. Traceability
  - 1.2.3. Authentication
  - 1.2.4. Data Management
- 1.3. Big Data
  - 1.3.1. Genomic data
  - 1.3.2. Molecular data
  - 1.3.3. Clinical data
  - 1.3.4. Data Analysis
- 1.4. Digital Health.
  - 1.4.1. Mobile Applications
  - 1.4.2. Telemedicine
  - 1.4.3. Virtual Consultations
  - 1.4.4. Online communities
- 1.5. Intelligent medical devices
  - 1.5.1. Intelligent insulin pumps
  - 1.5.2. Connected glucose meters
  - 1.5.3. Intelligent inhalers
  - 1.5.4. Cardiac monitoring devices
- 1.6. 3D Printing
  - 1.6.1. Manufacture of personalized medicines
  - 1.6.2. Drug formulation
  - 1.6.3. Design of complex pharmaceutical forms
  - 1.6.4. Anatomical models
- 1.7. Nanotechnology
  - 1.7.1. Genetic Therapy
  - 1.7.2. Detection of Diseases
  - 1.7.3. Photothermal therapy
  - 1.7.4. Regenerative nanomedicine





- 1.8. Robotics
  - 1.8.1. Production line automation
  - 1.8.2. Drug synthesis
  - 1.8.3. Automated pharmacy
  - 1.8.4. Robots-Assisted Surgery
- 1.9. Biosensors
  - 1.9.1. Glucose biosensors
  - 1.9.2. PH biosensors
  - 1.9.3. Oxygen biosensors
  - 1.9.4. Oxygen biosensors
- 1.10. Augmented Reality
  - 1.10.1. Product promotion
  - 1.10.2. Training of professionals
  - 1.10.3. Dosage Guide
  - 1.10.4. Viewing medical data

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*You will get up-to-date content on robotics, automation of production lines in the pharmaceutical sector”*

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 New Technologies Applied to the Pharmaceutical Industry guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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

This program will allow you to obtain your **Postgraduate Certificate in New Technologies Applied to the Pharmaceutical Industry** endorsed by **TECH Global University**, the world's largest online university.

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

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

Title: **Postgraduate Certificate in New Technologies Applied to the Pharmaceutical Industry**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





## Postgraduate Certificate

### New Technologies Applied to the Pharmaceutical Industry

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

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