

# Postgraduate Certificate Coronavirus Infections Update





## Postgraduate Certificate Coronavirus Infections Update

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/coronavirus-infections-update](http://www.techtute.com/us/medicine/postgraduate-certificate/coronavirus-infections-update)

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# 01

# Introduction

The rapid spread and severe consequences caused by the COVID-19 pandemic have highlighted the importance of having a team of medical professionals prepared to deal with a health crisis such as the one experienced from 2020 onwards. This is why TECH has considered it necessary to develop a program with which specialists in this field can learn in detail the latest developments related to infections caused by the coronavirus and its different variants. This is a 100% online program, designed by experts and thanks to which, in only 180 hours, you will be able to update your knowledge and improve your skills with the endorsement of a great university.





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*A program designed by experts thanks to which you can learn in detail the epidemiological changes that have occurred in relation to coronavirus infections"*

The global pandemic unleashed by the breakthrough of COVID-19 has resulted in more than 6.34 million deaths, as well as side effects of varying severity in patients who have managed to survive. However, the consequences of the development of this virus have been stifled by the magnificent intervention of healthcare workers who, since the beginning of the crisis, have worked exhaustively and laboriously, sometimes even without sufficient information due to the volatile and evolving nature of the disease.

As this is a new condition, new ways of treating and preventing it are constantly being discovered, which makes it difficult for professionals in this sector to keep up to date. For this reason, and with the aim of making it easier for you to update your knowledge, TECH and its team of experts in microbiology and parasitology have developed this Postgraduate Certificate in Coronavirus Infections Update. It is a comprehensive and innovative program that includes the latest scientific advances that have been made in this field.

For this, the specialist will have 180 hours of the best theoretical, practical and additional content (in different formats), all in a comfortable and accessible 100% online program. This feature will give you the possibility to access the virtual classroom from anywhere and with a fully customized schedule, as well as from any device with internet connection. A dynamic, safe and guaranteed way to bring yourself up to date without face-to-face classes and with a program adapted to your academic needs.

This **Postgraduate Certificate in Coronavirus Infections Update** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ◆ Clinical cases presented by experts in Infectious Diseases
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*A unique academic opportunity to catch up on the evolution of COVID-19 variants 100% online"*

“

*Thanks to TECH's commitment to professionals like you, you will be able to access the program through a schedule adapted to your availability and from any device with an internet connection"*

The program includes in its teaching staff professionals from the sector who bring to this program the experience of their work, as well as recognized 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.

The design of this program focuses on problem-based learning, through which the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Would you like to delve into the latest scientific advances related to COVID-19 infections and the immune system? This program is perfect for you.*

*You will have 180 hours of content presented in different formats, selected by experts in Microbiology and Parasitology.*



# 02 Objectives

TECH is aware that the medical profession requires a practically exclusive dedication, which means that the professionals in this field hardly have time to study any type of program in a way that is compatible with the activity of their practice. For this reason, the objective of this and all the programs offered by this university is to allow the specialists to know in detail the advances that have been made in their field, in this case in relation to coronavirus infections, in a guaranteed, exhaustive and totally adapted to their availability.







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*A Postgraduate Certificate designed with the objective of updating your knowledge in relation to COVID-19 in a guaranteed way and without worrying about schedules or face-to-face classes"*



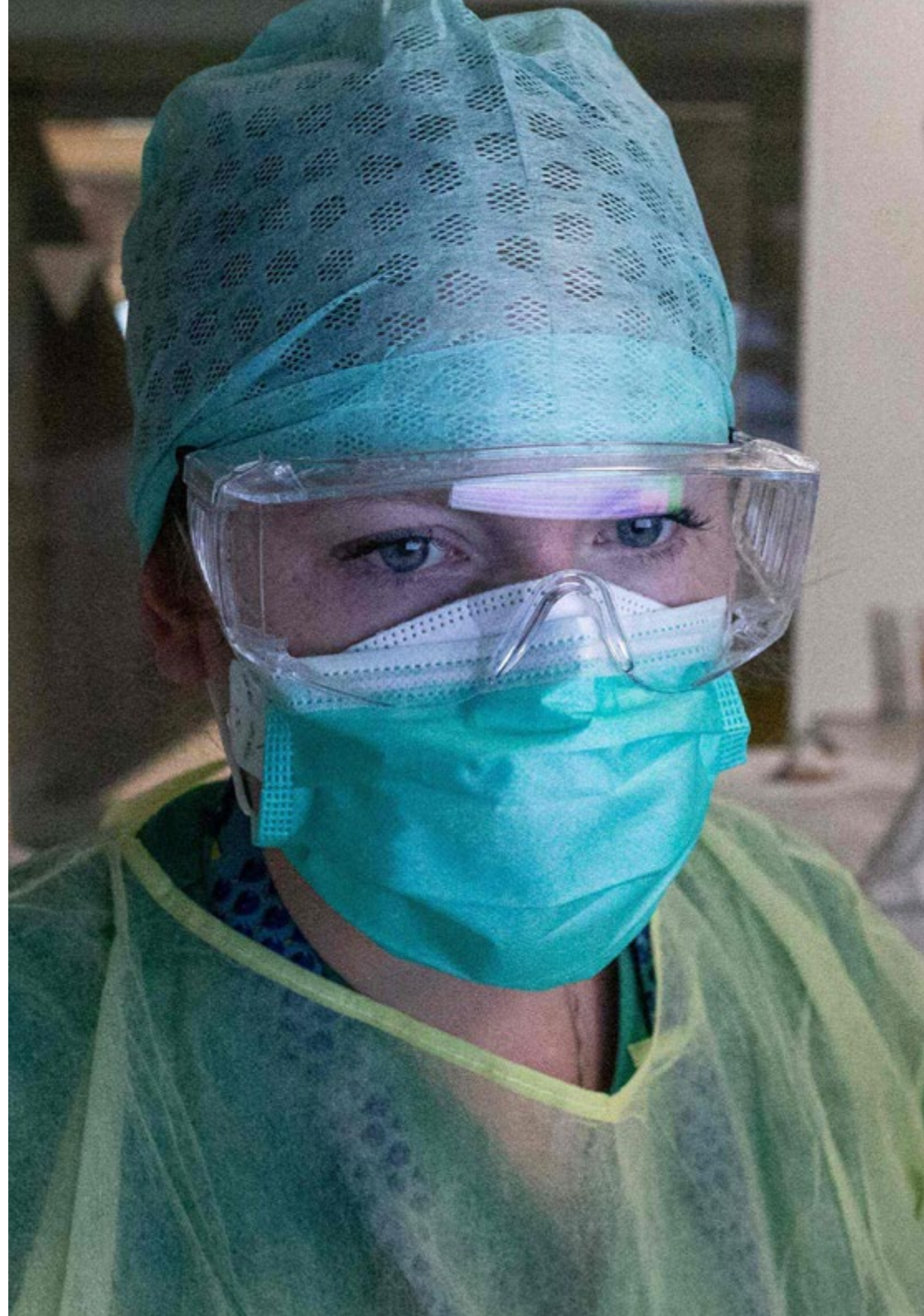
## General Objectives

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- ◆ Know in detail the immediate news related to the situation of COVID-19 in the world
- ◆ Develop specialized and novel knowledge about the different infections that may arise from this pathology

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*You will be able to hone your skills in the microbiological diagnosis of infections, as well as the best strategies and techniques for serological testing”*







## Specific Objectives

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- ◆ Know the microbiological characteristics of coronaviruses
- ◆ Know how to assess the morbidity and mortality of coronavirus infections
- ◆ Identify the main risk groups and mechanisms of coronaviruses
- ◆ Be able to perform the necessary tests for diagnosing Coronavirus
- ◆ Know how to apply the necessary preventive measures, as well as the most accurate treatments according to the type of patient

# 03

# Course Management

Having a specialized faculty in the field of the educational program is, undoubtedly, a quality plus that TECH includes in each of its programs. In this case, a group of medical professionals versed in the field of Microbiology, Infectious Diseases and Parasitology, with years of experience in the clinical management of patients with different clinical pathologies, including COVID-19 variants, have been selected for the Postgraduate Certificate. Thanks to this, you will be able to learn in detail about the latest developments in this field from practicing experts.





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*TECH offers you the possibility of sharing your doubts and concerns with the teaching team through online tutorials”*

## Management



### Dr. Díaz Pollán, Beatriz

- ◆ Faculty Specialist La Paz University Hospital
- ◆ Faculty Specialist at San Carlos Clinical Hospital
- ◆ Resident Physician in San Carlos Clinical Hospital
- ◆ Master's Degree in Clinical Medicine from the Rey Juan Carlos University
- ◆ Degree in Medicine and Surgery from the Autonomous University of Madrid
- ◆ Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU - Cardenal Herrera University
- ◆ Postgraduate Diploma in Community and Nosocomial Infections from CEU - Cardenal Herrera University
- ◆ Postgraduate Diploma in Chronic Infectious Diseases and Imported Infections from CEU - Cardenal Herrera University
- ◆ Postgraduate Diploma in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology from CEU - Cardenal Herrera University

## Professors

### Dr. Ramos, Juan Carlos

- ◆ Doctor at La Paz University Hospital. Madrid
- ◆ Official Doctoral Programme in Medicine. University of Alcalá
- ◆ Degree in Medicine and Surgery. Complutense University of Madrid
- ◆ Master's Degree in Infectious Diseases in Intensive Care. University-Company Foundation Valencia
- ◆ Author of Several Scientific Publications

**Dr. Rico, Alicia**

- ◆ Specialist in the Microbiology and Parasitology Department at La Paz University Hospital
- ◆ Assistant and co-founder of the Infectious Diseases and Clinical Microbiology Unit at La Paz University Hospital
- ◆ Team Member of PROA (Programs of reinforcement, Orientation and Support)
- ◆ Teaching Collaborator of the Department of Medicine at UAM
- ◆ Member of the Infection and Policy Committee of La Paz University Hospital.
- ◆ Member of SEIMC (the Spanish Society of Infectious Diseases and Clinical Microbiology)
- ◆ Participation in several research projects
- ◆ Degree in Medicine from the Complutense University of Madrid
- ◆ Doctorate Courses at the Complutense University of Madrid

**Dr. Loeches Yagüe, María Belén**

- ◆ Specialist in the field of Infectious Diseases at La Paz General University Hospital
- ◆ Professor of Infectious Diseases at the Infanta Sofía University Hospital in Madrid European University of Madrid
- ◆ Doctor of Medicine. Autonomous University of Madrid
- ◆ Degree in Medicine. Complutense University of Madrid
- ◆ Master in Theoretical and Practical Learning in Infectious Diseases. Complutense University of Madrid
- ◆ Specialised Training in Microbiology and Infectious Diseases. Gregorio Marañón General University Hospital

**Dr. Arribas López, José Ramón**

- ◆ Head of the Infectious Diseases and Clinical Microbiology Unit. La Paz University Hospital
- ◆ Coordinator of the High-Level Isolation Unit. La Paz University Hospital– Carlos III
- ◆ Member of the Interministerial Committee for the management of the Ebola crisis
- ◆ Head of the AIDS and Infectious Diseases research group at IdiPAZ
- ◆ Doctor of Medicine. Autonomous University of Madrid
- ◆ Degree in Medicine and Surgery. Complutense University of Madrid

**Dr. Mora Rillo, Marta**

- ◆ Specialist in the field of Infectious Diseases at La Paz University
- ◆ Clinical Teaching Collaborator in the Department of Medicine. Autonomous University of Madrid
- ◆ Doctor of Medicine. Autonomous University of Madrid
- ◆ Degree in Medicine and Surgery. University of Zaragoza
- ◆ Master's Degree in Infectious Diseases in Intensive Care. University of Valencia
- ◆ Online Masters in Infectious Diseases and Antimicrobial Treatment CEU Cardenal Herrera University. 2017
- ◆ Master's Degree in Tropical Medicine and International Health. Autonomous University of Madrid
- ◆ Expert in Emerging and High-Risk Virus Pathology. Autonomous University of Madrid
- ◆ Expert in Tropical Medicine. Autonomous University of Madrid

# 04

## Structure and Content

This program includes 180 hours of the best theoretical, practical and additional content presented in different formats: detailed videos, self-knowledge exercises, images, dynamic summaries, research articles and complementary readings. All this, based on the latest developments in the sector and carefully selected by the teaching team. In this way, the specialists will be able to delve into each section in a personalized way, obtaining from this academic experience a broad and exhaustive knowledge that will make them even more prepared to clinically manage patients affected by this virus and its different variants.



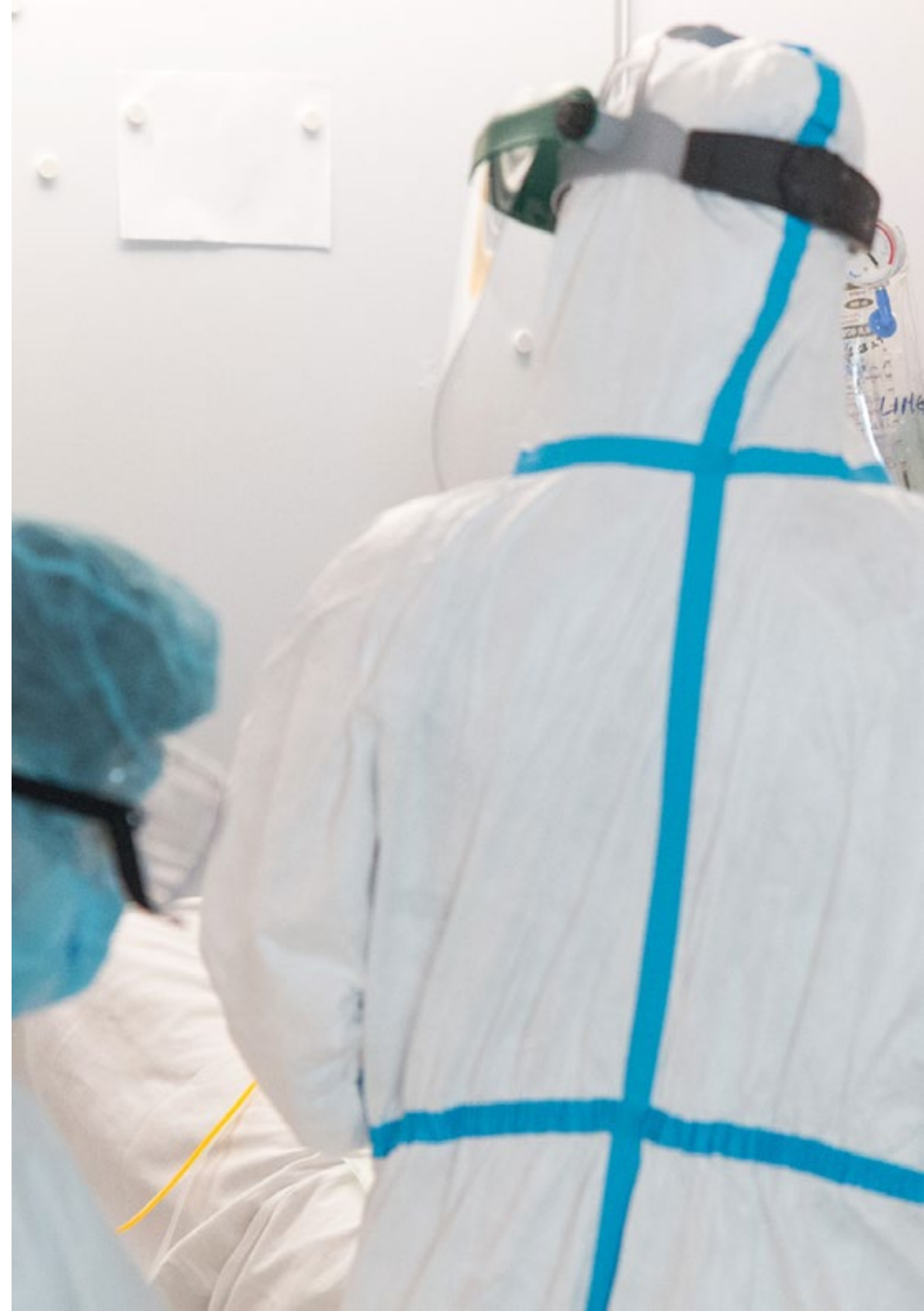


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*You will be able to delve into new developments related to current biosafety in microbiology laboratories for handling coronavirus samples"*

## Module 1. Coronavirus Infections

- 1.1. Discovery and Evolution of Coronaviruses
  - 1.1.1. Discovery of Coronaviruses
  - 1.1.2. Global Trends in Coronavirus Infections
- 1.2. Main Microbiological Characteristics and Members of the Coronavirus Family
  - 1.2.1. General Microbiological Characteristics of Coronaviruses
  - 1.2.2. Viral Genome
  - 1.2.3. Principal Virulence Factors
- 1.3. Epidemiological Changes in Coronavirus Infections from its Discovery to the Present
  - 1.3.1. Morbidity and Mortality of Coronavirus Infections from their Emergence to the Present
- 1.4. The Immune System and Coronavirus Infections
  - 1.4.1. Immunological Mechanisms Involved in the Immune Response to Coronaviruses
  - 1.4.2. Cytokine Storm in Coronavirus Infections and Immunopathology
  - 1.4.3. Modulation of the Immune System in Coronavirus Infections
- 1.5. Pathogenesis and Pathophysiology of Coronavirus Infections
  - 1.5.1. Pathophysiological and Pathogenic Alterations in Coronavirus Infections
  - 1.5.2. Clinical Implications of the Main Pathophysiological Alterations
- 1.6. Risk Groups and Transmission Mechanisms of Coronaviruses
  - 1.6.1. Main Sociodemographic and Epidemiological Characteristics of Risk Groups Affected by Coronavirus
  - 1.6.2. Coronavirus Mechanisms of Transmission
- 1.7. Natural History of Coronavirus Infections
  - 1.7.1. Stages of Coronavirus Infection
- 1.8. Latest Information on Microbiological Diagnosis of Coronavirus Infections
  - 1.8.1. Sample Collection and Shipment
  - 1.8.2. PCR and Sequencing
  - 1.8.3. Serology Testing
  - 1.8.4. Virus Isolation





- 1.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
  - 1.9.1. Biosafety Measures for Coronavirus Sample Handling
- 1.10. Up-to-Date Management of Coronavirus Infections
  - 1.10.1. Prevention Measures
  - 1.10.2. Symptomatic Treatment
  - 1.10.3. Antiviral and Antimicrobial Treatment in Coronavirus Infections
  - 1.10.4. Treatment of Severe Clinical Forms
- 1.11. Future Challenges in the Prevention, Diagnosis, and Treatment of Coronavirus
  - 1.11.1. Global Challenges for the Development of Prevention, Diagnostic, and Treatment Strategies for Coronavirus Infections

“ Explore future challenges in the prevention, diagnosis and therapeutics of Coronavirus infections? Choose this Postgraduate Certificate and trust that TECH will give you all the tools to achieve it”



05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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

## At TECH we use the Case Method

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

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



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

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

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

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



## Relearning Methodology

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

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

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





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

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

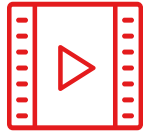
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

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



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



#### Study Material

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

These contents are then adapted in 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

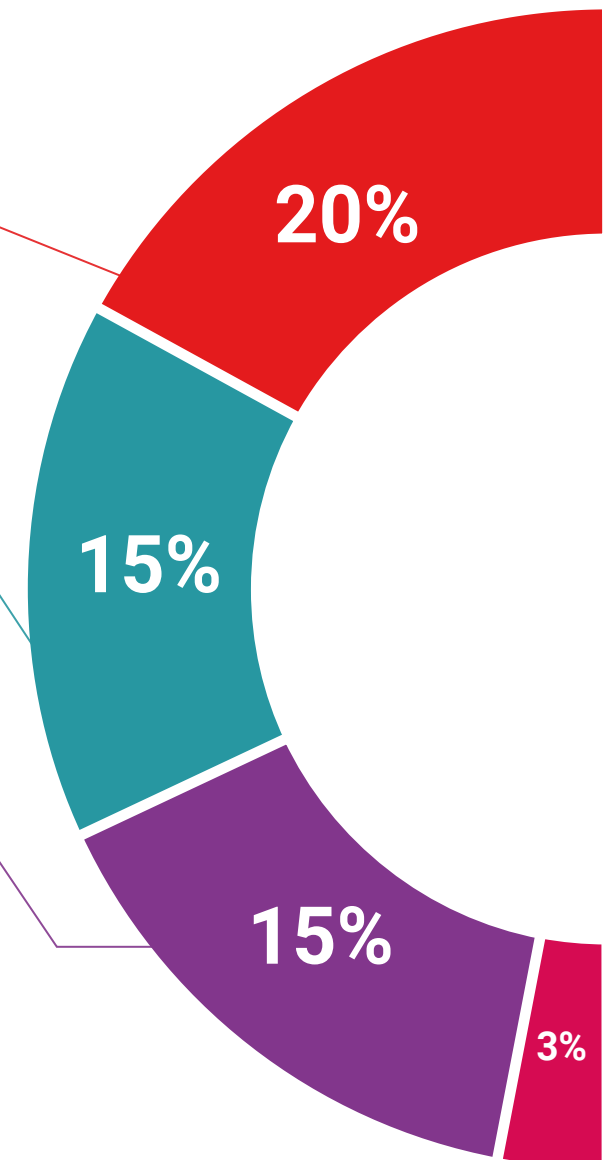
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

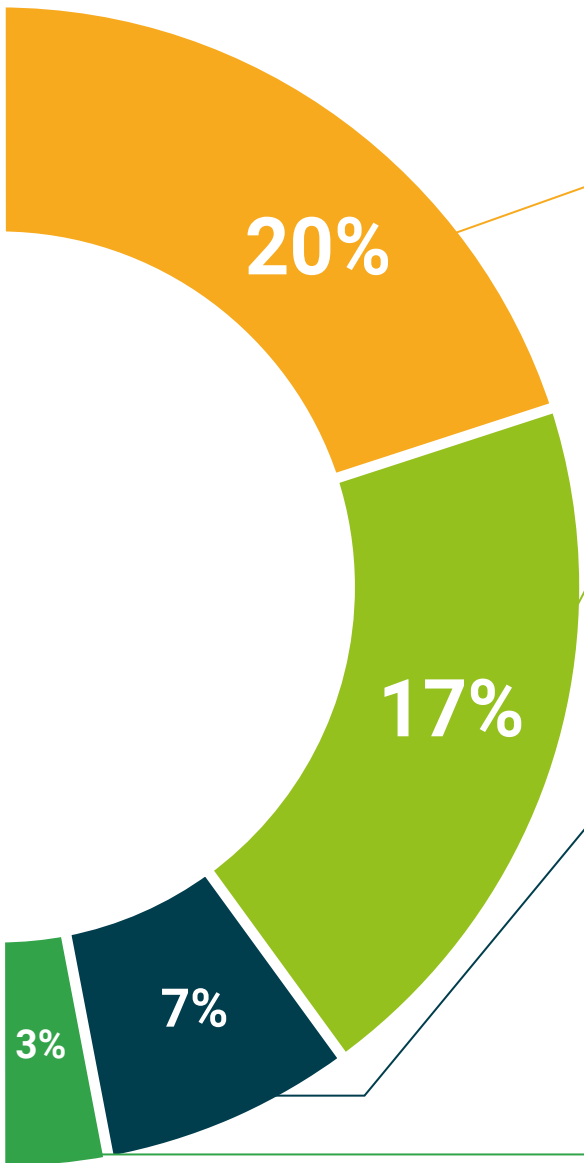
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Coronavirus Infections Updates 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 Coronavirus Infections Update** 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 Coronavirus Infections Update**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University 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 languages

virtual classroom

**tech** global  
university

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- » Credits: 6 ECTS
- » Schedule: at your own pace
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