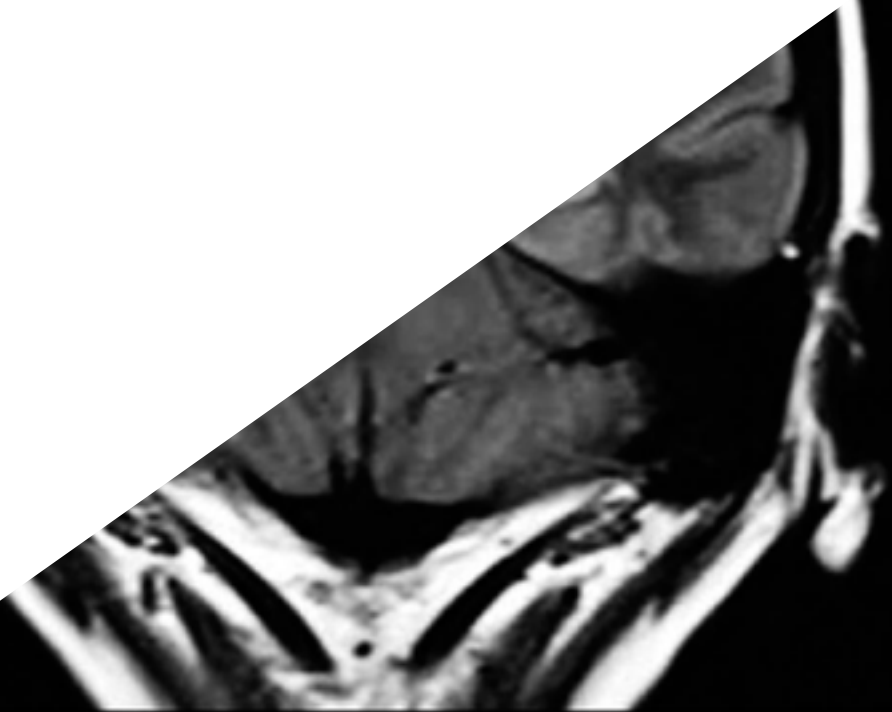


Postgraduate Certificate

Central Nervous System Infections



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Postgraduate Certificate

Central Nervous System Infections

Course Modality: Online

Duration: 8 weeks

Certificate: TECH Technological University

7 ECTS credits

Hours 175 hours.

Website: www.techtute.com/medicine/postgraduate-certificate/central-nervous-system-infections

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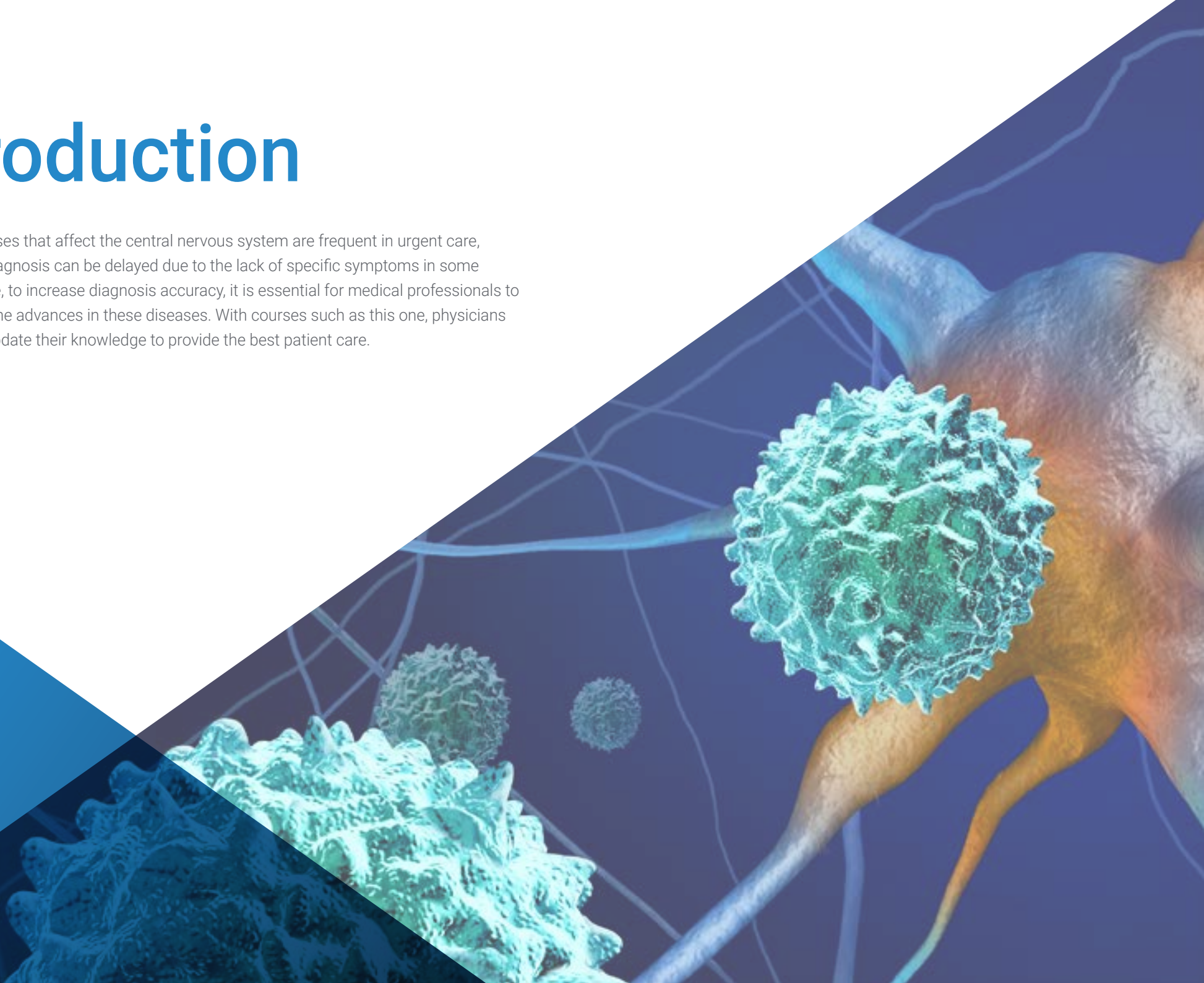
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01

Introduction

Infectious diseases that affect the central nervous system are frequent in urgent care, because their diagnosis can be delayed due to the lack of specific symptoms in some cases. Therefore, to increase diagnosis accuracy, it is essential for medical professionals to be aware of all the advances in these diseases. With courses such as this one, physicians will be able to update their knowledge to provide the best patient care.



“

Improve your knowledge in Central Nervous System Infections through this program, where you will find the best didactic material with real clinical cases. Learn here about the latest advances in the specialty to be able to perform a quality medical practice”

Central nervous system infections are an emerging health problem, as rapid and accurate diagnosis is necessary to avoid complications. In fact, since specific symptoms may not be present, diseases of this type are common in urgent care as they have not been diagnosed early.

Although the introduction of antibiotic drugs has significantly reduced the morbidity figures for this type of disease, it is still necessary to continue with medical scientific research, as well as for specialists to be aware of all the new developments that may arise in this regard.

Therefore, healthcare professionals, regardless of where they work, can see in this **Postgraduate Certificate** the opportunity to study a program that comprises the most advanced and in-depth knowledge of the most important health problems in the field of infectious diseases and antimicrobial treatment, where a group of professors of high scientific rigor and wide international experience presents the most complete and up-to-date information on the prevention, diagnosis, treatment and care of individual patients and population groups suffering from the most prevalent and deadly infectious diseases.

In this case, the program focuses on infections in the central nervous system, which affect thousands of people worldwide, with special emphasis on meningitis, encephalitis and myelitis.

This **Postgraduate Certificate in Central Nervous System Infections** contains the most complete and up-to-date scientific program on the market. The most important features of the course are:

- Firstly, Clinical features, in order to address the health-infectious disease process in a particular person through the study of the most prevalent and deadly infectious diseases and, secondly, in Epidemiologic features, to study the behavior of the same phenomenon in a particular population.
- Training and professional development in the indication, performance and interpretation of the main state-of-the-art diagnostic tests to complement clinical skills in the diagnostic process. Emphasizing the most up-to-date microbiological tests used to rapidly diagnose germs and study antimicrobial resistance.
- Training and professional development in the complex and determining pathophysiological relationships between immune response and infectious agents.
- Training and professional development in germs related to neoplasms and chronic non-communicable diseases.
- Training and professional development in the development and production of vaccines for the control of morbidity and mortality due to infectious diseases.
- Training and professional development in the important field of antimicrobial therapeutics, providing the best available information on the development and production of new antibiotics.



Update your knowledge through the Postgraduate Certificate in Central Nervous System Infections”

“

This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge of the Central Nervous System Infections, you will obtain a certificate from TECH Technological University”

Its teaching staff is made up of prestigious and renowned Cuban professionals with a long career in health care, teaching and research, who have worked in many countries on several continents, developing professional and teaching experience that they deliver in an extraordinary way in this **Postgraduate Certificate**.

The methodological design of this **Postgraduate Certificate**, developed by a multidisciplinary team of e-learning experts, integrates the latest advances in educational technology for the creation of numerous educational multimedia tools that allow the professional, based primarily on the problem-based learning method, to address real problems in their daily clinical practice, which will allow them to advance by acquiring knowledge and developing skills that will impact their future professional work.

It should be noted that the contents generated for this **Postgraduate Certificate**, as well as the videos, self-evaluations, clinical cases and exams, have been thoroughly reviewed, updated, and integrated by the professors and the team of experts that make up the work group to facilitate the learning process with a step-by-step approach in order to achieve the teaching program objectives.

Increase your decision-making confidence by updating your knowledge through this program.

Take the opportunity to learn about the latest advances in Infections the Central Nervous System Infections and improve your patient care.



02

Objectives

The main objective of this **Postgraduate Certificate** is the improvement of health professionals, based on the acquisition of the most up-to-date and innovative scientific knowledge in the field of Central Nervous System Infections and their treatment, enabling them to develop the skills that will turn their daily clinical practice into a bastion of the standards of the best scientific evidence available, with a critical, innovative, multidisciplinary and integrative focus.





“

This Postgraduate Certificate will help you to be more accurate in the diagnosis of Central Nervous System Infections”



General Objective

- Guarantee professional improvement through up-to-date and in-depth knowledge of the best scientific evidence , for the prevention, diagnosis, and treatment of infectious diseases with a multidisciplinary and integrative approach that facilitates the control of these pathologies.





Specific Objectives

- ◆ Provide students with advanced, in-depth, updated, and multidisciplinary information that allows them to comprehensively approach the process of health-infectious diseases.
- ◆ Provide training and practical theoretical improvement that will enable a reliable clinical diagnosis supported by the efficient use of diagnostic methods to indicate an effective integral treatment.
- ◆ Assess and interpret the epidemiological characteristics and conditions of the different continents where the appearance and development of infectious diseases often occur.
- ◆ Highlight the role of immunity in central nervous system infections and their complications.

*Update your knowledge through the
Postgraduate Certificate in Central
Nervous System Infections.*

03

Course Management

Renowned and recognized medical specialists with numerous publications, teaching experience, and professional experience in many countries, where many of the diseases studied have a high morbimortality, participate in the teaching program. The teaching staff is made up of a multidisciplinary team from various medical specialities, such as internal medicine, paediatrics, general surgery, gynaecology and obstetrics, microbiology, pathological anatomy, pharmacology, among others.





“

Learn from leading professionals the latest advances in infectious diseases and antibiotic management”

Guest Director



Dr. Díaz Pollán, Beatriz

- Faculty Area Specialist La Paz University Hospital Since 2013
- Official Doctoral Programme in Clinical Medicine. Rey Juan Carlos University. 2014
- Degree in Medicine and Surgery. Autonomous University of Madrid. 1995
- Masters in Infectious Diseases and Antimicrobial Treatment. CEU - Cardenal Herrera University. 2018
- University Expert in Community and Nosocomial Infections. CEU - Cardenal Herrera University. 2018
- University Expert in Chronic Infectious Diseases and Imported Infections. CEU - Cardenal Herrera University. 2018
- University Expert in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology. CEU - Cardenal Herrera University. 2018
- Faculty Area Specialist San Carlos Clinical Hospital 2001-2013
- Resident doctor. San Carlos Clinical Hospital 1996-2001

Co-Direction



Dr. Quintero Casanova, Jesús

- Attending physician and professor of medicine. General Teaching Hospital Héroes del Baire
- 1st and 2nd Degree Specialist in Internal Medicine
- Assistant Professor of the Speciality
- Master's Degree in Clinical Infectious and Tropical Diseases
- Teacher of Excellence Award. FCM IJ. 2009
- Alma Mater Prize of the FEU (in the years: 2008, 2009, 2015, 2016 y 2017)

04

Structure and Content

The teaching program has been created to provide healthcare professionals with the necessary tools for daily practice in the treatment of clinical infections. Thus, the content of this **Postgraduate Certificate** comprises the most updated syllabus on the market, which has been developed by leading experts in the field at the international level, with the aim of making specialists more accurate in the diagnosis and treatment of this type of infections.



“

This Postgraduate Certificate in Central Nervous System Infections contains the most complete and up-to-date scientific program on the market”

Module 1. Epidemiology and microbiology of infectious diseases

- 1.1. Epidemiological, Economic and Social Conditions by Continents that Favour the Development of Infectious Diseases
 - 1.1.1. Africa
 - 1.1.2. America
 - 1.1.3. Europe and Asia
- 1.2. New and Emerging Diseases by Continent
 - 1.2.1. Morbidity and Mortality from Infectious Diseases in Africa
 - 1.2.2. Morbidity and Mortality from Infectious Diseases in the Americas
 - 1.2.3. Infectious Disease Morbidity and Mortality in Asia
 - 1.2.4. Morbidity and Mortality from Infectious Diseases in Europe
- 1.3. The Taxonomy of Infectious Agents
 - 1.3.1. Viruses
 - 1.3.2. Bacteria
 - 1.3.3. Fungi
 - 1.3.4. Parasites
- 1.4. Disease-producing Properties of Micro-organisms
 - 1.4.1. Mechanisms of Pathogenicity
 - 1.4.2. Mechanisms of Adhesion and Multiplication
 - 1.4.3. Mechanisms Enabling the Acquisition of Nutrients from the Host
 - 1.4.4. Mechanisms Inhibiting the Phagocytic Process
 - 1.4.5. Mechanisms for Evading the Immune Response
- 1.5. Microscopy and Staining
 - 1.5.1. Microscopes and Types of Microscopes
 - 1.5.2. Composite Stains
 - 1.5.3. Acid-resistant Micro-organism Staining
 - 1.5.4. Staining to Demonstrate Cellular Structures
- 1.6. Cultures and Growth of Micro-organisms
 - 1.6.1. General Culture Mediums
 - 1.6.2. Specific Culture Methods
- 1.7. Effect of Chemical and Physical Agents on Micro-organisms
 - 1.7.1. Sterilization and Disinfection
 - 1.7.2. Disinfectants and Antiseptics Used in Practice
- 1.8. Molecular Biology and Its Importance for the Infectologist



- 1.8.1. Bacterial Genetics
- 1.8.2. Polymerase Chain Reaction Tests
- 1.9. Indication and Interpretation of Microbiological Studies

Module 2 Central Nervous System Infections

- 2.1. The Immune Defence Mechanisms of the CNS
 - 2.1.1. CNS Defence Mechanisms
 - 2.1.2. CNS Immune Response
- 2.2. Epidemiology of CNS Infection
 - 2.2.1. Morbidity
 - 2.2.2. Mortality
 - 2.2.3. Risk Factors
- 2.3. Microbiological Diagnosis of CNS Infection
 - 2.3.1. The Study of Cerebrospinal Fluid
- 2.4. Meningitis
 - 2.4.1. Etiology
 - 2.4.2. Clinical Picture
 - 2.4.3. Diagnosis
 - 2.4.4. Treatment
- 2.5. Encephalitis
 - 2.5.1. Etiology
 - 2.5.2. Clinical Picture
 - 2.5.3. Diagnosis
 - 2.5.4. Treatment
- 2.6. Myelitis
 - 2.6.1. Etiology
 - 2.6.2. Clinical Picture
 - 2.6.3. Diagnosis
 - 2.6.4. Treatment
- 2.7. Antibiotics and the Blood-Brain Barrier
 - 2.7.1. The Role of the Blood-Brain Barrier
 - 2.7.2. Antibiotics Crossing the Blood-Brain Barrier



05

Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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 Re-learning, 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

In a given situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you can 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 potential 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 professional medical 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on 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.



Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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.

The physician 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Re-learning 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 (we learn, unlearn, forget, and re-learn). Hence, we combine each of these elements concentrically.

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



In this program you will have access to the best educational material, prepared with you 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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

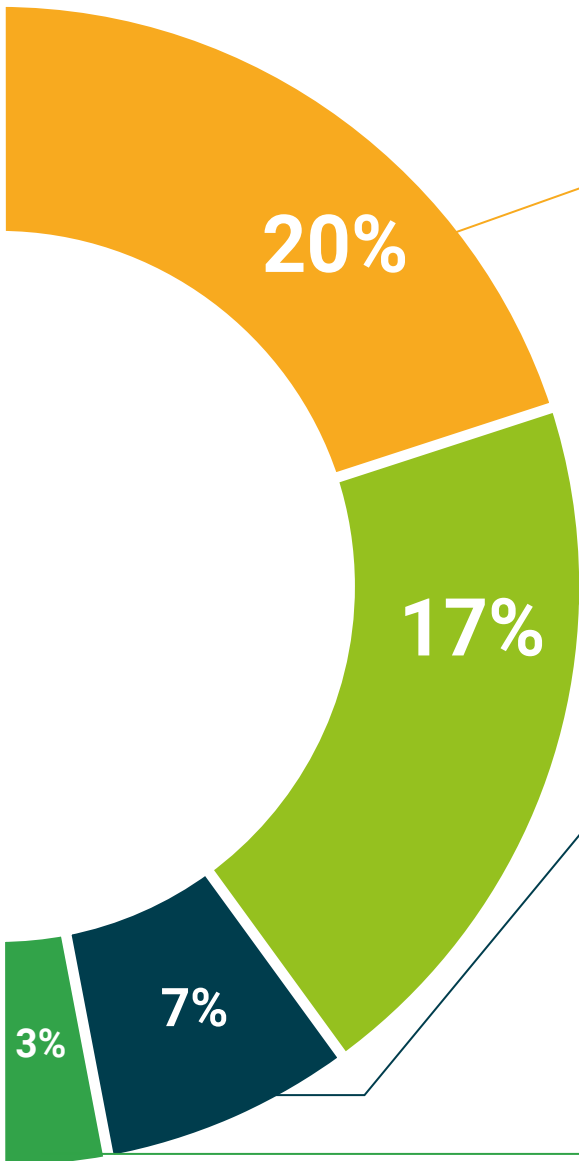
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





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 & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our future difficult decisions.



Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



05

Certificate

The **Postgraduate Certificate in Central Nervous System Infections** guarantees, in addition to the most rigorous and updated specialization, access to a **Postgraduate Certificate** issued by **TECH Technological University**.





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

This **Postgraduate Certificate in Central Nervous System Infections** contains the most complete and up-to-date scientific program on the market.

After students have passed the assessments, they will receive by certified mail their **Postgraduate Certificate** issued by **TECH Technological University**.

The certificate issued by **TECH Technological University** will specify the qualification obtained through the **Postgraduate Certificate**, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Certificate in **Central Nervous System Infections**

ECTS: 7

Official Number of Hours: **175**



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

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



Postgraduate Certificate
Central Nervous
System Infections

Course Modality: Online

Duration: 8 weeks

Certificate: TECH Technological University

7 ECTS credits

Teaching Hours: 175 hours.

Postgraduate Certificate

Central Nervous System Infections

