



Postgraduate Diploma

Mycobacterioses, Mycoses and Parasitoses in Clinical Practice

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 17 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-mycobacterioses-mycoses-parasitoses-clinical-practice

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Infections caused by bacteria, parasites and fungi constitute a wide and representative symptomatological catalog, characterized by different levels of affection, as well as by diverse clinical pictures that can lead to everything from a "simple" gastroenteritis to death. The advances made in terms of early diagnosis, prevention and treatment have allowed for specialized medical intervention based on the immediate detection of these microorganisms. This has made it possible for physicians today to work intensively from their clinical consultations to prevent the development and viralization of pathologies such as ringworms, leprosy or intestinal parasites.

TECH and its team, versed in infectious diseases and microbiology, have developed the Postgraduate Diploma in Mycobacteriosis, Mycosis and Parasitosis in Clinical Practice, a cutting-edge program on clinical healthcare, that will provide our students with a comprehensive and dynamic update on the latest developments in the field. This is a 425-hour course that consists of the best theoretical, practical and additional material for our students to delve into the advances in the epidemiology of infectious diseases, with a focus on anaerobic diseases. They will also be able to work on honing their skills in multi-resistance by updating their knowledge of the latest vaccines.

All this in a 100% online format and the best content, which, in addition to having been selected by the best professionals, has been developed according to the most innovative teaching methodology, so students need not invest extra hours in memorizing. They will benefit from an academic experience that adapts to them, without schedules or face-to-face classes, which they will be able to access from any device with an Internet connection. That way, our students will not have to worry about having to follow a strict and imposed program, allowing them to organize the academic calendar based on their total and absolute availability.

This Postgraduate Diploma in Mycobacterioses, Mycoses and Parasitoses in Clinical Practice contains the most complete and up-to-date scientific program on the market. The most important features include:

- Case studies presented by experts in infectious diseases in clinical practice
- 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 100% online course at the forefront of medicine so you can catch up on the latest developments in epidemiology from wherever you want: without schedules or face-to-face classes"



The best program on the academic market to delve into the latest developments in mycosis and parasitosis in infectious diseases through 425 hours of the best theoretical, practical and additional material"

The program's teaching staff includes professionals from the sector 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 students must try to solve the different professional practice situations that arise during the academic year. To that end, they will be assisted by an innovative, interactive video system created by renowned and experienced experts.

You will work intensively on honing your skills in the application of the most effective and innovative techniques for multidrug resistance in today's clinical environment.

Our Virtual Campus is compatible with any device with an Internet connection, so you can access it whenever you want and, above all, whenever you can.





tech 10 | Objectives



General objectives

- Provide all the theoretical, practical and additional information to ensure an update on the advances made in infectious diseases in clinical practice
- Provide the most advanced content on the pharmacology recommended to clinically manage mycobacteriosis, mycosis and parasitosis



Leprosy, abscesses, tetanus, gangrene...
With this Postgraduate Diploma you will
delve into the latest news on all of them,
as well as recommendations for their
correct diagnosis and treatment"





Module 1. Epidemiology of Infectious Diseases

- Know the epidemiological, economic, social and political conditions of countries with major infectious diseases
- Identify the different taxonomies of infectious agents, as well as the properties of microorganisms
- Gain in-depth knowledge of chemical and physical agents in microorganisms
- Know the indications and interpretations of a microbiological study, understanding all the technical aspects

Module 2. Mycobacteriosis and Anaerobic Infections

- Acquire the skills required to analyze the microbiological characteristics of mycobacteria
- Analyze microbiological methods to diagnose mycobacterial infections
- Know and identify the symptoms, infectious agents and clinical picture of mycobacterial infections
- Gain detailed knowledge of the main antimicrobials used against anaerobic bacteria

Module 3. Mycoses and Parasitosis in Clinical Practice

- Identify the etiology of the most common mycosis infections
- Gain a detailed understanding of the generalities of parasitosis, and the body's immune response to parasites, protozoa and helminths
- Correctly manage the various direct and indirect diagnostic methods for mycoses
- * Know the latest updates on antiparasitics and their pharmacological components

Module 4. Multi-Resistance and Vaccines

- Identify the acquired genetic mechanisms that lead to antimicrobial resistance
- Further understanding of the different infections that have developed resistance to antiviral drugs
- Know the general aspects of vaccination, as well as its immunological basis, its production process and the risk for people
- Establish the correct method for the use of vaccines





Management



Dr. Díaz Pollán, Beatriz

- * Specialist in the area of Infectious Diseases at La Paz University Hospital
- Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- University Expert in community and nosocomial infections from the CEU Cardenal Herrera University
- University Expert in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology from CEU Cardenal Herrera University
- University expert in chronic infectious pathologies and imported infections from CEU Cardenal Herrera University
- Degree in Medicine and Surgery from the Autonomous University of Madrid

Professors

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.
 La Paz University Hospital. Madrid
- Team Member of PROA (Programs of reinforcement, Orientation and Support)
- * Clinical teaching collaborator. Department of Medicine, UAM
- Member of the Infections and Policy Committee. La Paz Hopistal
- * Doctorate, Complutense University of Madrid
- Degree in Medicine from the Complutense University of Madrid

Dr. Loeches Yagüe, María Belén

- * Specialist in the area of Infectious Diseases at La Paz General University Hospital
- * Doctorate in Medicine from the Autonomous University Madrid
- Degree in Medicine from the Complutense University of Madrid
- Master's Degree in Theoretical and Practical Learning in Infectious Diseases
- * Specialised Training in Microbiology and Infectious Diseases
- Professor of Infectious Diseases, Infanta Sofía University Hospital, Madrid

Dr. Ramos, Juan Carlos

- Doctor at La Paz University Hospital
- Doctorate in Medicine, University of Alcala
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Master's Degree in Infectious Diseases in Intensive Care from the Fundación Universidad-Empresa Valencia
- Author of Several Scientific Publications

Dr. Arribas López, José Ramón

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

Dr. Mora Rillo, Marta

- Specialist in the area of Infectious Diseases at La Paz University
- Clinical Teaching Collaborator in the Department of Medicine. Autonomous University of Madrid
- * Doctorate in Medicine from the Autonomous University Madrid
- Degree in Medicine and Surgery from the University of Zaragoza
- Master's Degree in Infectious Diseases in Intensive Care by the University of Valencia
- Online Master in Infectious Diseases and antimicrobial treatment by CEU Cardenal Herrera University
- * Master's Degree in Tropical and Health Medicine, Autonomous University of Madrid
- Postgraduate Diploma in Emerging and High-Risk Virus Pathology, Autonomous University of Madrid
- Expert in Tropical Medicine from the Autonomous University Madrid





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Module 1. Epidemiology of Infectious Diseases

- 1.1. Epidemiological, Economic and Social Conditions by Continent that Favor the Emergence 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. Morbidity and Mortality from Infectious Disease in Asia
 - 1.2.4. Morbidity and Mortality from Infectious Diseases in Europe
- 1.3. The Taxonomy of Infectious Agents
 - 1.3.1. Viruses
 - 132 Bacteria
 - 1.3.3. Fungi
 - 1.3.4. Parasites
- 1.4. Properties in Microorganisms that Cause Disease
 - 1.4.1. Pathogenic Mechanisms
 - 1.4.2. Adhesion and Multiplication Mechanisms
 - 1.4.3. Mechanisms that Enable Nutrient Acquisition from Hosts
 - 1.4.4. Mechanisms that Inhibit Phagocytic Processes
 - 1.4.5. Mechanisms that Circumvent Immune Responses
- 1.5. Microscopy and Staining
 - 1.5.1. Microscopes and Types of Microscopes
 - 1.5.2. Composite Stains
 - 1.5.3. Acid-Fast Microorganism Stains
 - 1.5.4. Stains for Cellular Structures
- 1.6. Microorganism Cultures and Growth
 - 1.6.1. General Culture Methods
 - 1.6.2. Specific Culture Methods
- 1.7. Effect of Chemical and Physical Agents on Microorganisms
 - 1.7.1. Sterilisation and Disinfection
 - 1.7.2. Disinfectants and Antiseptics Used in Practice

- 1.8. Molecular Biology and Its Relevance to Infectious Disease Specialists
 - 1.8.1. Bacterial Genetics
 - 1.8.2. Polymerase Chain Reaction Tests
- 1.9. Indication and Interpretation of Microbiological Studies Module

Module 2. Mycobacteriosis and Anaerobic Infections

- 2.1. General Overview of Mycobacteriosis
 - 2.1.1. Microbiological Characteristics of Mycobacteria
 - 2.1.2. Immune Response to Mycobacterial Infection
 - 2.1.3. Epidemiology of Major Nontuberculous Mycobacteria Infections
- 2.2. Microbiological Methods to Diagnose Mycobacterioses
 - 2.2.1. Direct Methods
 - 2.2.2. Indirect Methods
- 2.3. Intracellular Mycobacterium Avium Infection
 - 2.3.1. Epidemiology
 - 2.3.2. Infectious Agents
 - 2.3.3. Pathobiology
 - 2.3.4. Clinical Picture
 - 2.3.5. Diagnosis
 - 2.3.6. Treatment
- 2.4. Infection by Mycobacterium Kansasii
 - 2.4.1. Epidemiology
 - 2.4.2. Infectious Agents
 - 2.4.3. Pathobiology
 - 2.4.4. Clinical Picture
 - 2.4.5. Diagnosis
 - 2.4.6. Treatment
- 2.5. Leprosy
 - 2.5.1. Epidemiology
 - 2.5.2. Infectious Agents
 - 2.5.3. Pathobiology
 - 2.5.4. Clinical Picture
 - 2.5.5. Diagnosis
 - 2.5.6. Treatment



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2.6. Other Mycobacteric	riosis
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- 2.7. Antimycobacterials
 - 2.7.1. Pharmacological Characteristics
 - 2.7.2. Clinical Use
- 2.8. Microbiological Characteristics of Anaerobic Germs
 - 2.8.1. Microbiological Characteristics of Anaerobic Germs
 - 2.8.2. Microbiological Studies
- 2.9. Pulmonary Abscess
 - 2.9.1. Definition
 - 2.9.2. Etiology
 - 2.9.3. Clinical Picture
 - 2.9.4. Diagnosis
 - 2.9.5. Treatment
- 2.10. Intra-Abdominal and Tubo-Ovarian Abscesses
 - 2.10.1. Definition
 - 2.10.2. Etiology
 - 2.10.3. Clinical Picture
 - 2.10.4. Diagnosis
 - 2.10.5. Treatment
- 2.11. Intracerebral Abscess
 - 2.11.1. Definition
 - 2.11.2. Etiology
 - 2.11.3. Clinical Picture
 - 2.11.4. Diagnosis
 - 2.11.5. Treatment
- 2.12. Tetanus and Gangrene
 - 2.12.1. Tetanus: Neonates and Adults
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 - 2.12.2. Gangrene: Definition, Aetiology, Clinical Picture, Diagnosis, and Treatment
- 2.13. Main Antimicrobials against Anaerobic Bacteria
 - 2.13.1. Mechanism of Action
 - 2.13.2. Pharmacokinetics
 - 2.13.3. Dose
 - 2.13.4. Introduction
 - 2.13.5. Adverse Effects

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Module 3. Mycoses and Parasitosis in Clinical Practice

- 3.1. General Information on Fungi
 - 3.1.1. General Features of Fungi
 - 3.1.2. Immune Response to Fungi
- 3.2. Diagnostic Methods for Mycoses
 - 3.2.1. Direct Methods
 - 3.2.2. Indirect Methods
- 3.3. Superficial Mycosis: Tinea and Epidermatophytosis
 - 3.3.1. Definition
 - 3.3.2. Etiology
 - 3.3.3. Clinical Picture
 - 3.3.4. Diagnosis
 - 3.3.5. Treatment
- 3.4. Deep Mycosis
 - 3.4.1. Cryptococcosis
 - 3.4.2. Histoplasmosis
 - 3.4.3. Aspergillosis
 - 3.4.4. Other Mycoses
- 3.5. Update on Antifungals
 - 3.5.1. Pharmacological Elements
 - 3.5.2. Clinical Use
- 3.6. General Overview of Parasitosis
 - 3.6.1. General Features of Microbiological Parasites
 - 3.6.2. Immune Response to Parasites
 - 3.6.3. Immune Response to Protozoa
 - 3.6.4. Immune Response to Helminths
- 3.7. Diagnostic Methods for Parasites
 - 3.7.1. Diagnostic Methods for Protozoa
 - 3.7.2. Diagnostic Methods for Helminths
- 3.8. Intestinal Parasites
 - 3.8.1. Ascariasis
 - 3.8.2. Oxiuriasis
 - 3.8.3. Hookworm Disease and Necatoriasis
 - 3.8.4. Trichuriasis



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- 3.9. Tissue Parasitosis
 - 3.9.1. Malaria
 - 3.9.2. Trypanosomiasis
 - 3.9.3. Schistosomiasis
 - 3.9.4. Leishmaniasis
 - 3.9.5. Filariasis
- 3.10. Update on Antiparasitics
 - 3.10.1. Pharmacological Elements
 - 3.10.2. Clinical Use

Module 4. Multi-Resistance and Vaccines

- 4.1. The Silent Epidemic of Antibiotic Resistance
 - 4.1.1. Globalisation and Resistance
 - 4.1.2. Change from Susceptible to Resistant of the Microorganisms
- 4.2. The Main Genetic Mechanisms of Antimicrobial Resistance
 - 4.2.1. Describe the Main Mechanisms of Antimicrobial Resistance
 - 4.2.2. Selective Antimicrobial Pressure on Antimicrobial Resistance
- 4.3. Superbugs
 - 4.3.1. Pneumococcus Resistant to Penicillin and Macrolides
 - 4.3.2. Multidrug-Resistant Staphylococci
 - 4.3.3. Resistant Infections in Intensive Care Units (ICUs)
 - 4.3.4. Resistant Urinary Tract Infections
 - 4.3.5. Other Multi-Resistant Microorganisms
- 4.4. Resistant Viruses
 - 4.4.1. HIV
 - 4.4.2. Influenza
 - 4.4.3. Hepatitis Viruses
- 4.5. Multidrug-Resistant Malaria
 - 4.5.1. Chloroquine Resistance
 - 4.5.2. Resistance to Other Antimalarials
- 4.6. The Main Genetic Studies of Antimicrobial Resistance
 - 4.6.1. Interpretation of Resistance Studies

- 4.7. Global Strategies for Reducing Antimicrobial Resistance
 - 4.7.1. The Control of Prescribing Antibiotics
 - 4.7.2. Microbiological Mapping and Clinical Practice Guidelines
- 4.8. Overview of Vaccines
 - 4.8.1. Immunological Basis of Vaccination
 - 4.8.2. The Process of Vaccination Production
 - 4.8.3. Quality Control of Vaccines
 - 4.8.4. Vaccine Safety and Major Adverse Events
 - 4.8.5. Clinical and Epidemiological Studies for Vaccine Approval
- 4.9. The Use of Vaccines
 - 4.9.1. Vaccine-Preventable Diseases and Vaccination Programmes
 - 4.9.2. Global Experiences of the Effectiveness of Vaccination Programmes
 - 4.9.3. Vaccine Candidates for New Diseases



A unique, key and decisive training experience to boost your professional development"





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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:

- 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.



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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.

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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.









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This private qualification will allow you to obtain a **Postgraduate Diploma in Mycobacterioses**, **Mycoses and Parasitoses in Clinical Practice** 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** private qualification 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 Diploma in Mycobacterioses, Mycoses and Parasitoses in Clinical Practice

Modality: online

Duration: 6 months

Credits: 17 ECTS



Mr./Ms. ______ with identification document _____ has successfully passed and obtained the title of:

Postgraduate Diploma in Mycobacterioses, Mycoses and Parasitoses in Clinical Practice

This is a private qualification of 510 hours of duration equivalent to 17 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024



^{*}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.

tech global university Postgraduate Diploma Mycobacterioses,

Mycoses and Parasitoses in Clinical Practice

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 17 ECTS
- » Schedule: at your own pace
- » Exams: online

