Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

tech technological university

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Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

Course Modality: **Online**

Duration: **12 months.**

Certificate: **TECH Technological University**

Official Nº of Hours: **1,500 h.**

Website: **www.techtitute.com/pharmacy/professional-master-degree/master-clinical-infectious-diseases-advanced-antibiotic-therapeutics**

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01

Introduction

Currently, pathologies of an infectious nature are making a comeback and are of particular concern to pharmacists. Infection control is hampered by the development and spread of bacterial resistance to antibiotics as a particularly significant problem in most countries. For example, the emergence of penicillin-resistant pneumococci, vancomycin-resistant enterococci, methicillin-resistant and even vancomycin-resistant staphylococci, quinolone-resistant enterobacteria and multi-resistant strains of Acinetobacter spp or Pseudomonas spp, among other problems, have also raised the alarm about a possible global antibiotic crisis. In this TECH program, pharmacists will learn how to combat these diseases from a pharmacological perspective, improving both their skills and their professional profile.

Thanks to this program that TECH offers, you will be able to specialize in infectious pathologies and improve your skills as a pharmacist"

Among the infectious diseases of major global importance is malaria, endemic in more than 100 countries, where the goal is to reduce mortality by at least 20% from that observed in 2005 in at least 75 countries; Tuberculosis is another of the world's serious infectious problems, with some 8 million new cases per year and more than 1 million deaths, 20% of which are associated with HIV/AIDS infection, with problems of resistance to treatment and lack of compliance with treatment, which led the WHO to consider tuberculosis a global health emergency in 1993.

On the other hand, there is HIV/AIDS, the great pandemic, with more than 1.8 million adults dying in 2016 and more than 600,000 children under 15 infected in a single year, and for which current treatment (as well as prevention of vertical transmission) is beyond the reach of many in developing countries, with numerous cases of resistance to the antiretroviral drugs used already detected.

In addition to these three diseases it should be noted that despite scientific advances in Care Services science, public health development and the pharmaceutical and biotechnology industry, there are infectious diseases prevalent throughout the world that continue to have high morbidity and mortality rates, such as pneumonia, infectious diarrhoea, urinary tract infections, nosocomial infections, arbovirosis and intestinal parasitism.

All of this is alarming when one considers all the new infectious diseases that have emerged in the last 20 years with epidemic behaviour, such as severe acute respiratory syndrome, Chikingunya and more recently Zika.

This provides the opportunity to study a teaching program that brings together the most advanced and in-depth knowledge of important health problems in the field of infectious diseases and antimicrobial treatment, where a group of internationally experienced professors will provide students with the most up-to-date information for the diagnosis, treatment and care of patients with prevalent and life-threatening diseases.

This **Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics** contains the most complete and up-to-date educational program on the market. The most important features of the training include:

- The development of practical 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 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

In addition, this Master's Degree is updated so you will also have access to the most accurate and effective information on the functioning of Coronavirus infections from a pharmaceutical point of view"

TECH allows you to train with the best teaching staff and the best content without sacrificing maximum scientific rigor. This Professional Master's Degree is everything your career needs to start advancing"

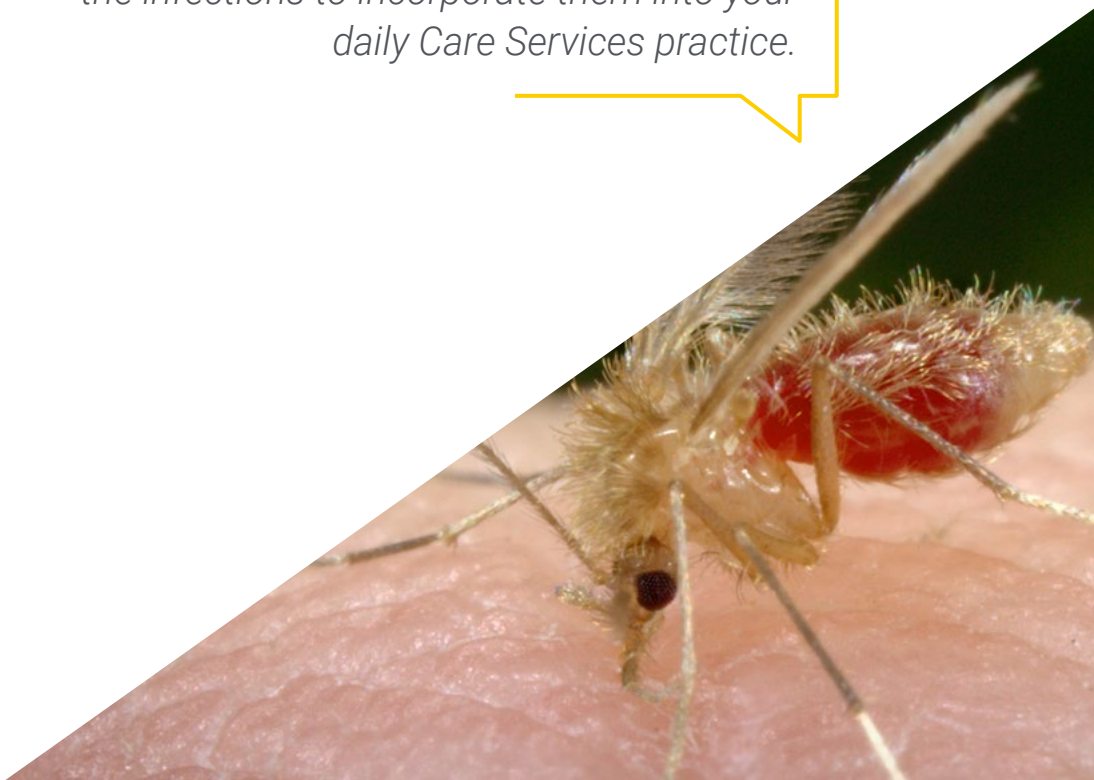
This program, updated in April 2020, is the best in the educational landscape in clinical infectious diseases and advanced therapeutics for pharmacists.

Get to know all the latest information on COVID-19 Don't miss the opportunity and get up-to-date on advances in the treatment of the infections to incorporate them into your daily Care Services practice.

The program includes in its teaching staff, professionals from the sector who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and 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 training programmed to train 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 student will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

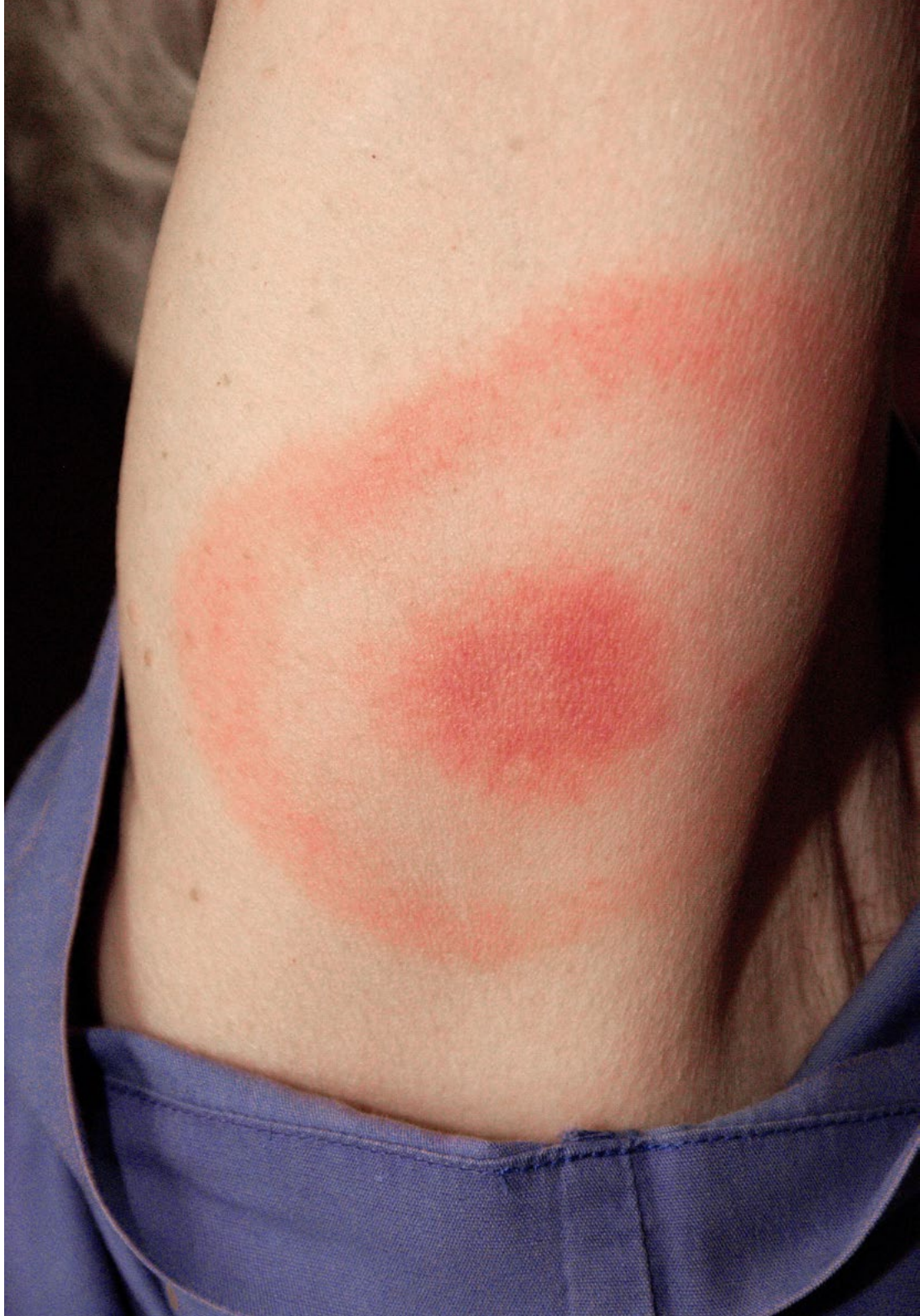
The Professional Master's Degree aims to help pharmacy professionals acquire the necessary knowledge to understand the epidemiological, economic, social and political conditions of the countries with the greatest number of infectious diseases. This will allow students to develop their professional skills. In this way, a series of general and specific objectives have been established to guide learning throughout the program.

This program will provide you with a sense of confidence in your Care Services practice, which will help you grow personally and professionally"

General Objectives

- Explore key aspects of Clinical Infectious Diseases and Advanced Antibiotic Therapeutics
- Manage the prevention, diagnosis and treatment of Infectious diseases
- Explore a multidisciplinary and integrative approach to facilitate the control of these pathologies
- Acquire skills in the area of Clinical Infectious Diseases and Advanced Antibiotic Therapeutics
- Be able to apply the latest technological innovations to establish an optimal management in diagnostics

Acquire the necessary skills to analyze the microbiological characteristics of mycobacteria"



Specific Objectives

Module 1. Epidemiology and microbiology of infectious diseases

- Understand the epidemiological, economic, social and political conditions of the countries with major infectious diseases
- Identify the different taxonomies of infectious agents, as well as the properties of microorganisms
- Explore chemical and physical Agents from microorganisms
- Become familiar with the indications and interpretations of a microbiological study, understanding all the technical aspects of it

Module 2. Cancer and Immunosuppression

- Identify the general structure of the immune system
- Establish common immune system responses to viral and bacterial infections
- Explain the complex interrelationships between infections and different types of immunosuppression

Module 3. Occupational Accident and Blood-borne Pathogens

- Address the important role of microbiology and the infectologist in the control of infectious diseases
- Describe the main elements that favour occupational accidents and the transmission of blood-borne pathogens
- Analyze the diagnostic and therapeutic approach to accidents Involving blood

Module 4. Infections in the International Traveller

- To highlight the importance of morbidity and mortality from infections in the international traveller
- Explain health controls for international travelers
- Know and identify the most common infections for international travelers such as "fever in returned travelers" or "traveler's diarrhea"

Module 5. Chronic Non-Communicable Diseases and Infections

- Study the current pathophysiological elements between non-transmissible chronic diseases and infections
- Understand neurological, endocrine and immune interrelationships in the face of stress and infectious agents
- Identify digestive diseases associated with infectious microorganisms and the function of this system in the body
- Explore the infectious theory of rheumatoid diseases

Module 6. The Most Lethal Respiratory Infections

- To deepen the study of the latest clinical, diagnostic and therapeutic elements of the most lethal respiratory infections
- Understand the lethal impact of healthcare-associated bacterial pneumonia and other factors
- Identify the clinical picture, pathobiology and diagnosis of tuberculosis
- Analyze the formation of Loeffler's syndrome in its pulmonary phase and the clinical manifestations

Module 7. Latest information on coronavirus infections

- Learn about the progress and evolution of coronaviruses from their discovery to the present day
- Identify the microbiological main characteristics of coronaviruses
- Explore the biosafety protocols currently used in laboratories handling coronavirus samples
- Highlight the pathogenesis and the pathophysiology of coronavirus infections

Module 8. Urinary Tract and Sexually Transmitted Infections

- Measure the extent of urinary tract infections and immune response in the genitourinary system
- Learn in detail about urinary tract infections in patients with bladder catheterization, prostate and elderly patients
- Identify and know the latest updates on STIs, as well as the main pathologies of this group according to their classification into viral and bacterial
- Analyze the current approach to herpes and the therapeutic alternatives that have gained the most popularity among specialists

Module 9. Food-Borne Infections

- Learn about diseases transmitted by the consumption and mishandling of food
- Identify and analyze the classifications of infections caused by improperly handled food
- Evaluate the main etiological agents such as salmonella, staphylococcus, among others
- Understand the socio-economic measures adopted by ATS for the control of foodborne infections.

Module 10. Hepatitis, Tuberculosis and HIV/AIDS Infection

- Describe the clinical picture, viral markers, course and treatment of hepatitis, tuberculosis and HIV/AIDS infection
- Understand in detail the clinical manifestations of co-infection at the pulmonary and extrapulmonary levels
- Evaluate the comprehensive care received by patients with infections in patients with co-infection and therapeutic considerations
- Consider other anti-tuberculosis treatments in patients with TB/HIV/AIDS co-Infection

Module 11. Viral Haemorrhagic Diseases and Arboviruses

- Quickly identify viral hemorrhagic diseases and the vaccines that target these diseases
- Be able to understand the diagnostic approach to hemorrhagic diseases
- Get an overview of the types of hemorrhagic infections that concern the world, such as Dengue, Chiquingunya, Zika, among others

Module 12. Central Nervous System Infections

- Quickly identify the defense mechanisms of the CNS immune system, as well as the epidemiology of the infections that affect it
- Diagnose possible microbes that cause infections in the CNS by studying cerebrospinal fluid
- Identify basic CNS infections by means of their most relevant characteristics such as etiology and clinical picture In addition to the correct diagnosis and treatment
- Gain a clear understanding of antibiotics and how the blood-brain barrier works

Module 13. Zoonosis

- Know the generalities of Zoonoses such as their origin and prion causes
- Identify and analyze the main control measures for Zoonoses of concern to public health systems worldwide
- Be able to establish an accurate diagnostic picture of some of the infections transmitted by animals, as well as their treatments and clinical picture

Module 14. Mycobacteriosis and anaerobic infections

- Acquire the necessary skills to analyze the microbiological characteristics of mycobacteria
- Analyze microbiological methods for the diagnosis of microbacterial infections
- Know and identify the symptoms, infectious agents and clinical picture of mycobacterial infections
- Know in detail the main antimicrobial agents against anaerobic germs

Module 15. Mycoses and Parasitosis in Infectiology

- Be able to identify the etiology of the most common mycosis infections
- Understand in detail the generalities of parasitosis, as well as the body's immune response to parasites, protozoa and helminths
- Correct management of the different direct and indirect diagnostic methods for mycoses
- Know the latest updates in antiparasitics and their pharmacological elements

Module 16. Multi-Resistance and Vaccines

- Identify the acquired genetic mechanisms that lead to antimicrobial resistance
- Explore 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

Module 17. Rare Infectious Diseases and Other Challenges in Infectiology

- Know the generalities of the most common infectious diseases in the world
- Identify the etiology, clinical picture and diagnosis of the most common diseases in the world
- Develop the skills necessary to identify new emerging infectious diseases as well as the development of new antibiotics

03

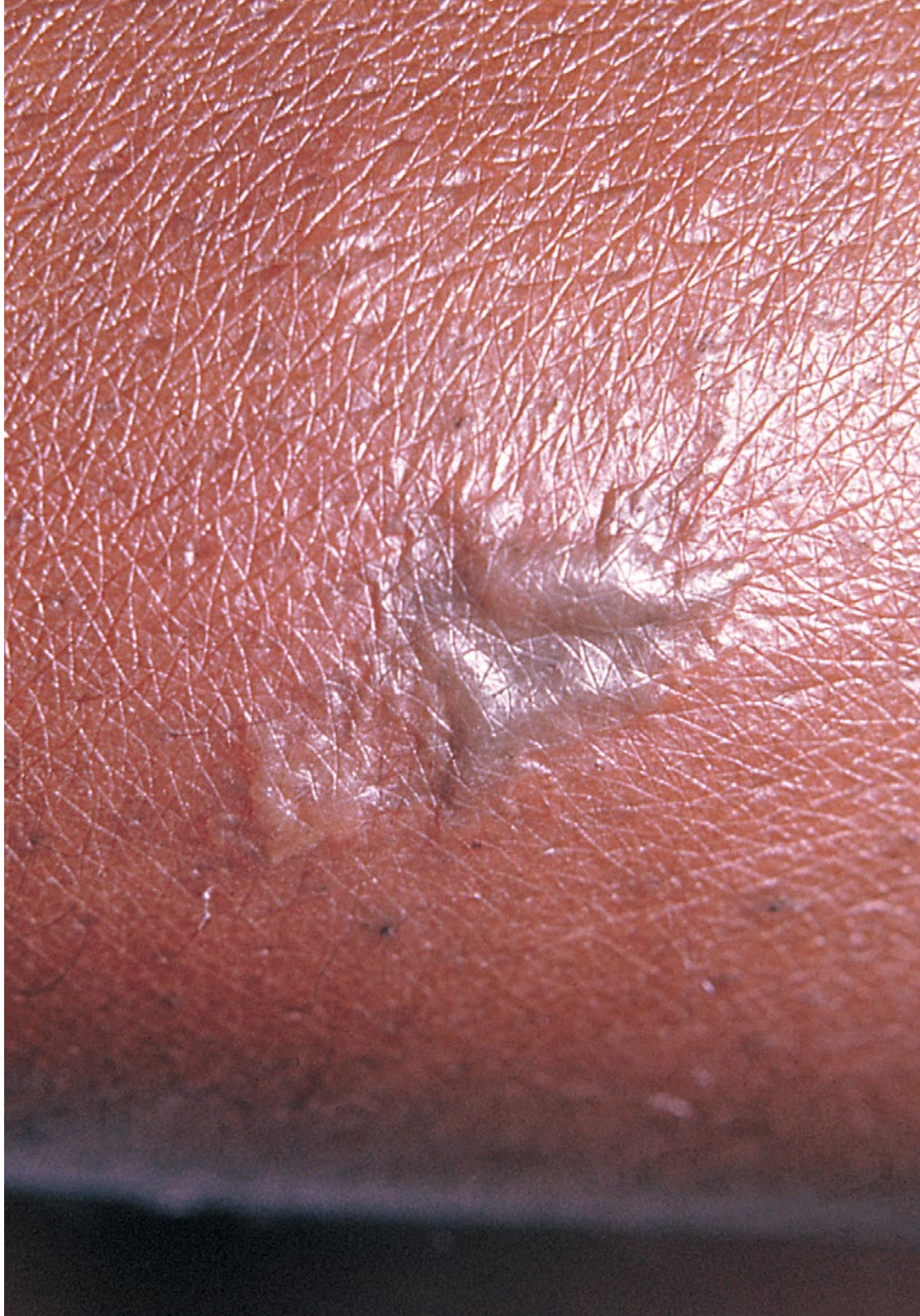
Skills

Once all the contents have been studied and the objectives of the Professional Master's Degree have been achieved, pharmaceutical professionals will be able to have a higher competence and performance, supporting their daily professional practice in the most important scientific advances of the time, with a multidisciplinary and integrative approach to the main causes of infectious morbidity and mortality worldwide, which will make them an obligatory reference in their field of action. This will make you not only a better pharmacist, but one who is better prepared to face the current challenges of the profession with greater chances of success.

With this program you will be able to master new diagnostic and therapeutic procedures in infectious diseases from a pharmaceutical point of view"

General Skills

- Increase their diagnostic and therapeutic capabilities for infectious diseases and their patients' health care in general, through the in-depth study of the epidemiological, clinical, pathophysiological, diagnostic and therapeutic elements of these diseases
- Refine skills to manage, advise or lead multidisciplinary teams for the study of infectious diseases in communities or individual patients, as well as scientific research teams
- Develop skills for self-improvement, in addition to being able to provide training and professional improvement activities due to the high level of scientific and professional preparation acquired with this program
- Educate the population in the field infectious diseases in order to acquire and develop a culture of prevention in the population, based on healthy styles and ways of life
- Apply epidemiological and clinical methods in collective or individual care to solve the main health problems related to infectious diseases
- Perform a critical reading of the scientific literature on these diseases and at the same time have the tools to communicate research results
- Collect, process, and analyse in very diverse clinical and epidemiological contexts, any scientific information for diagnostic and therapeutic decision-making in the field of clinical infectious diseases specifically and health in general
- Develop learning to learn as one of the most important skills for any professional nowadays, who is obliged to constantly train and improve his or her professional skills due to the dizzying and accelerated process of scientific knowledge production



Specific Skills

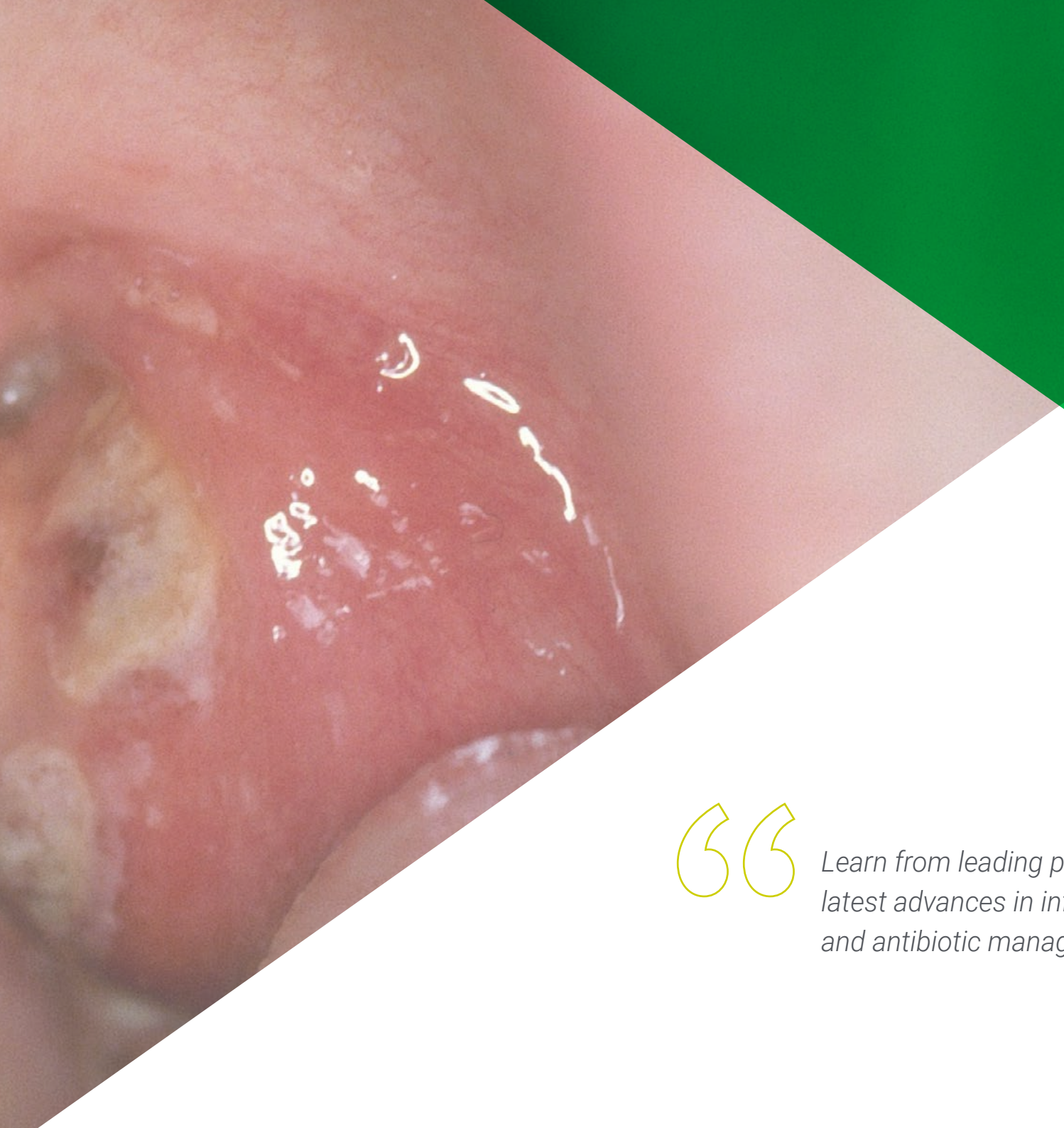
- Master the biological, epidemiological, and social determinants that favour the development of diseases and their impact on morbidity and mortality
- Identify and analyse the latest scientific information in infectious diseases, in order to design plans and programs to control it
- Apply existing control measures to prevent the transmission of these diseases between countries, in real and/or simulated
- Evaluate the epidemiological aspects related to chronic diseases that will allow them to implement actions for their control in the community, in real and/or simulated conditions.
- Identify, in a timely manner, the appearance of new diseases or the rise of emerging or re-emerging diseases, based on the application of the scientific method of the profession
- Timely diagnosis of the most frequent or new infections based on clinical manifestations for their correct treatment, rehabilitation, and control
- Justify the importance of vaccination as an important public health measure for the control of communicable diseases
- Identify the occupational, social, and environmental risk factors that favor the development of these diseases in the community
- Identify the main opportunistic infections in patients with different types and degrees of immunosuppression
- Apply prevention and control measures to reduce morbidity and mortality in chronic diseases
- Master the clinical, epidemiological, diagnostic and therapeutic elements for the main epidemiological threats in the world population such as Arbovirosis, HIV/AIDS infection, parasitosis, TB and haemorrhagic diseases
- Educate the community in the prevention of the process of infection-disease
- Identify the fundamental aspects of the pathogenesis and the main clinical features of the diseases studied
- Halt the progression of antibiotic resistance, based on reasoned treatment and supported by the best scientific evidence
- Develop skills to provide care for international travelers, based on the mastery of the main risks and diseases in this vulnerable group
- Correctly use and interpret all microbiological studies and other diagnostic resources in the care of their patients

Improve your patients' care by taking advantage of the training offered by the Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapy"

04

Course Management

The teaching program includes the participation of prestigious and renowned Pharmaceutical specialists, with numerous publications, teaching careers and professional experience in numerous countries, where many of the diseases studied have a high morbidity and mortality rate. 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. This teaching team, with a high degree of transversal knowledge, will be able to train the best pharmacists in the sector.



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

Management

Dr. Díaz Pollán, Beatriz

- Faculty Specialist Déu Hospital La Paz University Hospital
- Official Doctoral Programme in Clinical Medicine Clinical symptoms, University Rey Juan Carlos
- Degree in Medicine and Surgery, Universidad Autónoma de Madrid
- Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- Postgraduate Certificate in Community and Nosocomial Infections from CEU Cardenal Herrera University
- Postgraduate Certificate in Chronic Infectious Diseases and Imported Infections from CEU Cardenal Herrera University
- Postgraduate Certificate in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology from CEU Cardenal Herrera University
- Faculty Specialist Déu Hospital San Carlos Clinical Hospital
- Resident doctor, San Carlos Clinical Hospital

Professors

Dr. Rico, Alicia

- Specialist in the Microbiology and Parasitology Department at La Paz University Hospital, Madrid
- Degree in Medicine from the Complutense University of Madrid
- Doctorate Courses at the Complutense University of Madrid
- Assistant and co-founder of the Infectious Diseases and Clinical Microbiology Unit, La Paz University Hospital, Madrid
- Clinical teaching collaborator Department of Medicine of the UAM

Dr. Ramos, Juan Carlos

- Doctor at La Paz University Hospital, Madrid
- Official Doctoral Programme in Clinical Medicine. University of Alcalá
- Degree in Medicine and Surgery from the Complutense , University of Madrid
- Master's Degree in Infectious Diseases in Intensive Care, Fundación Universidad-Empresa Valencia
- Author of several community publications

Dr. Loeches Yagüe, María Belén

- Specialist in the area of Infectious Diseases at La Paz General University Hospital, Madrid
- Doctor in Medicine, Autonomous University, Madrid
- Degree in Medicine at Madrid Complutense University
- 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
- Professor of Infectious Diseases at the Infanta Sofía University Hospital in Madrid, European University of Madrid

Dr. Arribas López, José Ramón

- Head of Department of the Infectious Diseases and Clinical Microbiology Unit, La Paz University Hospital of Internal Medicine, Madrid
- Doctor in Medicine, Autonomous University, Madrid
- Degree in Medicine and Surgery from the Complutense University of Madrid
- Coordinator of the High-Level Isolation Unit 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

Dr. Mora Rillo, Marta

- Specialist in the area of Infectious Diseases at La Paz University Hospital
- Doctor in Medicine, Autonomous University, Madrid
- Degree in Medicine and Surgery, University of Zaragoza
- Master's Degree in Infectious Diseases in Intensive Care, University of Valencia
- Online Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- 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

05

Structure and Content

The teaching program has been created by a group of professors and medical professionals from various medical specialities, with extensive medical, research and teaching experience in several countries in Africa, Central and South America, interested in integrating the latest and most up-to-date scientific knowledge of clinical infectious diseases and antimicrobial therapeutics, to ensure training and professional development to improve the daily clinical practice of professionals who care for patients or populations with infectious diseases.

This Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics 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, Social and Political Conditions in Continents Which Favor 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. Fungus
- 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-fast Micro-organism Stainings
- 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. Sterilisation 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. Cancer and Immunosuppression

2.1. The Innate and Adaptive Immune Response
- 2.1.1. Cells and Cytokines in Response to Infectious Agents
- 2.1.2. Characteristics of the Innate Immune Response

2.2. Immunosuppression in Different Conditions in Patients with Sepsis
- 2.2.1. The role of Cytotoxics in Immunosuppression
- 2.2.2. The role of Cytotoxics in Immunosuppression
- 2.2.3. Infection in Transplant Patients

2.3. The Oncohematological Patient with Sepsis
- 2.3.1. Medullary Aplasia
- 2.3.2. Neutropenia
- 2.3.3. Infections in Patients with Cancer

2.4. The Diabetic Patient with Sepsis
- 2.4.1. The Immune System in Diabetes Mellitus
- 2.4.2. Main Infections in the Diabetic Patient

2.5. Comprehensive Approach to the Immuno-Compromised Patient with Sepsis
- 2.5.1. Diagnostic Considerations
- 2.5.2. Therapeutic Measures

2.6. The Link Between Cancer and Micro-organisms
- 2.6.1. Oncogenesis and Infection
- 2.6.2. Virus and Cancer
  - 2.6.2.1. Epstein-Barr Virus
  - 2.6.2.2. Hepatitis B and C Viruses
  - 2.6.2.3. Human Immunodeficiency Virus
  - 2.6.2.4. T-cell Lymphoma/Leukaemia Viruses
  - 2.6.2.5. Kaposi's Sarcoma-Associated Herpesvirus

2.7. Bacterias and Cancer
  2.7.1. Helicobacter Pylori
2.8. Parasites and Cancer
  2.8.1. Schistosoma Haematobium
  2.8.2. Opisthorchis Viverrini
2.9. Bacteria Allies Against Cancer

Module 3. Occupational Accident and Blood-borne Pathogens

3.1. Epidemiology of Blood Borne Pathogen Infections
3.2. Main Blood-Borne Infections
  3.2.1. Hepatitis B Virus Infection
  3.2.2. Hepatitis C Virus Infection
  3.2.3. HIV/AIDS
3.3. Diagnostic and Therapeutic approach to Accidents Involving Blood
  3.3.1. Diagnostic Follow-up of Cases
  3.3.2. Treatment
3.4. Universal Precautions in the Prevention of Accidents in the Workplace
3.5. Biosafety Measures and the Role of the Epidemiologist in Reducing Biohazards
  3.5.1. Biological Risk
  3.5.2. Biosecurity
3.6. Biosecurity Plans for Biological Protection

Module 4. Infections in the International Traveller

4.1. Vaccines in the International Traveller
  4.1.1. Vaccines in the International Traveller
  4.1.2. Vaccination Against Yellow Fever
4.2. Prophylaxis for Travellers to Tropical Areas
  4.2.1. Pharmacological Treatment According to the Geographical Area to be visited
  4.2.2. Glucose-6-- Phosphate Dehydrogenase Deficiency and Antimalarial Drugs
  4.2.3. Preventive Measures for Travellers in Tropical Areas
4.3. Traveller's Diarrhoea
  4.3.1. Epidemiology
  4.3.2. Etiology
  4.3.3. Clinical manifestations
  4.3.4. Diagnosis
  4.3.5. Treatment
4.4. Health Screening of International Travellers
4.5. Fever on Return from International Travel
  4.5.1. Main Aetiologies
  4.5.2. Diagnostic Approach
  4.5.3. Imported Infectious Pathology in the International Traveller

Module 5. Chronic Non-Communicable Diseases and Infections

5.1. Infections and the Chronic Inflammatory Response
  5.1.1. Immune System Cells of the Chronic Inflammatory Response to Infections
  5.1.2. The Granulomatous Response and Delayed-type Hypersensitivity
  5.1.3. The Role of Chemical Mediators of the Chronic Inflammatory Response
5.2. Stress, Immunity and Infectious Agents
  5.2.1. Neurological, Endocrine and Immune Interrelationships
  5.2.2. Stress and the Immune Response
  5.2.3. Chronic Fatigue Syndrome and Infections
5.3. Atherosclerosis, Cardiovascular Disease and the Role of Infectious Agents
  5.3.1. The Role of Infectious Agents in Atherosclerosis
  5.3.2. Cardiovascular Disease Mortality and its Association with Infectious Agents
  5.3.3. Cardiovascular Mortality in Patients with Pneumonia
5.4. Digestive Diseases Associated with Infectious Microorganisms
  5.4.1. Gut Flora and its Important Functions
  5.4.2. Gastroduodenal Peptic Ulcer Disease and Helicobacter Pylori
  5.4.3. Inflammatory Bowel Disease and Infections
  5.4.4. Whipple's Disease
5.5. Neurological Diseases and Infections
  5.5.1. Dementia and Infections
  5.5.2. Multiple Sclerosis and its Relationship to Certain Infectious Agents
  5.5.3. Guillain-Barré Syndrome, Immunity and Viral Infections
  5.5.4. Parkinson's Disease and its Association With Infections

5.6. Endocrinopathies and Infections
  5.6.1. Diabetes Mellitus and Infections
  5.6.2. Chronic Thyroiditis and Infections
5.7. The Infectious Theory of Rheumatic Diseases
  5.7.1. Rheumatoid Arthritis
  5.7.2. Systemic Lupus Erythematosus
  5.7.3. Seronegative Spondyloarthropathies
  5.7.4. Wegener's Granulomatosis
  5.7.5. Polymyalgia Rheumatica

Module 6. The Most Lethal Respiratory Infections

6.1. Immunology and Defence Mechanisms of the Respiratory System
6.2. Influenza and Other Lethal Viral Infections
  6.2.1. Influenza Epidemics
  6.2.2. H1N1 Influenza
  6.2.3. Vaccine Against Influenza and the Prevention of Mortality
6.3. Bacterial Pneumonia: The Captain of the Armies of Death
  6.3.1. Community-Acquired Pneumonia (CAP)
  6.3.2. Intrahospital Pneumonia
  6.3.3. Pneumonia Associated With Healthcare
6.4. Tuberculosis
  6.4.1. Epidemiology
  6.4.2. Pathobiology
  6.4.3. Classification
  6.4.4. Clinical Picture
  6.4.5. Diagnosis
  6.4.6. Treatment
6.5. Loeffler's Syndrome and Eosinophilic Syndromes
  6.5.1. Pulmonary Phase of Parasites
  6.5.2. Clinical and Radiological Manifestations
  6.5.3. Other Eosinophilic Pneumonias
6.6. Antimicrobials and the Respiratory System
  6.6.1. Antimicrobials Effective in the Respiratory System
  6.6.2. The Immunomodulatory Role of Macrolides in Pneumonia

Module 7. Latest information on coronavirus infections

7.1. Discovery and Evolution of Coronaviruses
  7.1.1. Discovery of Coronaviruses
  7.1.2. Global Trends in Coronavirus Infections
7.2. Main Microbiological characteristics and Members of the Coronavirus Family
  7.2.1. General Microbiological Characteristics of Coronaviruses
  7.2.2. Viral Genome
  7.2.3. Principal Virulence Factors
7.3. Epidemiological Changes in Coronavirus Infections from Discovery to the Present
  7.3.1. Morbidity and Mortality of Coronavirus Infections from their Emergence to the Present
7.4. The Immune System and Coronavirus Infections
  7.4.1. Immunological Mechanisms Involved in the Immune Response to Coronaviruses
  7.4.2. Cytokine Storm in Coronavirus Infections and Immunopathology
  7.4.3. Modulation of the Immune System in Coronavirus Infections
7.5. Pathogenesis and Pathophysiology of Coronavirus Infections
  7.5.1. Pathophysiological and Pathogenic Alterations in Coronavirus Infections
  7.5.2. Clinical Implications of the Main Pathophysiological Alterations
7.6. Risk Groups and Transmission Mechanisms of Coronaviruses
  7.6.1. Main Sociodemographic and Epidemiological Characteristics of Risk Groups Affected by Coronavirus
  7.6.2. Coronavirus Mechanisms of Transmission
7.7. Natural History of Coronavirus Infections
  7.7.1. Stages of Coronavirus Infection
7.8. Latest Information on Microbiological Diagnosis of Coronavirus Infections
  7.8.1. Sample Collection and Shipment
  7.8.2. PCR and Sequencing
  7.8.3. Serology Testing
  7.8.4. Virus Isolation
7.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
  7.9.1. Biosafety Measures for Coronavirus Sample Handling
7.10. Up-to-Date Management of Coronavirus Infections

7.10.1. Prevention Measures
7.10.2. Symptomatic Treatment
7.10.3. Antiviral and Antimicrobial Treatment in Coronavirus Infections
7.10.4. Treatment of Severe Clinical Forms
7.11. Future Challenges in the Prevention, Diagnosis, and Treatment of Coronavirus
7.11.1. Global Challenges for the Development of Prevention, Diagnostic, and Treatment Strategies for Coronavirus Infections

Module 8. Urinary Tract and Sexually Transmitted Infections

8.1. Epidemiology of Urinary Tract Infection
8.1.1. Factors Explaining the Increased Morbidity of Urinary Tract Infection in Women
8.2. Immunology of the Urinary System
8.3. Classification of Urinary Tract Infection
8.4. Urinary Infection
8.4.1. Etiology
8.4.2. Clinical Picture
8.4.3. Diagnosis
8.4.4. Treatment
8.5. Urinary Tract Infection in the Bladder Catheterised, Prostatic and Elderly Patient
8.6. Most commonly used antimicrobials in urinary tract infections
8.6.1. Pharmacological Elements
8.6.2. Antimicrobial Resistance of the Main Bacteria Affecting the Urinary Tract
8.7. Epidemiological Update on Major STIs
8.8. Viral STIs
8.8.1. Perinatal Herpes Simplex
8.8.2. Viral Hepatitis
8.8.3. Human papillomavirus
8.8.4. HIV
8.9. Bacterial STIs
8.9.1. Gonorrhoea
8.9.2. Syphilis
8.9.3. Soft Chancre
8.9.4. Lymphogranuloma Venereum
8.10. Trichomoniasis and Genital Candidiasis
8.11. Trichomoniasis: Epidemiology, Aetiology, Clinical Picture, Diagnosis and Treatment
8.12. Genital Candidiasis: Epidemiology, Etiology, Clinical Picture, Diagnosis and Treatment
8.13. The syndromic Approach to STIs and Control Measures
8.13.1. Main Clinical Framework
8.13.2. STI Control Measures
8.14. Multidrug-Resistant Gonococcus: Treatment Alternatives
8.14.1. Global Situation
8.14.2. Alternative Treatments
8.15. Current Management of Recurrent Herpes Infection
8.15.1. Focus Latest Information of Recurrent Herpes Infection

Module 9. Food-Borne Infections

9.1. Food-Borne Diseases, a Modern Day Health Problem
9.1.1. Epidemiology
9.1.2. Causes of Foodborne Infections
9.2. Classification of Foodborne Infections
9.2.1. Intoxications
9.2.2. Infections
9.2.3. Toxi-infections
9.3. Main Aetiological Agents
9.3.1. Salmonella
9.3.2. Staphylococci
9.3.3. Listeria monocytogenes
9.3.4. Escherichia coli, 0157;H7
9.3.5. Clostridium botulinum
9.4. Foodborne Diseases and their Socio-Economic Impact
9.4.1. Socio-Economic Consequences of the ATS
9.5. Main Measures for the Control of Food-Borne Infections
9.5.1. Primary Prevention of ATS
9.5.2. Education of Health
9.5.3. State Health Control and ATS

Module 10. Hepatitis and HIV/AIDS and TB Coinfection

10.1. Viral Hepatitis A
- 10.1.1. Virus Characteristics and Replication Cycle
- 10.1.2. Clinical Picture
- 10.1.3. Viral Markers
- 10.1.4. Evolution and Prognosis
- 10.1.5. Treatment

10.2. Viral Hepatitis B and C
- 10.2.1. Virus Characteristics and Replication Cycle
- 10.2.2. Clinical Picture
- 10.2.3. Viral Markers
- 10.2.4. Evolution and Prognosis
- 10.2.5. Treatment

10.3. Viral Hepatitis D and E
- 10.3.1. Virus Characteristics and Replication Cycle
- 10.3.2. Clinical Picture
- 10.3.3. Viral Markers
- 10.3.4. Evolution and Prognosis
- 10.3.5. Treatment

10.4. Epidemiology of Morbidity and Mortality from TB/HIV/AIDS Coinfection
- 10.4.1. Incidence
- 10.4.2. Prevalence
- 10.4.3. Mortality

10.5. Pathobiology from TB/HIV/AIDS Coinfection
- 10.5.1. Pathophysiological Alterations in Co-Infection
- 10.5.2. Pathological Alterations

10.6. Clinical Manifestations of Co-Infection
- 10.6.1. Clinical Manifestations of Pulmonary TB
- 10.6.2. Clinical Manifestations of Extrapulmonary TB

10.7. Diagnosis of Tuberculosis in Patients Living with HIV/AIDS
- 10.7.1. Diagnostic Studies in Pulmonary TB in HIV/AIDS Patients
- 10.7.2. Diagnostic Studies in Pulmonary TB in HIV/AIDS Patients

10.8. Integral Care of Patients with Co-infection TB and HIV/AIDS and Therapeutic Considerations
- 10.8.1. The System of Comprehensive Care for TB/HIV/AIDS Patients
- 10.8.2. Anti-Tuberculosis Treatment Considerations in Patients with TB/HIV/AIDS Co-Infection
- 10.8.3. Anti-Tuberculosis Treatment Considerations in Patients with TB/HIV/AIDS Co-Infection
- 10.8.4. The Issue of Anti-Tuberculosis and Anti-Retroviral Resistance in These Patients

Module 11. Viral Haemorrhagic Diseases and Arboviruses

11.1. Viral Hemorrhagic Diseases
- 11.1.1. Epidemiology
- 11.1.2. Classification
- 11.1.3. Diagnostic Approach to Viral Haemorrhagic Diseases
- 11.1.4. The Development of Vaccines for New Diseases
- 11.1.5. Measures for the Control of Viral Haemorrhagic Diseases

11.2. Ebola Haemorrhagic Fever
- 11.2.1. Characteristics and Replicative Cycle of the Virus
- 11.2.2. Clinical Picture
- 11.2.3. Diagnosis
- 11.2.4. Treatment

11.3. South American Hemorrhagic Fevers
- 11.3.1. Characteristics and Replicative Cycle of the Virus
- 11.3.2. Clinical Picture
- 11.3.3. Diagnosis
- 11.3.4. Treatment

11.4. Arbovirus:
- 11.4.1. Epidemiology
- 11.4.2. Vector Control
- 11.4.3. Other Arboviruses

11.5. Yellow fever.
- 11.5.1. Concept
- 11.5.2. Replicative Cycle of the Virus

11.5.3. Clinical manifestations
11.5.4. Diagnosis
11.5.5. Treatment
11.6. Dengue.
11.6.1. Concept
11.6.2. Replicative Cycle of the Virus
11.6.3. Clinical manifestations
11.6.4. Diagnosis
11.6.5. Treatment
11.7. Chikungunya
11.7.1. Concept
11.7.2. Replicative Cycle of the Virus
11.7.3. Clinical manifestations
11.7.4. Diagnosis
11.7.5. Treatment
11.8. Zika
11.8.1. Concept
11.8.2. Replicative Cycle of the Virus
11.8.3. Clinical manifestations
11.8.4. Diagnosis
11.8.5. Treatment

Module 12. Central Nervous System Infections

12.1. The Immune Defence Mechanisms of the CNS
12.1.1. Defence Mechanisms of the CNS
12.1.2. The Immune Response in the CNS
12.2. Epidemiology of the CNS Infection
12.2.1. Morbidity
12.2.2. Mortality
12.2.3. Risk factors
12.3. Microbiological Diagnosis of the CNS Infection
12.3.1. The Study of Cerebrospinal Fluid
12.4. Meningitis
12.4.1. Etiology
12.4.2. Clinical Picture
12.4.3. Diagnosis
12.4.4. Treatment
12.5. Encephalitis
12.5.1. Etiology
12.5.2. Clinical Picture
12.5.3. Diagnosis
12.5.4. Treatment
12.6. Myelitis
12.6.1. Etiology
12.6.2. Clinical Picture
12.6.3. Diagnosis
12.6.4. Treatment
12.7. Antibiotics and the Blood-Brain Barrier
12.7.1. The Role of the Blood-Brain Barrier
12.7.2. The Crossing of the Blood-Brain Barrier by Antibiotics

Module 13. Zoonosis

13.1. Overview of Zoonosis
13.1.1. General Concepts and Epidemiology of Zoonoses
13.1.2. Main Zoonotic Diseases on an International Level
13.1.3. Prion Zoonosis
13.1.4. Prions in the Aetiology of Diseases
13.1.5. Bovine Spongiform Encephalopathy (or mad cow disease)
13.1.6. Main Zoonosis Control Measures
13.2. Rabies
13.2.1. Epidemiology
13.2.2. Infectious Agents
13.2.3. Pathobiology.

13.2.4. Clinical Picture
13.2.5. Diagnosis
13.2.6. Treatment
13.3. Bird Flue
13.3.1. Epidemiology
13.3.2. Infectious Agents
13.3.3. Pathobiology.
13.3.4. Clinical Picture
13.3.5. Diagnosis
13.3.6. Treatment
13.4. Leptospirosis.
13.4.1. Epidemiology
13.4.2. Infectious Agents
13.4.3. Pathobiology
13.4.4. Clinical Picture
13.4.5. Diagnosis
13.4.6. Treatment
13.5. Brucellosis
13.5.1. Epidemiology
13.5.2. Infectious Agents
13.5.3. Pathobiology
13.5.4. Clinical Picture
13.5.5. Diagnosis
13.5.6. Treatment
13.6. Toxoplasmosis
13.6.1. Epidemiology
13.6.2 Infectious Agent
13.6.3. Pathobiology
13.6.4. Clinical Picture
13.6.5. Diagnosis
13.6.6. Treatment

Module 14. Mycobacteriosis and anaerobic infections

14.1. General Overview of Mycobacteriosis
- 14.1.1. Microbiological Characteristics of Mycobacteria
- 14.1.2. Immune Response to Mycobacterial Infection
- 14.1.3. Epidemiology of Major Nontuberculous Mycobacteria Infections

14.2. Microbiological Methods for the Diagnosis of Mycobacterioses
- 14.2.1. Direct Methods.
- 14.2.2. Indirect Methods.

14.3. Intracellular Mycobacterium Avium Infection
- 14.3.1. Epidemiology
- 14.3.2. Infectious Agents
- 14.3.3. Pathobiology.
- 14.3.4. Clinical Picture
- 14.3.5. Diagnosis
- 14.3.6. Treatment

14.4. Infection by Mycobacterium Kansasii
- 14.4.1. Epidemiology
- 14.4.2. Infectious Agents
- 14.4.3. Pathobiology.
- 14.4.4. Clinical Picture
- 14.4.5. Diagnosis
- 14.4.6. Treatment

14.5. Leprosy
- 14.5.1. Epidemiology
- 14.5.2. Infectious Agents
- 14.5.3. Pathobiology.
- 14.5.4. Clinical Picture
- 14.5.5. Diagnosis
- 14.5.6. Treatment

14.6. Other Mycobacteriosis

14.7. Antimycobacterials
- 14.7.1. Pharmacological Characteristics
- 14.7.2. Clinical Use

14.8. Microbiological Characteristics of Anaerobic Germs
- 14.8.1. Microbiological Characteristics of Anaerobic Germs
- 14.8.2. Microbiological Studies.

14.9. Pulmonary Abscess
- 14.9.1. Definition
- 14.9.2. Etiology
- 14.9.3. Clinical Picture
- 14.9.4. Diagnosis
- 14.9.5. Treatment

14.10. Intra-abdominal and ovarian tube abscesses
- 14.10.1. Definition
- 14.10.2. Etiology
- 14.10.3. Clinical Picture
- 14.10.4. Diagnosis
- 14.10.5. Treatment

14.11. Intracerebral Abscess
- 14.11.1. Definition
- 14.11.2. Etiology
- 14.11.3. Clinical Picture
- 14.11.4. Diagnosis
- 14.11.5. Treatment

14.12. Tetanus and Gangrene
- 14.12.1. Tetanus: Neonatal and Adult
- 14.12.2. Gangrene: Definition, Aetiology, Clinical picture, Diagnosis, Treatment

14.13. Main Antimicrobials against Anaerobic Germs
- 14.13.1. Mechanism of Action
- 14.13.2. Pharmacokinetics
- 14.13.3. Dose
- 14.13.4. Introduction
- 14.13.5. Adverse Effects

Module 15. Mycoses and Parasitosis in Infectiology

15.1. General Information on Fungi
- 15.1.1. General Features of Fungi
- 15.1.2. Immune Response to Fungi

15.2. Diagnostic Methods for Mycoses
- 15.2.1. Direct Methods.
- 15.2.2. Indirect Methods.

15.3. Superficial Mycosis: Tinea and Epidermatophytosis
- 15.3.1. Definition
- 15.3.2. Etiology
- 15.3.3. Clinical Picture
- 15.3.4. Diagnosis
- 15.3.5. Treatment

15.4. Deep Mycosis.
- 15.4.1. Cryptococcosis
- 15.4.2. Histoplasmosis
- 15.4.3. Aspergillosis
- 15.4.4. Other Mycosis

15.5. Update on Antifungals
- 15.5.1. Pharmacological Elements
- 15.5.2. Clinical Use

15.6. General overview of parasitic diseases
- 15.6.1. General Features of Microbiological Parasites
- 15.6.2. Immune Response to Parasites
- 15.6.3. Immune Response to Protozoa
- 15.6.4. Immune Response to Helminths

15.7. Diagnostic Methods for Parasites
- 15.7.1. Diagnostic Methods for Protozoa
- 15.7.2. Diagnostic Methods for Helminths

15.8. Intestinal Parasites
- 15.8.1. Ascariasis
- 15.8.2. Oxiuriasis
- 15.8.3. Hookworm Disease and Necatoriasis
- 15.8.4. Trichuriasis

15.9. Tissue Parasitosis
- 15.9.1. Malaria
- 15.9.2. Trypanosomiasis
- 15.9.3. Schistosomiasis
- 15.9.4. Leishmaniasis
- 15.9.5. Filariasis

15.10. Update on Antiparasitics
- 15.10.1. Pharmacological Elements
- 15.10.2. Clinical Use

Module 16. Multi-Resistance and Vaccines

16.1. The Silent Epidemic of Antibiotic Resistance
- 16.1.1. Globalisation and Resistance
- 16.1.2. Change from Susceptible to Resistant of the Microorganisms

16.2. The Main Genetic Mechanisms of Antimicrobial Resistance
- 16.2.1. Describe the Main Mechanisms of Antimicrobial Resistance
- 16.2.2. Selective Antimicrobial Pressure on Antimicrobial Resistance

16.3. Superbugs
- 16.3.1. Pneumococcus Resistant to Penicillin and Macrolides
- 16.3.2. Multidrug-Resistant Staphylococci
- 16.3.3. Resistant Infections in Intensive Care Units (ICUs)
- 16.3.4. Resistant Urinary Tract Infections
- 16.3.5. Other Multi-Resistant Microorganisms

16.4. Resistant Viruses
- 16.4.1. HIV
- 16.4.2. Influenza
- 16.4.3. Hepatitis Viruses

16.5. Multidrug-Resistant Malaria
- 16.5.1. Chloroquine Resistance
- 16.5.2. Resistance to Other Antimalarials

16.6. The Main Genetic Studies of Antimicrobial Resistance
- 16.6.1. Interpretation of Resistance Studies

16.7. Global Strategies for Reducing Antimicrobial Resistance
- 16.7.1. The Control of Prescribing Antibiotics
- 16.7.2. Microbiological Mapping and Clinical Practice Guidelines

16.8. Overview of Vaccines
- 16.8.1. Immunological Basis of Vaccination
- 16.8.2. The Process of Vaccination Production
- 16.8.3. Quality Control of Vaccines
- 16.8.4. Vaccine Safety and Major Adverse Events
- 16.8.5. Clinical and Epidemiological Studies for Vaccine Approval

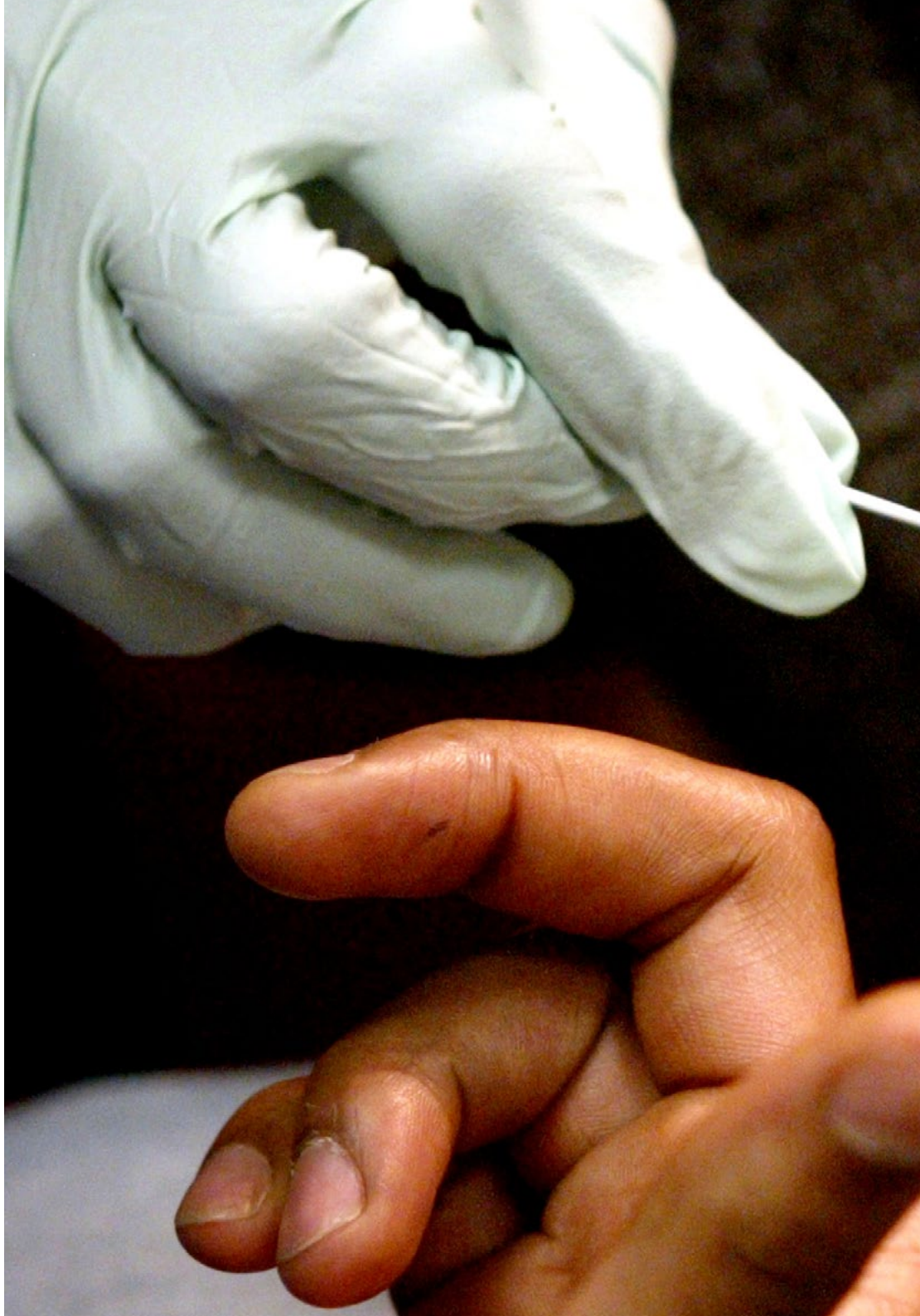
16.9. The Use of Vaccines
- 16.9.1. Vaccine-Preventable Diseases and Vaccination Programmes
- 16.9.2. Global Experiences of the Effectiveness of Vaccination Programmes
- 16.9.3. Vaccine Candidates for New Diseases

Module 17. Rare Infectious Diseases and Other Challenges in Infectiology

17.1. Overview of Rare Infectious Diseases
- 17.1.1. General Concepts
- 17.1.2. Epidemiology of Rare or Uncommon Infectious Diseases

17.2. Bubonic Plague.
- 17.2.1. Definition
- 17.2.2. Etiology
- 17.2.3. Clinical Picture
- 17.2.4. Diagnosis
- 17.2.5. Treatment

17.3. Lyme Disease
- 17.3.1. Definition
- 17.3.2. Etiology
- 17.3.3. Clinical Picture
- 17.3.4. Diagnosis
- 17.3.5. Treatment



17.4. Babesiosis.
- 17.4.1. Definition
- 17.4.2. Etiology
- 17.4.3. Clinical Picture
- 17.4.4. Diagnosis
- 17.4.5. Treatment

17.5. Rift Valley Fever
- 17.5.1. Definition
- 17.5.2. Etiology
- 17.5.3. Clinical Picture
- 17.5.4. Diagnosis
- 17.5.5. Treatment

17.6. Diphyllobothriasis
- 17.6.1. Definition
- 17.6.2. Etiology
- 17.6.3. Clinical Picture
- 17.6.4. Diagnosis
- 17.6.5. Treatment

17.7. Zygomycosis
- 17.7.1. Definition
- 17.7.2. Etiology
- 17.7.3. Clinical Picture
- 17.7.4. Diagnosis
- 17.7.5. Treatment

17.8. Cysticercosis
- 17.8.1. Definition
- 17.8.2. Etiology
- 17.8.3. Clinical Picture
- 17.8.4. Diagnosis
- 17.8.5. Treatment

17.9. Kuru
- 17.9.1. Definition
- 17.9.2. Etiology
- 17.9.3. Clinical Picture
- 17.9.4. Diagnosis
- 17.9.5. Treatment

17.10. The Re-emergence of Old Diseases: Causes and Effects
- 17.10.1. Emerging and New Infectious Diseases that Demand New Approaches to their Control
- 17.10.2. The Rise of Microbiological Resistance to Antimicrobial Drugs
- 17.10.3. Development of New Antibiotics
- 17.10.4. Training and Success of Infectologists

Diagnose possible microbes that cause infections in the CNS by studying cerebrospinal fluid"

06

Methodology

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

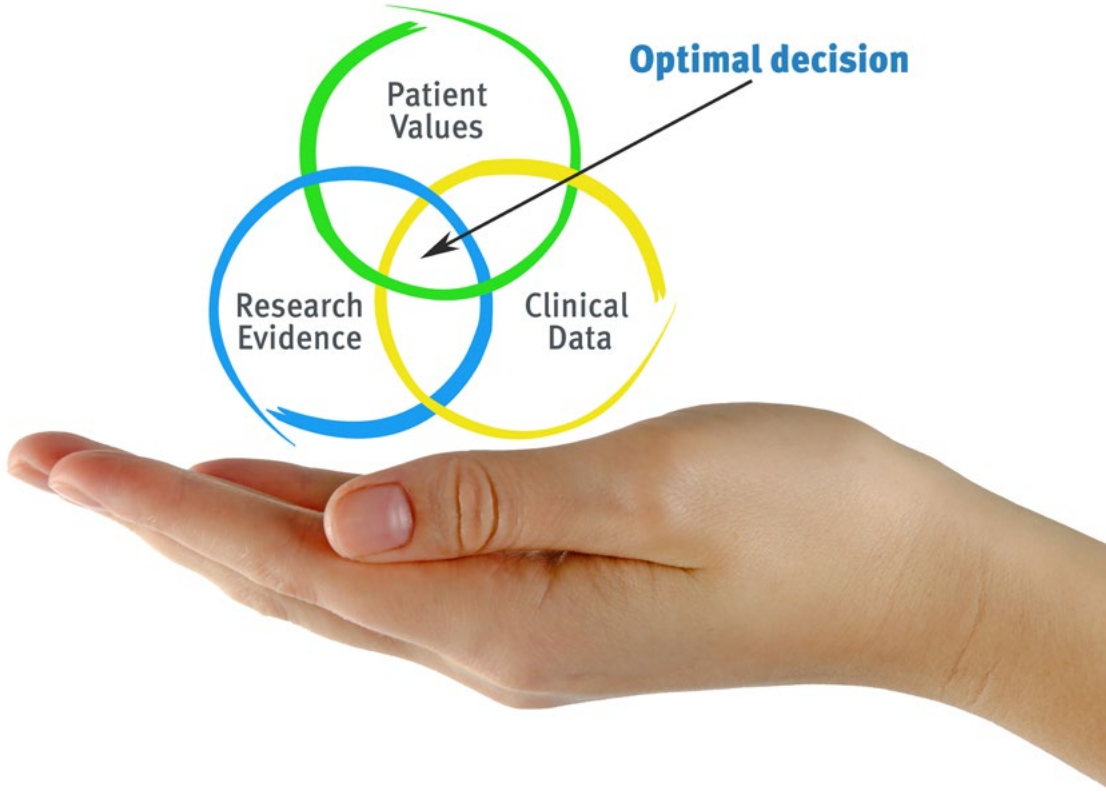
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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. 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, attempting to recreate the actual conditions in a pharmacist'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:

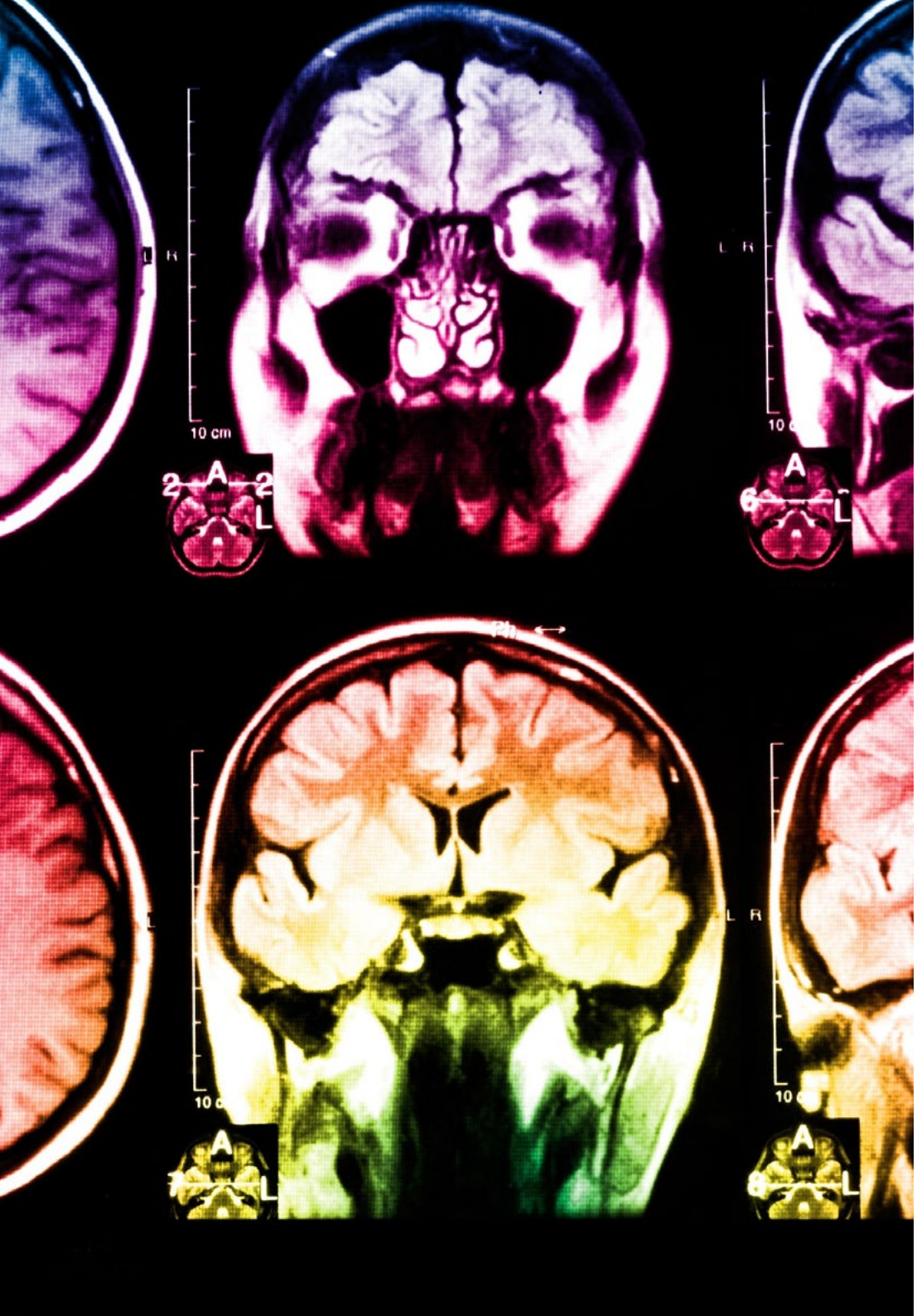
1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts 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.

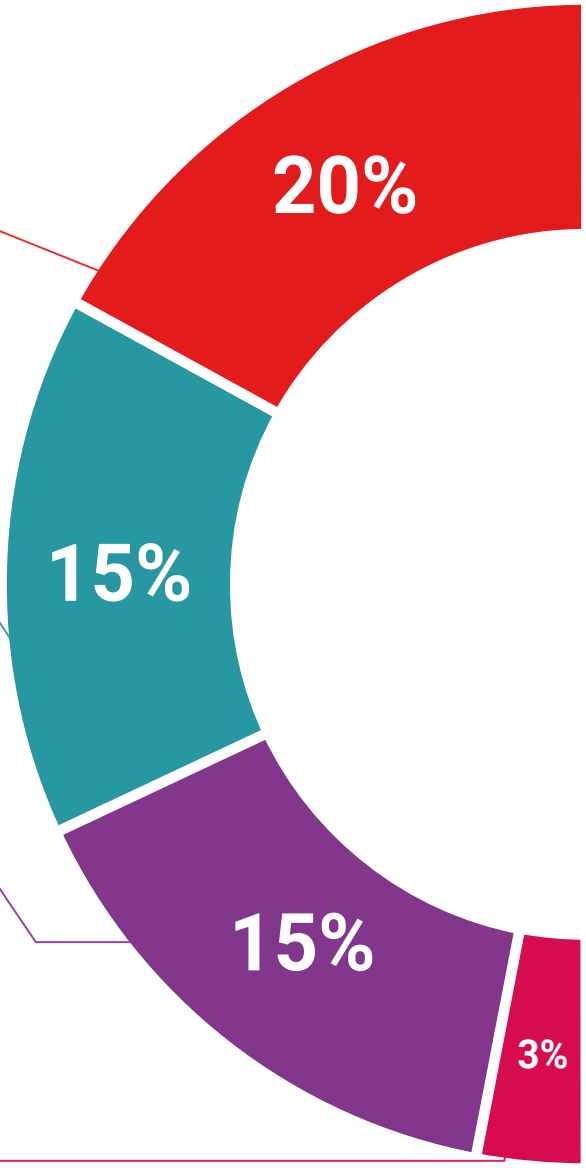
Interactive Summaries

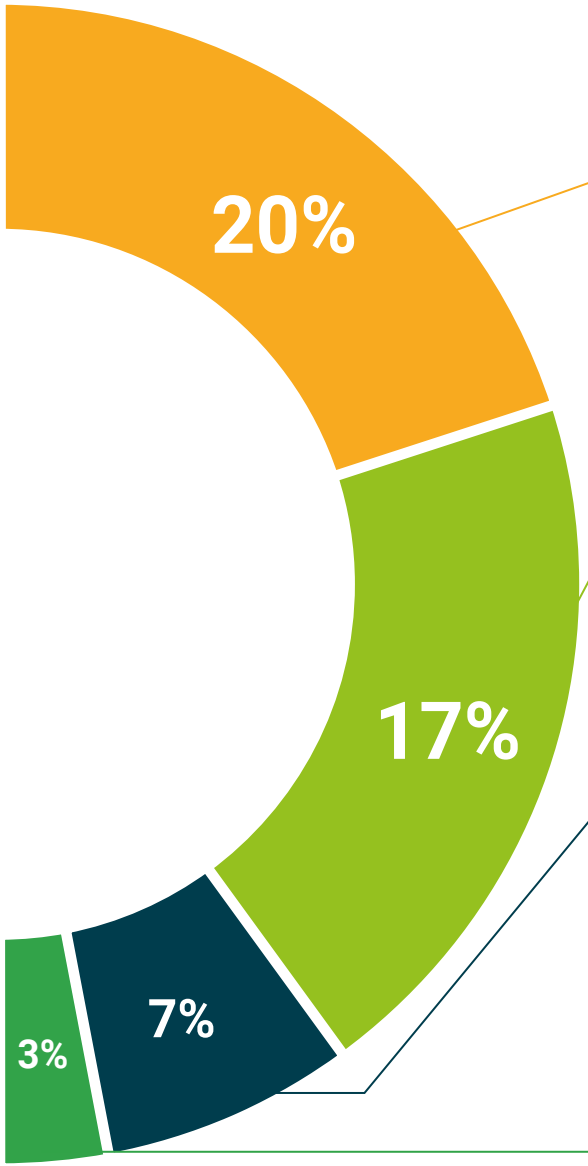
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

07

Certificate

The Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics guarantees, in addition to the most rigorous and up-to-date training, access to a Professional Master's Degree issued by TECH Technological University

Successfully complete this program and receive your university title without the hassle of travel or paperwork"

This **Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics** contains the most complete and up-to-date scientific program on the market.

After passing the assessments, the student will receive their corresponding **Professional Master's Degree** diploma issued by **TECH Technological University** via tracked delivery*****.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and will meet the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics**

Official Nº of Hours: **1,500 h.**


tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Clinical Infectious Diseases and Advanced Antiobiotic Therapeutics

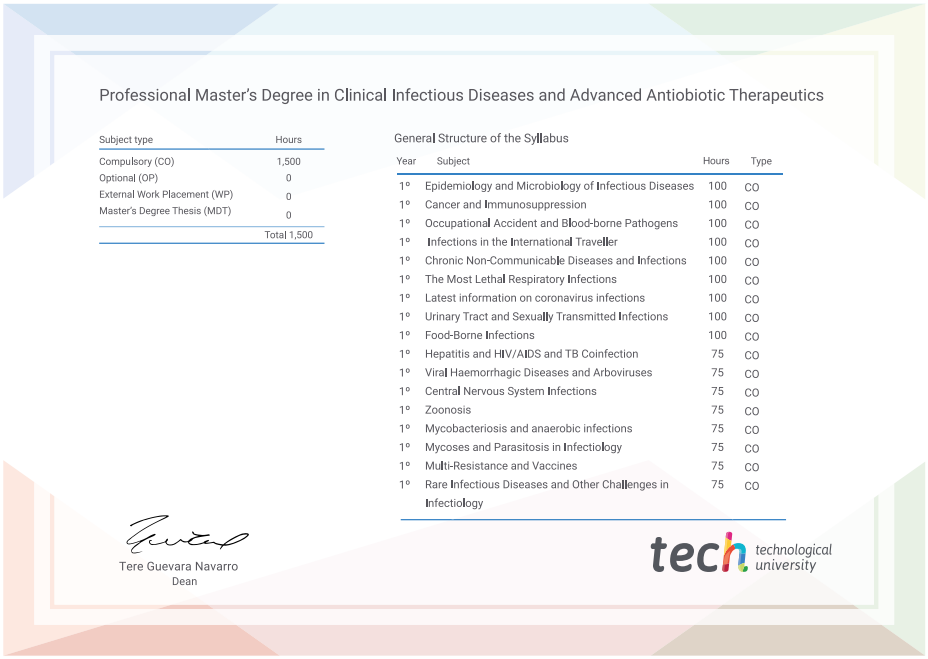
This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Professional Master's Degree in Clinical Infectious Diseases and Advanced Antiobiotic Therapeutics

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Epidemiology and Microbiology of Infectious Diseases	100	CO
1º	Cancer and Immunosuppression	100	CO
1º	Occupational Accident and Blood-borne Pathogens	100	CO
1º	Infections in the International Traveller	100	CO
1º	Chronic Non-Communicable Diseases and Infections	100	CO
1º	The Most Lethal Respiratory Infections	100	CO
1º	Latest information on coronavirus infections	100	CO
1º	Urinary Tract and Sexually Transmitted Infections	100	CO
1º	Food-Borne Infections	100	CO
1º	Hepatitis and HIV/AIDS and TB Coinfection	75	CO
1º	Viral Haemorrhagic Diseases and Arboviruses	75	CO
1º	Central Nervous System Infections	75	CO
1º	Zoonosis	75	CO
1º	Mycobacteriosis and anaerobic infections	75	CO
1º	Mycoses and Parasitosis in Infectiology	75	CO
1º	Multi-Resistance and Vaccines	75	CO
1º	Rare Infectious Diseases and Other Challenges in Infectiology	75	CO

Tere Guevara Navarro
Dean

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*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.

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Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

Course Modality: **Online**

Duration: **12 months.**

Certificate: **TECH Technological University**

Official Nº of Hours: **1,500 h.**

Professional Master's Degree

Clinical Infectious Diseases and Advanced Antiobiotic Therapeutics

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