Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

tech global university

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Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/medicine/professional-master-degree/master-clinical-infectious-diseases-advanced-antibiotic-therapetuics

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01

Introduction

Infectious diseases have become one of the main public health problems in the world. This has become even more apparent with the COVID-19 pandemic, which has claimed more than 5 million lives worldwide. It is, therefore, becoming increasingly important for medical professionals to have sound knowledge of these diseases and to constantly update their knowledge to ensure correct diagnosis and to develop new treatment and prevention techniques. This 100% online program was created with this in mind, and is taught by a teaching team specialized in this area.

This is the opportunity you were looking for to update your knowledge on COVID-19 with a flexible university qualification"

One of the challenges for medical professionals is the approach to patients with infectious diseases, since in recent years there has been an increase in morbidity and resistance to antibiotic treatment by human beings themselves. Bacterial resistance and the continued existence of diseases such as malaria, tuberculosis, HIV, as well as the expected emergence of new strains of increasingly infectious viruses, has driven research and highlighted the need for the international medical community to update their knowledge.

In this current panorama, TECH offers physicians a Professional Master's Degree, where over 12 months, they can delve into scientific advances in the medical sciences, the development of public health and the pharmaceutical and biotechnology industry. The multimedia content of this program will allow you to expand your knowledge in epidemiology, the most lethal respiratory infections, multi-resistant infections and the latest advances in vaccines. Likewise, the practical case studies provided by teams of specialists that make up this program will serve to bring students even closer to the reality they may face in their clinical practice.

An academic opportunity that will provide the latest scientific studies in the field of infectious diseases, where dengue, Chikungunya or Zika are still present in different countries around the world and are of special concern in the health field.

Medical professionals are being presented with an excellent opportunity to be able to expand their extensive knowledge comfortably. Students taking this academic course only need an electronic device with which they can connect to the Internet and access the syllabus. This content is also available in full from the beginning of the program, allowing you to distribute the workload and make the high-quality teaching compatible with your professional responsibilities. The physician, therefore, can study this program remotely, without fixed schedules and in a completely flexible way.

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". Its most notable features are:

- The development of case studies presented by experts in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development
- Practical exercises where self-assessment can be used to improve learning
- 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

With this course, you have the opportunity to update your knowledge comfortably and without sacrificing scientific accuracy, in order to incorporate the latest advances in the approach to infectious pathology in your daily medical practice"

Many infectious diseases have impacted the world over the years. The knowledge acquired in this Professional Master's Degree is essential in order to obtain the up-to-date knowledge you are looking for"

The program's teaching staff includes professionals from the sector who contribute their work experience to this 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 learning 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

This online program will allow you to deepen your knowledge of cancer, immunosuppression and chronic non-communicable diseases in an agile way thanks to the Relearning system used by TECH.

Learn all the latest news on multi-resistances and vaccines through the educational resources provided by a specialized teaching team.

02

Objectives

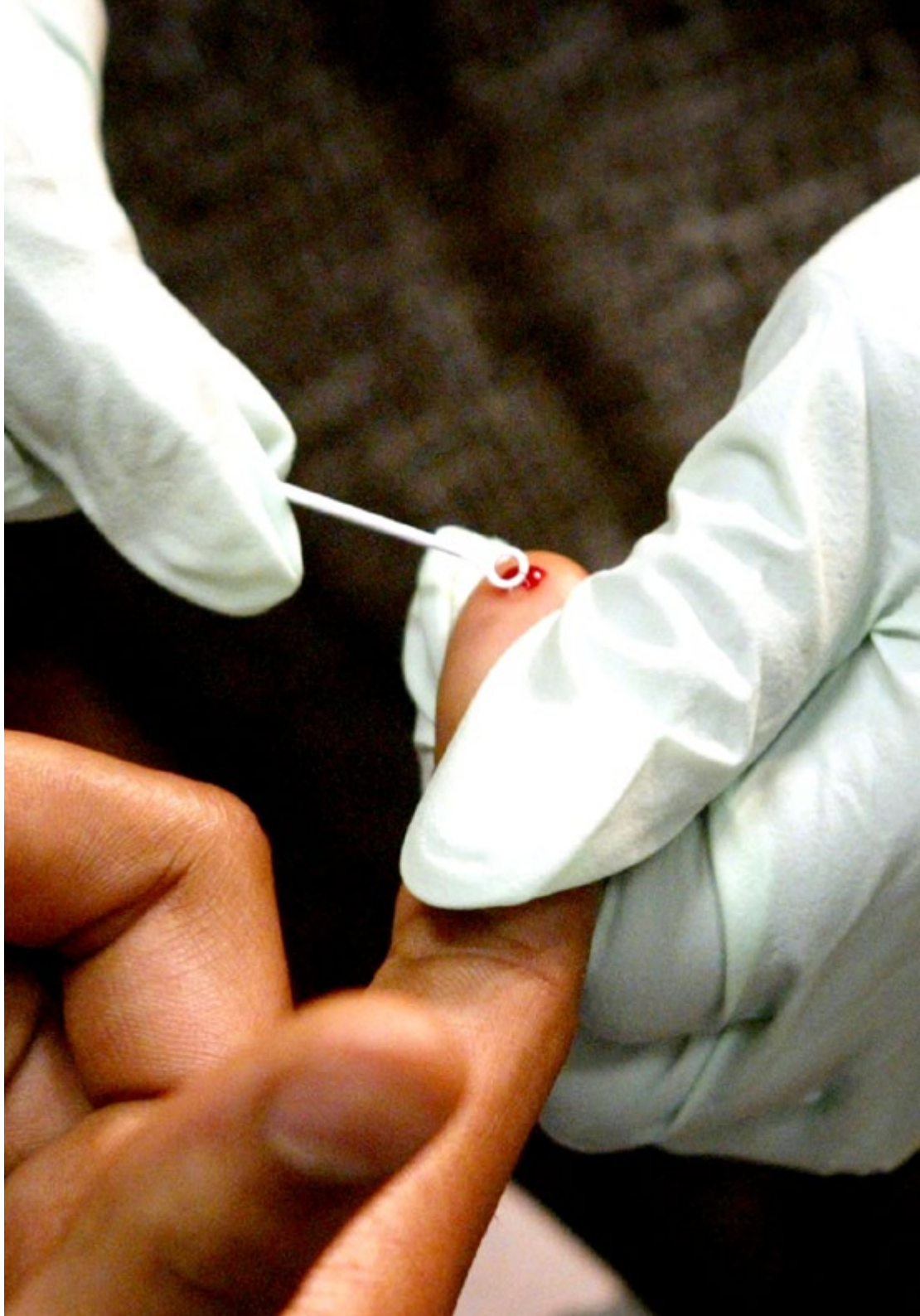
The program of this Professional Master's Degree is designed to allow the professional to acquire the skills required to update their knowledge and develop in their field of work, delving into the key aspects of Clinical Infectious Diseases and Advanced Antibiotic Therapeutics. The knowledge acquired in the development of the points of the syllabus will drive the professional from a global perspective, with full capacity to achieve the proposed goals. They will be fully empowered in a field of medicine that is versatile, global and essential, guiding them towards excellence in an industry that is continuously adapting to technological advances.

TECH is all about you, that's why it offers medical professionals flexible learning that they can access wherever and whenever they want"

General Objectives

- Gain in-depth knowledge of key aspects of Infectious Diseases and Advanced Antibiotic Therapeutics
- Manage prevention, diagnosis and treatment of infectious diseases
- Gain in-depth knowledge of the multidisciplinary and comprehensive approach to controlling these pathologies
- Acquire the relative skills in the field of Clinical Infectious Diseases and Advanced Antibiotic Therapeutics
- Be able to apply the latest technological innovations to establish an optimal diagnostic management

Achieve your goals thanks to our educational tools in which we use the latest technology in academic learning"



Specific Objectives

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. Cancer and Immunosuppression

- Identify the general structures of the immune system
- Establish the common responses of the immunological system when faced with 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. Infectious Diseases in International Travelers

- Highlight the importance of morbidity and mortality from infections in the international traveller
- Explain the health controls for international travellers
- Know and identify the most common infections for international travellers such as fever on returning from a trip or "traveller's diarrhoea"

Module 5. Chronic Non-Communicable Diseases and Infections

- Study the current pathophysiological elements between non-transmissible chronic diseases and infections
- Know the neurological, endocrine and immune interrelationships in the face of stress and infectious agents
- Identify the digestive diseases associated with infectious microorganisms and the function of this system in the body
- Gain in-depth knowledge on the infectious theory of rheumatic diseases

Module 6. The Most Lethal Respiratory Infections

- Study, in depth, the latest clinical, diagnostic and therapeutic elements of the most lethal respiratory infections
- Know the mortal repercussions of bacterial pneumonia associated with health care and other factors
- Identify the clinical picture, pathobiology and diagnosis of tuberculosis
- Analyze the formation of Loeffler 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 main microbiological characteristics of coronaviruses
- Gain in-depth knowledge of the biosafety protocols currently used in laboratories handling coronavirus samples
- Highlight the pathogenesis and pathophysiology of coronavirus infections

Module 8. Urinary Tract and Sexually Transmitted Infections

- Assess the extent of urinary tract infections and immune response in the genitourinary system
- Gain detailed knowledge of 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

- Gain knowledge of 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 taken to control foodborne infections

Module 10. Hepatitis and HIV/AIDS and Tuberculosis Co-Infection

- Characterize the clinical picture, viral markers, evolution and treatment of Hepatitis, Tuberculosis and HIV/AIDS infection
- Understand in detail the clinical manifestations of co-infection at pulmonary and extrapulmonary levels
- Evaluate the comprehensive care received by patients with infections in patients with co-infection and therapeutic considerations
- Consider other antituberculosis treatments in patients with tuberculosis/HIV/AIDS coinfection

Module 11. Viral Hemorrhagic Diseases and Arboviruses

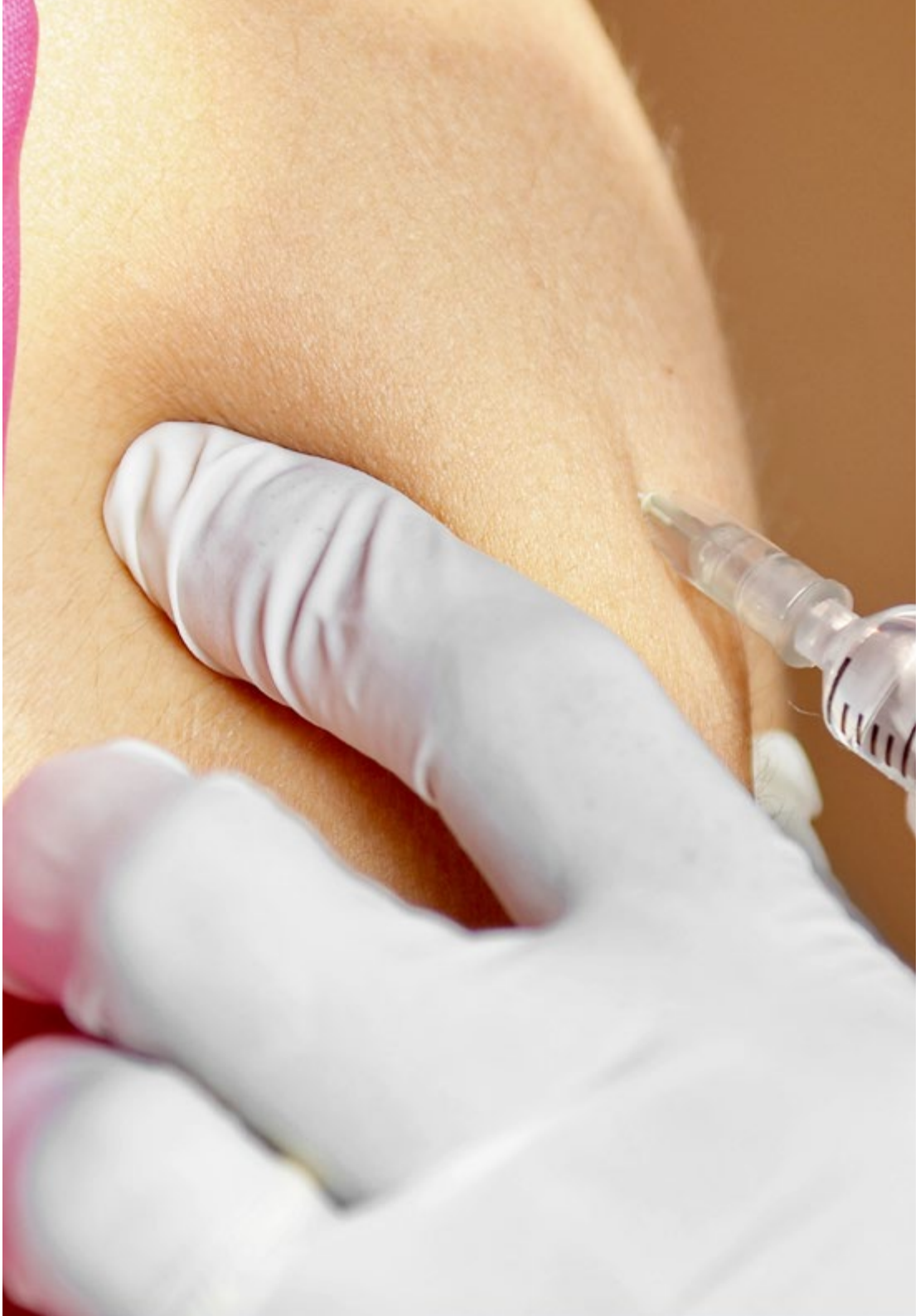
- Quickly identify viral hemorrhagic diseases and the vaccines that target these diseases
- Be able to understand the diagnostic approach to hemorrhagic diseases
- Get an overview of the types of hemorrhagic infections that concern the world, such as dengue, chikungunya, zika, among others

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 CNS infections 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. Zoonotic Diseases

- 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 pictures



Module 14. Mycobacteriosis and Anaerobic Infections

- Acquire the skills required to analyze the microbiological characteristics of mycobacteria
- Analyze the microbiological methods for the diagnosis of mycobacterial infections
- Know and identify the symptoms, infectious agents and clinical picture of mycobacterial infections
- Know in detail the main antimicrobials used 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
- Correctly manage 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
- Deepen 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

Module 17. Rare Infectious Diseases and Other Challenges in Infectiology

- Know the general aspects 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 required to identify new emerging infectious diseases as well as the development of new antibiotics

03

Skills

The structure of this Professional Master's Degree has been designed in such a way that professionals who study it will be able to identify and solve problems related to the diagnosis and treatment of the most common viral infections, thanks to a unique methodology and the support of the experts who have developed it. TECH guarantees students quality content that meets their expectations, giving them the opportunity to excel in their field. You will be able to perform the various functions related to this program, together with the most innovative proposals in this field of action, guiding you towards excellence. A series of aspects demanded by industry professionals and today's world.

The skills that you will acquire by completing this Professional Master's Degree will allow you to be up to date on the detection and diagnosis of infections such as gonorrhea, syphilis or chancroid"

General Skills

- 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
- 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

Specific Skills

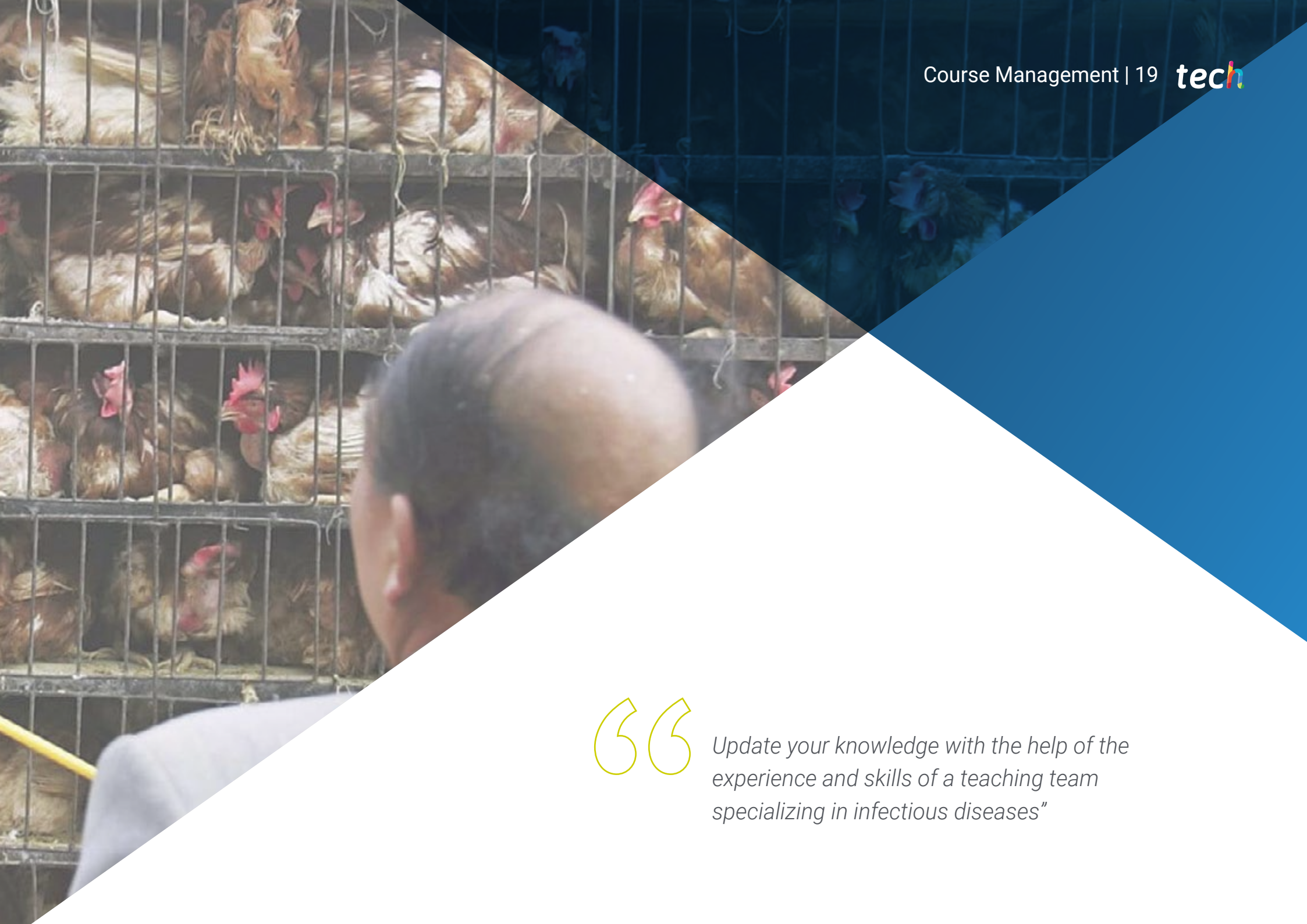
- Master the biological, epidemiological, and social determinants that favour the development of diseases and their impact on morbidity and mortality
- Identify and analyse the latest scientific information in infectious diseases, in order to design plans and programs to control it
- Apply existing control 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
- Diagnose in a timely manner, based on clinical manifestations, the most frequent or new infections in order to ensure 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 hemorrhagic 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

Update your skills with this online Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics in the approach to infectious pathologies imported by international travelers"

04

Course Management

In our commitment to offer elite education for all, TECH works with renowned professionals so that the student acquires solid knowledge in the field of Clinical Infectious Diseases and Advanced Antibiotic Therapeutics through an online qualification. Therefore, this Professional Master's Degree has a highly qualified team with extensive experience in the sector, who will offer the best teaching tools, allowing physicians to expand their knowledge throughout the 12 months of this program. In this way, they will have the guarantees they require to expand their knowledge in infectious diseases.



Update your knowledge with the help of the experience and skills of a teaching team specializing in infectious diseases"

Management

Dr. Díaz Pollán, Beatriz

- Faculty Specialist, La Paz University Hospital. Since 2013
- Master's Degree in Clinical Medicine from the Rey Juan Carlos University. 2014
- Degree in Medicine and Surgery, Autonomous University of Madrid 1995
- Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University. 2018
- Postgraduate Diploma in Community and Nosocomial Infections from CEU Herrera University. 2018
- Postgraduate Diploma in Chronic Infectious Diseases and Imported Infections from CEU Herrera University. 2018
- Postgraduate Diploma in Microbiological Diagnosis, Antimicrobial Treatment and Research in Infectious Pathology from CEU Herrera University. 2018
- Faculty Specialist at San Carlos Clinical Hospital. 2001-2013
- Resident Physician in San Carlos Clinical Hospital. 1996-2001

Professors

Dr. Ramos, Juan Carlos

- Doctor at La Paz University Hospital. Madrid. Since 2013
- Official Doctoral Programme in Medicine. University of Alcalá. 2006
- Degree in Medicine and Surgery. Complutense University of Madrid. 1994
- Master's Degree in Infectious Diseases in Intensive Care. Fundación Universidad-Empresa Valencia. 2019
- Author of Several Scientific Publications

Dr. Loeches Yagüe, María Belén

- Specialist in the area of Infectious Diseases at La Paz General University Hospital
- Doctor of Medicine. Autonomous University of Madrid
- Degree in Medicine. Complutense University of Madrid
- Master in Theoretical and Practical Learning in Infectious Diseases. Complutense University of Madrid. 2009
- Specialised Training in Microbiology and Infectious Diseases. Gregorio Marañón General University Hospital. 2005-2009
- Professor of Infectious Diseases at the Infanta Sofía University Hospital in Madrid. European University of Madrid. 2013-2015

Dr. Rico, Alicia

- Specialist in the Microbiology and Parasitology Department at La Paz University Hospital. Madrid. 2020
- Degree in Medicine from the Complutense University Madrid. 1998
- 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. Since 2007
- PROA team member. Since 2010
- Clinical teaching collaborator. Department of Medicine of the UAM. Since 2015
- Member of the Infections and Policy Committee. La Paz Hospital
- Member of SEIMC (the Spanish Society of Infectious Diseases and Clinical Microbiology). Since 2000
- Participation in several research projects

Dr. Arribas López, José Ramón

- Head of the Infectious Diseases and Clinical Microbiology Unit. La Paz University Hospital. Since 2015
- Doctor of Medicine. Autonomous University of Madrid. 1993
- Degree in Medicine and Surgery. Complutense University of Madrid. 1985
- Coordinator of the High-Level Isolation Unit. La Paz University Hospital– 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. Since 2008
- Clinical Teaching Collaborator in the Department of Medicine. Autonomous University of Madrid. Since 2017
- Doctor of Medicine. Autonomous University of Madrid. 2013
- Degree in Medicine and Surgery. University of Zaragoza. 1999
- Master's Degree in Infectious Diseases in Intensive Care. University of Valencia. 2018
- Online Masters in Infectious Diseases and Antimicrobial Treatment CEU Cardenal Herrera University. 2017
- Master's Degree in Tropical Medicine and International Health. Autonomous University of Madrid. 2014
- Expert in Emerging and High-Risk Virus Pathology. Autonomous University of Madrid. 2019
- Expert in Tropical Medicine. Autonomous University of Madrid

05

Structure and Content

The syllabus has been designed based on the requirements of the medical specialties, following the requirements proposed by the teaching team of this Professional Master's Degree. Therefore, a syllabus has been established in which the modules offer a broad perspective of Clinical Infectious Diseases and Advanced Antibiotic Therapeutics, from a global point of view for the sake of its application on an international level, incorporating all the fields of work involved in the development of its functions, both public and private. From the beginning of this degree, the professional will see their knowledge of blood-borne pathogens, coronavirus infections or anaerobic infections expanded through multimedia content based on video summaries, detailed videos or interactive diagrams.

Update your knowledge about rare infectious diseases, hepatitis or HIV through multimedia content that you can access 24 hours a day"

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. Infectious Disease Morbidity and Mortality in Africa
- 1.2.2. Infectious Disease Morbidity and Mortality in the Americas
- 1.2.3. Infectious Disease Morbidity and Mortality in Asia
- 1.2.4. Infectious Disease Morbidity and Mortality 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 Infectious Diseases Specialists
- 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/Leukemia Viruses
  - 2.6.2.5. Kaposi's Sarcoma-Associated Herpesvirus

2.7. Bacteria 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 Monitoring 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

Module 4. Infectious Diseases in International Travelers

4.1. Vaccines in International Travelers
  4.1.1. Vaccines in International Travelers
  4.1.2. Yellow Fever Vaccination
4.2. Prophylaxis for Travelers 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 Travelers in Tropical Areas
4.3. Traveler'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 Travelers
4.5. Fever on Return from International Travel
  4.5.1. Main Etiologies
  4.5.2. Diagnostic Approach
  4.5.3. Imported Infectious Pathology in International Travelers

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 its 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. Chancroid
  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 Etiological 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 Tuberculosis Co-Infection

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 Disorders in Co-Infection
- 10.5.2. Pathological Disorders

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 Hemorrhagic 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 Hemorrhagic Fever
- 11.2.1. Viral Replication Cycle and Characteristics
- 11.2.2. Clinical Picture
- 11.2.3. Diagnosis
- 11.2.4. Treatment

11.3. South American Hemorrhagic Fevers
- 11.3.1. Viral Replication Cycle and Characteristics
- 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. Viral Replication Cycle
- 11.5.3. Clinical Manifestations
- 11.5.4. Diagnosis
- 11.5.5. Treatment

11.6. Dengue
- 11.6.1. Concept
- 11.6.2. Viral Replication Cycle
- 11.6.3. Clinical Manifestations
- 11.6.4. Diagnosis
- 11.6.5. Treatment

11.7. Chikungunya
- 11.7.1. Concept
- 11.7.2. Viral Replication Cycle
- 11.7.3. Clinical Manifestations
- 11.7.4. Diagnosis
- 11.7.5. Treatment

11.8. Zika
- 11.8.1. Concept
- 11.8.2. Viral Replication Cycle
- 11.8.3. Clinical Manifestations
- 11.8.4. Diagnosis
- 11.8.5. Treatment

Module 12. Central Nervous System Infections

12.1. CNS Immune Defense Mechanisms
- 12.1.1. CNS Defense Mechanisms
- 12.1.2. CNS Immune Response

12.2. Epidemiology of CNS Infections
- 12.2.1. Morbidity
- 12.2.2. Mortality
- 12.2.3. Risk Factors

12.3. Microbiological Diagnosis of CNS Infections
- 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. Zoonotic Diseases

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 Flu
- 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. Mycobacterium Kansasii Infection
- 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 Mycobacterioses

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 Tubo-Ovarian 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 Infectious Diseases

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

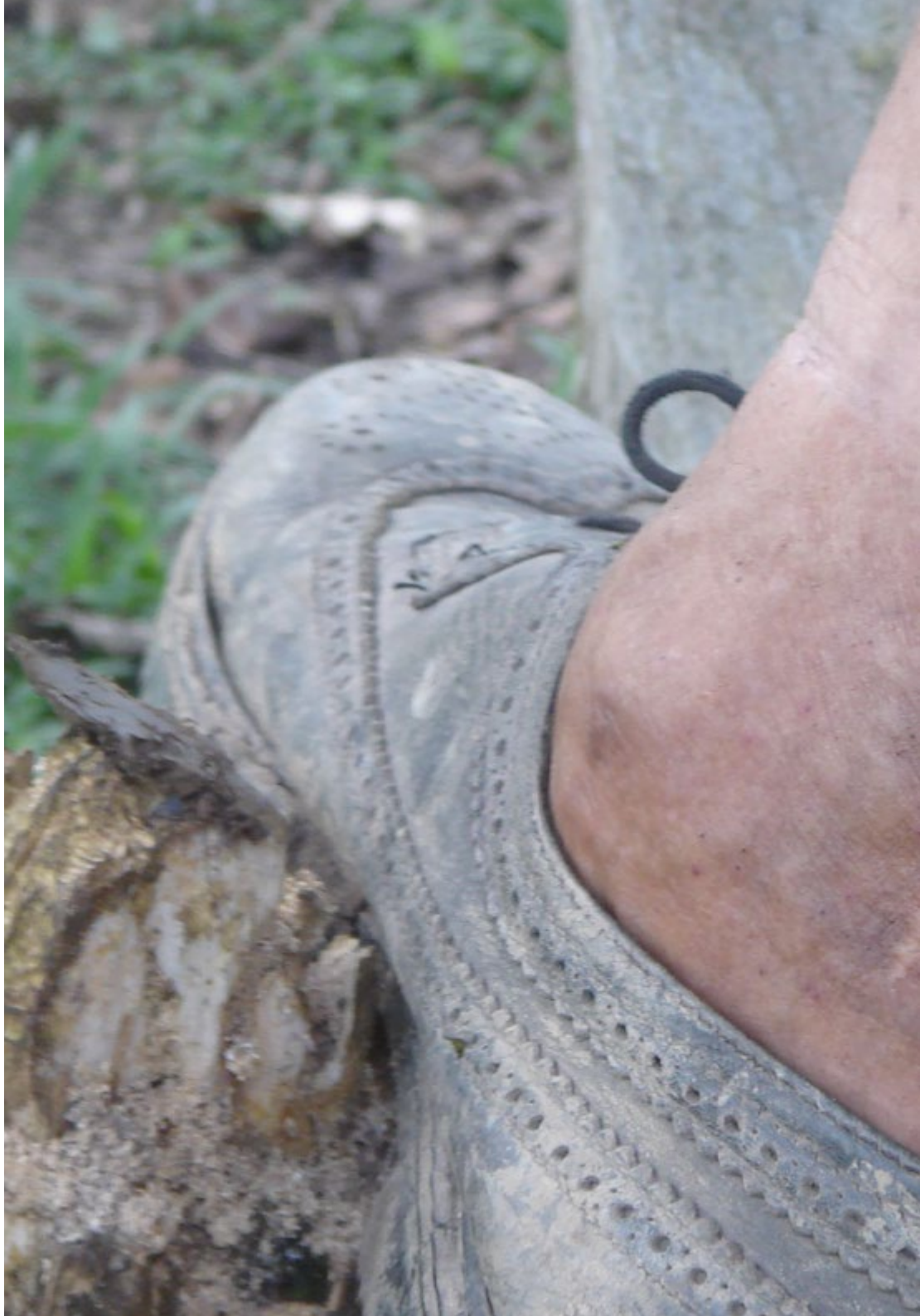
17.2. Bubonic Plague
- 17.2.1. Definition
- 17.2.2. Etiology
- 17.2.3. Clinical Picture
- 17.2.4. Diagnosis
- 17.2.5. Treatment

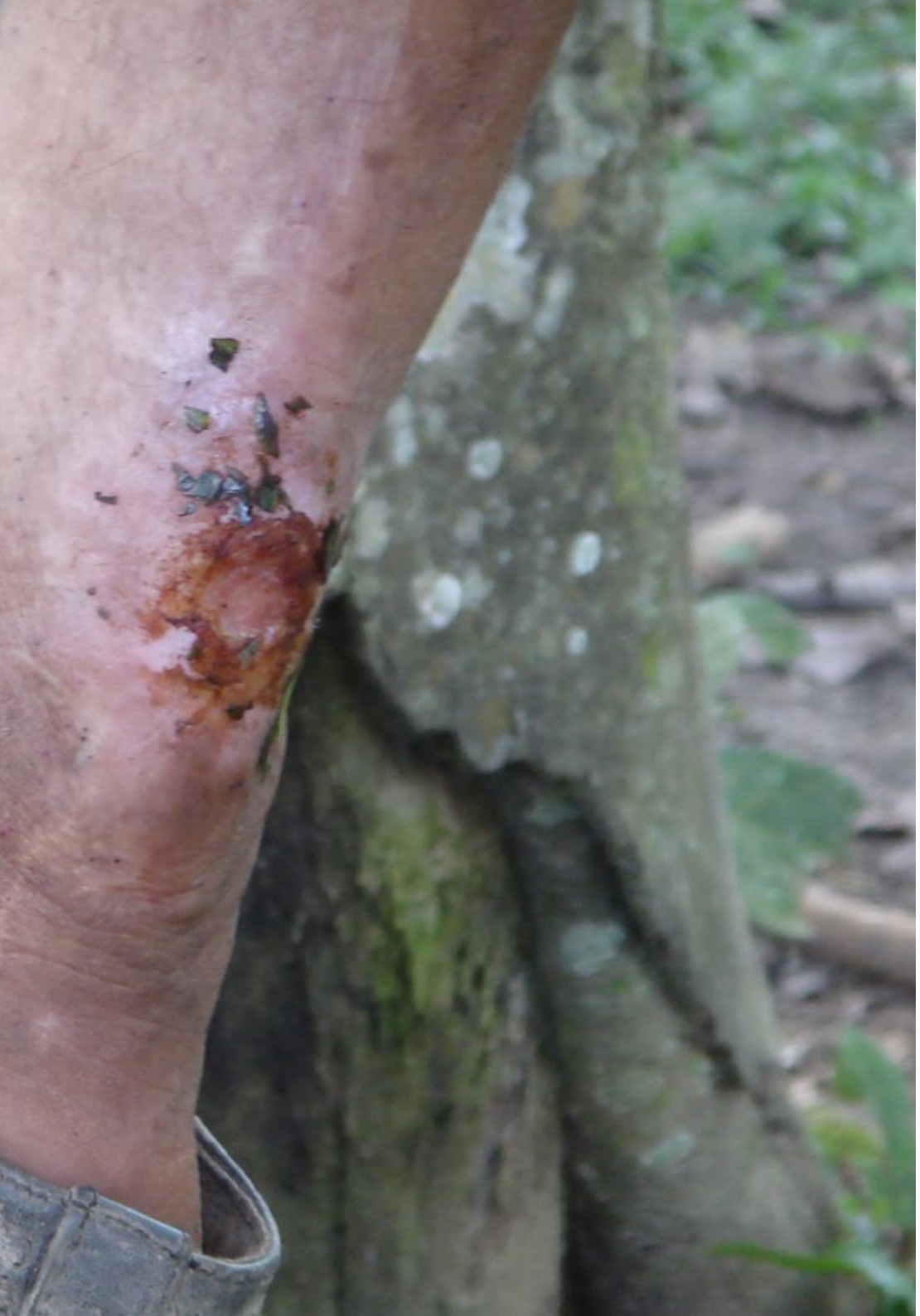
17.3. Lyme Disease
- 17.3.1. Definition
- 17.3.2. Etiology
- 17.3.3. Clinical Picture
- 17.3.4. Diagnosis
- 17.3.5. Treatment

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

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 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:

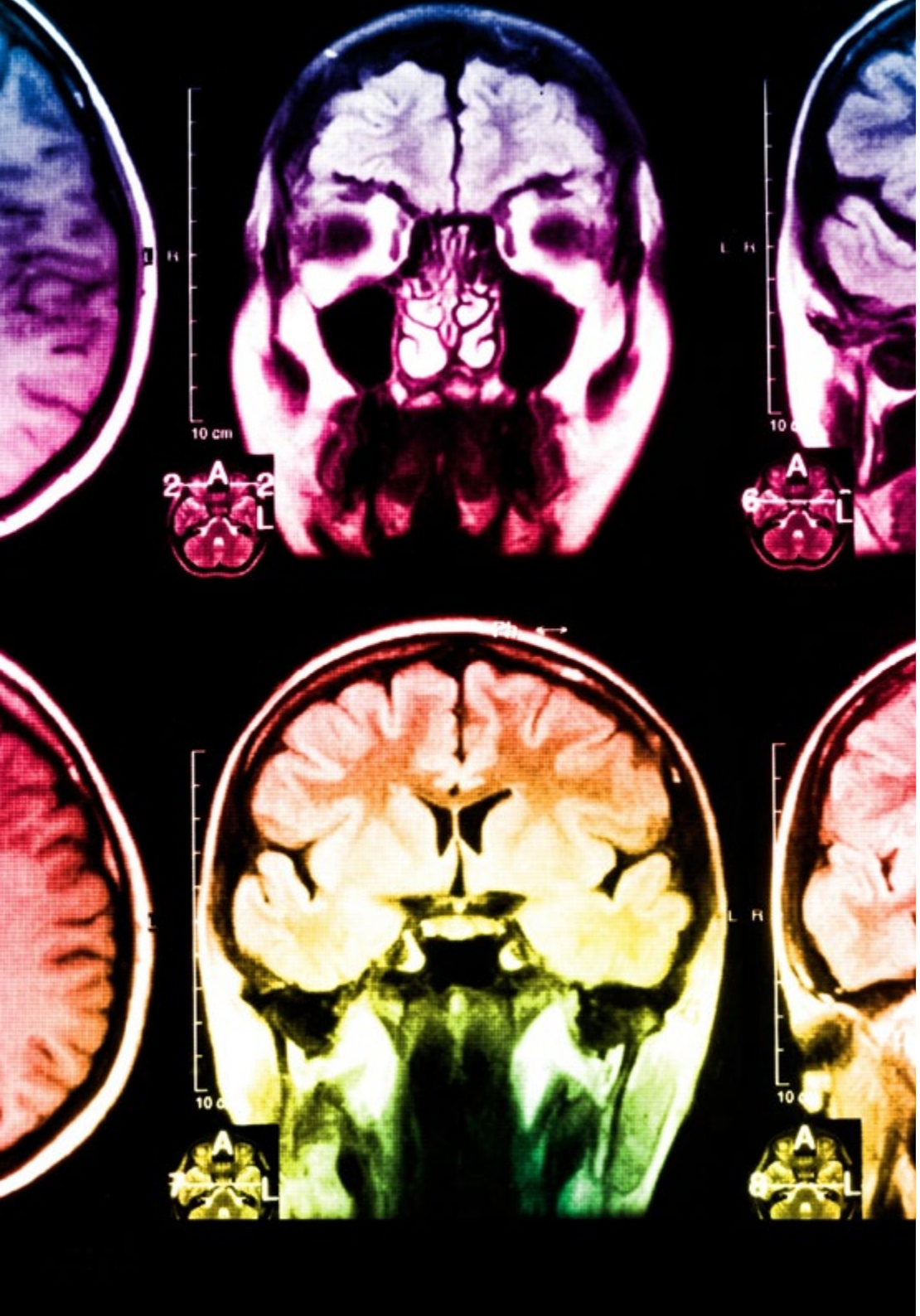
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

Relearning Methodology

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

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

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



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

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

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

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

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

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

Study Material

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

These contents are then 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.

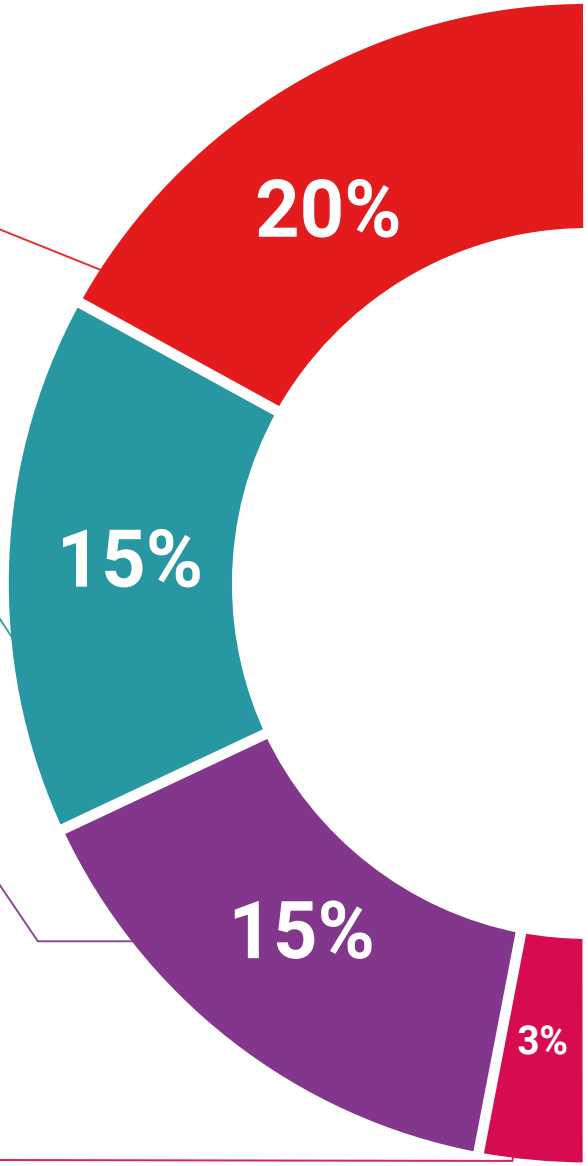
Interactive Summaries

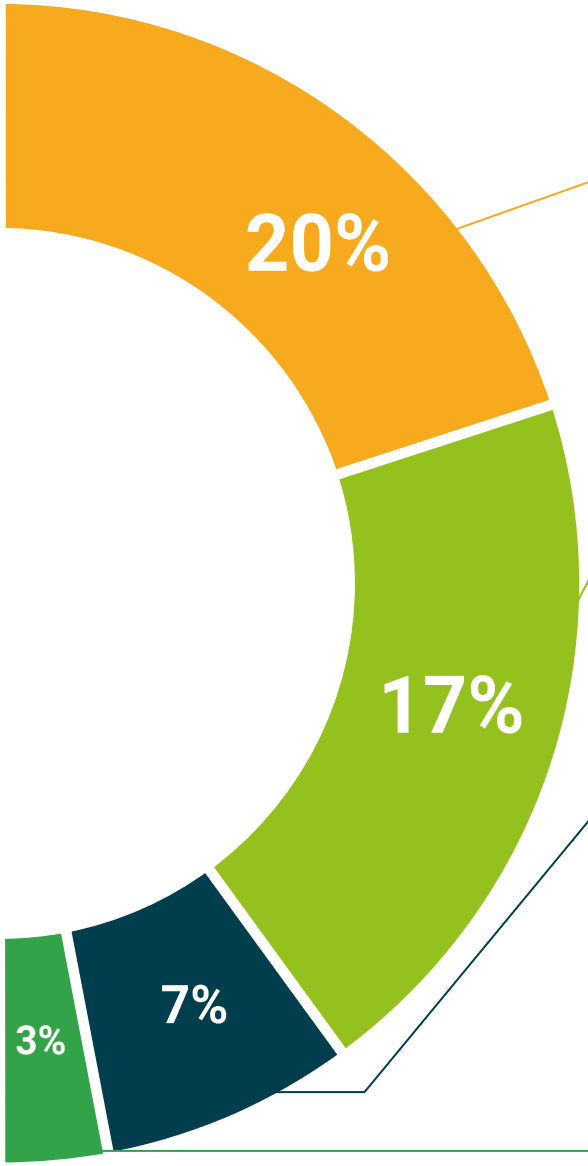
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

07

Certificate

The Professional Master's Degree in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics guarantees students, in addition to the most rigorous and updated education, access to a Professional Master's Degree issued by TECH Global University.

Successfully complete this program and receive your university degree without travel or laborious paperwork"

This program will allow you to obtain your **Professional Master's Degree diploma in Clinical Infectious Diseases and Advanced Antibiotic Therapeutics** endorsed by **TECH Global University**, the world's largest online university.

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

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

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

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**


tech global university

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

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

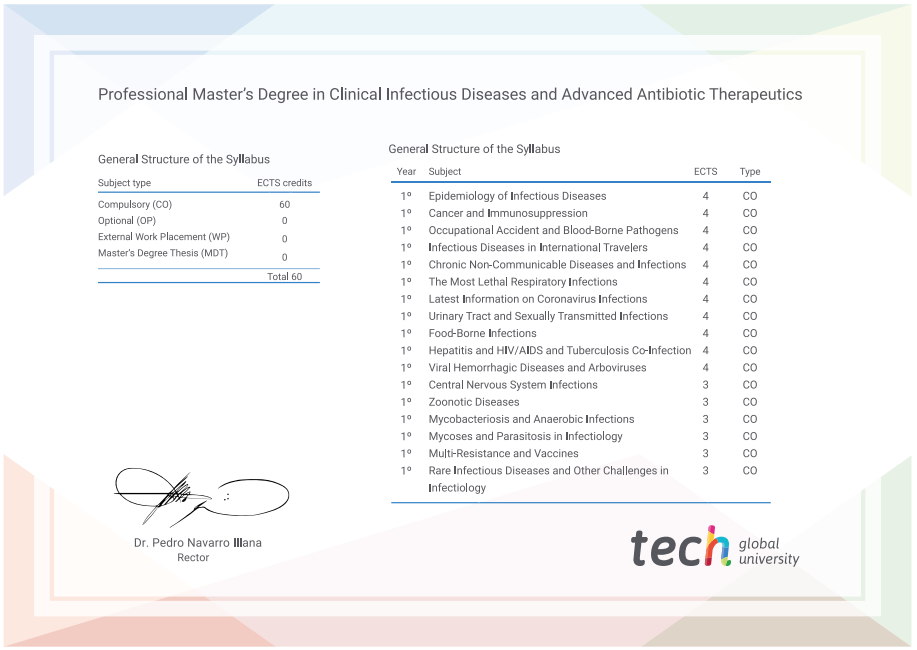
This is a program of 1,500 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

Dr. Pedro Navarro Illana
Rector

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 Antibiotic Therapeutics

General Structure of the Syllabus

Subject type	ECTS credits
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Epidemiology of Infectious Diseases	4	CO
1º	Cancer and Immunosuppression	4	CO
1º	Occupational Accident and Blood-Borne Pathogens	4	CO
1º	Infectious Diseases in International Travelers	4	CO
1º	Chronic Non-Communicable Diseases and Infections	4	CO
1º	The Most Lethal Respiratory Infections	4	CO
1º	Latest Information on Coronavirus Infections	4	CO
1º	Urinary Tract and Sexually Transmitted Infections	4	CO
1º	Food-Borne Infections	4	CO
1º	Hepatitis and HIV/AIDS and Tuberculosis Co-Infection	4	CO
1º	Viral Hemorrhagic Diseases and Arboviruses	4	CO
1º	Central Nervous System Infections	3	CO
1º	Zoonotic Diseases	3	CO
1º	Mycobacteriosis and Anaerobic Infections	3	CO
1º	Mycoses and Parasitosis in Infectiology	3	CO
1º	Multi-Resistance and Vaccines	3	CO
1º	Rare Infectious Diseases and Other Challenges in Infectiology	3	CO

Dr. Pedro Navarro Illana
Rector

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*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.

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Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Professional Master's Degree

Clinical Infectious Diseases and Advanced Antibiotic Therapeutics

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