Postgraduate Certificate

Clinical Epidemiology in Public Health

tech global university

tech global university

Postgraduate Certificate

Clinical Epidemiology in Public Health

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

Website: www.techtitute.com/us/pharmacy/postgraduate-certificate/clinical-epidemiology-public-health

Index

01

Introduction

Clinical epidemiology has experienced significant growth in recent decades due to technological and methodological advances. This scientific discipline has had an impact on pharmaceutical practice, contributing significantly to the evaluation of drug efficacy in real-world settings.

In this sense, pharmacists acquire a crucial role in the detection of drug-related side effects. Therefore, it is vitally important that they remain abreast of the latest methods in Clinical Epidemiology to provide people-centered pharmaceutical care. Faced with this situation, TECH presents a cutting-edge, 100% online university program dedicated to the evaluation of the quality of intervention studies in Epidemiology.

Through this 100% online Postgraduate Certificate, you will be able to evaluate risk factors that influence the incidence of diseases and design more efficient control programs"

According to official data from the World Health Organization, medication errors are responsible for 2.1 million hospital admissions annually on a global scale. Given this reality, understanding the principles of Clinical Epidemiology is essential for Pharmacy professionals, who have a key role in dispensing and monitoring drugs. Thanks to this, pharmacists can make informed decisions on drug selection, thus promoting rational drug use and minimizing unnecessary or inappropriate use of these products.

Given this scenario, TECH creates a revolutionary program in Clinical Epidemiology in Public Health. The academic itinerary will delve into the evaluation of the quality of intervention studies; paying attention to issues such as ethical aspects in research or the differentiation between pragmatic and explanatory clinical trials. Likewise, the syllabus will examine the analysis of the quality of care, taking into account the measurement of patient outcomes and experiences through sophisticated tools such as PROM. In this way, graduates will develop advanced skills to evaluate the effectiveness of pharmaceutical interventions through the design of epidemiological studies.

On the other hand, the program is based on a 100% online methodology, so that pharmacists can comfortably complete the program. In this sense, the only thing that professionals will require to enter the virtual platform will be an electronic device with Internet access (such as a cell phone, computer or tablet). In this way, they will be able to enjoy top-quality teaching materials and a virtual library full of multimedia resources. It should be noted that TECH uses the state-of-the-art Relearning system, which guarantees progressive and natural learning. In this way, graduates will enjoy a high-intensity program that will allow them to experience a significant leap in quality in their careers.

This **Postgraduate Certificate in Clinical Epidemiology in Public Health** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of practical case studies presented by experts in Public Health and health management
- 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

You will achieve professional success as a Pharmacist with this intensive program, developed by professionals with extensive experience in Clinical Epidemiology in Public Health"

You will delve into the ethical aspects of interventional research, which will ensure that your research is conducted in a transparent manner"

You will apply the principles of the GRADE methodology to establish the strength and certainty of clinical recommendations.

Through TECH's disruptive Relearning system, you will assimilate the essential concepts in a fast, natural and precise way.

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 education programmed to prepare for 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 course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

After completing this Postgraduate Certificate, pharmacists will have a comprehensive understanding of the principles of Clinical Epidemiology in Public Health. Likewise, graduates will apply epidemiological methods to design and conduct clinical research. They will also develop skills to evaluate the effectiveness and safety of therapeutic interventions (such as drugs or treatments) through the analysis of epidemiological studies. In line with this, pharmacists will identify risk factors and health determinants that influence disease progression in the population. Thanks to this, they will design more effective prevention and control strategies.

You will develop skills to conduct epidemiological studies to evaluate the effectiveness and safety of drugs in real-life conditions"

General Objectives

- Develop a broad and comprehensive conceptual framework of the situation, challenges and needs of public health in the 21st century
- Examine the international and global framework of public health policies
- Determine the key factors for proper health crisis communication: crisis communication and crisis of communication
- Identify the theoretical and methodological framework for Public Health evaluation
- Identify the steps to be followed for disease assessment using epidemiological data
- Compile the research methodology related to disease surveillance
- Identify the main risk and protective factors in communicable and noncommunicable diseases
- Analyze the importance of assessing the quality of intervention studies
- Develop the fundamentals of clinical epidemiology, measurement of frequency and distribution of diseases
- Critically evaluate the efficacy and effectiveness of clinical interventions, pharmacological treatments, surgical interventions and prevention strategies
- Substantiate the principles of the epidemiological method
- Substantiate the health promotion principles, social determinants of health, health-related behavioral theories, and strategies to promote healthy lifestyles and health-promoting environments
- Analyze the main health risks for different vulnerable groups
- Implement a holistic and integrative vision in the assessment of the impact of environmental risks on health protection

Specific Objectives

- Develop the ability to identify and describe the main components of an intervention study, as well as to determine its different types
- Analyze the importance of assessing the quality of intervention studies
- Compile examples of good and poor quality interventional studies
- Evaluate the methodology and design of pragmatic and explanatory clinical trials
- Analyze the different phases of the design of diagnostic test validity studies and the methodological quality and correctness of these studies
- Provide a basis for the quality and methodological correctness of prognostic factor studies
- Introduce patient safety as a key concept in quality health care
- Propose activities for the evaluation of Public Health plans, implementing strategies based on scientific evidence

This program has a wide range of multimedia resources such as videos or infographics, allowing a more didactic learning process"

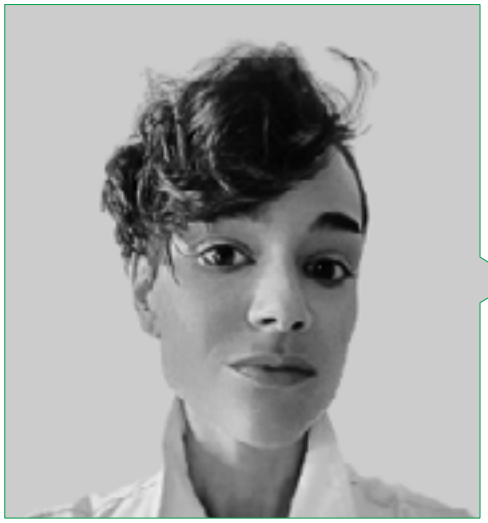
03

Course Management

Loyal to its philosophy of providing the most complete and renewed university degrees in the academic panorama, TECH carries out a rigorous process to constitute its teaching staff. For this Postgraduate Certificate, the institution brings together distinguished specialists in the field of Clinical Epidemiology in Public Health. These professionals have contributed significantly to the improvement of the health of the population, identifying risk factors and providing scientific evidence to support decision making in health matters. In this way, pharmacists will access an immersive experience that will optimize their daily practice and expand their career prospects significantly.

You will enjoy the personalized advice of the teaching team, made up of professionals with extensive experience in Clinical Epidemiology in Public Health"

Management



Ms. Ruiz Redondo, Julia María

- Coordinator of the National Working Group on Public Health 2.0 in the SEMG
- Coordinator of the General Directorate of Public Health in the Ministry of Health of Castilla-La Mancha
- Coordinator of the Regional Advisory Group on Immunization at the Regional Ministry of Health of Castilla-La Mancha
- Nurse Inspector in the Management of Coordination and Inspection of Castilla-La Mancha in the SESCAM
- Specialized Care Nurse in the Hospital Emergency Area at the General Hospital of Tomelloso
- Master's Degree in Medical Management and Clinical Management by UNED, ISCIII, National School of Health
- Master's Degree in Vaccines from the Catholic University of Murcia
- Master's Degree in Specialized Emergency Nursing Care, Critical Care and Post-Anesthesia from the University of Valencia
- Master's Degree in Nursing Services Management from the UNED
- Senior Healthcare Management Program, San Telmo Business School
- Graduate in Nursing from the Catholic University of Ávila
- Diploma in Nursing from the University of Jaén

Professors

Dr. Armenteros Yeguas, María Inés

- Specialist in Internal Medicine at the Sandoval Health Center, Hospital Clínico San Carlos
- Clinical Researcher at the Biomedical Research Foundation of the Hospital Clínico San Carlos
- Resident Intern of Internal Medicine at the Hospital Clínico San Carlos University Hospital
- Hybrid Master's Degree in Infectious Diseases and International Health, Miguel Hernández University
- Master's Degree in Human Immunodeficiency Virus Infection at the Rey Juan Carlos University
- Postgraduate Certificate in Fundamentals of Design and Statistics from the Autonomous University of Barcelona
- Degree in Medicine and Surgery from the Complutense University of Madrid

Dr. Mera Cordero, Francisco

- Director of the Precision Medicine Unit of Long Covid and Post Viral Syndromes at Blue Healthcare
- Clinical Director and Collaborating Researcher of the study "ACE 2 in Post COVID Syndrome" at the Center for Molecular Biology Severo Ochoa
- Emergency Physician in Assistència Sanitària
- Master's Degree in Diabetes and Nutrition, Francisco de Vitoria University
- Degree in Medicine and General Surgery from the University of Zaragoza
- Disseminator in the Health Dissemination Channel COVID Persistent in Medicina TV
- Presenter in Iberoamerican Channel @AIREyVIDA2021
- Member of the Board of the Spanish Network for Research in Persistent COVID
- Member of the CIBER POSTCOVID Group of the Carlos III Institute

Dr. Sánchez Diz, Paula

- Technical Research Coordinator at the Spanish Society of General and Family Physicians (SEMG)
- Coordinator and Member of the Executive Committee of the Spanish Research Network on persistent COVID (REiCOP)
- Technical Auditor of UNE-EN ISO/IEC 17025 and UNE-EN ISO/IEC 17043 in Clinical Trial laboratories
- Specialist Molecular Biology Technician at Nasertic
- Teaching and Research Staff at the University of Santiago de Compostela
- Predoctoral Research Staff linked to research projects
- Doctorate in Biology at the University of Santiago de Compostela
- Degree in Biology from the University of Santiago de Compostela

Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"

04

Structure and Content

With this program, pharmacists will have a thorough knowledge of Clinical Epidemiology in Public Health. The curriculum will focus on both the design and quality assessment of intervention studies, taking into account ethical aspects or the application of knowledge to clinical practice. Also, the syllabus will delve into the development of a diagnostic test, which will allow graduates to contribute to the management of quality and safety of individuals. In addition, the program will highlight the importance of counseling on treatment options, which will facilitate shared decision making.

You will evaluate risk factors that influence disease progression, which will enable you to design more effective prevention strategies"

Module 1. Clinical Epidemiology

1.1. Design and Quality Assessment of Intervention Studies in Epidemiology
- 1.1.1. Intervention Studies, Types and Key Elements of Design
- 1.1.2. Ethical Aspects of Intervention Research
- 1.1.3. Design of Specific intervention Studies
- 1.1.4. Tools for Assessing the Quality of Intervention Studies
- 1.1.5. Critical Appraisal of Intervention Studies
- 1.1.6. Importance of Design and Quality Assessment

1.2. Pragmatic vs. Explanatory Randomized Clinical Trials
- 1.2.1. Differentiation between Pragmatic and Explanatory Clinical Trials
- 1.2.2. Ethical Implications of Each Approach
- 1.2.3. Critical Appraisal of the Methodology and Design of Each Type of Trial
- 1.2.4. Application of Knowledge to Clinical Practice and Research
- 1.2.5. Encouragement of Critical Thinking and Analytical Skills
- 1.2.6. Design and Execution of Clinical Trials

1.3. Design of Diagnostic Test Studies
- 1.3.1. Selection of the Study Population and Definition of the Inclusion and Exclusion Criteria
- 1.3.2. Determination of the Study Design and Selection of the Reference Methodology
- 1.3.3. Calculation of Diagnostic Accuracy and Analysis of the Results

1.4. Evaluation of Quality of a Diagnostic Test Study
- 1.4.1. Study Validity Analysis
- 1.4.2. Evaluation of the Accuracy of the Diagnostic Test
- 1.4.3. Analysis of the Clinical Utility of the Diagnostic Test

1.5. Design and Quality Assessment of Prognostic Factors Studies
- 1.5.1. Selection and Definition of Prognostic Factors
- 1.5.2. Study Design and Selection of the Study Population
- 1.5.3. Evaluation of the Quality of the Study and the Prognostic Model

1.6. Evidence-Based Clinical Recommendations: GRADE 1
- 1.6.1. Systematic Reviews of Scientific Literature. Identification of Clinical Recommendations
- 1.6.2. Quality of Evidence and Strength of Recommendations
- 1.6.3. Clinical Recommendations Applicable to Clinical Practice

1.6.4. Development of a Clinical Protocol or Clinical Guideline based on the Recommendations Identified

1.6.5. Implementation and Follow-up of the Clinical Protocol or Guideline in Patient Care Evidence and Focus on Improving Clinical Outcomes

1.6.6. Periodic Evaluation, through Monitoring of Clinical Outcome Indicators and Feedback to the Health Professionals Involved

1.7. Evidence-Based Clinical Recommendations: GRADE 2

1.7.1. Analysis and Synthesis of the Evidence Available in the Scientific Literature for the Development of Recommendations

1.7.2. Identification and Evaluation of the Quality of the Relevant Studies Supporting the Clinical Recommendations

1.7.3. Application of the Principles of the GRADE Methodology to Establish the Strength and Certainty of Clinical Recommendations

1.7.4. Developing Clinical Practice Guidelines that Incorporate Evidence-Based Recommendations and are Useful for Decision-Making

1.7.5. Regular Updating and Revision of Clinical Recommendations Based on Available Scientific Evidence

1.8. Evaluation of the Quality of Care

1.8.1. Quality Criteria and Standards from a Safety Point of View

1.8.2. Evaluation from the Point of View of the Effectiveness of the Results Obtained through the Actions Evaluated and Their Components

1.8.3. Measurement of Patient Outcomes and Experiences, Patient-Reported Outcome Measures (PROM) and Patient-Reported Experience Measures (PREM)

1.8.4. Indicators for Assessing the Degree of Involvement, Participation and Satisfaction of Health Professionals

1.9. Incorporation of Patient Values and Preferences: Shared Decisions

1.9.1. Effective Communication and Understanding of Values and Preferences

1.9.2. Education and Counseling on Treatment Options

1.9.3. Facilitation of Shared Decision Making

1.10. Patient Safety

1.10.1. Identification and Recording of Adverse Events

1.10.2. Analysis of Errors and Underlying Causes

1.10.3. Implementation of Corrective Actions and Prevention Measures

05

Methodology

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

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

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:

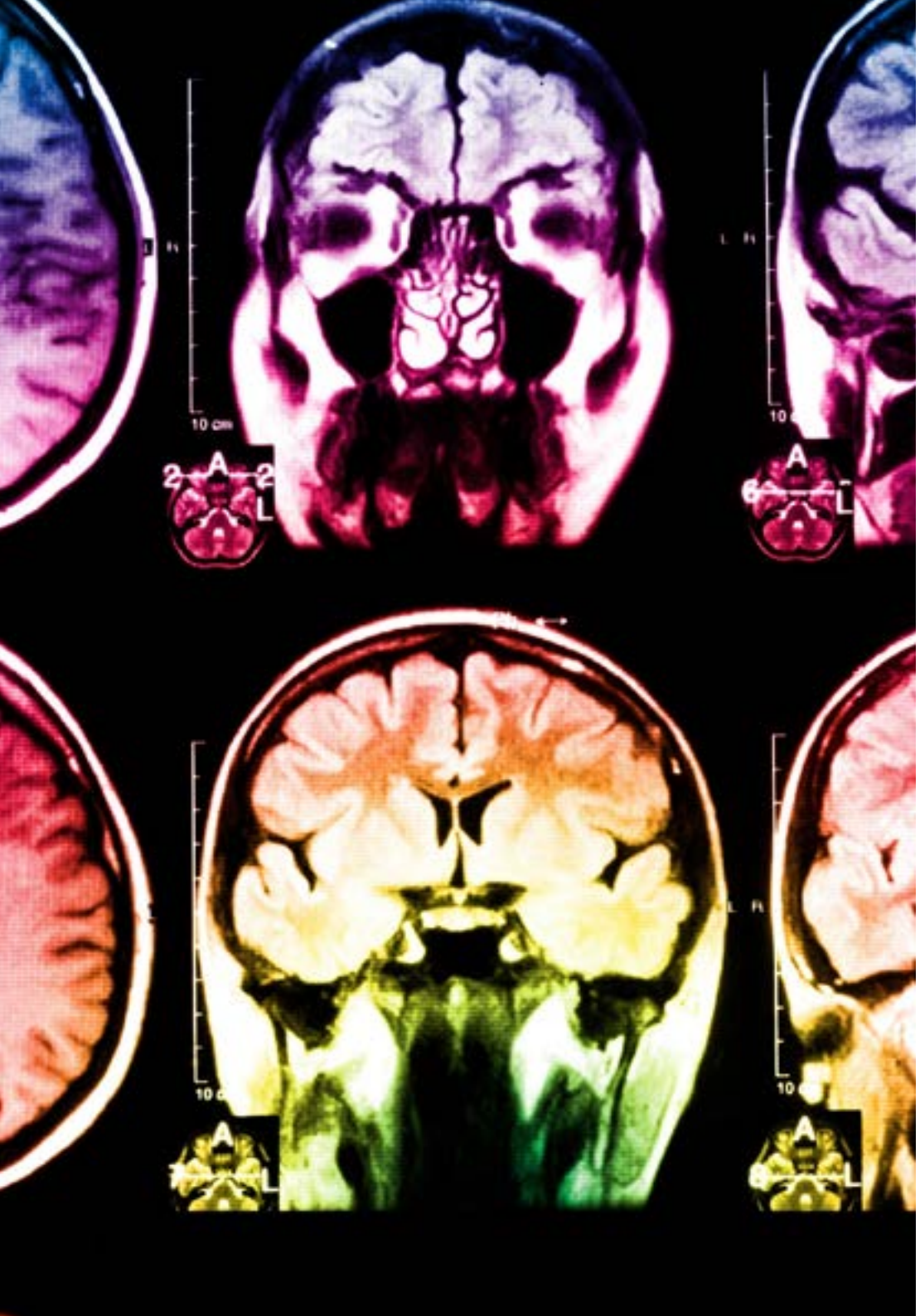
1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts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

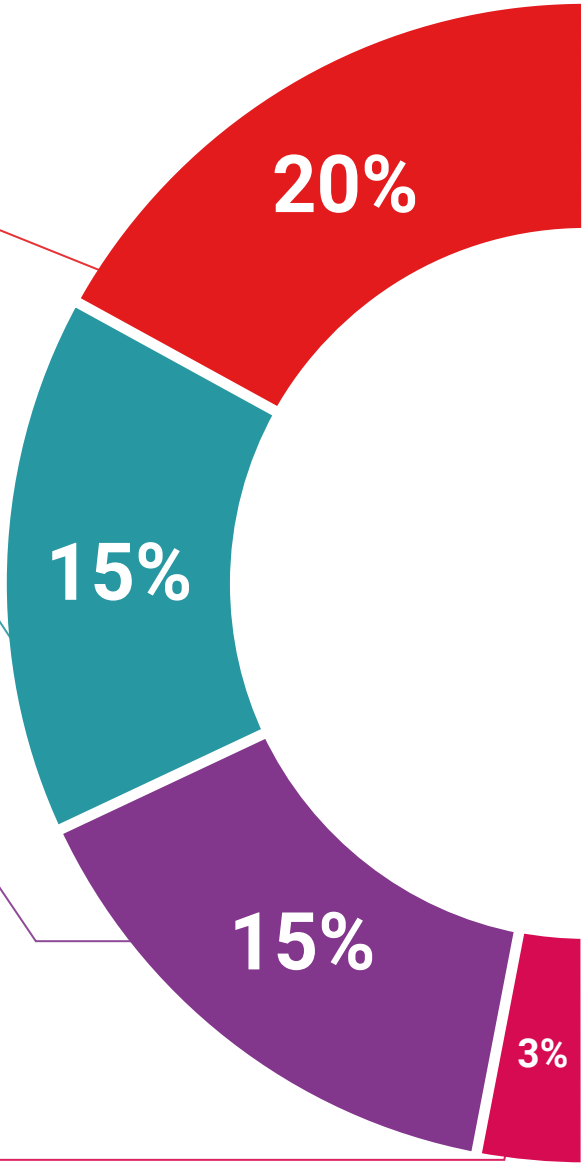
Interactive Summaries

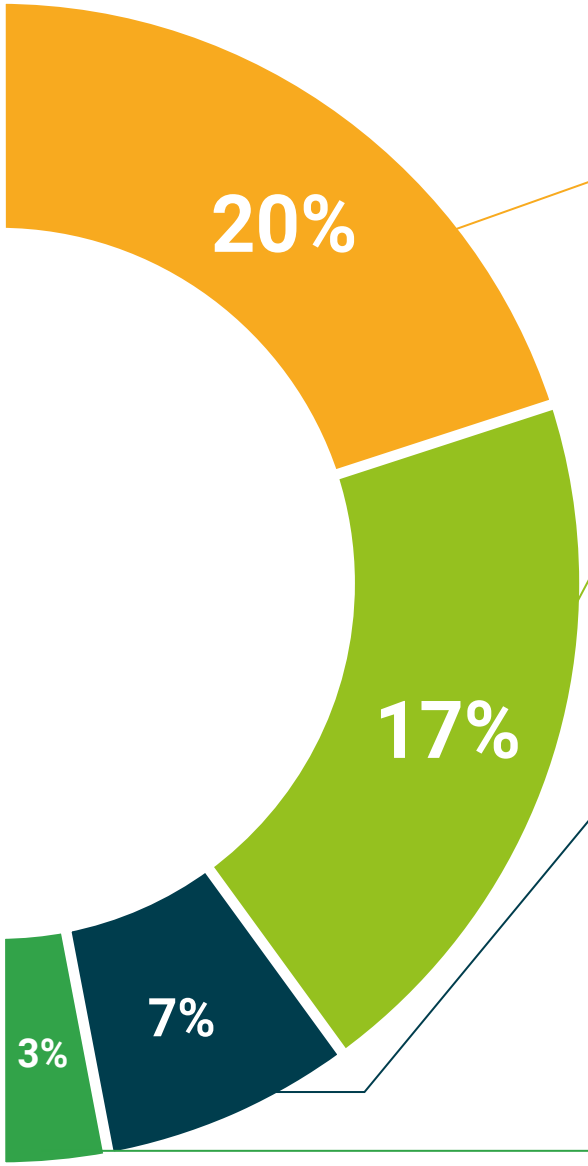
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

06

Certificate

The Postgraduate Certificate in Clinical Epidemiology in Public Health guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"

This private qualification will allow you to obtain a **Postgraduate Certificate in Clinical Epidemiology in Public Health** endorsed by **TECH Global University**, the world's largest online university.

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

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

Title: **Postgraduate Certificate in Clinical Epidemiology in Public Health**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**


tech global university

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

Postgraduate Certificate in Clinical Epidemiology in Public Health

This is a private qualification of 180 hours of duration equivalent to 6 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
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

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

tech global university

Postgraduate Certificate

Clinical Epidemiology in Public Health

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

Postgraduate Certificate

Clinical Epidemiology in Public Health

tech global university