

# Postgraduate Certificate Clinical Epidemiology in Public Health for Nursing



## Postgraduate Certificate Clinical Epidemiology in Public Health for Nursing

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

Website: [www.techtitute.com/us/nursing/postgraduate-certificate/clinical-epidemiology-public-health-nursing](http://www.techtitute.com/us/nursing/postgraduate-certificate/clinical-epidemiology-public-health-nursing)

# Index

01

Introduction

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*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 18*

05

Methodology

---

*p. 22*

06

Certificate

---

*p. 30*

# 01

# Introduction

Clinical epidemiology in public health plays a fundamental role in nursing practice by providing a framework for understanding both the distribution and determinants of disease in the population. Using epidemiological principles, practitioners can identify health problems, evaluate interventions, and even optimize patient care. However, this requires nurses to renew their knowledge assiduously to keep abreast of the latest evidence and research-based practices. Given this, TECH presents a revolutionary university program focused on the recent innovations that have emerged in this area. Moreover, it is delivered in a flexible 100% online mode to fit the schedule of busy professionals.





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*Thanks to this 100% online Postgraduate Certificate, you will apply the most innovative epidemiological methods to manage health problems in clinical settings"*

A recent study by the World Health Organization shows that non-communicable diseases (such as cardiovascular conditions, Cancer or Diabetes) are responsible for approximately 71% of all deaths on a global scale. Given this scenario, Clinical Epidemiology in Public Health plays a crucial role in identifying and addressing Public Health challenges. In this sense, nursing professionals can contribute to prevent these pathologies through interventions based on health promotion policies in the community.

In this context, TECH launches an innovative program in Clinical Epidemiology in Public Health for Nursing. The academic itinerary will delve into issues ranging from the design of specific intervention studies or pragmatic randomized clinical trials to the evaluation of the quality of care. In this way, graduates will acquire advanced skills to interpret epidemiological data and identify trends in the health of the population. The syllabus will also provide nurses with the most sophisticated techniques to ensure patient safety and prevent health complications at all times.

To reinforce these contents, the methodology of this program reinforces its innovative character. Therefore, TECH offers a 100% online educational environment, adapted to the needs of nurses seeking to advance their careers. It also relies on the *Relearning* methodology, based on the repetition of key concepts to fix knowledge and facilitate learning. Therefore, the combination of flexibility and a robust pedagogical approach makes it highly accessible. In addition, graduates will have access to an extensive library of innovative multimedia resources in different audiovisual formats, such as interactive summaries, explanatory videos, photographs, case studies and infographics.

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

- ♦ The development of case studies presented by experts in Public Health and Health Management
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*You will have at your disposal the most modern educational resources, with free access to the Virtual Campus 24 hours a day"*

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*You will deepen your knowledge of the most innovative methods to ensure patient safety and identify adverse events"*

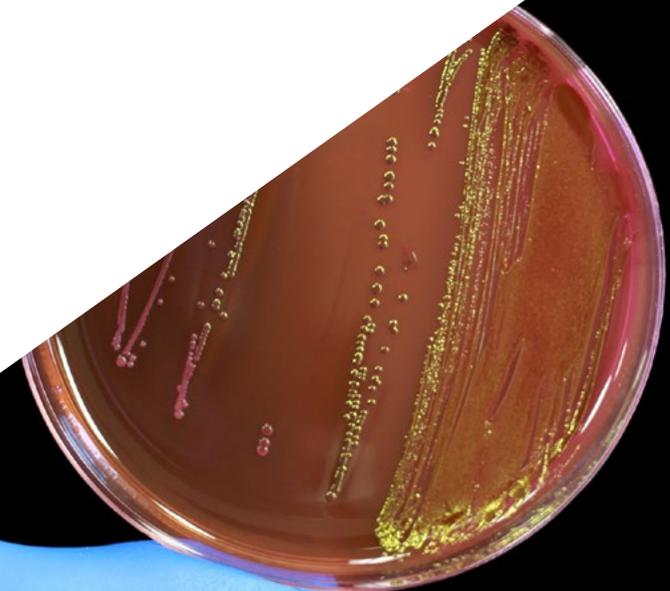
The program's teaching staff includes professionals from the industry who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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 learn 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Do you want to incorporate into your clinical practice advanced quality assessment tools of interventional studies? Achieve it with this program.*

*TECH's exclusive Relearning system will allow you to update your knowledge and skills in Clinical Epidemiology in Public Health in the most rigorous way.*



# 02 Objectives

After completing this Postgraduate Certificate, the Nursing staff will have a thorough knowledge of the principles of Clinical Epidemiology in Public Health (including risk factors, prevalence and design of epidemiological studies). In this sense, professionals will acquire advanced competencies to carry out epidemiological studies and design strategies to prevent diseases in the community. Thanks to this, nurses will be able to address the risk factors of pathologies and implement preventive interventions that favor disease control in the population.



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*You will develop competencies to evaluate the reliability of clinical outcomes and apply evidence in the implementation of Health policies”*



## General Objectives

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- ♦ 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 correct communication in health crisis: crisis communication and communication crisis
- ♦ Identify the theoretical and methodological framework for evaluation in Public Health
- ♦ 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 non-communicable diseases
- ♦ Analyze the importance of quality assessment 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
- ♦ Fundamentals of the principles of the epidemiological method
- ♦ Fundamentals of the principles of health promotion, social determinants of health, health-related behavioral theories, and strategies to promote healthy lifestyles and environments
- ♦ Analyze the main health risks for different vulnerable groups
- ♦ Implement a holistic and integrative vision in the impact assessment of environmental risks on health protection





## Specific Objectives

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- ◆ 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 quality assessment of intervention studies
- ◆ Compile examples of good- and poor-quality intervention 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 healthcare
- ◆ Propose activities for the evaluation of Public Health plans, implementing strategies based on scientific evidence



*This university program has a wide range of multimedia resources such as explanatory videos and infographics, making learning more enjoyable"*

03

# Course Management

For the design and delivery of this Postgraduate Certificate, TECH concentrates authentic references in the field of Clinical Epidemiology in Public Health. These professionals have an extensive work experience, where they have been part of distinguished health entities to optimize the welfare of many patients. In this way, these specialists have created didactic materials defined by their high quality and full applicability to the demands of the current labor market. Therefore, graduates have the guarantees they demand to access an immersive academic experience that will place them at the pinnacle of nursing.





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*The teaching staff of this program is made up of specialists in Public Health, who will offer you the knowledge with the greatest professional applicability in this area"*

## 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 SESCOAM.
- ◆ Nurse of Specialized Care in the Hospital Emergency Area at the General Hospital of Tomelloso.
- ◆ Master's Degree in Medical Management and Clinical Management by the UNED, ISCIII, National School of Health.
- ◆ Master's Degree in Vaccines from the Catholic University of San Antonio de Murcia.
- ◆ Master's Degree in Specialized Emergency Nursing Care, Critical Patient Area and Post-Anesthesia Care by the University of Valencia
- ◆ Master's Degree in Nursing Services Management from the UNED
- ◆ Senior Healthcare Management Program from San Telmo Business School
- ◆ Graduate in Nursing from the Catholic University of Avila
- ◆ Diploma in Nursing from the University of Jaén

## Professors

### Dr. Armenteros Yeguas, María Inés

- ♦ FEA of Internal Medicine at the Sandoval Health Center, San Carlos Clinical Hospital
- ♦ Clinical Researcher at the Biomedical Research Foundation of the San Carlos Clinical Hospital
- ♦ Resident Intern of Internal Medicine at the San Carlos University Hospital
- ♦ Hybrid Professional Master's Degree in Infectious Diseases and International Health Miguel Hernández University
- ♦ Master's Degree in Human Immunodeficiency Virus Infection from the Rey Juan Carlos University
- ♦ Postgraduate Course in Fundamentals of Design and Statistics from the Autonomous University of Barcelona
- ♦ Graduate 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" of the Severo Ochoa Molecular Biology Center
- ♦ Emergency Physician in Assistència Sanitària
- ♦ Master's Degree in Diabetes and Nutrition by the Francisco de Vitoria University
- ♦ Degree in Medicine and General Surgery from the University of Zaragoza
- ♦ Presenter 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
- ♦ PhD in Biology from 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

Through this program, nurses will have a solid understanding of the methods of Clinical Epidemiology. The syllabus will focus on quality assessment of interventional studies. In this line, the materials will provide professionals with the keys to design a diagnostic test, taking into account factors such as the selection of the study population. In this way, graduates will acquire skills to identify possible problems in the application of the tests. In addition, the program will also provide them with the keys to use tools such as the PROM to evaluate patient experience satisfaction.





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*You will be able to analyze epidemiological data to identify disparities in the health of the population and use this information to develop effective Public Health interventions”*

## Module 1. Clinical Epidemiology

- 1.1. Design and Quality Assessment of Intervention Studies in Epidemiology
  - 1.1.1. Intervention Studies, Types and Key Design Elements
  - 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 Evaluation of the Methodology and Design of Each Type of Trial
  - 1.2.4. Application of Knowledge to Clinical Practice and Research
  - 1.2.5. Promotion of Critical Thinking and Analytical Skills
  - 1.2.6. Design and Conduct of Clinical Studies
- 1.3. Design of Diagnostic Test Studies
  - 1.3.1. Selection of the Study Population and Definition of 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 Results
- 1.4. Evaluation of the 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 Factor 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 Review of the 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 Clinical Protocol or Clinical Guideline Based on the Identified Recommendations
- 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 from the Health Professionals Involved
- 1.7. Evidence-based Clinical Recommendations: *GRADE 2*
  - 1.7.1. Analysis and Synthesis of the Available Evidence in the Scientific Literature for the Development of Recommendations
  - 1.7.2. Identification and Evaluation of the Quality of the Relevant Studies that Support 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 that are Useful for Clinical Decision Making
  - 1.7.5. Periodic Updating and Revision of Clinical Recommendations Based on the Available Scientific Evidence
- 1.8. Evaluation of the Quality of Care
  - 1.8.1. Quality Criteria and Standards from the Point of View of Safety
  - 1.8.2. Evaluation of the Effectiveness of the Results obtained through the Actions Evaluated of 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 Healthcare Professionals
- 1.9. Incorporation of Patients' 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.





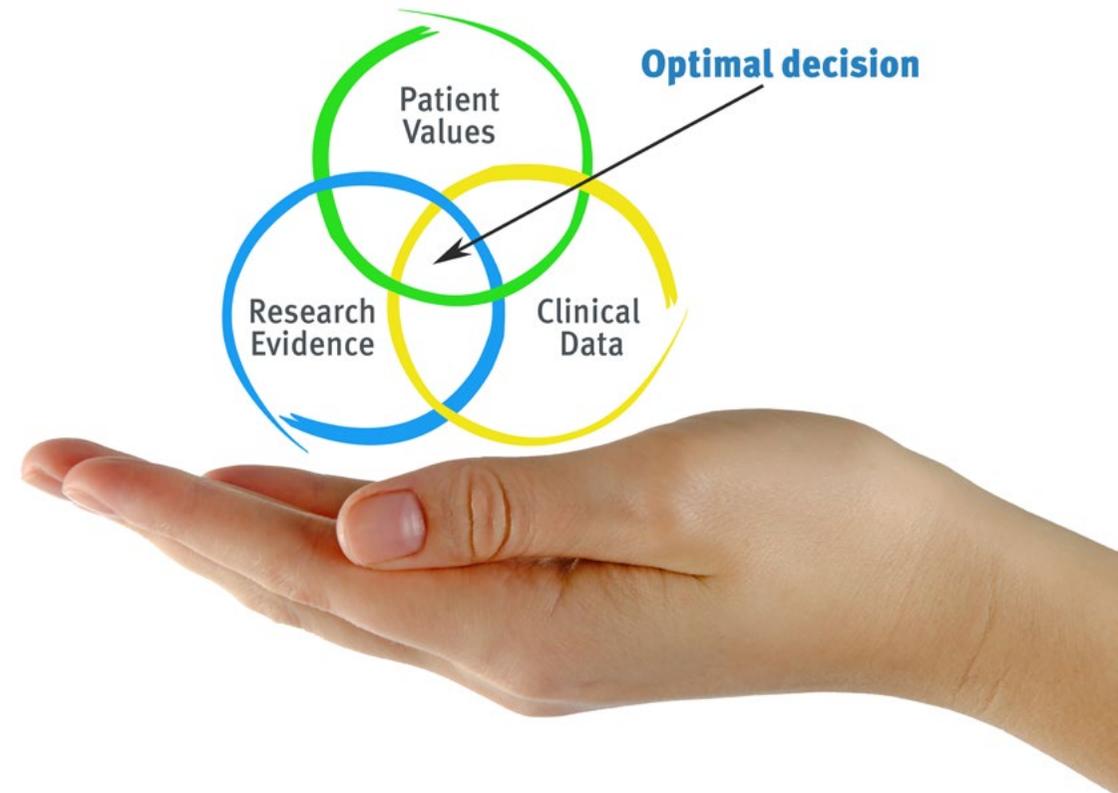
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing practice.

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*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. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.



*The nurse 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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 really 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.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All 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 them as many times as you want.



### Interactive Summaries

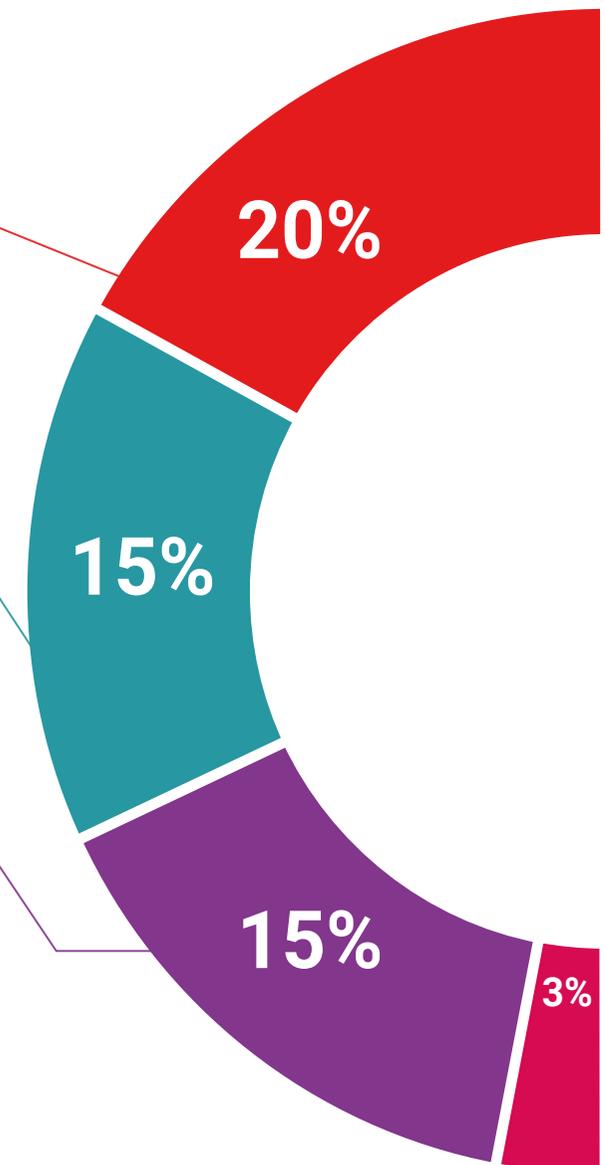
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

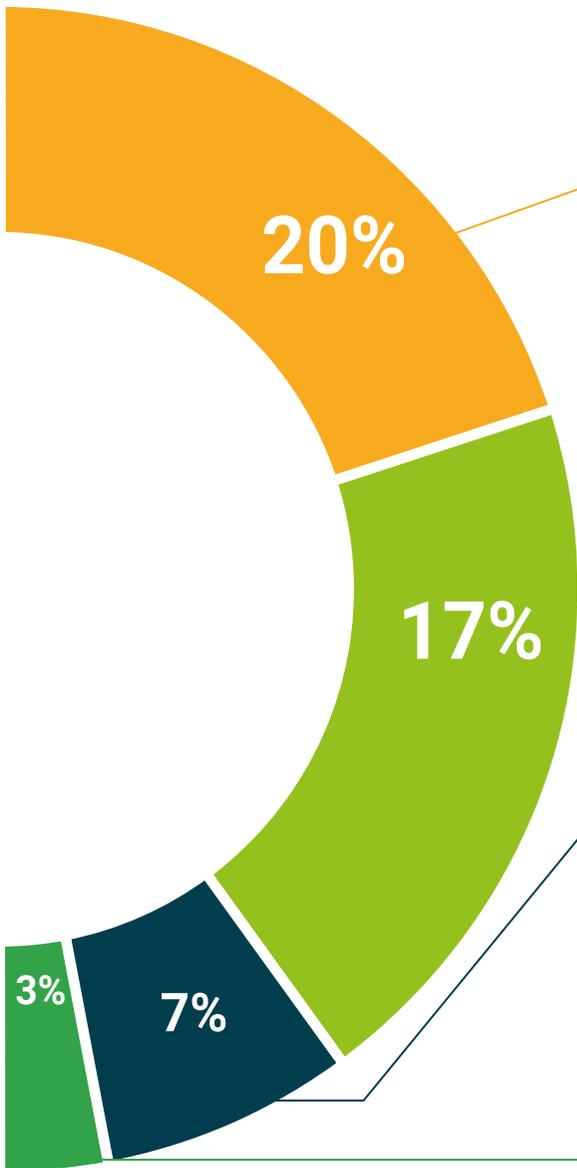
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 suggesting that observing third-party experts can be useful.

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 for Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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*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 for Nursing** 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 for Nursing**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



\*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.

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service in

knowledge present

online training

development languages

virtual classroom

**tech** global  
university

**Postgraduate Certificate**  
Clinical Epidemiology  
in Public Health  
for Nursing

- » 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 for Nursing