

# Postgraduate Diploma Epidemiology in Public Health



## Postgraduate Diploma Epidemiology in Public Health

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-epidemiology-public-health](http://www.techtute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-epidemiology-public-health)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 20*

05

Methodology

---

*p. 26*

06

Certificate

---

*p. 34*

# 01

# Introduction

Epidemiology in Public Health is at a crucial moment, marked by the global pandemic of COVID-19, which has highlighted the importance of this discipline in the prevention, control and management of diseases. Epidemiologists are therefore working tirelessly to track the spread of the virus, identify risk factors and evaluate the effectiveness of Public Health interventions and measures. In addition, new methodologies and technologies are being developed to improve epidemiological surveillance, early outbreak detection and rapid response to health emergencies. In this situation, TECH has created a 100% online program, which can be accessed through an electronic device with an Internet connection. In addition, it is based on the Relearning methodology.





“

*Thanks to this 100% online Postgraduate Diploma, you will obtain advanced tools for epidemiological data analysis, evaluating and managing the safety and effectiveness of drugs in diverse populations”*

Epidemiology in Public Health is at the center of global attention due to the COVID-19 pandemic and its impact on health and society. Therefore, epidemiologists are playing a crucial role in the collection, analysis and interpretation of data to understand the spread of the virus, identify risk factors and develop prevention and control strategies.

This is how this Postgraduate Diploma was created, in which pharmacists will identify and describe the main components of an intervention study, as well as its different types. The importance of evaluating the quality of these studies will also be analyzed, providing examples of good and bad practices. In addition, the methodology and design of clinical trials, both pragmatic and explanatory, will be addressed, delving into the design phases of validity studies of diagnostic tests.

Likewise, professionals will differentiate between univariate and multivariate analyses, develop advanced statistical techniques, and calculate epidemiological indicators, such as incidence and prevalence. They will also use statistical packages for data analysis and apply qualitative methodology, including the design and interpretation of qualitative and quantitative studies.

Finally, graduates will collaborate with institutions to integrate health literacy into public health policies and programs. In this sense, concepts of Salutogenesis and health asset models will be introduced, encouraging interdisciplinary collaboration and networking. Without forgetting the analysis of the ethical framework and the principles of equity in intervention programs.

In this way, a high quality program has been created, 100% online, with the aim of meeting the specific needs of students and overcoming the disadvantages related to other types of training, such as the need to travel to a physical campus and adjust to pre-established schedules. In addition, an innovative teaching methodology called Relearning has been incorporated, which involves the review of key concepts to achieve a deeper understanding of the contents.

This **Postgraduate Diploma in Epidemiology in Public Health** 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 Epidemiology in Public Health
- ♦ The graphic, schematic, and practical content with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an Internet connection



*You will update your ability to contribute to disease surveillance, design epidemiological studies and implement public health programs, through an extensive library of multimedia resources”*



“*You will investigate the importance of community engagement and health equity, reflecting on community health policies and programs, all at what is considered the best digital university in the world, according to Forbes”*

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

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to 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.

*You will propose activities for the evaluation of Public Health plans, implementing strategies based on scientific evidence, thanks to the best teaching materials, at the forefront of technology and education.*

*You will address the ethical principles in epidemiological research, applying ethical standards in your research, always supported by the revolutionary learning methodology known as Relearning.*



# 02 Objectives

The main objective of this Postgraduate Diploma will be to specialize pharmacists to play a crucial role in the research, prevention and control of diseases, both at the community and global level. In this sense, they will develop advanced skills in the critical analysis of epidemiological data and the implementation of strategies based on scientific evidence. In addition, they will be able to evaluate the quality and methodology of clinical and epidemiological studies, apply statistical and qualitative techniques, and design robust research.





“

*Don't miss out on this unique opportunity that only TECH offers you! You will promote equity and community participation in the formulation of Public Health policies and programs”*



## General Objectives

---

- ◆ 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

“

*This Postgraduate Diploma aims to strengthen the role of pharmacists as leaders in improving population health and promoting safe and effective health practices”*





## Specific Objectives

---

### Module 1. Clinical Epidemiology

- ♦ 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

### Module 2. Epidemiology Research Methodology

- ♦ Determine the main univariate statistical techniques
- ♦ Differentiate univariate from multivariate analysis
- ♦ Develop the main multivariate techniques
- ♦ Calculate incidence and prevalence
- ♦ Establish statistical packages for data analysis
- ♦ Apply qualitative methodology
- ♦ Design qualitative research
- ♦ Conduct health study designs
- ♦ Analyze and interpret results
- ♦ Use ethical principles in epidemiological research

### Module 3. Health Promotion and Evaluation

- ♦ Analyze the relationship between literacy and health, identifying how health literacy can improve population health outcomes
- ♦ Collaborate with health institutions and organizations to integrate health literacy into Public Health policies and programs
- ♦ Identify and understand the main concepts and rationale of Salutogenesis as a health promotion approach
- ♦ Compare different models of health assets to understand how individual and collective resources and capabilities influence health and well-being
- ♦ Promote networking and interdisciplinary collaboration between health professionals, social services, education and other sectors
- ♦ Raise awareness of the importance of participation, community empowerment and equity in health as fundamental principles for improving quality of life
- ♦ Promote critical reflection on health policies and programs at the community and primary care levels
- ♦ Analyze the ethical framework and the principles of equity in community intervention programs in Public Health

03

# Course Management

The faculty of the university program are highly qualified professionals with expertise in various areas of Epidemiology and Public Health. In fact, these instructors are committed to academic excellence and the comprehensive training of pharmacists, providing a combination of theoretical and practical knowledge based on current research and best practices in the field. And, in addition to their academic experience, many of these experts have strong professional backgrounds in healthcare institutions, government agencies and international organizations, allowing them to share practical experiences and real-world perspectives.



“

*The faculty of this Postgraduate Diploma stand out for their dedication to teaching and research in key areas of Epidemiology, ensuring quality and relevant training for pharmacists”*

## 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. Rodríguez Ledo, María Pilar

- ♦ President of the Territorial Research Ethics Committee of Santiago-Lugo
- ♦ National Coordinator of the Research Methodology and Support Working Group of the Spanish Society of General and Family Physicians (SEMG)
- ♦ Deputy Medical Director of the Integrated Management Structure of Lugo, Cervo and Monforte
- ♦ Head of the Innovation Node in the Integrated Management Structure of Lugo, Cervo and Monforte
- ♦ Head of the Simulation Classroom at the Integrated Management Structure of Lugo, Cervo and Monforte
- ♦ Deputy Secretary of the Official College of Physicians of Lugo
- ♦ Member of the National Commission of the Specialty of Family Medicine, as Advisor to the Ministry of Health, Social Services and Equality
- ♦ Specialist in Family and Community Medicine
- ♦ Doctor of Medicine from the University of A Coruña
- ♦ Master's Degree in Drug Addiction and AIDS by the Official College of Physicians of Malaga and the Institute for Research in Social Sciences
- ♦ Master's Degree in Design and Statistics in Health Sciences from the Autonomous University of Barcelona
- ♦ Degree in Medicine and Surgery from the University of Barcelona
- ♦ Member of: Foundation for Research and Training of the Spanish Society of General and Family Physicians (FIFSEMG), SEMG-Solidaria Foundation and UNICEF

### Dr. Aboal Alonso, Julia María

- ♦ Family and Community Medicine Physician at the Sagrado Corazón Health Center
- ♦ Participant in the implementation and coordination of the Community Project "Caring for those who care" with ProCC methodology (Community Corrective Processes)
- ♦ Graduate in Medicine from the University of Santiago de Compostela

### Dr. Durán Martínez, Carlos Yair

- ♦ Deputy Secretary of the Spanish Society of General and Family Physicians (SEMG)
- ♦ Family and Community Physician at the Continuous Care Point (PAC) of O Barco de Valdeorras, Health Area of Ourense, Verín and O Barco de Valdeorras, Servizo Galego de Saúde (SERGAS)
- ♦ Coordinator of the SEMG Digital Health Working Group
- ♦ Family and Community Physician at the Bierzo Health Care Authority, Castilla and León
- ♦ Medical Intern at the Rural Medical Unit 152 Vicente Guerrero of the Mexican Institute of Social Security
- ♦ University Specialist in Digital Health from the Rey Juan Carlos University
- ♦ Master's Degree in Palliative Care, Pontifical University of Salamanca
- ♦ Degree in Medicine and Surgery from Universidad La Salle, Mexico

### Dr. Paulés Cuesta, Isabel María

- ♦ Family and Community Physician in the Caspe Health Center
- ♦ Family and Community Physician at the Gallur Health Center
- ♦ Primary Care and Hospital Care Nurse in the Aragonese Health Service
- ♦ Specialist in Family and Community Medicine by the Teaching Unit of Primary Care and Family and Community Care of Huesca
- ♦ Master's Degree in Emergencies in Primary Care by the CEU Cardenal Herrera University
- ♦ Master's Degree in Genetic, Nutritional and Environmental Determinants of Growth and Development from the University of Zaragoza
- ♦ Degree in Medicine from the European University of Madrid
- ♦ University Diploma in Nursing from the University of Zaragoza

**Dr. Chertkoff, Liliana**

- ♦ Medical Manager Consultant of Health Management and Medical Audit at CHKconsultores Medical Advisor for Health Management in several institutions and associations.
- ♦ Advisor to the Association of Municipal Doctors of Buenos Aires
- ♦ Medical Trustee at the National Superintendence of Health Insurance, Argentina
- ♦ Coordinator at the Department of Pediatrics of the National University of Buenos Aires Teaching/Research
- ♦ Coordinator of Teaching, Research and Rotating Internship at the National University of Buenos Aires
- ♦ Advisor and Rapporteur in the Health Commission for the Senate of the Province of Córdoba, Argentina.
- ♦ Researcher by competition at the Chair of Preventive and Social Medicine, Faculty of Medical Sciences, National University of Córdoba
- ♦ Teacher and researcher at the Argentine Society of Pediatrics Adolescence Committee
- ♦ Temporary professor at the Pan-American Health Organization
- ♦ Head of the Integral Adolescence Service at the Josefina Priour Hospital
- ♦ General Practitioner in Public and Private Hospitals
- ♦ Medical Surgeon by the Faculty of Medical Sciences of the National University of Cordoba, Argentina
- ♦ Diploma in Public Health from the National University of Cordoba, Argentina
- ♦ Master's Degree in Sociology, Faculty of Social Sciences, National University of Córdoba, Argentina
- ♦ Degree in Medical Auditing from the University Institute of the Italian Hospital of Buenos Aires
- ♦ Member of the Argentine Society of Pediatrics

**Dr. Pérez Rodríguez, Natalia**

- ♦ Family and Community Medicine Physician at the Canary Islands Health Center
- ♦ Coordinator of the community project "Caring for those who care" with ProCC methodology (Community Corrective Processes)
- ♦ Manager of Community Action for Health (I Edition) by the Carlos III Health Institute
- ♦ Health Equity Manager. Learning with the Roma people (II Edition) by the Carlos III Health Institute
- ♦ Manager of Local Health (VII Edition) by the Instituto de Salud Carlos III
- ♦ Graduate in Medicine from the University of Santiago de Compostela

**Dr. Bendek Quevedo, Laura Patricia**

- ♦ Family and Community Physician at the Toreno Health Center
- ♦ Family and Community Physician at the Bierzo Health Care Authority
- ♦ Emergency Physician at El Bierzo Hospital in Ponferrada
- ♦ General Practitioner, Betania Special Care Unit, at the Valle del Lili Foundation, Colombia
- ♦ General Practitioner at Imbanaco Medical Center, Colombia
- ♦ Specialist in Family and Community Medicine at the Multiprofessional Teaching Unit of Family and Community Care of León, Ponferrada
- ♦ Master's Degree in Palliative Care, Pontifical University of Salamanca
- ♦ University Specialist in Digital Health from the Rey Juan Carlos University
- ♦ Degree in Medicine and Surgery from the University of Valle, Colombia

**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. Losada Salamanca, Diana Carolina**

- ◆ Palliative Medicine Physician, Palliative Care Unit, Hospital Virgen de la Luz
- ◆ Emergency Physician at the Virgen de la Luz Hospital
- ◆ Master's Degree in Bioethics from the Catholic University of Valencia
- ◆ Master's Degree in Palliative Care for Medicine from CEU Cardenal Herrera
- ◆ Expert in Individualized Palliative Care for Medicine
- ◆ Expert in Clinical Management of the Patient in Palliative Care for Medicine
- ◆ Expert in Psychosocial Aspects In The Palliative Patient for Medicine
- ◆ Specialist in Family and Community Medicine (2020)
- ◆ Degree in Medicine and Surgery by the Pontificia Universidad Javeriana

**Dr. Pérez Escanilla, Fernando**

- ◆ Family Physician at the San Juan Health Center in Salamanca
- ◆ Head of the Venous Insufficiency Group of the Spanish Society of General and Family Physicians
- ◆ Local Head of Health and Coordinator of the Health Centers of Aldeanueva del Camino and North Zone of Cáceres
- ◆ Regular speaker at international scientific congresses, such as the Clinical Ultrasound Congress
- ◆ Gold Medal awarded by the Extremadura Health Service
- ◆ First Prize for "Best Research Project" of the Spanish Society of General and Family Physicians for "Clinical Ultrasound Classroom in Primary Care"
- ◆ Medal of the Collegiate Merit of the Illustrious Colleges of Physicians of Cáceres and Badajoz
- ◆ Award for Excellence from the San Juan Health Center
- ◆ Degree in Medicine and Surgery from the University of Salamanca

**Dr. Maya, Roberto**

- ◆ Primary Care Physician at the Zorita Health Center
- ◆ Family and Community Physician in the Family and Community Medicine Teaching Unit of the Cáceres Health Area
- ◆ Master's Degree in Emergencies, Emergencies and Catastrophes from the University San Pablo-CEU
- ◆ Master's Degree in Emergency Medicine from the University of Guayaquil
- ◆ Degree in Medicine from the Faculty of Medical Sciences of the State University of Guayaquil

**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





**Dr. Sánchez Borrego, Beatriz**

- ◆ Specialized Physician in Family and Community Medicine
- ◆ Master's Degree in Emergency Medicine from CEU Cardenal University
- ◆ Specialist in Family and Community Medicine
- ◆ Graduate in Medicine from the University of Salamanca

**Dr. Álvarez Sobrado, Cristina**

- ◆ Family and Community Medicine Physician at the Sarria Health Center
- ◆ Physician at the Domusvi Monforte and Domusvi Chantada Homes for the Elderly
- ◆ Master's Degree in Clinical Medicine from the Camilo José Cela University
- ◆ Graduate in Medicine from the University of Santiago de Compostela

**Dr. Silva Contreras, Javier**

- ◆ Head of the Preventive Medicine Service of the Hospital Virgen de la Luz
- ◆ Master's Degree in Public Health and Healthcare Management, University of Valencia
- ◆ Master's Degree in Infectious Diseases and Antimicrobial Treatment, Cardenal Herrera University
- ◆ Specialist in Vaccines, University of Santiago de Compostela
- ◆ Specialist in Nosocomial Infections by the Higher Postgraduate Training Center EUROINNOVA
- ◆ Specialist Physician in Preventive Medicine and Public Health
- ◆ Degree in Medicine and Surgery by the Pontificia Universidad Javeriana



04

# Structure and Content

Throughout the academic program, pharmacists will acquire specialized knowledge in key areas such as clinical epidemiology, epidemiological research methodology, and health promotion and evaluation. In this way, from understanding the different types of intervention studies and their methodology, to mastering advanced statistical techniques and applying ethical principles in research, the curriculum will provide you with a comprehensive foundation for understanding, analyzing and addressing contemporary epidemiological challenges.





A close-up, angled view of a microscope lens. The lens is metallic and has some text engraved on it, including "HCX" and "63X". The background is a blurred green, suggesting a laboratory setting.

“

*You will delve into emerging issues, such as the relationship between health literacy and health outcomes, reflecting on the effectiveness of policies and community health programs”*

## 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

## Module 2. Epidemiology Research Methodology

- 2.1. Biostatistics: Univariate, Bivariate and Multivariate Analysis
  - 2.1.1. Types of Variables
  - 2.1.2. Normality Study of a Distribution. Parametric and Non-Parametric Statistics
  - 2.1.3. Dependent and Independent Variables. Confounding Factors
  - 2.1.4. Identification of the Necessary Statistical Tests
- 2.2. Models and Methods in Multivariate Statistics of Dependence and Interdependence: Statistical Inference. Standardization and Prediction. Multiple Linear Regression. Regression and Cluster Analysis
  - 2.2.1. Multivariate Models
  - 2.2.2. Multivariate Models: Multiple Linear Regression
  - 2.2.3. Cluster Analysis
- 2.3. Models and Methods in Multivariate Structural Statistics: Logistic Regression, Poisson Regression, Survival Analysis and Longitudinal Data. Kaplan-Meier and Log-Rank Statistics
  - 2.3.1. Multivariate Models: Logistic Regression
  - 2.3.2. Kaplan-Meier and Log-Rank Survival Analysis
  - 2.3.3. Poisson Regression
- 2.4. Incidence and Prevalence Models in Public Health
  - 2.4.1. Incidence Studies
  - 2.4.2. Prevalence Studies
  - 2.4.3. Risk Analysis
- 2.5. Computer Software: Advanced Statistical Analysis with SPSS Package
  - 2.5.1. Statistical Packages: R®, STATA® and Epidat®
  - 2.5.2. Use of the SPSS® Package
  - 2.5.3. Interpretation of the Results of Statistical Analyses Performed by SPSS® and Evidence-Based Decision-Making
  - 2.5.4. Effective Communication of Statistical Findings to Specialized and Non-Specialized Audiences
- 2.6. Qualitative Methodology applied to Public Health: Theoretical, Conceptual, and Ethical Aspects
  - 2.6.1. Qualitative Evaluation Applied to Public Health
  - 2.6.2. Techniques of Qualitative Research Applied to Public Health
  - 2.6.3. Collection, Analysis and Interpretation of Qualitative Data in Public Health Studies: Validity, Reliability and Generalization of the Results
  - 2.6.4. Ethical Principles: Protecting Participant Confidentiality and Managing Potential Ethical Conflicts
  - 2.6.5. Integration of the Qualitative Perspective in the Planning, Implementation, and Evaluation of Public Health Programs and Policies: Designing Effective Interventions Focused on the Population's Needs
- 2.7. Design and Phases of Qualitative Research in Public Health. Sample Designs
  - 2.7.1. Design and Phases of Qualitative Research
  - 2.7.2. Sampling
  - 2.7.3. Elaboration and Justification of Data Collection Instruments
  - 2.7.4. Data Analysis Process
  - 2.7.5. Establishment and Justification of the Validity and Reliability Criteria of the Research
  - 2.7.6. Design and Justification of the Communication and Dissemination of Results Plan
- 2.8. Designs of Interest for Public Health. Information Collection Techniques
  - 2.8.1. Sampling
  - 2.8.2. Surveys. Design of Surveys
  - 2.8.3. Validation of Questionnaires
- 2.9. Analysis and Interpretation of Results. Digital Analysis of Qualitative Data
  - 2.9.1. Text Analysis Software
  - 2.9.2. Data Visualization Software
  - 2.9.3. QDA (Qualitative Data Analysis) Software
  - 2.9.4. Artificial Intelligence Applied to Qualitative Studies
- 2.10. Evaluation, Rigor, and Ethics in Qualitative Research in Public Health
  - 2.10.1. Ethical Principles of Research
  - 2.10.2. International Legislation and Regulations
  - 2.10.3. Healthcare Ethics Committees

### Module 3. Health Promotion and Evaluation

- 3.1. Health Literacy and Development of Literacy Tools and Models
  - 3.1.1. Relationship between Literacy and Health. Improving Health Outcomes of the Population
  - 3.1.2. Design and Implementation of Health Literacy Programs for Vulnerable Groups and Marginalized Communities
  - 3.1.3. Effective Communication Strategies Adapted to Different Cultural and Linguistic Contexts
  - 3.1.4. Evaluating the Effectiveness of Health Literacy Programs through the Application of Appropriate Evaluation Tools and Models
  - 3.1.5. Integrating Health Literacy into Public Health Policies and Programs
  - 3.1.6. Research and Development of New Technologies and Digital Tools to Improve Health Literacy and Promotion in Digital Environments
- 3.2. Salutogenesis, a Health Assets Model
  - 3.2.1. Salutogenesis: Health Promotion Approach
  - 3.2.2. Health Asset Models
  - 3.2.3. Practical Applications of Health Asset Models in the Planning, Implementation, and Evaluation of Health Promotion Interventions
  - 3.2.4. Evaluation of the Effectiveness and Relevance of Health Asset Models in Different Contexts and Populations
  - 3.2.5. Design and Implementation of Salutogenesis-based Strategies and Health Asset Models to Promote Health and Wellness in Different Settings and Communities
- 3.3. Community Intervention and Community-oriented Primary Care
  - 3.3.1. The Scope of Community Intervention and Primary Care: Health and Wellness Promoters in the Population
  - 3.3.2. Implementation and Evaluation of Community Intervention Projects in Different Contexts and Populations: Principles of Equity, Participation and Sustainability
  - 3.3.3. Comprehensive Approach: Networking and Interdisciplinary Collaboration between Health Professionals, Social Services, Education and other Sectors
  - 3.3.4. Tools and Strategies for Health Promotion, Disease Prevention and the Promotion of Healthy Lifestyles in the Community
  - 3.3.5. Importance of Participation, Community Empowerment, and Health Equity: Fundamental Principles for the Improvement of the Quality of Life of the Population
- 3.3.6. Identifying and Addressing the Social Determinants of Health and Health Inequalities: Equity and Justice in Access to Health Services and Well-Being
- 3.3.7. Critical Reflection on Health Policies and Programs at the Community and Primary Care Levels: Improvement and Adaptation to the Needs and Demands of the Population
- 3.4. Community Intervention Programs with an Ethical and Equitable Perspective
  - 3.4.1. Ethics in Public Health
  - 3.4.2. Principles of Equity in Community Intervention
  - 3.4.3. Interprofessionalism in Community Intervention: Creation of International Strategic Alliances
  - 3.4.4. Potential of Information and Communication Technologies (ICTs) and e-Health for the Promotion of Health
  - 3.4.5. Implementation of e-Health Strategies in Community Intervention Programs
- 3.5 Health Promotion and Protection at the Local Level from an International Approach
  - 3.5.1. Intersectoriality
  - 3.5.2. Social Map
  - 3.5.3. Social Actors of the Community from Different Sectorial Spheres and the Administration
  - 3.5.4. Research Guidelines, Time, Universe, and Sample
  - 3.5.5. Universal, Replicable and Multicenter Collaborative Models
  - 3.5.6. Indicators of Assessment
  - 3.5.7. Research and Action on Replicable Collaborative Models
- 3.6. Research in Social and Community Participation
  - 3.6.1. Community and Social Participation
  - 3.6.2. Research and Action in Community and Social Participation
  - 3.6.3. Interdiscipline, Transdiscipline, Eco-environmental, Sustainable and Maintainable
  - 3.6.4. Key Families and Strategic Groupings in the Community
  - 3.6.5. Research Rationale and Action Appropriate to Each Site
  - 3.6.6. Quantitative and Qualitative Evaluation Measures
  - 3.6.7. Focus Groups
  - 3.6.8. Indicators and Utilization
  - 3.6.9. Strategic Indicators Appropriate to Each Site
  - 3.5.10. Health Team Participating in Research and Action
  - 3.5.11. The Scope of Research and Action
  - 3.5.12. Evaluation of the Sample

- 3.7. Methods of Idea Generation and Design of Health Promotion/Health Education (HPE) Campaigns
  - 3.7.1. Methods for Generating Ideas for the Design of Health Promotion, Health Education, and Disease Prevention Campaigns
  - 3.7.2. Analysis of the Specific Needs and Characteristics of the Target Audience to Tailor Communication and Promotion Strategies to Adapt Communication and Promotion Strategies to their Needs and Preferences
  - 3.7.3. Creative Tools and Techniques to Generate Innovative and Effective Ideas in the Design of Health Promotion Campaigns
  - 3.7.4. Educational Messages and Materials: Clear, Informative and Persuasive
  - 3.7.5. Evaluating the Effectiveness of Health Promotion Campaigns: Adjustments to Improve Results
- 3.8. Complex Models and Methods in Health Education
  - 3.8.1. Theory of Change: Determinants of Human Behavior and Strategies to Change Them towards Healthier Behaviors
  - 3.8.2. Social Determinants of Health Approach: Socio-political, Economic and Cultural Factors Influencing the Health of Populations. Addressing Inequities
  - 3.8.3. Community Empowerment Models: Strengthening Communities to Make Healthy Decisions and Achieve Positive Changes in their Environment
  - 3.8.4. Theories of Health Behavior: Beliefs, Attitudes and Motivations of People
  - 3.8.5. Participatory Methods in Health Education: Involving People and Communities in Designing, Implementing and Evaluating Health Programs. Collaboration and Autonomy
- 3.9. Elaboration, Development, and Design of Health Education Programs
  - 3.9.1. Design and Elaboration of Health Education Programs: Identification of Needs, Formulation of Objectives, Selection of Intervention Methods and Strategies, and Planning of Activities
  - 3.9.2. Implementation Strategies: Accessibility, Equity and Sustainability of Health Programs
  - 3.9.3. Partnerships and Collaborations with Relevant Institutions and Organizations to Strengthen the Implementation of Health Programs
  - 3.9.4. Continuous and Systematic Evaluation of the Implementation of Health Programs: Identification of Challenges, Necessary Adjustments, and Opportunities for Improvement
  - 3.9.5. Active Community Involvement in the Implementation of Health Programs: Encouraging Community Ownership and Sustainability of the Actions Carried out.
  - 3.9.6. Ethical Principles Governing the Implementation of Health Education Programs: Ethics and Accountability to Communities and Beneficiary Populations
- 3.10. Research and Evaluation of the Impact of Collaborative and Educational Models
  - 3.10.1. Health Research: Protocol Development, Data Collection and Analysis, and Scientific Report Writing
  - 3.10.2. Evaluation of the Impact of Educational Programs on Population Health, Use of Qualitative and Quantitative Assessment Tools
  - 3.10.3. Importance of Interdisciplinarity in the Design and Evaluation of Educational Projects in Health Collaboration between Professionals as an Enhancer of Results
  - 3.10.4. Effective Communication of Research and Evaluation Results to Health Sector Professionals and to the Community in General



*The interdisciplinary and practice-oriented approach of this program will prepare you to play an active and meaningful role in health promotion and disease prevention in communities”*



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.

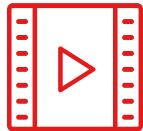
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

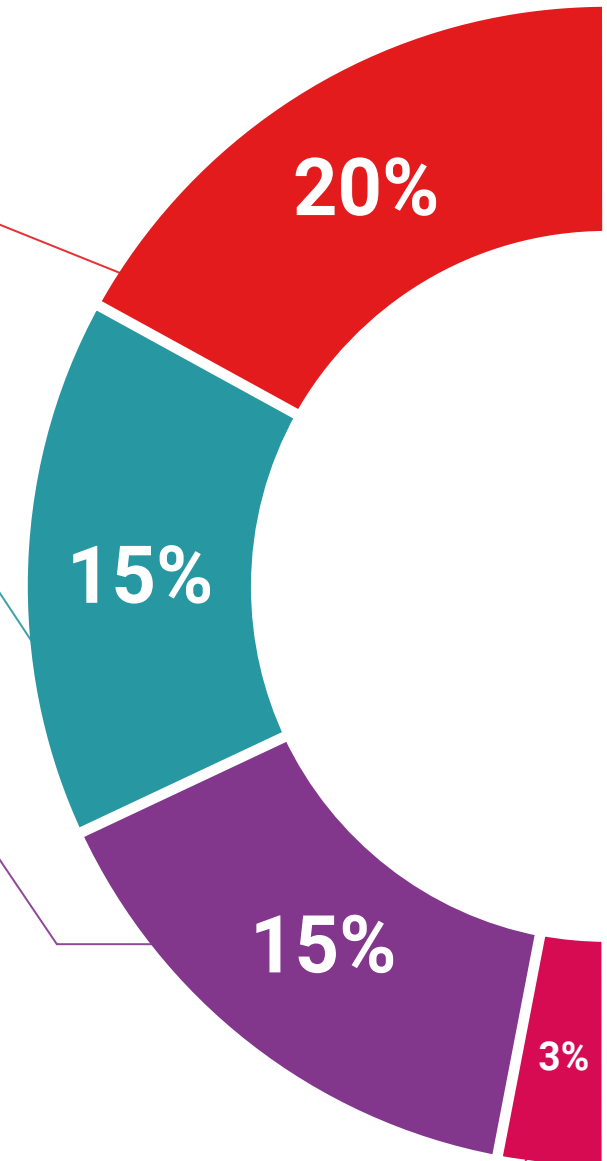
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".

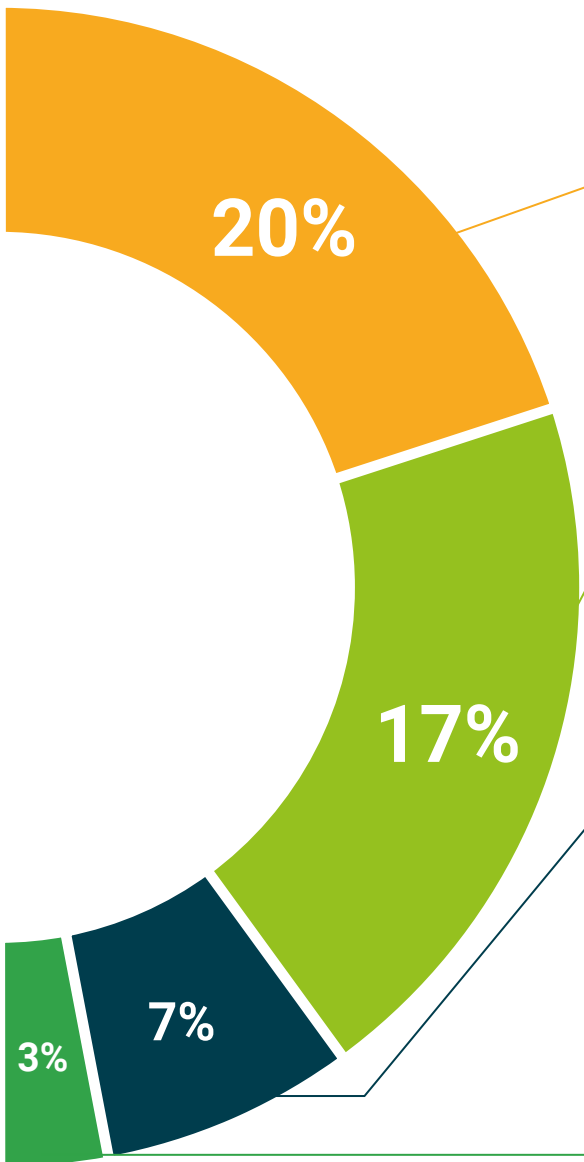


### Additional Reading

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 Diploma in 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 Diploma in 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 Diploma in Epidemiology in Public Health**

Modality: **online**

Duration: **6 months**

Accreditation: **18 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.



## Postgraduate Diploma Epidemiology in Public Health

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Accreditation: 18 ECTS
- » Schedule: at your own pace
- » Exams: online



# Postgraduate Diploma Epidemiology in Public Health

