

# Postgraduate Diploma Public Health Surveillance



## Postgraduate Diploma Public Health Surveillance

- » 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-public-health-surveillance](http://www.techtute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-public-health-surveillance)

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# 01

# Introduction

Public Health Surveillance is in a phase of transformation and strengthening due to global challenges such as the COVID-19 pandemic.

As a result, international collaboration and information sharing between countries has improved, facilitating a more coordinated and effective response to health threats. In addition, greater emphasis is being placed on genomic surveillance to identify pathogen variants to identify pathogen variants and on environmental health, to monitor factors that may influence the spread of disease. In this context, a fully online program has been developed, which can be accessed through an electronic device with an Internet connection. In addition, it is based on the innovative Relearning methodology, a method pioneered by TECH.







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*With this 100% online program, you will acquire competencies in the identification and analysis of disease patterns, the implementation of outbreak prevention strategies and the management of health emergencies”*

The COVID-19 pandemic has underscored the critical importance of robust, real-time surveillance systems that enable early detection of outbreaks and rapid implementation of control measures. At the same time, international cooperation and data sharing have become essential to address global health threats.

This is how this program was created, which will provide pharmacists with an in-depth understanding of the fundamental principles of health protection and prevention. In this way, epidemiological surveillance, risk assessment, management, control and communication will be covered, providing essential tools for professional practice. In addition, self-control and surveillance systems will be examined through hazard analysis and identification of critical control points.

The epidemiology and risk factors associated with diseases such as Cancer and Cardiovascular Diseases, as well as their primary and secondary prevention, will also be analyzed. Likewise, a solid basis for the detection of rare diseases and the implementation of neonatal screening programs will be provided.

Finally, the ability of professionals to identify and describe the main components of intervention studies, evaluating their quality and methodology will be developed. Pharmacists will also be able to analyze pragmatic and explanatory clinical trials, including the different phases of the design of diagnostic test validity studies. Without overlooking the importance of quality and methodological correctness in studies of prognostic factors, also introducing patient safety as a key concept in health care.

Therefore, an online program of excellent quality has been designed to meet the individual needs of students and eliminate the associated problems, such as moving to a physical campus and adapting to fixed schedules. Additionally, a revolutionary learning methodology called Relearning has been integrated, which involves the review of essential concepts to achieve a more solid understanding of the contents.

This **Postgraduate Diploma in Public Health Surveillance** 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 Surveillance
- ◆ 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 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 expand your role as a pharmacist beyond dispensing medications, becoming a key player in early disease detection and health promotion”*

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*You will address major communicable diseases, as well as the usefulness of vaccines in the prevention of immunopreventable infectious diseases, through TECH's extensive library of multimedia resources”*

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.

*Bet on TECH! As a pharmacist, you will strengthen your skills in clinical research and the application of evidence-based practices, thus contributing to the continuous improvement of Public Health.*

*You will interpret epidemiologic data related to environmental health and surveillance of diseases and environmental risk factors, as well as describe innovative pharmacovigilance monitoring and prevention systems.*



# 02

# Objectives

This university program will equip pharmacists with advanced knowledge and skills in health surveillance, enabling them to play a proactive role in disease detection, prevention and control. In this way, they will be able to analyze and manage health risks, implement epidemiological surveillance and self-monitoring systems, and conduct critical research on health indicators. In addition, they will be able to evaluate and improve primary prevention strategies for chronic diseases, interpret epidemiological data related to environmental health, and apply innovative pharmacovigilance systems.





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*With this program, pharmacists will be prepared to contribute to the development of comprehensive public health programs and collaborate in international disease surveillance, thus improving community health”*



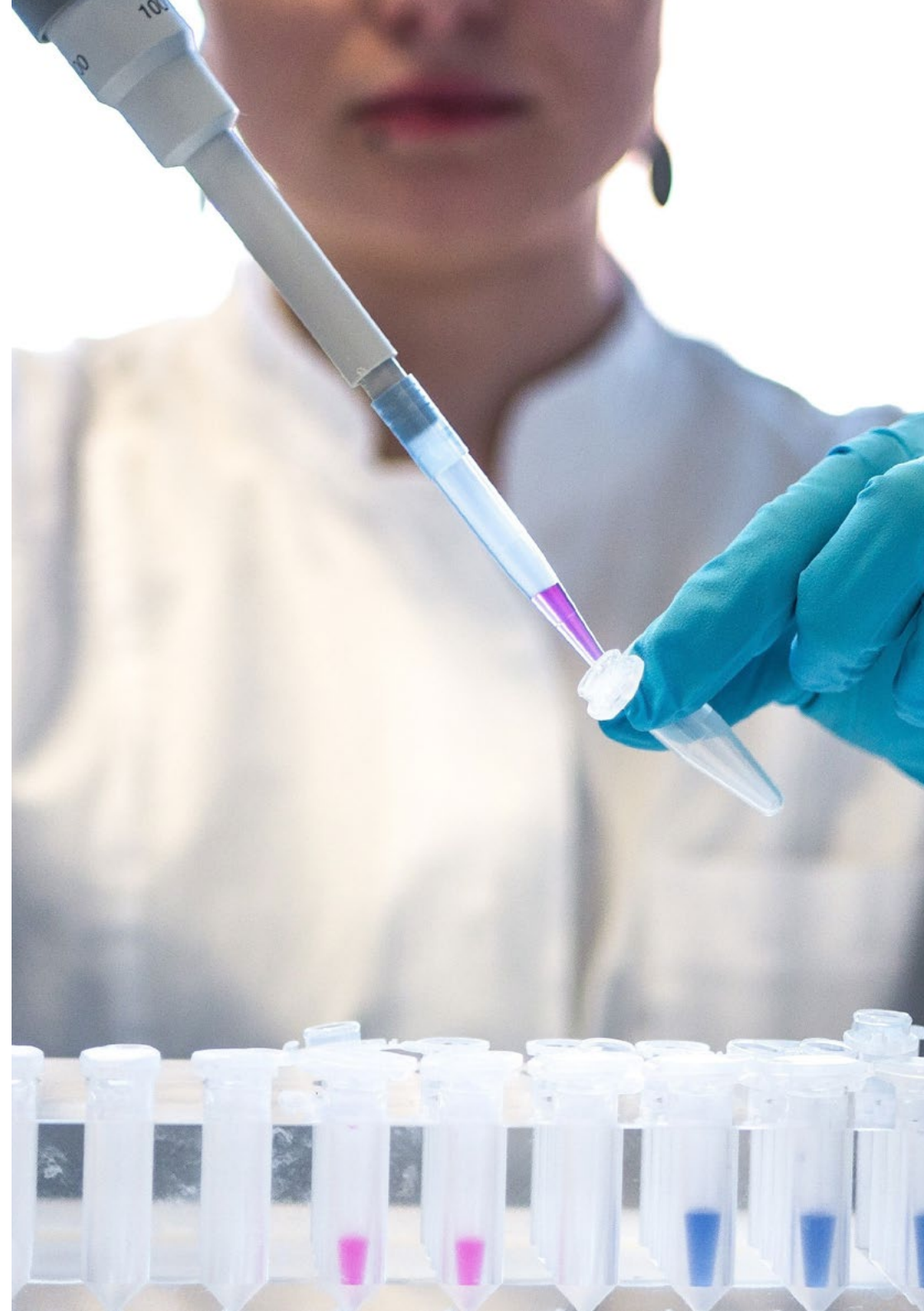
## General Objectives

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- ◆ 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



*You'll address international disease surveillance and global cooperative systems, preparing you to play a crucial role in global public health. What are you waiting for to enroll?"*





## Specific Objectives

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### Module 1. Public Health Monitoring

- ◆ Determine the fundamental principles of health protection and prevention, including epidemiological monitoring, and the assessment, management, control and communication of risk
- ◆ Examine self-monitoring and monitoring systems through hazard analysis and identification of critical control points
- ◆ Delve into research systems and carry out a critical analysis of indicators, as well as records and evaluation systems
- ◆ Determine the requirements in primary prevention research for chronic diseases, as well as evaluate effective strategies
- ◆ Specify the terms needed to conduct research to improve the design, implementation and evaluation of comprehensive health protection and prevention programs
- ◆ Analyze, in detail, the interpretation of epidemiological data related to environmental health, including disease monitoring and environmental risk factors
- ◆ Describe innovative pharmacovigilance monitoring and prevention systems that allow early detection of drug-related adverse events
- ◆ Describe international disease monitoring systems and the systems of cooperation between them

### Module 2. Epidemiology and Prevention of Communicable and Non-Communicable Diseases

- ◆ Analyze the epidemiology and risk factors of Cancer, as well as its primary and secondary prevention
- ◆ Substantiate the epidemiology of Cardiovascular Diseases and their risk
- ◆ Promote the detection of rare diseases and neonatal screening programs
- ◆ Evaluate healthy and active aging programs
- ◆ Identify the main communicable diseases
- ◆ Determine the usefulness of vaccines in the prevention of Immunopreventable Infectious Diseases

### Module 3. 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

03

# Course Management

The faculty of this Postgraduate Diploma are highly qualified experts with extensive experience in various fields related to Public Health.

In fact, their practical experience in Public Health research and management, as well as their ability to convey complex concepts in a clear and accessible manner, will ensure that graduates acquire solid and relevant knowledge for their professional practice. In addition, they will foster critical thinking and active participation, creating a dynamic and collaborative learning environment.







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*The faculty of this Postgraduate Diploma have in-depth knowledge in epidemiological surveillance, disease prevention and pharmacovigilance, and are committed to your professional development”*

## Management



### Dr. Camacho Parejo, Juan José

- General Director of Public Health at the Ministry of Health of Castilla-La Mancha
- Director of the Center for Analysis, Documentation and Evaluation of Health Policies of the SESCAM
- Director of Hospitals in DG Health Care of SESCAM
- Medical Director at the Integrated Care Management of Talavera de la Reina
- Deputy Medical Director at Nuestra Señora del Prado Hospital (Talavera de la Reina)
- Urologist at the Río Hortega Hospital, Jove Hospital (Gijón) and Nuestra Señora del Prado Hospital (Talavera de la Reina)
- Specialist in Urology
- Senior Management Program in the Health Sector, Administration/Management of Health Services, San Telmo Business School
- Degree in Medicine and Surgery from the Complutense University of Madrid



### **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
- ◆ 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. Jimeno Sanz, Isabel

- ♦ Director and Family Doctor at the Isla de Oza Health Center
- ♦ Collaborator with different groups of the Madrid Ministry of Health
- ♦ Head of the SEMG Vaccine Group
- ♦ Specialist in the CAM Vaccine Advisory Committee and in the VHP Platform of Madrid
- ♦ Principal Researcher in Clinical Trials
- ♦ Master's Degree in Epidemiology and Public Health from the Autonomous University of Madrid
- ♦ Master's Degree in Dietetics and Nutrition from the University of Navarra
- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid
- ♦ Diploma in Leadership and Management of PC Teams, Autonomous University of Madrid
- ♦ Member of the Neumoexperto Group

### 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. Sanz Muñoz, Iván**

- ♦ Scientific and Virological Surveillance Manager at the National Influenza Center in Valladolid
- ♦ Director and Coordinator of the Influenza Update Conference at the National Influenza Center
- ♦ Doctorate in Health Sciences Research, University of Valladolid
- ♦ Master's Degree in Vaccines from the Catholic University of Murcia
- ♦ Master's Degree in Genomics and Medical Genetics from the University of Granada
- ♦ Master's Degree in Health Sciences Research: Pharmacology, Neurobiology and Nutrition from the University of Valladolid
- ♦ Master's Degree in Anthropology and Forensic Genetics from the University of Granada
- ♦ Degree in Biology from the University of Salamanca
- ♦ Member of: WHO Global Influenza Surveillance and Response System (GISRS), Institute of Health Sciences of Castilla and León (ICSCYL) and Center for Biomedical Research in Infectious Diseases (CIBERINFEC)

**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. 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. 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. 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





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*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 specialized modules, professionals will explore key topics such as epidemiological surveillance, health risk management and evaluation of prevention programs. In addition, the identification and control of communicable and non-communicable diseases, as well as the importance of pharmacovigilance for the early detection of drug-related adverse events will be discussed. The interpretation of epidemiological data will also be addressed, the implementation of evidence-based strategies and collaboration in international disease surveillance systems.







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*With a comprehensive and up-to-date approach, this program will empower you to play a vital role in promoting Public Health and disease prevention in your communities”*

## Module 1. Public Health Monitoring

- 1.1. Public Health Protection, Prevention and Surveillance: Classification, Evaluation, Management, Control and Risk Communication
  - 1.1.1. Health Protection and Prevention
  - 1.1.2. Health Surveillance and Risk Management
  - 1.1.3. Risk Communication. Mechanisms and Limitations
- 1.2. Self-control and Surveillance Systems: Hazard Analysis and Critical Control Points
  - 1.2.1. Establishment of Preventive Protocols
  - 1.2.2. Risk Identification and Assessment
  - 1.2.3. Implementation and Follow-up. Control Points
- 1.3. Research and Critical Analysis of Process and Result Indicators, Records, and Evaluation Systems Development and Innovation
  - 1.3.1. Research and Analysis of Indicators
  - 1.3.2. Recording and Evaluation for Efficient Data Management
  - 1.3.3. Innovation in Evaluation Systems
- 1.4. Research in the Design, Implementation, and Impact Evaluation of Health Protection and Prevention Programs
  - 1.4.1. Mechanisms for the Design of Health Protection and Prevention Programs
  - 1.4.2. Implementation of Health Protection and Prevention Programs
  - 1.4.3. Analysis of the Impact of Health Protection and Prevention Programs
- 1.5. Analysis and Interpretation of Epidemiological Data on Environmental Health: Surveillance, Estimation, Plans and Programs
  - 1.5.1. Importance of Environmental Health in Human Health
  - 1.5.2. Exploration of Environmental Epidemiological Data
  - 1.5.3. Practical Application of Environmental Data Analysis
- 1.6. Interpretation of Epidemiological Data on Chronic Diseases and Planning: Surveillance, Estimation, Plan Design, Programs and Screening
  - 1.6.1. Epidemiological Analysis of Chronic Diseases. Importance of Follow-up
  - 1.6.2. Design and Development of Interventions for Chronic Diseases
  - 1.6.3. Epidemiological Surveillance and Disease Load Analysis
- 1.7. Research in Primary Prevention of Chronic Diseases: Health Protection
  - 1.7.1. Research in Primary Prevention of Chronic Diseases
  - 1.7.2. Applied Research in Prevention and Health Protection
  - 1.7.3. Impact Evaluation and Communication of Results



- 1.8. Innovation in Pharmacovigilance Monitoring and Prevention Systems: Alerts and Preventive Interventions
  - 1.8.1. Importance of Pharmacovigilance. Safety in the Use of Medications
  - 1.8.2. Advances in Pharmacovigilance Monitoring Systems
  - 1.8.3. Risk Prevention through Preventive Interventions
- 1.9. Models of Response to Alerts, Epidemic Outbreaks and Emergencies Development of Protocols and Procedures
  - 1.9.1. Response Strategies for Health Emergencies
  - 1.9.2. Development of Crisis Management Protocols
  - 1.9.3. Implementation and Evaluation of Emergency Response
- 1.10. International Health and Innovation in International Cooperation for Epidemiological Surveillance
  - 1.10.1. International Health Global Perspective on Epidemiological Surveillance
  - 1.10.2. Innovation in International Cooperation for Epidemiological Surveillance
  - 1.10.3. Challenges and Future of International Health Cooperation

## Module 2. Epidemiology and Prevention of Communicable and Non-Communicable Diseases

- 2.1. Epidemiology of Cancer: Risk Factors and Prevention Primary
  - 2.1.1. Descriptive Epidemiology: Incidence, Mortality and Data Sources
  - 2.1.2. Cancer Risk Factors: Environmental and Occupational
  - 2.1.3. Other Factors: Ultraviolet Light, Infections, Radiations
- 2.2. Risk Factors and Primary Prevention of Cancer: Lifestyle and Screening
  - 2.2.1. Primary Prevention. Risk Factors and Prevention Strategies
  - 2.2.2. Legislative Measures
  - 2.2.3. Secondary Prevention
- 2.3. Biological Mechanisms of Cardiovascular Diseases. Estimation of Cardiovascular Risk and Population Prevention.
  - 2.3.1. Ischemic Heart Disease and Stroke
  - 2.3.2. Epidemiological Indicators
  - 2.3.3. Classification of Cardiovascular Risk
  - 2.3.4. Prevention and Control of Cardiovascular Diseases
- 2.4. Detection of Rare Diseases and Neonatal Screening
  - 2.4.1. Rare Diseases
  - 2.4.2. Newborn Screening Programs
  - 2.4.3. Neonatal Screening for Congenital Metabolic and Endocrinologic Diseases
- 2.5. Comprehensive Approach to Chronic Disease Prevention for Healthy and Sustainable Aging
  - 2.5.1. Healthy Aging
  - 2.5.2. Active Aging
  - 2.5.3. Integrated Prevention
- 2.6. Epidemiology of Communicable Diseases: Epidemiological Surveillance Systems and Notifiable Diseases Systems
  - 2.6.1. Causative Agents
  - 2.6.2. Time Periods
  - 2.6.3. Transmission
  - 2.6.4. Host and Susceptible Population
  - 2.6.5. Epidemiological Surveillance Systems
- 2.7. Utility of Vaccines in the Prevention of Immuno-Preventable Infectious Diseases
  - 2.7.1. Analysis of the Importance of Vaccination in the Prevention of Infectious Diseases at the Individual and Community Levels
  - 2.7.2. Evolution of Vaccines: Types of Vaccines Currently Available
  - 2.7.3. Mechanisms of Action of Vaccines and Their Impact on the Immune System
  - 2.7.4. Efficacy and Safety of Vaccines in the Prevention of Infectious Diseases
  - 2.7.5. Importance of Vaccination in Risk Groups and in the Prevention of Epidemics
  - 2.7.6. Logistics and Vaccination Programs at the International Level
  - 2.7.7. Economic and Social Impact of Vaccination in the Prevention of Infectious Diseases
  - 2.7.8. Research and Analysis of Barriers and Challenges in the Implementation of Vaccination Programs
  - 2.7.9. Strategies and Measures to Promote Vaccination and Raise Public Awareness of its Importance
  - 2.7.10. Evaluation and Critical Analysis of the Scientific Literature Related to Vaccines and their Usefulness in the Prevention of Infectious Diseases

- 2.8. Emerging Diseases. Epidemic Outbreaks
  - 2.8.1. Factors Favoring Emerging Diseases
  - 2.8.2. New Agents and Diseases
  - 2.8.3. International Health Regulations (IHR)
  - 2.8.4. Epidemic Outbreaks. Study, Control and Measures: Chemoprophylaxis, Immunoglobulins and Vaccines.
- 2.9. Viral Hepatitis, HIV infection, AIDS, Sexually Transmitted Infections (STIs) and Tuberculosis
  - 2.9.1. Hepatitis A: Etiology, Epidemiology and Preventive Measures
  - 2.9.2. Hepatitis B: Etiology, Epidemiology and Preventive Measures
  - 2.9.3. Other Viral Hepatitis: Etiology, Epidemiology and Preventive Measures
  - 2.9.4. HIV: Etiology, Epidemiology and Preventive Measures
  - 2.9.5. Sexually Transmitted Infections (STIs): Etiology, Epidemiology, Epidemiology and Preventive Measures
  - 2.9.6. Tuberculosis: Etiology, Epidemiology and Preventive Measures
- 2.10. Meningococcal Disease (MD) and Zoonosis: Epidemiology. Prevention and Control
  - 2.10.1. Epidemiology of Meningococcal Disease
  - 2.10.2. Prevention and Control of Meningococcal Disease
  - 2.10.3. Epidemiology of Zoonoses
  - 2.10.4. Prevention and Control of Zoonoses
- 3.3. Design of Diagnostic Test Studies
  - 3.3.1. Selection of the Study Population and Definition of the Inclusion and Exclusion Criteria
  - 3.3.2. Determination of the Study Design and Selection of the Reference Methodology
  - 3.3.3. Calculation of Diagnostic Accuracy and Analysis of the Results
- 3.4. Evaluation of Quality of a Diagnostic Test Study
  - 3.4.1. Study Validity Analysis
  - 3.4.2. Evaluation of the Accuracy of the Diagnostic Test
  - 3.4.3. Analysis of the Clinical Utility of the Diagnostic Test
- 3.5. Design and Quality Assessment of Prognostic Factors Studies
  - 3.5.1. Selection and Definition of Prognostic Factors
  - 3.5.2. Study Design and Selection of the Study Population
  - 3.5.3. Evaluation of the Quality of the Study and the Prognostic Model
- 3.6. Evidence-Based Clinical Recommendations: *GRADE 1*
  - 3.6.1. Systematic Reviews of Scientific Literature. Identification of Clinical Recommendations
  - 3.6.2. Quality of Evidence and Strength of Recommendations
  - 3.6.3. Clinical Recommendations Applicable to Clinical Practice
  - 3.6.4. Development of a Clinical Protocol or Clinical Guideline based on the Recommendations Identified
  - 3.6.5. Implementation and Follow-up of the Clinical Protocol or Guideline in Patient Care Evidence and Focus on Improving Clinical Outcomes
  - 3.6.6. Periodic Evaluation, through Monitoring of Clinical Outcome Indicators and Feedback to the Health Professionals Involved
- 3.7. Evidence-Based Clinical Recommendations: *GRADE 2*
  - 3.7.1. Analysis and Synthesis of the Evidence Available in the Scientific Literature for the Development of Recommendations
  - 3.7.2. Identification and Evaluation of the Quality of the Relevant Studies Supporting the Clinical Recommendations
  - 3.7.3. Application of the Principles of the GRADE Methodology to Establish the Strength and Certainty of Clinical Recommendations
  - 3.7.4. Developing Clinical Practice Guidelines that Incorporate Evidence-Based Recommendations and are Useful for Decision-Making
  - 3.7.5. Regular Updating and Revision of Clinical Recommendations Based on Available Scientific Evidence

### Module 3. Clinical Epidemiology

- 3.1. Design and Quality Assessment of Intervention Studies in Epidemiology
  - 3.1.1. Intervention Studies, Types and Key Elements of Design
  - 3.1.2. Ethical Aspects of Intervention Research
  - 3.1.3. Design of Specific intervention Studies
  - 3.1.4. Tools for Assessing the Quality of Intervention Studies
  - 3.1.5. Critical Appraisal of Intervention Studies
  - 3.1.6. Importance of Design and Quality Assessment
- 3.2. Pragmatic vs. Explanatory Randomized Clinical Trials
  - 3.2.1. Differentiation between Pragmatic and Explanatory Clinical Trials
  - 3.2.2. Ethical Implications of Each Approach
  - 3.2.3. Critical Appraisal of the Methodology and Design of Each Type of Trial
  - 3.2.4. Application of Knowledge to Clinical Practice and Research
  - 3.2.5. Encouragement of Critical Thinking and Analytical Skills
  - 3.2.6. Design and Execution of Clinical Trials



- 3.8. Evaluation of the Quality of Care
  - 3.8.1. Quality Criteria and Standards from a Safety Point of View
  - 3.8.2. Evaluation from the Point of View of the Effectiveness of the Results Obtained through the Actions Evaluated and Their Components
  - 3.8.3. Measurement of Patient Outcomes and Experiences, Patient-Reported Outcome Measures (PROM) and Patient-Reported Experience Measures (PREM)
  - 3.8.4. Indicators for Assessing the Degree of Involvement, Participation and Satisfaction of Health Professionals
- 3.9. Incorporation of Patient Values and Preferences: Shared Decisions
  - 3.9.1. Effective Communication and Understanding of Values and Preferences
  - 3.9.2. Education and Counseling on Treatment Options
  - 3.9.3. Facilitation of Shared Decision Making
- 3.10. Patient Safety
  - 3.10.1. Identification and Recording of Adverse Events
  - 3.10.2. Analysis of Errors and Underlying Causes
  - 3.10.3. Implementation of Corrective Actions and Prevention Measures

“*This program will be vital for pharmacists seeking to broaden their understanding of disease prevention and management, both communicable and noncommunicable*”





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. Gervas, 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.



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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. 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.

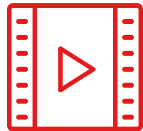
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

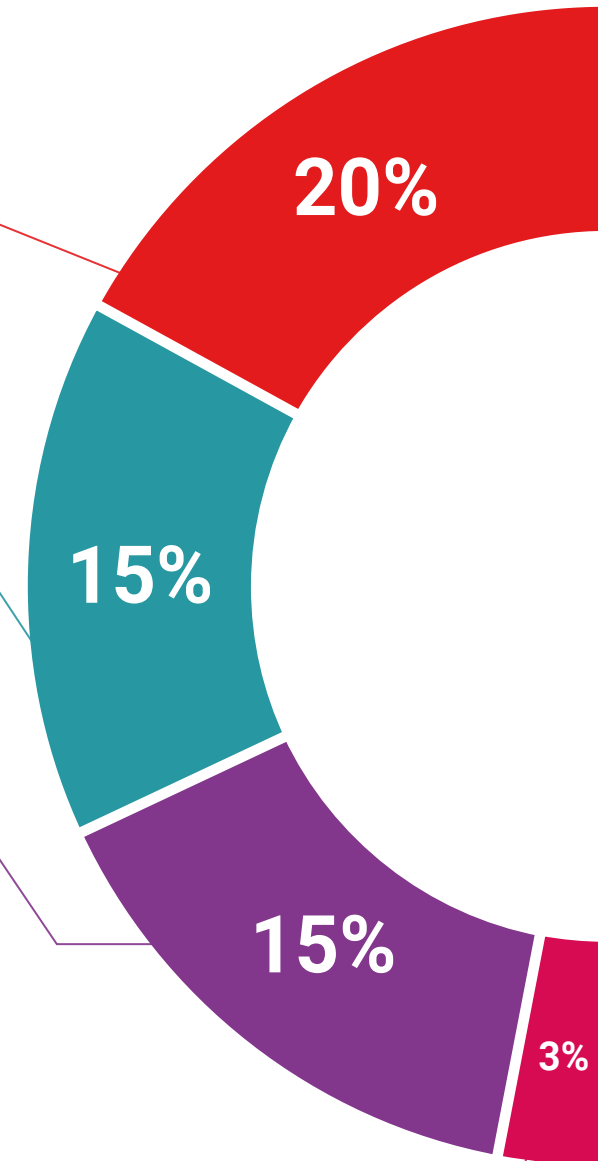
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

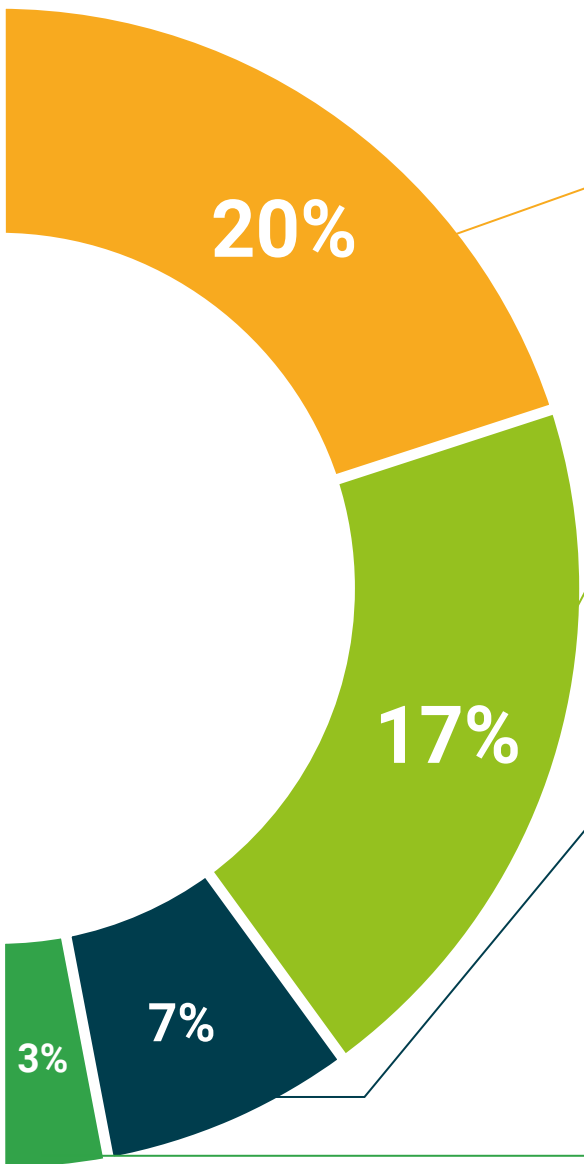
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



### 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 Public Health Surveillance guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 Diploma in Public Health Surveillance** 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 Public Health Surveillance**

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.

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom



## Postgraduate Diploma Public Health Surveillance

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

# Postgraduate Diploma Public Health Surveillance