



## Professional Master's Degree

## Public Health

- » Modality: online
- » Duration: 12 months.
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

 $We bsite: {\color{blue}www.techtitute.com/us/engineering/professional-master-degree/master-public-health}$ 

# Index

01		02			
Introduction		Objectives			
	p. 4		p. 8		
03		04		05	
Skills		Course Management		Structure and Content	
	p. 16		p. 20		p. 30
		06		07	
		Methodology		Certificate	
			p. 42		p. 50





## tech 06 | Introduction

In today's Public Health landscape, pharmacists occupy a pivotal role as a bridge between the community and healthcare services. From the promotion of vaccination to the management of medicines, these professionals play a crucial role in the protection and promotion of Public Health.

In this context, this program was conceived with the purpose of providing pharmacists with specialized, comprehensive and multidisciplinary training. Therefore, through a broad and integrative perspective, the fundamentals of Public Health in the 21st century will be addressed, such as surveillance, health promotion and protection, disease prevention, foreign health management and international health.

Likewise, this academic degree will guarantee a first class preparation in scientific and epidemiological methodology, focused on analyzing the distribution and determinants of health problems in the population, as well as on developing strategies for prevention and health control. In addition, the program will focus on the field of community health, emphasizing the reduction of inequalities through the creation of intervention and prevention programs at the community level.

Finally, the curriculum will cover global health challenges such as communicable diseases, malnutrition and barriers to accessing health services, with special attention to vulnerable groups such as children, the elderly and people with disabilities. It will also provide an update on crisis management and health emergencies, including the response to epidemics, natural disasters and acts of terrorism.

In view of this, an online academic program of excellence has been developed to adapt to the individual needs of students and avoid the difficulties associated with traveling to a physical campus and adjusting to a predetermined schedule. Additionally, the innovative Relearning methodology has been integrated, which implies the repetition of the fundamental concepts for an effective and natural assimilation of the contents.

This **Professional Master's Degree in Public Health** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of practical case studies presented by experts in health sciences
- The graphic, schematic and practical contents with which it is conceived provide scientific and practical information on those 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 address community health, with an emphasis on reducing inequalities through the implementation of prevention and intervention programs. What are you waiting for to enroll?"



You will analyze the distribution and determinants of population health problems, as well as the design of prevention and health control programs, through an 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.

You will delve into global Public Health challenges, such as communicable diseases, malnutrition and limited access to health services, with a focus on vulnerable groups. With TECH's quality guarantee!.

Take advantage of this opportunity that only TECH offers you! You will acquire up-to-date training in crisis management and health emergencies, including response to epidemics, natural disasters and terrorist acts.







## tech 10 | Objectives



### **General Objectives**

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







### **Specific Objectives**

#### Module 1. Public Health in the 21st Century

- Establish health as an integral and global concept and define the factors that influence it
- Establish the health determinants of greatest relevance in the current situation, historical evolution and lay the foundations for their future development
- Analyze the current models of international collaboration in health and their characteristics
- Examine the interactions between health, the health system, the environment and the social system
- Analyze current public health policies at the international level
- Review the legal, regulatory and institutional framework for health at the international level
- Recognize the political and governance functions, insurance and provision of public health services in any health system
- Determine the set of professional competencies required to work in public health services
- Incorporate the organizational perspective to the main challenges in Public Health, specifically climate change and pandemic
- Specify the objectives and evaluate the health impact of health and non-health interventions

#### Module 2. Communication and New Technologies in Public Health

- Analyze communication processes and their use in Public Health
- Evaluate the current presence of Public Health in the communication framework and develop strategies for its improvement
- Examine the different communication channels available for use in Public Health and define their use
- Substantiate the specific communication needs in crises with a health component and establish the essential factors for their best implementation

## tech 12 | Objectives

- Identify the key points for the use of SSRs as a tool for knowledge and intervention in Public Health
- Examine the technological developments available for use in community health
- Evaluate the use, usefulness, risks and benefits of new technologies available in Public Health
- Present the general framework of the use and future possibilities of Artificial Intelligence in Public Health

#### Module 3. Evaluation of Public Health Policies and Programs

- Justify the need for Public Health policy evaluation as an essential part of its development
- Identify the most appropriate models for evaluation in Public Health
- Examine and analyze qualitative and quantitative tools and their use in Public Health evaluation
- Establish the basic principles, methods of measurement and evaluation of health outcomes
- Define objectives, method and scope of the evaluation of public health plans
- Obtain a broad view of the design, decision, implementation and analysis phases of health policies
- Apply the methodology and tools available for the evaluation of specific cases of health plans and policies
- Have an objective and critical view on evaluation

#### Module 4. 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 5. 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

## tech 14 | Objectives

#### Module 6. 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 7. 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 8. 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

#### Module 9. Public Health in Situations of Vulnerability

- Analyze the main risks to the health of children and adolescents, as well as measures to avoid them
- Examine the influence of gender on health and wellbeing
- Substantiate the factors influencing worker's health in any field
- Establish the health needs and challenges in different multicultural settings

- Promote and maintain functional capacity for wellness in old age
- Compile the factors that affect mental health and improve its promotion, prevention and treatment
- Identify the developmental implications and the economic, social and medical consequences of the global burden of malnutrition
- Examine health needs and challenges in migrants and in the event of humanitarian crises and health emergencies

#### Module 10. Environmental Health

- Substantiate the interrelationship of health with its environmental determinants, to apply cross-cutting approaches, such as One Health
- Analyze the most significant risks of contaminants in drinking water and establish the key measures to ensure their contribution to the population
- Identify the hazards arising from the use of recreational waters and analyze the preventive measures necessary for the safe use of recreational waters
- Examine the main preventive measures to avoid the conditions that favor colonization, multiplication and dispersion of Legionella
- Substantiate the risk and impact of vectors and the diseases they transmit to develop and establish strategies and means of control
- Analyze the exposure to natural radioactivity, specifying actions to reduce exposure to radon



You will play an active role in community health promotion, health program management and evaluation of pharmaceutical interventions from a Public Health perspective"

# 03 **Skills**

With this program, graduates will acquire advanced skills in epidemiology, biostatistics and evaluation of health programs, which will enable them to understand and apply research methodologies in the field of population health. In addition, the development of leadership and management skills in health will be fostered, facilitating active participation in the planning, implementation and evaluation of health policies at the community and national levels. Likewise, the capacity of pharmacists to promote effective and evidence-based interventions to improve the quality of life of populations will be enhanced.



## tech 18 | Skills



#### **General Skills**

- Establish the relationships between health and the Sustainable Development Goals of the 2030 Agenda at all levels, beyond the SDGs3
- Design bidirectional communication strategies that allow the transfer of emerging health problems and their proposed solutions between the community and agents
- Develop strategies for the use of new technologies for use in Public Health, define structures and models that allow for agile and secure analysis and application
- Determine measures for the prevention and control of communicable and noncommunicable diseases
- Establish interventions to reduce morbidity, disability and mortality from communicable and non-communicable diseases
- Apply epidemiologic methods in clinical settings to conduct epidemiologic study design and studies in patients, interpretation of results, and application in clinical practice
- Contribute to clinical decision making based on epidemiologic evidence to inform and improve clinical decision making
- Identify public health problems and develop appropriate health promotion strategies to address these challenges
- Promote health equity by understanding existing disparities in access to health care and underlying social determinants

- Identify the difficulties encountered by different groups in obtaining appropriate health care
- Develop prevention strategies and establish a plan to respond effectively to the different situations of vulnerability at the global level
- Establish strategies for prevention, control and health surveillance of environmental hazards



You will design and implement prevention and health promotion programs in the community setting, as well as critically evaluate the effectiveness of pharmaceutical interventions in the context of Public Health"



- Design tools to facilitate decision making on the implementation and development of such interventions
- Develop monitoring, intervention and evaluation models for communicable diseases
- Develop a capable, robust and effective information system for evaluation and decision making
- Apply the methodology and tools available for the evaluation of specific cases of health plans and policies
- Carry out a critical analysis of indicators, as well as registries and evaluation systems
- Interpret epidemiological data related to chronic diseases
- Specify models for rapid and effective response to alerts, epidemic outbreaks and health emergencies
- Establish the main preventive measures for the control of viral hepatitis, HIV infection and AIDS, sexually transmitted infections and tuberculosis
- Generate specialized knowledge on preventive and control strategies for Meningococcal Disease and the main Zoonoses
- Apply knowledge to pragmatic and explanatory clinical trials in practice
- Integrate patient experience into clinical decision making, valuing communication and shared decisions
- Developing effective communication strategies adapted to different cultural and linguistic contexts to promote health literacy
- Research and develop new technologies and digital tools to improve health literacy and health promotion in digital environments

- Design and implement strategies based on Salutogenesis and health asset models to promote health and wellness in different settings and communities
- Manage and administer health projects at the local level, taking into account community participation and intersectoral coordination
- Apply the different methods of idea generation for the design of health promotion, health education and disease prevention campaigns
- Evaluate the effectiveness of health promotion campaigns through data collection and analysis, making adjustments as needed to improve results
- Determine mechanisms for health protection against risks from chemical substances and mixtures
- Infer the health effects of climate change to implement mitigation and adaptation strategies
- Define air quality by identifying health risks to establish prevention, control and communication systems





## tech 22 | Course Management

#### 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. Salmerón Ríos, Raúl

- National Head of the Public Health Working Group at SEMG
- President of the Board of Directors of SEMG of Castilla-La Mancha
- Family and Community Physician in the Rural Clinic of SESCAM
- Doctor in Health Sciences from the University of Castilla-La Mancha
- Master's Degree in Family Medicine Update from the University of Castilla-La Mancha
- Postgraduate Diploma in Pain Treatment, Biostatistics, Advanced Life Support, Geriatric Rehabilitation, Vision Sciences, Psychogeriatrics and Active Aging and Health from the International University Isabel I of Castilla-La Mancha
- Degree in Medicine and Surgery from the University of Zaragoza
- Member of: Society of Medicine and Surgery of Albacete and Royal Academy of Medicine of Castilla-La Mancha

#### 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 at the University Rey Juan Carlos
- Master's Degree in Palliative Care, Pontifical University of Salamanca
- Degree in Medicine and Surgery from Universidad La Salle, Mexico

#### 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 Prieur 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

## tech 24 | Course Management

#### 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. 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
- Degree in Medicine from the University of Santiago de Compostela

#### Dr. Montero Rubio, Juan Carlos

- Head of Section of Clinical and Environmental Microbiology at the Institute of Health Sciences, Castilla-La Mancha
- Doctor in the Department of Preventive Medicine and Public Health, Medical Immunology and Microbiology, Rey Juan Carlos University
- Master's Degree in Public Health, University Center of Public Health, Autonomous University of Madrid
- Master's Degree in Environmental Management, Institute of Ecological Research of Malaga, Open International University
- Doctorate in Biological Sciences from the Complutense University of Madrid.

#### 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)

#### Mr. Gago Gutiérrez, Roberto

- Environmental Health Inspector in the Official Pharmaceutical Services, Ávila
- Head of the Physical and Chemical Risk Assessment Section of the Environmental Health Service of the Castilla and León Regional Gorvernment
- Food Safety Inspector in the Official Pharmaceutical Services, Ávila
- Assistant Pharmacist in Pharmacy Office
- University Expert in Pharmaceutical Marketing from the UNED
- Degree in Pharmacy from the University of Salamanca.

#### Dr. Columé Díaz, Almudena

- Official Public Health Pharmacist in the Community Regional Government of Castilla-La Mancha
- Member of the Research Group Specialized in the Automation and Miniaturization of Analytical Techniques, at the University of Cordoba
- Doctorate in Chemistry from the University of Cordoba
- Degree in Pharmacy from the University of Seville
- Degree in Food Science and Technology, University of Córdoba

#### 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. 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

## tech 26 | Course Management

#### 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. 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

#### Ms. González Gascón y Marín, María Almudena

- Official Pharmacist of the Community Regional Government of Castilla-La Mancha
- First Prize for "Best Communication" of the Spanish Society of Environmental Health for the article "Ochratoxin A and residues of phytosanitary products in wines produced in the health districts of La Roda and Villarrobledo (Albacete)"
- Degree in Pharmacy from the Complutense University of Madrid
- Diploma in Advanced Studies in Preventive Medicine and Public Health, Complutense University of Madrid
- Collaboration grant at the European Food Safety Authority

#### 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

#### Ms. Martínez Domínguez, María Inmaculada

- Civil servant of the Superior Corps of Chemistry in the Community Regional Government of Castilla-La Mancha
- Consultant in the private sector, especially in activities related to food safety and development and implementation of HACCP system
- Master's Degree in Environmental Management from the Institute of Training and Employment
- Degree in Chemistry from the University of Castilla-La Mancha
- Degree in Food Science and Technology from the University of Castilla-La Mancha
- Diploma in Public Health from the National School of Health

#### 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. 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. 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. 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

## tech 28 | Course Management

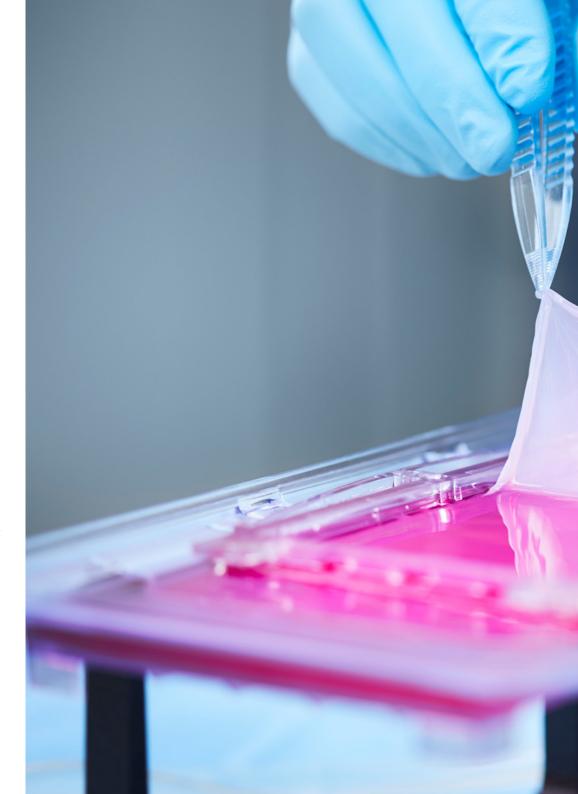
- Predoctoral Research Staff linked to research projects
- Doctorate in Biology at the University of Santiago de Compostela
- Degree in Biology from the University of Santiago de Compostela

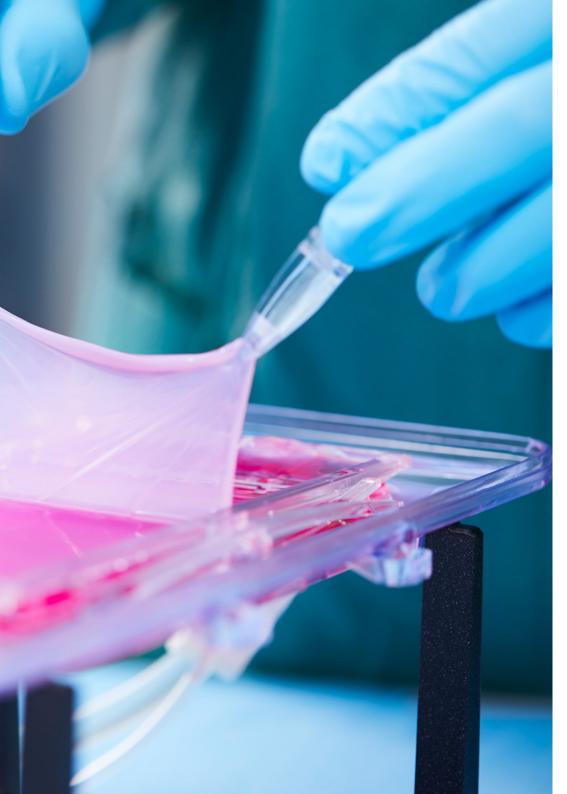
#### Dr. Losada Salamanca, Diana Carolina

- 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 from the Pontificia Universidad Javeriana

#### 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





## Course Management | 29 tech

#### 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

#### 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





## tech 32 | Structure and Content

#### Module 1. Public Health in the 21st Century

- 1.1. Health, a Global Public Asset
  - 1.1.1. Health: Concept, Limitations of Definitions and Evolution
  - 1.1.2. Health of the Individual, Public Health and Social Health
  - 1.1.3. Health in a Globalized World: Opportunities and Threats
- 1.2. Health Determinants: Past, Present and Future
  - 1.2.1. Models: Health Field, Social Determinants, Social Determination
  - 1.2.2. Structural, Intermediate and Proximal Determinants
  - 1.2.3. Health Determinants in the 21st Century: New Perspectives
- 1.3. Collaborative Culture at the International Level
  - 1.3.1. Structures and Institutions
  - 1.3.2. The Impulse of NGOs: Collaboration Channels and Weaknesses
  - 1.3.3. The Role of Private Actors in International Health Collaboration
- 1.4. Health and Sustainable Development
  - 1.4.1. Agenda 2030 and Sustainable Development Goals
  - 1.4.2. Health beyond SDG 3
  - 1.4.3. One Health: One Concept, One Voice, One Policy
- 1.5. New Profiles in Public Health (PH): Human Resources
  - 1.5.1. Data and Communication
  - 1.5.2. New Professional Profiles in PH: Technological, Social and Ethical
  - 1.5.3. Public Administrations Facing the Challenge of the New Profiles
- 1.6. Current Public Health Policies
  - 1.6.1. Public Health Strategies
  - 1.6.2. Public Health and Environmental Challenges
  - 1.6.3. Public Health in the Information Society
- 1.7. Public Health Impact Interventions
  - 1.7.1. Health Impact Assessment
  - 1.7.2. Decision Making and Prioritization of Interventions: Budgetary, Social and Ethical Aspects
  - 1.7.3. Success Stories

- 1.8. International Public Health Projects in Endemic Areas, Outbreaks and Epidemics
  - 1.8.1. Health Surveillance Strategies in the 21st Century
  - 1.8.2. The COVID19 Pandemic: A Before and After or Just a Temporary Change?
  - 1.8.3. International Collaboration in this Context
- .9. Management, Financing and Leadership in Public Health
  - 1.9.1. Public Health Management Models: Health Authority and Provision
  - 1.9.2. Agencies, Centers and Institutes
  - 1.9.3. Public Health Budgets: Decision Making and Management
- 1.10. Legal Aspects at the International Level in the Context of Public Health
  - 1.10.1. International Standards
  - 1.10.2. Right to Health: Perspective and Comparison
  - 1.10.3. International Health Regulations (IHR)

#### Module 2. Communication and New Technologies in Public Health

- 2.1. Communication Processes: Transparency, Trust and Communication Strategies in the Mass Media in Public Health
  - 2.1.1. The Communication Process in Public Health
  - 2.1.2. Communication in Health
  - 2.1.3. Agents of the Communication Process
- 2.2. Public Health Image, Reputation and Presence
  - 2.2.1. Public Health Image and Impact
  - 2.2.2. Reputation, Trust and Reliability. Importance in Effective Communication
  - 2.2.3. The Future of Public Health Image. Post-COVID 19 Scenario and Improvement Actions
- 2.3. Design of Effective Communication Strategies in Public Health
  - 2.3.1. Communication as a Tool for Public Health Policies, Programs and Interventions
  - 2.3.2. Reaction or Pro-action: Communication Planning
  - 2.3.3. Objective, Message, Channels and Agents
- 2.4. Communication Channels: Analysis, Use and Evaluation in Health
  - 2.4.1. Analysis of Health Communication Channels
  - 2.4.2. Strategies and Models for the Use of the Different Channels: Segmentation, Reach and Specific Use
  - 2.4.3. Preliminary Assessment of the Different Channels and Assessment of Interventions

- 2.5. Leadership and Communication Styles among Professionals: Coaching and Empowerment in Public Health
  - 2.5.1. Importance of Internal Communication. Factors, Styles and Models
  - 2.5.2. Training Models and Communication Empowerment between and by Health Professionals
  - 2.5.3. The Health Professional as the Axis of Communication: the Speaker in the White Coat and Its Particularities in Public Health
- 2.6. Communication in Crisis Situations for Public Health
  - 2.6.1. Crisis Communication and Communication Crises
  - 2.6.2. Key Factors in Health Crisis Communication: Coping with Uncertainty
  - 2.6.3. Strategies and Agents. The Spokesperson's Role
- 2.7. RRSS Research and Strategy to Improve Accessibility to Accurate and Reliable Information. Improving Health Literacy and Increasing Participation" Dejar el espacio en blanco"
  - 2.7.1. Health in Social Networks: Presence, Treatment, and Impact
  - 2.7.2. Social Networks as an Element of Knowledge and Intervention in Health
  - 2.7.3. Disinformation and Health Hoaxes
- 2.8. Research and Use of New Technologies for the Promotion of Health, Community Development and Empowerment of Community Associations
  - 2.8.1. New Technologies as a Tool for Health Equity
  - 2.8.2. Threats and Risks of New Health Technologies
  - 2.8.3. Practical Application
- 2.9. Quality Analysis: Contribution of New Technologies
  - 2.9.1. Technology Assessment: Objectives, Challenges and Tools
  - 2.9.2. Ethical Factors in the Application of New Technologies in Public Health
  - 2.9.3. Technological Acceleration: Planning in Innovation
- 2.10. Development of Internet of Things Projects in Epidemiology and Public Health and Other Emerging Projects
  - 2.10.1. Internet of Things (IoT): Balancing Knowledge and Privacy
  - 2.10.2. Real-life Data and Real-time Data: Sources, Analysis, Processing, and Use for Knowledge and Decision-Making
  - 2.10.3. Artificial Intelligence in Public Health

#### Module 3. Evaluation of Public Health Policies and Programs

- 3.1. Evaluation of Public Health Policies
  - 3.1.1. Public Health Assessment. Historical Framework
  - 3.1.2. International Framework
  - 3.1.3. Present and Future of Public Health Assessment
- 3.2. Methodological Aspects of Public Health Assessment
  - 3.2.1. Assessment Dimensions
  - 3.2.2. Assessment Objectives, Design and Procedure
  - 3.2.3. Oualitative and Ouantitative Methods
- 3.3. Health Information Systems Based on Management Indicators. Development of Indicators
  - 3.3.1. Information Systems Models
  - 3.3.2. Design and Construction of an Information System Useful for Decision-Making
  - 3.3.3. Future of IS: Technical, Ethical and Usability Issues
- 3.4. Qualitative and Quantitative Tools in the Evaluation of Health Programs
  - 3.4.1. Qualitative Methods
  - 3.4.2 Quantitative Methods
  - 3.4.3. Choice, Advantages and Difficulties
- 3.5. Evaluation and Critical Analysis of Health Outcomes
  - 3.5.1. Data: Sources, Usefulness and Ethical-Legal Factors
  - 3.5.2. Measurement and Analysis Models
  - 3.5.3. Use and Limitations of Health Outcomes
- 3.6. Satisfaction of Patients, Staff, Providers, and Environment. Analysis and Improvement Cycles
  - 3.6.1. Dimensions of Satisfaction. Perceived Quality
  - 3.6.2. PROMS and PREMS. External and Internal Customer Satisfaction
  - 3.6.3. Improvement Cycles: PDCA, DMAIC
- 3.7. Evaluation of Public Health Programs
  - 3.7.1. Evaluation Objectives
  - 3.7.2. Evaluation Models
  - 3.7.3. Implementation, Re-design and Measurement of PH Interventions

## tech 34 | Structure and Content

- 3.8. Health Policy Assessment
  - 3.8.1. Health in All Policies
  - 3.8.2. Health Impact Assessment
  - 3.8.3. Existence or Absence of Non-Health Policies
- 3.9. Health Program Studies
  - 3.9.1. Evaluation of Immunization Programs
  - 3.9.2. Screening Program Assessment
  - 3.9.3. Environmental Policy Evaluation
- 3.10. Assessment Plan Analysis
  - 3.10.1. The Figure of the Evaluator
  - 3.10.2. Who Monitors the Monitors
  - 3.10.3. Evaluation Policies and Policy Evaluation

#### Module 4. Public Health Monitoring

- 4.1. Public Health Protection, Prevention and Surveillance: Classification, Evaluation, Management, Control and Risk Communication
  - 4.1.1. Health Protection and Prevention
  - 4.1.2. Health Surveillance and Risk Management
  - 4.1.3. Risk Communication. Mechanisms and Limitations
- 4.2. Self-control and Surveillance Systems: Hazard Analysis and Critical Control Points
  - 4.2.1. Establishment of Preventive Protocols
  - 4.2.2. Risk Identification and Assessment
  - 4.2.3. Implementation and Follow-up. Control Points
- 4.3. Research and Critical Analysis of Process and Result Indicators, Records, and Evaluation Systems Development and Innovation
  - 4.3.1. Research and Analysis of Indicators
  - 4.3.2. Recording and Evaluation for Efficient Data Management
  - 4.3.3. Innovation in Evaluation Systems
- 4.4. Research in the Design, Implementation, and Impact Evaluation of Health Protection and Prevention Programs
  - 4.4.1. Mechanisms for the Design of Health Protection and Prevention Programs
  - 4.4.2. Implementation of Health Protection and Prevention Programs
  - 4.4.3. Analysis of the Impact of Health Protection and Prevention Programs

- 4.5. Analysis and Interpretation of Epidemiological Data on Environmental Health: Surveillance, Estimation, Plans and Programs
  - 4.5.1. Importance of Environmental Health in Human Health
  - 4.5.2. Exploration of Environmental Epidemiological Data
  - 4.5.3. Practical Application of Environmental Data Analysis
- 4.6. Interpretation of Epidemiological Data on Chronic Diseases and Planning: Surveillance, Estimation, Plan Design, Programs and Screening
  - 4.6.1. Epidemiological Analysis of Chronic Diseases. Importance of Follow-up
  - 4.6.2. Design and Development of Interventions for Chronic Diseases
  - 4.6.3. Epidemiological Surveillance and Disease Load Analysis
- 4.7. Research in Primary Prevention of Chronic Diseases: Health Protection
  - 4.7.1. Research in Primary Prevention of Chronic Diseases
  - 4.7.2. Applied Research in Prevention and Health Protection
  - 4.7.3. Impact Evaluation and Communication of Results
- 4.8. Innovation in Pharmacovigilance Monitoring and Prevention Systems: Alerts and Preventive Interventions
  - 4.8.1. Importance of Pharmacovigilance. Safety in the Use of Medications
  - 4.8.2. Advances in Pharmacovigilance Monitoring Systems
  - 4.8.3. Risk Prevention through Preventive Interventions
- 4.9. Models of Response to Alerts, Epidemic Outbreaks and Emergencies Development of Protocols and Procedures
  - 4.9.1. Response Strategies for Health Emergencies
  - 4.9.2. Development of Crisis Management Protocols
  - 4.9.3. Implementation and Evaluation of Emergency Response
- 4.10. International Health and Innovation in International Cooperation for Epidemiological Surveillance
  - 4.10.1. International Health Global Perspective on Epidemiological Surveillance
  - 4.10.2. Innovation in International Cooperation for Epidemiological Surveillance
  - 4.10.3. Challenges and Future of International Health Cooperation

## **Module 5.** Epidemiology and Prevention of Communicable and Non-Communicable Diseases

- 5.1. Epidemiology of Cancer: Risk Factors and Prevention Primary
  - 5.1.1. Descriptive Epidemiology: Incidence, Mortality and Data Sources
  - 5.1.2. Cancer Risk Factors: Environmental and Occupational
  - 5.1.3. Other Factors: Ultraviolet Light, Infections, Radiations
- 5.2. Risk Factors and Primary Prevention of Cancer: Lifestyle and Screening
  - 5.2.1. Primary Prevention. Risk Factors and Prevention Strategies
  - 5.2.2. Legislative Measures
  - 5.2.3. Secondary Prevention
- 5.3. Biological Mechanisms of Cardiovascular Diseases. Estimation of Cardiovascular Risk and Population Prevention"Dejar el espacio en blanco"
  - 5.3.1. Ischemic Heart Disease and Stroke
  - 5.3.2. Epidemiological Indicators
  - 5.3.3. Classification of Cardiovascular Risk
- 5.3.4. Prevention and Control of Cardiovascular Diseases
  - 5.4. Detection of Rare Diseases and Neonatal Screening
  - 5.4.1. Rare Diseases
  - 5.4.2. Newborn Screening Programs
  - 5.4.3. Neonatal Screening for Congenital Metabolic and Endocrinologic Diseases
- 5.5. Comprehensive Approach to Chronic Disease Prevention for Healthy and Sustainable Aging
  - 5.5.1. Healthy Aging
  - 5.5.2. Active Aging
  - 5.5.3. Integrated Prevention
- 5.6. Epidemiology of Communicable Diseases: Epidemiological Surveillance Systems and Notifiable Diseases Systems
  - 5.6.1. Causative Agents
  - 5.6.2. Time Periods
  - 5.6.3. Transmission
  - 5.6.4. Host and Susceptible Population
  - 5.6.5. Epidemiological Surveillance Systems

- 5.7. Utility of Vaccines in the Prevention of Immuno-Preventable Infectious Diseases
  - 5.7.1. Analysis of the Importance of Vaccination in the Prevention of Infectious Diseases at the Individual and Community Levels
  - 5.7.2. Evolution of Vaccines: Types of Vaccines Currently Available
  - 5.7.3. Mechanisms of Action of Vaccines and Their Impact on the Immune System
  - 5.7.4. Efficacy and Safety of Vaccines in the Prevention of Infectious Diseases
  - 5.7.5. Importance of Vaccination in Risk Groups and in the Prevention of Epidemics
  - 5.7.6. Logistics and Vaccination Programs at the International Level
  - 5.7.7. Economic and Social Impact of Vaccination in the Prevention of Infectious Diseases
  - 5.7.8. Research and Analysis of Barriers and Challenges in the Implementation of Vaccination Programs
  - 5.7.9. Strategies and Measures to Promote Vaccination and Raise Public Awareness of its Importance
  - 5.7.10. Evaluation and Critical Analysis of the Scientific Literature Related to Vaccines and their Usefulness in the Prevention of Infectious Diseases
- 5.8. Emerging Diseases. Epidemic Outbreaks
  - 5.8.1. Factors Favoring Emerging Diseases
  - 5.8.2. New Agents and Diseases
  - 5.8.3. International Health Regulations (IHR)
  - 5.8.4. Epidemic Outbreaks. Study, Control and Measures: Chemoprophylaxis, Immunoglobulins and Vaccines"Dejar el espacio en blanco"
- 5.9. Viral Hepatitis, HIV infection, AIDS, Sexually Transmitted Infections (STIs) and Tuberculosis
  - 5.9.1. Hepatitis A: Etiology, Epidemiology and Preventive Measures
  - 5.9.2. Hepatitis B: Etiology, Epidemiology and Preventive Measures
  - 5.9.3. Other Viral Hepatitis: Etiology, Epidemiology and Preventive Measures
  - 5.9.4. HIV: Etiology, Epidemiology and Preventive Measures
  - 5.9.5. Sexually Transmitted Infections (STIs): Etiology, Epidemiology, Epidemiology and Preventive Measures
  - 5.9.6. Tuberculosis: Etiology, Epidemiology and Preventive Measures
- 5.10. Meningococcal Disease (MD) and Zoonosis: Epidemiology. Prevention and Control
  - 5.10.1. Epidemiology of Meningococcal Disease

## tech 36 | Structure and Content

- 5.10.2. Prevention and Control of Meningococcal Disease
- 5.10.3. Epidemiology of Zoonoses
- 5.10.4. Prevention and Control of Zoonoses

#### Module 6. Clinical Epidemiology

- 6.1. Design and Quality Assessment of Intervention Studies in Epidemiology
  - 6.1.1. Intervention Studies, Types and Key Elements of Design
  - 6.1.2. Ethical Aspects of Intervention Research
  - 6.1.3. Design of Specific intervention Studies
  - 6.1.4. Tools for Assessing the Quality of Intervention Studies
  - 6.1.5. Critical Appraisal of Intervention Studies
  - 6.1.6. Importance of Design and Quality Assessment
- 6.2. Pragmatic vs. Explanatory Randomized Clinical Trials
  - 6.2.1. Differentiation between Pragmatic and Explanatory Clinical Trials
  - 6.2.2. Ethical Implications of Each Approach
  - 6.2.3. Critical Appraisal of the Methodology and Design of Each Type of Trial
  - 6.2.4. Application of Knowledge to Clinical Practice and Research
  - 6.2.5. Encouragement of Critical Thinking and Analytical Skills
  - 6.2.6. Design and Execution of Clinical Trials
- 6.3. Design of Diagnostic Test Studies
  - 6.3.1. Selection of the Study Population and Definition of the Inclusion and Exclusion
  - 6.3.2. Determination of the Study Design and Selection of the Reference Methodology
  - 6.3.3. Calculation of Diagnostic Accuracy and Analysis of the Results
- 6.4. Evaluation of Quality of a Diagnostic Test Study
  - 6.4.1. Study Validity Analysis
  - 6.4.2. Evaluation of the Accuracy of the Diagnostic Test
  - 6.4.3. Analysis of the Clinical Utility of the Diagnostic Test
- 6.5. Design and Quality Assessment of Prognostic Factors Studies
  - 6.5.1. Selection and Definition of Prognostic Factors
  - 6.5.2. Study Design and Selection of the Study Population
  - 6.5.3. Evaluation of the Quality of the Study and the Prognostic Model
- 6.6. Evidence-Based Clinical Recommendations: GRADE 1

- 6.6.1. Systematic Reviews of Scientific Literature. Identification of Clinical Recommendations
- 6.6.2. Quality of Evidence and Strength of Recommendations
- 6.6.3. Clinical Recommendations Applicable to Clinical Practice
- 6.6.4. Development of a Clinical Protocol or Clinical Guideline based on the Recommendations Identified
- 6.6.5. Implementation and Follow-up of the Clinical Protocol or Guideline in Patient Care Evidence and Focus on Improving Clinical Outcomes
- 5.6.6. Periodic Evaluation, through Monitoring of Clinical Outcome Indicators and Feedback to the Health Professionals Involved
- 6.7. Evidence-Based Clinical Recommendations: GRADE 2
  - 6.7.1. Analysis and Synthesis of the Evidence Available in the Scientific Literature for the Development of Recommendations
  - 6.7.2. Identification and Evaluation of the Quality of the Relevant Studies Supporting the Clinical Recommendations
  - 6.7.3. Application of the Principles of the GRADE Methodology to Establish the Strength and Certainty of Clinical Recommendations
  - 6.7.4. Developing Clinical Practice Guidelines that Incorporate Evidence-Based Recommendations and are Useful for Decision-Making
  - 6.7.5. Regular Updating and Revision of Clinical Recommendations Based on Available Scientific Evidence
- 6.8. Evaluation of the Quality of Care
  - 6.8.1. Quality Criteria and Standards from a Safety Point of View
  - 6.8.2. Evaluation from the Point of View of the Effectiveness of the Results Obtained through the Actions Evaluated and Their Components
  - 6.8.3. Measurement of Patient Outcomes and Experiences, Patient-Reported Outcome Measures (PROM) and Patient-Reported Experience Measures (PREM)
  - 6.8.4. Indicators for Assessing the Degree of Involvement, Participation and Satisfaction of Health Professionals
- 6.9. Incorporation of Patient Values and Preferences: Shared Decisions
  - 6.9.1. Effective Communication and Understanding of Values and Preferences
  - 6.9.2. Education and Counseling on Treatment Options
  - 6.9.3. Facilitation of Shared Decision Making
- 6.10. Patient Safety

## Structure and Content | 37 tech

- 6.10.1. Identification and Recording of Adverse Events
- 6.10.2. Analysis of Errors and Underlying Causes
- 6.10.3. Implementation of Corrective Actions and Prevention Measures

## Module 7. Epidemiology Research Methodology

- 7.1. Biostatistics: Univariate, Bivariate and Multivariate Analysis
  - 7.1.1. Types of Variables
  - 7.1.2. Normality Study of a Distribution. Parametric and Non-Parametric Statistics
  - 7.1.3. Dependent and Independent Variables. Confounding Factors
  - 7.1.4. Identification of the Necessary Statistical Tests
- 7.2. Models and Methods in Multivariate Statistics of Dependence and Interdependence: Statistical Inference. Standardization and Prediction. Multiple Linear Regression. Regression and Cluster Analysis
  - 7.2.1. Multivariate Models
  - 7.2.2. Multivariate Models: Multiple Linear Regression
  - 7.2.3. Cluster Analysis
- 7.3. Models and Methods in Multivariate Structural Statistics: Logistic Regression, Poisson Regression, Survival Analysis and Longitudinal Data. Kaplan-Meier and Log-Rank Statistics
  - 7.3.1. Multivariate Models: Logistic Regression
  - 7.3.2. Kaplan-Meier and Log-Rank Survival Analysis
  - 7.3.3. Poisson Regression
- 7.4. Incidence and Prevalence Models in Public Health
  - 7.4.1 Incidence Studies
  - 7.4.2. Prevalence Studies
  - 7.4.3. Risk Analysis
- 7.5. Computer Software: Advanced Statistical Analysis with SPSS Package
  - 7.5.1. Statistical Packages: R®, STATA® and Epidat®
  - 7.5.2. Use of the SPSS® Package
  - 7.5.3. Interpretation of the Results of Statistical Analyses Performed by SPSS® and Evidence-Based Decision-Making
  - 7.5.4. Effective Communication of Statistical Findings to Specialized and Non-Specialized Audiences
- Qualitative Methodology applied to Public Health: Theoretical, Conceptual, and Ethical Aspects
  - 7.6.1. Qualitative Evaluation Applied to Public Health

- 7.6.2. Techniques of Qualitative Research Applied to Public Health
- 7.6.3. Collection, Analysis and Interpretation of Qualitative Data in Public Health Studies: Validity, Reliability and Generalization of the Results
- 7.6.4. Ethical Principles: Protecting Participant Confidentiality and Managing Potential Ethical Conflicts
- 7.6.5. 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
- 7.7. Design and Phases of Qualitative Research in Public Health. Sample Designs
  - 7.7.1. Design and Phases of Qualitative Research
  - 7.7.2. Sampling
  - 7.7.3. Elaboration and Justification of Data Collection Instruments
  - 7.7.4. Data Analysis Process
  - 7.7.5. Establishment and Justification of the Validity and Reliability Criteria of the Research
  - 7.7.6. Design and Justification of the Communication and Dissemination of Results Plan
- 7.8. Designs of Interest for Public Health. Information Collection Techniques
  - 7.8.1. Sampling
  - 7.8.2. Surveys. Design of Surveys
  - 7.8.3. Validation of Ouestionnaires
- 7.9. Analysis and Interpretation of Results. Digital Analysis of Qualitative Data
  - 7.9.1. Text Analysis Software
  - 7.9.2. Data Visualization Software
  - 7.9.3. QDA (Qualitative Data Analysis) Software
  - 7.9.4. Artificial Intelligence Applied to Qualitative Studies
- 7.10. Evaluation, Rigor, and Ethics in Qualitative Research in Public Health
  - 7.10.1. Ethical Principles of Research
  - 7.10.2. International Legislation and Regulations
  - 7.10.3. Healthcare Ethics Committees

#### Module 8. Health Promotion and Evaluation

8.1. Health Literacy and Development of Literacy Tools and Models

## tech 38 | Structure and Content

- 8.1.1. Relationship between Literacy and Health. Improving Health Outcomes of the Population
- 8.1.2. Design and Implementation of Health Literacy Programs for Vulnerable Groups and Marginalized Communities
- 8.1.3. Effective Communication Strategies Adapted to Different Cultural and Linguistic Contexts
- 8.1.4. Evaluating the Effectiveness of Health Literacy Programs through the Application of Appropriate Evaluation Tools and Models
- 8.1.5. Integrating Health Literacy into Public Health Policies and Programs
- 8.1.6. Research and Development of New Technologies and Digital Tools to Improve Health Literacy and Promotion in Digital Environments
- 8.2. Salutogenesis, a Health Assets Model
  - 8.2.1. Salutogenesis: Health Promotion Approach
  - 8.2.2. Health Asset Models
  - 8.2.3. Practical Applications of Health Asset Models in the Planning, Implementation, and Evaluation of Health Promotion Interventions
  - 8.2.4. Evaluation of the Effectiveness and Relevance of Health Asset Models in Different Contexts and Populations
  - 8.2.5. Design and Implementation of Salutogenesis-based Strategies and Health Asset Models to Promote Health and Wellness in Different Settings and Communities
- 8.3. Community Intervention and Community-oriented Primary Care
  - 8.3.1. The Scope of Community Intervention and Primary Care: Health and Wellness Promoters in the Population
  - 8.3.2. Implementation and Evaluation of Community Intervention Projects in Different Contexts and Populations: Principles of Equity, Participation and Sustainability
  - 8.3.3. Comprehensive Approach: Networking and Interdisciplinary Collaboration between Health Professionals, Social Services, Education and other Sectors
  - 8.3.4. Tools and Strategies for Health Promotion, Disease Prevention and the Promotion of Healthy Lifestyles in the Community
  - 8.3.5. Importance of Participation, Community Empowerment, and Health Equity: Fundamental Principles for the Improvement of the Quality of Life of the Population
  - 8.3.6. Identifying and Addressing the Social Determinants of Health and Health Inequalities: Equity and Justice in Access to Health Services and Well-Being
  - 8.3.7. 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

- 8.4. Community Intervention Programs with an Ethical and Equitable Perspective
  - 8.4.1. Ethics in Public Health
  - 8.4.2. Principles of Equity in Community Intervention
  - 8.4.3. 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
  - 8.4.5. Implementation of e-Health Strategies in Community Intervention Programs
- 8.5 Health Promotion and Protection at the Local Level from an International Approach
  - 8.5.1. Intersectoriality
  - 8.5.2. Social Map
  - 8.5.3. Social Actors of the Community from Different Sectorial Spheres and the Administration
  - 8.5.4. Research Guidelines, Time, Universe, and Sample
  - 8.5.5. Universal, Replicable and Multicenter Collaborative Models
  - 8.5.6. Indicators of Assessment
  - 8.5.7. Research and Action on Replicable Collaborative Models
- 8.6. Research in Social and Community Participation
  - 8.6.1. Community and Social Participation
  - 8.6.2. Research and Action in Community and Social Participation
  - 8.6.3. Interdiscipline, Transdiscipline, Eco-environmental, Sustainable and Maintainable
  - 8.6.4. Key Families and Strategic Groupings in the Community
  - 8.6.5. Research Rationale and Action Appropriate to Each Site
  - 8.6.6. Ouantitative and Oualitative Evaluation Measures
  - 8.6.7. Focus Groups
  - 8.6.8. Indicators and Utilization
  - 8.6.9. Strategic Indicators Appropriate to Each Site
  - 8.6.10. Health Team Participating in Research and Action
  - 8.6.11. The Scope of Research and Action
  - 8.6.12. Evaluation of the Sample
- 8.7. Methods of Idea Generation and Design of Health Promotion/Health Education (HPE) Campaigns
  - 8.7.1. Methods for Generating Ideas for the Design of Health Promotion, Health

- Education, and Disease Prevention Campaigns
- 8.7.2. 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
- 8.7.3. Creative Tools and Techniques to Generate Innovative and Effective Ideas in the Design of Health Promotion Campaigns
- 8.7.4. Educational Messages and Materials: Clear, Informative and Persuasive
- 8.7.5. Evaluating the Effectiveness of Health Promotion Campaigns: Adjustments to Improve Results
- 8.8. Complex Models and Methods in Health Education
  - 8.8.1. Theory of Change: Determinants of Human Behavior and Strategies to Change Them towards Healthier Behaviors
  - 8.8.2. Social Determinants of Health Approach: Socio-political, Economic and Cultural Factors Influencing the Health of Populations. Addressing Inequities
  - 8.8.3. Community Empowerment Models: Strengthening Communities to Make Healthy Decisions and Achieve Positive Changes in their Environment
  - 8.8.4. Theories of Health Behavior: Beliefs, Attitudes and Motivations of People
  - 8.8.5. Participatory Methods in Health Education: Involving People and Communities in Designing, Implementing and Evaluating Health Programs. Collaboration and Autonomy
- 8.9. Elaboration, Development, and Design of Health Education Programs
  - 8.9.1. Design and Elaboration of Health Education Programs: Identification of Needs, Formulation of Objectives, Selection of Intervention Methods and Strategies, and Planning of Activities
  - 8.9.2. Implementation Strategies: Accessibility, Equity and Sustainability of Health Programs
  - 8.9.3. Partnerships and Collaborations with Relevant Institutions and Organizations to Strengthen the Implementation of Health Programs
  - 8.9.4. Continuous and Systematic Evaluation of the Implementation of Health Programs: Identification of Challenges, Necessary Adjustments, and Opportunities for Improvement
  - 8.9.5. Active Community Involvement in the Implementation of Health Programs: Encouraging Community Ownership and Sustainability of the Actions Carried out"Dejar el espacio en blanco"
  - 8.9.6. Ethical Principles Governing the Implementation of Health Education Programs: Ethics and Accountability to Communities and Beneficiary Populations

- 8.10. Research and Evaluation of the Impact of Collaborative and Educational Models
  - 8.10.1. Health Research: Protocol Development, Data Collection and Analysis, and Scientific Report Writing
  - 8.10.2. Evaluation of the Impact of Educational Programs on Population Health, Use of Qualitative and Quantitative Assessment Tools
  - 8.10.3. Importance of Interdisciplinarity in the Design and Evaluation of Educational Projects in Health Collaboration between Professionals as an Enhancer of Results
  - 8.10.4. Effective Communication of Research and Evaluation Results to Health Sector Professionals and to the Community in General

## Module 9. Public Health in Situations of Vulnerability

- 9.1. Children and Health
  - 9.1.1. Environmental Threats
  - 9.1.2. Obesity and Non-Communicable Diseases
  - 9.1.3. Trauma, Violence and Conflict
- 9.2. Adolescence and Health
  - 9.2.1. Sexual and Reproductive Health: Contraception, Communicable Diseases, Sexual Abuse, Partner Violence
  - 9.2.2. Traffic Accidents, Suicide, and Interpersonal Violence
  - 9.2.3. Abuse of Psychoactive Substances
  - 9.2.4. Nutrition and Physical Activity
- 9.3 Health and Gender
  - 9.3.1. Gender as a Determinant of Health Inequity
  - 9.3.2. Intersectionality
  - 9.3.3. Gender-Based Violence
- 9.4. Occupational Health
  - 9.4.1. Mental Health in the Workplace
  - 9.4.2. Healthy Teleworking
  - 9.4.3. Occupational Hazards in Health Care Workers
- 9.5. Health in Multicultural Contexts
  - 9.5.1. Cultural Validation and Negotiation
  - 9.5.2. Multilingual Communication
  - 9.5.3. The COVID-19 Pandemic as an Exacerbator of Inequalities
- 9.6. Health and Aging

## tech 40 | Structure and Content

- 9.6.1. Healthy Aging. Decade of Healthy Aging
- 9.6.2. Geriatric Syndromes
- 9.6.3. Integrated Care and Primary Health Care Centered on the Elderly Person
- 9.7. Health and Mental Well-Being
  - 9.7.1. Determinants of Mental Health
  - 9.7.2. Mental Health Promotion and Prevention of Mental Health Conditions
  - 9.7.3. Mental Health Care and Treatment
- 9.8. Nutritional Problems and Their Effects on Global Health
  - 9.8.1. Malnutrition: Undernutrition, Vitamin and Mineral Imbalance, Overweight and Obesity
  - 9.8.2. Diet-Related Non-Communicable Diseases: Diabetes, Hypertension, Heart Disease, Stroke and Cancer"Dejar el espacio en blanco"
  - 9.8.3. Healthy Diet
  - 9.8.4. Nutritional Safety vs. Food Safety
- 9.9. Migration and Health. Health in Emergencies and Humanitarian Crises
  - 9.9.1. Common Health Needs and Vulnerabilities of Refugees and Migrants
  - 9.9.2. Barriers to Access to Services for Refugees and Migrants
  - 9.9.3. Preparedness and Resilience to Emerging Threats (PRET) Initiative
- 9.10. Communicable and Non-Communicable Diseases
  - 9.10.1. Sexually Transmitted Infections (STI). Controlling the Spread on a Global Scale
  - 9.10.2. Communicable Diseases. Measures against Risk Factors
  - 9.10.3. Vector-Borne Diseases

### Module 10. Environmental Health

- 10.1. Environmental Health: Health Impact Assessment. One Health Approach
  - 10.1.1. Environmental Health through Environmental Determinants of Health
  - 10.1.2. Interaction of Health and Environment with One Health Approach
  - 10.1.3. Health in All Policies. Health Impact Assessment Tools
- 10.2. Water Quality: Supply
  - 10.2.1. Sanitary Quality of Water: Sources of Contamination and Health Risks Emerging Contaminants
  - 10.2.2. Infrastructures of Water Supplies for Human Consumption

- 10.2.3. Drinking Water Treatment. Products for the Treatment of Drinking Water
- 10.2.4. Quality Control of Water for Human Consumption
- 10.2.5. Disinfection By-products
- 10.2.6. Communication of Water Quality to the Population
- 10.3. Water Quality. Recreational Waters: Swimming Pools and Bathing Waters
  - 10.3.1. Risks Associated with the Use of Recreational Waters
  - 10.3.2. Requirements for Swimming Pool and Aquatic Park Facilities
  - 10.3.3. Treatments to Ensure Water and Air Quality Products
  - 10.3.4. Control of the Sanitary Quality of Water and Air
  - 10.3.5. Bathing Water Quality Requirements
  - 10.3.6. Measures to Prevent Bathing Water Contamination
  - 10.3.7. Surveillance and Sanitary and Environmental Control of Bathing Water
  - 10.3.8. Communication of Risks to the Population
- 10.4. Environmental Management of Legionellosis
  - 10.4.1. Bacteria from an Environmental Health Perspective
  - 10.4.2. Installations and Equipment Involved and Preventive Measures
  - 10.4.3. Control Strategies and Responsibilities
  - 10.4.4. Examples of Cases and Outbreaks. Lessons Learned
- 10.5. Public Health and Chemical Safety
  - 10.5.1. International Chemical Risk Management
  - 10.5.2. Hazard Classification and Hazard Communication: Labeling and Safety Data Sheets
  - 10.5.3. Registers for the Protection of Human Health and the Environment against Chemical Hazards. Evaluation, Authorization and Restrictions of Chemical Substances and Mixtures
  - 10.5.4. Biocides. Administrative Control over Activities and User"Dejar el espacio en blanco"
- 10.6. Environmental Management of Vector-borne Diseases
  - 10.6.1. Main Vectors
  - 10.6.2. Impact on Health
  - 10.6.3. Vector Control Strategies
- 10.7. Public Health Impact of Contaminated Soil, Solid Waste and Contaminated Wastewater 10.7.1. Contaminating and Emerging Sources



## Structure and Content | 41 tech

- 10.7.2. Pollution Prevention Measures
- 10.7.3. Monitoring Systems and Control Strategies
- 10.8. Monitoring and Control of Physical Contamination and Natural Radioactivity to Protect Public Health
  - 10.8.1. Natural Radioactivity
  - 10.8.2. Routes of Exposure
  - 10.8.3. Radioactivity in Drinking Water and its Regulation
  - 10.8.4. Radon as a Parameter in Indoor Air Quality and its Management
- 10.9. Public Health Protection. Air Quality: Atmospheric Pollution
  - 10.9.1. Air Quality Analysis
  - 10.9.2. Pollutant Sources and Health Risks Associated with Air Quality
  - 10.9.3. Monitoring Systems and Control Strategies
  - 10.9.4. Communication of Risks to the Population
- 10.10. Climate Change and Health
  - 10.10.1 Climate Change
  - 10.10.2. Actions to Address Climate Change
  - 10.10.3. Influence of Climate Change and Health
  - 10.10.4. Climate Change and Social Determinants of Health

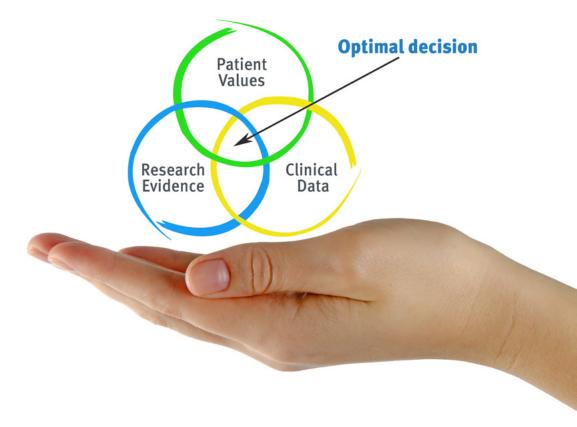


## tech 44 | Methodology

## 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.



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:

- 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.



## Methodology | 47 tech

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.

## tech 48 | Methodology

## 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 adapted in 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.

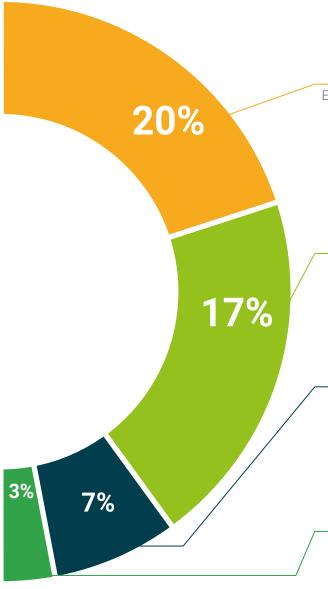
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



## **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**

The student's knowledge is periodically assessed and re-assessed throughout the program, through evaluative and self-evaluative activities and exercises: in this way, students can check how they are doing in terms of achieving their goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.





#### **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.







## tech 52 | Certificate

This private qualification will allow you to obtain a **Professional Master's Degree diploma 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.



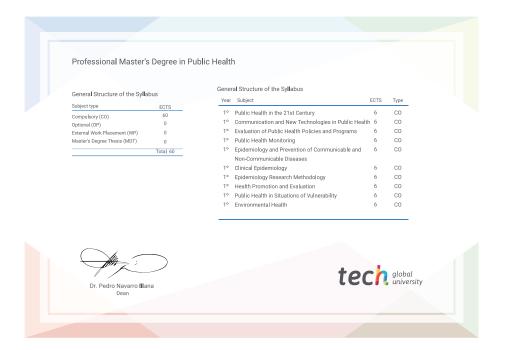
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Professional Master's Degree in Nombre del Programa

Modality: online

Duration: 12 months

Accreditation: 60 ECTS



<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

health confidence people information tutors guarantee accreditation feaching technology learning community community community to the technology learning technology.



# Professional Master's Degree

Public Health

- » Modality: online
- » Duration: 12 months.
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

