Postgraduate Diploma

Epidemiological Surveillance

tech global university

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Postgraduate Diploma
Epidemiological Surveillance

- Modality: **online**
- Duration: **6 months.**
- Certificate: **TECH Global University**
- Accreditation: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-epidemiological-surveillance

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01

Introduction

Epidemiological Surveillance is an essential discipline in the field of Veterinary Medicine, due to its relevance when analyzing, collecting data and preventing epidemics, seeking to ensure the health and welfare of animal populations. To carry out these types of procedures, extensive and advanced knowledge in the field is necessary, which is only available to a few professionals. This is the reason why experts in this sector are increasingly in demand and also why TECH has decided to design this program. Throughout the program, multiple topics such as Epidemiology Applied to Clinical Trials, Genetic Diseases or Pharmacovigilance are studied in depth. All this, with the aim of providing the student with specific knowledge in the field and in a 100% online mode.

Delve into all aspects of Epidemiological Surveillance thanks to the best theoretical and practical contents”

One of the most important disciplines in veterinary medicine is epidemiology, which is responsible for the health and welfare of animal populations.
Hence, experts in areas such as Epidemiological Surveillance are increasingly in demand for their specific knowledge in one of the best preventive measures, which is based on the collection and interpretation of results and reports, for the subsequent management and search for solutions.

This is the reason why TECH has designed a Postgraduate Diploma in Epidemiological Surveillance, to generate specialized skills and knowledge in students, so that they are able to face their work in this field with the maximum possible efficiency. To achieve this, this curriculum has a content that addresses issues such as the Determinants of Disease, Data Collection, Population Studies, Animal Handling or Safety Reports, among other relevant issues.

All this, through the most complete multimedia materials, information based on the most rigorous and updated sources, as well as the latest teaching technologies. In addition, under a comfortable 100% online modality that allows the student to carry out the process with total freedom, without time limits, without the need to travel and without affecting their other daily obligations.

- This **Postgraduate Diploma in Epidemiological Surveillance** contains the most complete and up-to-date scientific program on the market. The most important features include:
- The development of practical cases presented by experts in Epidemiological Surveillance
- The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Become an expert in Epidemiological Surveillance in a few months”

Acquire specific knowledge on Population Studies and Animal Management"

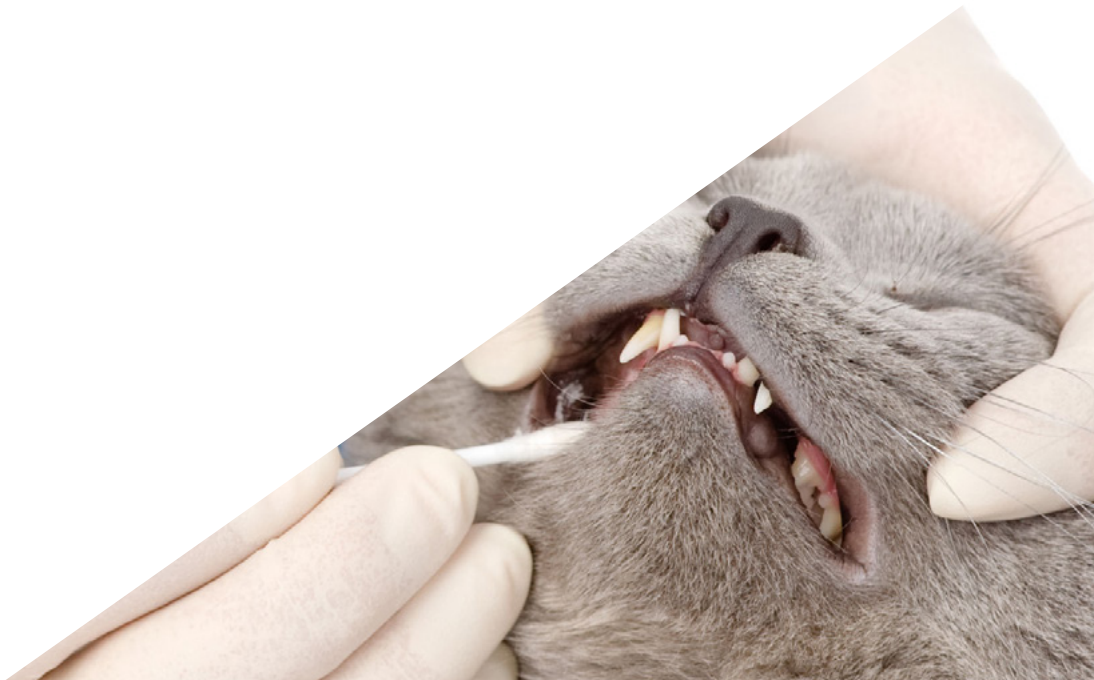
From the first day you will have complete availability of all the materials in the Virtual Campus.

Delve into Crisis Management and Risk-Benefit Analysis without leaving home.

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

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.



02

Objectives

The objective of this Postgraduate Diploma in Epidemiological Surveillance is to provide students with the necessary skills and knowledge to enable them to face their professional future, carrying out the highest quality and efficient work. All this, through the most updated and dynamic theoretical and practical materials.

Reach your most demanding objectives, thanks to the most practical and dynamic multimedia materials in the academic market"

General Objectives

- Generate specialized knowledge in the design and interpretation of a clinical trial
- Examine the key features of clinical trials
- Analyze key analytical concepts in clinical trials
- Justify decisions made to solve problems
- Evaluate behavioral aspects and standardized procedures of clinical trials
- Review legislation on analytical, toxico-pharmacological and clinical standards and Protocols for veterinary drug testing
- Assess the regulatory environment in relation to clinical trials
- Develop standards for veterinary clinical trials
- Generate specialized knowledge to carry out clinical research
- Establish the correct methodology for conducting veterinary clinical trials
- Develop advanced knowledge for the development of a protocol for the conduct of a clinical trial with veterinary drugs
- Analyze the structure of the different regulatory agencies and organizations and their attributions
- Correctly manage the documentation generated in the framework of the application, follow-up and completion of a veterinary clinical trial

Specific Objectives

Module 1. Applied Epidemiology in Veterinary Clinical Trials

- Develop autonomy to participate in research projects and scientific collaborations in the field of clinical trials and in interdisciplinary contexts
- Examine the different databases, their validation and the different tools for data management in clinical trials
- Apply problem solving techniques in the creation and development of clinical trials under the scientific method and new environments
- Properly elaborate structured projects focused on clinical and epidemiological trial activity
- Generate the integration of knowledge to face the formulation of judgments and conclusions generated in the studies
- Analyze the processes that allow the introduction of new veterinary medication in the market, as well as to incorporate the ethical principles involved

Module 2. Genetic Diseases in Veterinary Clinical Trials (VCT) Veterinary Genetic Epidemiology

- Determine groups of individuals and examine population parameters useful in genetic epidemiology studies
- Analyze the factors and elements in the epidemiological triad
- Demonstrate the contribution of triad factors to genetic disease to expose and justify their applicability to epidemiological studies
- Establish agent-disease causality relationships

- Analyze data and recognize and control sources of bias to differentiate between studies
- Compile data and generate incidence and prevalence measures from raw data
- Formalize disease-exposure association tests
- Present, propose and implement different appropriate designs in relation to observational data

Module 3. Approach to Veterinary Clinical Trials in Different Veterinary Settings Laboratories and Farms

- Examine, step by step, quality assurance and best practices in the application and production of vaccines
- Develop good clinical practices to regulate personnel and aspects involved in studies
- Manage field trials, demonstrate safety and efficacy in terms of environmental conditions, care and possible adverse reactions
- Properly elaborate tests in different areas and give solidity to the sampling method
- Apply different recommendations to assess exposure to different pathogens and collect quantitative information in order to develop study and work patterns
- Analyze the processes that can lead to the emergence of resistance to antimicrobial agents and know how to collect therapeutic information to produce results

Module 4. Pharmacovigilance and Pharmacoeconomics

- Determine the responsibilities of the monitor within the pharmacovigilance system (DDPS) and the responsibilities of the Qualified Person for Pharmaco Vigilance (QPPV)
- Correctly analyze and present safety reviews of veterinary products
- Determine the importance of health economics through the economic medicine evaluation
- Design and perform cost-benefit, cost-effectiveness, cost-utility and cost-minimization analyses Uncover potentially hidden costs: hospitalization days, concomitant medication, treatment of adverse effects, complementary tests, etc

A unique opportunity to gain a professional position in one of the most powerful areas of the veterinary field"

03

Course Management

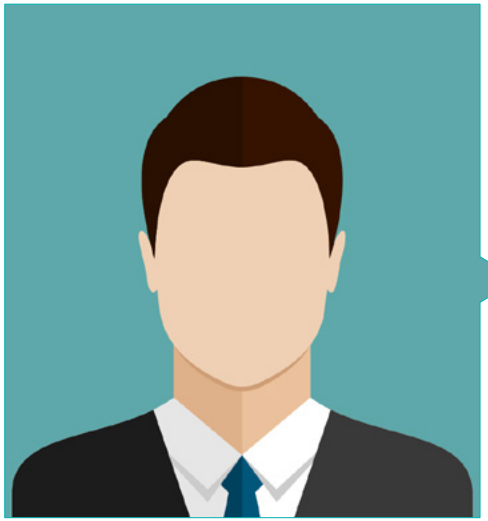
In its constant search for teaching of the highest quality, TECH has selected outstanding professionals with an excellent track record to make up the management and faculty of this program. The result is the most innovative and complete theoretical and practical materials on the academic market, guaranteeing the best assimilation of the contents by the student.

Reach your highest goals with the best experts in Epidemiological Surveillance and stand out in the sector in just a few months"

Management

Dr. Martín Palomino, Pedro

- Manager of ALJIBE Veterinary Laboratory
- Senior program researcher at the Castilla-La Mancha Research Center Spain
- PhD in Veterinary Medicine from the University of Extremadura
- Diploma in Public Health from the National School of Health (ENS) at the Carlos III Health Institute (ISCIII)
- Master's Degree in Swine Technology from the Faculty of Veterinary Medicine of Murcia at the University of Murcia
- Professor of Infectious Diseases, Zoonoses and Public Health at the Alfonso X el Sabio University



Dr. Fernández García, José Luis

- Veterinary Doctor
- PhD in Veterinary Medicine from the University of Extremadura
- Graduate in Veterinary with Degree from the University of Extremadura
- Master's Degree in Biotechnology from the CNB Severo Ochoa
- Adjunct Veterinarian, University of Extremadura

Professors

Dr. Ripa López - Barrantes, Adriana

- Veterinarian at the Palacios Veterinary Clinic
- Veterinarian at Mi Mascota Veterinary Clinic
- Veterinary collaborator in the Identification and Vaccination Campaign of the Madrid City Council
- Collaborating researcher in R&D&I projects
- Teacher at Veterinary University Studies
- Degree in Veterinary Medicine from Alfonso X El Sabio University
- Master's Degree in Veterinary Science Research from the Complutense University of Madrid
- Master's Degree in Teacher Training at the International University of La Rioja

Mr. Cortés Gamundi, Iván

- Specialist in Pharmacovigilance in Biomapas
- Microbiologist Expert in Pharmacovigilance
- Transition Associate for Pharmacovigilance Operations and Strategies at Novartis
- Validation Technician at Asyval
- Pharmacovigilance Technician at Uriach
- AquaLab Laboratory Technician
- Master's Degree in Pharmacology from the Autonomous University of Barcelona.
- Graduate in Microbiology from the Autonomous University of Barcelona.

Dr. Serrano García, Alicia

- Specialist in Applied Ethology and Marine Mammals
- Caretaker of marine mammals at the Zoo Aquarium of Madrid
- Caretaker of marine mammals in Mundomar Benidorm
- Curricular internship with marine mammals at Oceanographic de Valencia
- PhD in Applied Ethology from the Autonomous University of Madrid.
- Graduate in Biology from the Rey Juan Carlos University of Madrid
- Specialist in marine mammals by Sea Wolves
- Master's Degree in Applied Ethology from the Autonomous University of Madrid
- Courses in Monographs by Zoo Aquarium of Madrid

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

The structure and content of this program have been designed by the professionals who make up TECH's team of experts in Epidemiological Surveillance. To carry it out, they have relied on the most rigorous and updated sources of information, as well as on the most efficient pedagogical methodology, Relearning, which guarantees the best possible assimilation of the essential concepts by the student.

Thanks to Relearning you will not have to invest extra hours in the study of the program and you will be able to combine it with your other day-to-day activities”

Module 1. Applied Epidemiology in Veterinary Clinical Trials

1.1. Veterinary Epidemiology
- 1.1.1. Historical Background
- 1.1.2. Epidemiology and Its Uses
- 1.1.3. Causality Criteria
  - 1.1.3.1. Koch's Postulates
  - 1.1.3.2. Bradford Hill Criteria
  - 1.1.3.3. Evans' Postulates
- 1.1.4. Association Types
- 1.1.5. Epidemiological Research
- 1.1.6. Epidemiological Methods
  - 1.1.6.1. Qualitative Epidemiology
  - 1.1.6.2. Quantitative Epidemiology
- 1.1.7. Disease Determinants
  - 1.1.7.1. Factors: Agent, Host, and Environment
- 1.1.8. Pattern of Disease Progression
  - 1.1.8.1. Transmission, Repertoires, Hosts and Vectors
  - 1.1.8.2. Biological Cycles
- 1.1.9. Emerging Diseases and Zoonoses

1.2. Epidemiological Data Analysis
- 1.2.1. Data Collection
  - 1.2.1.1. Epidemiological Surveys
- 1.2.2. Nature of Data
- 1.2.3. Databases. Examples of Veterinary Databases and Information Systems
  - 1.2.3.1. Stata Databases
  - 1.2.3.2. SPSS Databases
- 1.2.4. Types of Variables
- 1.2.5. Interpretation of Results
  - 1.2.5.1. Pie Charts
  - 1.2.5.2. Bar Chart
  - 1.2.5.3. Histograms
  - 1.2.5.4. Stem and Leaves
  - 1.2.5.5. Cumulative Frequency Polygon

1.2.5.6. Box Chart
1.2.5.7. Scatter Plot
1.2.6. Cartography
1.2.6.1. Geographical Information Systems
1.3. Population Structure
1.3.1. Animal Population Structure
1.3.2. Presentation of a Collective Disease
1.3.2.1. Endemic
1.3.2.2. Epidemic Outbreak
1.3.2.3. Epidemic or Epizootic
1.3.2.4. Pandemic
1.3.2.5. Sporadic
1.3.3. Measurement of Disease in the Population
1.3.3.1. Prevalence
1.3.3.2. Incidence and Cumulative Incidence
1.3.3.3. Incidence Rate or Density
1.3.4. Relationships between the Different Parameters
1.3.4.1. Calculation of the Relationship between Prevalence and Incidence
1.3.5. Rate Adjustment
1.3.6. Measuring Disease Presentation
1.3.6.1. Mortality and Mortality Ratio
1.3.6.2. Morbidity
1.3.6.3. Lethality
1.3.6.4. Survival
1.3.7. Epidemic Curves
1.3.8. Temporal Disease Distribution
1.3.8.1. Single-Source Epidemics
1.3.8.2. Epidemics by Propagation
1.3.8.3. Kendall's Theorem
1.3.9. Evolution of Endemic Situations
1.3.9.1. Time Trends
1.3.9.2. Spatial Disease Distribution

1.4. Epidemiological Research
- 1.4.1. Study Planning
- 1.4.2. Types of Epidemiological Studies
  - 1.4.2.1. By Purpose
  - 1.4.2.2. By Sense of Analysis
  - 1.4.2.3. By Time Relationships
  - 1.4.2.4. By Units of Analysis

1.5. Diagnostic Epidemiology
- 1.5.1. Use of Diagnostic Tests
- 1.5.2. Diagnostic Concepts
- 1.5.3. Reliability Assessment of Diagnostic Tests
  - 1.5.3.1. Sensitivity
  - 1.5.3.2. Specificity
- 1.5.4. Relationship between Prevalence, Sensitivity and Specificity
- 1.5.5. Diagnostic Probability Ratio
- 1.5.6. Youden's Test
- 1.5.7. Threshold Value
- 1.5.8. Concordance of Diagnostic Tests
  - 1.5.8.1. Kappa Calculation

1.6. Sample Size in Epidemiological Studies
- 1.6.1. What Are Samples?
- 1.6.2. Terms Related to Sampling
  - 1.6.2.1. Target Population
  - 1.6.2.2. Population Study
  - 1.6.2.3. Study Subjects
  - 1.6.2.4. External and Internal Validity
- 1.6.3. Selection Criteria
- 1.6.4. Types of Sampling
  - 1.6.4.1. Probabilistic
  - 1.6.4.2. Non-Probabilistic
- 1.6.5. Sample Size Calculation
- 1.6.6. Sample Size for Estimating the Mean of a Population

1.6.7. Sample Size for Estimating Proportions
1.6.7.1. Sample Size Adjustments
1.6.7.2. Calculation of the Accepted Error for a Preset Sample
1.6.8. Sample Size for Estimating Difference Between Proportions
1.6.9. Sample Size for Estimating Mean Difference
1.6.10 Errors
1.6.10.1. Random Error
1.6.10.2. Systematic Error or Bias
1.7. Observational Analytical Studies in Epidemiological Studies
1.7.1. Measures of Effectiveness
1.7.1.1. Case-Control Studies: Odds Ratio
1.7.1.2. Cohort Studies: Relative Risk
1.7.2. Impact Measures
1.7.2.1. Attributable Risk in Exposures
1.7.2.2. Fraction Attributable in Exposures
1.7.2.3. Attributable Population Risk
1.7.2.4. Population Attributable Fraction
1.7.3. Confusion and Interaction
1.8. Experimental Studies in the Epidemiological Study
1.8.1. Types of Experimental Studies
1.8.2. Experimental Elements
1.8.3. Experimental Study Design
1.8.4. Statistical Analysis
1.8.4.1. Exposure Effect
1.9. Epidemiological Statistics
1.9.1. Types of Statistics
1.9.1.1. Analytics
1.9.1.2. Descriptive or Inferential
1.9.2. Relationship between Epidemiology and Biostatistics
1.10. Review in Clinical Epidemiological Research
1.10.1. Systematic Review and Meta-Analysis
1.10.2. Protocol
1.10.3. Hypothesis Origin
1.10.4. Selection of the Study Population
1.10.4.1. Information Search
1.10.4.2. Inclusion Criteria
1.10.5. Data Collection
1.10.5.1. Importance of Source and Measurement of Data
1.10.6. Combination Methods
1.10.6.1. Mantel-Haensel Method
1.10.7. Heterogeneity Studies
1.10.8. Publication Bias
1.10.9. Health Significance of Meta-Analysis

Module 2. Genetic Diseases in Veterinary Clinical Trials (VCT) Veterinary Genetic Epidemiology

2.1. Populations
2.1.1. Attributes to Highlight in a Population
2.1.1.1. Common and Ethnicity Attributes
2.1.1.2. Methods and Estimates of Gene Phylogeny in Populations
2.1.1.3. Populations, Social Level and Health Plan: Epidemiological Influence
2.2. Distributions of Disease Traits in Animal Populations. Genetic Databases
2.2.1. Genetic Traits and Diseases
2.2.1.1. Qualitative Determinants of Disease
2.2.1.2. Quantitative Traits and Disease Susceptibility
2.2.1.3. Genetic Disease Databases and their Application to Epidemiology
2.2.1.4. NCBI Searches
2.2.1.5. Species-Specific Databases on Genetic Diseases
2.3. Interaction in the Genetic Epidemiological Triad
2.3.1. Elements of the Epidemiological Triad
2.3.2. Host, Genetic Make-Up and Environment
2.3.2.1. Genetic Make-Up and its Relevance
2.3.2.2. Genotype-Environment Interaction

2.4. Genetic Epidemiology in the Light of Koch's Postulates. Part I
- 2.4.1. Epidemiology of Cytogenetic Animals
- 2.4.2. Diseases Due to Genetic Alterations of Major Effect
  - 2.4.2.1. Cause of Disease: Single Gene Disorders"Monogenic"
  - 2.4.2.2. Genetic Heterogeneity in Monogenic Diseases

2.5. Genetic Epidemiology in the Light of Koch's Postulates. Part II
- 2.5.1. Multifactorial Cause of Disease: Genetic Component
  - 2.5.1.1. High Heritability
  - 2.5.1.2. Low Heritability
- 2.5.2. Multifactorial Cause of Disease: Environmental Component
  - 2.5.2.1. Infectious Causes as an Environmental Component
  - 2.5.2.2. Cause of Disease and Environmental Exposure
- 2.5.3. Interaction Between Components

2.6. Data Collection and Analysis Strategy: Population Studies vs. Family Studies
- 2.6.1. Population Studies
  - 2.6.1.1. Evaluation of the Distribution of Traits in Populations
  - 2.6.1.2. Identification of Risk Factors and their Importance
- 2.6.2. Family Studies
  - 2.6.2.1. Evaluation of Trait Distribution in Families
  - 2.6.2.2. Identification of Risk Factors, Aggregation and their Importance
- 2.6.3. Combining Population and Family Studies

2.7. Data Collection Strategy and Analysis: Components of a Study of a Common Complex Disease
- 2.7.1. Measuring Disease Burdens
  - 2.7.1.1. Different Ways of Measuring Disease Burdens
- 2.7.2. Morbidity Measures
  - 2.7.2.1. Cumulative Incidence
  - 2.7.2.2. Prevalence
  - 2.7.2.3. Disease Duration

2.8. Main Analytical Study Designs
- 2.8.1. Cross-Sectional Design (Current Prevalence)
- 2.8.2. Cohort Design (Prospective)
- 2.8.3. Case-Control Design (Retrospective)
- 2.8.4. Association Measures

2.9. Data Analysis and Risk Calculations
- 2.9.1. Association Measures
  - 2.9.1.1. Relative Risk Estimates
  - 2.9.1.2. Odds Ratio (OR)
- 2.9.2. Impact Measures
  - 2.9.2.1. Attributable Risk (AR)
  - 2.9.2.2. Population Attributable Risk (PAR)

2.10. Estimates, Data Evaluation and Calculations in SPSS
- 2.10.1. Estimates
- 2.10.2. Assessment of Information
- 2.10.3. SPSS Calculations

Module 3. Approach to Veterinary Clinical Trials in Different Veterinary Settings Laboratories and Farms

3.1. Biology and Animal Management
- 3.1.1. Interaction Between Animals and Their Environment
- 3.1.2. Species Criteria
  - 3.1.2.1. Mammals
  - 3.1.2.2. Birds
  - 3.1.2.3. Reptiles
  - 3.1.2.4. Amphibians
  - 3.1.2.5. Fish
- 3.1.3. Procedures
  - 3.1.3.1. Substance Administration
  - 3.1.3.2. Sample Collection
  - 3.1.3.3. Surgical Procedures

3.1.4. Animal Pain and Suffering
3.1.4.1. Pain Recognition
3.1.4.2. Ethical Obligations
3.1.4.3. Euthanasia
3.2. Veterinarians' Role in Different Veterinary Fields
3.2.1. Advantages and Disadvantages in the Different Veterinary Fields
3.2.1.1. Communication
3.2.2. Adapting Protocols to the Study Environment
3.2.2.1. Veterinarian's Responsibilities
3.2.3. Informed Consent
3.3. Special Considerations in the Practice of Clinical Trials in Laboratories and on Farms
3.3.1. Structure and Sites for Clinical Trials
3.3.1.1. Study Location Importance
3.3.1.2. Role of Laboratories
3.3.1.3. The Role of Farms
3.3.2. Shipping and Handling of Samples and Medical Products
3.3.3. Evolution of Anti-Parasitic Products
3.3.4. Application and Therapeutics of Vaccines
3.3.5. Responsible Antibiotic Use
3.3.5.1. Resistance Surveillance and Monitoring
3.4. Clinical Trials in the Scope of Aquaculture
3.4.1. Study Planning
3.4.1.1. Environmental Requirements
3.4.1.2. Access to Study Sites
3.4.1.3. Working Conditions: Personnel and Equipment
3.4.2. Protocol Development
3.4.3. Types of Research Substances
3.4.3.1. Nutritional Treatments
3.4.3.2. Immersion Baths
3.4.3.3. Vaccines
3.4.4. Design and Procedures
3.4.5. Sampling
3.4.6. Data Processing
3.5. Clinical Trials in the Scope of Poultry
3.5.1. Special Conditions in Poultry Farming
3.5.1.1. Study Structure
3.5.2. Study Planning
3.5.3. Protocol Development
3.5.4. Data Processing
3.6. Clinical Trials in Companion Animals
3.6.1. Pet Therapy Industry
3.6.2. Pet Characteristics
3.6.3. Protocol Development
3.6.4. Design and Procedures
3.6.5. Working Conditions: Personnel and Equipment
3.6.5.1. Informed Consent
3.6.5.2. Protection and Precaution
3.6.7. Study Purpose
3.7. Clinical Trials in Pig Farming
3.7.1. The Pig Industry in Recent Years
3.7.1.1. Meat Quality
3.7.1.2. Industry Structure
3.7.1.3. Medical Products and the Industry
3.7.2. Good Practices and Organization of Trials
3.7.2.1. Participant Considerations
3.7.2.2. Research Site Choice
3.7.3. Performance of Procedures
3.7.3.1. Practical Applications
3.8. Clinical Trials in Cattle
3.8.1. Test Conditions and Approvals
3.8.2. Study Sites
3.8.2.1. Today's Cattle Industry
3.8.2.2. Choice of Site

3.8.3. Livestock Transportation
3.8.4. Test Substance Considerations
3.8.5. Trial Inclusion and Exclusion Criteria
3.8.5.1. Immune Status and Weaning
3.8.5.2. Signs of Disease
3.8.6. Practical Considerations
3.8.6.1. Design and Procedures
3.8.6.2. Monitoring of Animals and Personnel
3.9. Clinical Trials in Sheep and Goats
3.9.1. Small Ruminant Industry
3.9.2. Good Practices and Organization of Trials
3.9.2.1. Trail Conditions
3.9.2.2. Protocol Development
3.9.3. Studies Site Choice
3.9.4. Working Conditions: Personnel and Equipment
3.9.5. Trail Monitoring
3.10. Clinical Trials in Equids
3.10.1. Researchers' Role in this Area of Study
3.10.2. Protocol Development
3.10.2.1. Important Aspects of Treatments
3.10.2.2. Importance of Standardized Procedures
3.10.3. Recruitment of Individuals
3.10.3.1. The Importance of Equine Aptitude
3.10.3.2. How to Choose the Sample: Age, Breed, Feed and Fitness
3.10.4. Research Site Planning
3.10.5. Unforeseen Events and Problems During the Trial

Module 4. Pharmacovigilance and Pharmacoeconomics

4.1. Safety of Veterinary Medications in Animals
- 4.1.1. Design and Implementation of the Pharmacovigilance System in a Clinical Trial
- 4.1.2. Development and Updating of Standard Operating Procedures (SOPs)
- 4.1.3. Initial Assessment

4.2. Personal Safety
- 4.2.1. Active Substance Toxicity Data
- 4.2.2. Toxicity Studies
- 4.2.3. Exposure Scenarios
- 4.2.4. Risk Management

4.3. Environmental Safety
- 4.3.1. Active Substance Metabolites
- 4.3.2. Biodegradation
- 4.3.3. Recommended Studies

4.4. Adverse Event Management
- 4.4.1. Registration (Adverse Reactions, Side Effects and Expected Unfavorable Reactions)
- 4.4.2. Control Methods
- 4.4.3. Adverse Events Communication.

4.5. Summary of Product Characteristics (SPC) for Veterinary Medication

4.6. Elaboration and Maintenance of the Pharmacovigilance System Description
- 4.6.1. Detailed Description of the Pharmacovigilance System
- 4.6.2. Qualified Person Responsible for Pharmacovigilance (QPPV)
- 4.6.3. Organization
- 4.6.4. Databases
- 4.6.5. Quality Management Systems

4.7. Periodic Safety Reports (PSRs)
- 4.7.1. VedDRA Code (Veterinary Dictionary for Regulatory Activities)

4.8. Risk-Benefit Analysis
- 4.8.1. Concept and Components
- 4.8.2. Quantitative Methods
  - 4.8.2.1. Relationship Between Benefit and RIsk Impact Measures
  - 4.8.2.2. Incremental Benefit-Risk Ratio
  - 4.8.2.3. Multi-Criteria Analysis
- 4.8.3. Cohort Simulation

4.9. Crisis Management
- 4.9.1. Risk Assessment
- 4.9.2. Response Coordination
- 4.9.3. Risk and Crisis Communication

4.10. Pharmacoeconomics
- 4.10.1. Cost-Benefit Analysis
- 4.10.2. Cost-Effectiveness Analysis
- 4.10.3. Cost-Utility Analysis
- 4.10.4. Cost Minimization

Opt for a program with which you will be able to update your knowledge about Periodic Safety Reports or Impact Measures, with total freedom of organization and in a 100% online mode"

05

Methodology

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

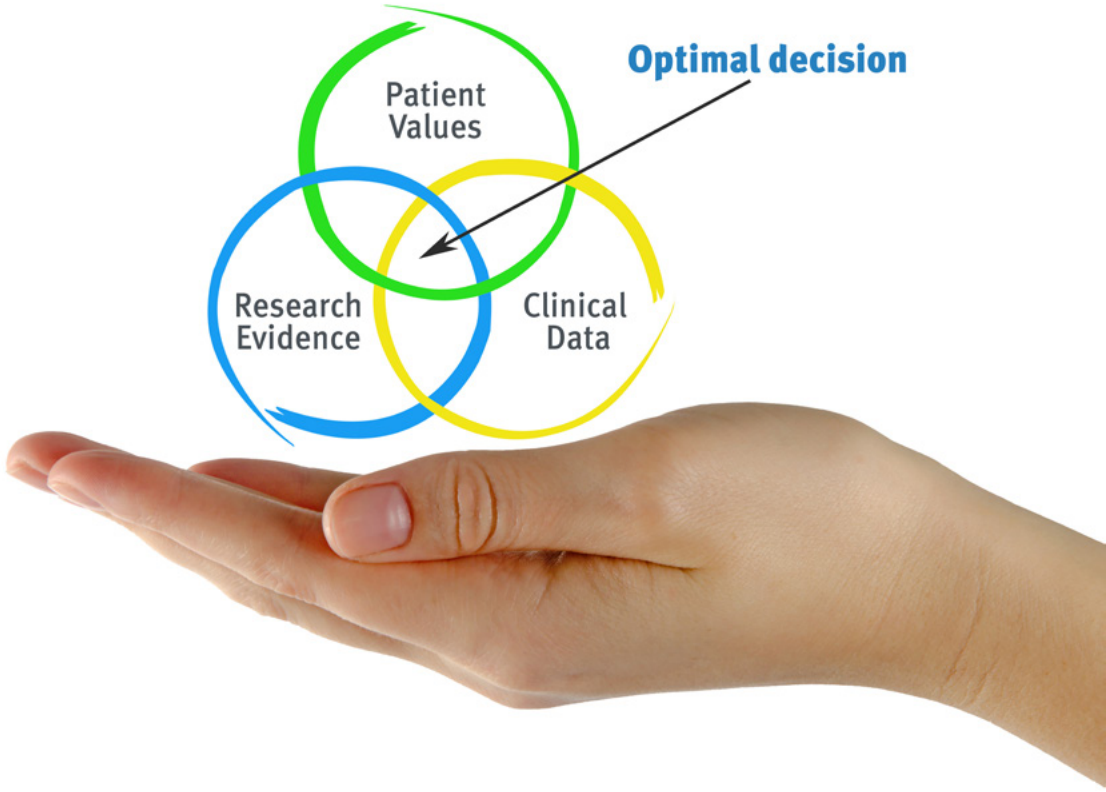
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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 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:

1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.

2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.

3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.

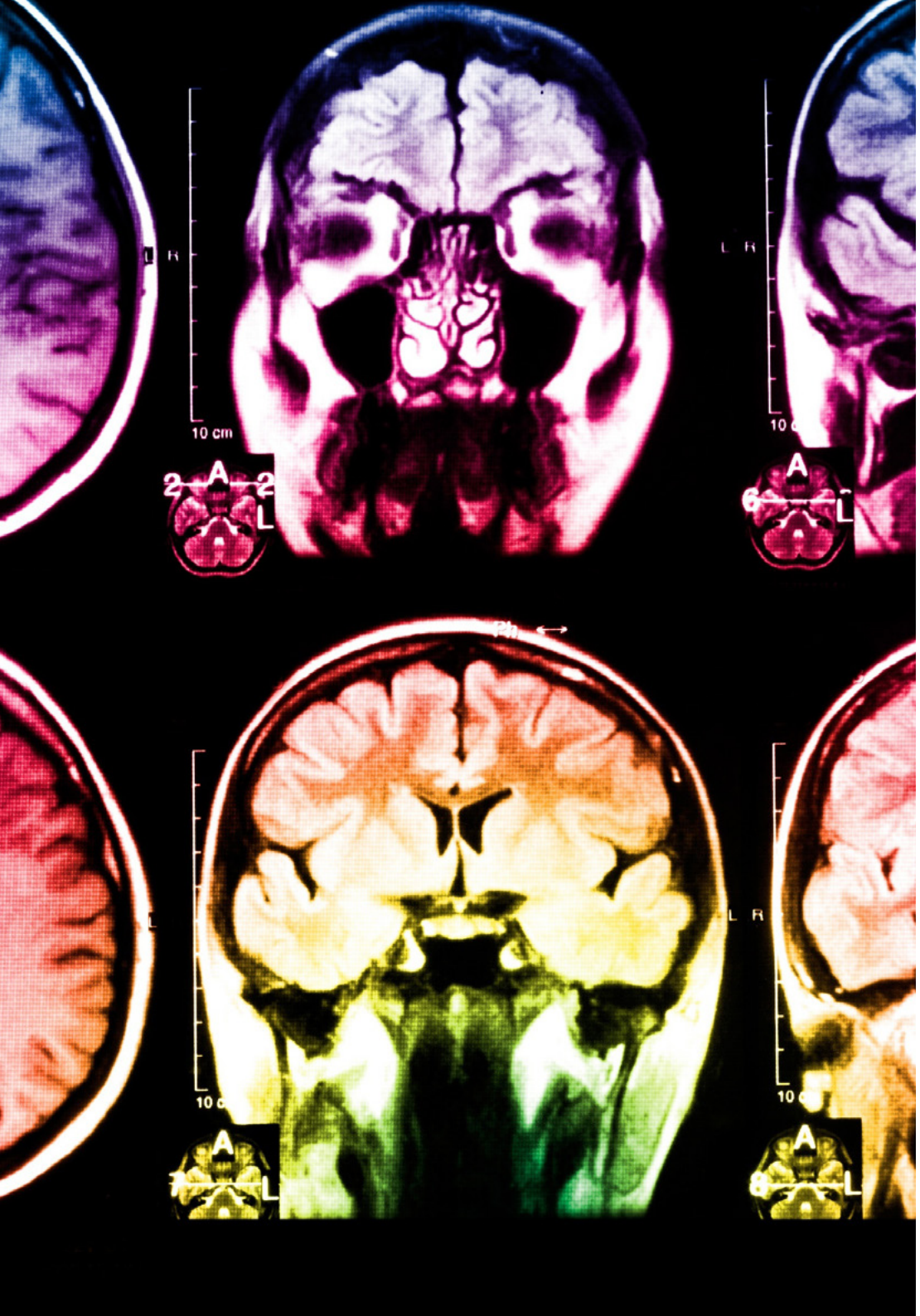
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.

The nurse will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is really specific and precise.

These contents are then 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.

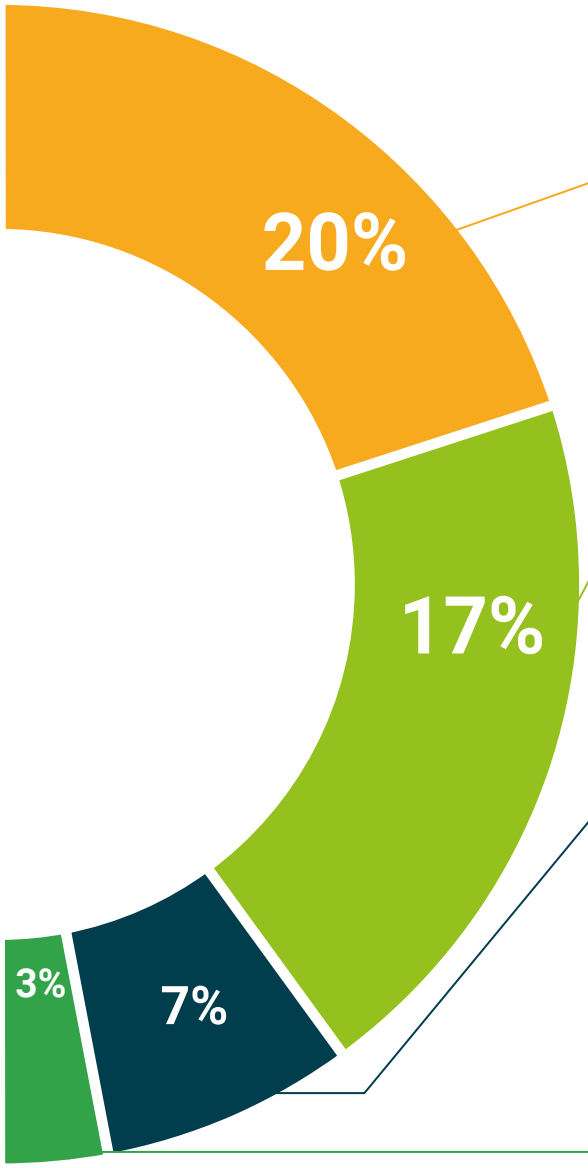
Interactive Summaries

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.

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

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

This private qualification will allow you to obtain a **Postgraduate Diploma in Epidemiological 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 Epidemiological Surveillance**

Modality: **online**

Duration: **6 months.**

Accreditation: **24 ECTS**


tech global university

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

Postgraduate Diploma in Epidemiological Surveillance

This is a private qualification of 720 hours of duration equivalent to 24 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

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

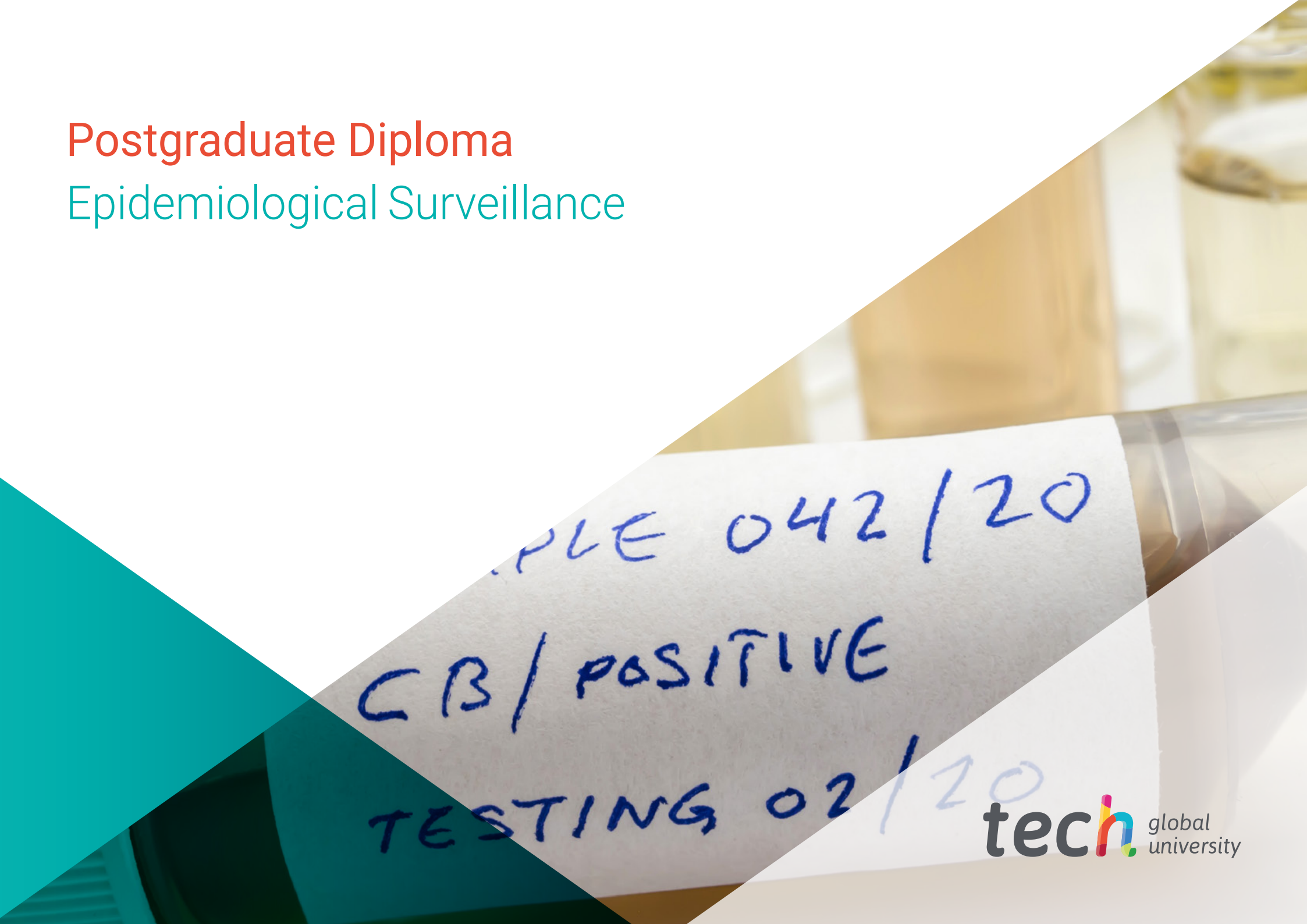
tech global university

Postgraduate Diploma
Epidemiological Surveillance

- Modality: **online**
- Duration: **6 months.**
- Certificate: **TECH Global University**
- Accreditation: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma

Epidemiological Surveillance



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