



Postgraduate Certificate

Swine Production and Health

» Modality: online

» Duration: 12 weeks

» Certificate: TECH Global University

» Credits: 12 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/swine-production-health

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tech 06 | Introduction

The globalization that has emerged in recent years and its relationship with animal health and, therefore, with public health is a topic of worldwide interest, where the increase in international trade and structural changes in the state have favored the emergence and spread of global health phenomena that represent risks, challenges and opportunities for producers and consumers.

In spite of the important results achieved in disease control and prevention, there are still sanitary problems in the swine production sector that require a therapeutic solution. The sector continues to be threatened by new or re-emerging diseases, so that the use of antibacterial treatments is still a necessary tool in pig farming.

However, the fight against diseases must be carried out in an integrated manner, on several fronts, such as hygienic measures for cleaning and disinfection, vector control, stress-free animal management, personnel hygiene, visitor control, animal quarantine, isolation and protection of buildings.

Thus, the syllabus provides a solid and updated training in Swine Production and Health, enabling them to successfully address the work of veterinary specialists in companies and industries dedicated to swine production.

This **Postgraduate Certificate in Swine Production and Health** contains the most complete and up-to-date program on the market. The most important features include:

- The latest technology in online teaching software
- A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- Practical cases presented by practicing experts
- State-of-the-art interactive video systems
- Teaching supported by telepractice
- · Continuous updating and recycling systems
- · Autonomous learning: full compatibility with other occupations
- Practical exercises for self-assessment and learning verification
- Support groups and educational synergies: questions to the expert, debate and knowledge forums
- Communication with the teacher and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection
- Supplementary documentation databases are permanently available, even after finishing the course



Join the elite, with this highly effective educational program and open new paths to help you advance in your professional progress"

Introduction | 07 tech



A complete educational program that will allow you to acquire the most advanced knowledge in all areas of veterinary intervention"

The teaching staff is made up of professionals from different fields related to this specialty. In this way, TECH makes sure to offer the educational update in line with its objective. A multidisciplinary team of professionals trained and experienced in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put their own experience at the service of the professional.

This mastery of the subject matter is complemented by the effectiveness of the methodological design. Developed by a multidisciplinary team of *e-learning* experts. In this way, the professional will be able to study with a range of comfortable and versatile multimedia tools that will provide the operability needed in the field.

The design of this program is based on problem-based learning: an approach that conceives learning as an eminently practical process. To achieve this remotely, telepractice will be used: with the help of an innovative interactive video system, and *Learning from an Expert*.

With the experience of working professionals and the analysis of real success stories, in a high-impact training approach.

With a methodological design based on proven teaching techniques, this innovative course will take you through different teaching approaches to allow you to learn in a dynamic and effective way.







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General Objective

- Develop specialized knowledge in the field of Animal Production and Health
- Analyze the impact of livestock production on public health
- Examine the concept of Globalization
- Justify the term "One Health" and its relationship with veterinary medicine
- Analyze which are the competent authorities from the veterinarian's point of view
- Specify which communications should be made to the competent authorities
- Develop advanced capabilities in the field of swine production and health
- Integrate knowledge to address real problems and propose models and solutions in an efficient, effective, reasoned, and correct way
- Offer specialized technical support, which can be an added value in each farm that is assessed
- Control or eradicate diseases with economic repercussions





Specific Objectives

- Determine the biosecurity measures in livestock production
- Analyze the veterinary controls to be carried out at border control
- · Identify zoonotic diseases and their communication to the authorities
- Classify antibiotics according to their group of use in animals within the framework of antibiotic resistance
- Determine the competent bodies in the field of animal health
- Specify which notifications should be made to the competent authority and in what manner
- Analyze the different animal identification systems depending on the species in question
- Develop specialized knowledge on livestock diseases whose declaration is mandatory
- Examine the existing innovations in animal health and the perspectives of the field
- Analyze and apply, autonomously, the concepts, tools and management related to sanitation in pig farming
- Diagnose and define with certainty the etiology of the pathology, pathophysiological mechanisms of the main diseases affecting swine production
- Propose diagnostic methods, treatments within the legal framework, and prevention methods related to swine health
- Improve facilities, management, and feeding, in order to obtain maximum productive performance
- Guide and demonstrate that animal welfare conditions at all stages allow a higher performance in swine production

- Design farms, minimizing the negative impact on the environment
- Identify opportunities for improvement on farms and replicate the knowledge to people working in swine production



A path to achieve education and professional growth that will propel you towards a greater level of competitiveness in the employment market"





tech 14 | Course Management

Management



Dr. Ruiz Fons, José Francisco

- CSIC Senior Scientist at the Institute for Research in Hunting Resources
- Research Fellow in the Health Research Fund at The Macaulay Land Use Research Institute (Scotland)
- Research Fellow at James Hutton Research Institute (Scotland)
- Researcher at the Carlos III Health Institute
- Researcher at NEIKER
- PhD in Biology and Technology of Hunting Resources from the University of Castilla La Mancha
- Degree in Veterinary Medicine from the University of Murcia
- Member of: SECEM, WDA

Professors

Mr. García Sánchez, Juan

- PhD in Veterinary Medicine and Biochemist at the Center for Scientific and Technological Research of Extremadura (CICYTEX)
- Degree in Veterinary Medicine (specializing in Animal Medicine and Health). Faculty of Veterinary Medicine of Cáceres, University of Extremadura
- Degree in Biochemistry, University of Extremadura
- University Expert Course "Statistics applied to Health Sciences" (UNED)
- Professional Master's Degree in Environmental Management

Mr. Risco Pérez, David

- Administrator of Neobeitar S.L
- Researcher in Animal Health
- Author of dozens of scientific publications
- PhD in Veterinary Medicine from the University of Extremadura
- Degree in Veterinary Medicine from the University of Extremadura
- Professional Master's Degree in Kinetic Management by the University of Huelva

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- Pig Key Account Manager Boehringer Ingelheim
- Veterinary Technical Advisor, Boehringer-Ingelheim Animal Health Spain
- Veterinary Technical Service, Ingafood, S.A.
- Veterinarian La Paz Veterinary Clinic
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D. Gómez Gómez, Francisco Javier

- Solutions Manager FPA at Vetoquinol Iberia
- · Swine Technical Manager at Laboratorios Maymó
- Technician in Microsurgery for TREMIRS Project
- Swine Technical Specialist at Ecuphar Veterinaria
- Technical-economic Manager of Farms in all the productive phases of the sector in Inga Food
- Field veterinarian at Avescal
- Veterinary Technician at Inmaculada Acevedo Veterinary Clinic
- Degree in Veterinary Medicine from the University of Extremadura
- Professional Master's Degree in Sales and Marketing Management by EAE Business School
- Member of the ADSP in the province of Salamanca

Ms. Gómez García, Andrea

- Veterinary Technician Commercial Veterinarian at Alternative Swine Nutrition (ASN) in Huesca
- Mentor in the Veterinary Degree of the University of Zaragoza
- Graduada en Veterinaria por la Universidad de Zaragoza
- Master in Swine Health and Production by the University of Lérida

Dr. Sarmiento García, Ainhoa

- Collaborative researcher at the Faculty of Agricultural and Environmental Sciences and the Polytechnic School of Zamora at the University of Salamanca.
- Research Director at Entogreen
- Reviewer of scientific articles in Iranian Journal of Applied Science
- Veterinarian in charge of the nutrition department at Casaseca Livestock
- Veterinary Clinic El Parque in Zamora
- Associate Professor at the Faculty of Agricultural Sciences of the University of Salamanca
- Degree in Veterinary Medicine from the University of León
- PhD. in Chemical Science and Technology from the University of Salamanca
- Master's Degree in Innovation in Biomedical and Health Sciences by the University of León

Dr. Limón Garduza, Rocío Ivonne

- Quality Inspector and Bromatological Expertise at Just Quality System S.L.
- Lecturer in Food Safety at Training Center Mercamadrid (CFM)
- Responsible for Quality Management and Project Development at KMC
- Head of the Quality Control Department at Frutas Garralón Imp-Exp, S.A. Mercamadrid
- PhD in Agricultural Chemistry and Bromatology, Autonomous University of Madrid
- Degree in Food Science and Technology from the Autonomous University of Puebla, Mexico
- Professional Master's Degree in Food Biotechnology (MBTA) from the University of Oviedo



An impressive teaching staff, made up of professionals from different areas of expertise, will be your teachers during your education: a unique opportunity not to be missed"

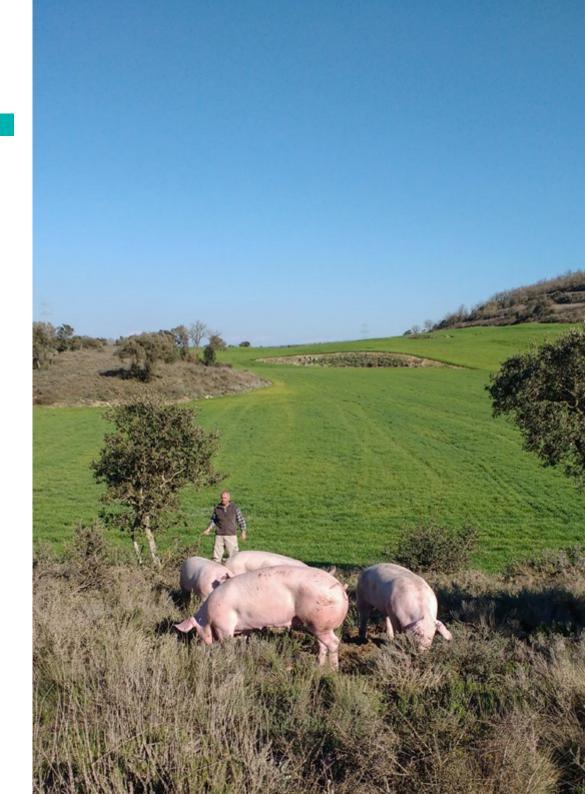




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Module 1. Important Aspects of Animal Production and Health

- 1.1. Animal Production
 - 1.1.1. Introduction
 - 1.1.2. Current Situation of the Sector
 - 1.1.3. Role of the Veterinarian
- 1.2. Animal Production Systems
 - 1.2.1. Intensive
 - 1.2.2. Alternative Systems
 - 1.2.2.1. Extensive Production
 - 1.2.2.2. Ecological Production
- 1.3. Livestock Production
 - 1.3.1. Biosecurity Measures
 - 1.3.2. Vaccination and Treatment Plans
- 1.4. Health in the Livestock Sector
 - 1.4.1. Concept of Animal Health
 - 1.4.2. Animal Identification Systems
 - 1.4.3. Movements of Animals For Slaughter
- 1.5. Animal Welfare
 - 1.5.1. Current Situation
 - 1.5.2. Animal Welfare Measures
- 1.6. Impacts of Livestock Production on Public Health
 - 1.6.1. Concept of One Health
 - 1.6.2. Zoonotic Diseases
 - 1.6.2.1. Main Zoonotic Diseases
 - 1.6.2.2. Declaration to the Competent Authority
 - 1.6.3. Resistance to Antibiotics
 - 1.6.2.1. Importance of Antibiotic Resistance
 - 1.6.2.2. Categorization of Antibiotics from the Point of View of their Use in Animals
- 1.7. Impact of Animal Production on Food Safety
 - 1.7.1. Food Safety.
 - 1.7.2. Major Foodborne Diseases
 - 1.7.3. Declaration
- 1.8. Notifiable Diseases of Livestock



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- 1.8.1. Introduction
- 182 Main Diseases
- 1.8.3. Notification
- 1.9. Competent Veterinary Medicine and Animal Health Authorities
 - 1.9.1. Introduction
 - 1.9.2. National Veterinary Corps
 - 1.9.3. Regional Offices and Veterinary Units
- 1.10. Reference Laboratories
 - 1.10.1. Introduction
 - 1.10.2. Sensitivity and Specificity
 - 1.10.3. Sample Collection Tables

Module 2. Swine Production and Health

- 2.1. Installations in Swine Farms
 - 2.1.1. External Biosafety Common on all Farms
 - 2.1.2. Breeder Farm
 - 2.1.3. Weaning Farm
 - 2.1.4. Fattening Farm
- 2.2. Management in Swine Production
 - 2.2.1. Management Related to Breeders
 - 2.2.2. Management Related to Weaned Piglets
 - 2.2.3. Management Related to Fattening Pigs
- 2.3. Main Infectious Diseases (I)
 - 2.3.1. Diseases producing Systemic Symptomatology
 - 2.3.1.1 African Swine Fever (ASF)
 - 2.3.1.2. Diseases Associated to Porcine Circovirus Type 2
 - 2.3.1.2.1. Post-weaning Multisystemic Wasting Syndrome (PMWS)
 - 2.3.1.2.2. Proliferative Necrotizing Pneumonia (PNP) or Lung Disease
 - 2.3.1.2.3. Enteritis or Enteric Disease
 - 2.3.1.2.4. Porcine Dermatitis and Nephropathy Syndrome (PDNS)
 - 2.3.1.3. Red Disease
 - 2.3.1.4. Sudden Death due to Clostridium Novyi Types A and B
- 2.4. Main Infectious Diseases (II)

- 2.4.1. Porcine Respiratory Complex
- 2.4.2. Swine Enzootic Pneumonia (SEP)
- 2.4.3. Porcine Reproductive and Respiratory Syndrome (PRRS)
- 2.4.4. Glassër's Disease
- 2.4.5. Porcine Pleuropneumonia (PP)
- 2.4.6. Swine Influenza or Swine Flu
- 2.4.7. Pasteurellosis
 - 2.4.7.1. Pneumonic Processes
 - 2.4.7.2. Porcine Atrophic Rhinitis (AR)
- 2.5. Main Infectious Diseases (III). Digestive Pathologies
 - 2.5.1. Hemorrhagic Dysentery
 - 2.5.1.1. Etiology
 - 2.5.1.2. Pathogenesis
 - 2.5.1.3. Diagnosis
 - 2.5.1.4. Treatment
 - 2.5.1.5. Practical Aspects
 - 2.5.2. Proliferative lleitis
 - 2.5.2.1. Etiology
 - 2.5.2.2. Pathogenesis
 - 2.5.2.3. Diagnosis
 - 2.5.2.4. Treatment
 - 2.5.2.5. Practical Aspects
 - 2.5.3. Colibacillosis
 - 2.5.3.1. Etiology
 - 2.5.3.2. Pathogenesis
 - 2.5.3.3. Diagnosis
 - 2.5.3.4. Treatment
 - 2.5.3.5. Practical Aspects
 - 2.5.4. Chlostridiosis
 - 2.5.4.1. Etiology
 - 2.5.4.2. Pathogenesis.
 - 2.5.4.3. Diagnosis
 - 2.5.4.4. Treatment
 - 2.5.5.5. Practical Aspects

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2.5.5.1. Etiology

2.5.5.2. Pathogenesis

2.5.5.3. Diagnosis

2.5.5.4. Treatment

2.5.5.5. Practical Aspects

2.6. Frequent Causes of Reproductive Failure in Sows

2.6.1. Causes of Infectious Origin

2.6.1.1. Bacteria

2.6.1.1.1. Leptospira Interrogans

2.6.1.1.2. Brucella Suis

2.6.1.1.3. Chlamydia

2.6.1.1.4. Dirty Sow Syndrome (SCS)

2.6.1.2. Virus

2.6.1.2.1. Porcine Reproductive and Respiratory Syndrome (PRRS)

2.6.1.2.2. Porcine Parvovirus (PPV).

2.6.1.2.3. Porcine Circovirus Type 2 (PCV 2)

2.6.1.2.4. Aujeszky's Disease Virus (ADV)

2.6.2. Causes of Non-infectious Origin Associated with:

2.6.2.1. Breeder Management

2.6.2.1.1. Replenishment

2.6.2.1.2. Estrus Detection

2.6.2.1.3. Seminal Quality

2.6.2.2. Environments and Facilities

2.6.2.3. Feeding

2.7. Main Parasitic Diseases

2.7.1. Internal Parasites

2.7.1.1. Digestive Parasites

2.7.1.1.1 Roundworms: Ascarissuum

2.7.1.1.2. Whipworms: Trichuris Suis

2.7.1.1.3. Red Stomach Worms: Hyostrongylus Rubidus

2.7.1.1.4. Nodular Worms: Oesophagostomum dendatum

2.7.1.1.5. Thread worms: Strongyloides Ransomi





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2.7.1.2. Pulmonary Parasites

2.7.1.2.1. Lung Worms: Metastrongylus Apri

2.7.2. External Parasites

2.7.2.1. Mange

2.7.2.2. Lice

2.7.3. Other Parasitic Diseases

2.7.3.1. TRICHINELLOSIS: Trichinella Spiralis

2.8. Sanitary Actions (I)

2.8.1. Diagnosis of Sanitary Problems in Farms

2.8.2. Regulated Necropsy and Interpretation of Lesions

2.8.3. Sampling and Sending to Diagnostic Laboratory

2.8.4. Interpretation of Laboratory Results

2.9. Sanitary Actions (II)

2.9.1. Disease Control Strategies

2.9.2. Vaccination Plans

2.9.3. Antibiotic Treatments

2.9.4. Alternative Treatments

2.10. Food Safety and Environmental Management

2.10.1. Food Safety and Feed Hygiene

2.10.1.1. Regulation (EC) 183/2005

2.10.1.2. Quality Plan

2.10.1.3. Cleaning and Disinfection Plan

2.10.2. Waste Management

2.10.2.1. Slurry Management Plan

2.10.2.2. On-Farm Gas Production



A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"



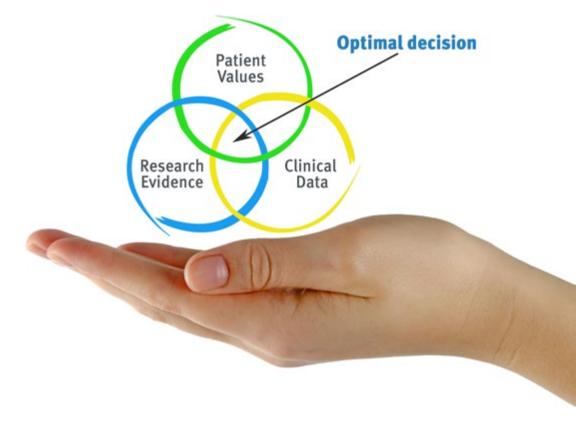


tech 24 | Methodology

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the actual conditions in a veterinarian's professional practice.



Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

- 1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
- 2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- **4.** The feeling that the effort invested is effective becomes a very important motivation for veterinarians, which translates into a greater interest in learning and an increase in the 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 the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

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





Methodology | 27 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 more than 65,000 veterinarians have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. Our teaching method is developed in a highly demanding environment, where the students have a high socio-economic profile and an average age of 43.5 years.

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Latest Techniques and Procedures on Video

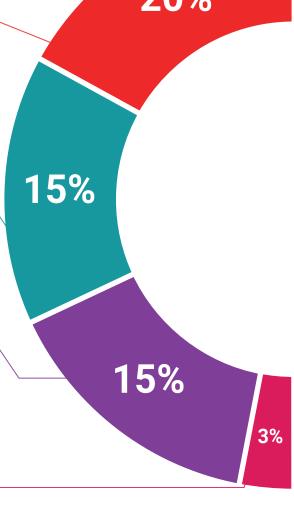
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



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



Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

and direct way to achieve the highest degree of understanding.



Classes

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

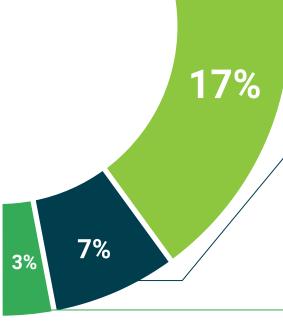
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



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.





20%





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This program will allow you to obtain your **Postgraduate Certificate in Swine Production and 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** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Postgraduate Certificate in Swine Production and Health

Modality: online

Duration: 12 weeks

Accreditation: 12 ECTS



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

Postgraduate Certificate in Swine Production and Health

This is a program of 360 hours of duration equivalent to 12 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



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



Postgraduate Certificate

Swine Production and Health

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