

# Postgraduate Certificate Artificial Insemination in Swine





## Postgraduate Certificate Artificial Insemination in Swine

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

Official N° of Hours: 150 h.

Website: [www.techtute.com/veterinary-medicine/postgraduate-certificate/artificial-insemination-swine](http://www.techtute.com/veterinary-medicine/postgraduate-certificate/artificial-insemination-swine)

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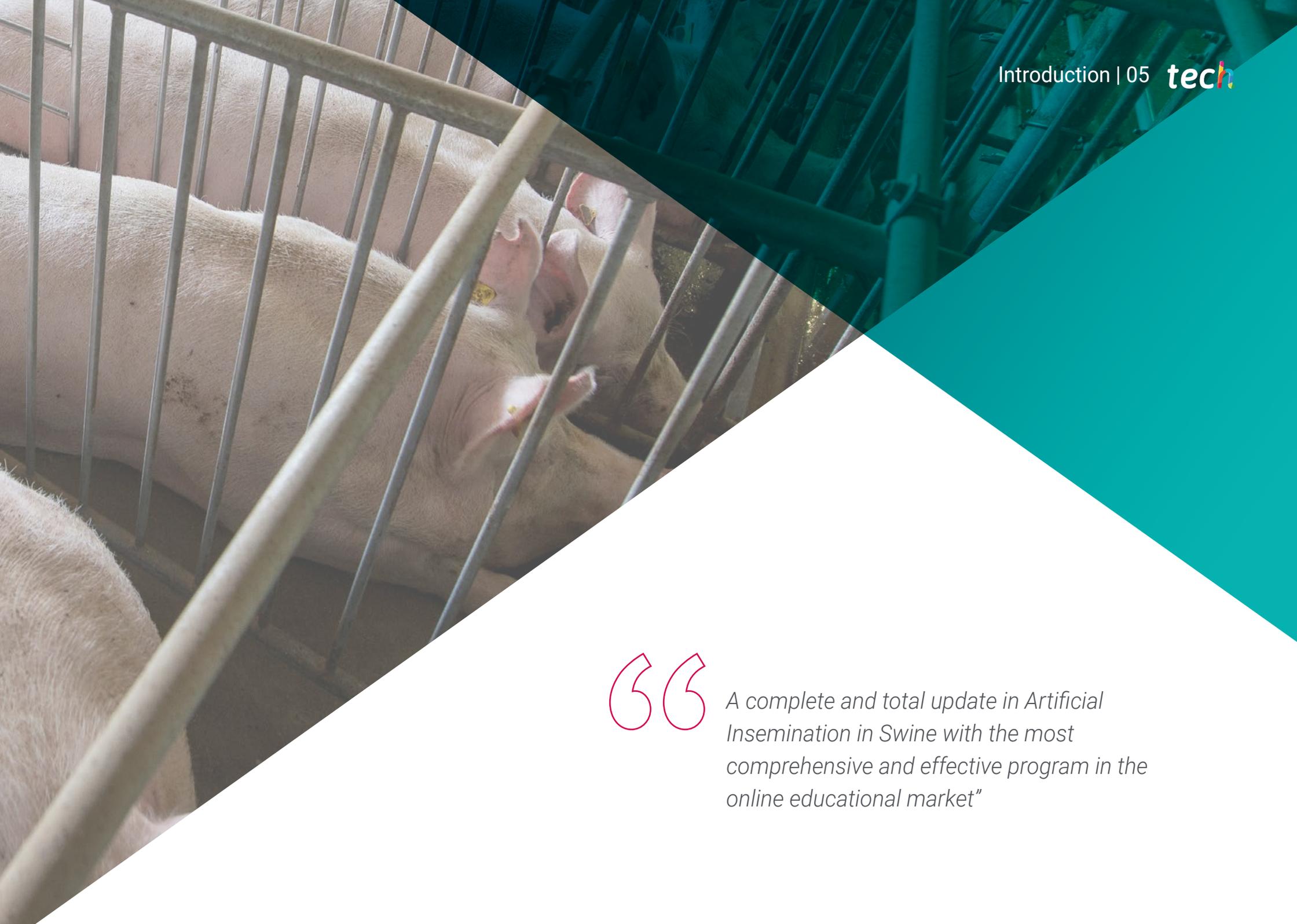
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01

# Introduction

Currently, more than 90% of female pigs worldwide undergo artificial insemination. For this reason, the increasing demand for pork production worldwide has made it necessary for veterinary professionals to understand and improve the equipment and protocols for artificial insemination.





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*A complete and total update in Artificial Insemination in Swine with the most comprehensive and effective program in the online educational market”*

Artificial Insemination in Swine is a practice that has been performed since the beginning of the 20th century. This technique had its development in Russia, where they extracted germ cells from male pigs with the help of artificial vaginas.

Subsequently, Japanese research strengthened the results, but it was not until the 1980's when artificial insemination in swine experienced its true development and broadened its application at a commercial level, becoming the most prominent tool for swine breeding worldwide.

This program includes structured contents that provide an in-depth understanding of the processes that occur during estrus detection and artificial insemination. It analyzes which methods are more efficient and which factors (intrinsic and extrinsic) can affect these protocols.

It also offers specialized knowledge on new technologies and artificial insemination protocols for both nulliparous and multiparous sows.

It provides a realistic and updated vision on estrus detection and artificial insemination, necessary for the future development of advances in the field of reproductive biotechnology.

At the end of the program, veterinarians will have acquired the necessary skills to work independently with the techniques described.

The Postgraduate Certificate in Artificial Insemination in Swine contains the most complete and up-to-date educational program on the market. The contents will be available to access from any fixed or portable device with an Internet connection guarantees students will be able to use their available time to achieve his double objective: training and qualification. Furthermore, the program's methodological design integrates the latest advances in educational technology that will facilitate learning.

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

- ♦ The latest technology in online teaching software
- ♦ A highly virtual 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-evaluation 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 availability from any fixed or portable device with an Internet connection
- ♦ Supplementary documentation databases are permanently available, even after the course



*Join the elite with this highly effective Postgraduate Certificate, which will open new paths for your professional development”*

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*A complete training program that will allow you to acquire the most advanced knowledge in all the areas of intervention of a specialized veterinarian"*

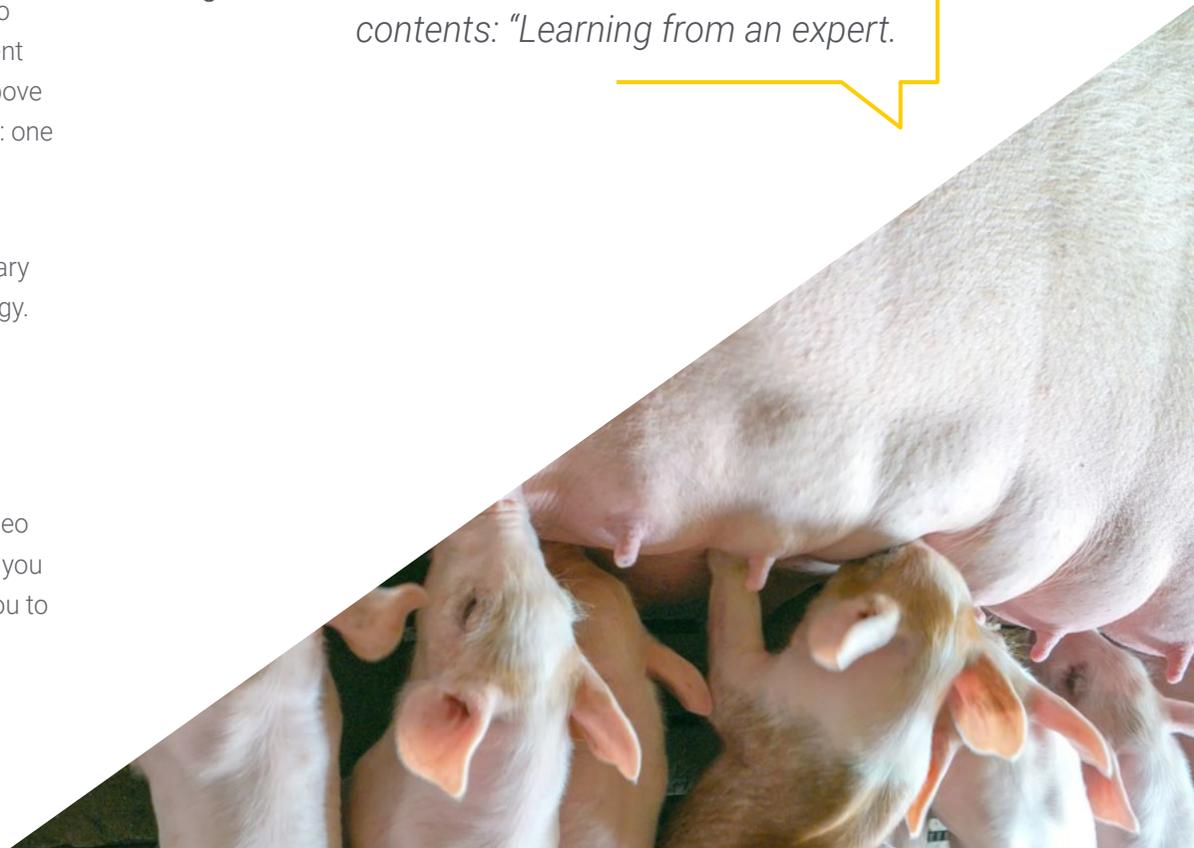
Our teaching staff is made up of professionals in different fields related to this specialty. That way, TECH ensures to offer students the updating objective it aims to provide. A multidisciplinary team of professionals trained and experienced in different environments, who will develop the theoretical knowledge in an efficient way, but above all, they will bring their practical knowledge from their own experience to the course: one of the differential qualities of this program.

The efficiency of the methodological design of this Professional Master's Degree, enhances the student's understanding of the subject. Developed by a multidisciplinary team of *e-learning* experts, it integrates the latest advances in educational technology. This way, students will be able to study with a range of easy-to-use and versatile multimedia tools that will give you the necessary skills for your training.

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, TECH uses telepractice: With the help of an innovative, interactive video system and *Learning from an Expert*, you will be able to acquire the knowledge as if you were dealing with the case you are studying in real time. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

*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.*

*Our innovative telepractice concept will give you the opportunity to learn through an immersive experience, which will provide you with a faster integration and a much more realistic view of the contents: "Learning from an expert."*



# 02 Objectives

Our objective is to train highly qualified professionals for the work environment. An objective that is complemented in a global manner by promoting human development that lays the foundations for a better society. This objective is materialized in helping professionals to reach a much higher level of competence and control. A goal that students will be able to achieve in just a few months, with a high intensity and effective training.





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*If your objective is to broaden your skill set to pave new ways toward success and development, this is the course for you: A program that aspires to excellence”*



## General Objectives

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- ♦ Establish the guidelines to correctly detect estrus in sows
- ♦ Develop a general and specific vision of artificial insemination in sows
- ♦ Implement the design of new technologies for heat detection and artificial insemination
- ♦ Analyze the principles and characteristics of other reproductive technology components that could be incorporated to future farms

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*A path to achieve specialization and professional growth that will propel you towards a greater level of competitiveness in the job market”*





## Specific Objectives

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- ◆ Examine the main protocols for heat detection
- ◆ Apply current artificial insemination techniques
- ◆ Diagnose the factors that can affect estrus detection and artificial insemination
- ◆ Specify the most appropriate tools to implement good practices in artificial insemination
- ◆ Present the principles and component features of other reproductive technologies associated with artificial insemination
- ◆ Propose application methods for these protocols in swine farms with excellent results
- ◆ Analyze the reproductive results of the different reproductive biotechnologies in swine farms
- ◆ Develop effective solutions for potential incidences in artificial insemination

03

# Course Management

Within the concept of total quality of our program, we are proud to put at your disposal a Teaching Staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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*Leading professionals in the field have come together to teach you the latest advances in Artificial Insemination in Swine”*

## Management



### Dr Falceto Recio, Victoria

- Degree in Veterinary Medicine from the University of Zaragoza
- President of the board of directors AVPA at Pig Veterinary Association of Aragon
- Secretary of the board of directors ANAVEPOR National Association of Pig Veterinarians
- Spokesperson for the Board of Directors of ANAPORC Association of Scientific Pork Producers
- Member of AERA Spanish Association of Animal Reproduction
- Diploma in Pedagogical Training for university professors at the Institute of Education Sciences, University of Zaragoza
- Advanced Course in Animal Production (Animal Reproduction Cycle from the Mediterranean Agronomic Institute of Zaragoza)
- Substitutions as a rural veterinarian
- Specialization stays at several universities and institutions
- Responsible for the Reproduction and Obstetrics Service at the Veterinary Hospital University of Zaragoza
- Member of the Instituto Universitario de Investigación Mixto Agroalimentario de Aragón IA2 (University Institute of Mixed Agrifood Research of Aragón)



04

# Structure and Content

The contents have been developed by different experts, with a clear purpose: to ensure that our students acquire each and every one of the skills necessary to become true experts in this subject.

A complete and well-structured program that will take you to the highest standards of quality and success.





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

## Module 1. Breeding Females

- 1.1. Genital Apparatus Anatomy in Sows: Reproductive Physiology
  - 1.1.1. Embryology
  - 1.1.2. Anatomy
  - 1.1.3. Histology
  - 1.1.4. Physiology
  - 1.1.5. Practical Applications on Farms
- 1.2. Puberty: Puberty Management
  - 1.2.1. Puberty
  - 1.2.2. Factors Influencing the Onset of Puberty
  - 1.2.3. Puberty Induction
  - 1.2.4. Puberty Diagnosis
- 1.3. Future Breeding Female Selection
  - 1.3.1. Early Puberty
  - 1.3.2. Genital Apparatus Development
  - 1.3.3. Weight and Body Condition
  - 1.3.4. Poise
  - 1.3.5. Temperament and Adaptability
- 1.4. Reproductive Cycles in Sows
  - 1.4.1. Reproductive Cycle Characteristics and Phases
  - 1.4.2. Hypothalamic-Pituitary-Ovarian Axis Function
  - 1.4.3. Follicular and Luteal Dynamics
  - 1.4.4. Luteolysis
- 1.5. Induction of Estrus: Delayed Puberty Treatment
  - 1.5.1. Reproductive Hormone Classification
  - 1.5.2. Gonadotropic Hormone Features
  - 1.5.3. Induction of Estrus
  - 1.5.4. Delayed Puberty Treatment
- 1.6. Estrus Synchronization
  - 1.6.1. Progestogen Features
  - 1.6.2. Estrus Synchronization Protocol
  - 1.6.3. Causes of Estrus Synchronization Failure
  - 1.6.4. Practical Applications on Farms





- 1.7. First Insemination
  - 1.7.1. Age
  - 1.7.2. Weight and Body Condition
  - 1.7.3. Number of Estrus Cycles
  - 1.7.4. Practical Recommendations
- 1.8. Nulliparous Sow Diet
  - 1.8.1. Replacement Sow Needs in Fattening
  - 1.8.2. Diet Strategies
  - 1.8.3. *Flushing*
- 1.9. Main Reproductive Parameters
  - 1.9.1. Indicator Description
  - 1.9.2. Wean-to-Estrus Interval and Wean-to-Fertile Mating Interval
  - 1.9.3. Fertility
  - 1.9.4. Prolificity
  - 1.9.5. Breeding Sows and Neonatal Mortality
  - 1.9.6. Non-Productive Days
  - 1.9.7. Other Parameters
- 1.10. Hyperprolific Sow Reproductive Features
  - 1.10.1. Definition
  - 1.10.2. Reproductive Possibilities and Limitations
  - 1.10.3. The Importance of Follicular Development and Ovulation Rate
  - 1.10.4. The Influence of Uterine Capacity



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

# 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.





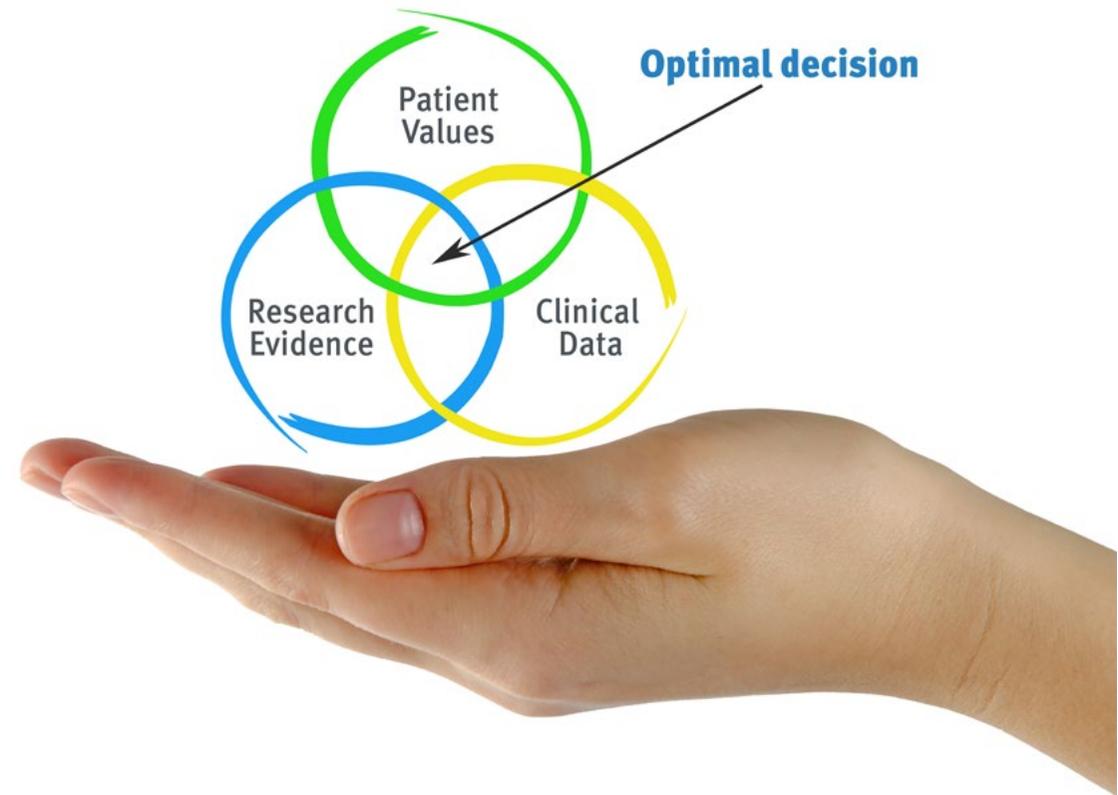
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program 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.

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

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

1. 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.*

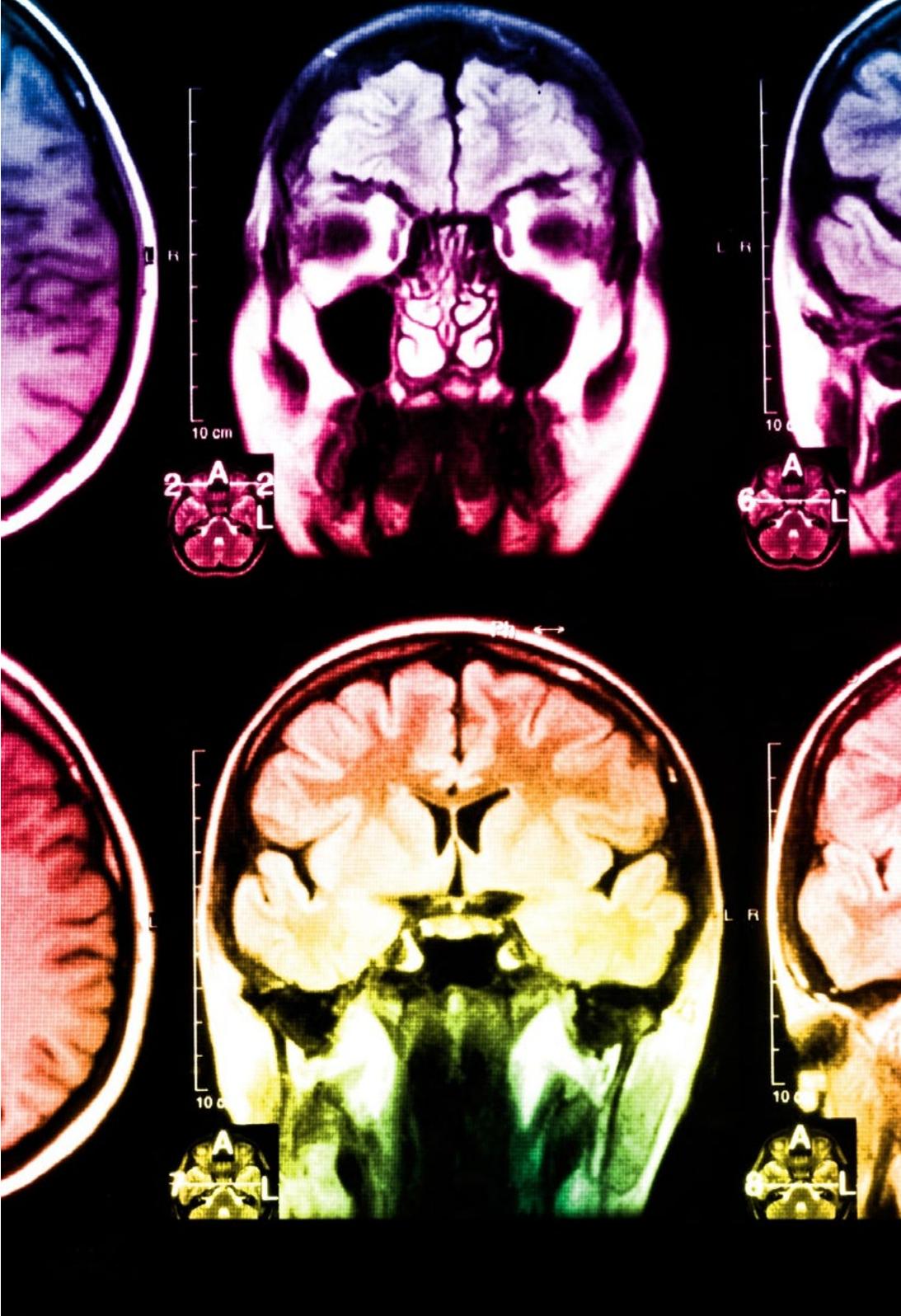
At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

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

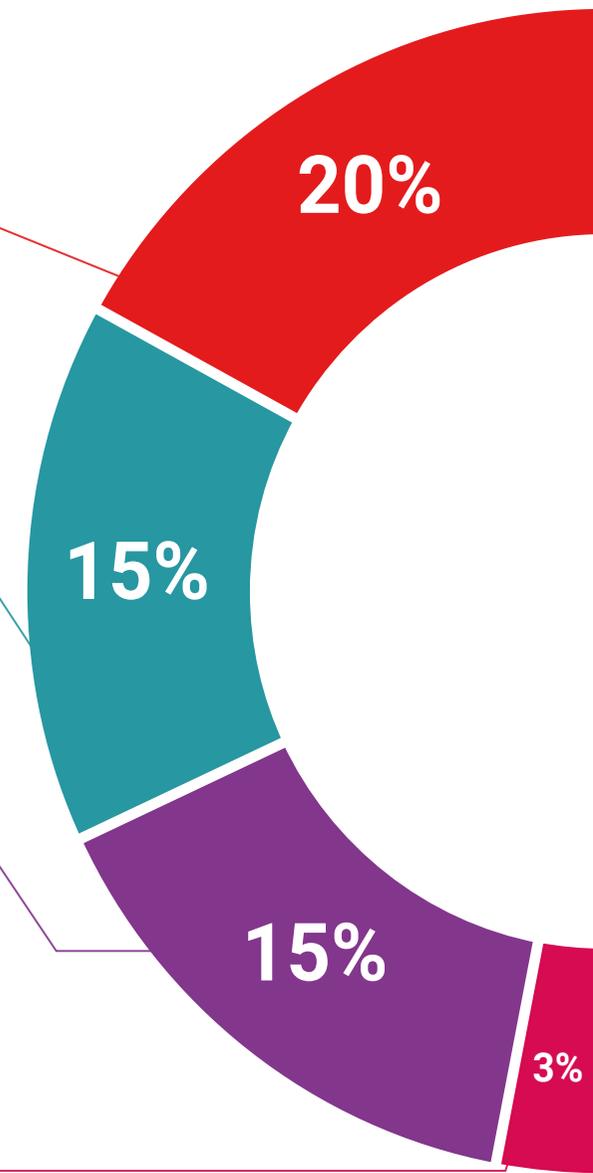
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

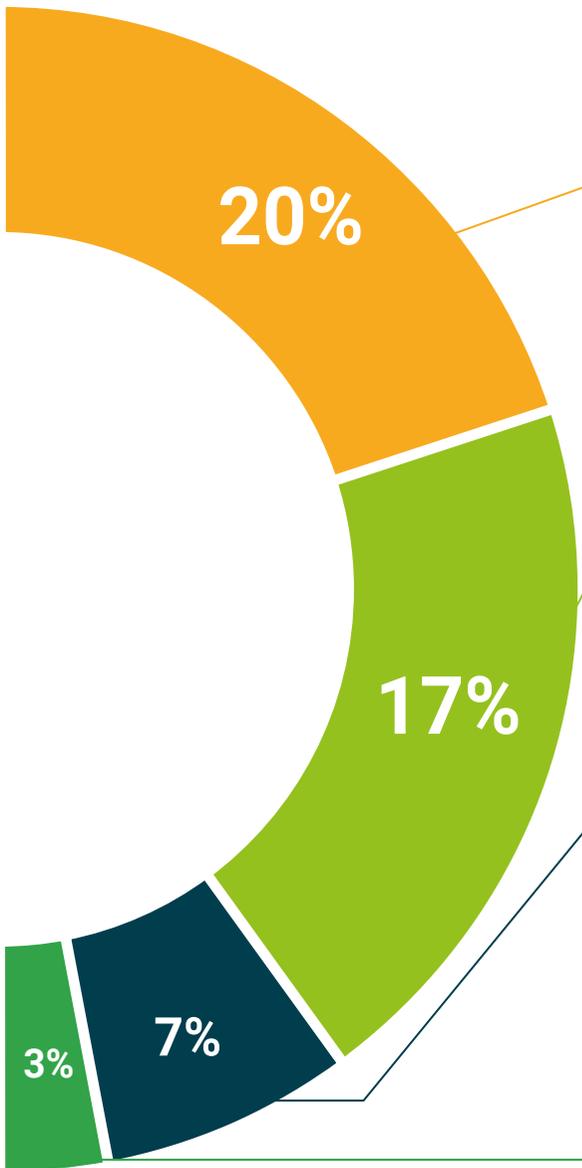
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

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



#### Classes

There is scientific evidence 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 Certificate in Artificial Insemination in Swine guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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*Successfully complete this program and receive your certificate without the hassle of travel or paperwork”*

This **Postgraduate Certificate in Artificial Insemination in Swine** contains the most complete and up-to-date program the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by job markets, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Artificial Insemination in Swine**

Official N° of Hours: **150 h.**



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

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



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Artificial Insemination in  
Swine

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

Official N° of Hours: 150 h.

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