



# Postgraduate Certificate Preparation of Commercial Seminal Doses

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/preparation-commercial-seminal-doses

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## tech 06 | Introduction

From the earliest data on animal reproduction in Egyptian hieroglyphs, through the ancient veterinarians to the present day, man has always been interested in the study of animal reproduction to increase populations and obtain better yields.

Animal reproduction has evolved exponentially in recent decades and its current development means that technologies implemented a few years ago are now obsolete. Technique, science and human genius combine and bring, as a consequence, results identical to natural reproduction.

The objective of this program focuses on the mastery and control of all physiological, pathological and biotechnological aspects that affect the reproductive organ function of domestic animals. The species studied in this Postgraduate Certificate are: bovids, equids, swine, sheep, goats and canids; a selection made based on the importance and development of assisted reproduction at present.

This Postgraduate Certificate is developed to deepen the current knowledge of the specialization in the different techniques of Preparation of Commercial Seminal Doses.

The group of professors teaching the Postgraduate Certificate is made up of specialists in animal reproduction with a work history of more than 30 years of experience, not only in the field of teaching, but also with practical activity, research and directly in livestock farms and animal reproduction centers. In addition, the teaching team is actively developing the latest techniques in assisted reproduction biotechnologies, making available to the market genetic material of different species of international zootechnical interest.

The specialization will be based on the theoretical and scientific aspects, combining them with the practical and applicative professionalism of each of the subjects in the current work. Continuous training after completing undergraduate studies is sometimes complicated and difficult to combine with work and family activities, so with this Postgraduate Certificate TECH gives students the possibility to continue specializing online with a large amount of practical audiovisual support that will allow the student to advance in reproductive techniques in their work environment.

This **Postgraduate Certificate in Preparation of Commercial Seminal Doses** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts in Preparation of Commercial Seminal Doses
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development
- New Developments on Preparation of Commercial Seminal Doses
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies in Preparation of Commercial Seminal Doses
- 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



Don't miss the opportunity to study this Postgraduate Certificate in Preparation of Commercial Seminal Doses with us. It's the perfect opportunity to advance your career"



This Postgraduate Certificate is the best investment you can make when choosing a refresher program to expand your existing knowledge of Preparation of Commercial Seminal Doses"

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system developed by recognized experts in Preparation of Commercial Seminal Doses and with great experience.

This program has the best didactic material, which will enable a contextual study that will facilitate your learning.

This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work while increasing your knowledge in this field.







## tech 10 | Objectives



## **General Objectives**

- Define controls and sanitary regulations within the national and international legal framework
- Establish working protocols for sperm extraction, evaluation, processing and cryopreservation
- Specify practical methods for determining stallion fertility in clinics and farms (spermiograms)



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







## **Specific Objectives**

- Develop national, European and international sanitary requirements for the trade of germplasmic material
- Present the methods of macroscopic, microscopic and seminal quality assessment
- Evaluate the compositions and functionality of the different diluents, as well as the methodology for the calculation of seminal doses
- Examine the critical points in the processing, maintenance and cryopreservation of spermatozoa
- Establish quality management systems in semen freezing centers
- Compile the design of a stallion assessment system
- Identify all genetic diseases transmissible by spermatozoa
- Propose the creation of germplasm banks for the conservation of animal genetic resources







## tech 14 | Course Management

#### Management



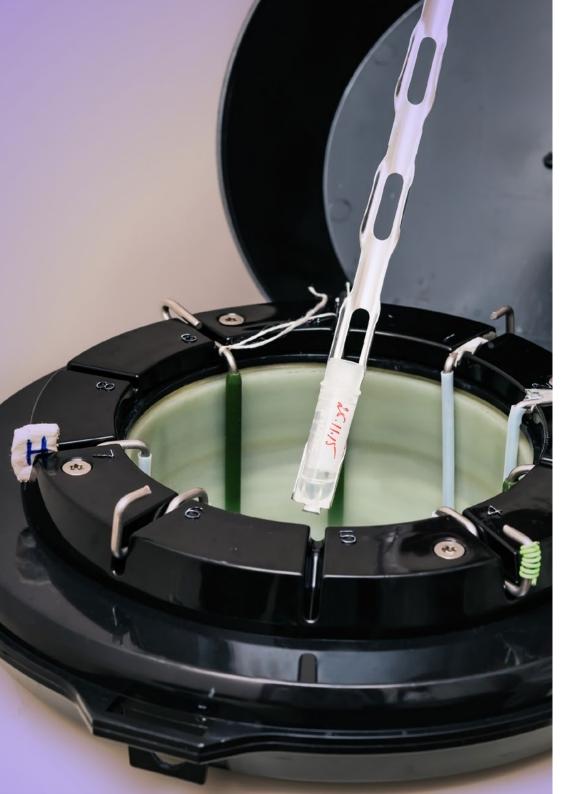
#### Dr. Gomez Peinado, Antonio

- Coordinator of Obstetrics and Reproduction at Alfonso X El Sabio University, Faculty of Veterinary Medicine
- Degree in Veterinary Medicine
- Doctorate in Alfonso X El Sabio University Faculty of Veterinary Medicine Professor of Animal Production



#### Dr. Gómez Rodríguez, Elisa

- Work development of assisted reproduction techniques at the "Spanish Institute of Animal Genetics and Reproduction" (IEGRA) in Talavera de la Reina, Toledo
- Professor of Veterinary Medicine at the Alfonso X El Sabio University
- Degree in Veterinary Medicine, Complutense University Madrid
- Postgraduate course "Assisted Reproduction in Cattle Taught by IEGRA, UAX and HUMECO, Talavera de la Reina
- Course on "Bovine Reproductive Ultrasound" Taught by Dr. Giovanni Gnemmi (HUMECO), Talavera de la Reina



### Course Management | 15 tech

#### **Professors**

#### Mr. Pinto González, Agustín

- Veterinarian of the Spanish Institute of Animal Genetics and Reproduction
- Sani Lidia's Veterinarian
- Degree in Veterinary Medicine
- Specialization in Animal Reproduction at IEGRA
- IEGRA's Diploma in Artificial Insemination in Cattle



The leading professionals in the field have come together to offer you the most comprehensive knowledge in this field, so that you can develop with total guarantees of success"





## tech 18 | Structure and Content

#### Module 1. Reproductive Biotechnologies in Males

- 1.1. Control and Sanitary Regulations for the Selection of Donors Venereal Diseases
  - 1.1.1. Introduction
  - 1.1.2. Animal Health Risks and Their Impact on International Trade
  - 1.1.3. Legal and Institutional Framework of Global Agricultural Trade
  - 1.1.4. National, European and International Sanitary Requirements for the Trade of Germoplasmic Material in Different Species
- 1.2. Methods of Semen Collection in Different Species of Domestic Mammals
- 1.2.1 Semen Extraction Using Artificial Vagina in Different Species of Domestic Mammals
  - 1.2.2. Extraction of Semen by Electroejaculation in Different Species of Domestic Mammals
  - 1.2.3. Postmortem Semen Collection in Different Species of Domestic Mammals
  - 1.2.4. How Does the Method of Semen Collection Affect the Quality of the Ejaculate?
- 1.3. Sperm Assessment Specific Parameters and Methods to Determine Semen Quality
  - 1.3.1. Macroscopic Assessment of the Ejaculate
  - 1.3.2. Microscopic Assessment of the Ejaculate
  - 1.3.3. Existing Methods for Semen Quality Assessment
- 1.4. Processing and Maintenance of Spermatozoa in Different Mammalian Species
  - 1.4.1. Composition and Functionality of the Diluent
  - 1.4.2. Differences in the Composition of Diluents in Different Species of Domestic Mammals
  - 1.4.3. Methodology for Calculating the Number of Seminal Doses
  - 1.4.4. Straw Packaging and Printing Criteria
  - 1.4.5. Critical Points During Processing and Maintenance of Spermatozoa
- 1.5. Sperm Cryopreservation
  - 1.5.1. Introduction
  - 1.5.2. Types of Cryoprotectants Used in Sperm Cryopreservation and Their Function
  - 1.5.3. Sperm Cryopreservation Methods
  - 1.5.4. Differences in Patterns of Sperm Cryopreservation in Different Species of Domestic Mammals

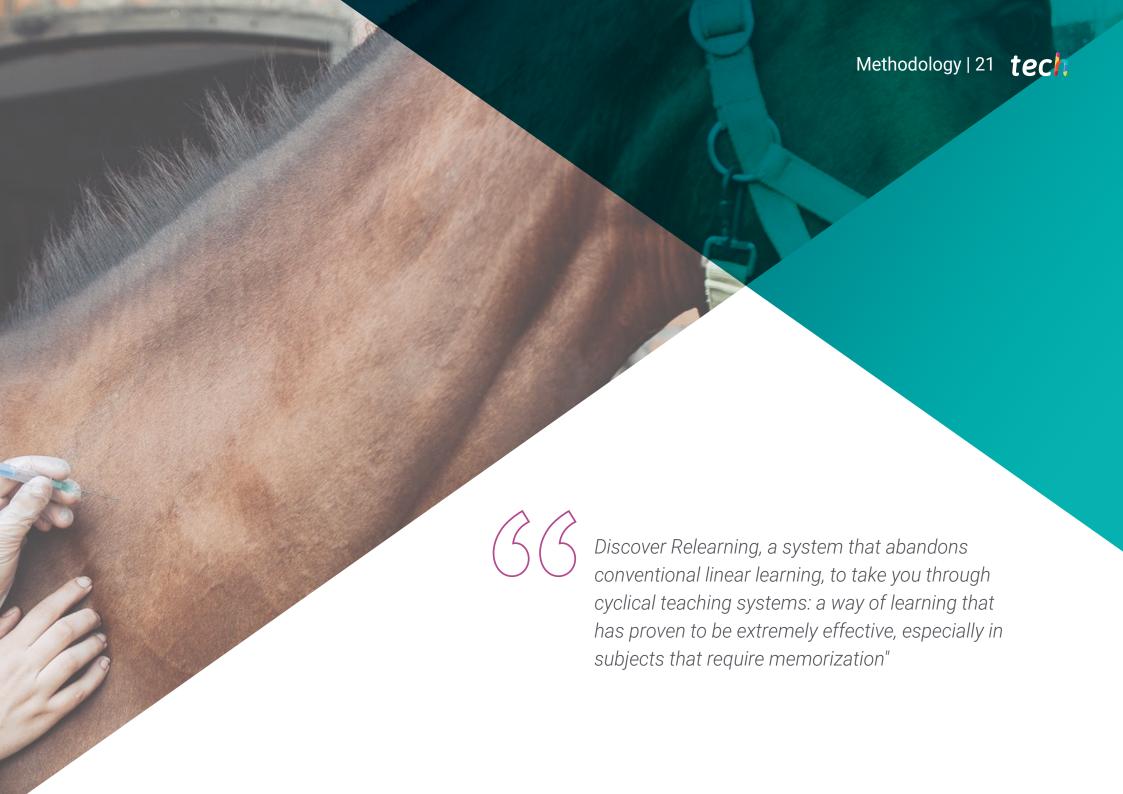




## Structure and Content | 19 tech

- 1.6. Quality Management System in Semen Freezing Centers
  - 1.6.1. Pre-Marketing Quality Management System for Seminal Doses
  - 1.6.2. Internal Data Management System for the Control of Seminal Dose in a Reproductive Center
  - 1.6.3. Quality Management Systems for the Movement of Seminal Dose at the National Level
  - 1.6.4. Quality Management Systems in Sperm Freezing Centers by the Ark
- 1.7. Methods of Determining the Fertility of Stallions Individually and on Farms
  - 1.7.1. Complete Study of Physical Capabilities for Riding and Sexual Libido
  - 1.7.2. Hormonal and Health Analyses
  - 1.7.3. Evaluation of the Reproductive System of the Stallion
  - 1.7.4. Therapeutic Methods to Improve Fertility in a Stallion
- 1.8. Genetic Characteristics of Stallions (Progeny Testing) and Guidelines for Marketing of Frozen Semen Doses
  - 1.8.1. Design of an Animal Assessment System
  - 1.8.2. Assess the Genetic Performance of an Individual
  - 1.8.3. Genomic Assessment
- 1.9. Study of Genetic Diseases Transmissible by Spermatozoa
  - 1.9.1. Introduction
  - 1.9.2. Peripheral Blood Karyotype
  - 1.9.3. Study of Meiosis in Testicular Tissue
  - 1.9.4. Study of the Spermatozoon
  - 1.9.5. Genetic Analysis of the Stallion to Detect Communicable Diseases
- 1.10. Establishment of Germplasm Banks for the Conservation of Animal Genetic Resources
  - 1.10.1. Regulations for the Creation of a Germplasm Bank
  - 1.10.2. Germplasm Bank Quality Management Systems
  - 1.10.3. Importance of a Germplasm Bank



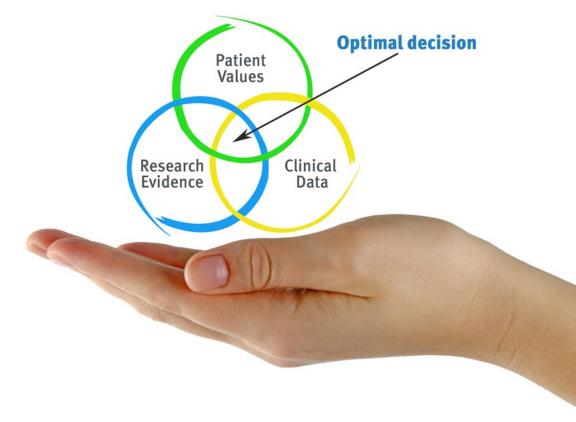


## tech 22 | Methodology

#### 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 | 25 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.

## tech 26 | 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 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 Therefore, TECH presents real cases in which

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.







## tech 30 | Certificate

This **Postgraduate Certificate in Preparation of Commercial Seminal Doses** contains the most complete and up-to-date scientific program on 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 diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: Postgraduate Certificate in Preparation of Commercial Seminal Doses

Official N° of Hours: 150 h.



<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.

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