



### Postgraduate Certificate Beekeeping

» 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/beekeeping

# Index

 $\begin{array}{c|c} 01 & 02 \\ \hline & \\ \hline \\ 03 & 04 \\ \hline \\ \hline \\ \hline \\ course Management & Structure and Content \\ \hline \\ \\ \hline \\ p. 12 & p. 16 \\ \hline \end{array}$ 

Certificate

06

p. 28





### tech 06 | Introduction

The Postgraduate Certificate in Beekeeping is a comprehensive program that covers the broadest spectrum of species and breeds used in extensive animal production systems. Not only is in-depth and specialized attention paid to the most common productions, but also to other much less common but highly relevant productions, which demand a greater degree of specialization from professionals in the area.

Likewise, the degree of knowledge and professional experience of the program's professors allows them to deal with very specific productions, where it is very difficult to access levels of specialization, except for the small number of people who have had the opportunity to develop their knowledge within the scope of this type of livestock farming.

This program is the most specialized since the development of each subject is structured according to the knowledge and experience of the teaching team, avoiding generalist voluntarism which, although it can provide acceptable global visions, lacks the capacity to study in depth each and every one of the subjects that need to be addressed with the highest quality.

The high levels of knowledge provided by the faculty in the areas of economics, genetics and animal breeding contribute decisively to consolidate and expand knowledge in two areas that are absolutely fundamental to achieve success in the management of extensive livestock production.

This **Postgraduate Certificate in Beekeeping** contains the most complete and upto-date scientific program on the market. The most important features include:

- Case studies presented by experts in the management of veterinary centers
- 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 in Beekeeping
- Practical exercises where self-assessment can be used to improve learning
- · Special emphasis on innovative methodologies in Beekeeping
- 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



Immerse yourself in a program of the highest educational quality, which will allow you to face future challenges in Beekeeping"

### Introduction | 07 tech



This Postgraduate Certificate is the best investment you can make in selecting a refresher program to update your knowledge of beekeeping"

It includes, in its teaching staff, professionals belonging to the field of extensive livestock farming, who contribute to this training the experience of their work, in addition to recognized 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 specialization programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the specialist must try to solve the different professional practice situations that arise throughout the program. To do so, the professional will be assisted by an innovative interactive video system created by recognized experts in Extensive Livestock Management.

This Postgraduate Certificate has the best didactic material, which will allow you a contextual study that will facilitate your learning.

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







### tech 10 | Objectives



### **General Objectives**

- Study in depth the life and habits of bees
- Mastering the techniques for handling them
- Identify and control the main dangers to bees
- Manage the procedures for obtaining quality products derived from this practice



Take the opportunity and take the step to get up to date on the latest developments in beekeeping"









### **Specific Objectives**

- Investigate the morphology, anatomy and physiology of each of the castes that make up the hive
- Study in depth the ethological behavior of bees, in order to reach a deep knowledge of them
- Identify the main problems affecting the queen
- Study the pollination process in depth and quantify its importance
- Investigate in the field of melliferous flora
- Identify the different species and breeds of bees
- Analyze and identify the different materials used for each of the tasks performed in this practice
- Deepen the knowledge of integrated hive health management to preserve the health of bees
- Evaluate the different extraction processes of the numerous products obtained from beekeeping





### tech 14 | Course Management

#### Management



#### Dr. Rodríguez Montesinos, Adolfo

- PhD and Degree in Veterinary Medicine from the Complutense University of Madrid
- Graduated in Veterinary Medicine in 1979 with the qualification of Outstanding at the Complutense University of Madrid, subsequently carrying out the corresponding doctoral studies, finishing them with the reading of the Doctoral Thesis in 1992, qualified as Apto cum Laude
- Journalist Registered with the Federation of Press Associations and the Press Association of Madrid
- Coordinating Professor of Animal Production (Third year of the Veterinary Degree) and Ethnology (Second Postgraduate Certificate of the Veterinary Degree) at the Alfonso X El Sabio University from 2009 to the <u>present</u>
- Director of Final Degree Projects at Universidad Alfonso X El Sabio
- Training Coordinator, Director and Professor of Postgraduate Courses organized by the General Council of Veterinary Associations of Spain, for veterinarians on the fighting bull and expertise in bullfighting shows, taught in more than 200 editions from 1987 to the present

#### **Professors**

#### Dr. Herrero Iglesias, Alicia Cristina

- Degree in Veterinary Medicine from the University of Extremadura (2005)
- Master's Degree in Secondary Education, International University of La Rioja
- Postgraduate Certificate in Occupational Training, taught by the INESEM Postgraduate
   Training Center through the Euroinnova Training Center
- Course "Animal Welfare in Livestock Production" organized by the Official College of Veterinarians of Madrid, in collaboration with the Faculty of Veterinary Medicine UCM and the Ministry of Environment and Land Management of the Community of Madrid







### tech 18 | Structure and Content

#### Module 1. Beekeeping

- 1.1. Bees
  - 1.1.1. Bee Morphology
  - 1.1.2. Anatomy and Physiology
  - 1.1.3. Evolutionary Stages
  - 1.1.4. Castes
- 1.2. The Queen Bee
  - 1.2.1. Queen Cells, Birth of the Queen
  - 1.2.2. Life in the Hive and Work of the Queen
  - 1.2.3. Mating
  - 1.2.4. Egg Laying and Development
  - 1.2.5. Some Problems Associated with the Queen
- 1.3. The Workers
  - 1.3.1. Birth of the Workers
  - 1.3.2. Worker Development and First Foraging
  - 1.3.3. Worker Ethology
  - 1.3.4. Pollination
  - 1.3.5. Melliferous Flora
- 1.4. Drones
  - 1.4.1. Drone Morphology and Anatomy
  - 1.4.2. Function of Drones
  - 1.4.3. Bee Species and Breeds
  - 1.4.4. The Bee Colony
- 1.5. Flowers
  - 1.5.1. Nectar
  - 1.5.2. Pollen
  - 1.5.3. Propolis or Bee Glue
  - 1.5.4. Myelate
- 1.6. Beekeeping Equipment
  - 1.6.1. Beehives
  - 1.6.2. Operating Tools
  - 1.6.3. Material Used in the Collection
  - 1.6.4. Material Used in Queen Rearing
  - 1.6.5. Maintenance and Disinfection of Equipment



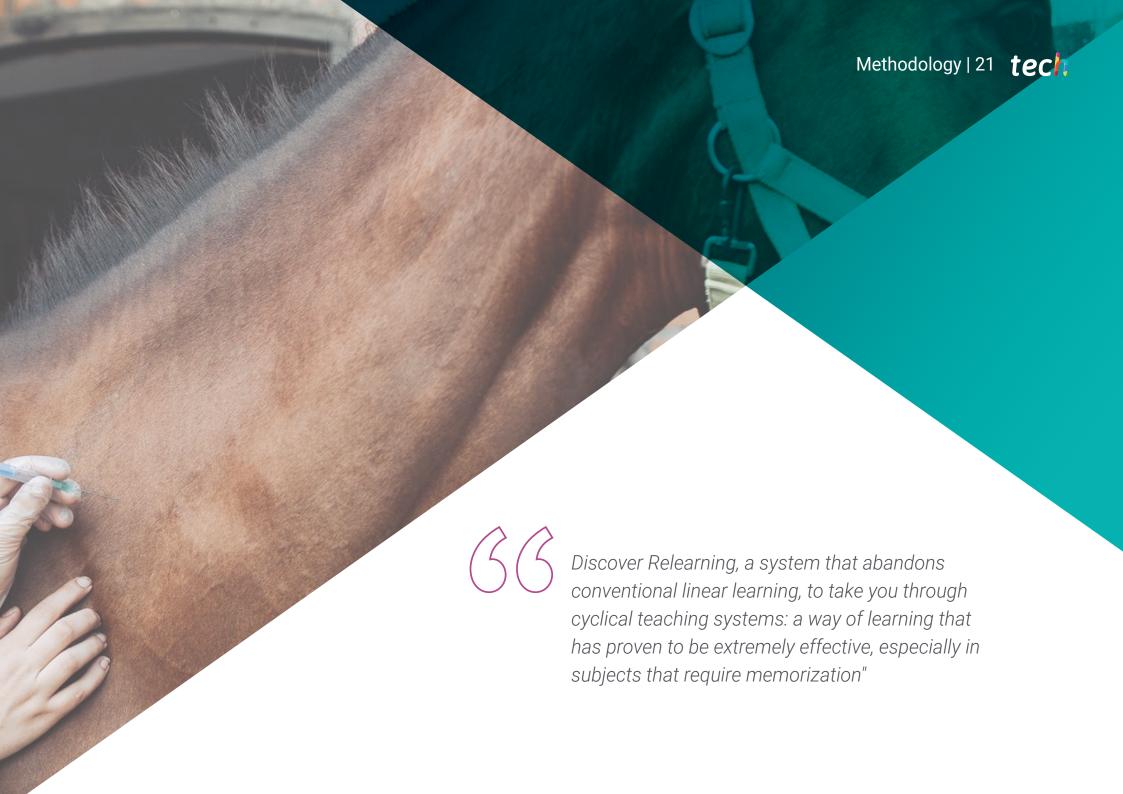


### Structure and Content | 19 tech

- 1.7. Hostile Elements for the Hive. Main Bee Diseases
  - 1.7.1. Main Enemies of Bees
  - 1.7.2. Bee Diseases
  - 1.7.3. Treatment of Pathologies
  - 1.7.4. Sanitary Defence
- 1.8. Installation and Control of the Apiary. Winter Jobs
  - 1.8.1. Location of Hives
  - 1.8.2. Winter Surveillance
  - 1.8.3. First Inspection after Winter
  - 1.8.4. Post-Winter Beehive Preparation
- 1.9. Work in the Hive during the Year
  - 1.9.1. Address of the Apiary
  - 1.9.2. Spring Jobs
  - 1.9.3. Summer Jobs
  - 1.9.4. Autumn Jobs
- 1.10. Products Derived from Beekeeping and How to Obtain Them
  - 1.10.1. Honey
  - 1.10.2. Pollen
  - 1.10.3. Wax
  - 1.10.4. Poisons
  - 1.10.5. Propolis





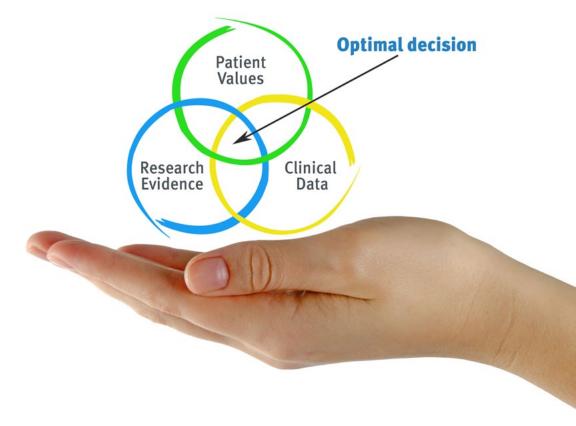


### tech 22 | Methodology

#### 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**

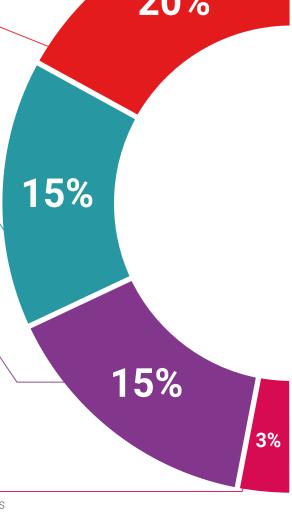
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch 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 Beekeeping** contains the most complete and up-todate 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 Beekeeping

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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