

# Postgraduate Certificate

Labor Care and Neonatology in  
Different Species of Domestic  
Mammals



## Postgraduate Certificate Labor Care and Neonatology in Different Species of Domestic Mammals

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/in/veterinary-medicine/postgraduate-certificate/labor-care-neonatology-different-species-domestic-mammals](http://www.techtute.com/in/veterinary-medicine/postgraduate-certificate/labor-care-neonatology-different-species-domestic-mammals)

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# 01

# Introduction

In mammalian reproduction, birth is the main way to ensure the survival of a species, which is a process that consists of several consecutive stages and phases that must occur with a synchronized physiological system. Pregnant females in their approach to birth display a series of symptoms that must be interpreted in order to adequately attend this process and perform an optimal clinical performance during labor.

Specialize in Labor Care and Neonatology in the Different Species of Domestic Mammals with this high-level training, taught by experts with extensive experience in the field.





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*This specialization is the best option you can find to specialize in Labor Care and Neonatology in the Different Species of Domestic Mammals and make more accurate diagnoses"*

From the earliest data on animal reproduction in Egyptian hieroglyphs, through the ancient veterinarians to the present day, humankind 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, equidae, swine, sheep, goats and canids; a selection made based on the importance and development of assisted reproduction at present.

This Postgraduate Certificate has been developed to expand upon the current knowledge of the specialization in the different techniques of Labor Care and Neonatology in the Different Species of Domestic Mammals.

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 the genetic material of different species of international zootechnical interest available to the market.

The program will be based on theoretical and scientific aspects, combining them with the practical and applicable professionalism of each of the units covered in this program. Continuing education after completing undergraduate studies is sometimes complicated and difficult to balance with professional and personal 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 Labor Care and Neonatology in Different Species of Domestic Mammals** contains the most complete and up-to-date educational program on the market. The most important features of the specialization are:

- ♦ Case studies presented by experts in Labor Care and Neonatology in Different Species of Domestic Mammals
- ♦ 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
- ♦ Latest development in Labor Care and Neonatology in Different Species of Domestic Mammals
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative methodologies in Labor Care and Neonatology in Different Species of Domestic Mammals
- ♦ 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



*Do not miss the opportunity to take this Postgraduate Certificate in Labor Care and Neonatology in the Different Species of Domestic Mammals with us. It's the perfect opportunity to advance your career"*

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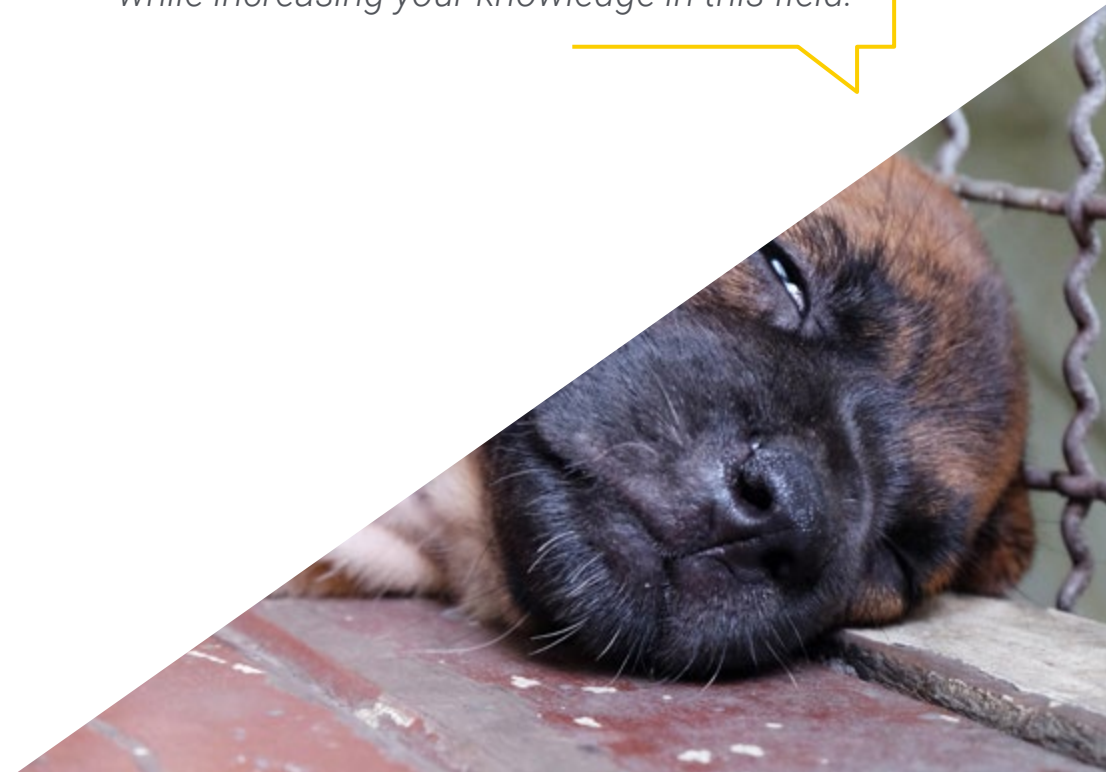
*This Postgraduate Certificate is the best investment you can make when selecting a refresher program to update your knowledge in Labor Care and Neonatology in Different Species of Domestic Mammals”*

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 training that is programmed to train students 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 created by renowned experts in Labor Care and Neonatology in Different Species of Domestic Mammals with extensive experience.

*This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.*

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



# 02 Objectives

The program in Labor Care and Neonatology in Different Species of Domestic Mammals is oriented to facilitate the performance of the veterinary professional with the latest advances and most innovative treatments in the sector.





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*This is the best option to learn about the latest advances in Labor Care and Neonatology in the Different Species of Domestic Mammals"*



## General Objectives

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- Specify the stages of labor, its physiology and precursor signs
- Define the methods of exploration and clinical monitoring of mammalian parturition preparation
- Examine mammary gland function, lactogenic hormones and milk composition in different species of domestic mammals



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





## Specific Objectives

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- ♦ Analyze pelvic diameters and circumferences in different domestic females
- ♦ Substantiate the events during the stages of childbirth
- ♦ Evaluate external and internal factors affecting the dynamics of childbirth
- ♦ Establish calving induction treatments in different domestic females
- ♦ Develop puerperal control guidelines
- ♦ Compile the different performances of the physiology of childbirth, as well as anesthesia and obstetric surgery in different species
- ♦ Establish newborn care protocols (neonatology)
- ♦ Specify the process of mammogenesis and lactogenesis based on the physiology of lactation
- ♦ Define milk quality conditions and milk control programs

03

# Course Management

The program includes in its teaching staff leading experts in Labor Care and Neonatology in Different Species of Domestic Mammals who bring the experience of their work to this specialization. They are world-renowned doctors from different countries with proven theoretical and practical professional experience.





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*Our teaching team, experts in Labor Care in Different Species of Domestic Mammals, will help you achieve success in your profession"*

## 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

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



## 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

### Dr. Peris Frau, Patricia

- ♦ Postdoctoral fellow in charge of the UCLM research project entitled: "Improvements in Sperm Conservation of Different Species" In the Animal Health and Biotechnology Research Group (SaBio, IREC, UCLM)
- ♦ Degree in Veterinary Medicine from the University of Murcia.
- ♦ Doctorate in Agricultural and Environmental Sciences with international mention from the University of Castilla La Mancha
- ♦ Member of the research team of the National Project entitled: "Increased in vitro embryo procurement in small ruminants through modification in the in vitro fertilization protocol" (AGL2017-89017-R).
- ♦ Clinical Veterinarian at Animal Care Hospital Douglas, Cork, Ireland

04

# Structure and Content

The structure of the contents has been designed by the best professionals in the field of Labour Care and Neonatology in Different Species of Domestic Mammals, with an extensive experience and recognized prestige in the profession, supported by the volume of cases reviewed, studied and diagnosed, and with a wide mastery of new technologies applied to veterinary medicine.



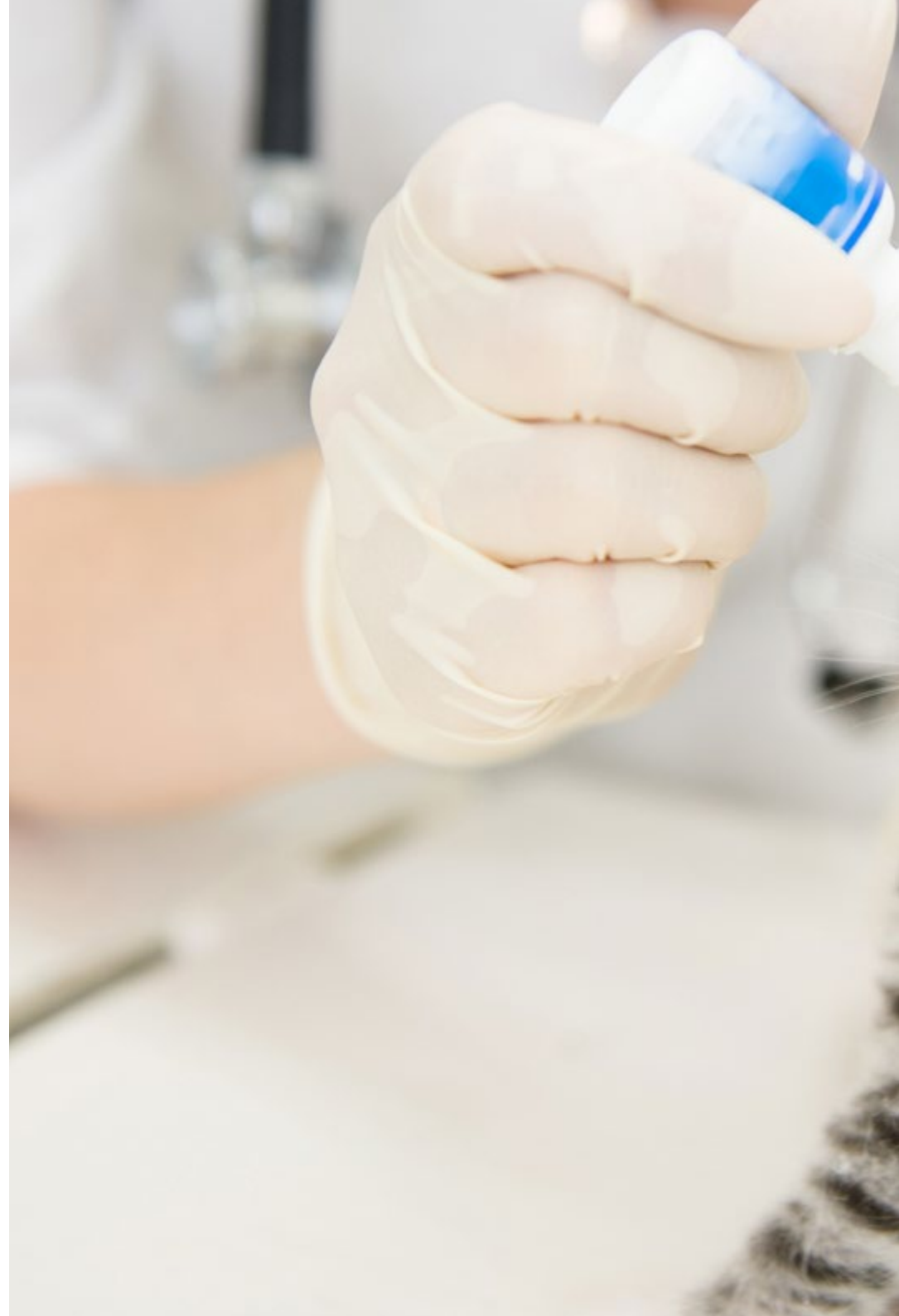


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*This Postgraduate Certificate in Labor Care and Neonatology in Different Species of Domestic Mammals contains the most complete and up-to-date scientific program on the market”*

## Module 1. Labor and Lactation

- 1.1. Labor: Stages Physiology of Labor
  - 1.1.1. Definition of Labor and Its Phases
  - 1.1.2. Late Gestational Hormonal Changes and Effect on Myometrial Activation
  - 1.1.3. Prostaglandins at the End of Gestation and Their Physiological Activity
  - 1.1.4. The Peripheral Nervous System and Its Mediators in Childbirth
- 1.2. Precursor Signs of Parturition in Different Female Mammals
  - 1.2.1. Signs of Approaching Parturition in Different Females
  - 1.2.2. Relaxation of the Pubic Symphysis, Cervix, and Medial and External Tract of the Reproductive System
  - 1.2.3. Study of the Hypothalamic-Pituitary-Cortico-Adrenal Axis of the Fetus and the Determination of the Onset of Labor
  - 1.2.4. Influence of External Factors on the Onset of Labor
  - 1.2.5. Induction of Parturition in Different Females Pharmacological Aspects
- 1.3. Pelvimetry Labor Neonatology
  - 1.3.1. Study of the Anatomy of the Pelvis in Mammals
  - 1.3.2. Pelvic Diameters and Circumferences in Females
  - 1.3.3. Events During the Stages of Childbirth
  - 1.3.4. Care of the Mother after Labor
  - 1.3.5. Care of Newborns
- 1.4. Fetal Presentation and Positions Labor Technique
  - 1.4.1. Methods of Examination and Clinical Follow-Up in Preparation for Mammalian Parturition
  - 1.4.2. Fetal Presentations and Positions in Females
  - 1.4.3. Diagnosis and Mechanisms of Clinical Action in Childbirth
- 1.5. The Puerperium in Females
  - 1.5.1. Puerperal Period, Early Phase
  - 1.5.2. Puerperal Period, Late Phase
  - 1.5.3. Guidelines for Puerperal Control
  - 1.5.4. Cycles of Lochia Elimination in Females





- 1.6. Pathophysiology of Labor Obstetrics
  - 1.6.1. Labor Propaedeutics
  - 1.6.2. Study of Obstetric Material in Different Females
  - 1.6.3. Obstetric Anesthesia in Different Females
  - 1.6.4. Bloodless Obstetric Interventions
  - 1.6.5. Bloody Obstetric Interventions
- 1.7. Mammary Gland Development Mammogenesis
  - 1.7.1. Anatomy of the Mammary Gland in Different Female Mammals
  - 1.7.2. Vascularization and Innervation of the Udder
  - 1.7.3. Mammogenesis, Fetal Period and Postnatal Period
  - 1.7.4. Hormonal Control of Mammary Gland Growth
- 1.8. Functioning of the Mammary Gland Lactogenesis
  - 1.8.1. Lactation Physiology
  - 1.8.2. Lactogenic Hormones During Gestation and Labor Mechanism of Action
  - 1.8.3. Lactation
  - 1.8.4. Neuroendocrine Reflex of Lactal Ejection
- 1.9. Colostrum and Milk Production
  - 1.9.1. Composition of Milk in Different Females
  - 1.9.2. Composition of Colostrum in Different Females
  - 1.9.3. Influence of External Factors on Milk Production
  - 1.9.4. Management of Females for the Initiation of Milk Productive Activity
- 1.10. Pathologies in Lactation Mammitis
  - 1.10.1. Control of Reproductive Aptitude in Lactation: Lactational Anestrus
  - 1.10.2. Milk Quality
  - 1.10.3. Markers of Udder Inflammation
  - 1.10.4. Mammitis and Control Programs
  - 1.10.5. Mechanical Milking and Animal Welfare Conditions



*This training will allow you to advance  
in your career comfortably"*

# 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 Labor Care and Neonatology in Different Species of Domestic Mammals guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification issued by TECH Technological University.



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

This **Postgraduate Certificate in Labor Care and Neonatology in Different Species of Domestic Mammals** 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 certificate 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 Labor Care and Neonatology in Different Species of Domestic Mammals**

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.

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



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