



## Professional Master's Degree

## Animal Welfare

» Modality: online

» Duration: 12 months

» Certificate: TECH Global University

» Credits: 60 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/veterinary-medicine/professional-master-degree/master-animal-welfare

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## tech 06 | Introduction to the Program

Animal Welfare has gained significant attention in recent years, becoming a priority for both society and veterinarians. For example, the growing concern over animal handling, transportation, and slaughter practices has driven the adoption of stricter standards and better techniques to minimize suffering. In this regard, professionals must have a deep understanding of the most up-to-date protocols to ensure that animals are treated ethically and that international standards are met.

In this context, the Professional Master's Degree in Animal Welfare at TECH offers comprehensive and current training in a crucial area for society. Additionally, it thoroughly analyzes current legislation on Animal Welfare in livestock farms, zoos, animal shelters, and animal sales establishments. On the other hand, it dedicates a specific module to the ethics of Animal Welfare in Aquaculture, a relatively new and less explored topic. It also delves into key issues regarding welfare in transport and slaughter—critical moments in the animal's life that, although brief, have a significant impact. Thereby, veterinarians are prepared to face the challenges of ensuring Animal Welfare in different contexts.

Additionally, the university program offers a 100% online modality, allowing veterinarians to organize their schedules flexibly. To access the content, all that is needed is a device with an internet connection, facilitating knowledge updates from anywhere. Furthermore, an innovative approach based on Relearning is used, which favors a progressive and natural assimilation of essential concepts. In this way, graduates will be able to incorporate new concepts without the need for traditional memorization. They will also have access to a wide range of multimedia resources, such as detailed videos, interactive summaries, and specialized readings.

This **Professional Master's Degree in Animal Welfare** 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 Veterinary Medicine
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in Animal Welfare across different environments, both domestic and production-based
- 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



You will delve into the ethological foundations of the main animal species of interest"



You will promote education and social awareness regarding the importance of Animal Welfare"

The teaching staff includes professionals from the field of veterinary medicine, who bring their work experience to this program, as well as 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 an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student 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 and experienced experts.

You will design individualized Welfare plans tailored to each environment, species, and production phase.

Through TECH's Relearning methodology, you will update your knowledge progressively and autonomously. At your own pace!.







## tech 10 | Why Study at TECH?

#### The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

#### The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistuba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

#### The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabus





World's
No.1
The World's largest
online university

## The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

#### A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

#### The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

#### **Leaders in employability**

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.









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#### **Google Premier Partner**

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

#### The top-rated university by its students

Students have positioned TECH as the world's toprated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.





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## Module 1. Animal Welfare. Concepts and Evolution

- 1.1. Evolution of the Concept of Animal Welfare, from Antiquity to Present Day
  - 1.1.1. Animal Welfare in Antiquity
  - 1.1.2. Introduction to the Concept of Welfare
  - 1.1.3. Animal Welfare Today
- 1.2. Vision of the Concept of Animal Welfare from Different Cultures
  - 1.2.1. Buddhism
  - 1.2.2. Catholicism
  - 1.2.3. Islam
  - 1.2.4. Judaism
  - 1.2.5. Orthodox Church
  - 1.2.6. Protestantism
- 1.3. Concept of Animal Welfare, Approaches to Understanding It
  - 1.3.1. Definitions of Animal Welfare
  - 1.3.2. Emotion-Based Approach
  - 1.3.3. Function-Based Approach
  - 1.3.4. Ethology-Based Approach
- 1.4. Physiological Responses to Stress
  - 1.4.1. Hypothalamus-Pituitary-Adrenal-Glands Axis
- 1.5. Acute and Chronic Stress Response
  - 1.5.1. Physiological Responses to Chronic Stress
  - 1.5.2. Physiological Responses to Acute Stress
- 1.6. Concepts of "Eustress" and "Distress"
  - 1.6.1. Eustress: Optimal Stress
  - 1.6.2. Distress: Negative Stress
- 1.7. The Role of Stress Response in Welfare
- 1.8. Freedoms and Needs
  - 1.8.1. Concept of Freedoms
  - 1.8.2. The Role of freedoms in Animal Welfare
  - 1.8.3. Concept of Needs

- 1.9. Animal Welfare Assessment Systems
  - 1.9.1. Direct Indicators
  - 1.9.2. Indirect Indicators
- 1.10. Developing Animal Welfare Assessment Protocols
  - 1.10.1. TGI 35 L
  - 1.10.2. WelfareQuality ®
  - 1.10.3. AWIN (Animal Welfare Indicators)

## Module 2. Applied Animal Ethology

- 2.1. Applied Animal Ethology and Its Relation to Animal Welfare
  - 2.1.1. General Information on Ethology
  - 2.1.2. Origin of Applied Ethology
  - 2.1.3. Fields of Applied Ethology
- 2.2. Organization of Behavior
  - 2.2.1. Learning
  - 2.2.2. Motivation
- 2.3. The Effect of Domestication on Animal Behavior
  - 2.3.1. Definition of Domestication
  - 2.3.2. The Environment in Domestication
  - 2.3.3. Domestication and Animal Behavior
- 2.4. Individual Animal Behavior
  - 2.4.1. Food Industry
  - 2.4.2. Body Care
  - 2.4.3. Examination
  - 2.4.4. Reaction Behavior
  - 2.4.5. Rest and Sleep
- 2.5. Social and Reproductive Behavior
  - 2.5.1. General Social Behavior
  - 2.5.2. Association
  - 2.5.3. Social Interactions
  - 2.5.4. Reproductive Capacity

- 2.6. Infant and Parental Behavior
  - 2.6.1. Fetal Behavior and Childbirth
  - 2.6.2. Maternal Behavior
  - 2.6.3. Neonatal and Juvenile Behavior
  - 2.6.4. Play, Practice and Exercise
- 2.7. Applied Ethology in Swine and Poultry
  - 2.7.1. Origin and Domestication of Swine
  - 2.7.2. Swine Signals and Communication
  - 2.7.3. Biological Rhythms in Swine: Diet, Rest, Reproduction
  - 2.7.4. Origin and Domestication of Birds
  - 2.7.5. Signals and Communication in Birds
  - 2.7.6. Biological Rhythms in Birds: Diet, Rest, Reproduction
- 2.8. Applied Ethology in Cattle, Sheep and Goats
  - 2.8.1. Origin and Domestication of Beef Cattle
  - 2.8.2. Signals and Communication in Cattle
  - 2.8.3. Biological Rhythms in Cattle: Diet, Rest, Reproduction
  - 2.8.4. Origin and Domestication of Sheep and Goats
  - 2.8.5. Signals and Communication in Sheep and Goats
  - 2.8.6. Biological Rhythms in Sheep and Goats: Diet, Rest, Reproduction
- 2.9. Applied Ethology in Dogs and Cats
  - 2.9.1. Origin and Domestication of Dogs
  - 2.9.2. Signals and Communication in Dogs
  - 2.9.3. Biological Rhythms in Dogs: Diet, Rest, Reproduction
  - 2.9.4. Origin and Domestication of Cats
  - 2.9.5. Signals and Communication in Cats
  - 2.9.6. Biological Rhythms in Cats: Diet, Rest, Reproduction
- 2.10. Environmental Enrichment
  - 2.10.1. Concept of Environmental Enrichment
  - 2.10.2. Functions of Environmental Enrichment
  - 2.10.3. Types of Environmental Enrichment

## Module 3. Animal Ethics

- 3.1. Concept of Animal Ethics: Bioethics
  - 3.1.1. Concept of Animal Ethics
  - 3.1.2. Principles of Animal Ethics
- 3.2. Social, Personal and Professional Ethics
  - 3.2.1. Ethics and Logic behind Ethics
- 3.3. Ethics and Morals concerning Animals
- 3.4. Ethical Theories
  - 3.4.1. Utilitarianism
  - 3.4.2. Rights Ethics
  - 3.4.3. Contractualism
  - 3.4.4. Aristotelian Approaches
  - 3.4.5. Ethics of Care
  - 3.4.6. Egalitarianism
- 3.5. Debate on the Moral Status of Animals
  - 3.5.1. Value Attached to Animals
  - 3.5.2. Differentiation between Species
- 3.6. Animal Integrity
  - 3.6.1. Animal Integrity and Zoocentric Animal Ethics
  - 3.6.2. Biocentric Animal Integrity and Ethics
  - 3.6.3 Aesthetics and Ethics
- 3.7. Animal Abuse
  - 3.7.1 The Evolution of Animal Treatment
  - 3.7.2. Types of Animal Abuse
  - 3.7.3. Animal Abuse in Society Today
- 3.8. Distress and Happiness in Animals
  - 3.8.1. Quality of Life in Animals
  - 3.8.2. Interpreting Animal Pain
- 3.9. Animal Rights
  - 3.9.1. The Universal Declaration of Animal Rights
- 3.10. Human-Animal Relationships
  - 3.10.1. Qualities of the Human-Animal Relationships
  - 3.10.2. Implications of the Human Animal on the Non-Human Animal

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## Module 4. International Animal Protection Legislation

- 4.1. European Union Treaties
  - 4.1.1. Prior to the Treaty of Lisbon
  - 4.1.2. The Treaty of Lisbon
- 4.2. The European Parliament, Its Role in Animal Protection
  - 4.2.1. The European Parliament, First Stage prior to 1986
  - 4.2.2. Second Stage of Animal Welfare in the European Parliament
  - 4.2.3. The European Parliament and Animal Welfare Today
- 4.3. The European Council: Origin of Legislation in the European Union
  - 4.3.1. Council of Europe
  - 4.3.2. The Role of the European Council on Animal Welfare
- 4.4. The Role of International Agencies in Animal Welfare
  - 4.4.1. The Role of the Organization for Economic Co-Operation and Development (OECD)
  - 4.4.2. The Role of Food and Agriculture Organization of the United Nations (FAO)
  - 4.4.3. The Role of the World Organization for Animal Health (WOAH)
- 4.5. Animal Protection in Countries outside the European Union: North America, South America, Africa, Asia and Oceania
  - 4.5.1. Animal Protection Regulations in the Americas
  - 4.5.2. Animal Protection Regulations in Africa
  - 4.5.3. Animal Protection Regulations in Asia
  - 4.5.4. Animal Protection Regulations in Oceania

## Module 5. Livestock Establishments. Welfare in Swine, Beef Cattle and Poultry

- 5.1. Welfare in Swine Establishments: Facilities and Equipment
  - 5.1.1. Accommodation
  - 5.1.2. Environmental Needs
  - 5.1.3. Management
- 5.2. Breeding Swine Welfare
  - 5.2.1. Breeding Sow Welfare
  - 5.2.2. Boar Welfare
- 5.3. Welfare in Swine Breeding
  - 5.3.1. Nursing
  - 5.3.2. Transition







- 5.4. Welfare in Fattening Pigs
  - 5.4.1. Accommodation and Facilities
  - 5.4.2. Management
- 5.5. Welfare in Beef Cattle Establishments: Facilities and Equipment
  - 5.5.1. Accommodation
  - 5.5.2. Environmental Needs
  - 5.5.3. Management
- 5.6. Dairy Cow Welfare
  - 5.6.1. Cow Comfort
- 5.7. Calf Welfare
  - 5.7.1. Accommodation and Facilities
  - 5.7.2. Management
- 5.8. Welfare in Poultry Establishments: Facilities and Equipment
  - 5.8.1. Accommodation
  - 5.8.2. Environmental Needs
  - 5.8.3. Management
- 5.9. Laying Hen Welfare
  - 5.9.1. Alternative Egg Production Systems
- 5.10. Welfare in Broiler Fattening
  - 5.10.1. Accommodation and Facilities
  - 5.10.2. Management

## Module 6. Welfare in Others Species of Interest

- 6.1. Welfare in Dairy Sheep and Goats
  - 6.1.1. Accommodation
  - 6.1.2. Environmental Needs
  - 6.1.3. Management
- 6.2. Sheep Feedlot Welfare
  - 6.2.1. Accommodation
  - 6.2.2. Environmental Needs
  - 6.2.3. Management

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5.3.	Welfare	in Equine Livestock	
		Accommodation	
	6.3.2.	Environmental Needs	
	6.3.3.	Management	
5.4.	Welfare in Rabbit Farms		
	6.4.1.	Accommodation	
	6.4.2.	Environmental Needs	
	6.4.3.	Management	
б.5.	Welfare in Alternative Poultry Production		
	6.5.1.	Accommodation	
	6.5.2.	Environmental Needs	
	6.5.3.	Management	
5.6.	Welfare of Game Species		
	6.6.1.	Accommodation	
	6.6.2.	Environmental Needs	
	6.6.3.	Management	
6.7.	Camelid Welfare (Llamas, Alpacas, Vicunas and Guanacos)		
	6.7.1.	Accommodation	
	6.7.2.	Environmental Needs	
	6.7.3.	Management	
б.8.	Welfare in Companion Animals: Dogs and Cats		
	6.8.1.	Accommodation	
	6.8.2.	Responsible Animal Ownership	
	6.8.3.	Welfare Problems	
5.9.	Welfare in Other Companion Animals		
	6.9.1.	Accommodation	
	6.9.2.	Responsible Animal Ownership	
	6.9.3.	Welfare Problems	
5.10.	Welfare in Beekeeping		
	6.10.1.	The Importance of Bees as a Super Organism	
	6.10.2.	The Environment	
	6.10.3.	Feeding and Management	

## Module 7. Welfare in Zoos, Shelters and Other Facilities and Establishments

- 7.1. Welfare in Zoos
  - 7.1.1. Functions of Zoos
  - 7.1.2. Physical and Emotional Health in Zoo Animals
  - 7.1.3. Fear Response
- 7.2. Wild Animal Response to Captivity
  - 7.2.1. Accommodation
  - 7.2.2. Behavior and Welfare
  - 7.2.3. Species-Specific Response to Captivity
- 7.3. Welfare Indicators in Zoos
  - 7.3.1. Behavioral Indicators
  - 7.3.2. Animal-Related Indicators
- 7.4. Welfare Problems in Zoo Animals
  - 7.4.1. Dietary Problems
  - 7.4.2. Thermal Stress
  - 7.4.3. Space Restrictions
  - 7.4.4. Social Stress
- 7.5. Animal Welfare in Animal Shelters
  - 7.5.1. Accommodation, Care and Environment
- 7.6. Problems in Animal Shelters
  - 7.6.1. Animal Collection
  - 7.6.2. Grouping and Sheltering
- 7.7. Animal Welfare in Shows
  - 7.7.1. Fighting Bulls
  - 7.7.2. Circus Animals
  - 7.7.3. Dolphins
- 7.8. Animal Welfare in Commercial Animal Establishments
  - 7.8.1. Accommodation, Care and Environment
- 7.9. Welfare in Research and Teaching Establishments
  - 7.9.1. Housing, Care and Environmental Factors
  - 7.9.2. Nutrition and Welfare
- 7.10. Welfare Problems in Research and Teaching Animals
  - 7.10.1. Experimental Procedures: General Principles and Recommendations
  - 7.10.2. Infections in Laboratory Animals: Significance and Control

## Module 8. Animal Welfare in Fish Farming

- 8.1. Physiological Stress Response in Fish
  - 8.1.1. Stress Response in Fish
  - 8.1.2. Detecting and Measuring Stress Response
  - 8.1.3. Cortisol as a Stress Index
- 8.2. Consciousness in Fish
  - 8.2.1. Fish Are Capable of Suffering
  - 8.2.2. Basic Brain Organization of Teleost Fish
  - 8.2.3. Cognitive Capacity and Behavior Modification
- 8.3. Pain and Fear in Fish
  - 8.3.1. Sensitivity and Consciousness
  - 8.3.2. Pain
  - 8.3.3. Fear
- 8.4. Fish Welfare Indicators
  - 8.4.1. Based on the Group
  - 8.4.2 Based on the Individual
- 8.5. Water Quality and Fish Welfare
  - 8.5.1. Dissolved Oxygen
  - 8.5.2. Ammonia, Nitrates, Nitrites
  - 8.5.3. Carbon Dioxide, Gas Oversaturation
  - 8.5.4. Suspended Solids, Heavy Metals
  - 8.5.5. Acidity, Alkalinity, Hardness, Temperature, Conductivity
  - 8 5 6 Water Flow
- 8.6. Fish Welfare under Different Production Systems
  - 8.6.1. Pond Aquaculture
  - 8.6.2. Continuous Flow Systems
  - 8.6.3. Semi-Closed Water Circuit Systems
  - 8.6.4. Water Recirculation Systems
  - 8.6.5. Net Cages
  - 8.6.6. Offshore Culture Systems using Sea Cages

- 8.7. Fish Management and Welfare Implications
- 8.8. Fish Welfare Problems due to Animal Density
  - 8.8.1. Animal Density in Cages
  - 8.8.2. Animal Density in Tanks, Ponds and Raceways
  - 8.8.3. Animal Density and Behavior
  - 8.8.4. Relation between Animal Density and Welfare
- 8.9. Welfare in Commercial Fishery Capture and Fish Farming
  - 8.9.1. Stressors during Capture
  - 8.9.2. Commercial Catching Methods: Trawling, Seining, Trammel Nets and Pots
  - 8.9.3. Preparing for Capture, Crowding and Harvesting of Fish in Fish Farming
- 8.10. Aguarium Fish Welfare
  - 8.10.1. General Considerations
  - 8.10.2. Breeding and Capture
  - 8.10.3. Destination Arrival
  - 8.10.4. Food Industry
  - 8.10.5. Health

## Module 9. Animal Welfare during Transportation

- 9.1. Animal Behavior during Handling and Transportation
  - 9.1.1. Animal Handling
  - 9.1.2. Behavioral Features in Animals
  - 9.1.3. Fear Response and Interaction with the Environment
- 9.2. Animal Transportation by Road: Vehicles and Drivers
  - 9.2.1. Features of Road Transportation Vehicles
  - 9.2.2. Driver Aptitude in Animal Transportation
- 9.3. Environmental Factors involved in Welfare during Transportation
  - 9.3.1. Temperature
  - 9.3.2. Humidity
  - 9.3.3. Ventilation

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9.4.	Handling Factors Involved in Welfare during Transportation		
	9.4.1.	Loading and Unloading	
	9.4.2.	Social Mixing	
	9.4.3.	Fasting	
9.5.	Transportation and Handling in Swine and Beef Cattle		
	9.5.1.	Temperature in Swine Transportation	
	9.5.2.	Loading Density, Diet and Microclimate in Swine Transportation	
	9.5.3.	Cattle Behavior in Moving Vehicles	
	9.5.4.	Loading Density and Diet in Cattle Transportation	
9.6.	Poultry Transportation and Handling		
	9.6.1.	Loading and Unloading Poultry	
	9.6.2.	Heat Stress: Energy Balance, Hunger, Thirst and Fatigue	
	9.6.3.	Behavioral Responses: Fear, Aversion	
9.7.	Fish Transportation and Handling		
	9.7.1.	Transportation Systems	
	9.7.2.	The Impact of Transportation on Fish Welfare	
	9.7.3.	Minimizing the Impact of Transportation on Welfare	
9.8.	Transportation and Handling in Other Species		
	9.8.1.	Horse Transportation	
	9.8.2.	Sheep Transportation	
	9.8.3.	Rabbit Transportation	
	9.8.4.	Dog Transportation	
	9.8.5.	Wildlife Transportation	
9.9.	Animal Welfare in Rail, Air and Ship Transportation		
	9.9.1.	Animal Transportation by Rail	
	9.9.2.	Animal Transportation by Aircraft	
	9.9.3.	Animal Transportation by Ship	
9.10.	Impact	of Transportation on Animals: Health and Productivity	
	9.10.1.	Consequences of Transportation and Handling on Health	
	9.10.2.	Consequences of Transportation and Handling on Carcass and Meat Quality	

## Module 10. Animal Welfare during Slaughter

- 10.1. Scientific Basis of Consciousness and Being Stunned
  - 10.1.1. Neural Basis of Consciousness
  - 10.1.2. Behavior and Physical Reflexes
  - 10.1.3. Criteria for Stunning and Stunning/Sacrifice Methods
- 10.2. Potential Causes of Pain during Slaughter
  - 10.2.1. Pain Caused by Cutting Off Bleeding
  - 10.2.2. Loss of Consciousness Time
  - 10.2.3. Consequences of Cutting Off Animal Responsiveness
- 10.3. Neurophysiological Basis of Stunning and Stunning/Sacrifice Methods
  - 10.3.1. Mechanical Method
  - 10.3.2. Electrical Method
  - 10.3.3. Gas-Mixture Method
- 10.4. Stunning and Stunning/Slaughtering Systems used in Slaughterhouses
  - 10.4.1. Mechanical Stunning Equipment
  - 10.4.2. Electrical Stunning Equipment
  - 10.4.3. Gas-Mixture Stunning Equipment
- 10.5. Welfare in the Slaughter of Cattle, Sheep, Goats and Horses
  - 10.5.1. Stunning or Stunning/Slaughtering Methods Employed
  - 10.5.2. Assessing Effectiveness of Use
  - 10.5.3. Advantages and Disadvantages of Such Methods
- 10.6. Welfare in Swine Slaughter
  - 10.6.1. Stunning or Stunning/Slaughtering Methods Employed
  - 10.6.2. Assessing Effectiveness of Use
  - 10.6.3. Advantages and Disadvantages of Such Methods

- 10.7. Welfare in Poultry Slaughter
  - 10.7.1. Stunning or Stunning/Slaughtering Methods Employed
  - 10.7.2. Assessing Effectiveness of Use
  - 10.7.3. Advantages and Disadvantages of Such Methods
- 10.8. Welfare in Fish Slaughter
  - 10.8.1. Stunning or Stunning/Slaughtering Methods Employed
  - 10.8.2. Assessing Effectiveness of Use
  - 10.8.3. Advantages and Disadvantages of Such Methods
- 10.9. Impact of Stunning or Stunning/Slaughtering Methods on Carcass and Meat Quality
  - 10.9.1. Impact on Carcass Quality
  - 10.9.2. Impact on Meat Quality: Pale, Soft, Exudative (PSE) and Dark Cut Meats
- 10.10. Euthanasia in Production, Companion and Research Animals
  - 10.10.1. Euthanasia Techniques
  - 10.10.2. Euthanasia Agents



You will implement management systems that minimize stress and promote a good quality of life for the animals"





## tech 24 | Teaching Objectives



## **General Objectives**

- Establish systems for evaluating Animal Welfare
- Examine Ethology as a fundamental aspect of Animal Welfare
- Analyze the ethical implications of animal treatment in our society
- Identify Animal Welfare issues in milk and beef cattle production
- Generate different viewpoints on the management and welfare of non-traditional livestock species
- Define welfare issues in zoo animals and animal shelters
- Identify welfare problems related to facilities and management in fish farming
- Analyze proper handling guidelines for effective livestock transportation
- Evaluate the effectiveness of stunning systems and identify animals at risk of regaining consciousness



Implement best practices in the transportation, handling, and housing of animals"





## Module 1. Animal Welfare. Concepts and Evolution

- Examine the concept of Animal Welfare with all its implications
- Analyze the physiological stress response in animals and its quantification
- Develop the concepts of stress and the responses of chronic and acute stress
- Define the existing systems for evaluating Animal Welfare today

#### Module 2. Applied Animal Ethology

- Develop the concept of applied Animal Ethology
- Establish the principles of learning and motivation in animals
- Identify the role of domestication in the development of current behaviors
- Demonstrate the importance of studying ethology to assess Animal Welfare
- Identify normal and abnormal behavioral patterns in animals

#### Module 3. Animal Ethics

- Analyze the concept of Animal Ethics and bioethics in all its branches
- Base social, personal, and professional ethics on the role it plays toward animals
- Identify the moral status that can be granted to animals

## Module 4. International Animal Protection Legislation

- Analyze the development of Animal Protection legislation in the European Union
- Develop Animal Protection legislation in livestock farms
- Identify international bodies involved in the development of Animal Protection legislation

## Module 5. Livestock Establishments. Welfare in Swine, Beef Cattle and Poultry

- Analyze Welfare issues in establishments for breeding swine
- Examine Welfare issues in the handling of sows and piglets during lactation and rearing
- Analyze Welfare in laying poultry farms and meat poultry farms

#### Module 6. Welfare in Others Species of Interest

- · Analyze Welfare in dairy sheep and goats and in sheep fattening farms
- Examine Welfare in equines
- Develop specialized knowledge on Welfare in alternative poultry farming

## tech 26 | Teaching Objectives

## Module 7. Welfare in Zoos, Shelters and Other Facilities and Establishments

- Define Welfare issues in zoo animals
- Analyze indicators to assess Welfare in zoos
- Evaluate Animal Welfare in zoos
- Examine Welfare issues in animal shelters
- Develop Welfare evaluation protocols for animal shelters

## Module 8. Animal Welfare in Fish Farming

- Define the physiological stress response in fish
- Evaluate information on consciousness, pain, and fear in fish
- Examine water quality measures and their implications for fish





## Teaching Objectives | 27 tech

## Module 9. Animal Welfare during Transportation

- Examine animal behavior in relation to transportation
- Establish environmental and handling factors affecting Welfare during transportation
- Identify proper handling and transport guidelines for cattle and swine
- Determine proper handling and transport guidelines for poultry

## Module 10. Animal Welfare during Slaughter

- Analyze the principles of consciousness and insensitivity in animals
- Define potential causes of pain during animal slaughter
- Address the most effective stunning systems for each animal species
- Identify the main factors that may lead to inadequate stunning
- Evaluate the repercussions of stunning systems on carcass and meat quality





## tech 30 | Career Opportunities

#### **Graduate Profile**

The graduate of this Professional Master's in Animal Welfare from TECH will be a highly trained professional capable of managing Animal Welfare in various contexts. Furthermore, they will understand child and parental behaviors, which will allow them to apply effective techniques to improve interactions and care. They will also master environmental enrichment practices, promoting environments that favor natural and emotional development. In addition, they will actively participate in the debate about the moral status of animals, defending their welfare and rights. Thanks to this knowledge, veterinarians will be prepared to apply ethical and scientific approaches.

You will provide specialized advice to institutions on the implementation of ethical and efficient practices to ensure Animal Welfare in various environments.

- Adaptation of Animal Welfare Strategies: Ability to integrate modern approaches to Animal Welfare management, improving living conditions and reducing suffering in various species
- Animal Stress Management: Aptitude to identify and mitigate the causes of stress in animals, using specialized techniques to promote a healthier and more balanced environment
- Environmental Enrichment Practices: Competence to design and implement methods
  of enrichment that enhance the physical and emotional well-being of animals in captivity,
  encouraging their natural behavior
- Professional Ethics and Animal Welfare: Commitment to implementing ethical practices in the management and care of animals, ensuring compliance with Animal Welfare regulations, and promoting respect and protection for animals.



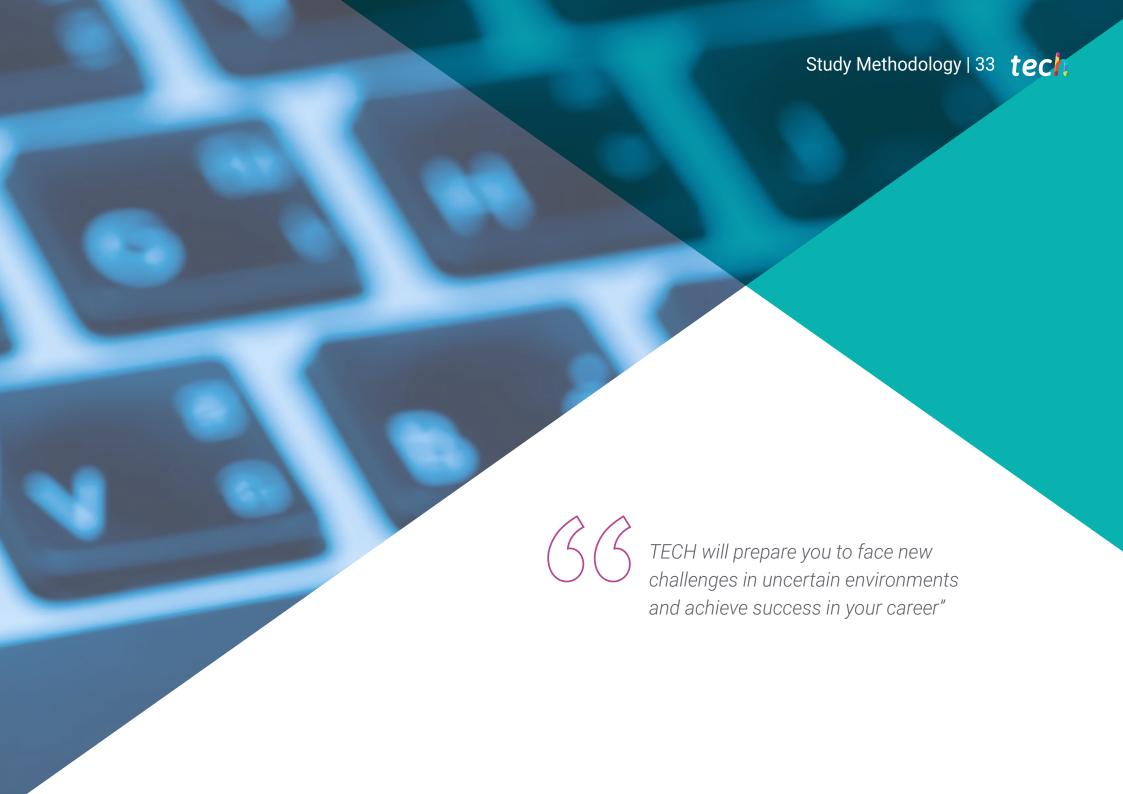


## Career Opportunities | 31 **tech**

After completing this university program, you will be able to apply your knowledge and skills in the following positions:

- Animal Welfare Consultant: Advises institutions, businesses, and organizations on the implementation of practices that ensure the physical and emotional well-being of animals, ensuring compliance with ethical and legal regulations.
- **2. Animal Welfare Manager in Zoos:** Supervises and improves the living conditions of animals in captivity, implementing strategies to enrich their environment and monitor their health.
- **3. Animal Welfare Veterinarian in Livestock Farms:** Responsible for the health and welfare of animals on farms, applying methods that minimize suffering during handling, transport, and slaughter.
- **4. Coordinator of Animal Welfare Programs in Nature Parks:** Responsible for managing and overseeing projects dedicated to the conservation and welfare of animal species in their natural habitat, ensuring the protection of ecosystems.
- **5. Animal Welfare Specialist in Adoption Centers:** Oversees the conditions of animals in shelters and rescue centers, working to ensure their well-being and facilitate their adoption under optimal conditions.
- **6. Animal Welfare Veterinarian in Events and Shows:** Ensures that animals used in performances, circuses, or competitions are treated ethically, ensuring their welfare during the event.
- 7. **Specialist in Ethical Animal Euthanasia:** Responsible for providing guidance and carrying out euthanasia procedures, following ethical and scientific principles to minimize animal suffering.
- **8. Animal Welfare Researcher:** Responsible for conducting studies and research projects to improve knowledge and practices related to Animal Welfare, developing new strategies for animal care and protection.



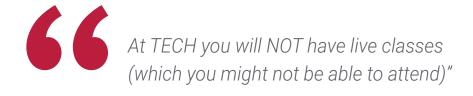


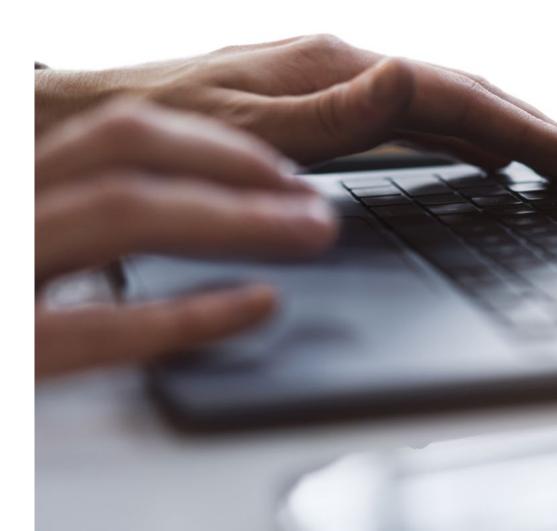
## The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.







## The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

## tech 36 | Study Methodology

#### Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



# Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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





# A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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

- 1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
- 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. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

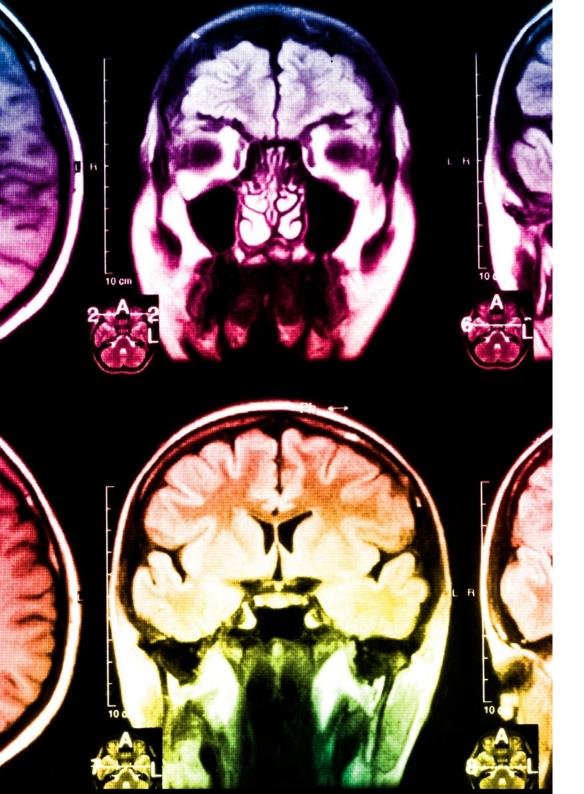


The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



# tech 40 | Study Methodology

As such, the best educational materials, thoroughly prepared, will be available in this program:



#### **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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### **Practicing Skills and Abilities**

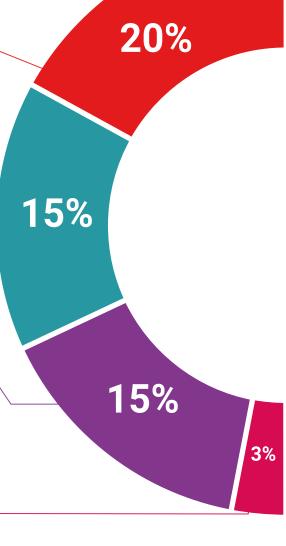
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### **Interactive Summaries**

We present 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, international guides... In our virtual library you will have access to everything you need to complete your education.

# Study Methodology | 41 tech



Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



# **Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



#### **Classes**

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





#### **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.





17%





# tech 44 | Teaching Staff

# Management



# Dr. De la Fuente Vázquez, Jesús

- Expert Researcher in Animal Nutrition
- Researcher in the Department of Food Technology at the National Institute of Agricultural and Food Research and Technology (INTAF)
- Co-author of more than 35 research articles published in scientific journals
- Participation in more than 14 research projects on Animal Welfare
- Participation in 10 book chapters
- Collaborating teacher in more than 40 national and international courses on Animal Welfare
- Teacher in university veterinary studies
- Collaborator in more than 60 communications for national and international Veterinary Congresses
- Doctor in Veterinary Medicine from the Complutense University of Madrid
- Degree in Veterinary Medicine from the Complutense University of Madrid
- Professional Master's Degree in Science in Swine Production from the University of Aberdeen



#### **Teachers**

## Dr. Pérez Marcos, Concepción

- Expert Researcher in sheep behavior and management
- Researcher at the National Institute of Agricultural and Food Research and Technology in the Animal Production Unit
- Director of 2 R&D projects oriented to Agricultural Resources and Technologies
- Participant in more than 18 research projects
- Author and co-author of more than 30 articles published in scientific journals
- Contributor to 8 book chapters and complete books
- Teacher in university veterinary studies
- Doctor in Veterinary Medicine from the Complutense University of Madrid
- Degree in Veterinary Medicine from the Complutense University of Madrid

# Dr. González de Chavarri Echaniz, Elisabeth

- Expert Researcher in Animal Nutrition and Welfare
- Member of several research groups in Animal Nutrition and Welfare
- University assistant in the Department of Animal Production
- Participant in 12 research projects
- Co-author of more than 30 research and popular science articles
- Co-author of 15 book chapters and complete books
- Associate professor in university veterinary studies
- Contributor in more than 30 communications to national and international congresses
- Doctor in Veterinary Medicine from the Complutense University of Madrid
- Degree in Veterinary Medicine from the Complutense University of Madrid

# tech 46 | Teaching Staff

#### Dr. Díaz Díaz-Chirón, María Teresa

- Expert Researcher in Animal Nutrition
- Researcher in the Department of Food Technology at the National Institute of Agricultural and Food Research and Technology (INTAF)
- Senior Scientist at the National Institute of Agricultural and Food Research and Technology
- Researcher at the Agrarian Technological Institute of Castilla y León
- Author of more than 40 articles published in scientific journals
- Participant in more than 20 research projects on animal feed
- Collaborating teacher in university veterinary studies
- Contribution to more than 70 communications in national and international congresses
- Doctor in Veterinary Medicine from the Complutense University of Madrid
- Degree in Veterinary Medicine from the Complutense University of Madrid

### Dr. Cabezas Albéniz, Almudena

- Researcher Specialized in Animal Welfare
- Advisor in animal nutrition, production and management for different companies in the sector
- Researcher in more than 10 projects focused on Animal Welfare
- Co-author of more than 10 scientific publications on animal nutrition
- Lecturer in courses and university studies related to the field of veterinary medicine
- Doctor in Veterinary Medicine from the Complutense University of Madrid
- Technical Agricultural Engineer at the Polytechnic University of Madrid
- Master's Degree in Veterinary Science Research from the Complutense University of Madrid

# Dr. Arroyo Lambaer, Ana Alejandra

- Specialist in Ethology and Animal Welfare
- Founder of the veterinary consultancy Yolcati
- Animal Welfare Consultant at Oasis Wildlife
- Responsible for the Animal Welfare Department at the Psittacus Catalonia Breeding Center
- Animal trainer and caretaker at Oasis Wildlife
- · Author of popular science material on Animal Welfare
- Lecturer in courses related to animal care
- Speaker in Congresses and Seminars on Ethology and Animal Welfare
- Degree in Veterinary Medicine and Zootechnics from the National Autonomous University of Mexico

# Mr. Beltrán Álvarez, Santiago

- Researcher in Biomedicine, Francisco de Vitoria University
- Biology teacher at Nuevo Futuro Academy
- Biology and Geology teacher at El Porvenir School
- Professional aguarist and Founder of The Green Guy company
- Degree in Biology at the University of Salamanca
- Master's Degree in Advanced Therapies and Biotechnological Innovation at the Francisco de Vitoria University

### Mr. Sánchez Arispe, Alex

- Science Teacher, Fundació Jesuïtes Educació
- Founding Partner and Director of the Yura Educational Association
- Field Researcher at the African Elephant Research Unit in South Africa
- Animal Caretaker at Aqualeón
- Animal Caretaker at the Wildlife Recovery Center Torreferrussa
- Degree in Biology, Autonomous University of Barcelona
- Master's Degree in Terrestrial Ecology from the Autonomous University of Barcelona
- Master's Degree in Animal Welfare from the Autonomous University of Barcelona

#### Dr. Temsamani Rivero, Nabil

- Territory Business Manager at Hill's Pet Nutrition
- Veterinarian at Oasis Wildlife
- Veterinarian at Reinoso Veterinary Clinic
- Veterinarian at Granavet Veterinary Clinic
- Degree in Veterinary Medicine from the University of Córdoba
- Master of Business Administration by EAE Business School

### Ms. Calero Alonso, Silvia

- Expert Pharmacist in Animal Production and Health
- Assistant Pharmacist at the Mercedes Heras Peña Pharmacy
- Degree in Pharmacy, University of La Laguna
- Master's Degree in Animal Production and Health

#### Dr. Serrano García, Alicia

- Caretaker of marine mammals at the Zoo Aquarium of Madrid
- Caretaker of marine mammals in Mundomar Benidorm
- Curricular internship with marine mammals at Oceanographic de Valencia
- PhD in Applied Ethology from the Autonomous University of Madrid
- Graduate in Biology from the Rey Juan Carlos University of Madrid
- Specialist in marine mammals by Sea Wolves
- Master's Degree in Applied Ethology from the Autonomous University of Madrid
- Courses in Monographs by Zoo Aquarium of Madrid

#### Dr. Martínez Villalba, Andrea

- Technical support in the research of the SPAC/21 Project of the Faculty of Veterinary Medicine at the Complutense University of Madrid
- Assistant professor in the Department of Animal Production of the Faculty of Veterinary Medicine at the Complutense University of Madrid
- Degree in Veterinary Medicine from the Catholic University of Valencia
- Master's Degree in Food Safety from CEU Cardenal Herrera University
- Speaker at: National Aquaculture Congress (SEA) Annual Congress of the European Federation of Animal Science (EAAP) PhDay Complutense - VETINDOC 2022





# tech 50 | Certificate

This private qualification will allow you to obtain a**Professional Master's Degree in Animal Welfare** 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.

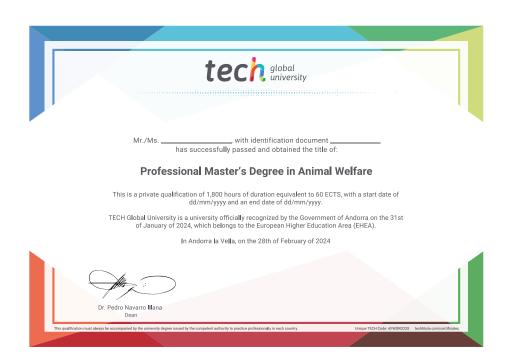
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Professional Master's Degree in Animal Welfare

Modality: online

Duration: 12 months

Accreditation: 60 ECTS





<sup>\*</sup>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.



# **Professional Master's** Degree

Animal Welfare

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

