



Postgraduate Certificate

Update on Avian Surgery

» Modality: online

» Duration: 12 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

We bsite: www.techtitute.com/pk/veterinary-medicine/postgraduate-certificate/update-avian-surgery

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tech 06 | Introduction

Veterinarians specialized in treating birds must have updated and extensive surgical knowledge to conduct successful operations that will extend the quality of life of these species. Following this premise, TECH has designed this very complete Postgraduate Certificate for students acquire the necessary skills for professional practice in this area.

The objective of this Postgraduate Certificate is to provide a comprehensive resource for avian surgery, making it a particularly valuable program for veterinary students, veterinary technicians and clinical veterinarians, as well as for biologists, wildlife center directors and researchers.

Specifically, the program includes aspects such as anesthetic drug toxicity, surgical interventions or pharmacology, which

should be noted incorporates statistics, biochemistry, biology, pathology and medicine, because failure to interpret the description of the pharmacological properties of drugs in the context of clinical pictures may lead to undesirable results.

In short, this training provides students with specific tools and skills to successfully develop their professional activity in the wide field of avian medicine and surgery. It addresses key competencies such as knowledge of the reality and daily practice of the veterinary professional, and develops responsibility in the monitoring and supervision of their work, as well as communication skills within the essential teamwork.

As it is an online Postgraduate Certificate, students will not be bound by fixed schedules or the need to commute to another location, but rather, they can access the content at any time of the day, balancing their professional or personal life with their academic life.

This **Postgraduate Certificate in Lines of Research in Nursing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical cases presented by experts in avian medicine
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Latest developments avian patient care
- Practical exercises where the self-assessment process can be used to improve learning
- Special emphasis on innovative methodologies in avian medicine
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection



Do not miss the opportunity to study this Postgraduate Certificate 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 the subject matter"

Its teaching staff includes professionals from the veterinary field, who bring the experience of their work to this training, as well as recognised 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 training programmed to train in real situations.

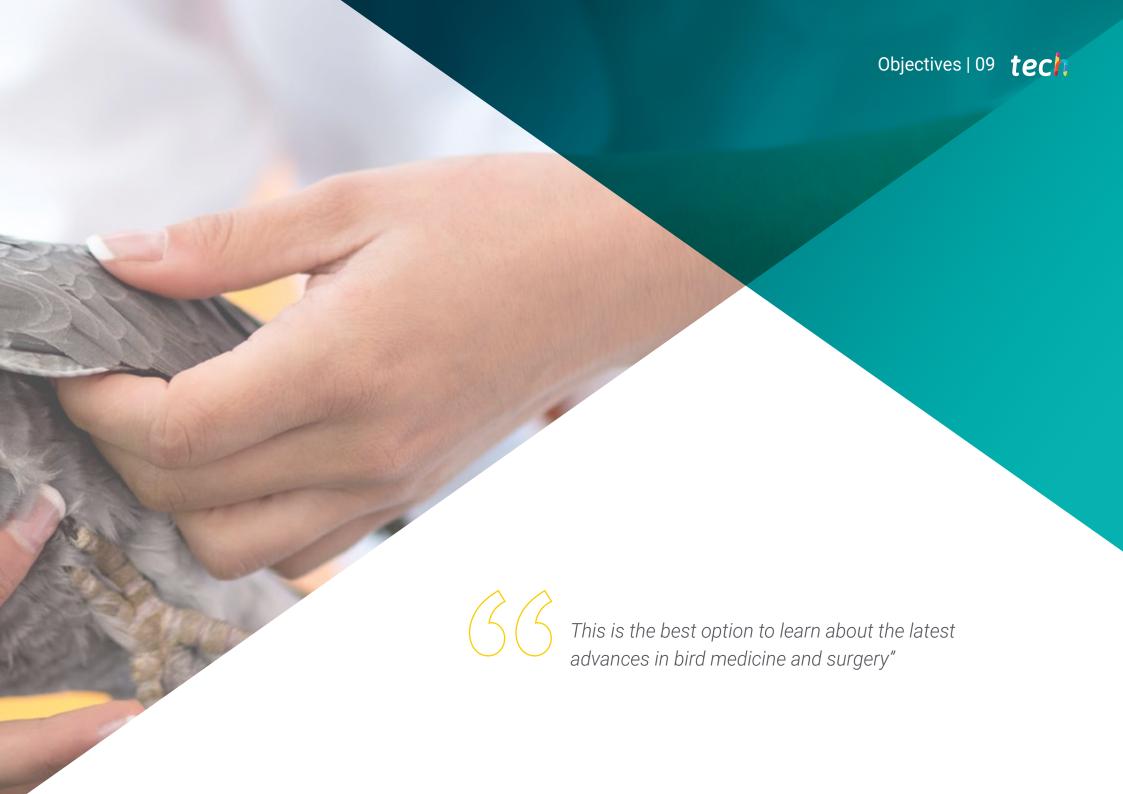
This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic program. For this, the professional will have the help of an innovative interactive video system made by recognized experts in patient Medicine, and with great experience.

This training comes with the best didactic material, providing you with a contextual approach 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

- Analyze the different anatomical and physiological aspects of birds to apply them to anesthetic techniques
- Examine emergencies in situations of hemorrhage and more advanced surgical problems
- Establish emergency protocols, as in any animal that is injured or needs surgical assistance
- Reach the shock state protocol, which is very difficult to determine in avian patients
- Provide nutritional and fluid therapy requirements for pathology recoveries
- Analyze the relevant aspects of drug administration
- Gain in-depth knowledge of the most used antibiotics, taking into account the routes
 of administration and the possible and real guidelines that can be followed in each real
 situation
- Acquire knowledge of new medications for birds









Specific Objectives

- Develop specialized knowledge in soft tissue surgery, starting from supplies in the operating room prior to any surgery
- Determine the special surgical supplies for avian patients
- Establish the main surgical problems of the skin and its appendages
- Perform all surgical techniques on male and female reproductive systems
- Evaluate all surgeries of the digestive and respiratory systems, following comprehensive and updated protocols
- Demonstrate the need for biopsies to reach a definitive diagnosis
- Emphasize the necessary guidelines for patient recovery
- Compile the most important nutritional treatments, understanding dehydration as one of the key factors for each treatment recovery
- Examine all the external treatments that birds need, recognizing that these are the fundamental aspects that we must understand to proceed with the rest of pathologies and treatments
- Attain the maximum knowledge of traumatic injury treatments
- Present the routes of administration of drugs and their advantages and disadvantages
- Develop the list of antibiotics, antifungals and antiparasitics most commonly used, including dosage and clarifications
- Propose the success in nebulization treatments
- Reach peak knowledge of eye drops and ophthalmologic treatments







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Management



Ms. Trigo García, María Soledad

- Veterinarian in charge of the Internal Medicine and Exotic Animal Surgery Service at the Clinical Veterinary Hospital of the Alfonso X El Sabio University in Madrid
- Degree in Veterinary Medicine from the Alfonso X el Sabio University (2012)
- Postgraduate degree in General Practitioner Certificate Programme in Exotic Animals, Improve International
- Postgraduate degree in Food Safety from the Complutense University of Madrid
- Veterinary consultant at the José Peña Wildlife Center, and various veterinary clinics in Madric
- Director of the Exotic Animal Service at the Prado BOADILLA veterinarian center

Professors

Dr. Beltrán, Javier

- Clinical Veterinarian at Privet Veterinary Hospital (2015-Present)
- Degree in Veterinary Medicine, ULE University
- Master's Degree in Medicine and Surgery
- Exotic Animals Forvetex
- Advanced Master's Degree in Exotic Animal Medicine and Surgery Forvetex
- Diploma in Herpetology, UCM
- National and International University Lecturer Management and Clinical Practice: Birds and Reptiles - University of León, 2017

Dr. Jaime Aquino, Sara

- Veterinary Assistance at Prado de Boadilla
- Collaborator in the Exotic Animal Medicine and Surgery Service at Alfonso X El Sabio University
- Nova Veterinary Clinic, Boadilla del Monte
- Degree in Veterinary Medicine Alfonso X El Sabio University

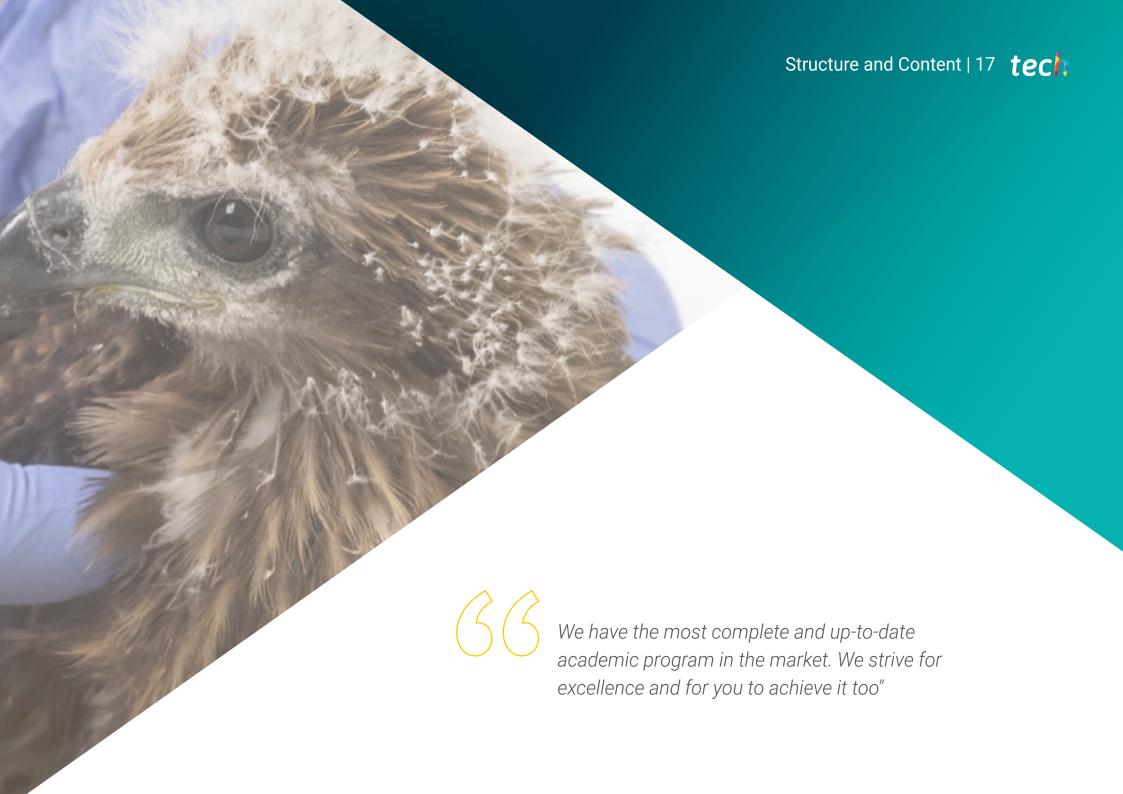
Dr. Arenal Ferreira, Alfonso

- Veterinarian specializing in exotic animals, as well as generalist in small animals, Hospital Veterinario Privet Aluche, Madrid
- General veterinarian and head of the GMC Vet Group Clinic, Madrid
- General Veterinarian in the Emergency and Hospitalization Service, Miramadrid Veterinary Hospital, Madrid
- Degree in Veterinary Medicine, Alfonso X El Sabio University
- Author of original animal-themed texts for WinVet

Dr. Sánchez Góngora, Juan

- Veterinarian at Clinique Vétérinaire de l'Epte, Gisors
- Degree in Veterinary Medicine, Complutense University Madrid
- Speaker at the XVII Congress of Veterinary and Biomedical Sciences in relation to Bacterial Stomatitis in Chameleons Calumma parsonii in Captivity
- External stays at ZooAquarium, Madrid





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Module 1. Anesthesia and Soft Tissue Surgery

1.1.1. Soft Tissue Surgeon in Birds

1.1.2. Patient Preparation

1.1.2.1. Hypothermia.

1.1.2.2. Skin Preparation

1.1.3. Necessary Equipment

1.1.4. Sterile Cotton Balls

1.1.5. Bifocal Surgical Lenses

1.1.6. Microsurgery Tools

1.1.7. Suture Materials.

1.2. Special Surgical Supplies in Bird Surgery

1.2.1. Hemoclips

1.2.2. Radiosurgery

1.2.3. Surgical Lasers1.2.3.1. Most Used Types and Equipment

1.2.4. Microsurgery

1.3. Skin and Appendage Surgery

1.3.1. Feather Cysts

1.3.1.1. Plumafoliculoma

1.3.2. The Uropygian Gland

1.3.2.1. Most Common Pathologies

1.3.3. Wounds and Soft Tissue Injury Treatment

1.3.4. Most Common Neoplasms

1.3.4.1. Lipoma

1.3.4.2. Xanthoma

1.4. Reproductive System Techniques

1.4.1. Prior Patient Preparation

1.4.2. Sterilization.

1.4.3. Female Sterilization

1.4.3.1. Surgical Technique

1.4.4. Egg Obstruction in the Oviduct Dystocia in Birds

1.4.4.1. Cesarean Section: Egg Obstruction in the Oviduct

1.4.4.2. Uterine Torsion: Coeloma Inflammation

1.4.5. Orchidectomy

1.4.5.1. Anatomical Location of the Testicles: Intracellular

1.4.5.2. Technique

1.4.6. Testicular Endoscopic Biopsy

1.5. Gastrointestinal Tract Techniques I

1.5.1. The Tongue

1.5.1.1. Most Common Pathologies

1.5.2. The Proximal Esophagus

1.5.2.1. Esophageal Strictures: Causes and Treatments

1.5.2.2. Esophageal Trauma: Causes and Treatments

1.5.3. Ingluviotomy

1.5.3.1. Localization

1.5.3.2. Indications: Foreign Bodies.

1.5.4. Crop Burns

1.5.4.1. Pathology Origin

1.5.4.2. Adequate Surgical Technique

1.5.5. Others Surgical Techniques of Choice

1.6. Gastrointestinal Tract Techniques II

1.6.1. Crop or Esophagus Lacerations

1.6.1.1. Traumatic Diet: Causes and Treatments

1.6.1.2. External Trauma: Causes and Treatments

1.6.2. Ingluviostomy Tube Placement

1.6.2.1. Feeding Tube Indications

1.6.3. Celiotomy: Opening the Coelomic Cavity

1.6.3.1. Indications and Complications

1.6.3.2. Left Lateral Celiotomy

1.6.4. Others Surgical Techniques of Choice

1.7. Gastrointestinal Tract Techniques III

1.7.1. Proventriculotomy: Proventriculus or Ventricle Access

1.7.1.1. Indications

1.7.1.2. Surgical Techniques of Choice

1.7.2. Yolk Saculectomy: Newborn Chicks

1.7.2.1. Indications:

1.7.2.2. Surgical Techniques of Choice

1.7.3.	Enterotomy				
	1.7.3.1. Cases Where Enterotomy Is Necessary				
	1.7.3.2. Type of Surgery to Applied				
1.7.4.	Enterectomy: Intestinal Anastomosis				
	1.7.4.1. Clinical Situations				
	1.7.4.2. Surgical Process				
1.7.5.	Ventral Midline Celiotomy				
	1.7.5.1. Indication This Type of Surgical Access				
	1.7.5.2. Approaches				
1.7.6.	Cloaca Disorders				
	1.7.6.1. Prolapsed Organs through the Cloaca				
	1.7.6.2. Cloacolito				
Magnetic Biopsy Procedures					
1.8.1.	Hepatic Biopsy				
	1.8.1.1. Indication This Type of Surgical Access				
	1.8.1.2. Approach				
1.8.2.	Pancreatic Biopsy.				
	1.8.2.1. Pancreatic Alterations				
	1.8.2.2. Surgical Indications				
1.8.3.	Renal Biopsy				
	1.8.3.1. Indications				
	1.8.3.2. Necessary Technical Resources				
	1.8.3.3. Technique and Approach				
Respira	tory Surgical Techniques				
1.9.1.	Respiratory Surgery				
	1.9.1.1. Necessary Anatomy Recap				
1.9.2.	Tracheotomy				
	1.9.2.1. Indications				
	1.9.2.1.1. Presence of Aspergillomas and Foreign Bodies				
	1.9.2.2. Surgical Technique				
1.9.3.	Tracheotomy				
	1.9.3.1. Indications: Severe Tracheal Stenosis				
	1.9.3.2. Surgical Technique				

1.8.

1.9.

	1.9.4.	Pulmonary Biopsy
		1.9.4.1. Indications: Severe Tracheal Stenosis
		1.9.4.2. Surgical Technique
	1.9.5.	Muting in Birds
		1.9.5.1. Ethical Considerations
1.10.	Postope	erative Care
	1.10.1.	Stressful Situations
	1.10.2.	Thermal Recovery and Maintenance
	1.10.3.	Hospitalization and Swift Recovery
	1.10.4.	Self-Trauma Prevention
	1.10.5.	Postoperative Analgesia
	1.10.6.	Adequate Fluid Therapy
	1.10.7.	Nutritional Supplements
Mod	ule 2. P	Pathologies and Medical Treatments
2.1.	Nutritio	nal Treatments
	2.1.1.	Fluid Therapy: Clinical Application
		2.1.1.1. Types of Fluid Therapy
		2.1.1.2. Advantages and Disadvantages
	2.1.2.	Feeding Tube and Nutritional Support
		2.1.2.1. Nutritional Needs
		2.1.2.2. Enteric Nutrition Formulas
2.2.	Externa	l Treatment
	2.2.1.	Claw, Nail and Beak Trimming
	2.2.2.	Feather Repair
		2.2.2.1. Materials Instruments Used in Grafting
		2.2.2.2. Bent Feather Repair
		2.2.2.3. Partial Feather Substitution
		2.2.2.4. Total Feather Substitution
	2.2.3.	Wing Trimming and Cutting
	2.2.4.	Wound Treatment Management Objectives
		9.3.4.1. Bandage Care
		9.3.4.2. Dressing Removal

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2.3.	Trauma Treatments			
	2.3.1. Bandages and Dressings			
		2.3.1.1. Bandage and Dressing Functions		
		2.3.1.1.1. Protection		
		2.3.1.1.2. Pressure		
		2.3.1.1.3. Support		
		2.3.1.1.4. Absorption, Moist Environment, Holding in Place		
		2.3.1.1.5. Comfort		
		2.3.1.1.6. Other Ideal Dressing Characteristics		
		2.3.1.2. Selection Process		
		2.3.1.3. Injury Evaluation		
	2.3.2.	Types of Bandages Most Used in Orthopedic Surgery		
		2.3.2.1. EightShaped Bandage		
		2.3.2.2. EightShaped Bandage to the Body		
		2.3.2.3. Wing Bandage with Two Circular Bandages around the Body		
		2.3.2.4. Robert Jones Bandage		
		2.3.2.5. Ball Bandage		
	2.3.3.	Protective Leg Casts		
	2.3.4.	External Splints		
	2.3.5.	Elizabethan Collars		
2.4.	Administering Drugs in Birds			
	2.4.1.	Relevant Aspects in Drug Administration		
	2.4.2.	Use Routes		
	2.4.3.	Advantages and Disadvantages		
	2.4.4. Metabolic Drug Adjustment			
2.5.	Most U	sed Antibiotics in Avian Patients		
	2.5.1.	Amikacin		
		2.5.1.1. Species Indicated and Dosage		
	2.5.2.	Ceftazidime		
		2.5.2.1. Species Indicated and Dosage		
	2.5.3.	Doxycycline		
		2.5.3.1. Species Indicated and Effective Dosage		
	2.5.4.	Enrofloxacin and Marbofloxacin		
		2.5.4.1. Quinolones and Current Uses		

	2.5.5.	Metronidazole
		2.5.5.1. Species Indicated and Effective Dosage
	2.5.6.	Trimethoprim / Sulfamethoxazole
		2.5.6.1. Adequate Dosage
	2.5.7.	Other Antibiotics Used
2.6.	Most U	sed Antifungal Drungs in Avian Patients
	2.6.1.	Amphotericin B
		2.6.1.1. Target Species and Dosage
	2.6.2.	Fluconazole
		2.6.2.1. Dosage
	2.6.3.	Itraconazole
		2.6.3.1. Dosage
	2.6.4.	Ketoconazole: Fungistatic
		2.6.4.1. Dosage
	2.6.5.	Nystatin: Antifungal Macrolide
		2.6.5.1. Target Species and Dosage
	2.6.6.	Other Antifungal Drugs of Clinical Interest
2.7.	Most U	sed Antiparasitics in Avian Patients
	2.7.1.	Ivermectin
		2.7.1.1. Target Species and Dosage
	2.7.2.	Albendazole
		2.7.2.1. Target Species and Dosage
	2.7.3.	Fenbendazole
		2.7.3.1. Target Species and Dosage
	2.7.4.	Levamisole
		2.7.4.1. Species Type and Dosage
	2.7.5.	Selamectin
		2.7.5.1. Species Type and Dosage
	2.7.6.	Toltrazuril
		2.7.6.1. Dosage and Target Species
	2.7.7.	Other Antiparasitics of Clinical Interest



Structure and Content | 21 tech

2.	8.	Other	Drugs	Used	in	Bird

2.8.1. Most Used Antivirals in Avian Patients

2.8.1.1. Aciclovir

2.8.1.1.1. Posology, Target Species and Dosage

2.8.1.2. Other Antivirals of Clinical Interest

2.8.2. Hormones Used in Birds

2.8.2.1. Adrenocorticotropic Hormone: ACTH

2.8.2.1.1. Bird Type and Dosage

2.8.2.2. Cabergoline

2.8.2.2.1. Effective Dosage

2.8.2.3. Oxytocin

2.8.2.3.1. Effective Dosage

2.8.2.4. Other Hormones of Clinical Interest

2.9. Medications Used for Nebulization

2.9.1. Nebulizer Use

2.9.2. F10 Use

2.9.3. Gentamicin

2.9.4. Amikacin

2.9.4.1. Dosage and Use

2.9.5. Amphotericin B

2.9.5.1. Dosage and Use

2.9.6. Clotrimazole

2.9.6.1. Dosage and Use

2.9.7. Other Medications Used for Nebulization

2.10. Ophthalmological Drops Used in Birds

2.10.1. Ciprofloxacin

2.10.2. Chloramphenicol

2.10.3. Tobramycin

2.10.4. Diclofenac

2.10.5. Prednisone



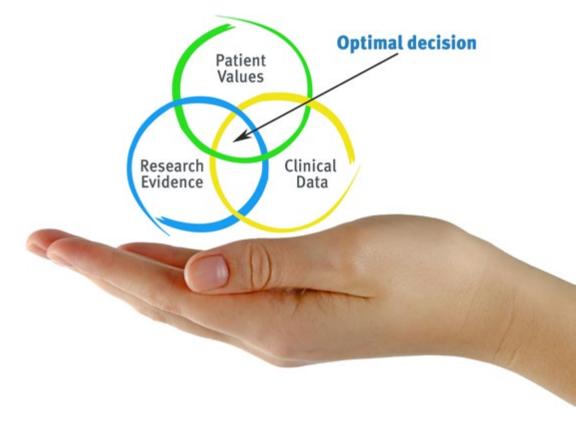


tech 24 | Methodology

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 | 27 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.

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

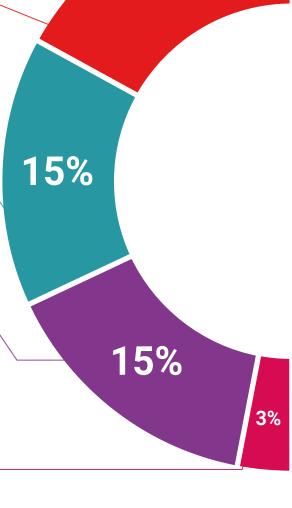
TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch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



Effective learning ought to be contextual. Therefore, TECH presents real cases in which

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.





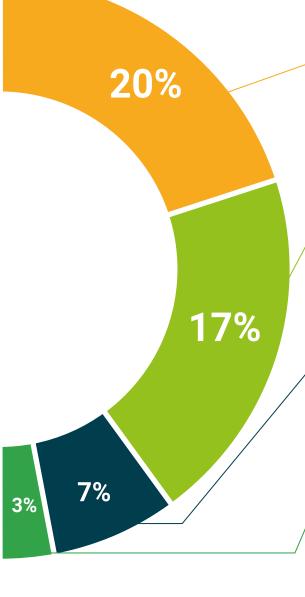
There is scientific evidence suggesting that observing third-party experts can be useful.

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.







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This **Postgraduate Certificate in Update on Avian Surgery** 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 Update on Avian Surgery

Official No of hours: 300 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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