

# Postgraduate Diploma

## New Companion Animals and Birds





## Postgraduate Diploma New Companion Animals and Birds

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

Website: [www.techtitute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-new-companion-animals-birds](http://www.techtitute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-new-companion-animals-birds)

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# 01

# Introduction

This Postgraduate Diploma in New Companion Animals and Birds provides students with specific tools and skills to successfully develop their professional activity in the wide field of exotic animals. 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.





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*New companion animals and birds require specialized veterinarians. A profession increasingly in demand by owners”*



The Postgraduate Diploma in New Companion Animals and Birds is a high quality training program that focuses on the study of the main pathologies, diagnostic techniques and treatments in this type of animals, with special emphasis on ferrets and birds.

The demand for veterinary specialists is a direct consequence of the introduction of increasingly less common species into our homes, as well as a change in society's mentality towards some less novel species, which for years have been somewhat despised. Even today, there are still patients whose owners admit that this is the first time they bring the animal to the clinic, so it is necessary to contribute to eradicate this belief.

However, each animal has its own particularities. Ferrets are very active animals, independent, very funny, real explorers..., but they require a very attentive care to avoid accidents. They are very good pets, but they must be gradually accustomed to be handled to avoid bites. This Postgraduate Diploma establishes the necessary management guidelines for its handling during consultation, hospitalization and complementary tests.

During the course of the Postgraduate Diploma, updated guidelines for ferret maintenance and diet, essential for proper development, are established. Ferrets are strict carnivores and have ideal nutritional requirements for them, even in special situations, a basic and important aspect to avoid intestinal inflammations that, in the medium term, can lead to intolerances and unspecific diarrhea. In addition, they are very prone to develop tumors, so any mass or abnormality that is appreciated should be checked in the clinic by a specialist. They are also susceptible to human influenza, which happens to be a serious respiratory disease in the ferret.

Squirrels, hedgehogs or pet pigs (of the Vietnamese or Kune breed) have gained a place in some homes, but it is necessary to know their characteristics and particularities in order to treat them safely and effectively.

Another essential part of this Postgraduate Diploma is related to wild or farmed birds. The veterinary professional must face these cases in the daily clinical practice, so it is necessary to understand the anatomical, physiological and ethological differences between conventional pets in the home and between avian species in order to approach the patient correctly.

The **Postgraduate Diploma in New Companion Animals and Birds** contains the scientific most complete and up-to-date educational program on the market. The most important features of the program include:

- ♦ The development of case studies presented by experts in new companion animals and birds.
- ♦ 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.
- ♦ The latest news on the diagnosis and treatment of diseases in new companion animals and birds.
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning.
- ♦ A special emphasis on innovative methodologies in the field of the diagnosis and treatment of diseases in new companion animals and birds.
- ♦ 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 do this Postgraduate Diploma in New Companion Animals and Birds with us. It's the perfect opportunity to advance your career".*

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*This Postgraduate Diploma is the best investment you can make in selecting a refresher program to update your knowledge in New Companion Animals and Birds”*

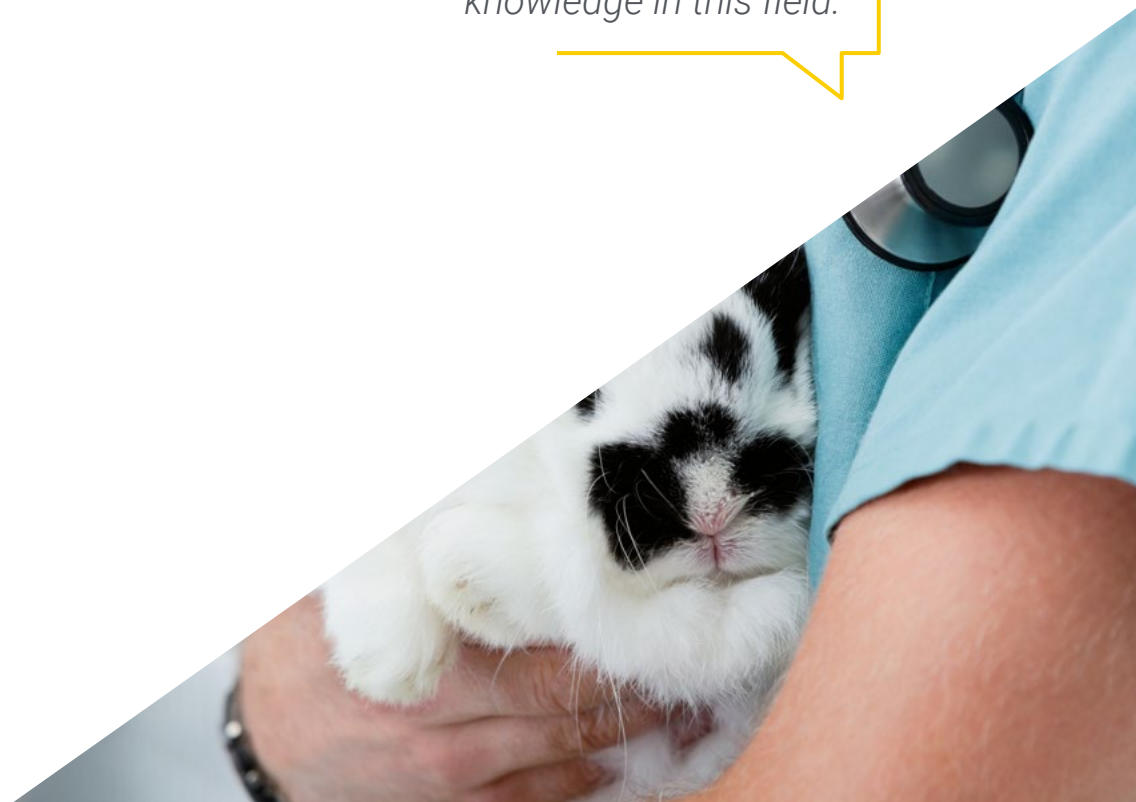
Its teaching staff includes professionals from the veterinary field, who bring the experience of their work to this training, as well as recognised specialists from leading societies and prestigious universities.

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 specialist must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in new companion animals and birds.

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

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



02

# Objectives

The Postgraduate Diploma in New Companion Animals and Birds 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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*Our main objective is to offer you quality training that allows you to keep up to date with the main advances in the field"*



## General Objectives

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- ♦ Develop specialized knowledge on biology, behavior, needs, feeding and care.
- ♦ Determine appropriate veterinary advice on handling and diagnostic techniques.
- ♦ Recognize the most common diseases in ferrets.
- ♦ Explore the various procedures and therapies, including anesthesia and surgical techniques.
- ♦ Develop specialized knowledge about the species that regularly come arrive at the exotic animal clinic.
- ♦ Establish the basic aspects, reasons for consultation and frequently asked questions by owners.
- ♦ Analyze management techniques for exploration and treatment administration.
- ♦ Define the most common pathologies in each species.
- ♦ Examine the symptoms that a bird has when sick.
- ♦ Explain the principles of the use of radiology in poultry and present the most commonly used images.
- ♦ Explore ultrasound scanning in birds, a forgotten diagnostic technique.
- ♦ Develop the basic principles of endoscopy in birds.
- ♦ Examine the different anatomical and physiological aspects of birds in order to apply them to the most effective treatments.
- ♦ Develop specialized knowledge in the treatment of emergencies in situations of hemorrhage, bone fractures and their treatment in emergency conditions.
- ♦ Establish anesthetic emergency protocols as with any animal that is anesthetized.
- ♦ Reach the protocol of state of shock, which is very difficult to determine in avian patients. Clinical signs may include weakness, mucosal paleness and poor peripheral perfusion.



## Specific Objectives

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- ♦ Establish an adequate anatomico-physiological background, advanced knowledge of dentition, types of molt, skeletal system, digestive system, perianal glands and salivary glands.
- ♦ Analyze the cardiorespiratory system and its pathologies.
- ♦ Develop the best method of drug administration, access routes, routine radiographic projections and laboratory sampling to achieve a reliable and effective diagnosis.
- ♦ List the various types of pathologies that are commonly encountered in daily clinical practice. Gastrointestinal and respiratory pathologies are very common, but so are neoplasms and skin problems.
- ♦ Analyze the most frequent and important endocrine pathologies in sterilized ferrets: hyperadrenocorticism, going deeper into the subject with an anatomical reminder of the adrenal glands and paying attention to the non-specific symptoms they present in order to achieve the correct diagnosis.
- ♦ Examine the most up-to-date treatments and make decisions about surgical or medical-only processes and the rationale for choosing each one.
- ♦ Assess the monitoring of anesthetized patients and the levels of anesthesia that can be used.
- ♦ Develop specialized knowledge to attend an emergency and cardiorespiratory resuscitation.
- ♦ List the most common surgical techniques and those that are unique and exclusive to ferrets.
- ♦ Anatomically and taxonomically describe the differences between each species.
- ♦ Design facilities equipped with the necessary requirements, according to their habits, diet, furnishings, environmental enrichment and special characteristics.
- ♦ Specify the necessary legal requirements to have invasive exotic pets.
- ♦ Establish the most important zoonoses to protect the veterinary specialist and the owners.
- ♦ Differentiate between the different techniques for drug administration and laboratory sampling.



- ◆ Examine the most common pathologies of each species.
- ◆ Describe the exclusive pathologies in each species.
- ◆ Develop specialized knowledge about the different bird species.
- ◆ To examine the anatomical differences in order to be able to detect them in the daily consultation.
- ◆ Design appropriate facilities in each situation and for each species, understanding the key factors for each of them.
- ◆ Set a basic list of nutrients for birds.
- ◆ To develop the nutritional requirements for Psittacidae, the most frequent exotic birds in practice.
- ◆ Perform mathematical energy calculations depending on the needs according to the established classifications.
- ◆ Determine the feeding of other bird species that are less frequent but also come to the daily practice.
- ◆ Perform management techniques and preventive medicine in avian patients.
- ◆ Establish the proper sampling and routes of drug administration, understanding their anatomical differences with the rest of the species.
- ◆ Master the techniques of radiology, ultrasound and endoscopy as vital diagnostic imaging tools in avian patients.
- ◆ Detect the most common dermal pathologies, such as acariasis, follicular cysts, itching and cutaneous lipomas.
- ◆ Classify diseases caused by viruses, as well as important traumatologic pathologies.
- ◆ Analyze the most frequent emergencies.
- ◆ Establish the appropriate treatment for each of them and understand the most common treatments.



# 03

# Course Management

The program's teaching staff includes leading experts in Exotic Animal Medicine and Surgery who contribute their vast work experience to this training program. Professionals of recognized prestige have joined forces to offer you this high-level training.







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*Our teaching team, Postgraduate Diploma in New Companion Animals and Birds, will help you achieve success in your profession”*

## Management



### Dr. 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..
- ♦ Coordinator and Professor of the subject of Exotic Animal Symptoms and Therapeutics at the Faculty of Veterinary Medicine, Alfonso X El Sabio University of Madrid.
- ♦ Lecturer in Food Science and Technology, Alfonso X El Sabio University.
- ♦ Veterinary consultant at the José Peña Wildlife Center, and various veterinary clinics in Madrid.
- ♦ Director of the Exotic Animal Service at the PRADO DE BOADILLA veterinarian center.
- ♦ Tutor of the Final Degree Dissertations of the Exotic and Wild Animal Medicine and Surgery at the Alfonso X El Sabio University,
- ♦ External expert evaluator and member of the tribunal of different Final Degree Dissertations.





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*Expand your training with the best specialists in the field”*

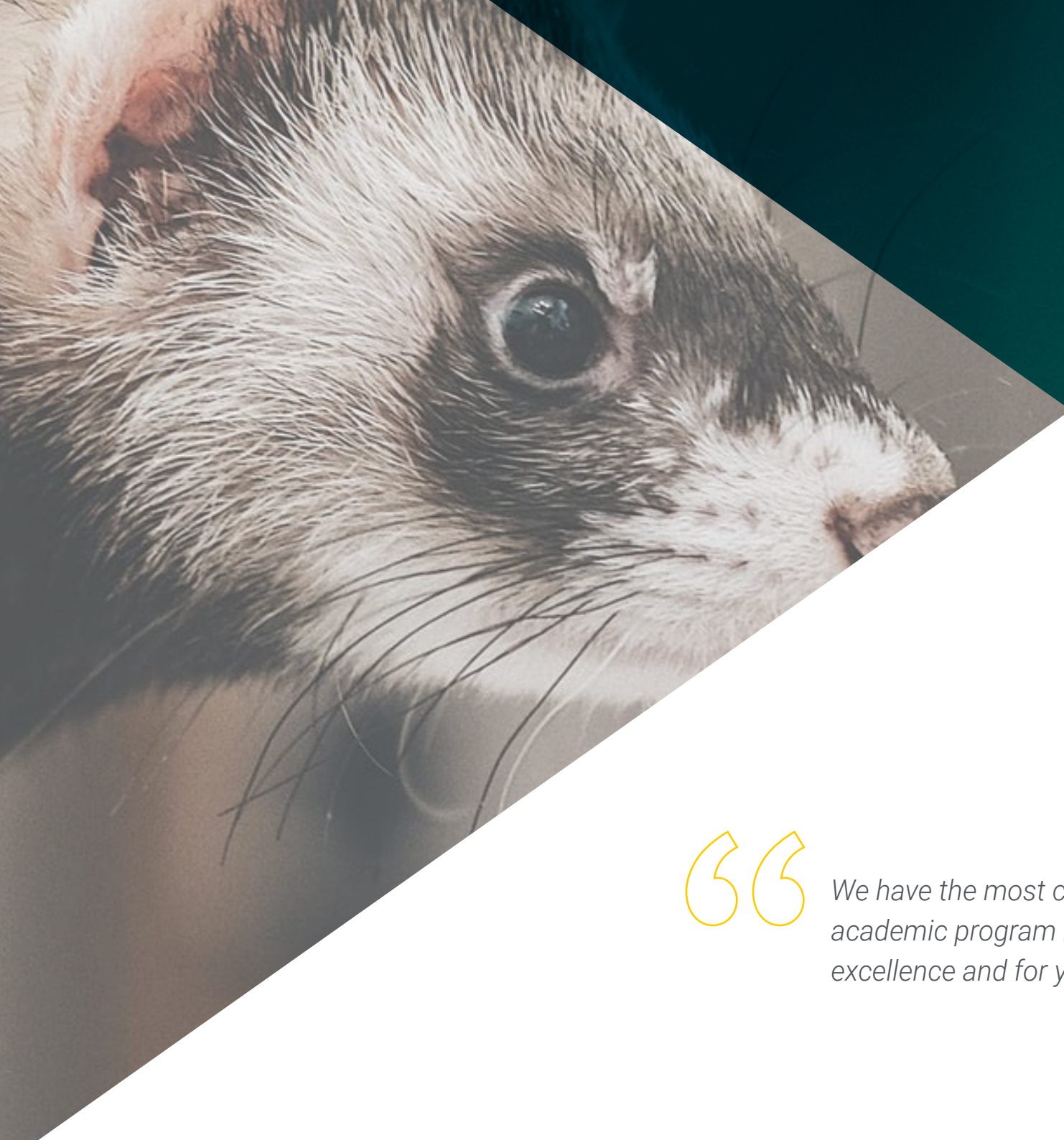
04

# Structure and Content

The structure of the content has been designed by the best professionals in the Exotic Animal Medicine and Surgery sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to veterinary studies.







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*We have the most complete and up-to-date academic program in the market. We strive for excellence and for you to achieve it too"*

## Module 1. Symptoms and Therapeutics for Ferrets.

- 1.1. Introduction to the Ferret Symptoms. Reinforced Basis Towards a Diagnosis.
  - 1.1.1. Anatomy:
    - 1.1.1.1. Taxonomic Classification.
    - 1.1.1.2. Anatomophysiological Peculiarities.
    - 1.1.1.3. Noticeable Differences With Other Domestic Carnivores.
    - 1.1.1.4. Sexual Dimorphism.
    - 1.1.1.5. Physiological Parameters.
  - 1.1.2. Maintenance and Nutritional Requirements of Ferrets.
    - 1.1.2.1. Interior and Exterior Accommodation.
    - 1.1.2.2. Specific Facilities.
    - 1.1.2.3. Absorbent Hygienic Bedding.
    - 1.1.2.4. Hospitalization Maintenance Requirements.
      - 1.1.2.4.1. Nutritional Classification.
      - 1.1.2.4.2. Feeding Guidelines.
      - 1.1.2.4.3. Nutritional Requirements in Special Physiological Situations.
- 1.2. Clinical Handling and Preventive Medicine: The Importance of the First Visit to the Veterinarian Center.
  - 1.2.1. Receiving the Patient and Clinical History.
  - 1.2.2. Physical Examination: Systematic Physical Examination Protocol.
  - 1.2.3. Clinical Handling and Veterinary Actions. Physical Containment of the Ferret for Examination, Diagnostic Techniques and to Apply Treatments.
    - 1.2.3.1. No Contact With the Patient.
    - 1.2.3.2. Light Containment.
    - 1.2.3.3. Light Immobilization.
    - 1.2.3.4. Full Immobilization.
  - 1.2.4. Sexing: Sexual Dimorphism.
  - 1.2.5. Preventative Medicine.
    - 1.2.5.1. Current Legislation and Animal Identification System.
    - 1.2.5.2. Vaccination Protocol.
    - 1.2.5.3. Deworming Guidelines.
    - 1.2.5.4. Information on Sterilization.





- 1.3. Pathways for Administering Drugs and Diagnostic Techniques.
  - 1.3.1. Venipuncture.
    - 1.3.1.1. Access to the Cephalic Vein.
    - 1.3.1.2. Vena Cava: Location and Common Use.
    - 1.3.1.3. Lateral Saphenous Vein.
  - 1.3.2. Administering Drugs.
    - 1.3.2.1. Oral Posology.
    - 1.3.2.2. Subcutaneous Route.
    - 1.3.2.3. Intramuscular Route.
    - 1.3.2.4. Intravenous Route.
    - 1.3.2.5. Intracardiac Route.
    - 1.3.2.6. The Importance of Nebulizations.
  - 1.3.3. Urine Collection.
  - 1.3.4. Radiographic Images Necessary to Reach the Correct Diagnosis and How to Perform Them
    - 1.3.4.1. Handling Techniques for Performing X-Rays Without Sedation.
    - 1.3.4.2. The X-ray as a Basic Tool.
  - 1.3.5. Laboratory Samples: Interpretation and Results.
    - 1.3.5.1. Urine Sample. Interpreting Results.
    - 1.3.5.2. Blood Sample. Different Results.
  - 1.3.6. Ultrasound to Diagnose Specific Pathologies.
    - 1.3.6.1. Main Ultrasound Approaches.
- 1.4. Skin Diseases. Update on Dermatologic Cases in Ferrets.
  - 1.4.1. Alopecia: Very Common in Clinical Practice.
    - 1.4.1.1. Non-Specific Symptoms That Should Not Be Forgotten.
  - 1.4.2. Ectoparasites. Symptoms and Treatment Discussion.
    - 1.4.2.1. Ear mites.
    - 1.4.2.2. Fleas: Ctenocephalides Felis and C. Canis.
    - 1.4.2.3. Ticks.
  - 1.4.3. Dermal Neoplasms: Very Common in Ferrets.
    - 1.4.3.1. Carcinomas.
    - 1.4.3.2. Sebaceous Adenomas.
    - 1.4.3.3. Epitheliomas.
    - 1.4.3.4. Cystadenomas.
    - 1.4.3.5. Epitheliotrophic Cutaneous Lymphomas.
- 1.5. Problems of the Oral Cavity: Pathologies Similar to Those of Other Domestic Carnivores.
  - 1.5.1. Dental Malocclusion: Congenital Causes.
  - 1.5.2. Double Dentition: Supranumerary Incisors.
  - 1.5.3. Dental Fractures: The Most Common Dental Pathology.
  - 1.5.4. Periodontal Disease: Ferrets of Medium - Advanced Age. Geriatrics.
  - 1.5.5. Tooth Abscesses.
    - 1.5.5.1. Advanced Periodontal Disease.
    - 1.5.5.2. Malpractice.
  - 1.5.6. Alterations in Dental Coloring. There are Two Classifications.
    - 1.5.6.1. Dental Stains.
      - 1.5.6.1.1. Intrinsic Staining of the Teeth.
      - 1.5.6.1.2. Extrinsic Staining.
    - 1.5.6.2. Dental Coloring.
- 1.6. Gastrointestinal Pathologies. The Importance of Diagnostic Tools.
  - 1.6.1. Gastritis.
    - 1.6.1.1. Gastric Ulcers.
    - 1.6.1.2. Causes. Diagnosis and Treatment.
  - 1.6.2. Diarrheic Processes: Most Common Symptoms in Ferrets.
  - 1.6.3. Presence of Internal Parasites.
    - 1.6.3.1. Toxascaris Leonina.
    - 1.6.3.2. Toxacara Cati.
    - 1.6.3.3. Ancylostoma Sp.
    - 1.6.3.4. Dipylidium Caninum.
    - 1.6.3.5. Giardia Sp.
    - 1.6.3.6. Coccidiosis.
  - 1.6.4. Inflammatory Bowel Disease.
    - 1.6.4.1. Lymphoplasmacytic.
    - 1.6.4.2. Eosinophilic.
  - 1.6.5. Epizootic Catarrhal Enteritis (Coronavirus).
    - 1.6.5.1. Frequency, Clinical Picture and Diagnosis.
  - 1.6.6. Infectious Peritonitis (Systemic Coronavirus).
    - 1.6.6.1. High Frequency.
    - 1.6.6.2. Symptoms and Diagnosis.
    - 1.6.6.3. Prognosis of the Disease.

- 1.7. Respiratory Pathology.
  - 1.7.1. Human Influenza: Orthomyxovirus.
    - 1.7.1.1. Transmission.
    - 1.7.1.2. Clinical Picture.
    - 1.7.1.3. Diagnosis.
    - 1.7.1.4. Treatment.
  - 1.7.2. Distemper Virus: Paramyxovirus.
    - 1.7.2.1. Progression of the Disease.
    - 1.7.2.2. Diagnosis.
    - 1.7.2.3. Prevention: The Best Tool Currently Available.
- 1.8. Endocrine Pathologies. The Main Issue With Ferrets.
  - 1.8.1. Hyperadrenocorticism in Ferrets.
    - 1.8.1.1. Definition and General Concepts.
    - 1.8.1.2. Adrenal Gland Anatomy. Location.
    - 1.8.1.3. Endocrinological Functioning of the Adrenal Glands.
      - 1.8.1.3.1. Reminder of Hormonal Functioning.
    - 1.8.1.4. Typical and Non-Specific Symptoms.
      - 1.8.1.4.1. Alopecia
      - 1.8.1.4.2. General Malaise: Anorexia.
      - 1.8.1.4.3. Genital Inflammation.
      - 1.8.1.4.4. Other Symptoms.
    - 1.8.1.5. Establishing a Diagnosis.
      - 1.8.1.5.1. Differential Diagnosis and Work Plan.
      - 1.8.1.5.2. Complementary Tests: The Importance of Ultrasound.
        - 1.8.1.5.2.1. Studies Measuring Adrenal Glands.
      - 1.8.1.5.3. Other Complementary Tests.
    - 1.8.1.6. Management Patient Stabilization.
      - 1.8.1.6.1. Surgical: Left or Bilateral, Total or Partial Adrenalectomy.
      - 1.8.1.6.2. Medical:
        - 1.8.1.6.2.1. Deslorelin Implant.
        - 1.8.1.6.2.2. Gonadotropin-Releasing Hormone (GnRH) Agonists.
        - 1.8.1.6.2.3. Other Medical Treatments Used.
  - 1.8.2. Hyperestrogenism.
    - 1.8.2.1. Symptoms, Diagnosis and Treatment.
- 1.9. Other Important Pathologies:
  - 1.9.1. Urinary Pathologies.
    - 1.9.1.1. Renal Cysts.
      - 1.9.1.1.1. Clinical Findings.
      - 1.9.1.1.2. Treatment.
    - 1.9.1.2. Bladder Uroliths.
      - 1.9.1.2.1. Frequency
      - 1.9.1.2.2. Types of Stones and Recommended Treatment.
  - 1.9.2. The Cardiac Patient.
    - 1.9.2.1. The Most Common Symptoms.
    - 1.9.2.2. The Diagnostic Tools: X-rays, Electrocardiograms, Ultrasound Scans.
    - 1.9.2.3. Common Treatments and Case Monitoring.
  - 1.9.3. Aleutian Disease.
    - 1.9.3.1. Causes.
    - 1.9.3.2. Characteristic Symptomatology.
    - 1.9.3.3. Early Diagnosis.
  - 1.9.4. Neoplasms.
    - 1.9.4.1. Insulinoma: Very Common Pathology in Middle-Aged Ferrets.
      - 1.9.4.1.1. Causes. Symptoms.
      - 1.9.4.1.2. Diagnostic Plan.
      - 1.9.4.1.3. Effective Treatment.
    - 1.9.4.2. Lymphoma.
      - 1.9.4.2.1. Causes.
      - 1.9.4.2.2. Diagnostic Plan.
- 1.10. Surgical Techniques in Ferrets.
  - 1.10.1. Most Commonly Used Anesthesia and Analgesia in Ferrets.
    - 1.10.1.1. Analgesia:
    - 1.10.1.2. Sedation.
    - 1.10.1.3. General Anesthesia.
    - 1.10.1.4. Anesthesia in the Emergency Department: Cardiopulmonary Resuscitation.
  - 1.10.2. Basic Surgical Techniques.
    - 1.10.2.1. Pre-Surgical, Surgical and Post-Surgical Factors.
    - 1.10.2.2. Lagomorph and Rodent Sterilization Techniques.



- 1.10.3. Advanced Surgical Techniques.
  - 1.10.3.1. Adrenalectomy in Ferrets.
    - 1.10.3.1.1. Surgical Technique: Bilateral, Unilateral, Total or Partial. Previous Decisions.
  - 1.10.3.2. Saculectomy: Anal Sacs Located in the Perianal Space.
    - 1.10.3.2.1. The Most Common Approaches Currently Used.
    - 1.10.3.2.2. When It Goes Wrong: Complications.
  - 1.10.3.3. Cystotomy.
    - 1.10.3.3.1. Indications: Neoplasms and Urinary Obstructions.
    - 1.10.3.3.2. Surgical management
  - 1.10.3.4. Urethrotomy and Urethrostomy in Ferrets.
    - 1.10.3.4.1. Anatomic Reminder: Os Penis (Penis Bone).
    - 1.10.3.4.2. Indications: Neoplasms, Distal Urethral Strictures and Urinary Obstructions.
    - 1.10.3.4.3. Surgical management
  - 1.10.3.5. Gastrotomy, Enterotomy and Enterectomy in Ferrets.
    - 1.10.3.5.1. Indications: Gastrointestinal Obstructions, Foreign Bodies, Neoplasms and Biopsies.
    - 1.10.3.5.2. Surgical management

## Module 2. New Companion Animals

- 2.1. Taxonomic Classification: Noticeable Differences Between Species.
  - 2.1.1. Squirrels, Prairie Dogs and Richardson's Squirrels: Small Rodents of Worldwide Distribution.
    - 2.1.1.1. Common or Red Squirrel (*Sciurus vulgaris*).
    - 2.1.1.2. Grey Squirrel (*Sciurus carolinensis*).
    - 2.1.1.3. Siberian Chipmunk (*Eutamias Sibiricus*).
    - 2.1.1.4. Eastern Chipmunk (*Tamias striatus*).
    - 2.1.1.5. Prairie Dog (*Cynomys Spp*).
    - 2.1.1.6. Richardson's Squirrels (*Urocitellus / Spermophilus Rochardsonii*).
  - 2.1.2. Hedgehogs: The Most Common Species.
    - 2.1.2.1. African White-Bellied, 4-Toed or Pygmy Hedgehog (*Atelerix Albiventris*).
    - 2.1.2.2. Egyptian Hedgehog (*Hemiechinus Auritus*).
    - 2.1.2.3. European Hedgehog (*Erinaceus Europaeus*).
    - 2.1.2.4. Moorish Hedgehog (*Erinaceus Algirus*).

- 2.1.3. Pet Pigs.
  - 2.1.3.1. Vietnamese Pig (*Sus Scrofa Domestica*).
  - 2.1.3.2. Kune Pig (*Sus Scrofa Domestica*).
- 2.2. Maintenance in Captivity: Specific Facilities. Furniture and Special Features.
  - 2.2.1. Sciuromorphs. Thermal Factor
    - 2.2.1.1. Body and Environmental Temperature in Each Species.
  - 2.2.2. Hedgehogs: Nocturnal, Territorial and Solitary Animals.
    - 2.2.2.1. Body and Environmental Temperature.
    - 2.2.2.2. Behavior in the Wild and in Captivity.
    - 2.2.2.3. The "Self-Anointing". A Characteristic Behavior of the Species.
  - 2.2.3. Pet Pigs: Dwarf Pigs.
    - 2.2.3.1. Body and Environmental Temperature.
    - 2.2.3.2. Interior and Exterior Facilities.
    - 2.2.3.3. Environmental Enrichment: Techniques for Preventing Destructive Behavior.
    - 2.2.3.4. Behavior in the Wild: Extrapolation to Captivity.
- 2.3. Nutritional Aspects: Nutritional Specifications in the Diets. Different Nutritional program for Each Species.
  - 2.3.1. Sciuromorphs.
    - 2.3.1.1. Classification According to their Habits.
      - 2.3.1.1.1. Arboreal.
      - 2.3.1.1.2. Mixed.
      - 2.3.1.1.3. Terrestrial.
    - 2.3.1.2. General Dental Distribution.
    - 2.3.1.3. Changes in Feeding for Hibernation.
    - 2.3.1.4. Nutritional Deficiencies.
  - 2.3.2. Hedgehogs: Very Different Nutrition in Captivity Than in the Wild.
  - 2.3.3. Pet Pigs: They Are Omnivores.
- 2.4. Anatomic Reminder: Different Species, Different Anatomies.
  - 2.4.1. Sciuromorphs.
    - 2.4.1.1. Oral Cavity. Types of Dentition.
    - 2.4.1.2. Sexual Dimorphism: Only Clear in Adult Specimens.
    - 2.4.1.3. Special Criteria for Reproduction: One Litter Per Year.
    - 2.4.1.4. Differences Between Species.

- 2.4.2. Hedgehogs: They Are Polygamous.
  - 2.4.2.1. Sexual Dimorphism.
  - 2.4.2.2. Special Criteria for Reproduction.
  - 2.4.2.3. Anatomic Considerations.
- 2.4.3. Pet Pigs:
  - 2.4.3.1. Special Criteria for Reproduction.
  - 2.4.3.2. Anatomy Recap.
- 2.5. Clinical Handling and Preventive Medicine: The Key Factor for Excellence in the Eyes of the Owner. Key Questions.
  - 2.5.1. Sciurormorphs
    - 2.5.1.1. Handling Techniques in the Practice for Examination.
  - 2.5.2. Hedgehogs:
  - 2.5.3. Pet Pigs
  - 2.5.4. Preventative Medicine.
    - 2.5.4.1. Current Legislation and Animal Identification System.
    - 2.5.4.2. Vaccination Protocol.
    - 2.5.4.3. Deworming Guidelines.
    - 2.5.4.4. Information on Sterilization.
- 2.6. Sampling for Diagnosis and Pathways for Drug Administration.
  - 2.6.1. Sciurormorphs.
  - 2.6.2. Hedgehogs.
  - 2.6.3. Pet Pigs.
- 2.7. The Most Important Zoonoses: Protection as a Key Factor in the Veterinarian's Practice.
  - 2.7.1. Sciurormorphs.
    - 2.7.1.1. Animals Born in Captivity.
    - 2.7.1.2. Captured Animals Who Live in Captivity.
  - 2.7.2. Hedgehogs.
    - 2.7.2.1. Demodex Spp.
    - 2.7.2.2. Notoedres Cati.
  - 2.7.3. Pigs:
    - 2.7.3.1. Hydatidosis.
- 2.8. Most Common Pathologies in Sciurormorphs.
  - 2.8.1. Update on Dermatology in Squirrels, Prairie Dogs and Richardson's Squirrels.
    - 2.8.1.1. Alopecia.
    - 2.8.1.2. Scabies: Sarcoptes Scabiei and Notoedres Cati.
    - 2.8.1.3. Dermatofyptosis.
  - 2.8.2. Pathologies of the Oral Cavity: Most Frequent Dentistry Problems.
    - 2.8.2.1. Most Common Causes.
    - 2.8.2.2. Antibiotic
    - 2.8.2.3. The Pseudo-Odontoma: The Most Common Dental Problem in Prairie Dogs.
      - 2.8.2.3.1. Predisposing Causes: Repeated Trauma.
      - 2.8.2.3.2. Symptoms: The Reason for Coming to the Practice.
      - 2.8.2.3.3. Effective Treatment.
      - 2.8.2.3.4. Definitive Treatment.
- 2.9. The Most Common Pathologies in Hedgehogs.
  - 2.9.1. Scabies: Loss of Spikes That Scares the Owner.
    - 2.9.1.1. Caparinia Tripilis.
    - 2.9.1.2. Symptoms and Treatment.
  - 2.9.2. Dermatofyptosis
    - 2.9.2.1. Trichophyton Mentagrophytes and Microsporum Spp.
    - 2.9.2.2. Symptoms and Treatment.
  - 2.9.3. Respiratory Pathologies: Pneumonias.
    - 2.9.3.1. Bordetella Bronchiseptica.
    - 2.9.3.2. Pasteurella Multocida.
    - 2.9.3.3. Mycoplasma Spp.
  - 2.9.4. Nerve Pathologies: Whobbly Hedgehog Syndrom.
    - 2.9.4.1. Definition.
    - 2.9.4.2. Symptoms.
- 2.10. The Most Common Pathologies in Dwarf Pigs.
  - 2.10.1. Dermal Pathologies: A Common Issue in the Practice.
  - 2.10.2. Parasitosis.
    - 2.10.2.1. Sarcoptes Scabiei.
    - 2.10.2.2. Haematopinus Suis.
  - 2.10.3. Botulism: Similar Symptoms to Other Dermal Lesions.
    - 2.10.3.1. Erysipelothrix Rusopathiae.
  - 2.10.4. Nail Overgrowth
    - 2.10.4.1. Specific Anatomy of the Nails.
  - 2.10.5. Obesity: A Common Issue with Pigs in Captivity.
  - 2.10.6. Swine Pleuropneumonia: Low Incidence but High Mortality.
    - 2.10.6.1. Actinobacillus Pleuroneumoniae.



### Module 3. Relevant Aspects of Birds

- 3.1. Taxonomic Classification of Psittaciformes: The Majority of Birds Brought to the Practice.
  - 3.1.1. Taxonomic Classification.
  - 3.1.2. Worldwide Distribution.
  - 3.1.3. Anatomic Differences.
- 3.2. Taxonomic Classification of Passerine Birds: The Vast Majority of Wild Birds.
  - 3.2.1. Taxonomic Classification.
  - 3.2.2. Worldwide Distribution.
  - 3.2.3. Anatomic Differences.
- 3.3. Taxonomic Classification of Falconiformes: Birds of Prey.
  - 3.3.1. Taxonomic Classification.
  - 3.3.2. Worldwide Distribution.
  - 3.3.3. Anatomic Differences.
- 3.4. Anatomy Recap.
  - 3.4.1. Generalized Anatomy Among Species.
  - 3.4.2. Anatomy of the Skeletal System.
  - 3.4.3. Anatomy of the Organs.
- 3.5. Maintenance: Suitable Facilities for Each Species.
  - 3.5.1. Special Furniture: Types of Cages.
  - 3.5.2. Stress.
  - 3.5.3. Physical exercise
  - 3.5.4. Ultraviolet Light.
  - 3.5.5. Maintenance of Birds in Captivity.
  - 3.5.6. Coloring of the Feathers.
  - 3.5.7. Availability of Water.
  - 3.5.8. Drugs Added to the Water.
  - 3.5.9. Baths and Sprays With Water.
- 3.6. Nutritional Requirements: Nutrition
  - 3.6.1. Feeding Guidelines:



- 3.6.2. Nutritional Composition of the Food.
  - 3.6.2.1. Carbohydrates.
  - 3.6.2.2. Proteins.
  - 3.6.2.3. Fats.
  - 3.6.2.4. Vitamins.
    - 3.6.2.4.1. Liposoluble Vitamins.
    - 3.6.2.4.2. Hydrosoluble Vitamins.
    - 3.6.2.4.3. Antivitamins.
  - 3.6.2.5. Minerals.
- 3.7. Type of Nutrition in Psittacine Birds.
  - 3.7.1. Seed Mixture: Nature in Captivity.
  - 3.7.2. Feed: Differences Between Granulated and Extruded.
  - 3.7.3. Fruits and Vegetables: Environmental Enrichment.
  - 3.7.4. Germinated Seeds: With High Amounts of Vitamins.
  - 3.7.5. Cooked Legumes: In Raw Form They Generate Digestive Alterations.
  - 3.7.6. Breeding Paste: Desired and Undesired Effects.
  - 3.7.7. Other Products.
  - 3.7.8. Calculating Energy Needs: Basal Metabolic Rate (BMR) and Maintenance Energy Requirements (MER)
- 3.8. Generalized Diet for the Most Frequent Psittacines in the Clinic.
  - 3.8.1. Australian Parakeet (*Melopsittacus undulattus*).
  - 3.8.2. Nymph (*Nymphicus Hollandicus*).
  - 3.8.3. Lovebird (*Agapornis* Spp.).
  - 3.8.4. African Grey Parrot, Yaco (*Psithacus Erithacus*).
- 3.9. Generalized Diet for the Least Frequent Psittacines in the Clinic.
  - 3.9.1. Amazona (*Amazona* Sp).
  - 3.9.2. Macaw (*Ara* Sp).
  - 3.9.3. Cockatoo (*Cacatua* Sp).
  - 3.9.4. Eclectus (*Eclectus Roratus*).
  - 3.9.5. Loris.
  - 3.9.6. Conversion of Psittacine Feeding.
- 3.10. Other Feeding Aspects.
  - 3.10.1. Relevant Aspects.
  - 3.10.2. Feeding in Passerine Birds.
  - 3.10.3. Food in Hospitalized Patients.





**Module 4. Diagnostic Criteria and Treatments in Birds**

- 4.1. The Most Important Zoonoses.
  - 4.1.1. Prevention and Protection of the Veterinary Professional.
  - 4.1.2. Risk of Zoonosis from Handling.
  - 4.1.3. Risk of Zoonosis from Ingesting.
- 4.2. Clinical Handling and Preventive Medicine.
  - 4.2.1. Physical Examination: Complete and Orderly.
  - 4.2.2. Containing the Bird.
  - 4.2.3. Sampling and Drug Administration.
    - 4.2.3.1. Intravenous Route.
    - 4.2.3.2. Intraosseous Route.
    - 4.2.3.3. Oral Posology.
    - 4.2.3.4. Intramuscular Route.
    - 4.2.3.5. Subcutaneous Route.
    - 4.2.3.6. Topical Route.
  - 4.2.4. Preventative Medicine.
    - 4.2.4.1. Vaccination.
    - 4.2.4.2. Deworming.
    - 4.2.4.3. Sterilization.
- 4.3. Diagnostic Imaging: Radiology in Birds.
  - 4.3.1. Ultrasound Equipment.
  - 4.3.2. Handling Techniques in Radiography.
  - 4.3.3. Ultrasound Visualization.
- 4.4. Advanced Diagnostic Imaging.
  - 4.4.1. Ultrasound in Birds: The Use of Ultrasound.
  - 4.4.2. Technical Issues.
  - 4.4.3. Preparing and Positioning the Patient.
  - 4.4.4. Endoscopy in Birds: Necessary Instruments.
- 4.5. Pathologies of the Skin.
  - 4.5.1. Acariasis: In Parakeets and Canaries.
  - 4.5.2. Follicular Cysts: Usual Reason for Attending a Practice in Canaries.
  - 4.5.3. Itching: A Major Disorder.
  - 4.5.4. Cutaneous Lipomas: Very Common in Parakeets and Other Species.
- 4.6. Other Important Diseases.
  - 4.6.1. Avian Smallpox: Poxvirus.
  - 4.6.2. Circovirus: Diseases of the Beak and Feathers.
  - 4.6.3. Gout: Visceral or Articular.
  - 4.6.4. Limping: Multifactorial Cause.
  - 4.6.5. Spikes: "Bumblefoot".
- 4.7. Reproductive Diseases.
  - 4.7.1. Introduction.
  - 4.7.2. Egg Retention.
  - 4.7.3. Chronic Egg Laying Nymphs, Parakeets and Lovebirds.
- 4.8. Listing Frequent Pathologies.
  - 4.8.1. Macrorhabdus Ornithogaster: The Megabacteria.
  - 4.8.2. Vomiting and Regurgitating: Nonspecific Type.
  - 4.8.3. PDD: Proventriculus Dilatation Disease.
  - 4.8.4. Hepatic Lipidosis: The Most Common Liver Problem.
  - 4.8.5. Nonspecific Diarrhea: In Passerines and Psittaciformes.
- 4.9. Other Pathologies.
  - 4.9.1. Psittacosis: Potential Zoonosis.
  - 4.9.2. Hypovitaminosis A: Common in Birds Fed Exclusively on Seeds.
  - 4.9.3. Aspergillosis: Fungi of the Aspergillus Genus.
  - 4.9.4. Nonspecific Respiratory Problems: The Major Issue.
  - 4.9.5. Heavy Metal Poisoning.
  - 4.9.6. Hypocalcemia: Very common in Yacos.
- 4.10. Treatments.
  - 4.10.1. Key Aspects to Perform a Surgical Procedure.
  - 4.10.2. Making Bandages.
    - 4.10.2.1. Bandaging Wings.
    - 4.10.2.2. Bandaging Spikes.
  - 4.10.3. Feather Cutting.

# 05 Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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 Re-learning, 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

In a given clinical situation, what would you do? 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 abundant scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you can 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 potential or because of its uniqueness or rarity. It is essential that the case be based on current professional life, trying to recreate the real conditions in the 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 achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
2. The learning process has a clear focus on 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.



## Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 65,000 veterinarians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning 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 to success.*

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



In this program you will have access to the best educational material, prepared with you 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.

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.



### Latest Techniques and Procedures on Video

We bring you closer to the latest Techniques, to the latest Educational Advances, to the forefront of current Veterinary Techniques and Procedures. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### 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 unique multimedia content presentation training system 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 training.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your 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 our future difficult decisions.



#### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





# 06 Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.



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*Include in your training a Postgraduate Diploma in New Companion Animals and Birds a highly qualified added value for any professional in this area"*

The **Postgraduate Diploma in New Companion Animals and Birds** contains the scientific most complete and up-to-date scientific program on the market.

**After the student has passed the evaluations, they will receive by mail with acknowledgement of receipt their corresponding Diploma issued by TECH - Technological University.**

The diploma issued by **TECH - Technological University** will specify the qualification obtained through the Postgraduate Diploma and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional from career evaluation committees.

Title: **Postgraduate Diploma in New Companion Animals and Birds**

ECTS: **24**

Official Number of Hours: **600**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



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**Postgraduate Diploma**  
New Companion  
Animals and Birds

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

# Postgraduate Diploma

## New Companion Animals and Birds

