Postgraduate Diploma
Detecting Disease in Avian Patients

tech global university

tech global university

Postgraduate Diploma
Detecting Disease in Avian Patients

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-detecting-disease-avian-patients

Index

01 Introduction p. 4

02 Objectives p. 8

03 Course Management p. 12

04 Structure and Content p. 16

05 Methodology p. 26

06 Certificate p. 34

01

Introduction

Knowing how to detect the diseases suffered by avian patients is fundamental for veterinarians specialized in these animals, as it will increase their life expectancy. However, information in this field is not abundant, so sometimes professionals are faced with a lack of educational opportunities. TECH wants to solve these problems by providing the student with the best Postgraduate Diploma on the market in detecting disease in avian patients.

Our complete Postgraduate Diploma will allow you to develop your skills in avian management to cure the diseases these patients present"

The Postgraduate Diploma in Detecting Disease in Avian Patients has been designed by professionals with years of experience and extensive training in the field, who have decided to contribute all their knowledge to complement the training of other professionals. Students will thus notice an improvement both in their professionalism and in the number of specialized centers that successfully treat avian patients as a result.

This academic program emphasizes the importance of examining the evidence from scientific research, applied to veterinary practice in birds, since clinical examination and anamnesis often provide little diagnostic data. Unfortunately, treatments are administered before sufficient evidence has been collected to reach a proper diagnosos, often because the symptoms worsen or the owner has a limited budget. That is why this new and updated Postgraduate Diploma focuses the coursework on establishing diagnoses based on scientific evidence while optimizing the economic resources and the time spent to find early treatment.

When a bird comes to a clinic, veterinarians must perform a series of tests according to the symptoms present. One of the mandatory guidelines is the routine coprological analysis, but, depending on each case, veterinarians will also have to perform radiographies, ultrasound scans, analysis or endoscopies, for example, in order to reach the most accurate diagnoses. Like other animals, birds are susceptible to a wide variety of diseases. This program focuses on the different diseases that can affect avian patients, giving veterinarians the keys to treat them properly.

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 veterinary professionals, 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 Diploma, students are not constrained by fixed timetables or the need to commute to a physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Diploma in Detecting Disease in Avian Patients** contains the most complete and up to date academic program on the market. The most important features of the program 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 developents in avian patient diseases
- Practical exercises where the self assessment process can be carried out 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 assignments
- Content that is accessible from any fixed or portable device with an Internet connection

Do not miss the opportunity to study this Postgraduate Diploma with us. It's the perfect opportunity to advance your career"

This Postgraduate Diploma is the best investment you can make when choosing a refresher program to expand your existing knowledge of the subject matter"

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 balance your studies with your professional work while expanding your knowledge in the field.

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 avian patient diseases with extensive experience.

02

Objectives

The Postgraduate Diploma in Detecting Disease in Avian Patients is designed to facilitate professional veterinary practice with the latest advances and most innovative procedures in the sector.

This is the best option to learn about the latest advances in bird medicine and surgery"

General Objectives

- Compile the most commonly used diagnostic techniques: radiology, endoscopy and ultrasound
- Develop specialized knowledge in all laboratory diagnostic tests
- Establish the protocols to interrupt biochemical analysis and proteinograms
- Demonstrate the correct necropsy technique in avian patients
- Generate protocols for coprology in birds
- Examine radiology techniques in avian patients
- Anticipate diagnostic difficulties in ultrasound in avian patients
- Propose endoscopy as the diagnostic technique of choice
- Analyze the main infectious pathologies in birds: Viral, bacterial, mycoplasmic, fungal and parasitic
- Develop specialized knowledge of non-infectious pathologies: genetic, metabolic-endocrine, anatomical alterations, physical-chemical imbalances and nutritional deficiencies
- Define soft tissue pathologies
- Specify treatments and prevention strategies
- Develop specialized knowledge of diseases in birds according to cause, epizootiology and physiopathogenesis
- Determine the close relationship between humans and wild birds
- Identify the routes of disease transmission
- Analyze the most frequent questions that arise in field situations

Specific Objectives

Module 1. Laboratory Tests

- Analyze diagnostic evidence, information gathering methods, sample preparation for referral and transport purposes to anatomic pathology laboratories
- Examine hematology in birds with the different morphological changes they present
- Identify the results of biochemical analyses in birds
- Develop the latest cytological techniques
- Demonstrate the correct technique for sending samples to anatomic pathology services
- Examine the external and internal lesions that birds may present in the postmortem technique and their diagnostic interpretation
- Obtain the necessary samples from the postmortem examination for study by histopathology, microbiology and polymerase chain reaction (PCR)

Module 2. Diagnostic Imaging Techniques

- Specify the sedation and anesthesia techniques necessary to perform diagnostic imaging techniques
- Study existing radiology equipment and diagnostic options in birds
- Develop management techniques for proper patient positioning, including the most commonly used projections in daily clinical practice
- Analyze the anatomical references in radiography, ultrasound and endoscopy to reach reliable diagnoses
- Justify why a specific type of ultrasound probe is used in avian patients
- Analyze the endoscopy techniques and applications in birds
- Achieve the maximum knowledge in other really important diagnostic techniques such as routine coprological analysis

Module 3. Management Related Pathologies

- Identify symptoms to be able to detect them in time and act as soon as possible
- Examine the main pathologies derived caused by incorrect handling to avoid them and even prevent death
- Analyze the most frequent emergencies derived from incorrect handling, such as lead poisoning and capture myopathy
- Specify oral cavity disorders and their most appropriate treatments.
- Completely and successfully deal with all the pathologies affecting the crop, the proventriculus and the ventriculus
- Delve deeper into all the most common pathologies affecting the distal part of the intestine
- Analyze liver disorders due to external causes, as well as the typical pathologies they present
- Develop specialized knowledge of the great avian unknown: The endocrine system, analyzing each of the endocrine glands in birds and their physiopathogenesis

Module 4. Avian Patient Diseases

- Identify the cause of the disease through causal agents
- Develop specialized knowledge of the most common diseases in wild birds
- Make the best use of a list of problems, together with their differential diagnoses to properly design work plans
- Develop the most important viral diseases in wild bird pathologies, understanding that they are the most serious
- Diagnose diseases caused by bacteria, since they are mostly linked to respiratory infections, blood infections, intestinal infections or a combination of any of them
- Analyze parasitic diseases, their symptomatology and the most updated treatments

03

Course Management

The program's teaching staff includes leading experts in Avian 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.

Our teaching team will help you achieve professional success"

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 Madrid
- 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. García Hernando, Javier

- Veterinarian at Internal Medicine for Exotic Animals at Privet Veterinary Hospital 2014 - present
- Degree in Veterinary Medicine from the Alfonso X el Sabio University (UAX)
- Advanced Master's Degree in Exotic Animal Medicine and Surgery at LianaBlue (Milan)
- Postgraduate Certificate in Herpetology, Complutense University of Madrid (UCM)

Dr. Melián Melián, Ayose

- Actions for the development of the Canary Islands wildlife health surveillance network Territorial and environmental planning and management, Gesplan July 2020 - present
- Technical support in the preparation of reports for the implementation of actions aimed at minimizing unnatural mortality of wildlife in the Canary Islands Territorial and environmental planning and management, Gesplan, from June to December, 2019
- Postgraduate Degree in Exotic Animal Clinics, GPcert (ExAP), European School of Veterinary Postgraduate Studies(ESVPS) 2017
- Doctorate Level in Veterinary Medicine, University of Las Palmas de Gran Canaria with a unanimous Cum Laude distinction 2016
- Guest lecturer in practical teaching for the compulsory course Marine Mammal Health and Fish Pathology II, academic year 2016- 2017 (20 hours)
- Guest professor in practical teaching for the compulsory course Marine Mammal Health and Fish Pathology II, academic year 2015-2016 (20 hours)

04

Structure and Content

The content structure 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.

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. Laboratory Tests

1.1. Clinical and Diagnostic Techniques: General Principles Diagnostic Evidence
- 1.1.1. Accurate Diagnoses
- 1.1.2. Considerations for Sample Preparation
- 1.1.3. Sample Transport and Processing

1.2. Hematology: An Essential Tool
- 1.2.1. Cell Morphology
  - 1.2.1.1. The Red Series in Blood
  - 1.2.1.2. The White Series in Blood
- 1.2.2. Morphological Changes in Blood Cells
  - 1.2.2.1. Degranulation
  - 1.2.2.2. Immaturity
  - 1.2.2.3. Toxicity
  - 1.2.2.4. Reactivity
- 1.2.3. Factors to Consider in Hematology
- 1.2.4. Hematology Protocols in Birds
  - 1.2.4.1. Erythrocyte Count
  - 1.2.4.2. Hemoglobin Estimation
  - 1.2.4.3. Hematocrit Estimation
  - 1.2.4.4. Leukocyte Count
  - 1.2.4.5. Thrombocyte Count
  - 1.2.4.6. Fibrinogen Estimation

1.3. Biochemical Analysis in Birds
- 1.3.1. Biochemical Reference Ranges
- 1.3.2. Most Used Profiles
  - 1.3.2.1. Total Protein: Increase and Decrease
  - 1.3.2.2. Glucose: Increase and Decrease
  - 1.3.2.3. Uric Acid, Urea and Creatinine
  - 1.3.2.4. Lactate Dehydrogenase (LDH)
  - 1.3.2.5. Serum Glutamic-Oxaloacetic Transaminase (SGOT)
  - 1.3.2.6. Bile Acids
  - 1.3.2.7. Creatine-Phosphokinase (CPK): Muscle or Heart Failure
  - 1.3.2.8. Calcium: Hypercalcemia Hypocalcemia
  - 1.3.2.9. Phosphorus
  - 1.3.2.10. Cholesterol
- 1.3.3. Age Related Biochemical Changes
  - 1.3.3.1. Proteinogram as a Diagnostic Tool
  - 1.3.3.2. The Albumin
  - 1.3.3.3. Alpha-1: Acute Disease Phase Indicator
  - 1.3.3.4. Alpha-2: Acute Disease Phase Proteins
  - 1.3.3.5. The Beta Fraction
  - 1.3.3.6. The Gamma Fraction

1.4. Urinalysis: Suspected Nephropathy
- 1.4.1. Anatomo-physiological Recap of the Urinary System
- 1.4.2. Urine Collection Techniques in Birds
- 1.4.3. Urinalysis
- 1.4.4. Urinalysis Parameters

1.5. Fundamental Cytological Techniques: Cell Study
- 1.5.1. Skin and Plumage Scrapings
  - 1.5.1.1. How to Perform Superficial Scrapings
  - 1.5.1.2. How to Perform Deep Scrapings
- 1.5.2. Biopsy Collection
  - 1.5.2.1. Different Application Techniques
  - 1.5.2.2. Skin Biopsies
  - 1.5.2.3. Skeletal Injury Biopsies
  - 1.5.2.4. Small Biopsies Organs and Masses
  - 1.5.2.5. Chronic Injury Biopsies
  - 1.5.2.6. Biopsies of Small Lesions and Masses
- 1.5.3. Cytology: Functions
  - 1.5.3.1. Sample Collection and Processing
  - 1.5.3.2. Key Points Cytologic Interpretations

1.6. Advanced Cytologic Techniques
- 1.6.1. Aspiration
  - 1.6.1.1. Complementary Tests
  - 1.6.1.2. Aspiration Methods
- 1.6.2. Microbiological Swabs Collection
  - 1.6.2.1. Upper Respiratory Routes
  - 1.6.2.2. Lower Gastrointestinal Tract
- 1.6.3. Washing Technique
  - 1.6.3.1. Crop Washing
  - 1.6.3.2. Air Sac Washing

1.7. Preparing for a Necropsy
- 1.7.1. Fundamental Aspects
  - 1.7.1.1. Necropsies
  - 1.7.1.2. The Importance of Anamneses and Patient Medical Histories
- 1.7.2. Necessary Equipment: Instruments
- 1.7.3. Selecting Tissues in Necropsy Cases
- 1.7.4. Samples Preservation for Diagnostic Studies
- 1.7.5. Records: Injuries and Findings

1.8. External Patient Evaluation in Postmortem Examinations
- 1.8.1. Skin and Appendages: Evidence of Trauma
- 1.8.2. The Skeletal System
- 1.8.3. The Sensory System
- 1.8.4. The Muscle System: Initial Examination

1.9. Internal Patient Evaluation in Postmortem Examinations
- 1.9.1. The Cardiorespiratory and Cardiovascular Systems
- 1.9.2. The Lymphoreticular System
- 1.9.3. The Liver
- 1.9.4. The Digestive system
- 1.9.5. Urinary System Assessment
- 1.9.6. Reproductive System Analysis
  - 1.9.6.1. Necropsy in Females
  - 1.9.6.2. Necropsy in Males
- 1.9.7. Necropsy Evaluation of the Nervous System
- 1.9.8. Examination Conclusion

1.10. Diagnostic Procedures for the Necropsy Technique
- 1.10.1. Histopathological Examination of Collected Samples
  - 1.10.1.1. Sample Collection
- 1.10.2. Microbiological Analysis
  - 1.10.2.1. Swabbing Technique
- 1.10.3. Polymerase Chain Reaction (PCR)
  - 1.10.3.1. Infectious Laryngotracheitis
  - 1.10.3.2. Infectious Bronchitis
  - 1.10.3.3. Poxvirus
  - 1.10.3.4. Mycoplasma Gallisepticum, Mycoplasma Synoviae
  - 1.10.3.5. Other Diseases

Module 2. Diagnostic Imaging Techniques

2.1. When to Anesthetize Birds for Diagnostic Techniques?
- 2.1.1. Volatile Anesthesia
- 2.1.2. Injectable Anesthesia
- 2.1.2. Anesthesia in Special Conditions

2.2. Necessary Radiology Equipment
- 2.2.1. General Considerations
- 2.2.2. The X-Ray Unit
- 2.2.3. Screens, Chassis and Foils

2.3. The Patient: Restraining and Positioning
- 2.3.1. Laterolateral Projection
- 2.3.2. Ventrodorsal Projection
- 2.3.3. Craniocaudal Projection
- 2.3.4. Wing Projection
- 2.3.5. Caudoplantar Projection

2.4. Types of X-Rays: Contrast Radiography Studies
- 2.4.1. Conventional Radiography
- 2.4.2. Gastrointestinal Contrast Studies
- 2.4.3. Respiratory Contrast Studies
- 2.4.5. Urography
- 2.4.6. Myelography

2.5. Radiologic Interpretations
- 2.5.1. Anatomy Applied to Radiography
- 2.5.2. Abnormal Radiographic Findings the Respiratory System
- 2.5.3. Abnormal Radiographic Findings the Digestive System
- 2.5.4. Abnormal Radiographic Findings the Skeletal System

2.6. Fundamental Aspects of Avian Ultrasound
- 2.6.1. The Complete Ultrasound Diagnosis
  - 2.6.1.1. Lineal Convex, Microconvex and Phased Array Probes
- 2.6.2. Ultrasound
  - 2.6.2.1. Specific Diagnostic Objectives in Birds and Limitations
- 2.6.3. Necessary Technical Equipment for Ultrasound

2.7. Advanced Criteria for Avian Ultrasound
- 2.7.1. Patient Preparation for Ultrasound
- 2.7.2. Applied Anatomical Recap and Proper Patient Positioning
- 2.7.3. Ultrasound Interpretations

2.8. Endoscopy
- 2.8.1. Endoscopy
  - 2.8.1.1. Necessary Equipment for Endoscopy
  - 2.8.1.2. Rigid Endoscope
- 2.8.2. Patient Preparation and Positioning for Endoscopy
- 2.8.3. Clinical and Surgical Application of Avian Ultrasound

2.9. Avian Cardiology: Basic Fundamentals
- 2.9.1. Cardiac System Anatomy in Birds
- 2.9.2. Clinical Examination in Birds
- 2.9.3. Avian Electrocardiography

2.10. Veterinary Clinical Analysis in Birds
- 2.10.1. Serotyping Major Diseases
  - 2.10.1.1. Salmonella Spp
- 2.10.2. Coprological Analysis
  - 2.10.2.1. Parasitology
  - 2.10.2.2. Bacteriology

2.10.3. Serology of the Most Prominent Diseases in Avian Medicine
- 2.10.3.1. Infectious Laryngotracheitis
- 2.10.3.2. Infectious Bronchitis
- 2.10.3.3. Newcastle Disease
- 2.10.3.4. Mycoplasma Spp
- 2.10.3.5. Avian Influenza

Module 3. Management-Related Pathologies

3.1. Most Common Pathologies
- 3.1.1. Paresis by Capture: Cause of Mortality in Birds
  - 3.1.1.1. Affected Species and Characteristic Symptomatology
  - 3.1.1.2. Physiopathogenesis
  - 3.1.1.3. Differential Diagnosis
  - 3.1.1.4. Treatment and Prevention
- 3.1.2. Lead Poisoning
  - 3.1.2.1. Diagnosis
  - 3.1.2.2. Treatment: Primary, Chelating and Supportive

3.2. Other Intoxications
- 3.2.1. Zinc Poisoning
- 3.2.2. Diagnosis
  - 3.2.2.1. Treatment
  - 3.2.2.2. Primary Treatment
  - 3.2.2.3. Chelating Treatment
  - 3.2.2.4. Supportive Treatment
- 3.2.3. Ammonium Chloride Poisoning in Falconiformes
  - 3.2.3.1. Clinical Signs
  - 3.2.3.2. Pathological Changes
  - 3.2.3.3. Physiological and Pathological Considerations
- 3.2.4. Copper Poisoning
  - 3.2.4.1. Diagnosis
  - 3.2.4.2. Treatment
    - 3.2.4.2.1. Chelating Treatment
    - 3.2.4.2.2. Supportive Treatment

3.3. Pathologies Derived from Poor Nutrition
- 3.3.1. Metabolic Osteopathies: Bone Lesions
- 3.3.2. Most Common Injuries Causes and Types
- 3.3.3. Symptomatology and Susceptible Species
- 3.3.4. Diagnoses and Treatments
- 3.3.5. Long Bone Deformities: Twisting and Flexing
  - 3.3.5.1. Describing Pathology Type
  - 3.3.5.2. Clinical Signs in Birds
  - 3.3.5.3. Treatment and Prevention
- 3.3.6. Bone Alterations in More Distal Bones: Deformation
  - 3.3.6.1. Slipped Tendon
  - 3.3.6.2. Angel Wing
  - 3.3.6.3. Curled Fingers
- 3.3.7. Starvation Induced Cachexia
  - 3.3.7.1. Definition and Etiology: Symptoms
  - 3.3.7.2. Necropsy Findings
    - 3.3.7.3. Treatment and Prevention
- 3.3.8. Behavioral Osteodystrophy

3.4. Oral Cavity Disorders
- 3.4.1. Beak Pathologies
- 3.4.2. The Oral Cavity and Oropharynx: The Tongue and Salivary Glands
  - 3.4.2.1. Hypovitaminosis A
  - 3.4.2.2. Trauma
  - 3.4.2.3. Bleeding
  - 3.4.2.4. Neoplasms
  - 3.4.2.5. Halitosis
- 3.4.3. Infectious Diseases in Birds
  - 3.4.3.1. Mucosal Necrosis
  - 3.4.3.2. Fowl Pox
  - 3.4.3.3. Anatidae Herpesvirus (Duck Viral Enteritis or Duck Plague)
  - 3.4.3.4. Candidiasis (Candida Albicans Infection)

3.5. Esophagus and Gullet Pathologies
- 3.5.1. Esophagitis, Ingluvitis: Esophageal and/or Ingluvial Impaction
- 3.5.2. Esophagus and/or Crop Infestation by Capillaria Contorta and Other Capillaria spp
- 3.5.3. Candidiasis and Trichomoniasis
  - 3.5.3.1. Esophageal Ingluvial
- 3.5.4. Ingluvial Pathologies
  - 3.5.4.1. Calculations and Stasis
- 3.5.5. Crop Pathologies
  - 3.5.5.1. "Sour Crop Syndrome"
  - 3.5.5.2. Hanging Crop
  - 3.5.5.3. Content Regurgitation
- 3.5.6. Common Neoplasms

3.6. Proventriculus Pathologies
- 3.6.1. Proventricular Dilatation Disease in Psittaciformes
- 3.6.2. Proventricular and Gizzard Impaction
- 3.6.3. Candidiasis (Candida Albicans Infection)
- 3.6.4. Other Pathologies
  - 3.6.4.1. Atony
  - 3.6.4.2. Hypertrophy of Unknown Etiology
  - 3.6.4.3. Proventriculitis
  - 3.6.4.4. Presence of Foreign Bodies

3.7. Gizzard or Ventricle Pathologies: Glandular Stomach
- 3.7.1. Proventricular Dilatation Disease
- 3.7.2. Gizzard Ulcerations
- 3.7.3. Stomach Nematode Infestation
- 3.7.4. Neoplasms
- 3.7.5. Other Pathologies
  - 3.7.5.1. Muscular Atrophy and Traumatic Ventriculitis

3.8. Intestinal Pathologies
- 3.8.1. Malabsorption Syndrome
- 3.8.2. Non-Specific Enteropathies
  - 3.8.2.1. Diahrrea in Birds
- 3.8.3. Lower Intestinal Tract Alterations
  - 3.8.3.1. Colorectal Impactation
  - 3.8.3.2. Rectal Prolapse
    - 3.8.3.2.1. Intestinal Overexertion
- 3.8.4. Most Common Neoplasms
- 3.8.5. The Cloaca
  - 3.8.5.1. Chloacitis: "Gonorrheal Discharge"
  - 3.8.5.2. Prolapses
  - 3.8.5.3. Most Common Neoplasms

3.9. Pathologies of the Liver
- 3.9.1. Lipidosis
  - 3.9.1.1. Fatty Infiltration or Fatty Degeneration
- 3.9.2. Hemochromatosis
  - 3.9.2.1. Iron Storage in Avian Organisms
- 3.9.3. Visceral Gout
- 3.9.4. Amilodosis
- 3.9.5. Most Common Neoplasms
- 3.9.6. Other Pathologies
  - 3.9.6.1. Toxic Hepatitis and Diabetes Mellitus

3.10. Endocrine Disorders
- 3.10.1. Thyroid Glands
- 3.10.2. Parathyroid Glands
- 3.10.3. Adrenal Glands
- 3.10.4. Ultimobranchial glands
  - 3.10.4.1. Thoracic Localization
- 3.10.5. Hypophysis: Avian Brains
- 3.10.6. Pancreas: Endocrine and Exocrine Function
  - 3.10.6.1. Pancreatitis
  - 3.10.6.2. Acute Pancreatic Necrosis
  - 3.10.6.3. Most Common Neoplasms

Module 4. Avian Patient Diseases

4.1. Viral Diseases
- 4.1.1. Viral Diseases
- 4.1.2. Newcastle Disease (Paramyxoviridae Family)
  - 4.1.2.1. Etiology
  - 4.1.2.2. Serotype Classification
  - 4.1.2.3. Clinical and Physiopathogenesis Characteristics
  - 4.1.2.4. Diagnostic and Treatment Techniques
- 4.1.3. Fowl Pox (Poxviridae Family Virus)
  - 4.1.3.1. Serotypes Detected in Birds
  - 4.1.3.2. Clinical Signs in Patients
  - 4.1.3.3. Diagnosis and Treatment

4.2. Other Viral Infections of Clinical Interest
- 4.2.1. Influenza Virus in Birds (Orthomyxoviridae Family)
  - 4.2.1.1. Disease Epizootiology
  - 4.2.1.2. Clinical Signs in Birds
  - 4.2.1.3. Diagnosis
  - 4.2.1.4. Prevention and Control
- 4.2.2. Herpesvirus Infections
  - 4.2.2.1. Etiology
  - 4.2.2.2. Marek's Disease
    - 4.2.2.2.1. Polyneuritis Paralysis
  - 4.2.2.3. Duck Plague
    - 4.2.2.3.1. Duck Viral Enteritis
  - 4.2.2.4. Avian Infectious Laryngotracheitis
  - 4.2.2.5. Herpes
- 4.2.3. Other Viral Diseases

4.3. Most Common Bacterial Diseases in Clinics
- 4.3.1. Pasteurellosis: Cholera
  - 4.3.1.1. History: Etiological Agent and Disease Transmission
  - 4.3.1.2. Susceptible Species and Symptoms
  - 4.3.1.3. Diagnosis
  - 4.3.1.4. Treatment Immunity
- 4.3.2. Chlamydiosis: Ornithosis-Psittacosis
  - 4.3.2.1. Causes and Most Susceptible Species
  - 4.3.2.2. Effective Diagnosis
  - 4.3.2.3. Treatment and Prevention
- 4.3.3. Salmonellosis
  - 4.3.3.1. Definition
  - 4.3.3.2. Etiological Agent
  - 4.3.3.3. Distribution
  - 4.3.3.4. Susceptible Species
  - 4.3.3.5. Transmission
  - 4.3.3.6. Diagnosis
  - 4.3.3.7. Treatment and Prevention

4.4. Less Common Bacterial Diseases in Clinics
- 4.4.1. Avian Tuberculosis: Mycobacterium Spp
  - 4.4.1.1. Causes and Most Susceptible Species
  - 4.4.1.2. Effective Diagnosis
  - 4.4.1.3. Treatment and Prevention
- 4.4.2. Pseudotuberculosis (Yersiniosis)
  - 4.4.2.1. Causes and Most Susceptible Species
  - 4.4.2.2. Effective Diagnosis
  - 4.4.2.3. Treatment and Prevention
- 4.4.3. Escherichia Coli Infections
  - 4.4.3.1. Definition
  - 4.4.3.2. Etiological Agent
  - 4.4.3.3. Distribution
  - 4.4.3.4. Susceptible Species
  - 4.4.3.5. Transmission
  - 4.4.3.6. Diagnosis
  - 4.4.3.7. Treatment and Prevention

4.5. Other Bacterial Diseases in Avian Patients
- 4.5.1. Botulism
  - 4.5.1.1. History and Spread
  - 4.5.1.2. Transmission
    - 4.5.1.2.1. Clostridium Botulinum Bacilli
  - 4.5.1.3. Clinical Symptoms and Lesions
  - 4.5.1.4. Diagnosis and Treatment
- 4.5.2. The Red Disease: Erysipelothrix Rhusiopathiae
  - 4.5.2.1. Etiology and Causative Agent Transmission: Wild Birds
  - 4.5.2.2. Effective Detection
    - 4.5.2.2.1. Symptoms and Lesions
  - 4.5.2.3. Diagnosis and Treatment
- 4.5.3. Listeriosis: Listeria Monocytogenes
  - 4.5.3.1. History: Etiological Agent and Disease Transmission
  - 4.5.3.2. Symptoms Detected in Birds
  - 4.5.3.3. Effective Diagnosis and Treatment

4.6. Fungal Diseases
- 4.6.1. Aspergillosis
  - 4.6.1.1. Relevant Disease Characteristics
  - 4.6.1.2. Detected Clinical Signs in Patients
  - 4.6.1.3. Effective Diagnostic Techniques
  - 4.6.1.4. Treatment, Prevention and Prophylaxis
- 4.6.2. Candidiasis
  - 4.6.2.1. Candida Albicans Clinical Signs in Avian patients
  - 4.6.2.2. Laboratory Diagnostic Techniques
  - 4.6.2.3. Treatment and Pathology Control
- 4.6.3. Dermatophytosis, Ringworm
  - 4.6.3.1. Predisposing Factors and Types of Birds Affected
  - 4.6.3.2. Most Common Clinical Signs
  - 4.6.3.3. Diagnosis and Control

4.7. Ectoparasites
- 4.7.1. Diptera
  - 4.7.1.1. Flies and Mosquitos
- 4.7.2. Fleas (Siphonaptera)
- 4.7.3. Lice (Phthiraptera-Mallophaga)
- 4.7.4. Bedbugs (Hemiptera-Cimicidae)
  - 4.7.4.1. Hematophagous Ectoparasites
- 4.7.5. Mites (Acari)
  - 4.7.5.1. Most Common Ectoparasites
- 4.7.6. Ticks (Ixodide)
  - 4.7.6.1. Macroscopic Parasites
- 4.7.7. Beetles (Coleoptera)
  - 4.7.7.1. Disease Vectors

4.8. Performing Coprological Analysis in Birds
- 4.8.1. Most Prominent Coprological Techniques
- 4.8.2. Trematodes
  - 4.8.2.1. Staves
- 4.8.3. Cestodes
  - 4.8.3.1. Tapeworms
- 4.8.4. Nematodes
  - 4.8.4.1. Special Nematodes Locations and Pathologies

4.9. Protozoa: SingleCell Microorganisms
- 4.9.1. Coccidiosis in Anseriformes, Galliformes and Passeriformes
  - 4.9.1.1. Eimeria and Isospora Species
  - 4.9.1.2. Caryospora Species
  - 4.9.1.3. Other Coccidial Species in Birds
- 4.9.2. Trichomoniasis: Trichomonas Spp
- 4.9.3. Other Protozoa
  - 4.9.3.1 Giardia, Hexamita and Histomonas

4.10. Hemoparasites
- 4.10.1. Microfilariae
- 4.10.2. Plasmodium Species
- 4.10.3. Haemoproteus Species
- 4.10.4. Leucocytozoon Species
- 4.10.5. Trypanosomiasis
- 4.10.6. Hepatozoon Species
- 4.10.7. Babesia Species
  - 4.10.7.1 Avian Piroplasmas
- 4.10.8. Other Species

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

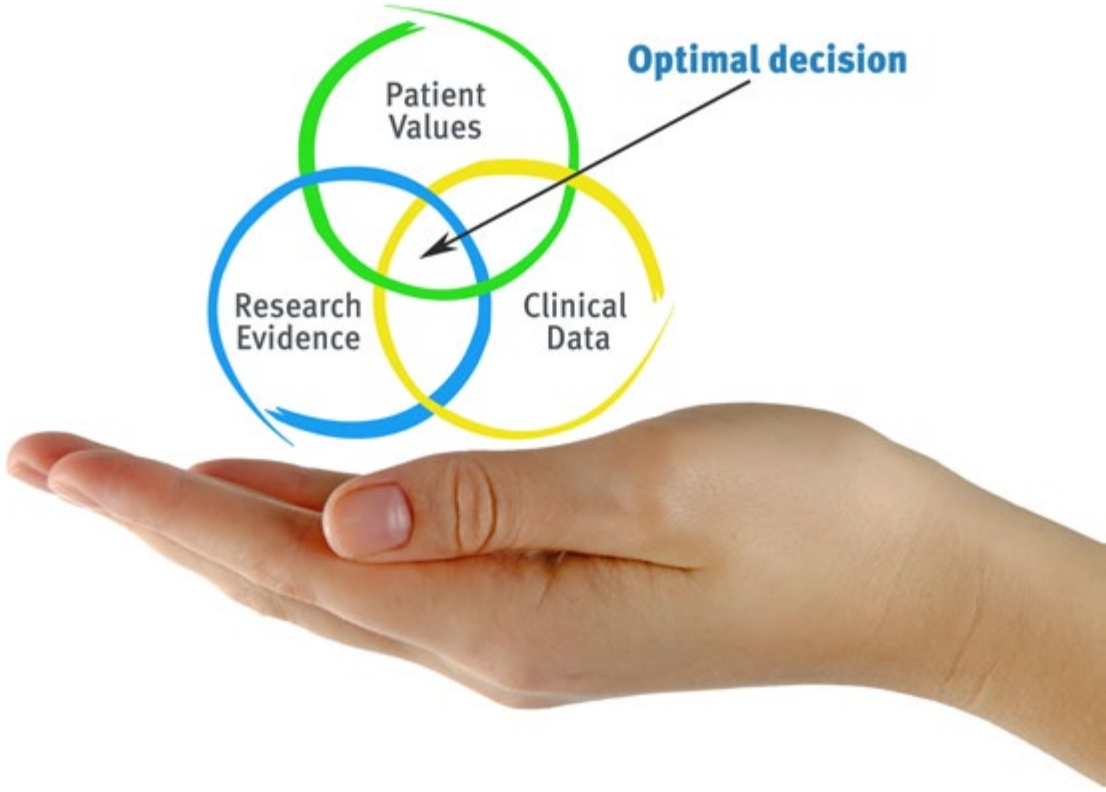
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the actual conditions in a veterinarian's professional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

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

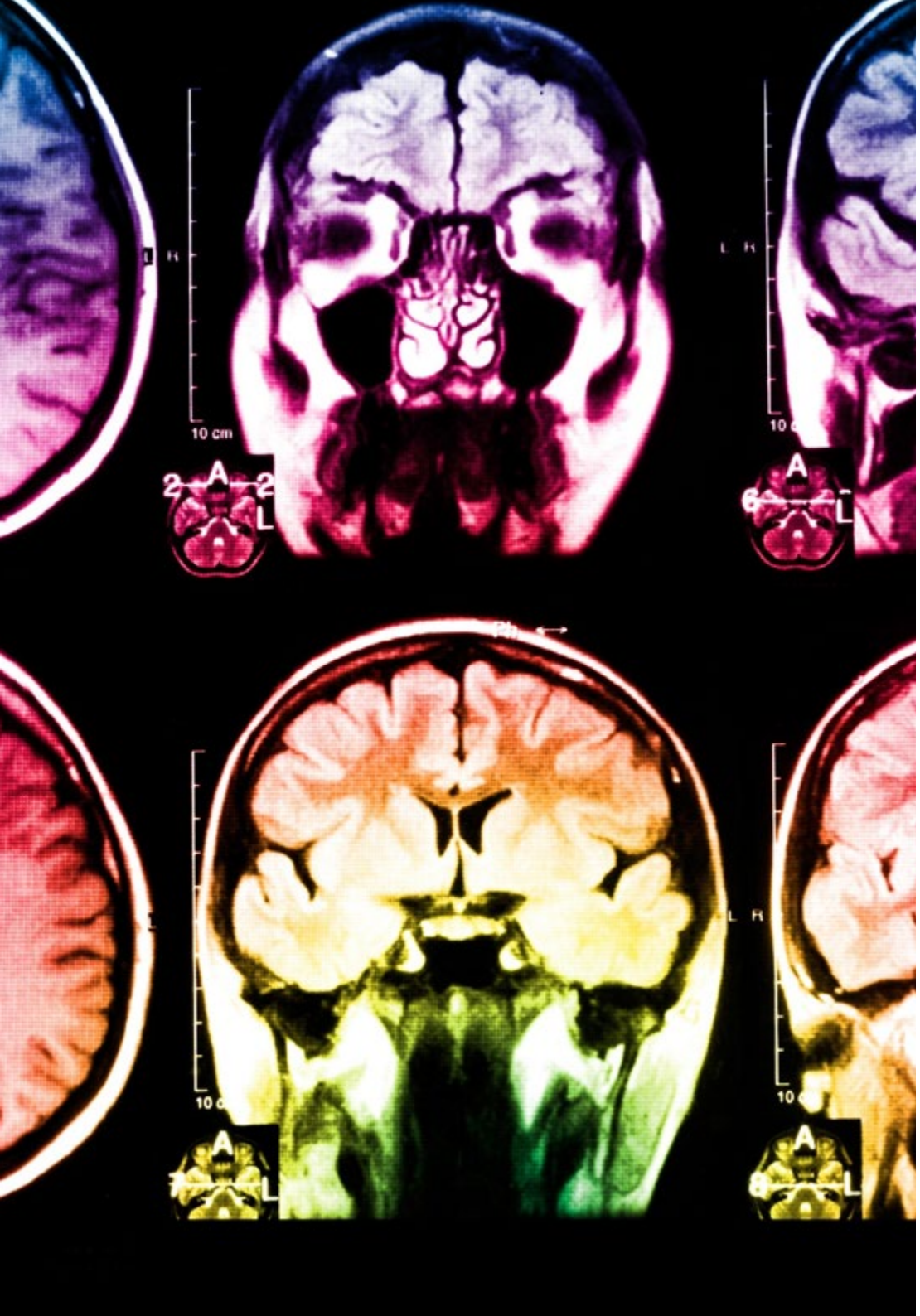
1. Veterinarians who follow this method not only manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. The feeling that the effort invested is effective becomes a very important motivation for veterinarians, which translates into a greater interest in learning and an increase in the time dedicated to working on the course.

Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Veterinarians will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

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

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

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

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

This program offers the best educational material, prepared with professionals in mind:

Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.

Latest Techniques and Procedures on Video

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

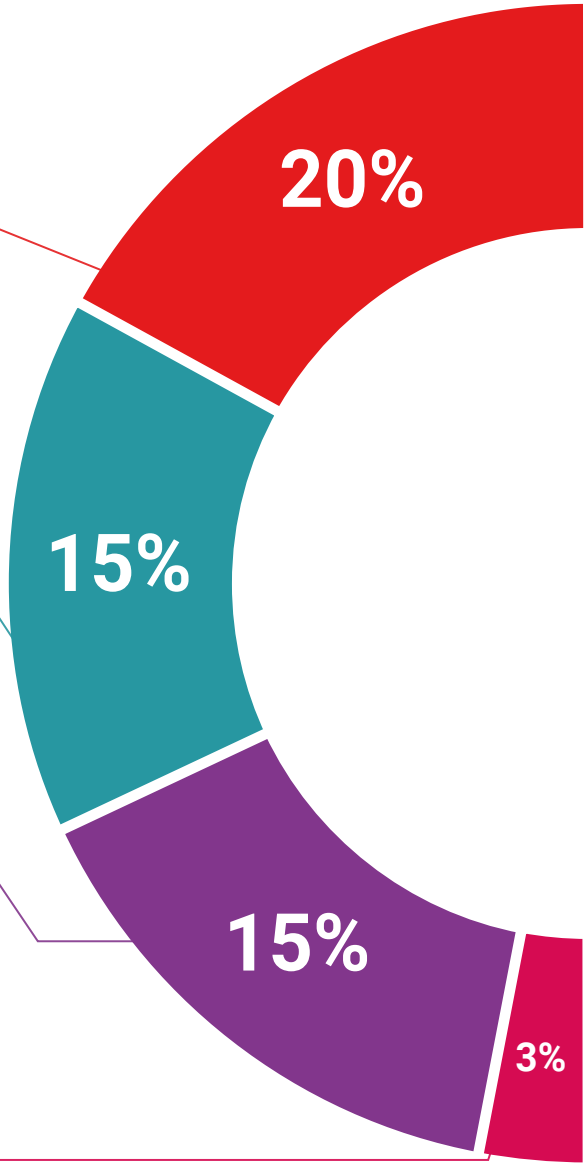
Interactive Summaries

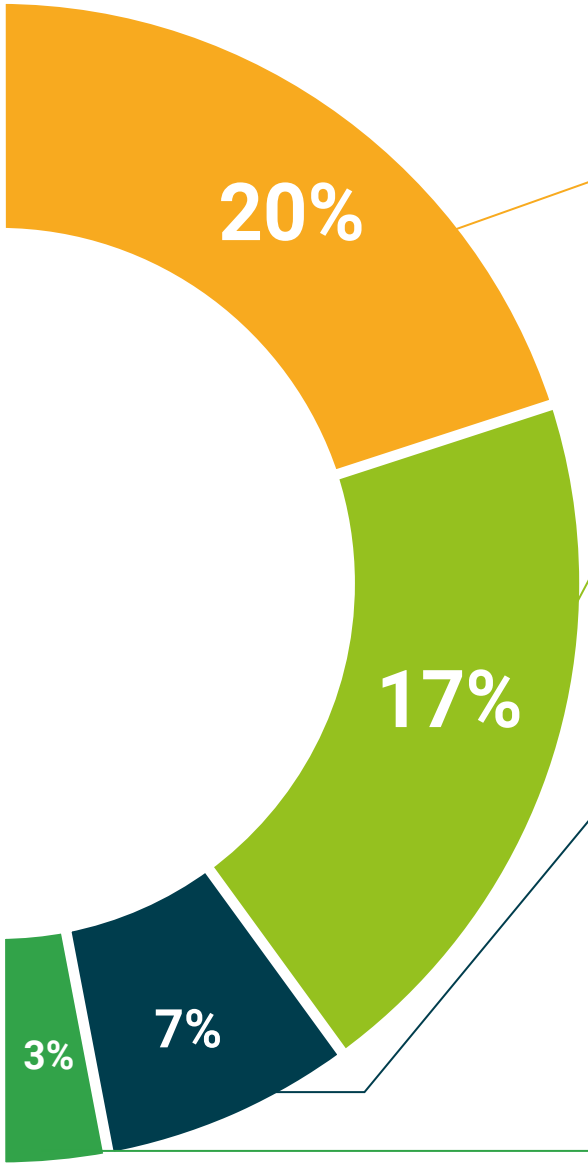
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Classes

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

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

06

Certificate

The Postgraduate Diploma in Detecting Disease in Avian Patients guarantees students, in addition to the most rigorous and up to date education, access to a Postgraduate Diploma issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Diploma in Detecting Disease in Avian Patients** 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** title 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: **Postgraduate Diploma in Detecting Disease in Avian Patients**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**

tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Detecting Disease in Avian Patients

This is a program of 600 hours of duration equivalent to 24 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

tech global university

Postgraduate Diploma

Detecting Disease in Avian Patients

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **24 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma
Detecting Disease in Avian Patients

tech global university