

# Postgraduate Certificate

## Basic Ecology





## Postgraduate Certificate Basic Ecology

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

Website: [www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/basic-ecology](http://www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/basic-ecology)

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# 01

# Introduction

As stated in the United Nations Convention on Biological Diversity, biodiversity conservation is one of the common interests that humanity must face, given the essential role it plays in satisfying our basic needs.

This program addresses the concepts considered to be the ecological basis required to assimilate the contents presented in the program. It is essential to understand the important role that some species play as environmental indicators, their vital strategies and population dynamics, as the basis for the knowledge presented in this specialization program.





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*Do not miss the opportunity to study this Postgraduate Certificate in Basic Ecology at TECH. It's the perfect opportunity to stand out and advance your career”*

Unlike other educational programs, the Postgraduate Certificate in Basic Ecology approaches wildlife management from an interdisciplinary point of view.

The numerous conventions on Biodiversity Conservation, agreed at the international level since the 1980s, have become the best tool in the fight against the loss of species diversity, and have served as a common link between the effort and commitment made by different countries in the appreciation of natural heritage.

This consolidation of efforts and adoption of common international action policies has been shaping the current regulatory framework which, from its origins to the present, has grown to guarantee the main lines of action in this area are regulated.

Wildlife management covers a wide spectrum of lines of research and action, in addition to the study of health surveillance and disease control, which is usually the general line of study in similar programs. However, in the future, veterinary professionals will have to face other lines of work in biodiversity conservation, which are also extensively developed throughout the syllabus.

Nowadays, it is difficult to find a Postgraduate Certificate like this one, which provides students with specialized education in the use of the most common software in daily practice. Today there are many computer tools available that are considered necessary and that facilitate and increase the level of quality of work.

Species biology is not only based on theoretical knowledge, but also on spatial and geolocalized data. The only way to understand and visualize how species are distributed is by using Geographic Information Systems to represent and model the data.

This complete specialization program is designed by professors with the highest recognized degree of specialization, thus guaranteeing its quality in all aspects in wildlife, both clinical and scientific. A unique opportunity to specialize in an area where professional positions are in high demand, from the hands of outstanding professionals.

This **Postgraduate Certificate in Basic Ecology** contains the most complete and up-to-date educational program on the market. The most important features include:

- ◆ Case studies presented by experts in Wildlife
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional development
- ◆ New developments in Wildlife Management
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Special emphasis on innovative methodologies in Wildlife Management
- ◆ 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



*Study at TECH and learn the concepts associated with wildlife populations and the processes and interactions that take place”*

“

*This Postgraduate Certificate is the best investment you can make when selecting a refresher program in Basic Ecology”*

It includes, in its Teaching staff, Professionals belonging to the veterinary field, who pour into this training the experience of their work, in addition to recognized Specialists from Reference Societies and Prestigious Universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education 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 throughout the program. For this, the professional will have the help of an innovative, interactive video system made by recognized and experienced experts in Wildlife.

*This specialisation program 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.*



# 02 Objectives

The Postgraduate Certificate in Basic Ecology is designed to facilitate the performance of veterinary professionals with the latest advances and most innovative strategies to in the sector.







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*You will learn to analyze one of the main threats to biodiversity loss, i.e., invasive alien species, establishing the main lines of action to manage them”*



## General Objectives

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- ♦ Establish the ecological basis to understand the relevant concepts in the area
- ♦ Develop the concepts associated with wildlife populations and the processes and interactions that take place
- ♦ Establish the differences between the types of surrogate species and how to read them as environmental indicators
- ♦ Compile energy flows and processes that take place in different ecosystems
- ♦ Discuss the international regulatory framework of Wildlife Management
- ♦ Examine the main legal implementation tools in biodiversity conservation at the European level
- ♦ Discuss the tools used in the three main areas of biodiversity conservation: sites, species and environmental conservation
- ♦ Establish management mechanisms in line with the regulations discussed



*Seize the opportunity and take the step to get up to speed with the latest developments in Basic Ecology”*





## Specific Objectives

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- ♦ Define the different biological indicators associated with the study of animal populations
- ♦ Develop population dynamics through the definition of species life history strategies
- ♦ Establish the critical periods in the life cycle of species and their vulnerability to extinction
- ♦ Study surrogate species, through real examples, and identify differences and similarities between them
- ♦ Define the basics of plant ecology and plant-animal interactions
- ♦ Analyze the structure of ecosystems and the joint action of various factors that influence their development
- ♦ Value the energy flows and cycles that occur in the natural environment
- ♦ Develop the main lines of action at the international level in biodiversity conservation
- ♦ Analyze the objectives of the Convention on International Trade in Endangered Species of Wild Fauna and Flora and its strategy
- ♦ Develop the Convention on Biological Diversity as a basic international reference on biodiversity concerns
- ♦ Establish the Ramsar Convention as a basic tool in the conservation and wise use of wetlands and their resources
- ♦ Analyze the main European directives in the field of biodiversity conservation

03

# Course Management

The program includes in its teaching staff experts in Basic Ecology, who have contributed their years of work experience to this training program. Professionals of recognized prestige have joined forces to offer you this high-level training program.





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*Our expert team of professors  
in Wildlife will help you achieve  
professional success”*

## International Guest Director

With a focus on Conservation and Wildlife Ecology, Allard Blom has become a prestigious Environmental Consultant. He has spent most of his professional career in non-profit organizations, including the World Wildlife Fund (WWF), where he has led numerous initiatives in collaboration with local communities in the Democratic Republic of Congo.

He has also overseen projects to counter corruption in natural resource management in Madagascar. In line with this, he has provided technical advice related to both landscape and wildlife preservation in general terms. In addition, he has played an active role in fundraising and collaborating with partners or stakeholders to manage natural protected areas.

Among his main achievements was his work in the development of the Dzanga-Sangha Special Reserve. There, he promoted a long-term sustainable financing strategy, consisting of a tri-national Conservation Trust Fund. He also designed a successful gorilla habituation scheme, which provided tourists with the opportunity to visit gorillas in their natural habitat under the supervision of the Bayaka people. In addition, he contributed significantly to the establishment of the Okapis Wildlife Reserve, which was designated a UNESCO World Heritage Site.

It is worth mentioning that he combines this work with his facet as a Scientific Researcher. In this sense, he has published multiple articles in the media specialized in Nature and Fauna. His main lines of research focus on biodiversity in protected areas of tropical forests and endangered animals such as elephants in Zaire. Thanks to this, he has been able to raise public awareness of these realities and has encouraged various organizations to intervene in favor of these causes.



## Dr. Blom, Allard

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- Vice President of WWF's Integrated Global Programs in the Democratic Republic of Congo
  - Collaborator in European Union Conservation Initiative to help establish Lopé National Park in Gabon, Central Africa
  - Ph.D. in Production Ecology and Resource Conservation from Wageningen University
  - Degree in Biology and Ecology from Wageningen University
- Member of: Zoological Society of New York, Conservation Society International in Virginia, United States



*Thanks to TECH, you will be able to learn with the best professionals in the world"*

## Management



### Mr. Matellanes Ferreras, Roberto

- ♦ Degree in Environmental Sciences, Rey Juan Carlos University
- ♦ Master's Degree in Training Management Management and development of training plans, European University, Madrid
- ♦ Master's Degree in Big Data and Business Intelligence, Rey Juan Carlos University
- ♦ Course on Pedagogical Aptitude in Natural Sciences, Complutense University, Madrid
- ♦ Unmanned Aerial Vehicle Pilot, State Agency of Aviation Safety (AESA)
- ♦ Technician in Management of Protected Natural Spaces, Official College of Forestry Technical Engineers
- ♦ Technician in Environmental Impact Assessment, Polytechnic University, Madrid
- ♦ Professor of Geographic Information Systems applied to the conservation of species and protected natural areas
- ♦ Conservation and national biodiversity management projects linked to species and protected natural areas
- ♦ Management, documentation and monitoring of species distribution inventories
- ♦ Territorial analyses for the reintroduction of protected species
- ♦ Analysis of the conservation status of species linked to the Natura 2000 Network for European sexennial reports (Directive 92/43/EEC and Directive 79/409/EEC)
- ♦ Inventory management of national and international wetland natural areas



**Ms. Pérez Fernández, Marisa**

- ♦ Forestry Polytechnic University of Madrid
- ♦ Master's Degree in Integrated Quality, Environmental and Occupational Health and Safety Management Systems, OHSAS
- ♦ San Pablo CEU University
- ♦ 3rd Year, Degree in Mechanical Industrial Engineering UNED
- ♦ Teaching Experience: Forest management for biodiversity conservation, natural inventories, integrated management of the natural environment, sustainable game management Technical bases and Technical Hunting Plans
- ♦ Senior Technician in Environmental Assessment, Engineering and Environmental Quality Management TRAGSATEC
- ♦ Technical Assistant TECUM Project (Tackling Environmental Crimes through standardized Methodologies) B&S Europe
- ♦ Field instructor on the Forest Arsonist Profiling project Environmental and Urban Planning Prosecutor's Office General Prosecutor's Office of the State
- ♦ Environmental Technician SEPRONA Spanish Civil Guard Headquarters
- ♦ Environmental Work Management of the Fraga-Mequinenza Gas Pipeline ENDESA Gas Transporter IIMA CONSULTING FIRM

# 04

## Structure and Content

The content has been structured and designed by leading professionals in Basic Ecology, who have extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and who have extensive knowledge of new technologies applied to veterinary medicine.



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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. Fundamentals of Ecology

- 1.1. General Ecology I
  - 1.1.1. Reproduction Strategies
  - 1.1.2. Biological Indicators
    - 1.1.2.1. Productivity
    - 1.1.2.2. Sex Ratio
    - 1.1.2.3. Flight Rate
    - 1.1.2.4. Operational Birth Rate
    - 1.1.2.5. Reproductive Success
- 1.2. General Ecology II
  - 1.2.1. Birth Rate and Mortality
  - 1.2.2. Growth
  - 1.2.3. Density and Assessment
- 1.3. Population Ecology
  - 1.3.1. Gregariousness and Territorialism
  - 1.3.2. Feeding Area
  - 1.3.3. Activity Patterns
  - 1.3.4. Age Structure
  - 1.3.5. Predation
  - 1.3.6. Animal Nutrition
  - 1.3.7. Extinction: Critical Periods
- 1.4. Biodiversity Preservation
  - 1.4.1. Life Cycle Critical Periods
  - 1.4.2. International Union for Conservation of Nature (IUCN) Categories
  - 1.4.3. Conservation Indicators
  - 1.4.4. Vulnerability to Extinction
- 1.5. Surrogate Species I
  - 1.5.1. Keystone Species
    - 1.5.1.1. Description
    - 1.5.1.2. Real Examples
  - 1.5.2. Umbrella Species
    - 1.5.2.1. Description
    - 1.5.2.2. Real Examples

- 1.6. Surrogate Species II
  - 1.6.1. Flagship Species)
    - 1.6.1.1. Description
    - 1.6.1.2. Real Examples
  - 1.6.2. Indicator Species
    - 1.6.2.1. Biodiversity Status
    - 1.6.2.2. Habitat Status
    - 1.6.2.3. Population Status
- 1.7. Plant Ecology
  - 1.7.1. Plant Successions
  - 1.7.2. Animal-Plant Interaction
  - 1.7.3. Biogeography
- 1.8. Ecosystems
  - 1.8.1. Factors
- 1.9. Biological Systems and Communities
  - 1.9.1. Community
  - 1.9.2. Biomass
- 1.10. Energy Flows
  - 1.10.1. Nutrient Cycles

## Module 2. Regulatory Bases in Species Conservation

- 2.1. Convention on Biological Diversity
  - 2.1.1. Mission and Objectives
  - 2.1.2. Strategic Plan for Biological Diversity
- 2.2. Convention on International Trade in Endangered Species of Wild Fauna and Flora
  - 2.2.1. Structure and Objectives
  - 2.2.2. Appendices I, II and III
- 2.3. Ramsar Convention
  - 2.3.1. Structure and Objectives
  - 2.3.2. Designation of Ramsar Sites

- 2.4. Other International Conventions
  - 2.4.1. United Nations Convention to Combat Desertification
  - 2.4.2. Bonn Convention on the Conservation of Migratory Species
  - 2.4.3. OSPAR Convention
- 2.5. Berna Convention
  - 2.5.1. Structure and Objectives
- 2.6. South America: National Strategies for Biodiversity
  - 2.6.1. Mission and Objectives
  - 2.6.2. Main Lines of Action



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*This program will allow you to advance in your career comfortably”*

# 05 Methodology

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

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





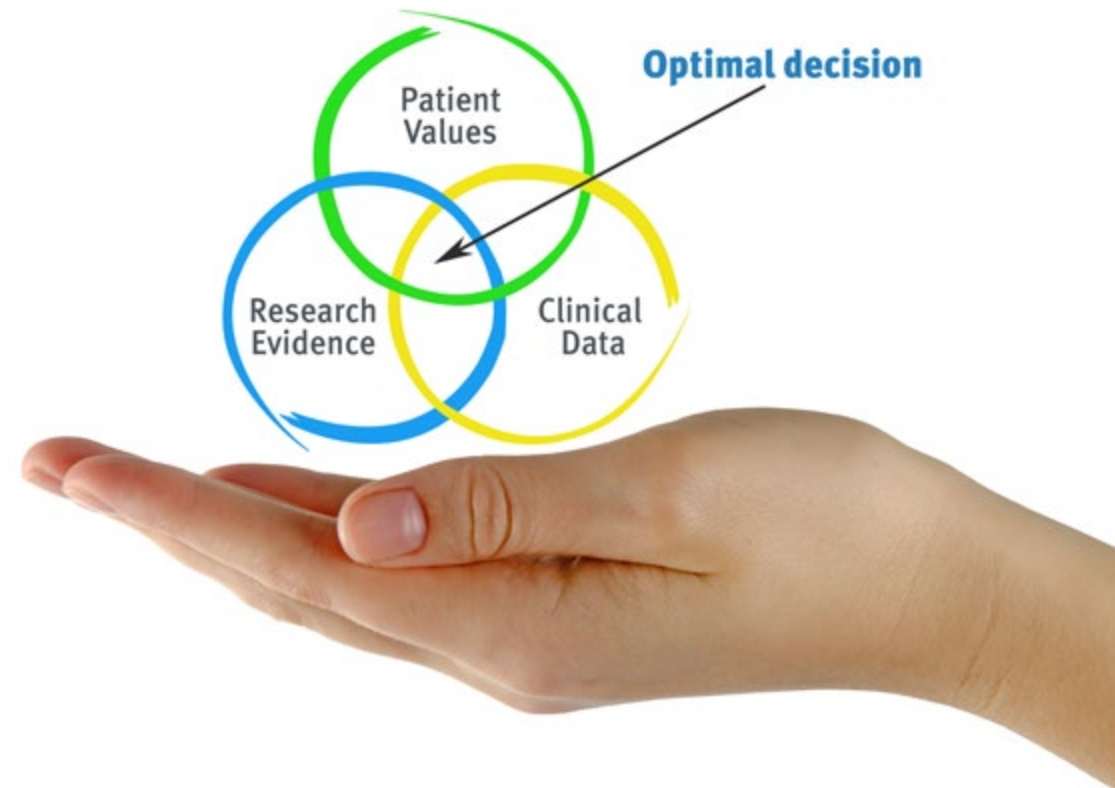
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

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

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



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



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

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

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



## Relearning Methodology

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

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



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

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

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

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

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

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



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



### Study Material

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

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



### Latest Techniques and Procedures on Video

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



### Interactive Summaries

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

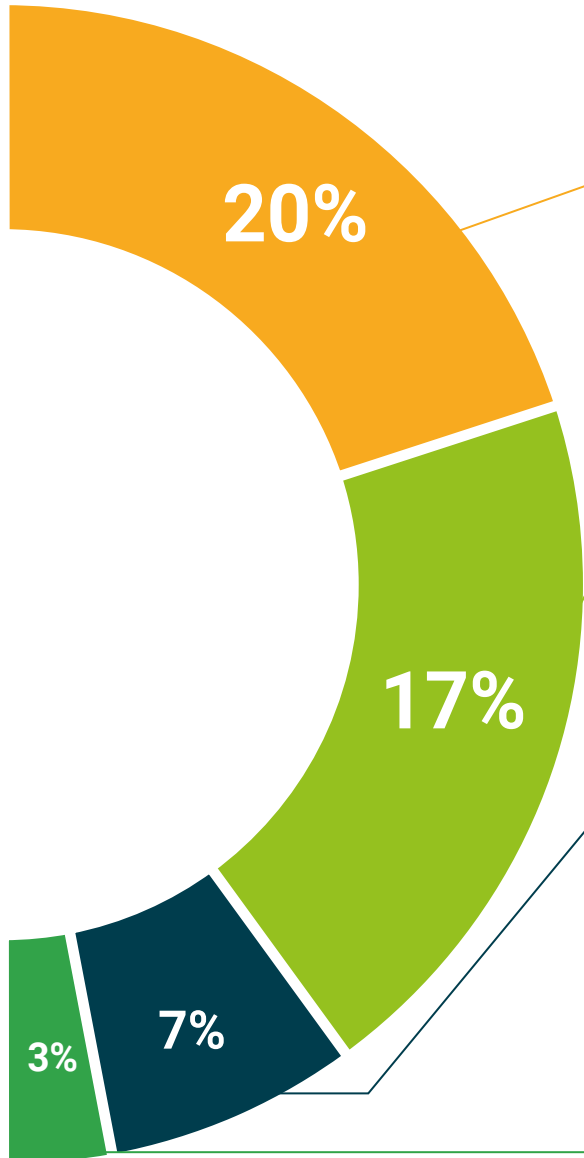
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### Additional Reading

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





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

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



#### Testing & Retesting

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



#### Classes

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

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



#### Quick Action Guides

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



# 06 Certificate

The Postgraduate Certificate in Basic Ecology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*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 Certificate in Basic Ecology** 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 Certificate in Basic Ecology**

Modality: **online**

Duration: **12 weeks**

Accreditation: **12 ECTS**



\*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.



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



## Postgraduate Certificate Basic Ecology

- » Modality: online
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