

# Postgraduate Certificate Animal Feed Additives





## Postgraduate Certificate Animal Feed Additives

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nutrition/postgraduate-certificate/animal-feed-additives](http://www.techtute.com/us/nutrition/postgraduate-certificate/animal-feed-additives)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

With an innovative format, this specialization allows nutritionist to develop autonomous learning and optimal time management, in which he will go in depth into additives in animal feed.

A unique opportunity to specialize in a booming sector with a high demand for professionals.



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*Join the elite, with this highly effective training training and open new paths to help you advance in your professional progress"*

Postgraduate Certificate course in Animal Feed Additives comprehensively analyzes the most widely used additives in animal nutrition and feeding, as well as in feed manufacturing. It establishes the main characteristics of each of them, their inclusion possibilities and recommendations regarding their use

It focuses on two major groups of additives, those aimed at safeguarding the microbiological and physicochemical quality of the feed or raw materials and those aimed at safeguarding intestinal health and/or optimizing the productive performance of the animals.

A high-value Postgraduate Certificate designed for professionals to update and perfect their technical and practical knowledge in this sector. A complete and effective Postgraduate Certificate that will propel you to highest level of competence.



*Become one of the most demanded professionals of the moment: prepare train with with our Certificate in Animal Feed Additives"*

This **Postgraduate Certificate in Animal Feed Additives** contains the most complete and up-to-date scientific program on the market. The most important features include:

- The latest technology in online teaching software
- Intensely visual teaching system, supported by graphic and schematic contents, easy to assimilate and understand
- Practical cases presented by practising experts
- State-of-the-art interactive video systems
- Teaching supported by telepractice
- Continuous updating and recycling systems
- Autonomous learning: full compatibility with other occupations
- Practical exercises for self-assessment and learning verification
- Support groups and educational synergies: questions to the expert, debate and knowledge forums
- Communication with the teacher and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection
- Supplementary documentation databases are permanently available, even after the course

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*A program that will enable you to work in Animal Nutrition and Feeding with the solvency of a high-level professional"*

TECH's teaching staff is made up of professionals from different fields related to this specialty. That way, TECH ensures to offer students the educational program and updating intended. A multidisciplinary team of professionals prepared and experienced in different environments, who will cover the theoretical knowledge in an efficient way, but, above all, will bring the practical knowledge from their own experience to the program: one of the differential qualities of this program.

This mastery of the subject matter is complemented by the effectiveness of the methodological design of Postgraduate Certificate. Developed by a multidisciplinary team of *e-learning* experts, it integrates the latest advances in educational technology. In this way, our students will be able to study with a range of convenient and versatile multimedia tools that will give them the operability they need during the program.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, telepractice will be used: with the help of an innovative system of interactive videos, and *learning from an expert* they will be able to acquire the knowledge as if they were facing the case they are learning in real time. A concept that will allow students to integrate and memorize what they have learnt in a more realistic and permanent way.

*You will have at your disposal a Virtual Campus available 24 hours a day and you will be able to download the material to consult it whenever you need it.*

*TECH seeks to project your professional career without neglecting other areas of your life, that's why it offers you a flexible and adaptable education to your needs.*



# 02 Objectives

The objective is to enable highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping medical professionals reach a much higher level of expertise and control. A goal they will easily achieve with a Postgraduate Certificate of high intensity and precision.







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*If your objective is to broaden your skills set to include new paths of success and development: this is the program for you: a training that aspires to excellence"*



## General Objectives

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- Determine the properties, use and metabolic transformations of nutrients in relation to the nutritional needs of an animal
- Provide clear and practical tools so that the professional can identify and classify the different foods that are available in the region and have better elements of judgment to make the most appropriate decision in terms of differential costs, etc
- Propose a series of technical arguments which allow for a better quality of diet and nutrition and therefore, improve the end produce (meat or milk)
- Analyze the different raw material components with both positive and negative effects on Animals. Nutrition and how animals use them for the production of animal protein
- Identify and understand the different levels of digestibility for each of the various nutritional components according to their origin
- To analyze the key aspects for the design and creation of diets (food) aimed at achieving the maximum utilization of nutrients by animals intended for animal protein production
- Provide specialized training on the nutritional requirements for the two main species of pigs to be used in animal protein production
- Develop specialized understanding of the nutritional requirements of the porcine species and the different feeding strategies needed in order to guarantee that they reach the expected welfare and production standards according to their production stage
- Provide specialized theoretical and practical knowledge on the physiology of the digestive system of ruminants
- Analyze the digestive system of ruminants and their particular way of assimilating nutrients from fiber-rich foods
- Analyze the main additive groups used in the food production industry, focused on ensuring the quality and performance of different food products
- Analyze, in a clear way, how the complete animal feed manufacturing process is developed: the phases and processes which feed undergoes to guarantee its nutritional composition, quality and safety



*A path to achieve education and professional growth that will propel you towards a greater level of competitiveness in the employment market"*



## Specific Objectives

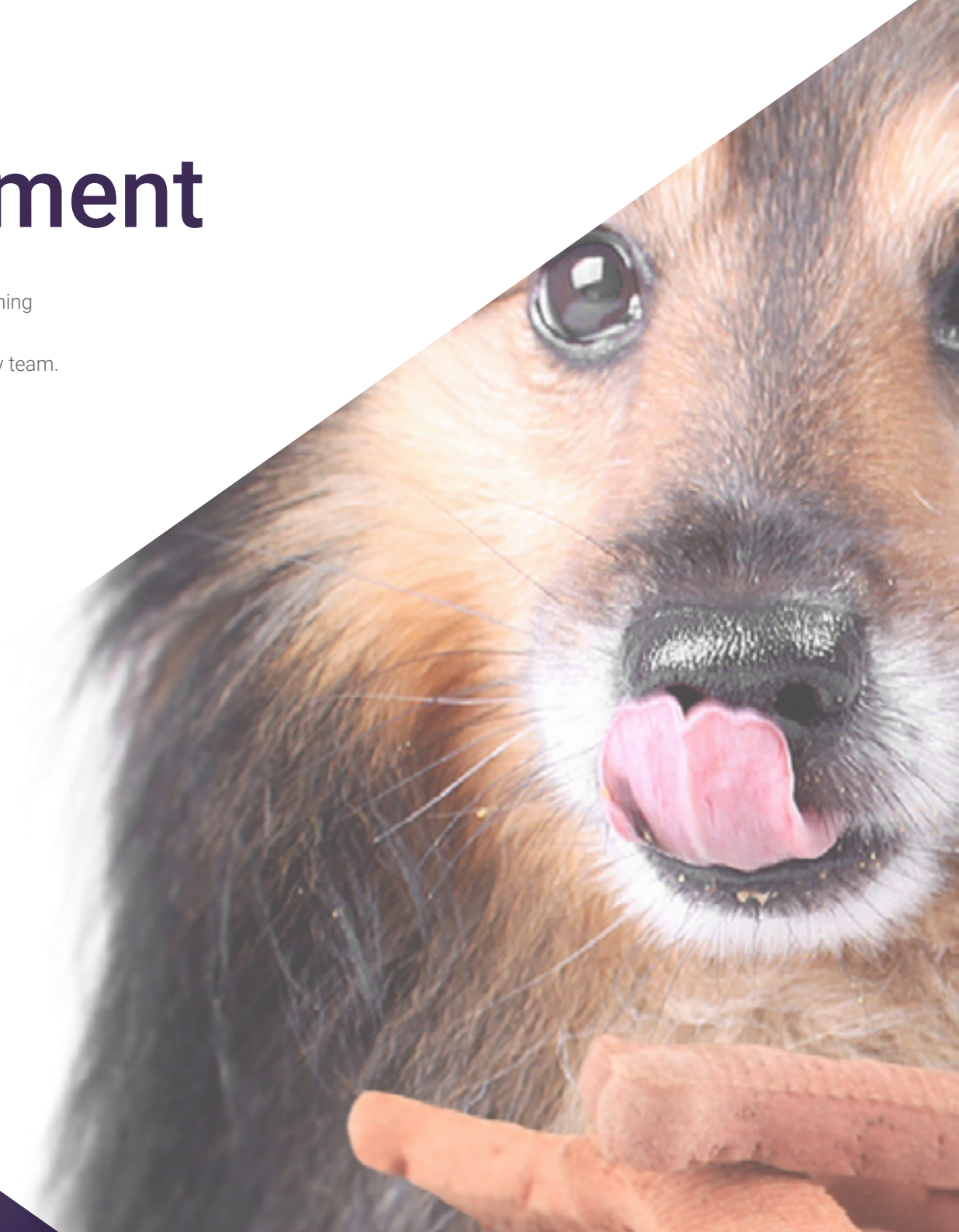
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- Analyze the different types of additives which exist in the animal feed and nutrition market
- Define the recommendations for the use and functionality of the different additive groups
- Gain up-to-date knowledge of the new technology focused on improving the quality and efficiency of animal feed
- Identify mycotoxins as the hidden enemy in diet quality, animal health and productivity; what are the strategies for their control, the different types and use of mycotoxin binders
- Specialize in the use of enzymes in balanced feed, what they are, the differences between enzymes of the same category, what they are used for and the benefits of their incorporation in the diet
- Analyze phytochemicals as a category that goes beyond essential oils; what they are, types of phytochemical substances, modes of use and benefits

03

# Course Management

Within the concept of total quality of the program, TECH is proud to offer a teaching staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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*A unique, key, and decisive  
educational experience to boost  
your professional development”*

## Management



### Dr. Cuello Ocampo, Carlos Julio

- ♦ Technical Director at Huvepharma in Latin America
- ♦ Degree in Veterinary Medicine from the National University of Colombia.
- ♦ Professional Master's Degree in Animal Production with emphasis on Monogastric Nutrition at the Universidad Nacional de Colombia.
- ♦ Postgraduate Certificate in Ration Formulation for Productive Species at the University of Applied and Environmental Sciences UDCA

## Professors

### Dr. Fernández Mayer, Anibal Enrique

- ♦ Academic Research at INTA
- ♦ Specialist and Private Advisor in Milk Production
- ♦ Technician Specialized in Animal Production at the Bordenave Agricultural Experimental Station (EEA)
- ♦ Agricultural Engineer from the University of Nacional de la Plata
- ♦ Veterinary Doctor from the La Habana Agricultural University

### Dr. Páez Bernal, Luis Ernesto

- ♦ Commercial Director at BIALTEC, a company dedicated to efficient and sustainable animal nutrition
- ♦ Doctor in Nutrition and Monogastric Production from Viçosa Federal University
- ♦ Bachelor's Degree in Veterinary from the National University of Colombia
- ♦ Master's Degree in Zootechnics from Viçosa Federal University
- ♦ Lecturer

**Dr. Sarmiento García, Ainhoa**

- ♦ Collaborative Researcher at the Faculty of Agricultural and Environmental Sciences and the Polytechnic School of Zamora
- ♦ Research Director at Entogreen
- ♦ Reviewer of scientific articles in Iranian Journal of Applied Science
- ♦ Veterinarian in charge of the nutrition department at Casaseca Livestock
- ♦ Veterinary Clinic El Parque in Zamora
- ♦ Associate Professor at the Faculty of Agricultural Sciences of the University of Salamanca
- ♦ Degree in Veterinary Medicine from the University of León.
- ♦ PhD. in Chemical Science and Technology from the University of Salamanca.
- ♦ Master's Degree in Innovation in Biomedical and Health Sciences by the University of León

**D. Ordoñez Gómez, Ciro Alberto**

- ♦ Researcher specialized in animal nutrition
- ♦ Author of the book *Glycerin and biodiesel by-products: alternative energy for poultry and swine feed*
- ♦ Lecturer in the area of animal nutrition and feeding at the Francisco de Paula Santander University
- ♦ Master's Degree in animal production at the Francisco de Paula Santander University
- ♦ Degree in Animal Husbandry from Francisco de Paula Santander University.

**Dr. Portillo Hoyos, Diana Paola**

- ♦ Zootechnician at *Dog Home* Veterinary Clinic
- ♦ Zootechnician at Productos Lácteos San Andrés
- ♦ Expert researcher in Animal Production
- ♦ Co-author of several books on veterenary
- ♦ Zootechnician at the National University of Colombia

**Dr. Rodríguez Patiño, Leonardo**

- ♦ Technical Manager at Avícola Fernandez (poultry company)
- ♦ Nutritionist at Grupo Casa Grande
- ♦ Nutritionist at Unicol
- ♦ Technical-Commercial Consultant at PREMEX
- ♦ Nutritionist at Corporación Fernández for Broilers and Pigs
- ♦ Master's Degree in Animals. Nutrition
- ♦ Zootechnician at the National University of Colombia



*An impressive teaching staff, prepared by professionals from different areas of expertise, will be your teachers during your specialization: a unique occasion not to be missed"*

04

# Structure and Content

The contents of this specialization have been developed by the different experts of this course, with a clear purpose: to ensure that students acquire each and every one of the skills necessary to become true experts in this field.

A comprehensive and well-structured program that will lead you to the highest standards of quality and success.







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*A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"*

## Module 1. Additives in Animal Food.

- 1.1. Definitions and Types of Additives Used in Animal Food
  - 1.1.1. Introduction
  - 1.1.2. Classification of Additive Substances
  - 1.1.3. Additives for Quality
  - 1.1.4. Performance Enhancing Additives
  - 1.1.5. Nutraceuticals.
- 1.2. Anticoccidials and GrowthPromoting Antibiotics
  - 1.2.1. Types of Anticoccidials
  - 1.2.2. Anticoccidials Programs.
  - 1.2.3. Growth-Promoting Antibiotics and Purposes of Use
- 1.3. Enzymes
  - 1.3.1. Phytases.
  - 1.3.2. Carbohydrases.
  - 1.3.3. Proteases.
  - 1.3.4. Mananasa Beta.
- 1.4. Antifungals and Mycotoxin Binders
  - 1.4.1. Importance of Fungal Contamination
  - 1.4.2. Types of Fungi that Contaminate Grains
  - 1.4.3. Substances with Antifungal Characteristics
  - 1.4.4. What are Mycotoxins?
  - 1.4.5. Types of Mycotoxins
  - 1.4.6. Types of Binders
- 1.5. Acidifiers and Organic Acids
  - 1.5.1. Objectives and Approaches to the Use of Acidifiers in Poultry and Swine
  - 1.5.2. Types of Acidifiers
  - 1.5.3. What are Organic Acids?
  - 1.5.4. Main Organic Acids Used
  - 1.5.5. Mechanisms of action
  - 1.5.6. Technological Characteristics of Acidifiers



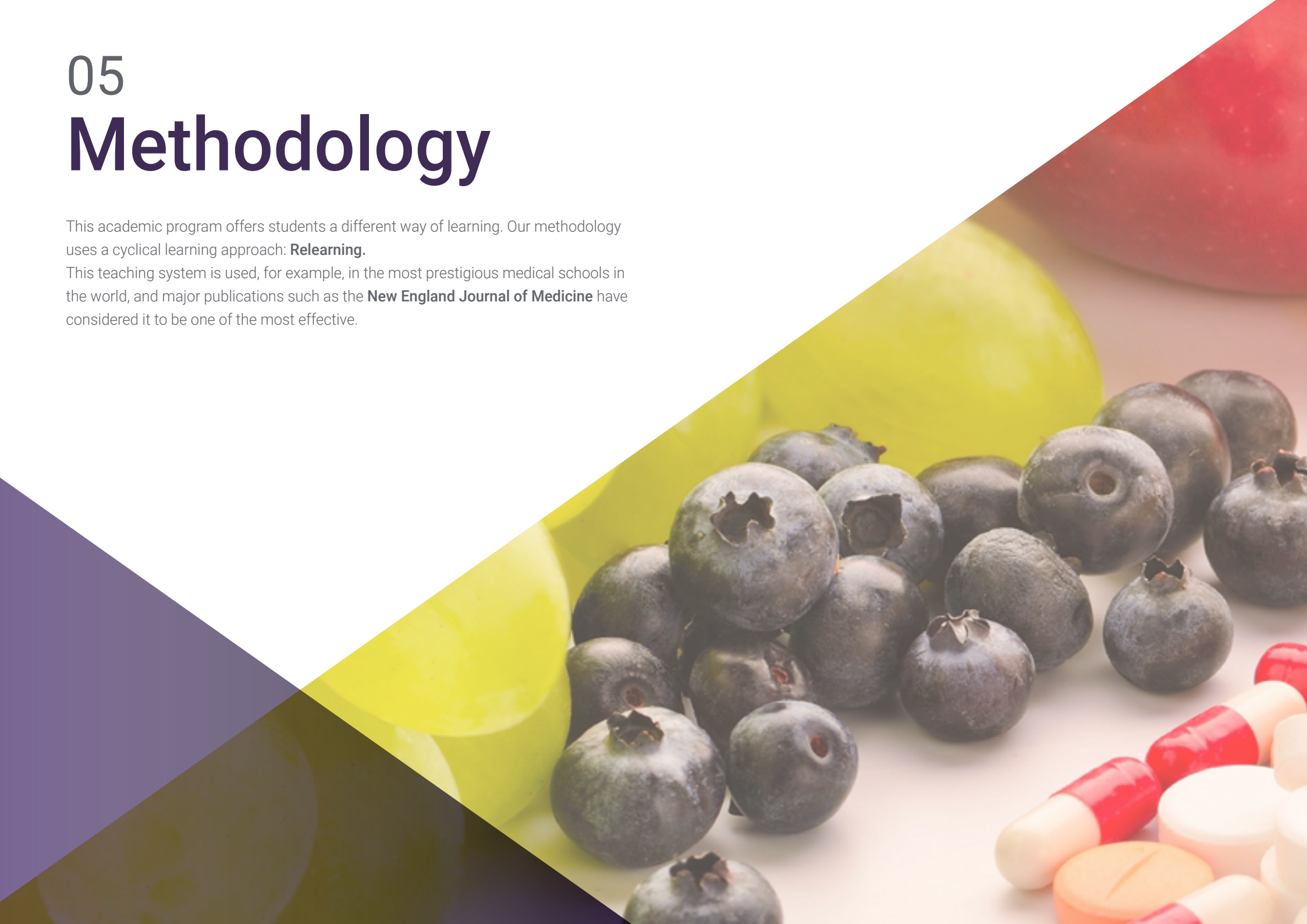


- 1.6. Antioxidants and Pigmenting Agents
  - 1.6.1. Importance of Antioxidantes in Balanced Foods and Veterinary Nutrition.
  - 1.6.2. Natural and Synthetic Anitoxidants
  - 1.6.3. How Antioxidants Work?
  - 1.6.4. Pigmentation in the Egg and the Chicken
  - 1.6.5. Pigment Sources
- 1.7. Probiotics, Prebiotics, and Symbiotics
  - 1.7.1. Differences between Probiotics, Prebiotics, and Symbiotics
  - 1.7.2. Types of Probiotics and Prebiotics
  - 1.7.3. Approaches and Strategies of Use
  - 1.7.4. Benefits of Poultry and Pig Farming
- 1.8. Odor Control Products
  - 1.8.1. Air Quality and Ammonia Control in Poultry Farming
  - 1.8.2. Yucca Shidigera
  - 1.8.3. Odour Controls in Pig Farming
- 1.9. PhytoGENICS.
  - 1.9.1. What are PhytoGENIC Substances?
  - 1.9.2. Types of PhytoGENIC Substances
  - 1.9.3. Procurement Processes
  - 1.9.4. Mechanisms of action
  - 1.9.5. Essential Oils.
  - 1.9.6. Flavonoids
  - 1.9.7. Pungent Substances, Saponins, Tannins and Alkaloids
- 1.10. Bacteriophages and Other New Technologies
  - 1.10.1. What are Bacteriophages?
  - 1.10.2. Recommendations for Use.
  - 1.10.3. Proteins and Bioactive Peptides.
  - 1.10.4. Egg Immunoglobulins.
  - 1.10.5. Additives for the Correction of Process Losses

# 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.





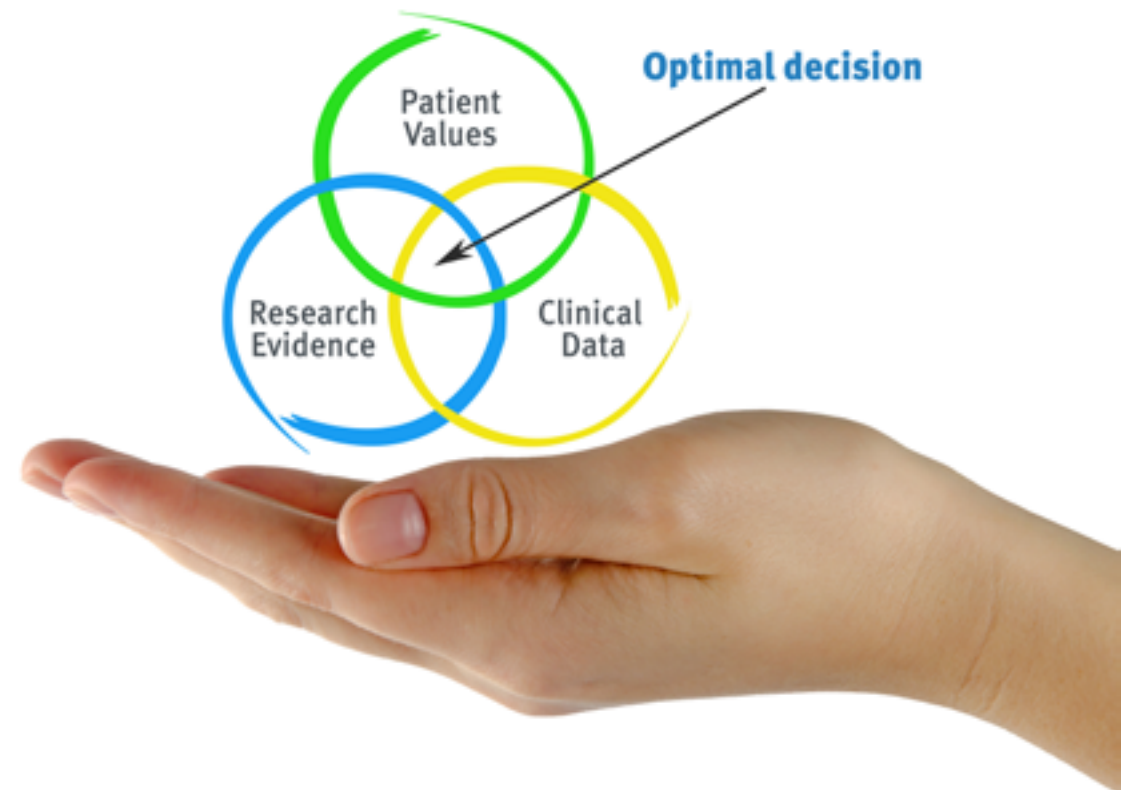
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately 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, nutritionists 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 power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional nutritional 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. Nutritionists 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. Learning is solidly translated into practical skills that allow the nutritionist to better integrate knowledge into clinical practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## 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.

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





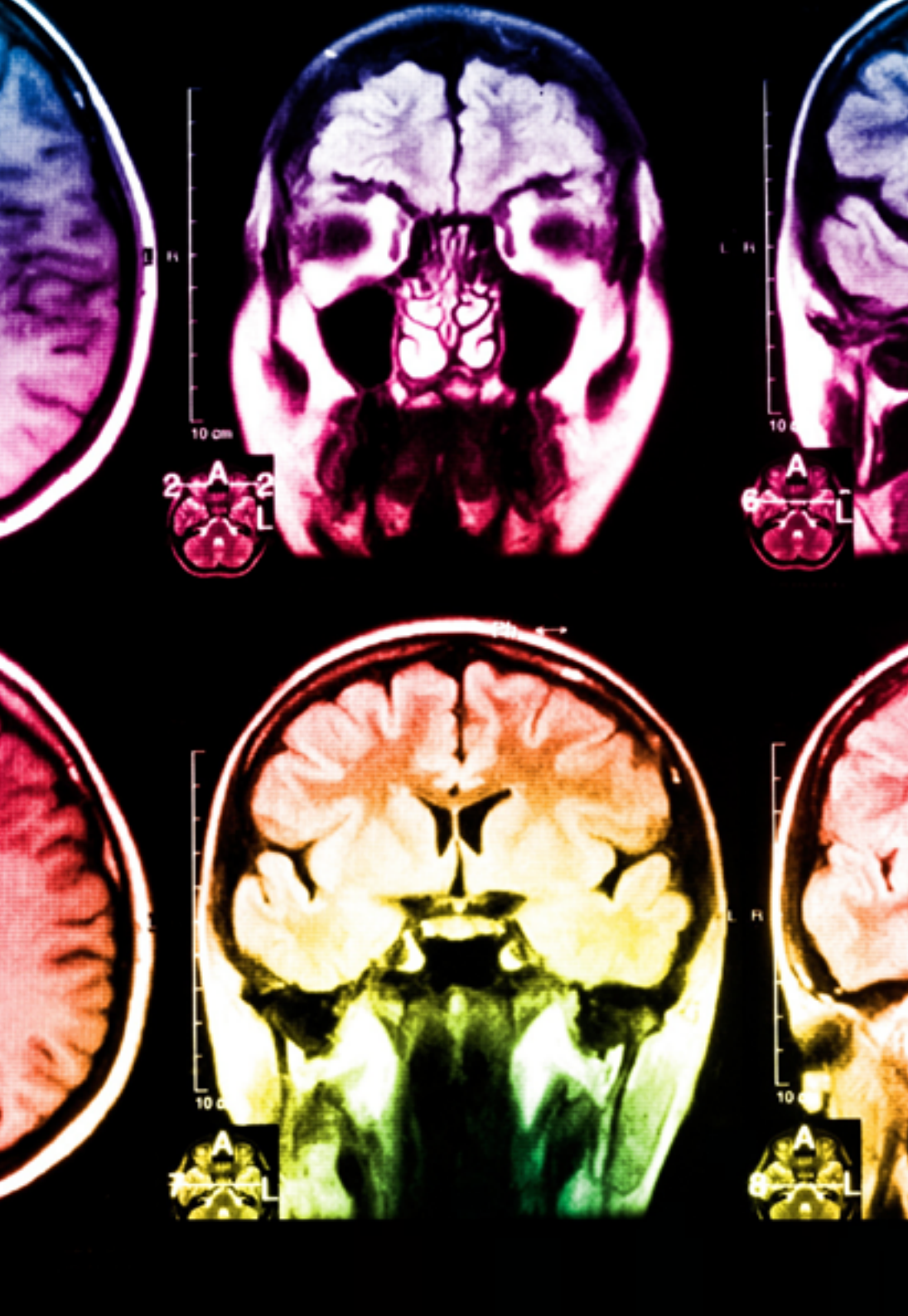
At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 45,000 nutritionists have been trained 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.

*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.



### Nutrition Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. 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 Animal Feed Additives 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 Animal Feed Additives** 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 Animal Feed Additives**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present quality

online training

development languages

virtual classroom

**tech** global  
university

**Postgraduate Certificate**

Animal Feed Additives

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
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# Postgraduate Certificate

## Animal Feed Additives

