

Postgraduate Certificate

Food Development and Innovation



Postgraduate Certificate

Food Development and Innovation

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

Website: www.techtute.com/us/nutrition/postgraduate-certificate/food-development-innovation

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01

Introduction

The design, development and innovation sectors are booming, so nutritionists must have the knowledge to successfully take on challenges in the profession and keep with the forefront of the industry. In this sense, the development of new foods is constantly evolving thanks to technological advances, but every process must be well understood for all health guarantees to be met. Take advantage of the opportunity and acquire solid knowledge in this field that will allow you to become a successful professional.





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*This is a great opportunity to grow
and consolidate yourself as a
prestigious nutritionist”*

This program presents R&D&I systems in the development of new foods in different sectors of the food industry that require new technologies, new processes and food safety systems that are increasingly specific and adapted to the features of new foods.

This is a field of growing interest in food technology, such as the production and use of new ingredients obtained from diverse sources.

This training analyzes current research and development systems in the design and use of new ingredients, with special emphasis on the importance of guaranteeing food safety.

The program in Food Development and Innovation at TECH Global University is the most complete academic specialization available today because it is aimed at the integral management of food safety.

The professors on the program are experts in food legislation and regulations in quality and safety, process and methodology validation, digitalization of quality management, research and development of new foods and, finally, the coordination and execution of R&D&I projects.

It is an educational project committed to educating highly qualified professionals. A program designed by professionals specialized in each specific subject who face new challenges every day.

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

- ◆ Case studies presented by experts in food safety in the area of nutrition
- ◆ 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
- ◆ The latest news on Food Development and Innovation
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative methodologies in Food Development and Innovation
- ◆ 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



TECH offers you the best syllabus, professional specialists in the field and the latest educational technology with a single objective: Elevate you to success in your daily practice"

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This Postgraduate Certificate is the best investment you can make when choosing a refresher program to update your existing knowledge of Food development and Innovation”

Its teaching staff includes professionals who belong to the field of food safety in the area of nutrition, and who bring to this training program the experience of their work, as well as recognized 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 an immersive program designed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. To that end, professionals will be assisted by a novel interactive video system developed by renowned and extensively experienced experts in Food Development and Innovation.

This program comes with the best educational material, providing you with a contextual approach that will facilitate your learning.

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



02 Objectives

The Postgraduate Certificate in Food Development and Innovation is aimed at facilitating professional performance based on the latest advances in the sector. All this, in an exclusively practical way, by means of the most complete theoretical and practical contents of the industry. Likewise, during the course of the program, professionals will address the main interventions specialists conduct in food safety. This allows you to improve and enhance your skills in this regard, with the assurance that you are performing the protocols in the most effective and safe way possible.



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All TECH's specialization programs have a single objective: To elevate your performance and help you grow and consolidate yourself professionally”



General Objectives

- ◆ Establish R&D&I systems that enable the development of new foods and ingredients, especially in food safety issues, so that they can address research, development and innovation in this field
- ◆ Develop knowledge that provides a basis or opportunity for the development and/or application of ideas, in a research context, including reflections on the responsibilities linked to the application of their developments

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Update your knowledge with this program in Food Development and Innovation”





Specific Objectives

- ◆ Establish new trends in food technologies that give rise to the development of a line of research and implementation of new products in the market
- ◆ Establish the fundamentals of the most innovative technologies that require research and development work to understand their potential for use in the production of new foods and ingredients
- ◆ Design research and development protocols for the incorporation of functional ingredients to a base food, taking into account its techno-functional properties, as well as the technological process involved in its elaboration
- ◆ Compile new trends in food technologies that will lead to the development of a line of research and implementation of new products in the market
- ◆ Apply research and development methodologies to evaluate the functionality, bioavailability and bioaccessibility of novel foods and ingredients

03

Course Management

The teaching staff on the program includes leading experts in food safety in the area of nutrition, who pour into this training program the experience of their work. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner. All this, in an exclusively practical way, by means of the most complete theoretical and practical contents of the sector. Likewise, during the course of the Postgraduate Certificate, professionals will address the main interventions specialists conduct in food safety. This will allow them to improve and enhance their skills in this regard, with the certainty of performing the protocols as effectively and safely as possible.





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Our team of teachers, specialists in food safety, will help you achieve success in your profession"

International Guest Director

Widely specialized in Food Safety, John Donaghy is a leading Microbiologist with an extensive professional experience of more than 20 years. His comprehensive knowledge on subjects such as foodborne pathogens, risk assessment and molecular diagnostics has led him to be part of international reference institutions such as Nestlé or the Department of Agriculture Scientific Services of Northern Ireland.

Among his main tasks, he has been in charge of operational aspects related to food safety microbiology, including hazard analysis and critical control points. He has also developed multiple prerequisite programs, as well as bacteriological specifications to ensure hygienic environments at the same time as safe for optimal food production.

His strong commitment to providing first class services has led him to combine his management work with scientific research. In this sense, he has an extensive academic production, consisting of more than 50 comprehensive articles on topics such as the impact of Big Data in the dynamic management of food safety risk, microbiological aspects of dairy ingredients, detection of ferulic acid esterase by *Bacillus subtilis*, extraction of pectin from citrus peels by polygalaturonase produced in serum or the production of proteolytic enzymes by *Lysobacter gummosus*.

On the other hand, he is a regular speaker at conferences and forums worldwide, where he discusses the most innovative molecular analysis methodologies to detect pathogens and the techniques for implementing systems of excellence in the manufacture of foodstuffs. In this way, he helps professionals stay at the forefront of these fields while driving significant advances in the understanding of Quality Control. In addition, it sponsors internal research and development projects to improve the microbiological safety of foods.



Dr. Donaghy, Jhon

- Global Head of Food Safety, Nestlé, Lausanne, Switzerland
- Project Leader in Food Safety Microbiology, Institute of Agri-Food and Biological Sciences, Northern Ireland
- Senior Scientific Advisor at the Department of Agriculture Scientific Services, Northern Ireland
- Consultant on various initiatives funded by the Food Safety Authority of the Government of Ireland and the European Union
- Doctorate in Science, Biochemistry, University of Ulster
- Member of the International Commission on Microbiological Specifications for Foods

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

Management



Dr. Limón Garduza, Rocío Ivonne

- ♦ PhD in Agricultural Chemistry and Bromatology (Autonomous University of Madrid)
- ♦ Master's Degree in Food Biotechnology (MBTA) (University of Oviedo)
- ♦ Food Engineer, Bachelor's Degree in Food Science, and Technology (CYTA)
- ♦ Expert in Food Quality Management ISO 22000
- ♦ Specialist in Food Quality and Safety, Mercamadrid Training Center (CFM)



Professors

Dr. Rendueles de la Vega, Manuel

- ◆ D. in Chemical Engineering, Professor of Chemical Engineering (University of Oviedo)
- ◆ Coordinator of the Master's Degree in Food Biotechnology at the University of Oviedo since 2013
- ◆ Principal investigator in three projects of the National R&D Plan. Since 2004

04

Structure and Content

The content structure has been designed by the best professionals in the 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 food safety. This team, aware of the relevance of training in this area, has designed the most complete and up-to-date compendium of contents and practical activities in the sector with the aim of providing nutritionists with the tools they need to carry out their daily practice successfully.





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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. R&D&I of Novel Foods and Ingredients

- 1.1. New Trends in Food Product Processing
 - 1.1.1. Design of Functional Foods aimed at Improving Specific Physiological Functions
 - 1.1.2. Innovation and New Trends in the Design of Functional Foods and Nutraceuticals
- 1.2. Technologies and Tools for Isolation, Enrichment, and Purification of Functional Ingredients from Different Starting Materials
 - 1.2.1. Chemical Properties
 - 1.2.2. Sensory Properties
- 1.3. Procedures and Equipment for the Incorporation of Functional Ingredients into the Base Feed
 - 1.3.1. Formulation of Functional Foods according to Their Chemical and Sensory Properties, Caloric Value, etc.
 - 1.3.2. Stabilization of Bioactive Ingredients from Formulation
 - 1.3.3. Dosage
- 1.4. Gastronomy Research
 - 1.4.1. Texture
 - 1.4.2. Viscosity and Flavor. Thickeners Used in Nouvelle Cuisine
 - 1.4.3. Gelling Agents
 - 1.4.4. Emulsions
- 1.5. Innovation and New Trends in the Design of Functional Foods and Nutraceuticals
 - 1.5.1. Design of Functional Foods Aimed at Improving Specific Physiological Functions
 - 1.5.2. Practical Applications of Functional Food Design
- 1.6. Specific Formulation of Bioactive Compounds
 - 1.6.1. Flavonoid Transformation in the Formulation of Functional Foods
 - 1.6.2. Bioavailability Studies of Phenolic Compounds
 - 1.6.3. Antioxidants in the Formulation of Functional Foods
 - 1.6.4. Preservation of Antioxidant Stability in Functional Food Design
- 1.7. Design of Low-Sugar and Low-Fat Products
 - 1.7.1. Development of Low-Sugar Products
 - 1.7.2. Low fat Products
 - 1.7.3. Strategies for the Synthesis of Structured Lipids





- 1.8. Processes for the Development of New Food Ingredients
 - 1.8.1. Advanced Processes to Obtain Food Ingredients with Industrial Application: Micronization and Microencapsulation Technologies
 - 1.8.2. Supercritical and Clean Technologies
 - 1.8.3. Enzymatic Technology for the Production of Novel Food Ingredients
 - 1.8.4. Biotechnological Production of Novel Food Ingredients
- 1.9. New Food Ingredients of Plant and Animal Origin
 - 1.9.1. Trends in R&D&I Developments in New Ingredients
 - 1.9.2. Applications of Plant-Based Ingredients
 - 1.9.3. Applications of Ingredients of Animal Origin
- 1.10. Research and Improvement of Labeling and Preservation Systems
 - 1.10.1. Labeling Requirements
 - 1.10.2. New Conservation Systems
 - 1.10.3. Validation of Health Claims

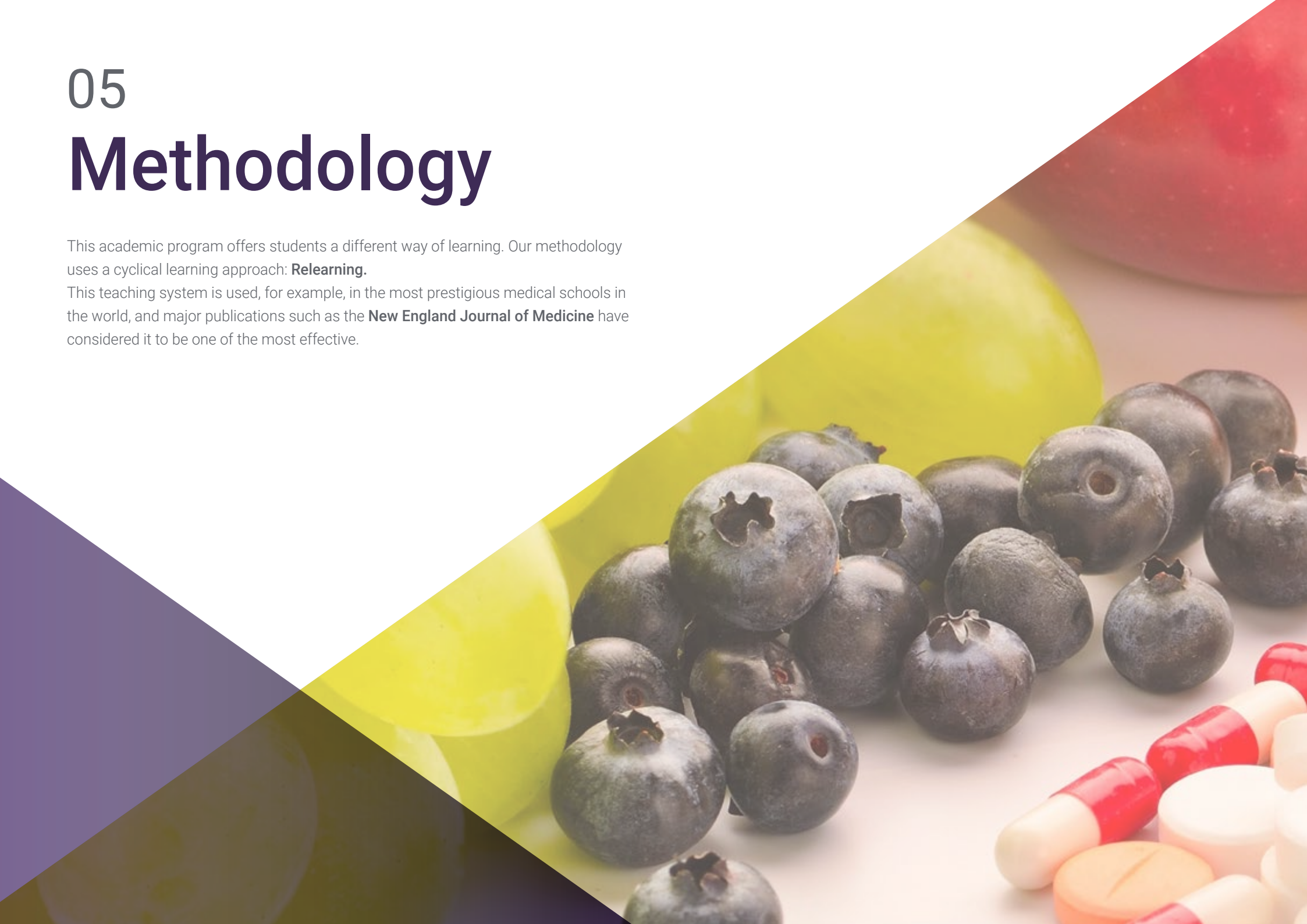
“ *This program will allow you to advance in your career comfortably* ”

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

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.

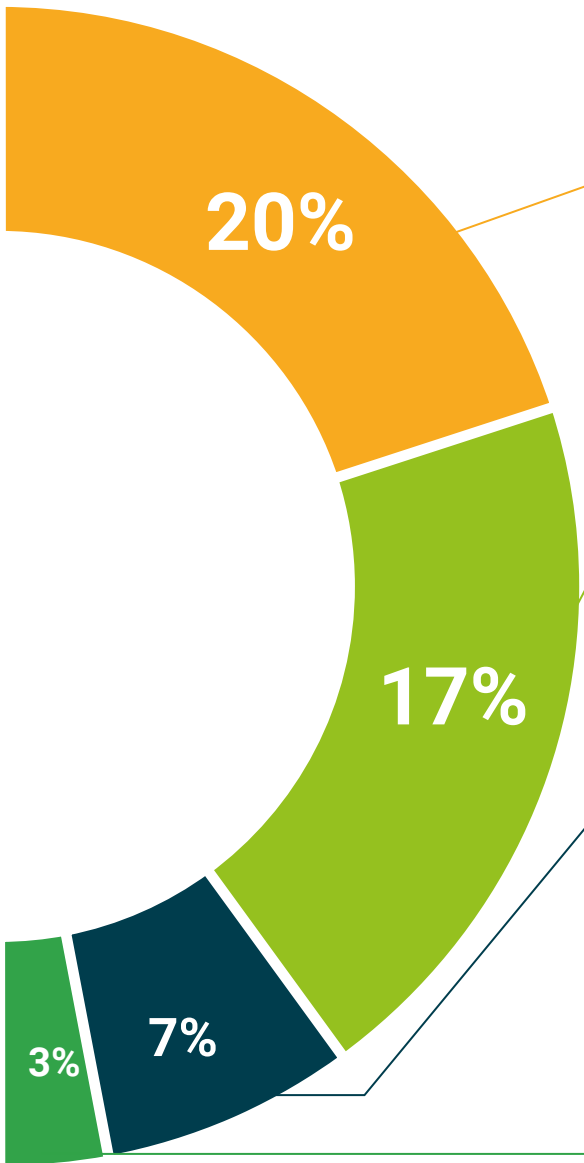
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 Food Development and Innovation 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 Food Development and Innovation** 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 Food Development and Innovation**

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
development language
virtual classroom



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