

Postgraduate Certificate

R&D&I Project Execution in Food
Quality and Safety





Postgraduate Certificate

R&D&I Project Execution in Food Quality and Safety

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

Website: www.techtute.com/us/nutrition/postgraduate-certificate/rdi-project-execution-food-quality-safety

Index

01

Introduction

p. 4

02

Objectives

p. 8

03

Course Management

p. 12

04

Structure and Content

p. 18

05

Methodology

p. 24

06

Certificate

p. 32

01

Introduction

Development, growth and innovation in the food industry is booming, so nutrition professionals must become familiar with all these new processes as a means to better meet new challenges in the profession. There are more and more new products and foods available to help people lead healthier lives, but for all the quality and safety guarantees to be met, the processes involved must be well known. Nutritionists must take advantage of the opportunity and acquire a solid body of knowledge in the field that will allow them to become successful professionals.





“

Do not miss this great opportunity and become a nutritionist capable of executing quality and food safety projects with this TECH Postgraduate Certificate”

The program in Project Execution in Food Quality and Safety at TECH Global University is the most complete academic program available today on account of its focus on comprehensive food safety management.

Food legislation is a highly relevant aspect prior to the commercialization of any product derived from the food industry. Therefore, the program offers students a broad body of knowledge of current regulations in food quality and safety, both national and international. Throughout the training, students will be introduced to legal instruments required to legislate in the food industry, applicable to both natural and processed products.

As a result, they will gain in-depth knowledge of Food Legislation and the applicable standardization in food matters, including the legislative structure, so as to apply and advise in different companies in the industry.

This Postgraduate Certificate also covers R&D project development and implementation in the food industry. It defines the economic support systems used in projects, legal constraints and, especially, operational methodology in terms of planning, resource availability, control and monitoring.

The adaptation to project work in the food environment is of great importance to carry out innovation, the development of new products or the improvement of food safety conditions and the use of food products and ingredients used.

This Postgraduate Certificate is taught by university professors and professionals from various disciplines in primary production, the use of analytical and instrumental techniques for quality control, the prevention of accidental and intentional contamination and fraud, food safety/food integrity and traceability (food defence and food fraud/food authenticity). They are experts in food legislation and regulations on quality and safety, validation of methodologies and processes, digitalization of quality management, new foods research and development and, finally, coordinating and executing R&D&I projects.

This **Postgraduate Certificate in R&D&I Project Execution in Food Quality and Safety** 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 practice
- The latest news on R&D&I Project Execution in Food Quality and Safety
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies in R&D&I Project Execution in Food Quality and Safety
- 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



This is a perfect opportunity to advance your career and establish yourself as a prestigious nutritionist”

“

This Postgraduate Certificate is the best investment you can make when selecting a refresher program to update your knowledge of R&D&I Project Execution in Food Quality and Safety”

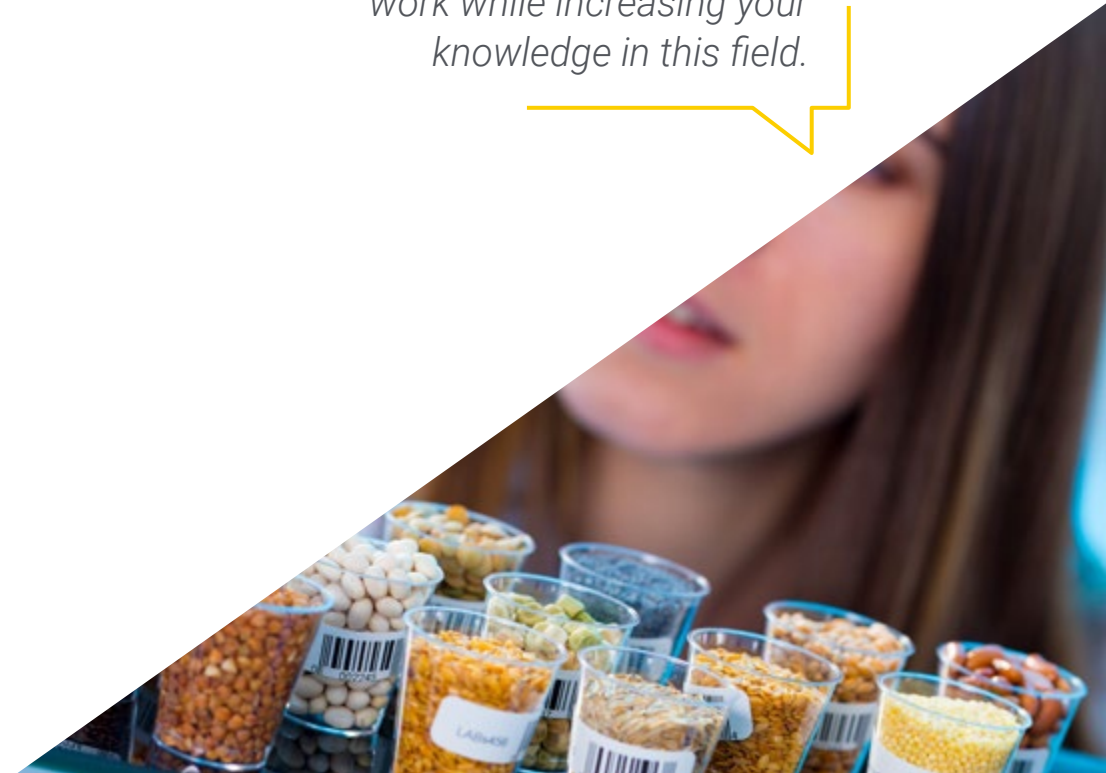
The teaching staff includes professionals who belong to the area of food safety in the area of nutrition, and who bring to this training program the experience of their work, as well as recognized specialists from leading societies and prestigious universities.

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 immersive specialization programmed 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 created by recognized and extensively experienced experts in R&D&I Project Execution in Food Quality and Safety.

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 program in R&D&I Project Execution in Food Quality and Safety is designed to facilitate professional performance based on the latest and most innovative advances in the industry. All this, in an exclusively practical way, by means of the most complete theoretical and practical contents in the sector. Likewise, during the course of this 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 as safely as possible.





“

This is the best option to learn about the latest advances in R&D&I Project Execution in Food Quality and Safety”



General Objectives

- Analyze the principles of international food legislation and evolution to present day
- Analyze the competencies in food legislation to develop the corresponding functions in the food industry
- Evaluating food industry procedures and mechanisms of action
- Develop the basis for applying legislation to the development of food industry products
- Determine the functioning of R&D&I systems in the field of new product and process development in the food environment
- Analyze the R&D&I system and the use of tools for planning, management, evaluation, protection of results and dissemination of food R&D&I
- Gain knowledge to provide a basis or opportunity to develop and/or apply ideas in a research context, including reflections on the responsibilities involved

“

Highly specialized objectives in a program created to train the best professionals in Nutrition”





Specific Objectives

- Define the fundamentals of food legislation
- Describe and develop the main international and European organizations in the field of food safety, as well as determine their competencies
- Analyze the food safety policy in the European frameworks
- Describe the principles, requirements and measures of food legislation
- Explain the European legislative framework regulating the food industry
- Identify and define the responsibility of the participants in the food chain.
- Classify the types of liability and offenses in the field of food safety
- Establish R&D&I systems that enable the development of novel foods and ingredients especially in food safety issues, so that they can address research, development and innovation in the field of novel foods and ingredients
- Compile the sources of financing for R&D&I activities in the development of new food products that allow different innovation strategies in the food industry to be addressed
- Analyze the forms of access to public and private sources of information in the scientific-technical, economic and legal fields for the planning of an R&D&I project
- Develop methodologies for project planning and management, control reporting and monitoring of results
- Evaluate the technology transfer systems that allow the transfer of R&D&I results to the productive environment
- Analyze the implementation of projects once their documentation stage has been completed

03

Course Management

The program includes in its teaching staff leading experts in food safety in the area of nutrition, who pour into this 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, with the aim of specializing the nutritionist and providing him/her with the necessary academic tools to practice in this area with greater guarantees of success. 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.



“

*Our teaching team, specialists in Food Safety,
will help you succeed professionally”*

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

“

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. Colina Coca, Clara

- Doctorate in Nutrition, Food Science and Technology
- Master's Degree in Food Quality and Safety: APPCC Systems
- Postgraduate in Sports Nutrition
- Collaborating professor at the UOC. Since 2018

Dr. Martínez López, Sara

- D. in Pharmacy (Universidad Complutense de Madrid)
- Degree in Chemistry (University of Murcia)
- Assistant Professor of Nutrition and Food Technology at the European University of Madrid
- Researcher in the research group "Microbiota, Food and Health". European University of Madrid

Dr. Rendueles de la Vega, Manuel

- Doctor in Chemical Engineering, Professor of Chemical Engineering (University of Oviedo)
- Coordinator of the Master 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.





“

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. Food Legislation and Quality and Safety Regulations

- 1.1. Introduction
- 1.2. International Food Legislation. International Organizations
 - 1.2.1. Food and Agriculture Organization of the United Nations (FAO)
 - 1.2.2. World Health Organisation (WHO)
 - 1.2.3. Codex Alimentarius Commission
 - 1.2.4. World Trade Organization
- 1.3. European Food Legislation
 - 1.3.1. European Food Legislation
 - 1.3.2. White Paper on Food Safety
 - 1.3.3. Principles of Food Legislation
 - 1.3.4. General Requirements of Food Legislation
 - 1.3.5. Procedures
 - 1.3.6. European Food Safety Authority (EFSA)
- 1.4. Food Safety Management in the company
 - 1.4.1. Responsibilities
 - 1.4.2. Authorization
 - 1.4.3. Certifications
- 1.5. Horizontal Food Legislation Part 1
 - 1.5.1. General Hygiene Regulations
 - 1.5.2. Water for Public Consumption
 - 1.5.3. Official Control of Foodstuffs
- 1.6. Horizontal Food Legislation Part 2
 - 1.6.1. Storage, Preservation and Transportation
 - 1.6.2. Materials in Contact with Food
 - 1.6.3. Food Additives and Flavorings
 - 1.6.4. Contaminants in Food





- 1.7. Vertical Food Legislation: Products of Plant Origin
 - 1.7.1. Vegetables and By-Products
 - 1.7.2. Fruits and Derivatives
 - 1.7.3. Cereals
 - 1.7.4. Legumes
 - 1.7.5. Edible Vegetable Oils
 - 1.7.6. Edible Fats
 - 1.7.7. Seasonings and Spices
- 1.8. Vertical Food Legislation: Animal Products
 - 1.8.1. Meat and Meat Derivatives
 - 1.8.2. Fish Products
 - 1.8.3. Milk and Dairy Products
 - 1.8.4. Eggs and Egg Products
- 1.9. Vertical Food Legislation: Other Products
 - 1.9.1. Stimulant Foods and Derivatives
 - 1.9.2. Beverages
 - 1.9.3. Prepared Dishes

Module 2. Development, Coordination and Execution of R&D&I Projects

- 2.1. Innovation and Competitiveness in the Food Industry
 - 2.1.1. Analysis of the Food Sector
 - 2.1.2. Innovation in Processes, Products and Management
 - 2.1.3. Regulatory Conditions for the Marketing of Novel Foods
- 2.2. The R&D System
 - 2.2.1. Public Investigation and Private Investigation
 - 2.2.2. Regional and Local Business Support Plans
 - 2.2.3. National R&D&I Plans
 - 2.2.4. International Programs
 - 2.2.5. Research Promotion Agencies
- 2.3. R+D+I Projects
 - 2.3.1. R&D&I Aid Programs
 - 2.3.2. Types of Projects
 - 2.3.3. Types of Financing
 - 2.3.4. Project Evaluation, Monitoring and Control
- 2.4. Scientific and Technological Production
 - 2.4.1. Publication, Dissemination and Diffusion of Research Results
 - 2.4.2. Basic Research/Applied Research
 - 2.4.3. Private Sources of Information
- 2.5. Technology Transfer
 - 2.5.1. Protection of Industrial Property. Patents
 - 2.5.2. Regulatory Constraints on Transfers in the Food Sector
 - 2.5.3. European Food Safety Authority (EFSA)
 - 2.5.4. Food and Drug Administration (FDA)
 - 2.5.5. National Organizations. Example: Spanish Agency for Food Safety and Nutrition (AESAN)





- 2.6. Planning of R&D&I Projects
 - 2.6.1. Work Decomposition Scheme
 - 2.6.2. Resource Allocation
 - 2.6.3. Priority of Tasks
 - 2.6.4. Gantt Chart Method
 - 2.6.5. Digitally Supported Planning Methods and Systems
- 2.7. Documentary Development of R&D&I Projects
 - 2.7.1. Prior Studies
 - 2.7.2. Delivery of Progress Reports
 - 2.7.3. Development of the Project Report
- 2.8. Project Execution
 - 2.8.1. Checklist
 - 2.8.2. Deliverables
 - 2.8.3. Project Progress Control
- 2.9. Project Delivery and Validation
 - 2.9.1. ISO Standards for the Management of R&D&I Projects
 - 2.9.2. Completion of the Project Phase
 - 2.9.3. Analysis of Results and Feasibility
- 2.10. Implementation of R&D&I Projects Developed by the Company
 - 2.10.1. Purchase Management
 - 2.10.2. Supplier Validation
 - 2.10.3. Project Validation and Verification

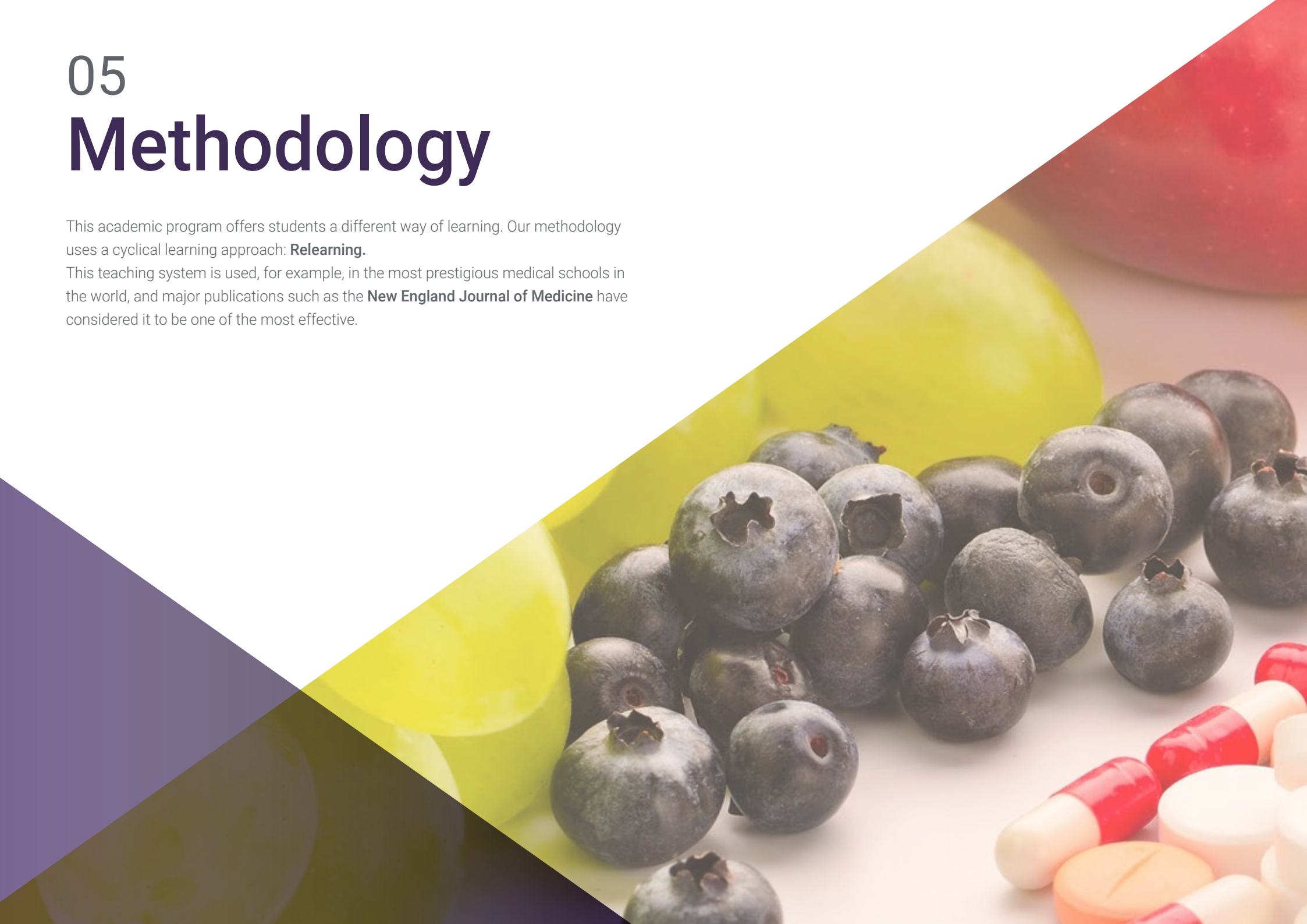
“ *This program will allow you to advance in your career comfortably*”

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.





“

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.

“

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

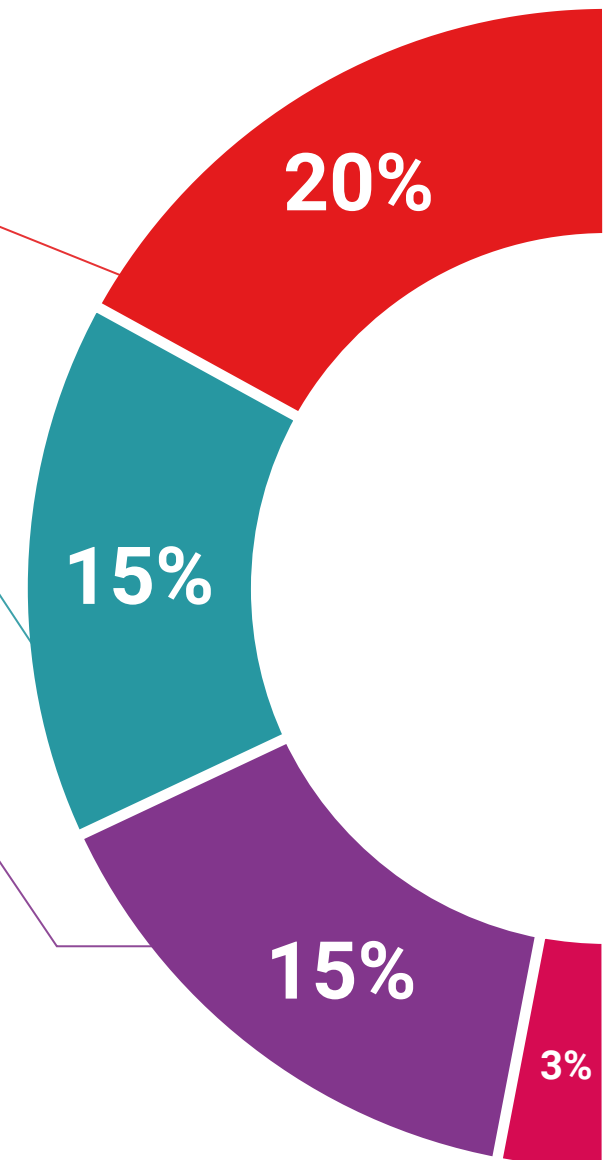
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

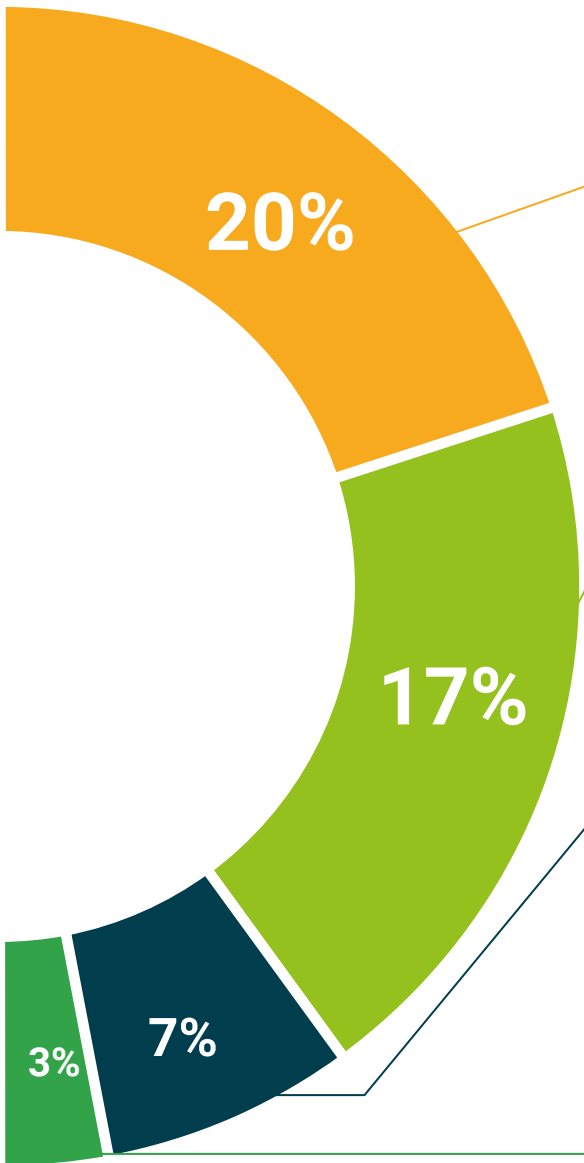
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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 R&D&I Project Execution in Food Quality and Safety guarantees students, in addition to the most rigorous and up-to-date education, access to a certificate 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 Certificate in R&D&I Project Execution in Food Quality and Safety** 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 R&D&I Project Execution in Food Quality and Safety**

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.



Postgraduate Certificate
R&D&I Project Execution
in Food Quality and Safety

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

Postgraduate Certificate

R&D&I Project Execution in Food
Quality and Safety

