

# Postgraduate Certificate

## Quality Management System Digitization in the Food Industry





## Postgraduate Certificate

### Quality Management System Digitization in the Food Industry

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/pk/nutrition/postgraduate-certificate/quality-management-system-digitalization-food-industry](http://www.techtute.com/pk/nutrition/postgraduate-certificate/quality-management-system-digitalization-food-industry)

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# 01

# Introduction

Nutrition professionals will find in this program the skills they need to understand digitization processes in the food industry and how they improve food safety. Digitization can lead to an improvement in food safety and quality management systems, and it is currently being implemented. So, it is fundamental to expand one's knowledge of this process for the future of the industry. This program will emphasize basic knowledge of traditional methods in quality systems management in the food industry and the advantages of using a commercial software or different internal computer tools to increase the efficiency of programs such as hazard analysis and critical control points (HACCP).





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*By means of specific cases, nutrition professionals will understand the improvement derived from digitalizing quality management systems in the food industry and the future prospects it entails, boosting their career further”*

This Postgraduate Certificate describes the importance of the application of digital media and platforms in quality management systems in the food industry, with special emphasis on migration strategies from traditional to the digital systems.

For a proper understanding of these issues, the current definitions of food quality and safety standards are discussed. In addition, it describes the impact of digital platforms on the performance of the main international regulatory bodies.

The program will emphasize basic knowledge of traditional methods in quality systems management in the food industry and the advantages of using commercial software or different in-house computer tools to increase the efficiency of programs such as Hazard Analysis and Critical Control Point (HACCP). It will present examples of formats for documenting prerequisite program protocols (PPR), permits, traceability formats, control logs, and audit documents, among others.

Finally, it analyzes case studies where digitization has improved quality management systems in the food industry to discuss the importance of digital platforms and future trends for food safety and quality management systems.

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. All this is necessary to achieve complete and specialized knowledge, highly demanded by professionals in the food sector.

This **Postgraduate Certificate in Quality Management System Digitization in the Food Industry** contains the most complete and up-to-date scientific program on the market.

The most important features of the program include:

- » Case studies presented by experts in food safety in the area Nutritional
- » 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 information on Quality Management System Digitization in the Food Industry
- » Practical exercises where self-assessment can be used to improve learning
- » Its special emphasis on innovative methodologies in Quality Management System Digitization in the Food Industry
- » 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



*Don't miss the opportunity to take this Postgraduate Certificate in Quality Management System Digitization in the Food Industry. It is the perfect opportunity to advance your career"*

“*Discover the most innovative methodologies in quality management system digitization in the food industry*”

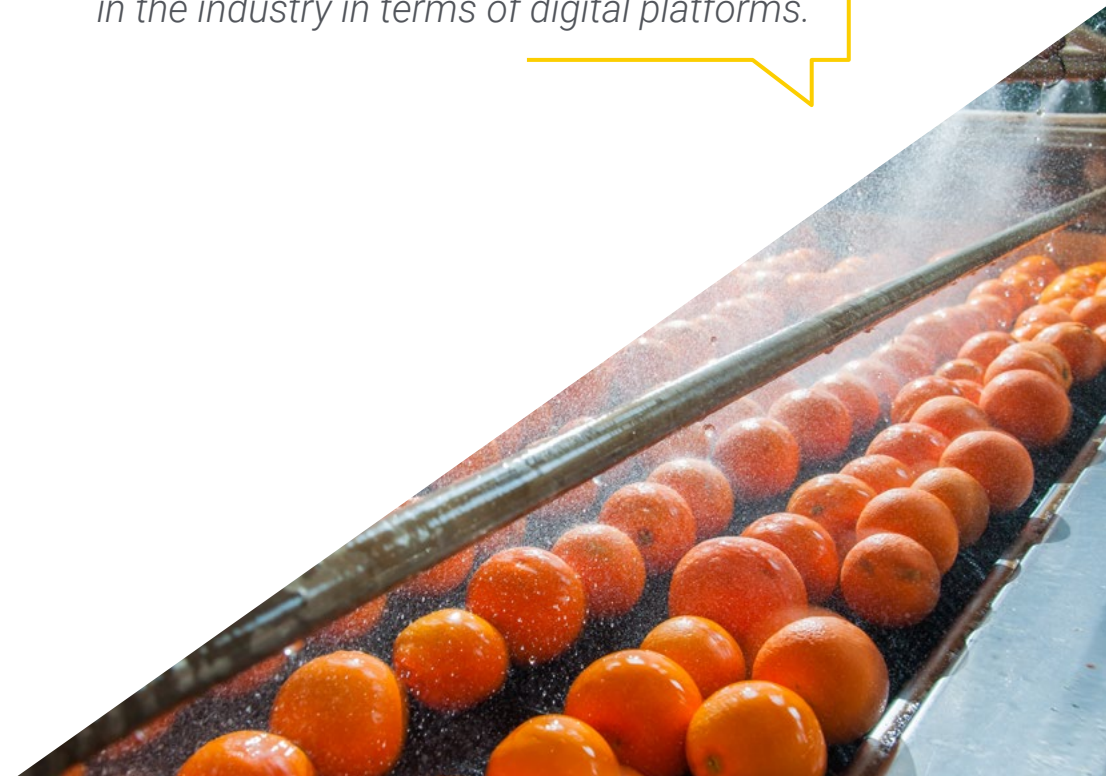
The program's curriculum has been conceived and developed by expert professionals in Quality Management System Digitization in the Food Industry, exclusively with nutritionists in mind.

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, professional will be assisted by a novel interactive video system developed by recognized and experienced experts in Quality Management System Digitization in the Food Industry.

*You will discover the latest commercial software used in food safety management.*

*This 100% online Postgraduate Certificate will allow you to balance your studies with your professional life while you expand your knowledge of the latest developments in the industry in terms of digital platforms.*



# 02 Objectives

The program's objectives focus on the specific work done by nutritionists who intend to delve into Quality Management System Digitization in the Food Industry, so they can become familiar with the technological processes involved. Throughout the program, students will acquire the skills required in the industry and will delve into various commercial platforms and internal IT tools used to manage food processes. Further, students will examine current quality standards and food regulations as established by various international bodies in matters of digitalization, thus launching them into a diverse and booming professional field.





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*You are just one click away from learning about the latest advances in digitization in food safety systems in matters of nutrition”*



## General Objectives

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- » Analyze the advantages of digitalization in the currently established food safety and quality management processes
- » Develop specialized knowledge of the different commercial platforms and internal IT tools for process management
- » Define the importance of migration processes from traditional to digital systems in food quality and safety management
- » Establish strategies for the digitalization of protocols and documents related to the management of different food quality and safety processes



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





## Specific Objectives

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- » Examine the quality standards and food regulations as established by various international bodies
- » Identify the main commercial software and internal IT strategies that enable the management of specific food safety and quality processes
- » Establish appropriate strategies to transfer traditional quality management processes to digital platforms
- » Define the key points of the digitization process of a Hazard Analysis and Critical Control Point (HACCP) program
- » Analyze alternatives for the implementation of prerequisite programs (PPR), HACCP plans and monitoring of standardized operating programs (SOP)
- » Analyze the most appropriate protocols and strategies for digitization in risk communication
- » Develop mechanisms for digitalizing the management of internal audits, recording corrective actions and monitoring continuous improvement programs

# 03

# Course Management

This Postgraduate Certificate's curriculum has been developed by leading experts in Quality Management System Digitalization in the Food Industry; and they have adapted it to the area of nutrition to meet the requirement established by many companies in the industry. The professors have unified their knowledge of the subject together with other prestigious professionals whose experience will aid students in learning the contents and the following the syllabus. All this with a strong interdisciplinary component so nutritionists can cover all the knowledge of digitization as applied to food quality management from the perspective of their respective disciplines.





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*A competent group of professionals  
will support and guide you toward  
professional success”*

## 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. Velderrain Rodríguez, Gustavo Rubén

- » D. in Science. Center for Research in Food and Development, A.C. (CIAD)
- » Member of the National System of Researchers of CONACyT (Mexico)



# 04

# Structure and Content

The content included on the program has been developed with the latest updates in the food industry, as well as the methods currently being used to manage food quality, i.e., digitalization. Through new technologies, more rigorous criteria are applied that have a positive impact on the treatment and processing of food products, ensuring greater peace of mind for consumers. The program has been designed by experts whose comprehensive syllabus will help nutritionists in their career path towards this specialization, which is highly demanded in the industry due to its long-term projection.







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*With this Postgraduate Certificate, you will master the new technological tools implemented in quality controls in the food industry”*

## Module 1. Digitization of the Quality Management System

- 1.1. Quality Standards and Risk Analysis in the Food Industry
  - 1.1.1. Current Food Safety and Quality Standards
  - 1.1.2. Main Risk Factors in Food Products
- 1.2. The "Age of Digitization" and Its Influence on Global Food Safety Systems
  - 1.2.1. Codex Alimentarius Global Food Safety Initiative
  - 1.2.2. Hazard Analysis and Critical Control Point (HACCP)
  - 1.2.3. ISO 22000
- 1.3. Commercial Software for Food Safety Management
  - 1.3.1. Use of Smart Devices
  - 1.3.2. Business Software for Specific Management Processes
- 1.4. Establishment of Digital Platforms for the Integration of a Team Responsible for the Development of the HACCP Program
  - 1.4.1. Stage 1. Preparation and Planning
  - 1.4.2. Stage 2. Implementation of Prerequisite Programs for Hazards and Critical Control Points of the HACCP program
  - 1.4.3. Stage 3. Execution of the Plan
  - 1.4.4. Stage 4. HACCP Verification and Maintenance
- 1.5. Digitization of Pre-requisite Programs (PPR) in the Food Industry - From Traditional to Digital Systems
  - 1.5.1. Primary Production Processes
    - 1.5.1.1. Good Hygiene Practices (GHP)
    - 1.5.1.2. Good Manufacturing Practices (GMP)
  - 1.5.2. Strategic Processes
  - 1.5.3. Operational Processes
  - 1.5.4. Support Processes
- 1.6. Platforms for Monitoring "Standard Operating Procedures (SOPs)"
  - 1.6.1. Training of Personnel in the Documentation of Specific SOPs
  - 1.6.2. Channels of Communication and Monitoring of SOP Documentation





- 1.7. Protocols for Document Management and Communication Between Departments
  - 1.7.1. Traceability Document Management
    - 1.7.1.1. Procurement Protocols
    - 1.7.1.2. Traceability of Raw Material Receipt Protocols
    - 1.7.1.3. Traceability of Warehouse Protocols
    - 1.7.1.4. Process Area Protocols
    - 1.7.1.5. Traceability of Hygiene Protocols
    - 1.7.1.6. Product Quality Protocols
  - 1.7.2. Implementation of Alternative Communication Channels
    - 1.7.2.1. Use of Storage Clouds and Restricted Access Folders
    - 1.7.2.2. Coding of Documents for Data Protection
- 1.8. Digital Documentation and Protocols for Audits and Inspections
  - 1.8.1. Management of Internal Audits
  - 1.8.2. Record of Corrective Actions
  - 1.8.3. Application of the "Deming cycle"
  - 1.8.4. Management of Continuous Improvement Programs
- 1.9. Strategies for Proper Risk Communication
  - 1.9.1. Risk Management and Communication Protocols
  - 1.9.2. Effective Communication Strategies
  - 1.9.3. Public Information and Use of Social Networks
- 1.10. Case Studies of Digitization and Its Advantages in Reducing Risks in the Food Industry
  - 1.10.1. Food Safety Risks
  - 1.10.2. Food Fraud Risks
  - 1.10.3. Food Defence Risks



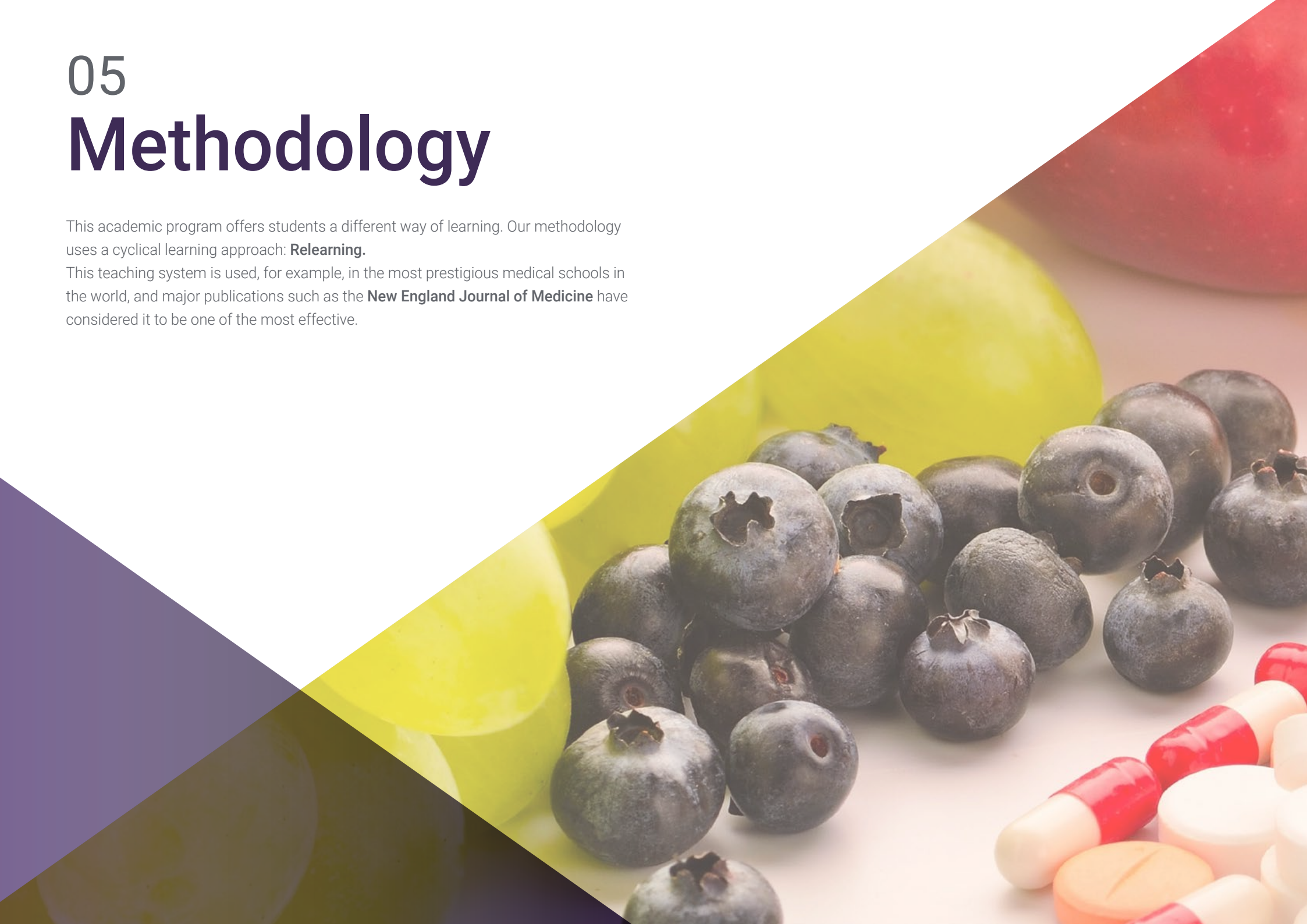
*This program will allow you to comfortably advance your career"*

# 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

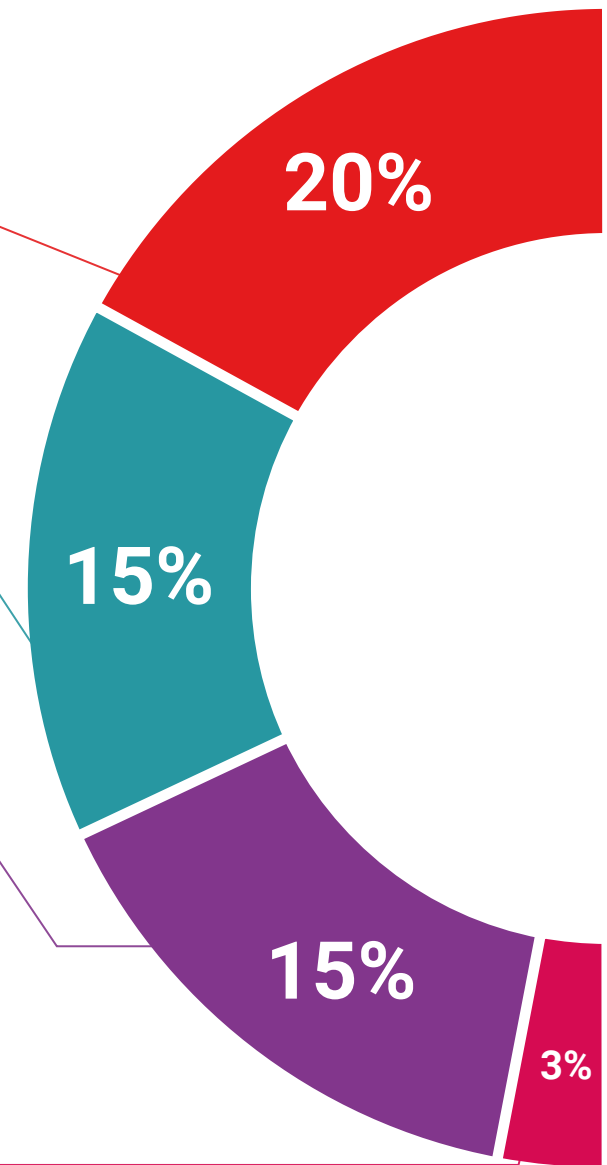
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

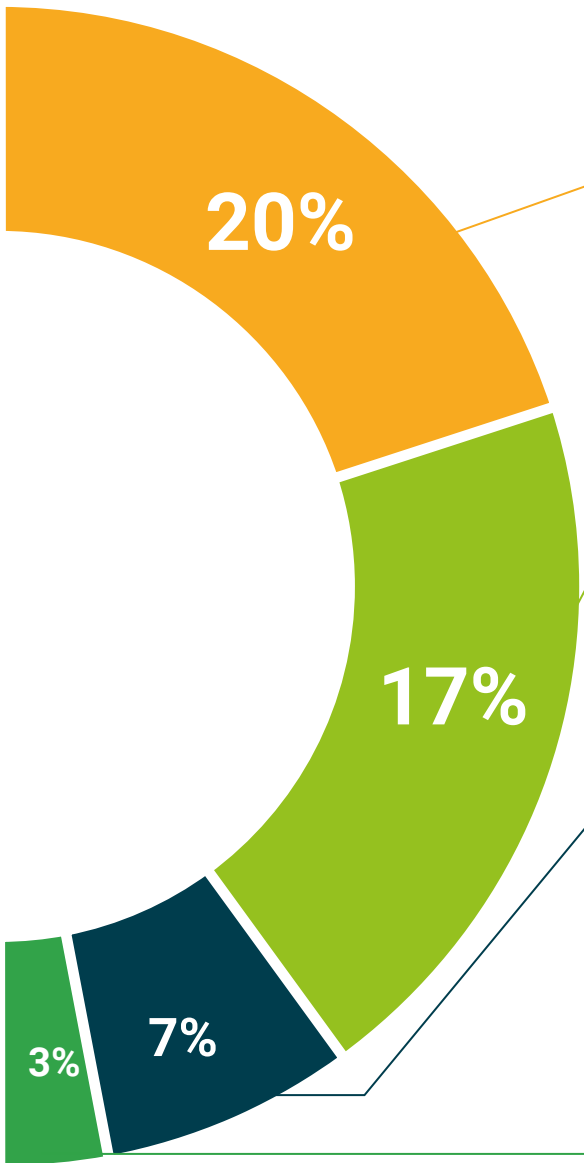
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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 Quality Management System Digitization in the Food Industry guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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

This **Postgraduate Certificate in Quality Management System Digitization in the Food Industry** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **certificate** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Quality Management System Digitization in the Food Industry**

Official Number of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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



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- » Modality: **online**
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# Postgraduate Certificate

## Quality Management System

### Digitization in the Food Industry

