

# Postgraduate Certificate

Digitization of Quality  
Management System in the Food  
Industry





## Postgraduate Certificate Digitization of Quality Management System 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.techtitute.com/us/veterinary-medicine/postgraduate-certificate/digitization-quality-management-system-food-industry](http://www.techtitute.com/us/veterinary-medicine/postgraduate-certificate/digitization-quality-management-system-food-industry)

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# 01

# Introduction

Digitization can lead to improvements in food safety and quality management systems, so it is necessary to increase knowledge in this field. 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 training is the best option you can find to specialize in Veterinary Food Safety and update your knowledge”*

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 the traditional to the digital system.

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.

This training reinforces the basic knowledge of traditional methods for managing quality systems 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). Examples of formats for the documentation of prerequisite program protocols (PPR), permits, traceability formats, control logs, audit documents, among others, are presented.

Finally, case studies are presented where digitization leads to improved quality management systems in the food industry, and the importance of digital platforms and future trends for food safety and quality management systems are discussed.

The teachers of this Postgraduate Certificate are 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 defense 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, research and development of new foods and finally, the coordination and execution of R&D&I projects. All this is necessary to achieve a complete and specialized training, highly demanded by professionals in the food sector.

The Postgraduate Certificate in Digitization of Quality Management System in the Food Industry of TECH Technological University is the most complete among those offered in universities at this time. It is an educational project committed to training high quality professionals. A program designed by professionals specialized in each specific subject who face new challenges every day.

This **Postgraduate Certificate in Digitization of Quality Management System 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:

- ♦ The development of case studies presented by experts in veterinary food safety
- ♦ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ News on Digitization of the Quality Management System in the Food Industry
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Special emphasis on innovative methodologies in Digitization of the Quality Management System 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

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*This Postgraduate Certificate is the best investment you can make in selecting a refresher program to update your knowledge in Digitization of Quality Management System in the Food Industry”*

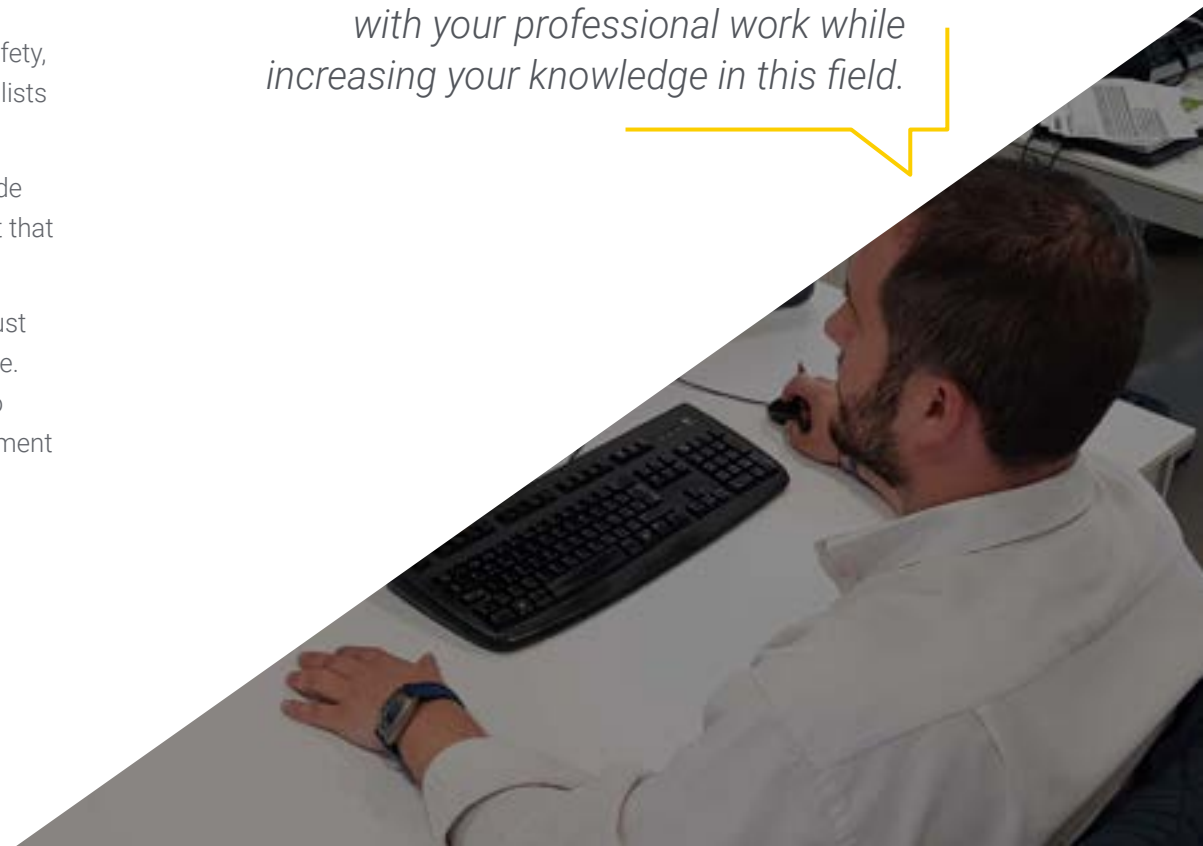
Its teaching staff includes professionals belonging to the field of veterinary food safety, who bring to this training the experience of their work, as well as recognized specialists from reference societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e. a simulated environment that will provide an immersive education programmed to train in real situations.

This program is designed around Problem-Based Learning, where the specialist must try to solve the different professional practice situations that arise during the course. For this purpose, the professional will be assisted by an innovative interactive video system developed by recognized and experienced experts in Food Quality Management System in the Food Industry.

*This training comes with the best didactic material, providing you with a contextual approach that will facilitate your learning.*

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



# 02 Objectives

The Postgraduate Certificate in Digitalization of Quality Management System in the Food Industry is aimed at facilitating the professional's performance with the latest and most innovative advances in the sector.





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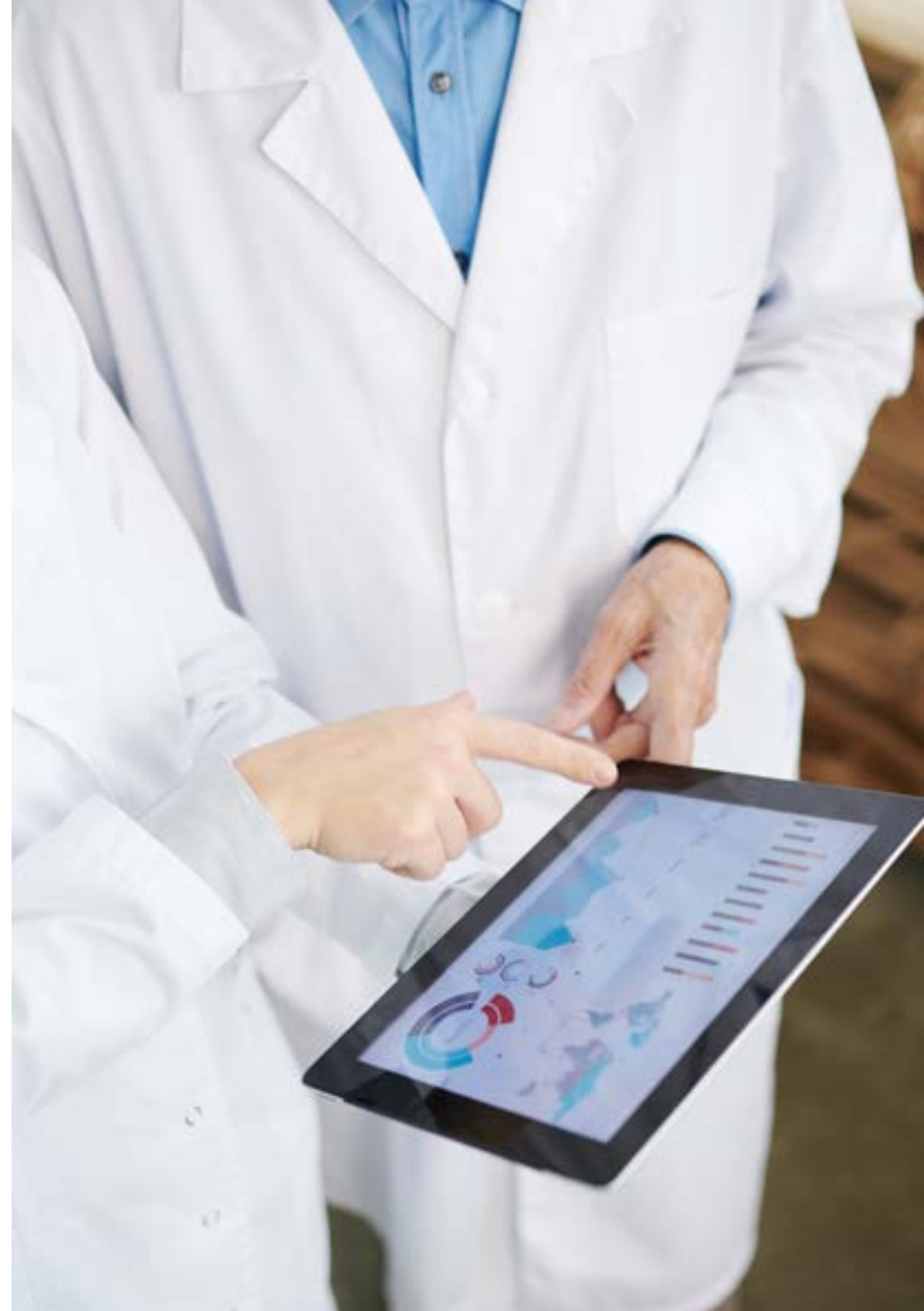
*This is the best option to learn about the latest advances in the Digitalization of the Quality Management System in the Food Industry"*



## 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 a migration process from a traditional to a digital system in Food Safety and Quality Management
- Establish strategies for the digitalization of protocols and documents related to the management of different Food Quality and Safety processes





## Specific Objectives

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- Examine the quality standards and food norms in force for the digitization of the different international reference bodies
- Identify the main commercial software and internal IT strategies that enable the management of specific food safety and quality processes
- Establish appropriate strategies for the transfer of 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



*A path of preparation and professional growth that will propel you towards greater competitiveness in the labor market"*

03

# Course Management

The program includes in its teaching staff leading experts in Veterinary Food Safety who bring to this training 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.



A hand holding a pen is visible in the upper right quadrant, positioned as if writing on a document. The document features the HACCP logo in large blue letters. The background is a teal gradient with a white diagonal stripe.

HACCP

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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 polygalacturonase 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 John

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- 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. 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 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.





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

## Module 1. Digitization of 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 - Migration 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 Onspections
  - 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



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

# 05 Methodology

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

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





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



## At TECH we use the Case Method

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

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



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

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

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

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



## Relearning Methodology

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

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



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



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

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

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

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

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



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



### Study Material

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

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



### Latest Techniques and Procedures on Video

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



### Interactive Summaries

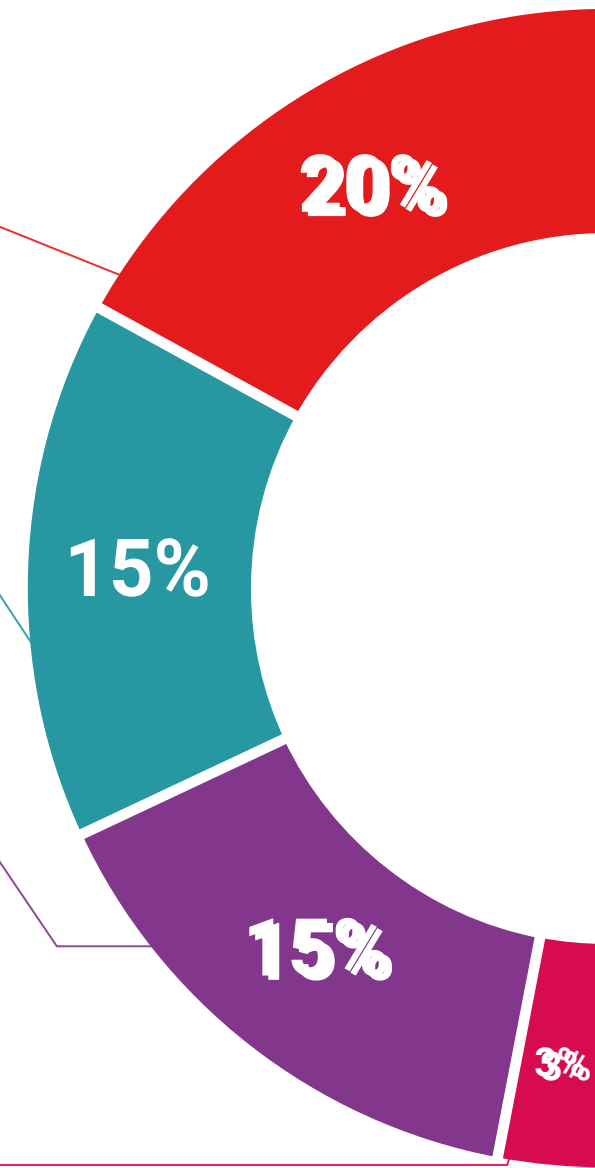
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

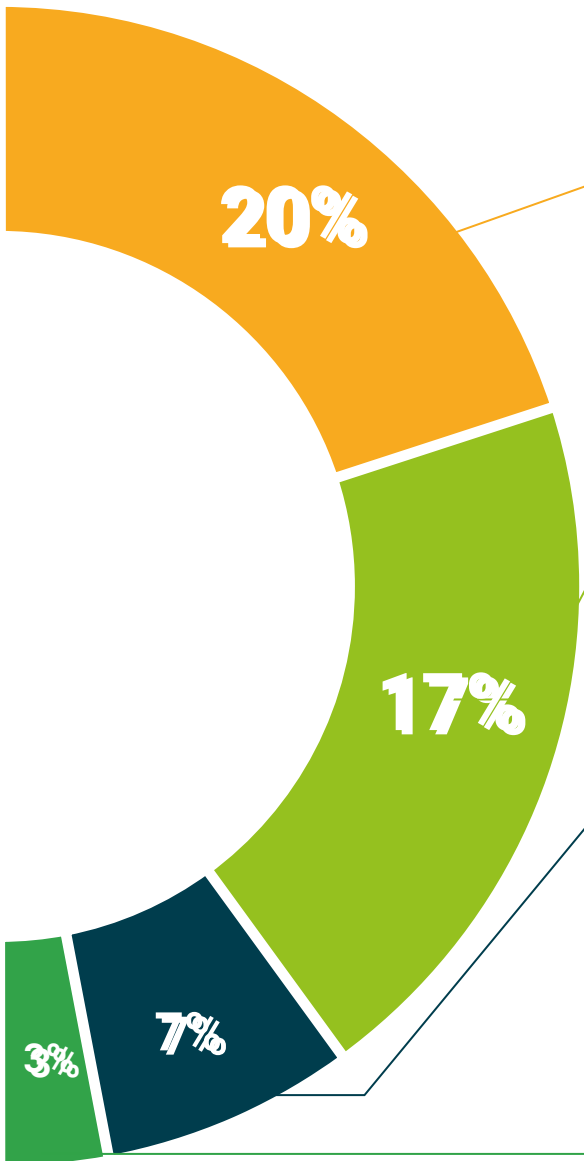


### Additional Reading

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







### Expert-Led Case Studies and Case Analysis

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



### Testing & Retesting

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



### Classes

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

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



### Quick Action Guides

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



# 06 Certificate

The Postgraduate Certificate in Traceability in Food Industries guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Technological University.



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*Include in your training a Postgraduate Certificate in Digitization of the Quality Management System in the Food Industry: a highly qualified added value for any professional in this area"*

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

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

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

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

Official N° of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma 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  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



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