Postgraduate Certificate
Digitizing Industry 4.0 in Quality and Safety Management

tech technological university

![tech technological university]

Postgraduate Certificate
Digitizing Industry 4.0 in Quality and Safety Management

» Modality: **online**
» Duration: **12 weeks**
» Certificate: **TECH Technological University**
» Dedication: **16h/week**
» Schedule: **at your own pace**
» Exams: **online**

Website: **www.techtitute.com/in/veterinary-medicine/postgraduate-certificate/digitizing-industry-4-0-quality-safety-management**

Index

01

Introduction

Digitization can lead to improvements in food safety and quality management systems, so it is necessary to increase knowledge in this field. The student can take advantage of the opportunity and acquire a solid knowledge in this field that will allow them to become a successful professional.

"This training is the best option you can find to specialize in Veterinary Food Safety and update your knowledge"

On the food crises that have occurred in recent decades at European and world level have demonstrated the need for systems to identify, locate and withdraw those products that could represent a food safety risk and a danger to the health of the population. The obligation of all companies in the food sector to have a food safety plan incorporating all the HACCP principles of the Codex Alimentarius makes it essential for the members of the quality department team to be familiar with each of the phases of the HACCP system, including batch traceability.

For this reason, the Postgraduate Certificate in Digitization of Industry 4.0 in Quality Management offers the professional a solid foundation, skills and abilities that will allow him/her to develop and implement a traceability plan in the different food industries of the sector.

In addition, this training also describes the importance of the application of digital media and platforms in the Quality Management systems of the Food Industry, with special emphasis on the 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.

Another of the strengths of this training is the presentation of concrete case studies in which digitization leads to an improvement in the quality management systems of the food industry.

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 contamination, intentional contamination and fraud, regulatory schemes for food safety certification (Food Safety/Food Integrity) and traceability (Food Defence and Food Fraud/Food Authenticity), and in the digitization of quality management.

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 Digitizing Industry 4.0 in Quality and Safety Management** 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
- New Developments on Industry 4.0 Digitization in Quality and Safety Management for Nutritionists
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in Industry 4.0 Digitalization
- 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

Do not miss the opportunity to take this Postgraduate Certificate in Digitizing Industry 4.0 in Quality and Safety Management. It's the perfect opportunity to advance your career"

" *This Postgraduate Certificate is the best investment you can make in selecting a refresher program to update your knowledge in Digitizing Industry 4.0 in Quality and Safety Management for Nutritionists"*

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

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

It includes, in its teaching staff, professionals belonging to the field of veterinary food safety, who pour into this training the experience of their work, in addition to recognized specialists from reference 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 training 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, the professional will be assisted by a novel interactive video system made by recognized experts in Industry 4.0 Digitalization in Quality Management and with great experience.

02
Objectives

The Postgraduate Certificate in Digitizing Industry 4.0 in Quality and Safety Management is aimed at facilitating the professional's performance with the latest and most innovative advances in the sector.

tria 4.0

General Objectives

- Analyze the fundamentals, requirements, regulations and main tools used in the traceability of the different points of the food chain

- Analyze the system for establishing a relationship between the food product and the origin of its components, the manufacturing process and distribution

- Evaluate food industry processes to identify those items that do not meet specific requirements to ensure food safety and consumer health

- Develop the basis for the application of the different phases of the traceability system in food sector companies

- 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

A unique, key, and decisive training experience to boost your professional development"

Specific Objectives

- Define the background of logistics and traceability
- Examine the different types of traceability and scope of application
- Analyze the principles, requirements and measures of food legislation in the context of traceability
- Establishing the scope of application of traceability in its mandatory nature
- Analyze the different traceability and lot identification systems
- Identify and define the responsibility of the different actors in the food chain in terms of traceability
- Describe the structure and implementation of a traceability plan
- Identify and discover the main tools for the identification of batches
- Establish procedures for locating, immobilizing and recalling products in case of incidents
- Identify, analyze and explain the logistics process at each point of the food chain
- 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

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.

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

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

- D. 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

Ms. Escandell Clapés, Erica

- Bachelor's Degree in Food Science and Technology. (University of Vic)
- Master's Degree in Industry 4.0 Digitalization and Quality Management
- Diploma in Human Nutrition and Dietetics
- Head of the Food Quality and Safety Department of the meat industry SUBIRATS GROUP (2015 - present)

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.

"This Digitizing Industry 4.0 in Quality and Safety Management contains the most complete and up-to-date scientific program on the market"

Module 1. Logistics and Batch Traceability

1.1.   Introduction to Traceability

1.1.1.   Background to the Traceability System

1.1.2.   Traceability Concept

1.1.3.   Types of Traceability

1.1.4.   Information Systems

1.1.5.   Advantages of Traceability

1.2.   Legal Framework for Traceability. Part I

1.2.1.   Introduction

1.2.2.   Horizontal Legislation Related to Traceability

1.2.3.   Vertical Legislation Related to Traceability

1.3.   Legal Framework for Traceability. Part II

1.3.1.   Mandatory Application of the Traceability System

1.3.2.   Objectives of the Traceability System

1.3.3.   Legal Responsibilities

1.3.4.   Penalty Regime

1.4.   Implementation of the Traceability Plan

1.4.1.   Introduction

1.4.2.   Previous Stages

1.4.3.   Traceability Plan

1.4.4.   Product Identification System

1.4.5.   System Test Methods

1.5.   Product Identification Tools

1.5.1.   Hand Tools

1.5.2.   Automated Tools

1.5.2.1. EAN Bar Code

1.5.2.2. RFID/// EPC

1.5.3.   Records

1.5.3.1. Registration Identification of Raw Materials and other Materials

1.5.3.2. Registration of Food Processing

1.5.3.3. Final Product Identification Record

1.5.3.4. Recording of the Results of Checks Performed

1.5.3.5. Record Keeping Period

1.6.   Incident Management, Product Recall and Reclamation and Customer Complaints

1.6.1.   Incident Management Plan

1.6.2.   Manage Customer Complaints

1.7.   Supply Chain

1.7.1.   Definition

1.7.2.   Supply Chain Steps

1.7.3.   Supply Chain Trends

1.8.   Logistics

1.8.1.   The Logistical Process

1.8.2.   Supply Chain vs. Logistics

1.8.3.   Containers

1.8.4.   Packaging

1.9.   Modes and means of Transportation

1.9.1.   Transportation Concept

1.9.2.   Modes of Transport, Advantages and Disadvantages

1.10.   Food Product Logistics

1.10.1.   Cold Chain

1.10.2.   Perishable Products

1.10.3.   Non-Perishable Products

Module 2. Digitization of the Quality Management System

2.1.   Quality Standards and Risk Analysis in the Food Industry

2.1.1.   Current Food Safety and Quality Standards

2.1.2.   Main Risk Factors in Food Products

2.2.   The "Age of digitization" and Its Influence on Global Food Safety Systems

2.2.1.   Codex Alimentarius Global Food Safety Initiative

2.2.2.   Hazard Analysis and Critical Control Point (HACCP)

2.2.3.   ISO 22000

2.3.   Commercial Software for Food Safety Management

2.3.1.   Use of Smart Devices

2.3.2.   Business Software for Specific Management Processes

This training will allow you to advance in your career comfortably"

05
Methodology

This training program offers 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

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.

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.
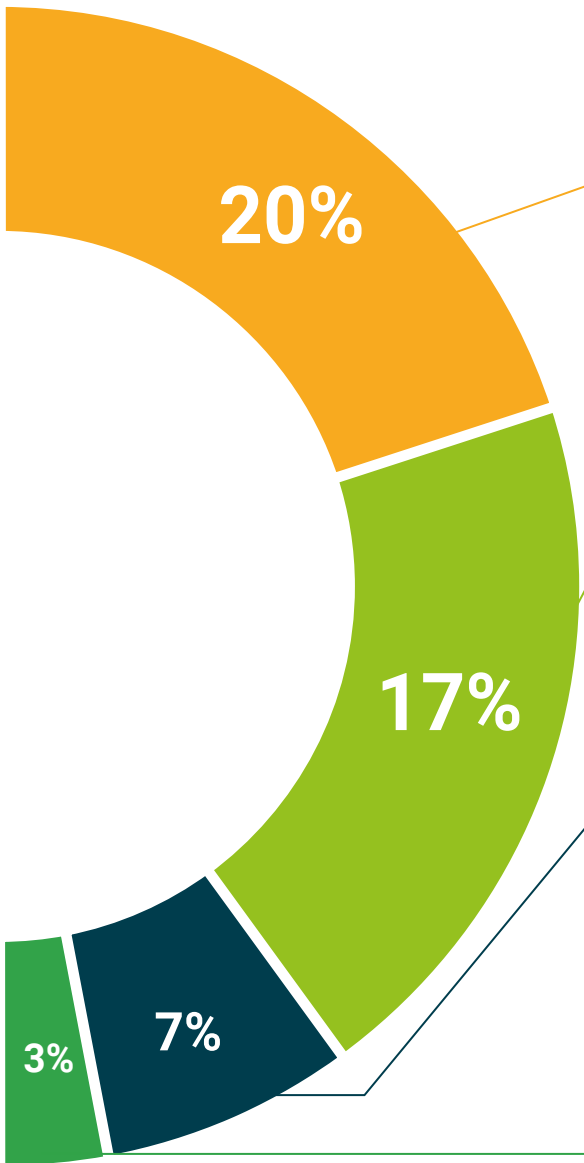
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".

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.

20%

15%

15%

3%

20%

17%

7%

3%

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 your 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 Digitizing Industry 4.0 in Quality and Safety Management guarantees, in addition to the most rigorous and updated training, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this training and receive your university degree without travel or laborious paperwork"

This **Digitizing Industry 4.0 in Quality and Safety Management** contains the most complete and updated scientific program on the market.

After the student has passed the evaluations, they will receive their corresponding **Postgraduate 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's Degree in Industry 4.0 Digitalization and Quality Management**

Official Nº of hours: **300 h.**

tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Digitalization of Industry 4.0 in Quality Management

This is a qualification awarded by this University, equivalent to 300 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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..

tech technological university

Postgraduate Certificate
Digitizing Industry 4.0 in Quality and Safety Management

- » Modality: **online**
- » Duration: **12 weeks**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

Digitizing Industry 4.0 in Quality and Safety Management

tech *technological university*