Hybrid Master's Degree

Food Safety

tech global university

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Hybrid Master's Degree

Food Safety

Modality: **Hybrid (Online + Clinical Internship)**
Duration: **12 months**
Certificate: **TECH Global University**
Credits: **60 + 4 ECTS**
Website: **www.techtitute.com/us/nutrition/hybrid-master-degree/hybrid-master-degree-food-safety**

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01

Introduction

Due to demographic growth and climate change, the pressure on food systems is intensifying as they strive to ensure safe, nutritious, and accessible food for all.

In addition, challenges such as foodborne illnesses, antimicrobial resistance, and pandemics underscore the need for robust food safety systems. In response to this situation, TECH Global University has developed this program, organized into two distinct parts. The first part covers the theoretical content entirely online, utilizing the innovative Relearning methodology. In contrast, the second part involves a three-week practical placement in a prominent institution within the food industry.

With this Hybrid Master's Degree, you will obtain comprehensive training that covers the essential aspects of quality management and assurance within the food industry"

Food Safety has become a growing global concern, driven by an ever-increasing world population and a rising demand for safe, nutritious food. The challenges are multiple: from ensuring food safety against various risks to achieving environmental sustainability and guaranteeing security throughout the entire supply chain.

This Hybrid Master's Degree was created in response to these needs, focusing on the traceability of raw materials and inputs, providing the foundations to track every component from its origin to its incorporation into the final product. In addition, the program explores the analytical and instrumental techniques required for quality control of processes and products, ensuring compliance with established standards.

You will also study national and international laws and regulations, along with their practical application. Food safety management will be another key element, including the implementation of systems such as HACCP to identify and control potential risks. The program also examines food industry safety certifications, covering the different certification standards and the processes required to obtain them.

To deliver a complete learning experience, TECH Global University has developed a comprehensive academic structure in which the theoretical component is offered entirely online, adapted to the personal and professional schedules of learners, who can access all materials from any device with an internet connection. It is built on the revolutionary Relearning methodology, which emphasizes the reinforcement of key concepts to improve comprehension and long-term retention. The program also includes an intensive three-week practical placement in a reputable institution. Additionally, the curriculum offers ten exclusive Masterclasses delivered by a distinguished International Guest Director.

This **Hybrid Master's Degree in Food Safety** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of more than 100 practical cases presented by food-industry professionals who are experts in Food Safety, along with university professors with extensive experience in the field
- Its graphic, schematic and practical contents provide essential information on those disciplines that are indispensable for professional practice
- All of this will be complemented by 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
- Furthermore, you will be able to carry out an internship in one of the best companies

Development of more than 100 practical cases presented by food-industry professionals who are experts in Food Safety, along with university professors with extensive experience in the field. What are you waiting for to enroll?"

Choose TECH! You will be able to develop, coordinate, and execute R&D&i projects, leading innovative plans that respond to market demands and emerging nutritional needs"

You will deepen your knowledge of research, development and innovation (R&D&i) in new foods and ingredients, supported by cutting-edge academic materials and technological resources.

You will complete a three-week intensive practical placement in a prestigious institution, where you will acquire the knowledge needed to advance both personally and professionally.

In this professionally oriented Hybrid Master's Degree, the program is designed for food-sector professionals working in the food industry who require a high level of specialization. The contents are based on the latest scientific evidence and are structured pedagogically to integrate theoretical knowledge into Food Safety practice, enabling informed decision-making through a strong theoretical-practical foundation.

Thanks to the multimedia content created with state-of-the-art educational technology, food-industry professionals will benefit from situated and contextual learning—a simulated environment that provides immersive training designed to prepare them for real-world scenarios. The design of this program is based on Problem-Based Learning, by means of which the student must try to solve the different professional practice situations that arise during the program. For this purpose, students will be assisted by an innovative interactive video system created by renowned experts.

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Why Study this Hybrid Master's Degree?

This program combines the flexibility of online learning with hands-on practical experience. As such, the training covers everything from the traceability and quality control of raw materials to food safety management and process digitalization, offering a comprehensive view of Food Safety. Moreover, its focus on legislation, certifications, and innovative techniques prepares students to face today's regulatory and market challenges. In fact, this specialization not only strengthens technical and analytical competencies, but also opens doors to professional opportunities in the food industry, regulatory agencies, and consulting firms.

Pursuing a Hybrid Master's Degree in Food Safety is a strategic decision for professionals seeking to specialize in this crucial and constantly evolving field"

1. Update using the latest available technology

This program highlights the use of Blockchain, which ensures transparent and immutable tracking of food from its origin to the final consumer, safeguarding the integrity of the supply chain. In addition, Artificial Intelligence (AI) and machine learning are used to analyze large volumes of data, predict and prevent potential contamination, and optimize production processes. Advanced biotechnology techniques also enable rapid and accurate detection of pathogens and contaminants, ensuring an agile response to any threat.

2. Learn from the best specialists

The extensive team of professionals who will accompany participants throughout the practical period provides a first-rate guarantee of quality and an unparalleled opportunity for professional advancement. With a dedicated tutor, students will be able to develop real projects in a cutting-edge environment, allowing them to integrate the most effective food safety procedures and techniques into their daily practice.

3. Train in top-tier professional environments

TECH carefully selects every center available for Internship Programs. Thanks to this rigorous process, participants are guaranteed access to a prestigious environment in the field of Food Safety. This will enable them to observe firsthand the daily operations of a demanding, rigorous, and detail-oriented field, applying the latest tools and procedures to their workflow.

4. Combine the best theory with advanced practical training

Many academic programs offer pedagogical models poorly adapted to the reality of professional work, often requiring long study hours incompatible with personal and professional responsibilities. TECH introduces a new learning model—highly practical and fully adapted to professional practice—that enables participants to work with state-of-the-art Food Safety procedures and, most importantly, apply them in real-life settings in just three weeks.

5. Opening the door to new opportunities

With the growing global emphasis on public health, sustainability, and complex supply chains, there is a rising demand for professionals capable of implementing and managing advanced control and prevention systems. New regulations and international standards are also creating additional needs for experts in regulatory compliance and safety certifications. In this context, continuous training and specialization in Food Safety not only open doors to technical and managerial roles, but also provide opportunities to lead innovative projects and contribute to the transformation of the food industry.

"You will have full practical immersion at the center of your choice"

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Objectives

This university program aims to develop competencies in the traceability of raw materials and inputs, analytical techniques for quality control, and the management of food safety in accordance with national and international regulations. In addition, it seeks to train specialists in the digitalization of quality management systems and in obtaining food safety certifications. Another key objective is to promote research, development, and innovation (R&D&I) in new foods and ingredients, as well as in the validation of new methodologies and processes.

The general objectives of this Hybrid Master's Degree focus on developing comprehensive competencies to effectively manage Food Safety across various industrial settings"

General Objective

- The general objective of the Hybrid Master's Degree in Food Safety is to establish the foundations of good hygiene and traceability practices in the production of raw materials, as well as to define the regulations applicable to primary animal production and internal auditing systems. In addition, the program will analyze and apply the regulatory framework governing food laboratories, assessing risks and implementing management systems. Participants will also develop competencies in food legislation, traceability, and food safety management, including the application of tools such as HACCP and good-practice certification

You will be prepared to address current and future challenges in Food Safety, combining technical knowledge with management skills and innovative development within the food sector"

Specific Objectives

Module 1. Traceability of Raw Materials and Inputs

- Compile the reference databases regarding the applicable food safety regulations
- Develop relevant aspects in the production of foods of animal origin and their derivatives
- Establish the foundations of animal welfare from rearing to slaughter
- Examine the types of plant cultivation and the regulations applicable to each
- Specify the mechanisms of internal auditing and certification of primary production
- Analyze foods with differentiated quality and the certification system for such products
- Evaluate the impact of the agri-food industry on the environment
- Examine the contribution of this industry to the sustainable development goals

Module 2. Analytical and Instrumental Techniques in Quality Control of Processes and Products

- Establish the quality characteristics that raw materials, intermediate products, and finished products must meet according to their origin prior to laboratory analysis
- Develop the pertinent methodology for product conformity, considering the applicable requirements established by regulations and standards
- Describe food sampling based on origin, use, and characteristics or specifications
- Identify and recognize the analytical techniques used in food and manage proper quality control
- Describe the main agri-food contaminants and understand the application of analytical techniques according to the sector involved
- Outline the process to identify and ensure the safety of raw materials, processed foods, and water suitability in obtaining safe products for human and animal consumption

Module 3. Logistics and Lot Traceability

- Define the background of logistics and traceability
- Examine the different types of traceability and their scope of application
- Analyze the principles, requirements and measures of food legislation in the context of traceability
- Establish the scope of mandatory traceability
- Analyze the different systems for traceability and lot identification
- Identify and define the responsibilities of the various actors in the food chain regarding traceability
- Describe the structure and implementation of a traceability plan
- Identify and determine the main tools for lot identification
- Establish procedures for locating, immobilizing, and withdrawing products in case of incidents
- Identify, analyze, and explain the logistics process at each point of the food chain

Module 4. Food Legislation and Quality and Safety Standards

- Define the foundations of food law
- Describe and outline the main international, European, and national bodies in the field of food safety, as well as determine their competencies
- Analyze food safety policy within the European framework
- Describe the principles, requirements and measures of food legislation
- Present 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

Module 5. Food Safety Management

- Analyze the main types of hazards associated with food
- Evaluate and apply the principle of risk and risk analysis in food safety
- Identify the prerequisites and preliminary steps for implementing a food safety management plan
- Establish the main hazards associated with food according to their physical, chemical, or biological nature, and identify some of the methods used for their control
- Apply these principles to develop a food safety management plan
- Specify the methods for evaluating the efficiency of a critical control point and the food safety management plan

Module 6. Safety Certifications for the Food Industry

- Establish the general requirements for certification
- Identify the different types of Good Practices (GxP) required in a food safety management and certification system
- Develop the structure of the international ISO and ISO 17025 standards
- Define the characteristics, structure, and scope of the main global food safety certification systems

Module 7. Digitalization of the Quality Management System

- Examine current quality standards and food regulations for the digitalization of different internationally recognized bodies
- Identify the main commercial software and internal computing strategies that enable the management of specific food quality and safety processes
- Establish appropriate strategies for transferring traditional quality management processes to digital platforms
- Define the key points in the digitalization process of a hazard analysis and critical control points (HACCP) program
- Analyze alternatives for implementing prerequisite programs (PRP), HACCP plans, and the monitoring of standardized operating procedures (SOP)
- Analyze the most suitable protocols and strategies for digitalization in risk communication

Module 8. Validation of New Methodologies and Processes

- Identify the major differences between control points and critical control points
- Develop prerequisite programs and management frameworks to ensure food safety
- Apply internal audits, complaints, or internal incidents as tools for validating control processes
- Examine process validation methods
- Differentiate and specify the differences among monitoring, verification, and validation activities within the HACCP system
- Demonstrate problem-solving capabilities through root cause analysis and the application of corrective actions for managing complaints or non-conformities

Module 9. R&D&I of New Foods and Ingredients

- Establish new trends in food technologies that enable the development of research lines and the implementation of new products in the market
- Establish the foundations of the most innovative technologies that require research and development to understand their potential use in producing new foods and ingredients
- Design research and development protocols for incorporating functional ingredients into a base food, considering their techno-functional properties and the technological process involved in their production
- Compile new trends in food technologies that lead to the development of research lines and implementation of new products in the market

Module 10. Development, Coordination, and Execution of R&D&I Projects

- Establish the R&D&I systems that enable the development of new foods and ingredients—particularly in matters of food safety—so that research, development, and innovation can be undertaken in the field of new foods and ingredients
- Gather funding sources for R&D&I activities in the development of new food products that allow various innovation strategies in the food industry
- Analyze access methods to public and private information sources in the scientific-technical, economic, and legal fields for planning an R&D&I project
- Develop methodologies for project planning and management, including preparation of monitoring and control reports
- Evaluate technology transfer systems that allow R&D&I results to move into the production environment
- Analyze project implementation once its documentary phase is completed

You will combine theory and professional practice through a rigorous and rewarding educational approach"

04

Skills

Graduates will develop advanced technical skills in the traceability of raw materials and inputs, enabling them to track and ensure quality from production to consumption. In addition, they will acquire in-depth knowledge of analytical and instrumental techniques for quality control of processes and products, as well as food safety management in accordance with current regulations. They will also gain competencies in the digitalization of quality management systems, allowing them to implement technological solutions that enhance efficiency and precision within the industry.

They will manage and obtain food safety certifications, ensuring that products comply with international standards, supported by the extensive multimedia resource library provided by TECH"

General Skills

- Use good hygiene practices in food production
- Understand the current regulations that food laboratories must follow
- Develop and ensure that the foods produced comply with all food safety guarantees
- Ensure the safety of all processes related to food production
- Monitor procedures within the food industry

Competencies in research, development, and innovation (R&D&I) will enable you to lead projects that introduce new and safe foods and ingredients to the market"

Specific Skills

- Understand the regulations applicable to food safety and apply them in each production process
- Safeguard animal welfare from rearing to slaughter
- Understand the impact of the food industry on the environment and promote sustainable development
- Identify the quality characteristics that all foods must meet prior to laboratory analysis
- Apply appropriate techniques for quality control, following the most accurate methodologies
- Ensure the quality of products intended for human consumption
- Identify all processes related to product traceability and analyze the various systems associated with this field
- Locate and withdraw products in the event of incidents
- Understand the logistics process at each point of the food chain
- Understand the foundations of food law and food safety policy
- Recognize the types of liability of individuals involved in the food chain and the types of offenses that may occur
- Identify and analyze hazards associated with foods
- Control such hazards
- Understand the different food safety certification systems
- Carry out work in accordance with safety certification requirements
- Identify food quality standards, commercial software, and computer strategies to ensure maximum product safety
- Digitalize risk communication processes
- Monitor the entire production process, taking into account the control points
- Supervise, verify, and validate the entire production process
- Conduct internal audits
- Investigate the development of new products
- Design research protocols supported by new technologies
- Use R&D&I systems to develop new foods
- Access information sources in the scientific, economic, and legal fields to develop new products

Deepen your understanding of the most relevant theory in this field and subsequently apply it in a real professional environment"

05

Course Management

The faculty members are highly qualified professionals recognized in the field of Food Safety and quality management. Coming from diverse areas of the sector, they contribute a rich variety of practical experience and applied knowledge. Indeed, these experts possess solid academic training and extensive professional experience, enabling them to provide instruction grounded in real cases and current industry challenges. Furthermore, their participation in cutting-edge research and innovation projects allows them to incorporate the latest technological and scientific developments, offering graduates an education that is both current and highly relevant.

The faculty also has extensive practical experience in implementing quality management systems, traceability procedures, and food safety certifications in leading companies within the sector"

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** and 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, he **sponsors internal research** and development projects to improve the microbiological safety of foods.

Dr. Donaghy, John

- 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, specialization in 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

- Quality Inspector and Bromatological Expertise at Just Quality System SL
- Lecturer in Food Safety at Training Center Mercamadrid
- Responsible for Quality Management and Project Development at KMC
- Head of the Quality Control Department at Frutas Garralón import, export SA in Mercamadrid
- PhD in Agricultural Chemistry and Bromatology, Autonomous University of Madrid
- Degree in Food Science and Technology from the Autonomous University of Puebla, Mexico
- Master's Degree in Food Biotechnology (MBTA) from the University of Oviedo

Faculty

Ms. Andrés Castillo, Alcira Rosa

- Senior Researcher and Pharmaceutical Marketing Consultant
- Researcher in the GenObIACM Project, Group of the Complutense University of Madrid
- Manager of Clinical Drug Trials at the Ramón y Cajal University Hospital
- RyC Institute for Health Research (IRYCIS). U. Endothelium and MCM
- Marketing Consultant at Bioroi
- EC Coordinator with drugs and food products
- Data Manager for Clinical Trials with DM2 drugs
- Regional Marketing Manager Latin America, Siemens Ag Siemens AG
- Bacherlor's Degree in Marketing UADE
- University Expert in Nutrition and Dietetics with CV Risk Factors and DM by UNED (Spanish National University of Distance Education)
- Course in Food Traceability by the USAL Foundation

Ms. Aranda Rodrigo, Eloísa

- Food Quality and Safety. Global Nutralabs
- Author and Consultant in Business Initiatives
- Production Laboratory Manager TONG IL S.L
- Laboratory Manager, José María Villasante SL
- Degree in Food Science and Technology. University of Castilla – La Mancha
- It develops its activity in the food production environment, with laboratory analysis of water and food
- Training in Quality Management Systems, BRC, IFS and ISO 22000 Food Safety
- Experience in audits under ISO 9001 and ISO 17025 protocols

Dr. Colina Coca, Clara
- Nutritionist and Dietitian in private practice
- Professor of programs related to Nutrition and Dietetics
- PhD in Nutrition, Food Science and Technology from the Complutense University of Madrid
- Master's Degree in Food Quality and Safety from the Polytechnic University of Valencia
- Diploma in Human Nutrition and Dietetics from the Central University of Catalonia

Ms. Escandell Clapés, Erica
- Head of the Quality and Food Safety Department at the Meat Industry Grupo Subirats
- Food Industry Consultant
- Dietitian at Grupo ISS
- Bachelor's Degree in Food Science and Technology, University of Vic
- Master's Degree in Food Development and Innovation, University of Barcelona
- Diploma in Human Nutrition and Dietetics, University of Vic

Dr. Martínez López, Sara
- Doctor in Pharmacy specialized in Nutrition and Food Science
- Assistant Professor at the Complutense University of Madrid
- Assistant Professor of Nutrition and Food Technology at the European University of Madrid
- Researcher in the Microbiota, Food and Health Research Group at the European University of Madrid
- Doctor in Pharmacy from the Complutense University of Madrid
- Degree in Chemistry from the University of Murcia

Dr. Moreno Fernández, Silvia
- Product Developer at Mimic Seafood
- New Product Developer at Restaurante Coque
- Researcher
- PhD in Food Science from the Autonomous University of Madrid
- Degree in Biology from the Complutense University of Madrid

Dr. Rendueles de la Vega, Manuel
- Chemical Engineer Expert in Food Biotechnology
- Principal Investigator in three projects of the National R&D Plan
- University Professor
- PhD in Chemical Engineering from the University of Oviedo
- Expert in Food Biotechnology

Dr. Velderrain Rodríguez, Gustavo Rubén
- Coordinator of Scientific and Regulatory Affairs at the Latin American Alliance for Responsible Nutrition (ALANUR)
- Lead Researcher at Quality Corn Group
- Research Analyst at Organic Nature México S.A. de C.V
- PhD in Sciences, Center for Research in Food and Development (CIAD)
- Biotechnology Engineer, Technological Institute of Sonora
- Member of: National System of Researchers of CONACyT, Mexico

06

Structure and Content

From the traceability of raw materials and inputs to advanced analytical techniques for quality control of processes and products, each module has been designed to equip professionals with both practical and theoretical skills. In this way, the program will delve into food legislation and quality and safety standards, meeting both local and international requirements. It will also examine food safety management, including methods such as HACCP to identify and mitigate risks. Other key components include the digitalization of quality management systems, the validation of new methodologies, and research in development and innovation (R&D&I).

The Hybrid Master's Degree will cover a wide range of essential content to effectively manage quality and safety in the food industry"

Module 1. Traceability of Raw Materials and Inputs

1.1. Basic Principles of Food Safety
- 1.1.1. Main Objectives of Food Safety
- 1.1.2. Basic Concepts
- 1.1.3. Traceability. Concept and Application in the Food Industry

1.2. General Hygiene Plan
- 1.2.1. Basic Concepts
- 1.2.2. Types of General Hygiene Plans

1.3. Primary Animal Food Production
- 1.3.1. Basic Aspects and Animal Welfare
- 1.3.2. Breeding and Feeding
- 1.3.3. Transport of Live Animals
- 1.3.4. Animal Slaughter

1.4. Primary Production of Animal Derivatives. Distribution of Raw Materials
- 1.4.1. Dairy Production
- 1.4.2. Poultry Production
- 1.4.3. Distribution of Animal-Origin Raw Materials

1.5. Primary Production of Plant-Origin Foods
- 1.5.1. Basic Aspects
- 1.5.2. Types of Plant Crops
- 1.5.3. Other Agricultural Products

1.6. Good Practices in Plant Production. Use of Phytosanitary Products
- 1.6.1. Sources of Contamination in Plant-Based Foods
- 1.6.2. Transport of Raw Materials of Plant Origin and Risk Prevention
- 1.6.3. Use of Phytosanitary Products

1.7. Water in the Agri-Food Industry
- 1.7.1. Livestock
- 1.7.2. Agriculture
- 1.7.3. Aquaculture
- 1.7.4. Water for Human Consumption in Industry

1.8. Audit and Certification of Primary Production
- 1.8.1. Official Control Audit Systems
- 1.8.2. Food Certifications

1.9. Differentiated Quality Foods
- 1.9.1. Protected Designation of Origin (PDO)
- 1.9.2. Protected Geographical Indication (PGI)
- 1.9.3. Traditional Specialty Guaranteed (TSG)
- 1.9.4. Voluntary Quality Terms
- 1.9.5. Use of Plant Varieties and Animal Breeds
- 1.9.6. Organic Agriculture and Livestock Farming

1.10. Food Industry and Environment
- 1.10.1. Sustainable Development Goals (SDGs)
- 1.10.2. Solutions Proposed by the Agri-Food Industry
- 1.10.3. Genetically Modified Organisms as a Path to Sustainable Development

Module 2. Analytical and Instrumental Techniques in Quality Control of Processes and Products

2.1. Laboratory Types, Regulations and Standards
- 2.1.1. Reference Laboratories
  - 2.1.1.1. European Reference Laboratory
- 2.1.2. Food Laboratory
- 2.1.3. Regulations and Standards Applicable to Laboratories (ISO/IEC 17025)
  - 2.1.3.1. General Requirements for Laboratory Competence
  - 2.1.3.2. Equipment Testing and Calibration
  - 2.1.3.3. Implementation and Validation of Analytical Methods

2.2. Official Control of the Agri-Food Chain
- 2.2.1. PNCPA of the Agri-Food Chain
- 2.2.2. Competent Authorities
- 2.2.3. Legal Support for Official Control

2.3. Official Methods of Food Analysis
- 2.3.1. Methods of Animal Feed Analysis
- 2.3.2. Water Analysis Methods
  - 2.3.2.1. Sampling Frequencies According to Type of Industry
- 2.3.3. Methods of Analysis of Cereals
- 2.3.4. Analysis methods for fertilizers, residues of phytosanitary and veterinary products
- 2.3.5. Food Products Analysis Methods
- 2.3.6. Meat Products Analysis Methods
- 2.3.7. Fat Analysis Methods
- 2.3.8. Dairy Products Analysis Methods
- 2.3.9. Methods of Analysis of Wines, Juices and Musts
- 2.3.10 Fishery Products Analysis Methods

2.4. On-Site Analytical Techniques for Fresh Food Receiving, Processing and Finished Product
- 2.4.1. In Food Handling
  - 2.4.1.1. Analysis of Environments and Surfaces
  - 2.4.1.2. Handler Analysis
  - 2.4.1.3. Equipment Analysis
- 2.4.2. Analysis of Dresh Feed and Finished Product
  - 2.4.2.1. Product Data Sheets
  - 2.4.2.2. visual Inspection
  - 2.4.2.3. Color Charts
  - 2.4.2.4. Organoleptic Evaluation According to Food Type
- 2.4.3. Basic Physicochemical Analysis
  - 2.4.3.1. Determination of Maturity Index in Fruit
  - 2.4.3.2. Firmness
  - 2.4.3.3. Brix Degrees

2.5. Nutritional Analysis Techniques
- 2.5.1. Determination of Proteins
- 2.5.2. Determination of Carbohydrates
- 2.5.3. Determination of Fats
- 2.5.4. Determination of Ashes

2.6. Microbiological and Physicochemical Food Analysis Techniques
- 2.6.1. Preparation Techniques: Fundamentals, Instrumentation and Application in Food Processing
- 2.6.2. Microbiological Analysis
  - 2.6.2.1. Handling and Treatment of Samples for Microbiological Analysis
- 2.6.3. Physical-Chemical Analysis
  - 2.6.3.1. Handling and Treatment of Samples for Physical-Chemical Analysis

2.7. Instrumental Techniques in Food Analysis
- 2.7.1. Characterization, Quality Indexes and Product Conformity
  - 2.7.1.1. *Food Safety / Food Integrity*
- 2.7.2. Analysis of Residues of Prohibited Substances in Food
  - 2.7.2.1. Organic and Inorganic Waste
  - 2.7.2.2. Heavy Metals
  - 2.7.2.3. Additives
- 2.7.3. Analysis of Adulterant Substances in Foodstuffs
  - 2.7.3.1. Milk
  - 2.7.3.2. Wine
  - 2.7.3.3. Honey

2.8. Analytical Techniques Used in GMOs and Novel Foods
- 2.8.1. Definition
- 2.8.2. Detection Techniques

2.9. Emerging Analytical Techniques to Prevent Food Fraud
- 2.9.1. *Food Fraud*
- 2.9.2. *Food Authenticity*

2.10. Issuance of Certificates of Analysis
- 2.10.1. In the Food Industry
  - 2.10.1.1. Internal Reporting
  - 2.10.1.2. Report to Customers and Suppliers
  - 2.10.1.3. Bromatological Expertise
- 2.10.2. In Reference Laboratories
- 2.10.3. In Food Laboratories
- 2.10.4. In Arbitration Laboratories

Module 3. Logistics and Lot Traceability

3.1. Introduction to Traceability
- 3.1.1. Background to the Traceability System
- 3.1.2. Traceability Concept
- 3.1.3. Types of Traceability
- 3.1.4. Information Systems
- 3.1.5. Advantages of Traceability

3.2. Implementation of the Traceability Plan
- 3.2.1. Introduction
- 3.2.2. Previous Stages
- 3.2.3. Traceability Plan
- 3.2.4. Product Identification System
- 3.2.5. System Test Methods

3.3. Product Identification Tools
- 3.3.1. Manual Tools
- 3.3.2. Automated Tools
  - 3.5.2.1. EAN Bar Code
  - 3.5.2.2. RFID/// EPC
- 3.3.3. Records
  - 3.3.3.1. Registration of Identification of Raw Materials and other Materials
  - 3.3.3.2. Registration of Food Processing
  - 3.3.3.3. Final Product Identification Record
  - 3.3.3.4. Recording of the Results of Checks Performed
  - 3.3.3.5. Record Keeping Period

3.4. Incident Management, Product Recall and Reclamation and Customer Complaints
- 3.4.1. Incident Management Plan
- 3.4.2. Manage Customer Complaints

3.5. Supply Chain
- 3.5.1. Definition
- 3.5.2. Supply Chain Steps
- 3.5.3. Supply Chain Trends

3.6. Logistics
- 3.6.1. The Logistical Process
- 3.6.2. Supply Chain vs. Logistics
- 3.6.3. Containers
- 3.6.4. Packaging

3.7. Modes and means of Transportation
- 3.7.1. Transportation Concept
- 3.7.2. Modes of Transport, Advantages and Disadvantages

3.8. Food Product Logistics
- 3.8.1. Cold Chain
- 3.8.2. Perishable Products
- 3.8.3. Non-Perishable Products

Module 4. Food Legislation and Quality and Safety Standards

4.1. Introduction
- 4.1.1. Legal Organization
- 4.1.2. Basic Concepts
  - 4.1.2.1. Law
  - 4.1.2.2. Legislation
  - 4.1.2.3. Food legislation
  - 4.1.2.4. Standard
  - 4.1.2.5. BORRAR
  - 4.1.2.6. Certification, etc.

4.2. International Food Legislation. International Organizations
- 4.2.1. Food and Agriculture Organization of the United Nations (FAO)
- 4.2.2. World Health Organization (WHO)
- 4.2.3. *Codex Alimentarius* Commission
- 4.2.4. World Trade Organization

4.3. European Food Legislation
- 4.3.1. European Food Legislation
- 4.3.2. White Paper on Food Safety
- 4.3.3. Principles of Food Legislation
- 4.3.4. General Requirements of Food Legislation
- 4.3.5. Procedures
- 4.3.6. European Food Safety Authority (EFSA)

4.4. Food Safety Management in the Company
- 4.4.1. Responsibilities
- 4.4.2. Authorization
- 4.4.3. Certifications

4.5. Horizontal Food Legislation. Part 1
- 4.5.1. General Hygiene Regulations
- 4.5.2. Water for Public Consumption
- 4.5.3. Official Control of Foodstuffs

4.6. Horizontal Food Legislation. Part 2
- 4.6.1. Storage, Preservation and Transportation
- 4.6.2. Materials in Contact with Food
- 4.6.3. Food Additives and Flavorings
- 4.6.4. Contaminants in Food

4.7. Vertical Food Legislation: Products of Plant Origin
- 4.7.1. Vegetables and By-Products
- 4.7.2. Fruits and Derivatives
- 4.7.3. Cereals
- 4.7.4. Legumes
- 4.7.5. Edible Vegetable Oils
- 4.7.6. Edible Fats
- 4.7.7. Seasonings and Spices

4.8. Vertical Food Legislation: Animal Products
- 4.8.1. Meat and Meat Derivatives
- 4.8.2. Fish Products
- 4.8.3. Milk and Dairy Products
- 4.8.4. Eggs and Egg Products

4.9. Vertical Food Legislation: Other Products
- 4.9.1. Stimulant Foods and Derivatives
- 4.9.2. Beverages
- 4.9.3. Prepared Dishes

Module 5. Food Safety Management

5.1. Food Safety Principles and Management
- 5.1.1. The Concept of Danger
- 5.1.2. The Concept of Risk
- 5.1.3. Risk Evaluation
- 5.1.4. Food Safety and Its Management Based on Risk Assessment

5.2. Physical Hazards
- 5.2.1. Concepts and Considerations on Physical Hazards in Foods
- 5.2.2. Physical Hazard Control Methods

5.3. Chemical Hazards
- 5.3.1. Concepts and Considerations on Chemical Hazards in Foods
- 5.3.2. Chemical Hazards Naturally Occurring in Food
- 5.3.3. Hazards Associated with Chemicals Intentionally Added to Food
- 5.3.4. Incidentally or Unintentionally Added Chemical Hazards
- 5.3.5. Chemical Hazard Control Methods
- 5.3.6. Allergens in Food
- 5.3.7. Allergen Control in the Food Industry

5.4. Biological Hazards
- 5.4.1. Concepts and Considerations of Biological Hazards in Foods
- 5.4.2. Microbial Hazards
- 5.4.3. Non-Microbial Biological Hazards
- 5.4.4. Biological Hazard Control Methods

5.5. Good Manufacturing Practices (GMP) Program
- 5.5.1. Buenas Prácticas de Fabricación (GMP)
- 5.5.2. Background on GMP
- 5.5.3. Scope of GMPAl
- 5.5.4. GMPs in a Safety Management System

5.6. Sanitation Standard Operating Procedure (SSOP)
- 5.6.1. Sanitary Systems in the Food Industry
- 5.6.2. Scope of SSOPs
- 5.6.3. Structure of a SSOP
- 5.6.4. SSOPs in a Safety Management System

5.7. Hazard Analysis and Critical Control Points (HACCP) Plan
- 5.7.1. Hazard Analysis and Critical Control Points (HACCP)
- 5.7.2. Background of HACCP
- 5.7.3. HACCP Prerequisites
- 5.7.4. The 5 Preliminary Steps to HACCP Implementation

5.8. The 7 Steps of Implementing the Hazard Analysis and Critical Control Points (HACCP) Plan
- 5.8.1. Risk Analysis
- 5.8.2. Identification of Critical Control Points
- 5.8.3. Establishment of Critical Limits
- 5.8.4. Establishment of Monitoring Procedures
- 5.8.5. Implementation of Corrective Actions
- 5.8.6. Establishment of Verification Procedures
- 5.8.7. Record Keeping and Documentation System

5.9. Evaluation of the Efficiency of the Hazard and Critical Control Point Plan (HACCP) System.
- 5.9.1. Evaluation of the Efficiency of a CCP
- 5.9.2. Overall Evaluation of the Efficiency of the HACCP Plan
- 5.9.3. Use and Management of Records to Evaluate the Efficiency of the HACCP Plan

5.10. Hazard and Critical Control Point Plan (HACCP) System Variants Based on Risk Systems
- 5.10.1. VACCP or Vulnerability Assessment and Critical Control Points (VACCP) Plan
- 5.10.2. Threat Assessment Critical Control Points (TACCP)
- 5.10.3. Hazard Analysis and Risk-Based Preventive Controls (HARPC)

Module 6. Safety Certifications for the Food Industry

6.1. Principles of Certification
- 6.1.1. The Certification Concept
- 6.1.2. The Certifying Agencies
- 6.1.3. General Outline of a Certification Process
- 6.1.4. Management of a Certification and Re-certification Program
- 6.1.5. Management System Before and After Certification

6.2. Good Practice Certifications
- 6.2.1. Good Manufacturing Practice (GMP) Certification
- 6.2.2. The case of GMP for food supplements
- 6.2.3. Good Practice Certification for Primary Production
- 6.2.4. Other Good Practice Programs (GxP)

6.3. ISO 17025 Certification
- 6.3.1. The ISO Standards Scheme
- 6.3.2. ISO 17025 System Overview
- 6.3.3. ISO 17025 Certification
- 6.3.4. CThe Role of ISO 17025 Certification in Food Safety Management

6.4. ISO 22000 Certification
- 6.4.1. Background
- 6.4.2. Structure of the ISO 22000 Standard
- 6.4.3. Scope of ISO 22000 Certification

6.5. GFSI Initiative and the Global GAP and Global Markets Program
- 6.5.1. The GFSI (Global Food Safety Initiative) Global Food Safety System
- 6.5.2. Global GAP Program Structure
- 6.5.3. Scope of Global GAP Certification
- 6.5.4. Structure of the Global Markets Program
- 6.5.5. Scope of the Global Markets Program Certification
- 6.5.6. Relation between Global GAP and Global Markets with Other

6.6. SQF Certification (Safe Quality Food)
- 6.6.1. SQF Program Structure
- 6.6.2. Scope of SQF Certification
- 6.6.3. Relationship of SQF With Other Certifications

6.7. BRC Certification (British Retail Consortium)
- 6.7.1. BRC Program Structure
- 6.7.2. Scope of BRC Certification
- 6.7.3. Relationship of BRC With Other Certifications

6.8. IFS Certification
- 6.8.1. IFS Program Structure
- 6.8.2. Scope of IFS Certification
- 6.8.3. Relationship of IFS With Other Certifications

6.9. Food Safety System Certification 22000 (FSSC 22000)
- 6.9.1. Background of the FSSC 22000 Program
- 6.9.2. FSSC 22000 Program Structure
- 6.9.3. Scope of FSSC 22000 Certification

6.10. Food Defense Programs
- 6.10.1. The Concept of Food Defense
- 6.10.2. Scope of a Food Defense Program
- 6.10.3. Tools and Programs for Implementing a Food Defense Program

Module 7. Digitalization of the Quality Management System

7.1. Quality Standards and Risk Analysis in the Food Industry
- 7.1.1. Current Food Safety and Quality Standards
- 7.1.2. Main Risk Factors in Food Products

7.2. The "Age of Digitization" and Its Influence on Global Food Safety Systems
- 7.2.1. *Codex Alimentarius* Global Food Safety Initiative
- 7.2.2. Hazard Analysis and Critical Control Point (HACCP)
- 7.2.3. ISO 22000 Standard

7.3. Commercial Software for Food Safety Management
- 7.3.1. Use of Smart Devices
- 7.3.2. Business Software for Specific Management Processes

7.4. Establishment of Digital Platforms for the Integration of a Team Responsible for the Development of the HACCP Program
- 7.4.1. Stage 1 Preparation and Planning
- 7.4.2. Stage 2 Implementation of Prerequisite Programs for Hazards and Critical Control Points of the HACCP program
- 7.4.3. Stage 3 Execution of the Plan
- 7.4.4. Stage 4 HACCP Verification and Maintenance

7.5. Digitization of Pre-requisite Programs (PPR) in the Food Industry - From Traditional to Digital Systems
- 7.5.1. Primary Production Processes
  - 7.5.1.1. Good Hygiene Practices (GHP)
  - 7.5.1.2. Good Manufacturing Practices (GMP)
- 7.5.2. Strategic Processes
- 7.5.3. Operational Processes
- 7.5.4. Support Processes

7.6. Platforms for Monitoring "Standard Operating Procedures (SOPs)"
- 7.6.1. Training of Personnel in the Documentation of Specific SOPs
- 7.6.2. Channels of Communication and Monitoring of SOP Documentation

7.7. Protocols for Document Management and Communication Between Departments
- 7.7.1. Traceability Document Management
  - 7.7.1.1. Procurement Protocols
  - 7.7.1.2. Traceability of Raw Material Receipt Protocols
  - 7.7.1.3. Traceability of Warehouse Protocols
  - 7.7.1.4. Process Area Protocols
  - 7.7.1.5. Traceability of Hygiene Protocols
  - 7.7.1.6. Product Quality Protocols
- 7.7.2. Implementation of Alternative Communication Channels
  - 7.7.2.1. Use of Storage Clouds and Restricted Access Folders
  - 7.7.2.2. Coding of Documents for Data Protection

7.8. Digital Documentation and Protocols for Audits and Onspections
- 7.8.1. Management of Internal Audits
- 7.8.2. Record of Corrective Actions
- 7.8.3. Application of the "Deming cycle
- 7.8.4. Management of Continuous Improvement Programs

7.9. Strategies for Proper Risk Communication
- 7.9.1. Risk Management and Communication Protocols
- 7.9.2. Effective Communication Strategies
- 7.9.3. Public Information and Use of Social Networks

7.10. Case Studies of Digitization and Its Advantages in Reducing Risks in the Food Industry
- 7.10.1. Food Safety Risks
- 7.10.2. Food Fraud Risks
- 7.10.3. Food Defense Risks

Module 8. Validation of New Methodologies and Processes

8.1. Critical Control Points
- 8.1.1. Significant Hazards
- 8.1.2. Prerequisite Programs
- 8.1.3. Critical Control Point Management Chart

8.2. Verification of a Self-Control System
- 8.2.1. Internal Audits
- 8.2.2. Review of Historical Records and Trends
- 8.2.3. Customer Complaints
- 8.2.4. Detection of Internal Incidents

8.3. Monitoring, Validation and Verification of Control Points
- 8.3.1. Surveillance or Monitoring Techniques
- 8.3.2. Validation of Controls
- 8.3.3. Efficiency Verification

8.4. Validation of Processes and Methods
- 8.4.1. Documentary Support
- 8.4.2. Validation of Analytical Techniques
- 8.4.3. Validation Sampling Plan
- 8.4.4. Method Bias and Accuracy
- 8.4.5. Determining Uncertainty

8.5. Validation Methods
- 8.5.1. Method Validation Stages
- 8.5.2. Types of Validation Processes, Approaches
- 8.5.3. Validation Reports, Summary of Data Obtained

8.6. Incident and Deviation Management
- 8.6.1. Formation of the Work Team
- 8.6.2. Description of the Problem
- 8.6.3. Root Cause Determination
- 8.6.4. Corrective and Preventive Actions
- 8.6.5. Efficiency Verification

8.7. Root Cause Analysis and Its Methods
- 8.7.1. Causal Analysis: Qualitative Methods
  - 8.7.1.1. Tree Causes Root
  - 8.7.1.2. Why
  - 8.7.1.3. Cause Effect
  - 8.7.1.4. Ishikawa Diagram
- 8.7.2. Cause Analysis: Quantitative Methods
  - 8.7.2.1. Data Collection Data Model
  - 8.7.2.2. Pareto Chart
  - 8.7.2.3. Scatter Plots
  - 8.7.2.4. Histograms

8.8. Claims Management
- 8.8.1. Claim Data Collection
- 8.8.2. Investigation and Action
- 8.8.3. Preparation of Technical Report
- 8.8.4. Claims Trend Analysis

8.9. Internal Audits of the Self-Control System
- 8.9.1. Competent Auditors
- 8.9.2. Audit Program and Plan
- 8.9.3. Scope of the Audit
- 8.9.4. Reference Documents

8.10. Executing Internal Audits
- 8.10.1. Opening Meeting
- 8.10.2. System Evaluation
- 8.10.3. Deviations from Internal Audits
- 8.10.4. Closing Meeting
- 8.10.5. Evaluation and Monitoring of the Effectiveness of Deviation Closure

Module 9. R&D&I of New Foods and Ingredients

9.1. New Trends in Food Product Processing
- 9.1.1. Design of Functional Foods Aimed at Improving Specific Physiological Functions
- 9.1.2. Innovation and New Trends in the Design of Functional Foods and Nutraceuticals

9.2. Technologies and Tools for Isolation, Enrichment, and Purification of Functional Ingredients from Different Starting Materials
- 9.2.1. Chemical Properties
- 9.2.2. Sensory Properties

9.3. Procedures and Equipment for the Incorporation of Functional Ingredients into the Base Feed
- 9.3.1. Formulation of Functional Foods According to Their Chemical and Sensory Properties, Caloric Value, etc.
- 9.3.2. Stabilization of Bioactive Ingredients from Formulation
- 9.3.3. Dosage

9.4. Gastronomy Research
- 9.4.1. Textures
- 9.4.2. Viscosity and Flavor. Thickeners Used in Nouvelle Cuisine
- 9.4.3. Gelling Agents
- 9.4.4. Emulsions

9.5. Innovation and New Trends in the Design of Functional Foods and Nutraceuticals
- 9.5.1. Design of Functional Foods Aimed at Improving Specific Physiological Functions
- 9.5.2. Practical Applications of Functional Food Design

9.6. Specific Formulation of Bioactive Compounds
- 9.6.1. Flavonoid Transformation in the Formulation of Functional Foods
- 9.6.2. Bioavailability Studies of Phenolic Compounds
- 9.6.3. Antioxidants in the Formulation of Functional Foods
- 9.6.4. Preservation of Antioxidant Stability in Functional Food Design

9.7. Design of Low-Sugar and Low-Fat Products
- 9.7.1. Development of Low-Sugar Products
- 9.7.2. Low fat Products
- 9.7.3. Strategies for the Synthesis of Structured Lipids

9.8. Processes for the Development of New Food Ingredients
- 9.8.1. Advanced Processes for Obtaining Food Ingredients with Industrial Application: Micronization and Microencapsulation Technologies
- 9.8.2. Supercritical and Clean Technologies
- 9.8.3. Enzymatic Technology for the Production of Novel Food Ingredients
- 9.8.4. Biotechnological Production of Novel Food Ingredients

9.9. New Food Ingredients of Plant and Animal Origin
- 9.9.1. Trends in R&D&I Developments in New Ingredients
- 9.9.2. Applications of Plant-Based Ingredients
- 9.9.3. Applications of Ingredients of Animal Origin

9.10. Research and Improvement of Labeling and Preservation Systems
- 9.10.1. Labeling Requirements
- 9.10.2. New Conservation Systems
- 9.10.3. Validation of Health Claims

Module 10. Development, Coordination, and Execution of R&D&I Projects

10.1. Innovation and Competitiveness in the Food Industry
- 10.1.1. Analysis of the Food Sector
- 10.1.2. Innovation in Processes, Products and Management
- 10.1.3. Regulatory Conditions for the Marketing of Novel Foods

10.2. The R&D System
- 10.2.1. Public Investigation and Private Investigation
- 10.2.2. International Programs
- 10.2.3. Research Promotion Organizations

10.3. R&D&I Projects
- 10.3.1. R&D&I Aid Programs
- 10.3.2. Types of Projects
- 10.3.3. Types of Financing
- 10.3.4. Project Evaluation, Monitoring and Control

10.4. Scientific and Technological Production
- 10.4.1. Publication, Dissemination and Diffusion of Research Results
- 10.4.2. Basic Research/Applied Research
- 10.4.3. Private Sources of Information

10.5. Technology Transfer
- 10.5.1. Protection of Industrial Property. Patents
- 10.5.2. Regulatory Constraints on Transfers in the Food Sector
- 10.5.3. European Food Safety Authority (EFSA)
- 10.5.4. Food and Drug Administration (FDA)

10.6. Planning of R&D&I Projects
- 10.6.1. Work Decomposition Scheme
- 10.6.2. Resource Allocation
- 10.6.3. Priority of Tasks
- 10.6.4. Gantt Chart Method
- 10.6.5. Digitally Supported Planning Methods and Systems

10.7. Documentary Development of R&D&I Projects
- 10.7.1. Preliminary Studies
- 10.7.2. Delivery of Progress Reports
- 10.7.3. Development of the Project Report

10.8. Project Execution
- 10.8.1. *Checklist*
- 10.8.2. Deliverables
- 10.8.3. Project Progress Control

10.9. Project Delivery and Validation
- 10.9.1. ISO Standards for the Management of R&D&I Projects
- 10.9.2. Completion of the Project Phase
- 10.9.3. Analysis of Results and Feasibility

10.10. Implementation of R&D&I Projects Developed by the Company
- 10.10.1. Purchase Management
- 10.10.2. Supplier Validation
- 10.10.3. Project Validation and Verification

You will train with updated and practical knowledge that will be crucial for leading in a global and dynamic Food Safety environment, supported by the revolutionary Relearning methodology"

07

Clinical Internship

After completing the online theoretical period, the program includes an Internship Program in a leading institution. In this way, graduates will have the support of a tutor who will accompany them throughout the entire process, both in preparation and in the development of the internship, dedicating 100% of their time to the student.

During the internship, you will have the opportunity to collaborate with companies in the food sector, quality control laboratories, or regulatory entities—always with the full quality guarantees of TECH. With all the quality guarantees from TECH!"

The Internship Program of this Food Safety program consists of a practical placement in a prestigious institution, lasting 3 weeks, from Monday to Friday, with 8 consecutive hours of practical training per day alongside an assigned specialist. This placement will allow graduates to work on real projects with a team of leading professionals in the field, applying the most innovative procedures and tools.

In this training proposal, each activity is designed to strengthen and refine the key competencies required for specialized practice in this field. In this way, the professional profile will be enhanced, driving a strong, efficient, and highly competitive performance.

The practical teaching will be done with the accompaniment and guidance of professors and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for medical praxis (learning to be and learning to relate).

The procedures described below will be the basis of the specialization, and their realization will be subject to the center's own availability, its usual activity and workload, the proposed activities being the following:

Module	Practical Activity
Quality Management and Control	Evaluate the conformity of food products
	Implement quality management systems
	Conduct internal and external audits
	Improve processes to ensure food quality
Food Legislation and Standards	Interpret and apply local and international food regulations
	Advise on legal requirements in food safety
	Develop policies and procedures aligned with current regulations
	Ensure compliance with regulatory standards
Food Risk Management	Identify hazards and assess food-related risks
	Develop risk management programs
	Implement early-warning and response systems
	Mitigate risks within the food chain
Research and Development in Food Safety	Investigate new technologies to improve food safety
	Develop new food preservation methods
	Evaluate the effectiveness of risk analysis techniques
	Participate in applied research projects

Module	Practical Activity
Communication and Training in Food Safety	Train personnel in safe food-handling practices
	Communicate food safety policies effectively
	Develop educational materials on good food-handling practices
	Collaborate in public awareness campaigns
Food Product Development	Formulate new food products that are safe and nutritious
	Optimize production processes to ensure safety
	Conduct product stability and shelf-life testing
	Adapt products to specific safety requirements

You will develop competencies in communication, teamwork, and decision-making under pressure, preparing you to face the complex challenges presented by Food Safety in today's world"

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.

General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Master's Degree, students will be assigned two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both practical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, five days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the student does not show up on the start date of the Hybrid Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who complete the Hybrid Master's Degree will receive a diploma accrediting their attendance at the institution.

5. EMPLOYMENT RELATIONSHIP: the Hybrid Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

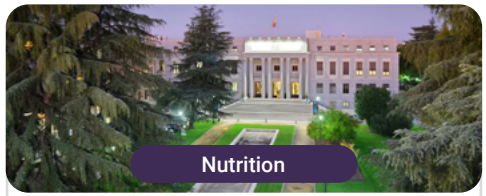
08

Where Can I Do the Clinical Internship?

This Hybrid Master's Degree includes in its curriculum a practical placement in a prestigious institution, where students will apply everything they have learned in the field of Food Safety management. To make this degree accessible to a wider range of professionals, TECH will offer graduates the opportunity to complete the internship in various companies, globally. In this way, this institution strengthens its commitment to quality and affordable education for all.

You will complement your theoretical training with the best practical placement available in the academic market. With TECH, you will achieve success in your professional career!"

The student will be able to complete the practical part of this Hybrid Master's Degree at the following centers:



CSIC

Country
Spain

City
Madrid

Address: Calle Serrrano,117, chamartin, 28006 Madrid

Spanish State Agency for Scientific Research and Technological Development

Related internship programs:
- Geotechnics and Foundations

Boost your career path with holistic teaching, allowing you to advance both theoretically and practically"

09

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career"

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.
The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

"At TECH you will NOT have live classes (which you might not be able to attend)"

The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.

Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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

A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

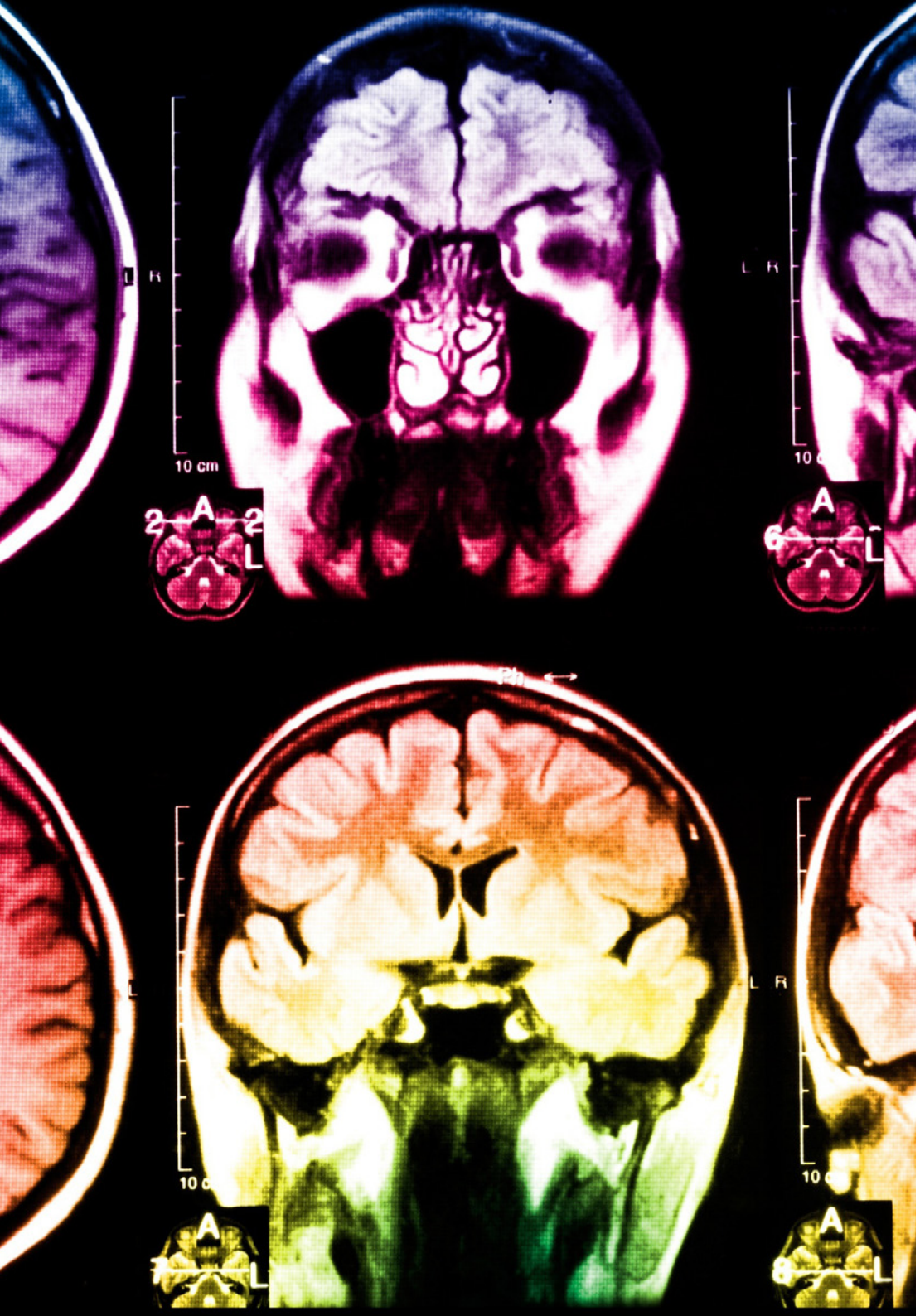
In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.

The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
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. 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.



The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.

As such, the best educational materials, thoroughly prepared, will be available in this program:

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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.

Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.

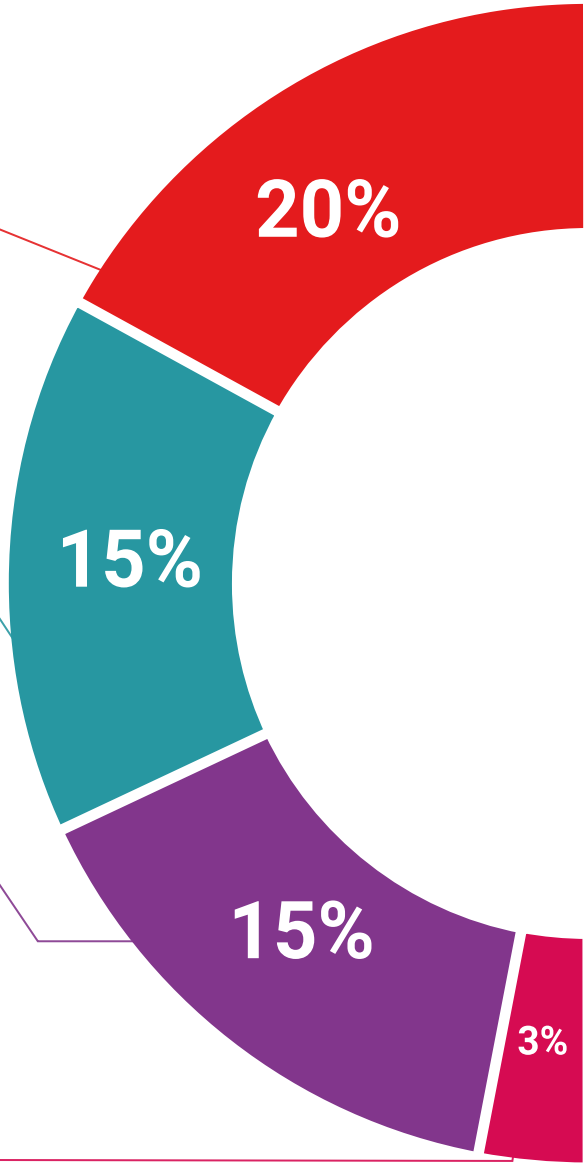
Interactive Summaries

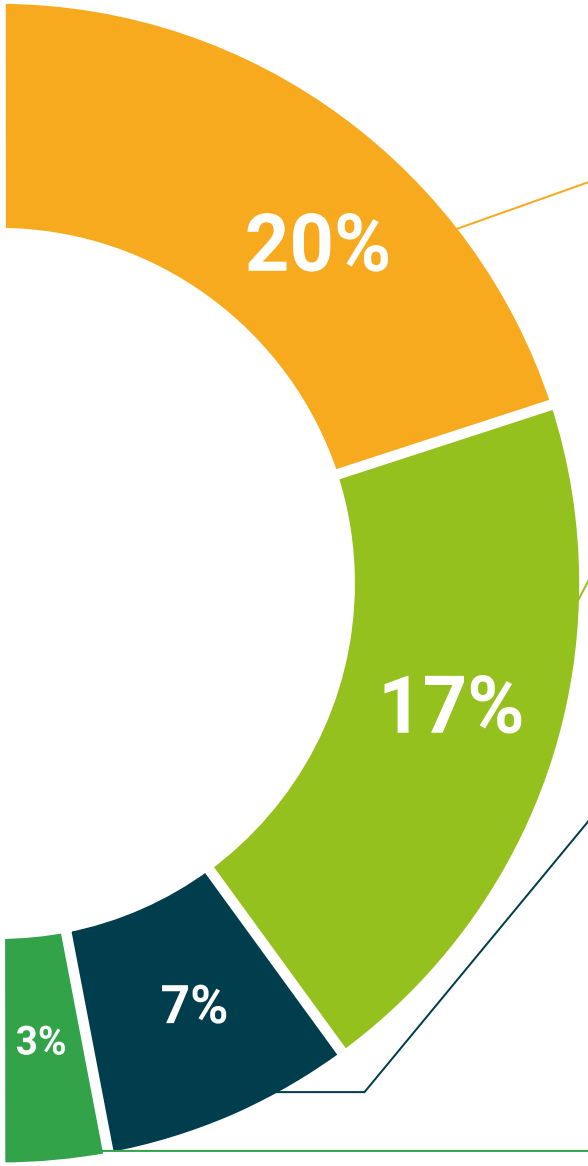
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

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 for 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.

10

Certificate

The Hybrid Master's Degree in Food Safety guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Hybrid Master's Degree issued by TECH Global University.

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

This private qualification will allow you to obtain a diploma for the **Hybrid Master's Degree in Food 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** private qualification, 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: **Hybrid Master's Degree in Food Safety**

Modality: **online**

Duration: **12 months**

Accreditation: **120 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Hybrid Master's Degree in Food Safety

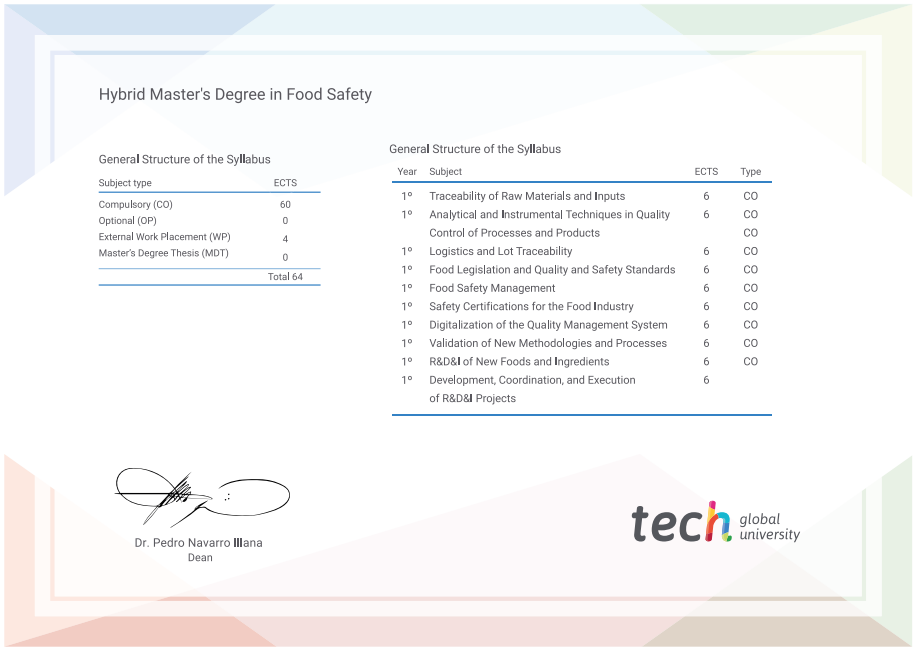
This is a private qualification of 1,920 hours of duration equivalent to 64 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
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


Hybrid Master's Degree in Food Safety

General Structure of the Syllabus

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	4
Master's Degree Thesis (MDT)	0
	Total 64

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Traceability of Raw Materials and Inputs	6	CO
1º	Analytical and Instrumental Techniques in Quality Control of Processes and Products	6	CO
1º	Logistics and Lot Traceability	6	CO
1º	Food Legislation and Quality and Safety Standards	6	CO
1º	Food Safety Management	6	CO
1º	Safety Certifications for the Food Industry	6	CO
1º	Digitalization of the Quality Management System	6	CO
1º	Validation of New Methodologies and Processes	6	CO
1º	R&D&I of New Foods and Ingredients	6	CO
1º	Development, Coordination, and Execution of R&D&I Projects	6	CO

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Dean

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*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.

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Hybrid Master's Degree

Food Safety

Modality: **Hybrid (Online + Clinical Internship)**
Duration: **12 months**
Certificate: **TECH Global University**
Credits: **60 + 4 ECTS**

Hybrid Master's Degree
Food Safety

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