



Postgraduate Diploma

Food Epidemiology

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/nutrition/postgraduate-diploma/postgraduate-diploma-food-epidemiology

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The scarcity of natural resources and global warming are causing a worldwide transformation that affects people's nutrition as well as the emergence of diseases. This is the current focus of the scientific community, which continues to work in the field of food epidemiology to find the mechanisms of transmission, for example, of listeriosis or how to improve the quality of the food sector. Advances in the relationship between diet and health are of great relevance for nutrition professionals. Against this backdrop, this 100% online program is born, which will delve, thanks to innovative multimedia material, into disease prevention, food safety management or the physiology of human nutrition. All this in a program that can be easily accessed at any time of the day, from a computer with an Internet connection.



tech 06 | Introduction

In recent decades, an increase in zoonoses has been detected as a result of changes in the environment caused, to a large extent, by the effects of human actions on ecosystems. This is a problem of concern and is the subject of work in different disciplines, including food epidemiology. However, advances in the detection of pathogens, analytical techniques and rigorous quality measures in the food industry give a halo of hope in a complex scenario that requires advanced knowledge and increasingly specialized professionals.

In this scenario, the Nutrition professional who is knowledgeable in this field must be aware of the latest developments and current scientific studies focused on improving human health through an adequate diet and quality standards. A panorama that requires, therefore, a constant updating that the specialist can obtain through this Postgraduate Diploma in Food Epidemiology.

A program that will deepen over 6 months in the advances in the prevention of diseases from dairy products, meat, pastries or canned food consumption; progress in studies focused on metabolism of each nutrient and micronutrient or the requirements for compliance with ISO 22000 standards.

For this purpose, students have at their disposal at any time of the day video summaries of each topic, videos in detail, diagrams or essential readings, which will provide them with the most updated information in this field. A theoretical approach is complemented by the practical vision of this program, thanks to the case studies provided by the experts who teach this program.

A Postgraduate Diploma designed by TECH to give the professional the opportunity to be up to date in this field through a 100% online program that you can access comfortably, wherever and whenever you want. Students only need an electronic device (computer, tablet or cell phone) with an Internet connection to visualize the content hosted on the virtual campus. In addition, the Relearning System, methodology used by this academic institution, health personnel will be able to advance, in a much more natural and progressive way, through the syllabus of this program.

This **Postgraduate Diploma in Food Epidemiology** contains the most complete and up-to-date educational program on the market. Its most outstanding features are:

- The development of case studies presented by experts in Food Technology
- Graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- 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



An academic option designed for professionals like you, who wish to study a Postgraduate Diploma without neglecting other areas of your personal life"



You will get to know the latest techniques used in food analysis thanks to the multimedia resource library available 24 hours a day"

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

The design of this program focuses on Problem-Based Learning, by means of which the professionals must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned experts.

Get in 6 months an update of your knowledge on the factors that influence proper nutrition.

A university program that will take you to the current reality of food and its perception by society.







tech 10 | Objectives

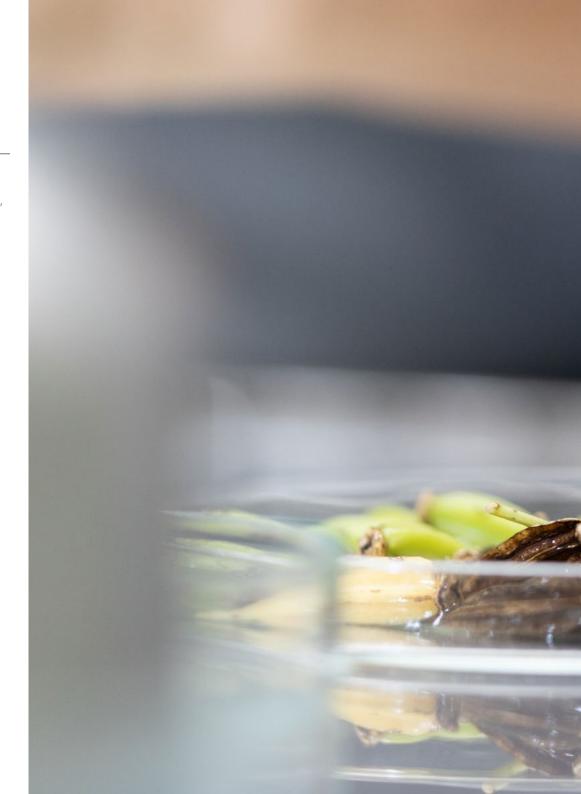


General Objectives

- Appreciate and recognize the sanitary and preventive importance of cleaning, disinfection, disinsecting and pest control programs in the food chain
- Collaborate in the implementation of quality systems
- Evaluate, control and manage aspects of traceability in the food supply chain
- Plan and implement health promotion and prevention programs
- Develop and establish food education guidelines



Thanks to the Relearning method, you will easily advance through the content of this program and reduce the long hours of study"





Specific Objectives

Module 1. Food and Public Health

- To know the distinguishing fact of human nutrition, interrelationships between nature and culture
- Acquire a good understanding of individual and social eating behaviors
- Identify health problems associated with the use of food additives
- Classify the main social and economic implications of zoonoses

Module 2. Quality and Food Safety Management

- Design and evaluate tools that promote food safety management throughout the food chain to protect public health
- Identify and interpret the requirements of the food safety management standard (UNE EN ISO 22000) for its subsequent application and evaluation in food chain operators
- Develop, implement, evaluate and maintain appropriate hygiene practices, food safety and risk control systems
- Participate in the design, organization and management of different food services

Module 3. Fundamentals of General Physiology

- Classify the nutrients that make up food
- Understand the range of factors that determine and condition nutrition
- Outline the metabolism of each nutrient and micronutrient, and their recommended intakes
- Understand different principles applied to physiological knowledge for human health
- Identify the factors influencing human nutrition
- Interpret the basic structure of the nervous and endocrine systems, as well as the action mechanisms of the respective hormones



03

Structure and Content

The professionals who enters this university program will have access to a study plan divided into three modular blocks in which they will be able to deepen in the advances on food and public health, quality management and food safety and the bases of the physiology of human nutrition. All this in a 100% online academic format, without classes with fixed schedules and with a library of multimedia resources, which will allow you to easily update your knowledge in Food Epidemiology.



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Module 1. Food and Public Health

- 1.1. Human Nutrition and Historical Evolution
 - 1.1.1. The Natural Element and the Cultural Element Biological Evolution,
 Tool Handling and Tool Making
 - 1.1.2. The Use of Fire, Hunter-Gatherer Profiles Meat or Vegetarian
 - 1.1.3. Biological, Genetic, Chemical and Mechanical Technologies Involved in Food Processing and Preservation
 - 1.1.4. Food in Roman Times
 - 1.1.5. Influence of the Discovery of America
 - 1.1.6. Food in Developed Countries
 - 1.1.6.1. Food Distribution Chains and Networks
 - 1.1.6.2. The Global Trade "Network" and Small Businesses
- 1.2. Socio-Cultural Significance of Food
 - 1.2.1. Food and Social Communication Social Relationships and Individual Relationships
 - 1.2.2. Emotional Influence of Foods Parties and Celebrations
 - 1.2.3. Relationships Between Diets and Religious Precepts Food and Christianity, Hinduism, Buddhism, Judaism, Islam
 - 1.2.4. Natural Foods, Ecological Foods, and Organic Foods
 - 1.2.5. Typology of Diets: The Standard Diet, Slimming Diets, Curative Diets, Magical Diets and Absurd Diets
 - 1.2.6. Food Reality and Food Perception Protocol for Family and Institutional Meals
- 1.3. Communication and Eating Behavior
 - 1.3.1. Written Media: Specialist Magazines Informative Magazines and Professional Journals
 - 1.3.2. Audiovisual Media: Radio, Television, Internet; Packaging; Advertising
 - 1.3.3. Eating Behavior: Motivation and Intake
 - 1.3.4. Food Labeling and Consumption: Development of Likes and Dislikes
 - 1.3.5. Sources of Variation in Food Preferences and Attitudes
- 1.4. Concept of Health and Diseases and Epidemiology
 - 1.4.1. Health Promotion and Disease Prevention
 - 1.4.2. Prevention Levels, Laws of Public Health
 - 1.4.3. Food Characteristics Food as a Vehicle for Disease
 - 1.4.4. Epidemiological Methods: Descriptive, Analytical, Experimental, Predictive

- 1.5. Sanitary, Social and Economic Significance of Zoonosis
 - 1.5.1 Zoonosis Classification
 - 1.5.2. Factors
 - 1.5.3. Assessment Criteria
 - 1.5.4. Action Plans:
- 1.6. Epidemiology and Prevention of Diseases Transmitted by Meat and Meat By-Products and Fish and Fish By-Products
 - 1.6.1. Introduction. Epidemiological Factors of Meat-Borne Diseases
 - 1.6.2. Consumption-based Diseases
 - 1.6.3. Preventive Measures for Diseases Transmitted by Meat Products
 - 1.6.4. Introduction. Epidemiological Factors of Fish Borne Diseases
 - 1.6.5. Consumption-based Diseases
 - 1.6.6. Prevention
- 1.7. Epidemiology and Prevention of Diseases Transmitted by Milk and Milk By-Products
 - 1.7.1. Introduction. Epidemiological Factors of Meat-Borne Diseases
 - 1.7.2. Consumption-based Diseases
 - 1.7.3. Preventive Measures for Diseases Transmitted by Dairy Products
- Epidemiology and Prevention of Diseases Transmitted by Bread, Pastries, Confectionery and Cakes
 - 1.8.1. Introduction. Epidemiological Factors
 - 1.8.2. Consumption-based Diseases
 - 1.8.3. Prevention
- Epidemiology and Prevention of Diseases Transmitted by Preserved and Semi-Preserved Foods, and by Edible Vegetables and Mushrooms
 - 1.9.1. Introduction. Epidemiological Aspects of Preserved and Semi-Preserved Foods
 - 1.9.2. Diseases Caused by Consumption of Canned and Semi-Canned Foods
 - 1.9.3. Sanitary Prevention of Diseases Transmitted by Preserved and Semi-Preserved Foods
 - 1.9.4. Introduction. Epidemiological Aspects of Vegetables and Mushrooms
 - 1.9.5. Diseases Caused by Consumption of Vegetables and Mushrooms
 - 1.9.6. Sanitary Prevention of Diseases Transmitted by Vegetables and Mushrooms
- 1.10. Health Problems Arising from the Use of Additives, Source of Food Poisoning
 - 1.10.1. Naturally Occurring Toxins in Food
 - 1.10.2. Toxins Due to Incorrect Handling
 - 1.10.3. Use of Food Additives

Module 2. Quality and Food Safety Management

- 2.1. Food Safety and Consumer Protection
 - 2.1.1. Definition and Basic Concepts
 - 2.1.2. Quality and Food Safety Evolution
 - 2.1.3. Situation in Developing and Developed Countries
 - 2.1.4. Key Food Safety Agencies and Authorities: Structures and Functions
 - 2.1.5. Food Fraud and Food Hoaxes: The Role of the Media
- 2.2. Facilities, Premises and Equipment
 - 2.2.1. Site Selection: Design and Construction and Materials
 - 2.2.2. Premises, Facilities and Equipment Maintenance Plan
 - 2.2.3. Applicable Regulations
- 2.3. Cleaning and Disinfection Plan (L + D)
 - 2.3.1. Dirt Components
 - 2.3.2. Detergents and Disinfectants: Composition and Functions
 - 2.3.3. Cleaning and Disinfection Stages
 - 2.3.4. Cleaning and Disinfection Programming
 - 2.3.5. Current Regulations
- 2.4 Pest Control
 - 2.4.1. Pest Control and Disinsection (Plan D + D)
 - 2.4.2. Pests Associated with the Food Chain
 - 2.4.3 Preventive Measures for Pest Control
 - 2.4.3.1. Traps and Snares for Mammals and Ground Insects
 - 2.4.3.2. Traps and Snares for Flying Insects
- 2.5. Traceability Plan and Good Manipulation Practices (GMP)
 - 2.5.1. Structure of a Traceability Plan
 - 2.5.2. Current Regulations Associated with Traceability
 - 2.5.3. GMP Associated with Food Processing
 - 2.5.3.1. Food Handlers
 - 2.5.3.2. Requirements to be Met
 - 2.5.3.3. Hygiene Training Plans

- 2.6. Elements in the Management of Food Safety
 - 2.6.1. Water as an Essential Element in the Food Chain
 - 2.6.2. Biological and Chemical Agents Associated with Water
 - 2.6.3. Quantifiable Elements of Quality, Safety and Use of Water
 - 2.6.4. Approval of Suppliers
 - 2.6.4.1. Supplier Monitoring Plan
 - 2.6.4.2. Current Regulations Associated
 - 2.6.5. Food Labeling
 - 2.6.5.1. Consumer Information and Allergen Labeling
 - 2.6.5.2. Labeling of Genetically Modified Organisms
- 2.7. Food Crisis and Associated Policies
 - 2.7.1. Triggering Factors of a Food Crisis
 - 2.7.2. Scope, Management and Response to the Food Security Crisis
 - 2.7.3. Alert Communication Systems
 - 2.7.4. Policies and Strategies for Improving Food Quality and Safety
- 2.8. Design of the Hazard Analysis Critical Control Point (HACCP) Plan
 - 2.8.1. General Guidelines to be Followed for its Implementation: Underlying Principles and Prerequisite Program
 - 2.8.2. Management Commitment
 - 2.8.3. Configuration of HACCP Resources
 - 2.8.4. Description of the Product and Identification of its Intended Use
 - 2.8.5. Flow Diagrams
- 2.9. Development of the HACCP Plan
 - 2.9.1. Defining Critical Control Points (CCPs)
 - 2.9.2. The Seven Basic Principles of the HACCP Plan
 - 2.9.2.1. Requirements Identification and Analysis
 - 2.9.2.2. Establishment of Control Measures for Identified Hazards
 - 2.9.2.3. Determination of Critical Control Points (CCP)
 - 2.9.2.4. Defining Critical Control Points (CCPs)
 - 2.9.2.5. Establishment of Critical Limits
 - 2.9.2.6. Determination of Corrective Actions
 - 2.9.2.7. HACCP System Checks

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2.10.	2.10.2.2.10.3.2.10.4.	ISO 22000 Principles Purpose and Field of Application Market Situation and Position in Relation to Other Applicable Standards in the Food Chain Application Requirements Food Safety Management Policy		
Mod	ule 3. F	Fundamentals of General Physiology		
3.1.	Physiol	ogy of Human Nutrition		
	3.1.1.	Introduction to Nutrition, Concepts and Definitions		
	3.1.2.	Body Composition and Main Nutrients		
	3.1.3.	Digestive System and Digestion		
		3.1.3.1. Digestive System Stages		
		3.1.3.2. Digestive Regulators		
	3.1.4.	Bioavailability of Nutrients		
3.2.	Carboh	ydrates		
	3.2.1.	General Characteristics: Biochemistry and Classification		
	3.2.2.	Digestion and Absorption of Carbohydrates: Physiological Utility		
	3.2.3.	Food Sources and Recommended Carbohydrate Intakes		
	3.2.4.	Pathologies Associated with Carbohydrate Ingestion		
3.3.	Dietary fiber:			
	3.3.1.	General Characteristics: Biochemistry and Classification		
	3.3.2.	Digestion and Absorption of Fibers: Physiological Utility		
	3.3.3.	Food Sources and Recommended Intakes		
	3.3.4.	Pathologies and Harmful Effects		
3.4.	Amino	Amino Acids and Proteins		
	3.4.1.	General Characteristics: Amino Acids and Metabolism		
		3.4.1.1. Protein Amino Acids		
		3.4.1.2. Non Protein Amino Acids		
	3.4.2.	Digestion and Absorption of Protein: Physiological Utility		
	3.4.3.	Food Sources and Recommended Protein Intakes		
	3.4.4.	Pathologies Associated with Protein Metabolism		

3.5.	Lipids		
	3.5.1.	General Characteristics: Classification and Structure	
		3.5.1.1. Structure and Special Properties of Cholesterol	
		3.5.1.2. Structure and Special Properties of Lipoproteins	
	3.5.2.	Digestion and Absorption of Lipids: Physiological Utility	
	3.5.3.	Food Sources and Recommended Intakes	
	3.5.4.	Pathologies Associated with Lipids Hypercholesterolemia	
3.6.	Minerals and Trace Elements		
	3.6.1.	Introduction and Classification	
	3.6.2.	Major Minerals: Calcium, Phosphorus, Magnesium, Sulphur	
	3.6.3.	Trace Elements: Copper, Iron, Zinc, Manganese	
	3.6.4.	Digestion and Absorption of Minerals: Bioavailability of Minerals	
	3.6.5.	Food Sources and Recommended Intakes	
	3.6.6.	Pathologies Associated with Minerals	
3.7.	Vitamins		
	3.7.1.	General Characteristics: Structure and Function	
		3.7.1.1. Hydrosoluble Vitamins	
		3.7.1.2. Liposoluble Vitamins	
	3.7.2.	Digestion and Absorption of Vitamins.: Physiological Utility	
	3.7.3.	Food Sources and Recommended Intakes	
	3.7.4.	Pathologies Associated with Vitamins	
		3.7.4.1. B Group Vitamins:	
		3.7.4.2. Vitamin C	
		3.7.4.3. Liposoluble Vitamins	
3.8.	Alcoho	I	
	3.8.1.	Introduction and Consumption of Alcohol	
	3.8.2.	Alcohol Metabolism	
	3.8.3.	Recommended Daily Intakes and Caloric Contribution to the Die	
	3.8.4.	Harmful Effects of Alcohol Consumption	

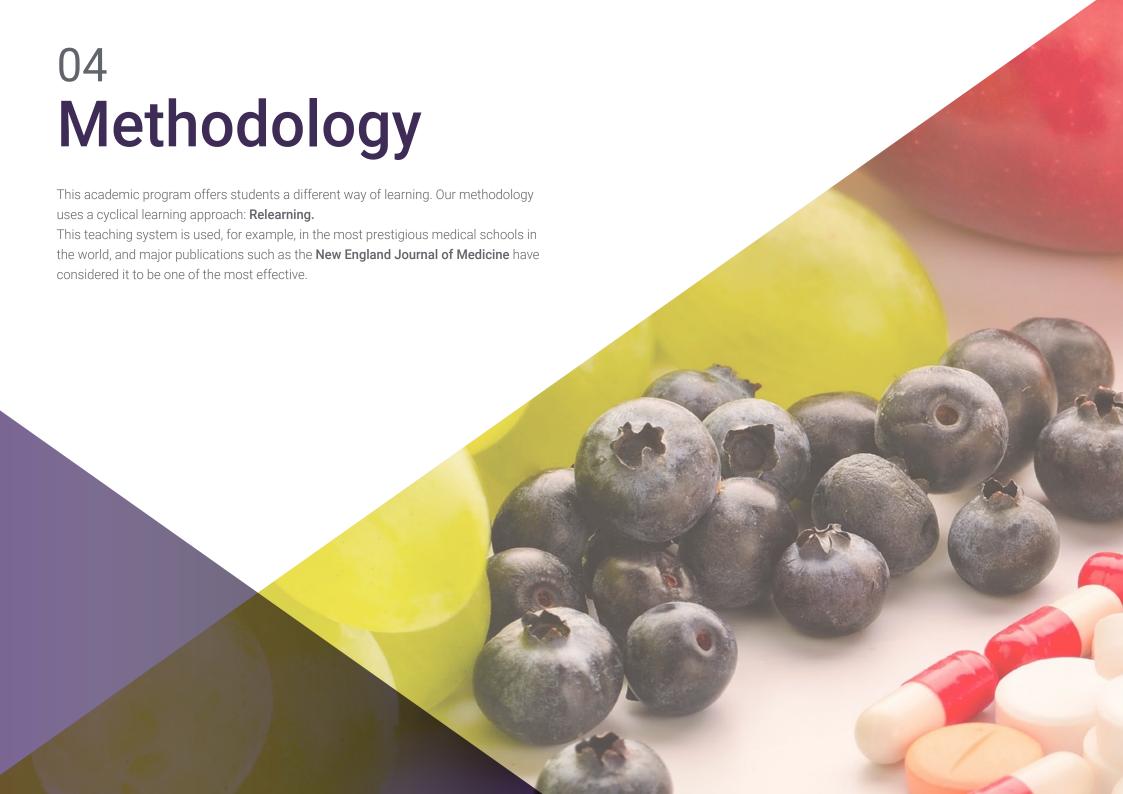


Structure and Content | 17 tech

- 3.9. Energy Metabolism and Nutrient Interactions
 - 3.9.1. Energy Content of Food
 - 3.9.1.1. Immediate Principles and Calorimetry
 - 3.9.1.2. Energy Needs of the Organism
 - 3.9.2. Basal Metabolism and Physical Activity
 - 3.9.2.1. Metabolism During Intense Exercise: Cori Cycle
 - 3.9.2.2. Biochemical Process of Thermogenesis
 - 3.9.3. Calculating Energy Needs
 - 3.9.4. Interactions Between Nutrients
 - 3.9.4.1 Mineral-vitamin Interactions
 - 3.9.4.2. Protein-Vitamin Interactions
 - 3.9.4.3. Interactions Between Vitamins
- 3.10. Nervous System and Endocrine
 - 3.10.1. Membrane and Action Potentials Active and Passive Transporters
 - 3.10.2. Nervous System Structure and Cellular Organization
 - 3.10.2.1. Synapses and Neuronal Transmission
 - 3.10.2.2. Central and Peripheral Nervous System
 - 3.10.2.3. Autonomic System: Sympathetic and Parasympathetic
 - 3.10.3. Endocrine Glands and their Hormones
 - 3.10.3.1. Pituitary Hormones and their Hypothalamic Regulation
 - 3.10.3.2. Thyroid and Parathyroid Hormones
 - 3.10.3.3. Sex Hormones
 - 3.10.4. Endocrine System Pathologies



With this program you will be able to delve into the food crises and the policies put in place to deal with them"



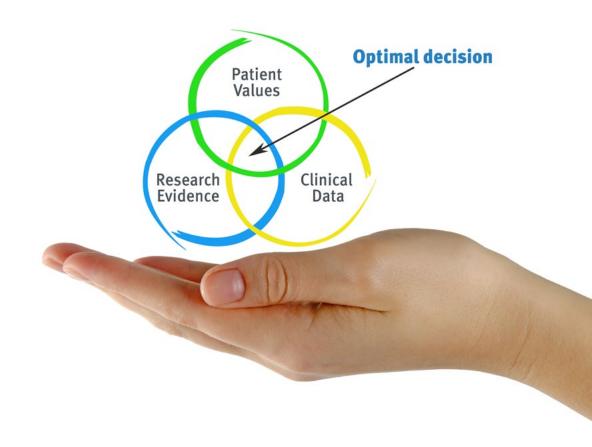


tech 20 | Methodology

At TECH we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH, nutritionists can experience a way of learning that is shaking the foundations of traditional universities around the world.



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



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

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

- Nutritionists who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
- 2. Learning is solidly translated into practical skills that allow the nutritionist to better integrate knowledge into clinical practice.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- **4.** Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



tech 22 | Methodology

Relearning Methodology

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

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

The nutritionist will learn through real cases and by solving complex situations in simulated learning environments.

These simulations are developed using state-of-the-art software to facilitate immersive learning.



Methodology | 23 tech

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

With this methodology, more than 45,000 nutritionists have been trained with unprecedented success in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socioeconomic 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.

tech 24 | Methodology

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



Study Material

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

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



Nutrition Techniques and Procedures on Video

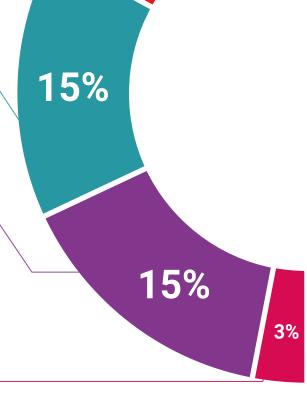
TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all,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



Interactive Summaries

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

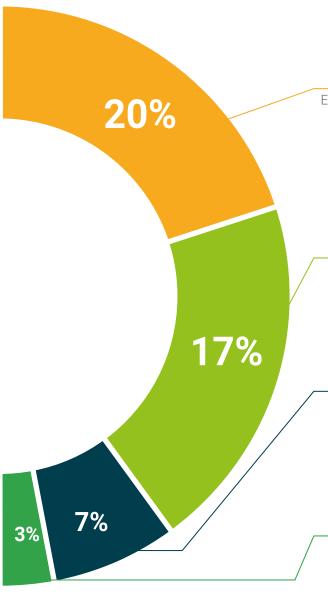
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".





Additional Reading

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



Expert-Led Case Studies and Case Analysis

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



Testing & Retesting

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



Classes

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

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



Quick Action Guides

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







tech 28 | Certificate

This **Postgraduate Diploma in Food Epidemiology** contains the most complete and up-to-date scientific program on the market.

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

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

Title: Postgraduate Diploma in Food Epidemiology

Official No of Hours: 450 h.



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

technological university Postgraduate Diploma Food Epidemiology » Modality: online » Duration: 6 months

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