

Postgraduate Certificate

Food Industries



Postgraduate Certificate Food Industries

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

Website: www.techtute.com/in/nutrition/postgraduate-certificate/food-industries

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01

Introduction

Food Industries play a fundamental role in the commercial dynamics and consumption habits of the population, in addition to the fact that they are responsible for supplying the main basic human need: food. For this reason, it is important that within them there are professionals specialized in the types of products offered and the correct way to implement the control and quality processes. With this in mind, TECH has designed a program that will provide the student with a very complete training on the most relevant aspects related to this market and the optimal production mechanisms. All this, through a 100% online methodology, which will allow participants to have greater control over their time.





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This is the best program to specialize Food Industries and the only one that will allow you to increase your professional expectations"

The production and processing of food for human consumption is part of the Food Industry, which is a key factor in the market. Therefore, this Postgraduate Certificate seeks to train future professionals who will be in charge of the activities in this area, through the study of the elements related to cereals, proteins, vegetables and fruits and the procedures that must be carried out with each type for the benefit of the conservation of their nutrients.

This will be possible thanks to the incredible academic syllabus of the degree, since it includes an abundant analysis of the classification of each product of natural or animal origin and the correct way to avoid contamination during the handling process. It will also provide specialized knowledge on the mechanisms that optimize the procedures through which the food must pass before being integrated into the market.

In this way, students will be able to enhance their professional competencies and obtain a complete mastery of the particular concepts of this industry, allowing them to improve their work methods and apply everything they have learned immediately in a work environment. In this way, students will be able to meet all the current requirements of this sector and become an active part of it.

All this, thanks to the innovative Relearning methodology, which allows students to study from home and have greater time flexibility, since they will have access 24 hours a day to the multimedia resources they will find in the online campus. In addition, you will be able to strengthen your competencies and increase your ability to solve problems, since you will analyze practical cases that will place you in a real scenario.

This **Postgraduate Certificate in Food Industries** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of case studies presented by experts Food Industries
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ 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 work
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



Be the best in the professional field of Food Industries and reach your goals with this Postgraduate Certificate"

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Without the need to submit to rigid schedules and from the comfort of your home, you will expand your knowledge about the Food Industries”

The program's teaching staff includes professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

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

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

With the application of the innovative Relearning method in this Postgraduate Certificate program, you will improve your ability to retain and apply knowledge.

Knows the current context of Food Industries and creates strategies to optimize production times within them.



02 Objectives

The main objective of this academic program is to bring students closer to the novelties of the Food Industries, providing them with the most relevant nuances that encompass them and the most used processes to streamline their production. In this way, students will be able to develop new products and guarantee their quality. All of this is based on the study of multimedia content that will help strengthen students' skills.





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Do not miss the opportunity to be part of the professionals of the future and get a specialized knowledge of the food market”



General Objectives

- ◆ Get to know the influence that chemical engineering has had in recent years in the production and creation of foodstuffs
- ◆ Identify the main quality processes to which food products are subjected
- ◆ Apply knowledge of food chemistry in dietetics and nutrition
- ◆ Recognize the influence of Bromatology and its related aspects in the qualitative and quantitative food composition
- ◆ Analyze new technologies and their contribution to the food production process



Learn about the types of products that make up the Food Industry and specialize in the specific quality processes of each one"





Specific Objectives

- ◆ Control and optimize processes and products in the food industry: Food manufacturing and preservation
- ◆ Develop new processes and products
- ◆ Get to know the industrial processes of food transformation and preservation, as well as packaging and storage technologies
- ◆ Analyze process and product control and optimization systems applied to the main types of food industries
- ◆ Apply knowledge of transformation and conservation processes to the development of new processes and products

04

Structure and Content

The study program of this Postgraduate Certificate has been created by leading experts in the field of Food Industry, with the objective of ensuring a quality education to students. In this way, students will be able to acquire a broad vision of the current state of the food market and gain in-depth knowledge about the kind of products that are most in demand by consumers. All this, through the study of multimedia resources and the analysis of practical cases, which will provide students with the best professional skills in this area.





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Discover the basics of cereal grains and how flours are characterized, thanks to the multimedia content on this topic"

Module 1. Food Industry

- 1.1. Cereals and by-products I
 - 1.1.1. Cereals: production and consumption
 - 1.1.1.1. Classification of cereals
 - 1.1.1.2. Current state of research and industry situation
 - 1.1.2. Cereal grain basics
 - 1.1.2.1. Methods and equipment for the characterization of flours and doughs
 - 1.1.2.2. Rheological properties during kneading, proofing and baking
 - 1.1.3. Cereal products: Ingredients, additives and adjuvants, their classification and effects
- 1.2. Cereals and by-products II
 - 1.2.1. Baking process: stages, changes produced and equipment used
 - 1.2.2. Instrumental, sensory and nutritional characterization of cereal-derived products from cereals
 - 1.2.3. Application of cold in bakery. Frozen precooked breads. Process and product quality
 - 1.2.4. Gluten-free products derived from cereals. Formulation, process and quality characteristics
 - 1.2.5. Food pastes. Ingredients and process. Types of pastes
 - 1.2.6. Innovation in bakery products. Trends in product design
- 1.3. Milk and dairy products. Eggs and egg products I
 - 1.3.1. Hygienic-sanitary milk quality
 - 1.3.1.1. Source and levels of contamination. Initial and contaminating microbiota
 - 1.3.1.2. Presence of chemical contaminants: residues and pollutants
 - 1.3.1.3. Influence of hygiene in the milk production and marketing chain
 - 1.3.2. Dairy production. Milk synthesis
 - 1.3.2.1. Factors influencing milk composition: extrinsic and intrinsic factors
 - 1.3.2.2. Milking: good process practices
 - 1.3.3. On-farm milk pretreatment: filtration, refrigeration and alternative preservation methods





- 1.3.4. Treatments in the dairy industry: clarification and bactofugation, skimming, standardization, homogenization, deaeration, Pasteurization, Definition, Procedures, Treatment temperatures and limiting factors
 - 1.3.4.1. Types of pasteurizers. Packaging. Quality Control Sterilization. Definition
 - 1.3.4.2. Methods: conventional, UHT, other systems. Packaging. Quality control Manufacturing defects
 - 1.3.4.3. Types of pasteurized and sterilized milk. Milk selection. Milkshakes and flavored milks. Mixing process. Enriched milks. Enrichment process
 - 1.3.4.4. Evaporated milk. Condensed milk
- 1.3.5. Preservation and packaging systems
- 1.3.6. Quality control of powdered milk
- 1.3.7. Milk packaging and quality control systems
- 1.4. Milk and dairy products. Eggs and egg products I
 - 1.4.1. Dairy Derivatives. Creams and Butters
 - 1.4.2. Elaboration process. Continuous manufacturing methods. Packaging and preservation. Manufacturing defects and alterations
 - 1.4.3. Fermented milks: Yogurt. Milk preparatory treatments. Manufacturing processes and systems
 - 1.4.3.1. Types of yogurt. Problems in the elaboration. Quality Control
 - 1.4.3.2. BIO products and other acidophilic milks
 - 1.4.4. Cheese making technology: preparatory milk treatments
 - 1.4.4.1. Obtaining curd: syneresis. Pressed. Salado
 - 1.4.4.2. Water activity in cheese. Brine control and conservation
 - 1.4.4.3. Cheese ripening: agents involved. Factors that determine maturation Effects of contaminating biota
 - 1.4.4.4. Toxicological problems of cheese
 - 1.4.5. Additives and antifungal treatments
 - 1.4.6. Ice cream. Features. Types of ice cream. Elaboration processes
 - 1.4.7. Eggs and egg products
 - 1.4.7.1. Fresh egg: processing of fresh egg as a raw material for the production of egg products
 - 1.4.7.2. Egg products: liquids, frozen and dehydrated
- 1.5. Vegetable products I
 - 1.5.1. Physiology and postharvest technology. Introduction
 - 1.5.2. Fruit and vegetable production, the need for postharvest conservation

- 1.5.3. Respiration: respiratory metabolism and its influence on postharvest preservation and deterioration of vegetables
- 1.5.4. Ethylene: synthesis and metabolism. Involvement of ethylene in the regulation of fruit ripening
- 1.5.5. Fruit ripening: The maturation process, generalities and its control
 - 1.5.5.1. Climacteric and non-climacteric ripening
 - 1.5.5.2. Compositional changes: physiological and biochemical changes during ripening and preservation of fruits and vegetables
- 1.6. Vegetable Products II
 - 1.6.1. Principle of fruit and vegetable preservation through the control of environmental gases. Mode of action and its applications in the preservation of fruits and vegetables
 - 1.6.2. Refrigerated storage. Temperature control in the preservation of fruits and vegetables
 - 1.6.2.1. Technological methods and applications
 - 1.6.2.2. Cold damage and its control
 - 1.6.3. Transpiration: control of water loss in fruit and vegetable preservation
 - 1.6.3.1. Physical Principles. Control systems
 - 1.6.4. Postharvest pathology: main deteriorations and rots during fruit and vegetable preservation. Control systems and methods
 - 1.6.5. IV Range Products
 - 1.6.5.1. Physiology of plant products: handling and preservation technologies
- 1.7. Vegetable Products III
 - 1.7.1. Preparation of canned vegetables: Overview of a typical canning line for vegetables
 - 1.7.1.1. Examples of the main types of canned vegetables and pulses
 - 1.7.1.2. New products of vegetable origin: cold soups
 - 1.7.1.3. Overview of a typical fruit packaging line
 - 1.7.2. Juice and nectar processing: juice extraction and juice treatments
 - 1.7.2.1. Aseptic processing, storage and packaging systems
 - 1.7.2.2. Examples of production lines for the main types of juices
 - 1.7.2.3. Production and preservation of semi-finished products: cremogenated products
 - 1.7.3. Production of jams, jellies and jams: production and packaging process
 - 1.7.3.1. Examples of characteristic processing lines
 - 1.7.3.2. Additives used in the manufacture of jams and marmalades



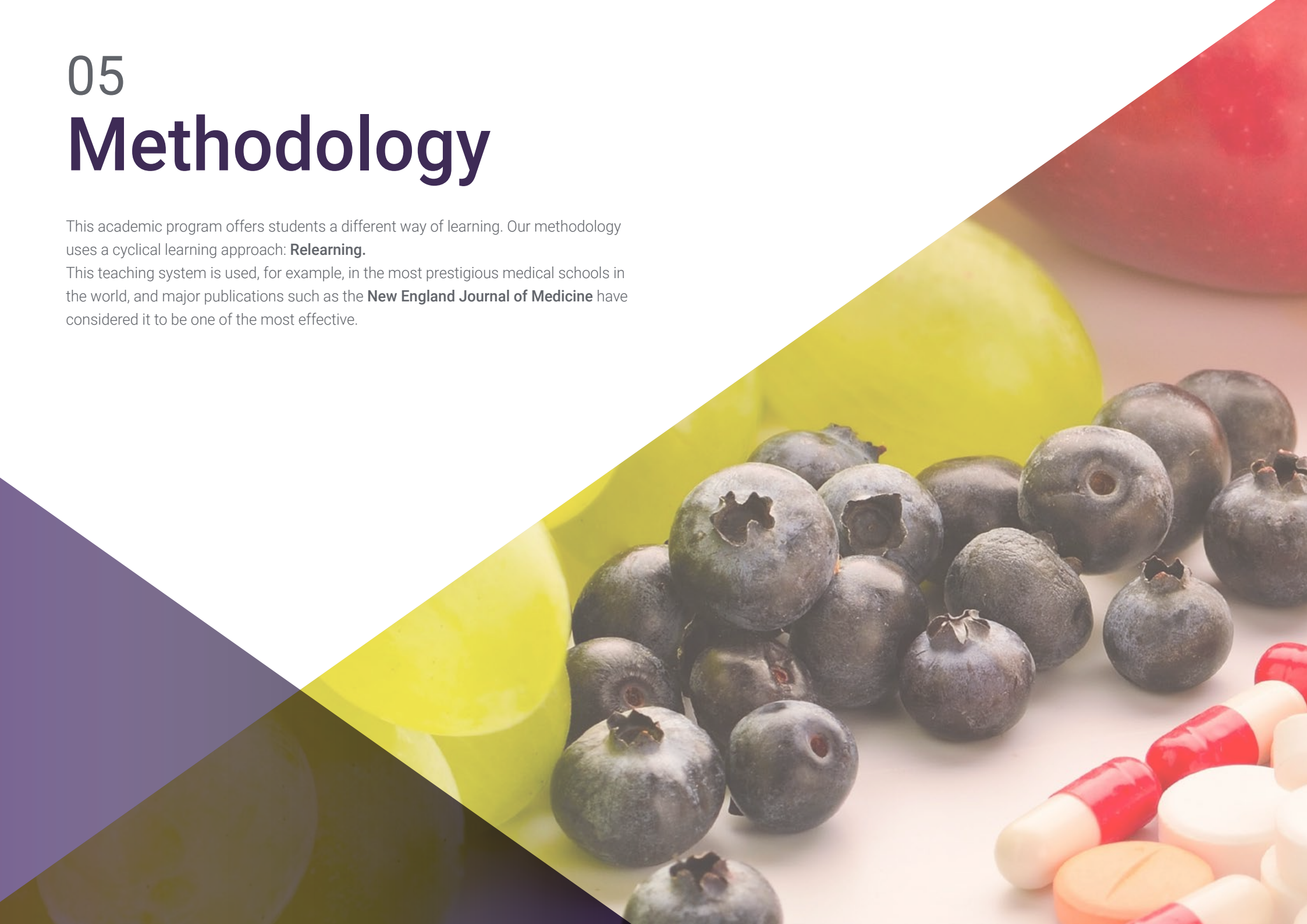


- 1.8. Alcoholic beverages and oils
 - 1.8.1. Alcoholic beverages: Wine. Elaboration process
 - 1.8.1.1. Beer: brewing process. Types
 - 1.8.1.2. Spirits and liquors: Manufacturing processes and types
 - 1.8.2. Oils and fats: Introduction
 - 1.8.2.1. Olive oil: Olive oil extraction system
 - 1.8.2.2. Oilseed oils. Extraction
 - 1.8.3. Animal fats: Refining of fats and oils
- 1.9. Meat and meat by-products
 - 1.9.1. Meat industry: Production and consumption
 - 1.9.2. Classification and functional properties of muscle proteins: Myofibrillar, sarcoplasmic and stromal proteins
 - 1.9.2.1. Muscle-to-meat conversion: porcine stress syndrome
 - 1.9.3. Maturation of meat. factors affecting the quality of meat for direct consumption and industrialization
 - 1.9.4. Curing chemistry: ingredients, additives and curing aids
 - 1.9.4.1. Industrial curing processes: dry and wet curing processes
 - 1.9.4.2. Nitrite alternatives
 - 1.9.5. Raw and raw marinated meat products: fundamentals and problems of preservation. Characteristics of raw materials
 - 1.9.5.1. Types of products. Manufacturing operations
 - 1.9.5.2. Alterations and defects
 - 1.9.6. Cooked sausages and cooked hams: basic principles of meat emulsion preparation. Characteristics and selection of raw materials
 - 1.9.6.1. Technological manufacturing operations. Industrial systems
 - 1.9.6.2. Alterations and defects
- 1.10. Seafood
 - 1.10.1. Fish and seafood. Features of technological interest
 - 1.10.2. Main industrial fishing and shellfishing gears
 - 1.10.2.1. Unit operations in fish technology
 - 1.10.2.2. Cold storage of fish
 - 1.10.3. Salting, pickling, drying and smoking: technological aspects of manufacture
 - 1.10.3.1. Characteristics of the final product. Performance
 - 1.10.4. Marketing

05 Methodology

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

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





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

At TECH we use the Case Method

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

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



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

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

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

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



Relearning Methodology

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

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

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



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

With this methodology, more than 45,000 nutritionists have been trained with unprecedented success in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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



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



Study Material

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

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



Nutrition Techniques and Procedures on Video

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



Interactive Summaries

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

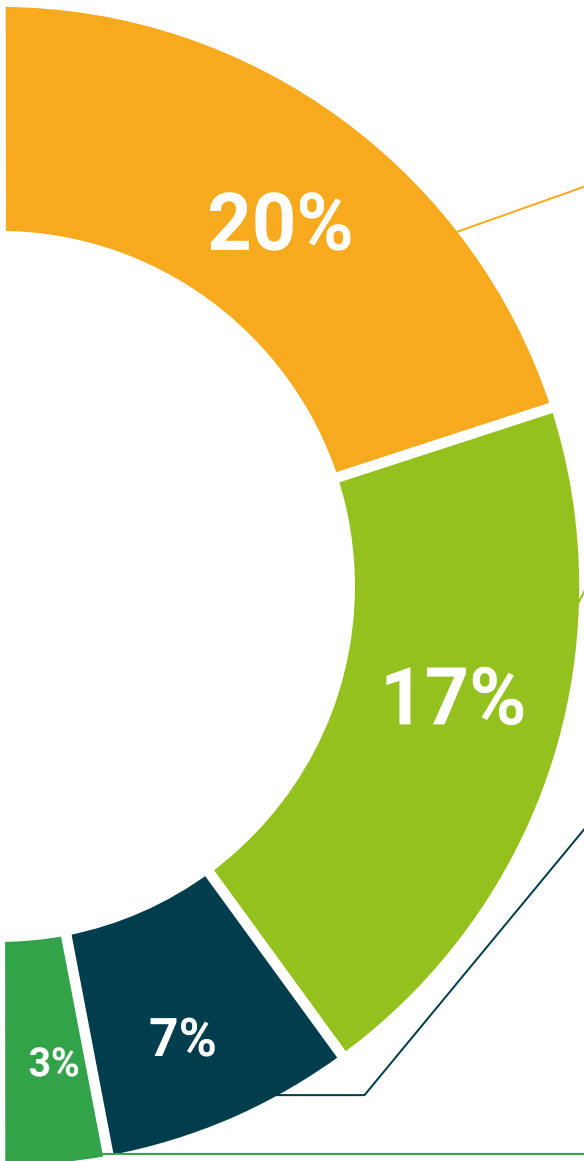
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





Expert-Led Case Studies and Case Analysis

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



Testing & Retesting

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



Classes

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

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



Quick Action Guides

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



06

Certificate

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



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

This **Postgraduate Certificate Food Industries** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Certificate in Food Industries**

Official N° of hours: **150 h.**



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

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



Postgraduate Certificate Food Industries

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

