



# Postgraduate Diploma

Phytotherapy of Locomotor System Disorders

» 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-phytotherapy-locomotor-system-disorders

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# tech 06 | Introduction

Nutrition works in the prevention and improvement of patients' health. Along the same lines, Phytotherapy, whose scientific advances have allowed us to know much better the properties of medicinal plants, the products derived from them and their optimal concentrations.

In recent years, the incorporation of advances in this field into the most advanced Nutrition has made it possible to facilitate more specific treatments and increase people's well-being. In this sense, TECH has oriented this program to provide the most current information on Phytotherapy of Locomotor System Disorders.

Therefore, it provides the professional nutritionist with an intensive program of 450 teaching hours, where they will be able to deepen in the bases that support this discipline, the most relevant studies on the active principles of the plants or the galenic preparations. Special dedication will be given to the approach to pathologies such as arthritis, osteoarthritis, muscle contractures or joint pain. All with a theoretical-practical approach and supported by numerous additional didactic material.

Additionally, thanks to the Relearningmethod, the graduate will be able to progressively advance through the content of this program, consolidate the key concepts and reduce the long hours of study and memorization.

Also, as it is an online program, the nutritionist is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, from an electronic device with an Internet connection. This is an excellent opportunity to update their knowledge through an avant-garde academic option.

This **Postgraduate Diploma in Phytotherapy of Locomotor System Disorders** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Practical case studies are presented by experts in Phytotherapy
- 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
- The practical exercises where the self-evaluation process can be carried out 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





Incorporate into your nutritional programs the use of the most advanced Phytotherapy to treat patients with arthritis and osteoarthritis"

The program includes in its teaching staff professionals of the field who pour into this training the experience of their work, in addition to recognized specialists from reference societies and prestigious universities.

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

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

A unique, key, and decisive educational experience to boost your professional development.

Learn more about the multiple therapeutic applications of simple Phenols, Coumarins and Lignans and improve your skills in Phytotherapy.





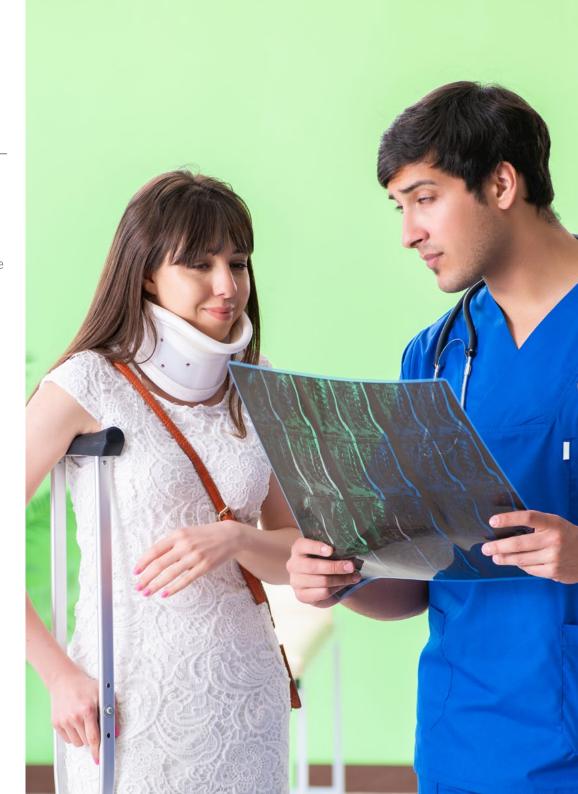


# tech 10 | Objectives



## **General Objectives**

- Define the therapeutic limits of Phytotherapy and identify the cases in which it can be used safely
- Describe the use of Phytotherapy aimed at satisfying the needs derived from the patient's health problems and the prevention of complications, guaranteeing a safe and quality practice
- Solve cases related to the field of phytotherapy
- Explain the use and indication of medical devices, food supplements and/or medications, evaluating the expected benefits and the associated risks
- Apply theoretical knowledge in daily practice





#### **Specific Objectives**

#### Module 1. Phytotherapy and Herbal Medicines

- Define what a drug is and distinguish it from an active ingredient
- Explain the protocols for drug recognition
- Define the main chemical groups of active ingredients, which are responsible for the effects of drugs and, by extension, of plants
- Explain techniques for the cultivation, collection, processing and conservation of medicinal plants
- Identify botanical nomenclature and species citation
- Classify plant groups according to current regulations
- Define the medicinal utility of mushrooms
- Explain the legislation and regulation in relation to Phytotherapy

# Module 2. Active Ingredients of the Plants, Pharmaceutical Forms and Galenic Preparations

- Explain the application of the magistral formulation in Phytotherapy
- Explain the industrial processing of herbal medicines
- Define the main groups and properties with relation to the active ingredients
- Define the therapeutic application of phenols, flavonoids, tannins, isoprenoids, resins, alkaloids and other products

#### Module 3. Phytotherapy for Disorders of the Locomotor System

- Define the usefulness of Phytotherapy in the treatment of arthritis
- Define the usefulness of phytotherapy in the treatment of arthrosis
- Define the usefulness of Phytotherapy in the treatment of joint pain
- Identify muscle that act as relaxant medicinal plants for the treatment of muscle contractions
- Define the usefulness of phytotherapy in the treatment of arthrosis
- Identify and classify remineralizing medicinal plants
- Explain the phytotherapy treatments and therapeutic limits in Locomotor System Disorders



Are you up to date with the latest scientific studies on the active principles of plants?

Delve into them whenever you want, from any electronic device with an Internet connection"

# 03

# **Course Management**

In choosing the teaching team for this program, TECH has taken into account both their excellent professional background and their human qualities. Two decisive factors that are reflected in the syllabus to which the graduate will have access and in the proximity they will find answers to any questions they may have about the content of this program. Undoubtedly, this is a unique option to receive a complete update from the best experts in Phytotherapy and Pharmacy.

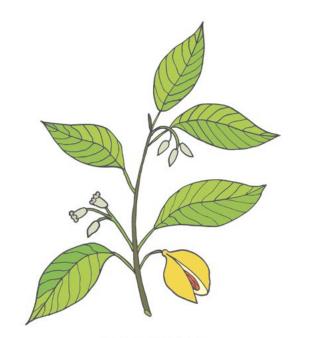




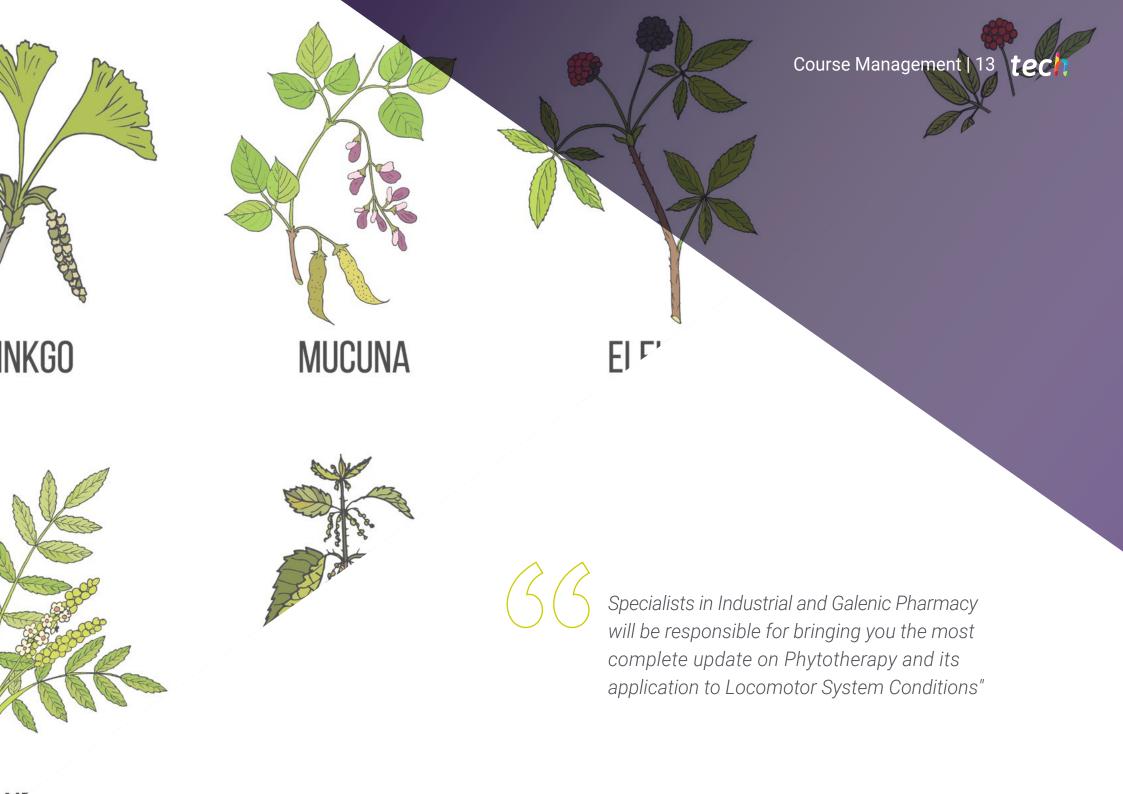


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# tech 14 | Course Management

#### **Professors**

#### Dr. Güemes Heras, Jaime

- Director of the Botanical Garden of Valencia
- Biologist and Botany Expert
- Curator of the Botanical Garden at the Cavanilles Institute of Biodiversity and Evolutionary Biology in Valencia
- President of the Ibero-Macaronesian Association of Botanical Gardens
- President of the Spanish Society of Plants Conservation
- PhD in Biology
- Author of more than a dozen books and chapters related to biology and botany
- Naming scientist of 31 new species for science in the International Plant Names Index

#### Dr. Soriano Guarinos, Pilar

- Researcher at the Germplasm Bank of the Botanical Garden of the University of Valencia
- Professor of the Department of Botanics at the Faculty of Pharmacy of the University of Valencia
- Researcher at the Fraunhofer Cavanilles Institute of Biodiversity and Evolutionary Biology
- Doctor of Pharmacy
- Author of dozens of scientific articles related to Botany

#### Ms. Buendía Sánchez, Esmeralda

- Technical Pharmaceutical Director Arkopharma Laboratories
- Director of the Scientific Department, Arkopharma, SA
- Author of Hypericum in the treatment of depression and co-author of several publications.
- Specialist in Pharmacy

#### Ms. Izquierdo Palomares, Rosa

- Private Pharmacy Manager in Customer Service and Preparation of Magisterial Formulas
- Head of Industrial Hygiene and Ergonomics at Unión de Mutuas
- Prevention Technician Specialist in Industrial Hygiene at Unión de Mutuas
- Degree in Community Pharmacy from the University of Valencia
- Master's Degree in Industrial Hygiene and Occupational Health

#### Dr. Palomino Ruiz-Poveda, Olga

- Expert in Pharmacology and Pharmacognosy and Botany and scientific researcher
- Professor of the Department of Pharmacology at the Faculty of Pharmacy of the Complutense University of Madrid
- Records Technician at Arkoprharma
- Doctor of Pharmacy
- Member of: Committee on Herbal Medicinal Products (HMPC) from the European Medicines Agency

#### Dr. Bejarano, María

- Histology and Pharmacy Specialist
- Assistant Pharmacist in Pharmacy Office at LKN Strategies Inc
- Trainer and promoter at LKN life
- EFG promoter trainer at Markefarm SL
- Pharmacist in pharmacy office
- Doctor of Pharmacy. CEU Cardenal Herrera University
- Degree in Histology Botanical Garden of the University of Valencia
- Degree in Pharmacy. University of Valencia





#### Dr. Acero de Mesa, Nuria

- Pharmaceutical expert in Biotechnology
- Full Professor, Department of Pharmaceutical and Health Sciences, Faculty of Pharmacy, CEU San Pablo University
- Main investigator of the Natural Products group at San Pablo University
- Doctor of Pharmacy
- Co-author of several scientific publications in specialized media

#### Dr. García-Fontestad, Gema Alejandra

- Independent Pharmacist and Expert in Chemical Morphophysiology and its impact on health
- Pharmacist in pharmacy office
- Editor at Farma13
- Doctor in Pharmacy from the CEU Cardenal Herrera University
- Author of dozens of research articles related to the pharmacological field

#### Ms. Alonso Osorio, María José

- Community Pharmacist and Specialist in Galenic and Industrial Pharmacy
- Member of Medicinal Plants and Homeopathy, College of Pharmacists of Barcelona
- Technical director and head of R&D at Farmadiez SA
- Translation coordinator for the monographs on medicinal plants of the German Commission E
- Co-author of the book Medicinal Plants (Practical Phytotherapy) and translator of Richard Pinto's book Practical Manual of Homeopathy
- Corresponding member of the Royal Academy of Pharmacy of Catalonia
- Postgraduate Diploma Degree in Advances in Phytotherapy Applied from the University of Montpellier

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#### Dr. González Rosende, Eugenia

- Pharmacist and Researcher Specializing in the Therapeutic Area
- Professor of the Department of Pharmacy at the Faculty of Health Sciences of the CEU Cardenal Herrera University
- Principal Investigator of the group on the Search for New Compounds with Therapeutic Activity at CEU Cardenal Herrera University
- Researcher of the SEPLAN group at CEU Cardenal Herrera University
- Doctor of Pharmacy
- Author of several specialized books on organic chemistry for the clinical profession

#### Dr. Allué Creus, Josep

- Scientific Director Sincrofarm
- Research and Development Director ApDeNa Consultation
- Member of Medicinal Plants and Homeopathy Official College of Pharmacists of Barcelona (COFB)
- Member of the Spanish Association of Pharmacists of the Industry (AEFI)
- Titular Professor Department of Animal Biology, Plant Biology and Ecology at the Autonomous University of Barcelona where he directs several master's degrees
- Founder and member of the management committee of SEFIT
- Doctor in Pharmacy (PhD)
- Degree in Pharmacy

#### Ms. Ibars Almonacil, Ana

- Biologist at the Cavanilles Institute of Biodiversity and Evolutionary Biology
- Teacher in the area of Botany and Geology at the University of Valencia
- Co-author of the book "Helechos de la Comunidad Valenciana"
- Member of: Cavanilles Institute of Biodiversity and Evolutionary Biology, CBiBE Research Lab and Scientific Committee of the SEFIT Conference: Phytotherapy in metabolic syndrome

#### Dr. López Castellano, Alicia

- Pharmacist Specialist in Industrial and Galenic Pharmacy
- Researcher and Author of outstanding publications in the area of Phytotherapy and Pharmacy
- Expert in Pharmacy and Pharmaceutical Technology
- Reviewer of the most important scientific journals such as: International Journal
  of Pharmaceutics, Journal of Controlled Release, Journal of Pharmaceutical Science, Drug
  Development and Industry Pharmacy, Journal of Drug Delivery Science, European Journal
  of Pharmaceutics and Biopharmaceutics, Technology and Journal of Pharmacy
  and Pharmacology
- Director of the Department of Physiology, Pharmacology and Toxicology at CEU Cardenal Herrera University
- Dean of the Faculty of Health Sciences, CEU Cardenal Herrera University
- Associate Professor and Senior Research Technician, Department of Pharmacy and Pharmaceutical Technology, University of Valencia
- Participation in presentations and communications at national and international conferences
- Doctor of Pharmacy (PhD) from the University of Valencia
- Degree in Pharmacy
- Member of: Teacher Evaluation Commission of the Valencian Agency of Evaluation and Prospective (AVAP) of the Valencia Government

#### Dr. Muñoz-Mingarro, Dolores

- Professor of the Department of Chemistry and Biochemistry of the Faculty of Pharmacy from CEU San Pablo University
- Researcher
- Author of more than 30 scientific articles
- Prize for the best initiative awarded by Correo Farmacéutico for the book Phytotherapy Manual
- PhD in Biological Sciences from the Complutense University of Madrid
- Degree in Biological Sciences from the Complutense University of Madrid
- Graduate in Pharmacy from the Complutense University of Madrid.
- Member of: Spanish Society of Chromatography and Related Techniques SECYTA, Iberoamerican Network of Natural Products for Medicinal Use and Research Groups in Ripronamed

#### Dr. Balaguer Fernández, Cristina

- Pharmacist specialized in transdermal administration therapies
- Vice-Dean of the Faculty of Pharmacy at Cardenal Herrera University
- Assistant Professor in the Department of Pharmacy at the Faculty of Health Sciences of the CEU Cardenal Herrera University
- Coordinator of different Masters at CEU University
- Doctor in Pharmacy from CEU Cardenal Herrera University
- Lectures and communications in national and international congresses

#### Dr. Calatayud Pascual, Araceli

- Director of the Department of Pharmacy, Faculty of Health Sciences, CEU Cardenal Herrera University
- Assistant Pharmacist in Pharmacy Office
- Coordinator of the Medicine Degree
- Coordinator of the External Internships of Medicine
- Coordinator of the second cycle of the Degree in Medicine
- Assistant Professor of the University Department of Pharmacy in the Faculty of Health Sciences from CEU Cardenal Herrera University
- Professor of Pharmacology in the Degree of Medicine at the CEU Cardenal Herrera University
- Participation in 41 presentations and / oral presentations at national and international conferences
- Researcher in 8 research projects funded by public and private institutions
- Author of several scientific publications
- Doctor of Pharmacy. Cardenal Herrera University CEU
- Degree in Pharmacy. Cardenal Herrera University CEU
- Master's Degree in Community Pharmaceutical Care University of Valencia
- Diploma in Pharmaceutical Performance in Primary Care University of Valencia
- Specialized pharmacist in Orthopedics University of Valencia





# tech 20 | Structure and Content

#### Module 1. Phytotherapy and Herbal Medicines

- 1.1. Phytotherapy: Definition and Scope of Application
- 1.2. Legislation and Registration of Herbal Medicines in Spain
- 1.3. Regulation of the European Market for Medicinal Herbal Preparations: Legal Regulations and Scope of Application
- 1.4. Plant Structure
- 1.5. Botanical Nomenclature and the Citation of Species in Phytotherapy
- 1.6. Cultivation, Collection, Processing and Preservation of Medicinal Plants
- 1.7. Current Classification of Plant Groups
- 1.8. Plant-Based Drugs: Impact of Drug Recognition on the Quality of Phytotherapeutic Products

# **Module 2.** Active Ingredients of the Plants, Pharmaceutical Forms and Galenic Preparations

- 2.1. Active Ingredients: Main Groups and Properties, as a Basis that Justifies the use of Phytotherapy
- 2.2. Carbohydrates, Lipids, Proteins, and Sulfocyanogenetic Heterosides and their Therapeutic Application
- 2.3. Simple Phenols, Coumarins and Lignans and their Therapeutic Application
- 2.4. Flavonoids and their Therapeutic Application
- 2.5. Tannins and Quinones, and their Application
- 2.6. Isoprenoids, Saponins and Cardiotonic Heterosides and their Application
- 2.7. Resins and their Application
- 2.8. Alkaloids and their Application
- 2.9. Magistral Formulation in Phytotherapy
- 2.10. Other Pharmaceutical Forms in Phytotherapy
- 2.11. Standards for the Proper Manufacture of Herbal Medicines





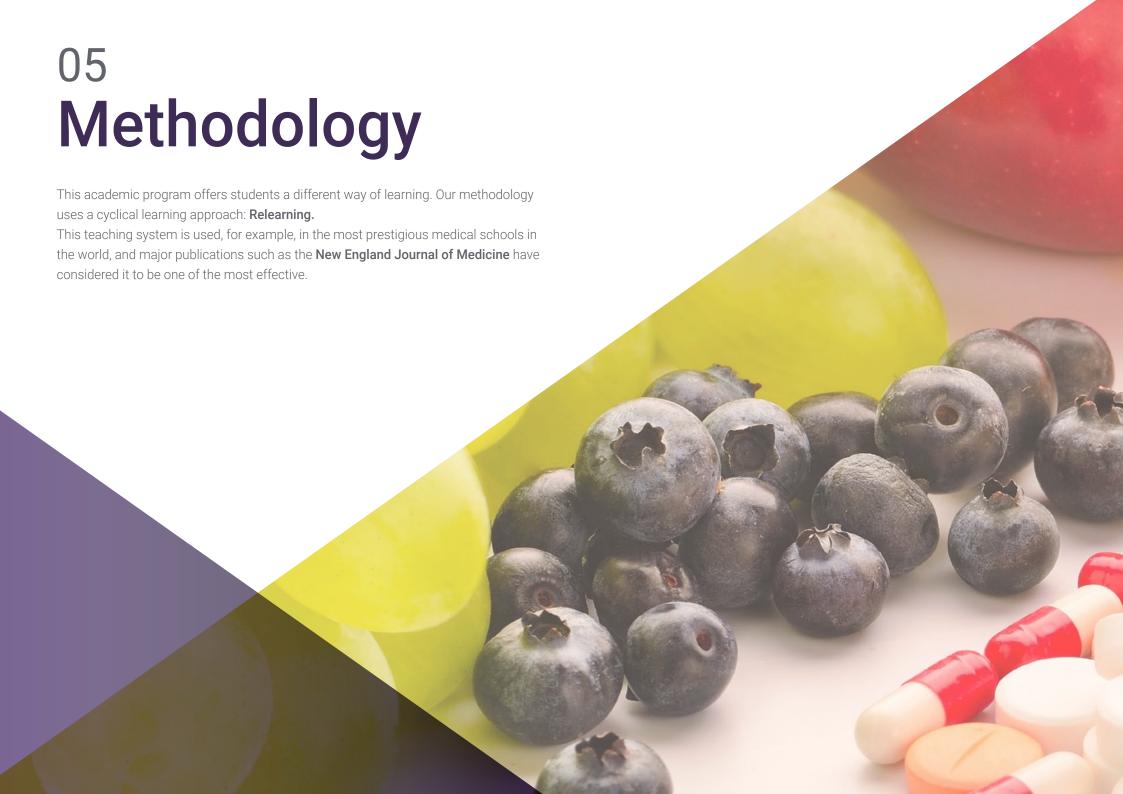
## Structure and Content | 21 tech

#### Module 3. Phytotherapy for Disorders of the Locomotor System

- 3.1. Phytotherapy in Diseases Affecting the Musculoskeletal System: Introduction
- 3.2. Phytotherapy in Diseases Affecting the Locomotor System: Plant Species with Analgesic and/or Anti-inflammatory Action in Oral Use
- 3.3. Phytotherapy in Diseases Affecting the Locomotor System: Plant Species with Analgesic and/or Anti-inflammatory Action in Topical Use
- 3.4. Phytotherapy in the Treatment of Rheumatism
- 3.5. Phytotherapy in the Treatment of Gout: Uricosuric Plants
- 3.6. Phytotherapy in the Treatment of Sarcopenia
- 3.7. Remineralizing Medicinal Plants



Learn more about the effectiveness of uricosuric plants for the treatment of gout and include them in your nutritional recommendations to treat this pathology"



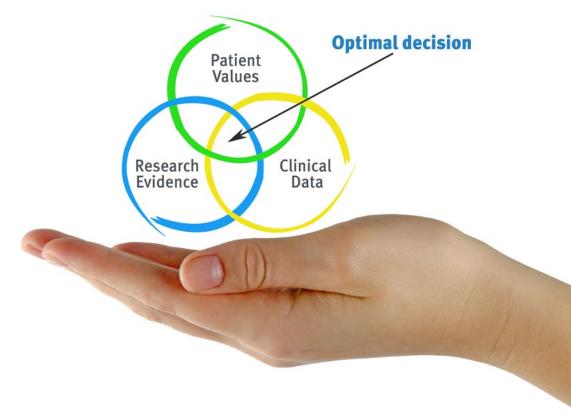


# tech 24 | Methodology

#### 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 26 | 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 | 27 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 28 | 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**

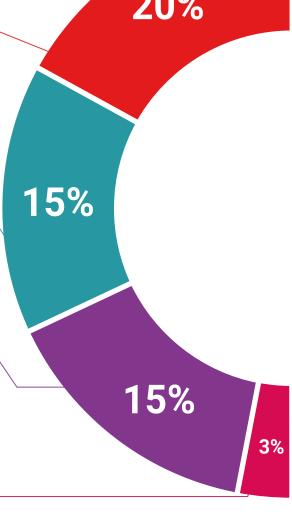
TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all,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





**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.





17%





# tech 32 | Certificate

This **Postgraduate Diploma in Phytotherapy of Locomotor System Disorders** contains the most complete and up-to-date scientific 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 Phytotherapy for Locomotor System Disorders
Official N° of Hours: **450 h**.



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# Postgraduate Diploma

Phytotherapy of Locomotor System Disorders

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