



## Postgraduate Diploma Phytotherapy for Disorders of the Locomotor System

» Modality: online

» Duration: 6 months

» Certificate: TECH Global University

» Credits: 18 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-phytotherapy-disorders-locomotor-system

## Index

 $\begin{array}{c} 01 \\ \hline \\ \underline{\text{Introduction}} \\ \hline \\ 03 \\ \hline \\ \underline{\text{Course Management}} \\ \hline \\ \\ \underline{\text{p. 12}} \\ \end{array} \begin{array}{c} 0\text{bjectives} \\ \hline \\ 04 \\ \hline \\ \underline{\text{Structure and Content}} \\ \hline \\ \underline{\text{p. 18}} \\ \end{array} \begin{array}{c} 05 \\ \underline{\text{Methodology}} \\ \hline \\ \underline{\text{p. 22}} \\ \hline \end{array}$ 

06 Certificate

p. 30





## tech 06 | Introduction

There is now a scientific basis supporting the efficacy of many phytotherapeutic products for certain indications. The place that phytotherapy should occupy in therapeutics should be that for which it has demonstrated its usefulness and safety.

Efficacy is achieved only with the proper use of phytotherapeutic preparations, both in terms of indications and form of administration.

This program offers a current vision of Phytotherapy and its application in the health field, including the latest contributions and advances. The contents are guaranteed by the teaching staff involved in the Expert, since in one way or another they all work in the field of phytotherapy or are related to it. Thus, the student will learn based on the experience of the teachers and experience evidence-based medicine, which results in training the student to be more effective and accurate. On the one hand, the different university training programs generally suffer from a deep and profound lack of

continuously updated training in Phytotherapy, and on the other hand that current health trends are leaning towards the use of safe and effective natural remedies, it is necessary to be able to offer the student the possibility of expanding their knowledge

and therapeutic skills with a greater specialization in the use of medicinal plants, from the professional and academic perspective necessary to adequately face their future in this field.

This ONLINE EXPERT offers you the characteristics of a high level scientific, teaching and technological course. These are some of its most notable features:

- Latest technology in online teaching software.
- Highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- Practical cases presented by practising experts.
- State-of-the-art interactive video systems.
- Teaching supported by telepractice.
- Continuous updating and recycling systems.
- Self-regulating learning: full compatibility with other occupations.
- Practical exercises for self-evaluation and learning verification.
- Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- Communication with the teacher and individual reflection work.
- Content that is accessible from any fixed or portable device with an Internet connection.
- Supplementary documentation databases are permanently available, even after the course.



Increase your skills in the Phytotherapy approach to locomotor system disorders through this program"

## Introduction | 07 tech



Include phytotherapy among your tools and improve patient care with new ways and alternatives for treatment and prevention"

Our teaching staff is made up of practicing specialists. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of doctors trained and experienced in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at the service of the course the practical knowledge derived from their own experience: one of the differential qualities of this training.

This mastery of the subject matter is complemented by the effectiveness of this expert's methodological design. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

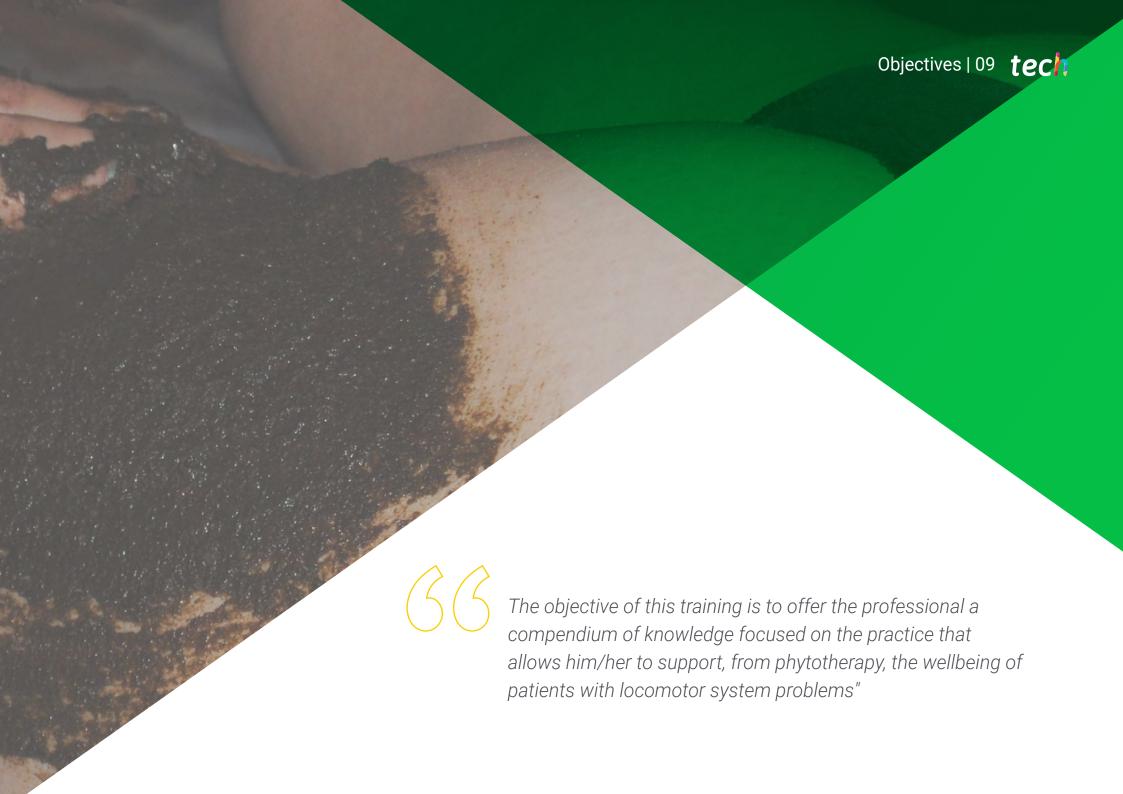
The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

With a methodological design based on proven teaching techniques, this Expert will take you through different teaching approaches to allow you to learn in a dynamic and effective way.

Our innovative telepractice concept will give you the opportunity to learn through an immersive experience, which will provide you with a faster integration and a much more realistic view of the contents: "learning from an expert"







## tech 10 | Objectives



## **General Objectives**

- Define the therapeutic limits of phytotherapy and recognize the cases in which it can be used safely.
- Describe the use of Phytotherapy oriented to the satisfaction of 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 drugs, assessing the expected benefits and associated risks.
- Apply theoretical knowledge in daily practice.





### **Specific Objectives by Modules**

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

- 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 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 phytotherapeutic treatments and therapeutic limits in locomotor system disorders.



Include among your skills the intervention in phytotherapy, including the preparation of galenicals, which only the most updated professional can offer to his patients"





## tech 14 | Course Management

#### **Professors**

#### Dña. Sanahuja Santafé, Maria Amparo

- Degree in Pharmacy.
- Professor of Pharmacy Department.
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.

#### Dña. Ibars Almonacil, Ana

• University of Valencia. Botany Teaching Unit.

#### Dr. Blanquer Hernández, Antonio

- Degree in Biology.
- Doctor of Biology (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- Professor of Pharmacy Department.

#### Dña. D'Ivernois Rodríguez, Araceli

- Degree in Pharmacy.
- Technical Director, Drug Information Center.
- Illustrious Official College of Pharmacists of Castellón.

#### Dr. Calatayud Pascual, Araceli

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- University Professor of the Department of Pharmacy.

#### Dr. Navarro Moll, Concepción

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy. University of Granada.
- Professor of Pharmacology, Department of Pharmacology.

#### Dr. Balaguer Fernández, Cristina

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- Assistant Professor of the Department of Pharmacy.

#### Dr. Muñoz-Mingarro, Dolores

- · Degree in Biology.
- Ph.D. in Biological Sciences.
- Faculty of Pharmacy.
- CEU San Pablo University.
- Full Professor, Department of from Chemistry and Biochemistry.

#### Dña. López Briz, Eduardo

- Graduate in Pharmacy.
- Specialist Pharmacist in Hospital Pharmacy.
- the Athlete Specialist in Industrial and Galenic Pharmacy.
- Valencian Community, Spain.
- Head of Pharmacy Section at Consellería de Sanidad

#### Dña. Buendía Sánchez, Esmeralda

• Technical Pharmaceutical Director. Arkopharma Laboratories.

#### Dr. Beltrán Montalbán, Estanislao

- Doctor of Medicine.
- · Specialist in obstetrics and gynecology.

#### Dr. González Rosende, Eugenia

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- Full Professor, Department of Pharmacy.

#### Dña. Tejerina Tébe, Eva

· Apdena Consult S.L.

#### Dr. Les Parellada, Francisco

- Doctor of Pharmacy.
- Research teaching staff of the San Jorge University.
- · Member of the research group Plant Bioactive Principles.

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

- Doctor of Pharmacy.
- Pharmacist in pharmacy office.

#### Dr. León Bello, Gemma

- PhD in Public Health
- Degree in Pharmacy.
- Associate Professor of Pharmacology at the CEU Cardenal Herrera University.

#### Dña. Reigada Ocaña, Inés

- Degree in Pharmacy.
- Researcher at the University of Helsinki.

#### Dr. Güemes Heras, Jaime

- Degree in Biology.
- Doctor of Biology (PhD).
- University of Valencia.
- Curator of the Botanical Garden, Cavanilles Institute of Biodiversity and Evolutionary and Biology

#### Dr. Merino Llorens, Jose Luis

- Graduate in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy. University of Valencia.
- Professor of Pharmacology, Department of Pharmacology.

#### Dr. Allué Creus, Josep

- · Graduate in Pharmacy.
- Doctor in Pharmacy (PhD).
- Autonomous University of Barcelona.
- Professor in the Department of Animal Biology, Plant Biology and Ecology.

#### Dña. Ibañez Torres, Lidia

• Professor CEU - UCH University

#### Dr. Moreno Royo, Lucrecia

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- Professor at Private University, Department of Pharmacy.

#### D. Bachiller Rodríguez, Luis Ignacio

- Degree in Medicine and Surgery.
- University Diploma in Phytotherapy and Medicinal Plants.
- Montpellier University.
- President of the Asturian Society of Phytotherapy.

#### Dr. Noguera Romero, María Antonia

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Full Professor, Department of from Pharmacology
- Faculty of Pharmacy. University of Valencia.

## tech 16 | Course Management

#### Dr. Guerrero Masiá, María Dolores

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- University Professor of the Department of Pharmacy.

#### Dña. Alonso Osorio, María José

- Degree in Pharmacy.
- Specialist in Galenic and Industrial Pharmacy.
- Postgraduate Diploma in Phytotherapy from the University of Montpellier.
- Member of Medicinal Plants and Homeopathy, College of Pharmacists of Barcelona.

#### Dr. Martín López, Teresa

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy, University of Alcalá.
- Full Professor, Department of from Pharmacology.

#### Dr. Carretero Accame, María Emilia

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy. Complutense University of Madrid.
- Full Professor, Department of from Pharmacology.

#### Dña. Dea Ayuela, María Auxiliadora

• University Professor, Department Pharmacy. CEU Cardenal Herrera University.

#### Dr. Bejarano, María

- Doctor of Pharmacy.
- · Pharmacist in pharmacy office.

#### Dr. Sanfeliu Alonso, María Carmen

- Doctor of Pharmacy. University of Valencia.
- University professor CEU Cardenal Herrera University

#### Dr. García Giménez, María Dolores

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy, University of Seville.
- Professor in Pharmacy, Department of Pharmacology.

#### Dr. Marín Vázquez, Marta

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- University Professor of the Department of Pharmacy.

#### D. Martín Almendros, Miguel

- Degree in Medicine and Surgery.
- Specialist in the HLBO blood diagnostic test.
- Diploma in Natural Therapy in Biological Medicine.
- Secretary of the Working Group on Phytotherapy SEMERGEN.

#### Dr. Acero de Mesa, Nuria

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy.
- CEU San Pablo University.
- Professor of the Department of Pharmaceutical and Health Sciences.

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

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy, Complutense University, Madrid.
- Associate Professor of the Department of Pharmacology.

#### Dr. Sánchez Thevenet, Paula

- Degree in Biology.
- Doctor in Biochemistry (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- Professor of degree the Department of Biomedical Sciences.

#### Dr. Catalá, Pedro

- Graduate in Pharmacy.
- Specialist in Cosmetology.
- Founder of Twelve Beauty.
- Doctor in Pharmacy (PhD).

#### Dr. Soriano Guarinos, Pilar

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy. University of Valencia.
- Full Professor, Department of from Pharmacology.

#### D. Folgado Bisbal, Ricardo V.

- Graduate in Pharmacy.
- Member of the Very Illustrious Official College of Pharmacists of Valencia.

#### Dña. Izquierdo Palomares, Rosa

- Degree in Pharmacy.
- Drug Information Center.
- Illustrious Official College of Pharmacists of Castellón.

#### Dr. Máñez Aliño, Salvador

- · Graduate in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy, University of Valencia.
- Professor of Pharmacology, Department of Pharmacology.

#### Dr. Puchol Enguídanos, Santiago Vicente

- Doctor of Pharmacy.
- Pharmacist in pharmacy office.

#### Dr. Ortega Hernández-Agero, Teresa

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Pharmacy, Complutense University, from Madrid.
- Full Professor, Department of from Pharmacology.

#### Dr. Beltrán Sanz, Vicente

- Doctor of Pharmacy.
- Pharmacy office holder.

#### Dr. Rodilla Alama, Vicente

- Degree in Biology.
- Doctor of Biology (PhD).
- Faculty of Health Sciences. CEU Cardenal Herrera University.
- Professor of Pharmacy Department.

#### Dr. López Ramos, Víctor

- Graduate in Pharmacy.
- Doctor in Pharmacy (PhD).
- Faculty of Health Sciences, San Jorge University of Zaragoza.
- Professor of Pharmacy Department.

#### Dr. Villagrasa, Victoria

- Degree in Pharmacy.
- Doctor in Pharmacy (PhD).
- Facultad de Ciencias de la Salud, Universidad CEU Cardenal Herrera.
- Professor of Pharmacy Department.





## tech 20 | Structure and Content

#### **Module 1.** Phytotherapy and Herbal Medicines

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

## **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. Industrial Processing of Herbal Medicines



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

- 3.1. Phytotherapy in Arthritis.
- 3.2. Phytotherapy in Arthrosis.
- 3.3. Phytotherapy for Joint Pain: Anti-Inflammatory and Analgesic.
- 3.4. Medicinal Plants Muscle Relaxants for the Treatment of Muscle Contractions.
- 3.5. Phytotherapy in the Treatment of Rheumatism.
- 3.6. Phytotherapy in the Treatment of Gout: Uricosuric Plants.
- 3.7. Phytotherapy in the Treatment of Sarcopenia.
- 3.8. Remineralizing Medicinal Plants.



A comprehensive teaching program, structured in well-developed teaching units, oriented toward a high impact learning and training"

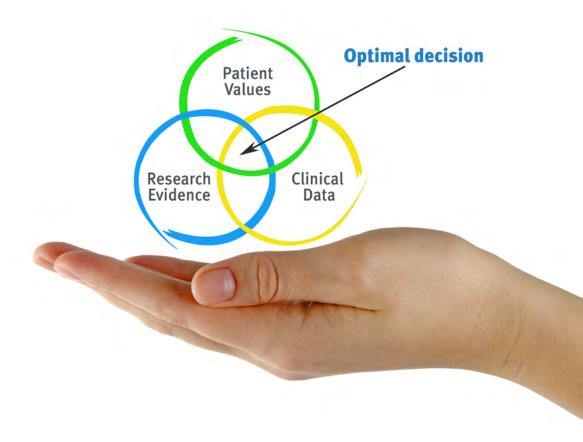


## tech 24 | Methodology

#### At TECH we use the Case Method

In a given clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly and more sustainably over time.

With TECH you 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 potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, attempting to recreate the actual conditions in a pharmacist's professional practice.



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

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

- 1. Pharmacists who follow this method not only achieve the assimilation of concepts, but also develop their mental capacity through exercises to evaluate real situations and apply their knowledge.
- 2. The learning process has a clear focus on 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.



## tech 26 | Methodology

#### Re-Learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing cases.

Pharmacists 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.



## Metodology | 27 tech

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

With this methodology we have trained more than 115,000 pharmacists with unprecedented success, in all clinical specialties. Our pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years old.

Re-learning 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.

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

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

## tech 28 | Methodology

In this program you will have access to the best educational material, prepared with you in mind:



#### **Study Material**

All teaching material is created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.



#### **Video Techniques and Procedures**

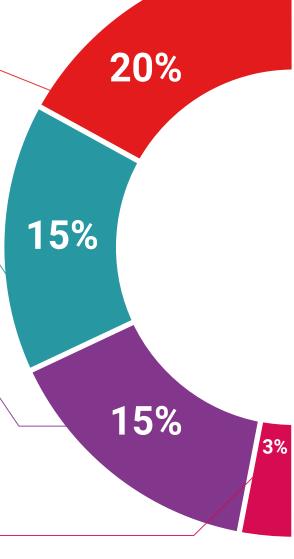
We bring you closer to the latest techniques, to the newest educational advances, to the forefront of current pharmaceutical care procedures. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### **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.

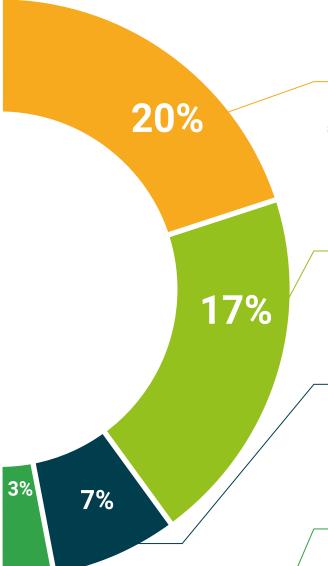
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".





#### **Additional Reading**

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



#### **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### **Testing & Re-testing**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



#### Classes

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



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

#### **Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.





## tech 32 | Certificate

This private qualification will allow you to obtain a **Postgraduate Diploma in Phytotherapy for Disorders of the Locomotor System** 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: Postgraduate Diploma in Phytotherapy for Disorders of the Locomotor System disorders

Modality: online

Duration: 6 months

Accreditation: 18 ECTS



#### Postgraduate Diploma in Phytotherapy for Disorders of the Locomotor System

This is a private qualification of 540 hours of duration equivalent to 18 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



<sup>\*</sup>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.

health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning



# Postgraduate Diploma Phytotherapy for Disorders of the Locomotor System

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

