Postgraduate Certificate
Magnetotherapy in Physiotherapy

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Postgraduate Certificate

Magnetotherapy in Physiotherapy

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

Website: **www.techtitute.com/pk/physiotherapy/postgraduate-certificate/magnetotherapy-physiotherapy**

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01

Introduction

The use of electromagnetic fields as a therapeutic tool has been used since ancient times, but it is since the end of the last century when it started to experience a great advance. This evolution occurred in parallel to the increasing knowledge of human physiology, which facilitated the design and development of different types of treatments based on the application of electromagnetic fields. In this context, it covers the need for a Magnetotherapy program that deals with the physical principles, techniques, physiological effects, pathologies to be treated and contraindications, in an innovative and precise way. With a specialized teaching team and a practical, effective and 100% online approach, this program is positioned as an optimal choice to improve and expand the competences in Physiotherapy.

This program will help you grow personally and professionally as an expert in Ultrasound and Laser Therapy"

In recent years, the number of information research studies related to electrotherapy has increased, mainly those focused on invasive techniques. These include percutaneous analgesic techniques in which needles are used as electrodes as, well as transcranial stimulation, of an electrical nature or by using magnetic fields. Based on latter application, the field of action of electrotherapy has been widened and can thereby be applied to various types of patients, ranging from subjects with chronic pain to neurological patients.

The objective of the Postgraduate Certificate in Magnetotherapy in Physiotherapy is to present in an updated way the applications of electrotherapy in neuromusculoskeletal pathologies and to explore in depth its therapeutic effects, always based on scientific evidence.
For this purpose, the neurophysiological bases of different currents are presented, with practical applications, so that the integration of the knowledge of the pathologies and their treatments is total.

This content, accessible from any device with an Internet connection, is also open to health professionals, expanding its application beyond the field of Physiotherapy. All this in a 100% online mode, with total freedom of organization, no classroom classes, no time restrictions of any kind and the guarantee of having the most dynamic and updated materials.

This **Postgraduate Certificate in Magnetotherapy in Physiotherapy** 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 in Magnetotherapy in Physiotherapy
- The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- Practical exercises where the self-assessment 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

Update your knowledge in the therapeutic effects of Magnetotherapy and become a reputed expert in this area"

This program in Magnetotherapy will be your best investment if you want to update your knowledge and prepare yourself with the most innovative materials"

You will be able to access the didactic resources 24 hours a day, from anywhere and with any device with an Internet connection.

Take the opportunity to expand your skills in therapeutic effects and clinical applications of Magnetotherapy, with TECH.

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

The 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 immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

The design of the program of this Postgraduate Certificate in Magnetotherapy in Physiotherapy is oriented to help the physiotherapist in their daily practice, expanding and updating their knowledge in this area. In this way, the aim is to obtain a significant improvement of the student's skills in the different areas related to the use of Magnetotherapy, such as its therapeutic effects, possible applications or the various contraindications to be taken into account.

This course will allow you to update your knowledge, with the best materials and the latest educational technology in Physical Principles of Magnetic Therapy"

General Objectives

- Improve your knowledge of the rehabilitation professional in the field of electrotherapy
- Promote work strategies based on a comprehensive approach to the patient as a standard model for achieving excellent care
- Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training
- Encourage professional stimulation through continuous education and research

Specific Objectives

- Explore in depth the therapeutic effects of magnetotherapy
- Identify the clinical applications of Magnetotherapy

You will be prepared through the analysis of real and simulated cases, which will provide you with all the necessary information to face reality as a professional expert in Magnetotherapy"

03

Course Management

In its maxim of offering an education of the highest quality for all its students, TECH has the best professionals in each area. That is why this program in Magnetotherapy in Physiotherapy, includes in its teaching staff distinguished professionals belonging to this field, as well as recognized specialists from prestigious reference societies and universities, who share their many years of experience working in the field of physiotherapy.

Learn the latest advances in Magnetotherapy in Physiotherapy from leading professionals in this field"

Management

Dr. León Hernández, Jose Vicente

- Physiotherapist expert in the Study and Treatment of Pain and Manual Therapy
- Doctorate in Physiotherapy from the Rey Juan Carlos University
- Master's Degree in the Study and Treatment of Pain from the Rey Juan Carlos University
- Degree in Chemical Sciences from the Complutense University of Madrid, specializing in Biochemistry
- Diploma in Physiotherapy from the Alfonso X el Sabio University
- Member and training coordinator at the Institute of Neuroscience and Movement Sciences

Coordinators

Mr. Losana Ferrer, Alejandro

- Clinical Physiotherapist and Trainer in New Technologies for Rehabilitation at Rebiotex
- Physiotherapist at CEMTRO Clinic
- Professional Master's Degree in Advanced Physiotherapy in Musculoskeletal Pain Management
- Expert in Neuroorthopedic Manual Therapy
- University Advanced Training in Therapeutic Exercise and Invasive Physiotherapy for Musculoskeletal Pain
- Graduate in Physiotherapy in La Salle

Mr. Suso Martí, Luis

- Physiotherapist
- Researcher at the Institute for Neurosciences and Movement Sciences
- Contributor to the popular science magazine NeuroRhab News
- Physiotherapy Degree: University of Valencia
- Doctorate, Autonomous University of Madrid
- Degree in Psychology. Open University of Catalonia
- Master's Degree in "Advanced Physiotherapy in Pain Management"

Dr. Cuenca - Martínez, Ferrán

- Physiotherapist Expert in Pain Management
- Physiotherapist at FisioCranioClinic
- Physiotherapist at the Institute of Functional Rehabilitation La Salle
- Researcher at the Center for Higher University Studies (CSEU La Salle)
- Researcher at EXINH Research Group
- Researcher in the Motion in Brans Research Group of the Institute of Neuroscience and Movement Sciences (INCIMOV)
- Chief editor of The Journal of Move and Therapeutic Science
- Editor and publisher of NeuroRehab News magazine
- Author of several scientific articles in national and international journals
- PhD in Medicine and Surgery from the Autonomous University of Madrid
- Graduate in Physiotherapy from the University of Valencia
- Master's Degree in Advanced Physiotherapy in Pain Treatment by the UAM

Dr. Gurdiel Álvarez, Francisco

- Physiotherapist at Powerexplosive
- Physiotherapist at Fisad Clinic
- Physiotherapist for Ponferradina Sports Society
- D. in Health Sciences from the Rey Juan Carlos University
- Degree in Physiotherapy by the University of Leon
- Degree in Psychology from UNED
- Master in Advanced Physiotherapy in the Treatment of Musculoskeletal Pain by the Autonomous University of Madrid
- Expert in Orthopedic Manual Therapy and Myofascial Pain Syndrome by the European University

Ms. Merayo Fernández, Lucía

- Physiotherapist Expert in Pain Management
- Physiotherapist in the Navarra Health Service
- Physiotherapist. Doctor San Martin Ambulatory
- Degree in Physiotherapy
- Professional Master's Degree in Advanced Physiotherapy in Musculoskeletal Pain Management

04

Structure and Content

The structure of the contents has been designed by a team of professionals from the best educational centers, universities and companies. Being aware of the relevance of current training, all information and tools available are based on the latest developments and innovations in terms of principles, effects, pathologies and contraindications of Magnetotherapy. As it could not be otherwise, TECH offers a material according to the principle of commitment to quality teaching through new technologies.

Become an expert in Magnetotherapy thanks to the pedagogical methodology of TECH's Relearning, without timetables or limits"

Module 1. Magnetotherapy in Physiotherapy

1.1. Physical Principles of Magnetotherapy
- 1.1.1. Introduction
- 1.1.2. History of Magnetotherapy
- 1.1.3. Definition
- 1.1.4. Principles of Magnetotherapy
  - 1.1.4.1. Magnetic Fields on Earth
  - 1.1.4.2. Physical principles |
- 1.1.5. Biophysical Interactions with Magnetic Fields

1.2. Physiological Effects of Magnetotherapy
- 1.2.1. Effects of Magnetotherapy on Biological Systems
  - 1.2.1.1. Biochemical Effects
  - 1.2.1.2. Cellular Effect
    - 1.2.1.2.1. Effects on The Lymphocytes and Macrophages
    - 1.2.1.2.2. Effects on the Cell Membrane
    - 1.2.1.2.3. Effects on the Cytoskeleton
    - 1.2.1.2.4. Effects on Cytoplasm
  - 1.2.1.3. Conclusion on the Effect on the Cell
  - 1.2.1.4. Effect on Bone Tissue

1.3. Therapeutic Effects of Magnetotherapy
- 1.3.1. Introduction
- 1.3.2. Inflammation
- 1.3.3. Vasodilatation
- 1.3.4. Analgesia
- 1.3.5. Increased Calcium and Collagen Metabolism
- 1.3.6. Reparation
- 1.3.7. Muscle Relaxation

1.4. Main Magnetic Field Parameters
- 1.4.1. Introduction
- 1.4.2. Magnetic Field Parameters
  - 1.4.2.1. Intensity
  - 1.4.2.2. Frequency (F)
- 1.4.3. Dosimetry of Magnetic Fields
  - 1.4.3.1. Frequency of Application
  - 1.4.3.2. Application Time

1.5. Types of Emitters and Their Application
- 1.5.1. Introduction
- 1.5.2. Electromagnetic Fields
  - 1.5.2.1. *Total Body Application*
  - 1.5.2.2. Regional Application
- 1.5.3. Local Magnetic Fields Induced with Magnets
  - 1.5.3.1. Conclusions

1.6. Clinical Applications
- 1.6.1. Introduction
- 1.6.2. Arthrosis
  - 1.6.2.1. Electromagnetic Fields and Chondrocyte Apoptosis
  - 1.6.2.2. Early-Stage Knee Osteoarthritis
  - 1.6.2.3. Advanced Stage Osteoarthritis
  - 1.6.2.4. Conclusion on Osteoarthritis and Pulsed Electromagnetic Fields
- 1.6.3. Bone Consolidation
  - 1.6.3.1. Review of Literature on Bone Consolidation
  - 1.6.3.2. Bone Consolidation in Long Bone Fractures
  - 1.6.3.3. Bone Consolidation in Short Bone Fractures
- 1.6.4. Shoulder Pathology
  - 1.6.4.1. Shoulder *Impingement*
  - 1.6.4.2. Rotator Cuff Tendinopathy
    - 1.6.4.2.1. Rheumatoid Arthritis
    - 1.6.4.2.2. Conclusions

1.7. Contraindications
- 1.7.1. Introduction
- 1.7.2. Possible Adverse Effects Studied
- 1.7.3. Precautions
- 1.7.4. Formal Contraindications
- 1.7.5. Conclusions

A unique, key, and decisive experience to boost your professional development in the field of electrotherapy"

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.

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

What should a professional do in a given situation? 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. Physiotherapists/kinesiologists learn better, faster, and more sustainably over time.

With TECH you will 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 physiotherapy 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:

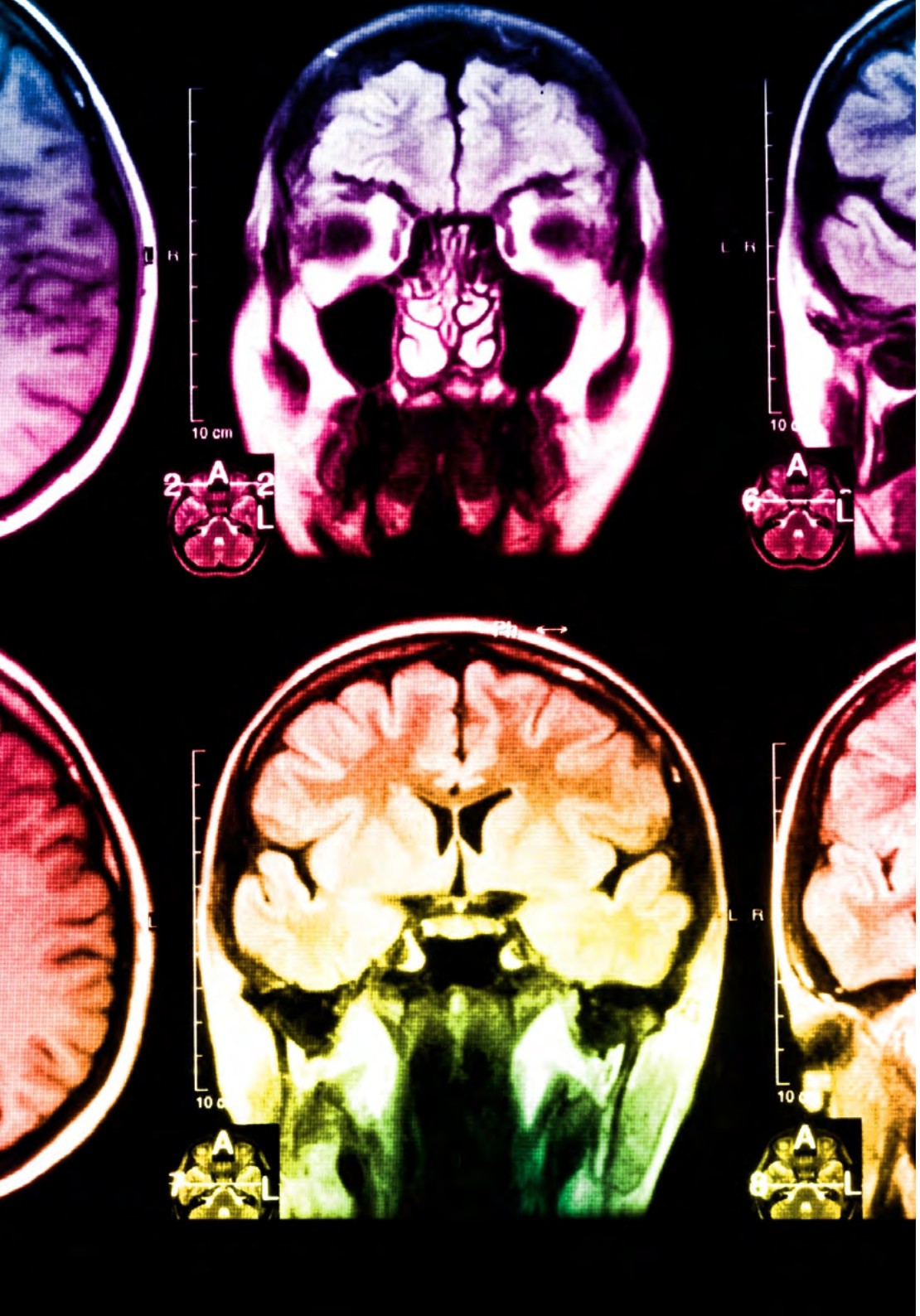
1. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist to better integrate 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.

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 physiotherapist/kinesiologist 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 we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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 our 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 really 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.

Physiotherapy Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current Physiotherapy 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 them as many times as you want.

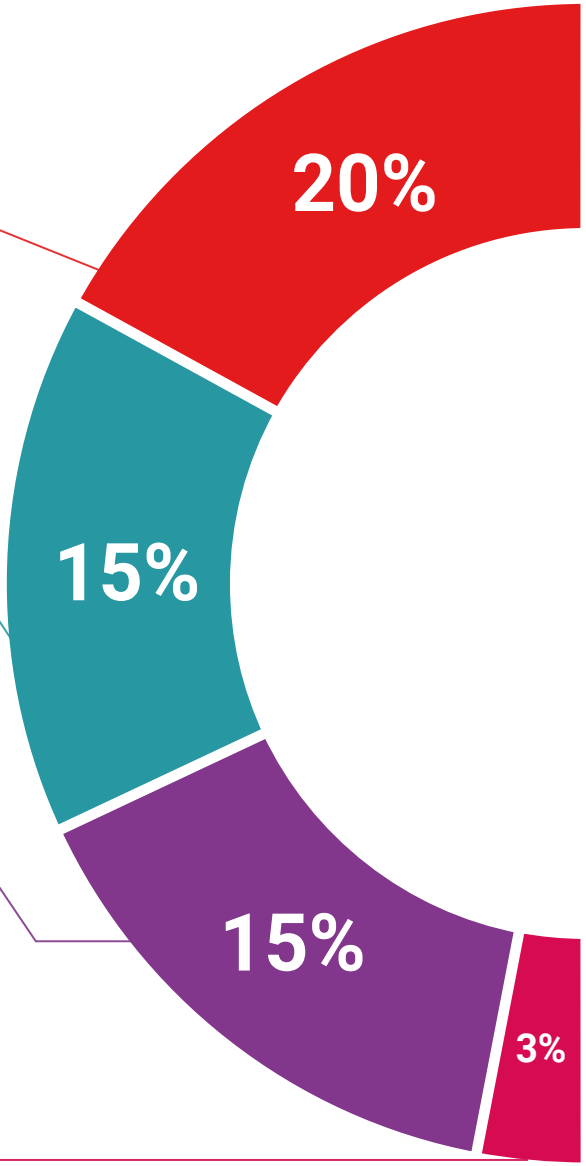
Interactive Summaries

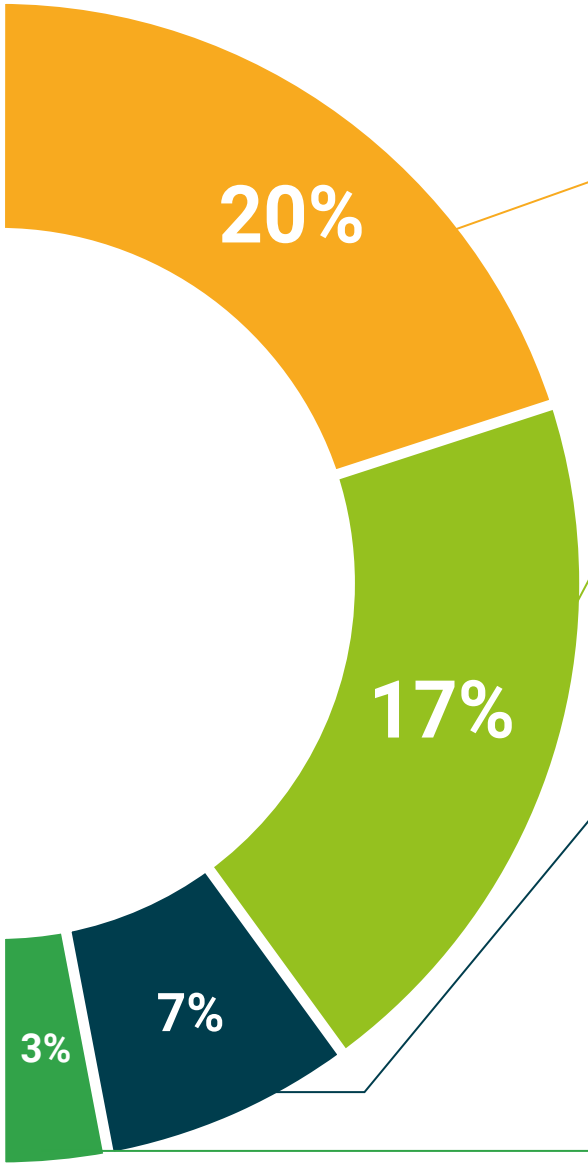
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system 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 on the usefulness of learning by observing experts. The system known as 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 Magnetotherapy in Physiotherapy guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

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

This **Postgraduate Certificate in Magnetotherapy in Physiotherapy** 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 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 Magnetotherapy in Physiotherapy**

Official Nº of Hours: **150 h.**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Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Magnetotherapy in Physiotherapy

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country.

Unique TECH Code: AFWORD23S techtitute.com/certificates

*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.

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Postgraduate Certificate

Magnetotherapy in Physiotherapy

- Modality: **online**
- Duration: **6 weeks**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
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