

# Postgraduate Diploma

Foundations in the Diagnostic  
and Therapeutic Approach to Pain



## Postgraduate Diploma

### Foundations in the Diagnostic and Therapeutic Approach to Pain

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

Website: [www.techtute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-foundations-diagnostic-therapeutic-approach-pain](http://www.techtute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-foundations-diagnostic-therapeutic-approach-pain)

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# 01

# Introduction

Learning how to manage patients' pain should be one of the main tasks of healthcare professionals, especially with regard to postoperative pain and chronic pain. Therefore, it is necessary for physicians, mainly those in the field of Anesthesiology and Resuscitation, to keep up to date with training such as this Expert in Fundamentals in the Diagnostic and Therapeutic Approach to Pain.







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*Healthcare professionals must update their knowledge in pain management to provide more specialized care to their patients”*

This Postgraduate Diploma has been designed by anesthesiologists with extensive experience in pain management, both acute and chronic, in daily clinical practice, so it offers Students a global vision of the clinical problem of pain in our environment.

With this training, students will be introduced to the basics of knowledge and management of patients with acute postoperative pain and the different types of chronic pain. Thus, they will learn about the main advances in the knowledge of neuroanatomy and physiology of pain, including psychological and psychosocial areas, which allow them to work in the best way to assimilate these pain processes.

In order to be up to date with new treatments to alleviate pain symptoms, it is essential to know the advances in pharmacology and, therefore, in this Postgraduate Diploma, professionals will be able to discover, through one of its topics, the main drugs for the treatment of acute postoperative pain. This training pays special attention to analgesic therapies with adjuvant drugs, which contribute to pain control in complex circumstances.

On the other hand, it is important that health professionals are up to date with other analgesic techniques that go beyond pharmacological therapies, so they can learn, through this Postgraduate Diploma, the invasive procedures used for pain control, especially in the field of chronic pain.

After completing and passing the Postgraduate Diploma, students will have acquired the theoretical knowledge necessary to carry out an effective approach to pain in the main fields of action of the anesthesiologist.

This **Postgraduate Diploma in Foundations in the Diagnostic and Therapeutic Approach to Pain** contains the most complete and up-to-date Educational program on the market. The most important features of the program include:

- ♦ Developing practical cases presented by experts in Foundations in the Diagnostic and Therapeutic Approach to Pain.
- ♦ The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ Novelties on Foundations in the Diagnostic and Therapeutic Approach to Pain.
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning.
- ♦ Special emphasis on innovative methodologies in Foundations in the Diagnostic and Therapeutic Approach to Pain.
- ♦ 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.

“After completing this training you will be able to help your patients live with chronic or postoperative pain situations”

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*This Postgraduate Diploma may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge in the Foundations in the Diagnostic and Therapeutic Approach to Pain, you will obtain a certificate endorsed by TECH Technological University"*

The teaching staff includes professionals from the field of Therapeutic and Diagnostic Approach to Pain, who bring their experience to this training program, as well as renowned specialists from leading communities 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 training programmed to train 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 professional will be assisted by an innovative interactive video system developed by renowned experts in Diagnostic and Therapeutic Approach to Pain, and with great medical experience.

*Don't miss the opportunity to join our team. You will be able to work with the best didactic material*

*This Postgraduate Diploma will allow you to combine your studies with your professional work and your private life, as it is 100% online*



02

# Objectives

The **Postgraduate Diploma in Foundations in the Diagnostic and Therapeutic Approach to Pain** is aimed at facilitating the medical professional's performance with the latest advances and most innovative treatments in the sector.





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*If you want to increase your knowledge in a diagnostic and therapeutic approach to pain, this will be your best option"*



## General Objectives

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- ♦ Update knowledge on pathophysiology, neuroanatomy, and etiopathogenesis of pain.
- ♦ Acquire the skills to adequately assess pain based on the patient's clinical history and physical examination.
- ♦ Obtain the necessary knowledge to determine the diagnostic methodology in the patient suffering from pain.
- ♦ Establish the updated theoretical basis of pharmacological therapies useful in the treatment of pain
- ♦ Know the advances in non-pharmacological therapies and invasive therapies in the control of acute and chronic pain.
- ♦ Develop competencies for the adequate control of pain in the perioperative period in different clinical situations and surgical procedures.
- ♦ Broaden knowledge of pain management in the gynecological and obstetrical field.
- ♦ Delve into the most relevant concepts of pain management in pediatric patients.
- ♦ Achieve the ability to define, evaluate, and determine the diagnostic and therapeutic approach in patients with chronic pain of neuropathic, musculoskeletal, oncologic, and visceral origin.





## Specific Objectives

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### Module 1.

- ♦ Acquire the Anatomical and Pathophysiological Knowledge Necessary to Understand the Mechanisms and Pathways of Pain.
- ♦ Develop the Ability to Obtain the Necessary Information to Plan the Diagnostic Management of Pain through Clinical History and Physical Examination of the Patient.
- ♦ Obtain the Necessary Knowledge to be able to Determine the Complementary Tests that will be Necessary in Each Case.
- ♦ Know the Psychosocial and Cognitive-Behavioral Aspects Related to the Origin and Evolution of Pain.
- ♦ Establish the basis for the therapeutic management of pain.
- ♦ Value the Importance of Educating Patients and their Environment in Pain Management and to Develop Strategies and Skills to Inform and Educate in this Area.

### Module 2.

- ♦ Know the Main Groups of Medications Used in Pain Management (Antipyretics, Anti-inflammatory Medications, and Opioids), their Beneficial Effects, Side Effects, Indications, and Contraindications.
- ♦ Acquire Updated Theoretical Knowledge on Pharmacology Related to Analgesia. New Formulations, Dosages.
- ♦ Know the Main Groups of Local Anesthetics used in the Management of Pain in the Surgical and Extra-Surgical Field.
- ♦ Indications, Contraindications, Side Effects.
- ♦ Expand the Knowledge of the Usefulness of Adjuvant Medications in Pain Control Mechanisms of Action, Dosage, Effectiveness. The Current State of Liver Transplantation.
- ♦ Introduce the Concepts of Multimodal, Pre-emptive, and Preventive Analgesia in Order to Generate Tools for Pain Management in the Surgical and Non-Surgical Setting.

### Module 3.

- ♦ Deepen the Knowledge of Invasive Analgesic Therapies in Pain Control.
- ♦ Acquire Concepts on Muscle Blocks and Joint Blocks for Diagnostic and Therapeutic Purposes.
- ♦ Learn about Invasive Techniques for Facet Blocks, Indications, and Contraindications.
- ♦ Integrate Knowledge about the Use of Radiofrequency for Pain Control at Different Anatomical Levels: Dorsal Root Ganglia, Sympathetic Ganglia..
- ♦ Assimilate Knowledge of Highly Specialized Analgesic Therapies such as Epidurolysis and Epiduroscopy.
- ♦ Understand and know how to Implement Analgesic Methods Based on Medullary or Ganglionic Implantable Devices and Intrathecal Infusion Systems.



*A broad view of the multidisciplinary approach to autoimmune diseases that the approach to autoimmune diseases requires, with the guidelines and knowledge that are essential in this scientific discipline"*



04

# Course Management

The program's faculty includes leading experts in the Diagnostic and Therapeutic Approach of Pain, who bring their work experience to this training. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.







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*Leading professionals in the field have come together to teach you the latest advances in the diagnostic and therapeutic approach to pain"*

## International Guest Director

Dr. Shehebar specializes in sports/spinal pain management, musculoskeletal medicine and cancer pain management. He utilizes several treatment modalities uniquely tailored to the patient. Each can expect a highly personalized, evidence-based medical evaluation to analyze, diagnose and treat pain symptoms or pain-related conditions.

Dr. Shehebar performs epidurals, medial branch (facet blocks), radiofrequency ablation, muscle trigger point injections, spinal cord/peripheral nerve stimulators, platelet rich plasma, joint and nerve injections using imaging guidance including fluoroscopy and ultrasonography. He is part of the **comprehensive pain management subdepartment** and is interested in employing multimodal therapies along with rehabilitation techniques.

Dr. Mourad M. Shehebar is an **Assistant Professor of Anesthesiology, Perioperative and Pain Medicine** at the Icahn School of Medicine at Mount Sinai. He received his undergraduate degree in Psychology and Biology from Baruch College in New York and his medical degree from the George Washington University School of Medicine and Health Sciences, Washington, D.C.

After a medical internship at Beth Israel Medical Center, Dr. Shehebar completed his board certification residency in Anesthesiology at the Icahn School of Medicine at Mount Sinai and, in addition, completed his fellowship in Interventional Pain Medicine at the Icahn School of Medicine at Mount Sinai.

As of January 2020, Dr. Shehebar has assumed the role of **Associate Director of the Mount Sinai Pain Fellowship Program**. In 2022, Dr. Shehebar has been promoted to Director of the Pain Management Fellowship Program at Mount Sinai.

He has been featured in New York Magazine and has also been named: **Castle Connolly's Top Doctors New York Metro Area: 2021, 2022.**



## Dr. Shehebar, Mourad M.

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- Director of the Pain Management Fellowship Program at Mount Sinai - New York
- Mount Sinai Health System Pain Unit Physician.
- Assistant Professor of Anesthesiology, Perioperative and Pain Medicine at the Icahn School of Medicine at Mount Sinai.
- Mount Sinai New York Pain Medicine Fellow
- Resident, Department of Anesthesiology Mount Sinai Hospital, New York
- Intern, Internal Medicine, Mount Sinai Beth Israel Internal Medicine
- Medical Degree, George Washington University, Washington D.C.
- B.A. Summa Cum Laude in Psychology and Biology from Baruch College in New York City

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*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### Dr. Arance García, Magdalena

- Specialist in the Pain Unit. Quirónsalud Infanta Luisa Hospital
- Specialist in Anesthesia, Resuscitation and Pain Therapy. Virgen Arrixaca University Hospital. Murcia
- Specialist in Anesthesiology and Resuscitation. Clinical Management Unit Surgical Block. Virgen del Rocío University Hospital, Seville
- Degree in Medicine and Surgery. University of Seville

## Professors

### Dra. Jiménez Vázquez, Paula

- ♦ Graduate in Medicine from the University of Cadiz. Promotion 2004-2010.
- ♦ Master in Pain Treatment (5th edition). Own degree from the University of Seville. Blended mode. 2016-2017
- ♦ FEA of Anesthesiology and Resuscitation. Virgen del Rocío University Hospital, Seville. Pain unit. Since July 2018.

### Dra. Fernández Castellanos, Guiomar Rosel

- ♦ Degree in Medicine from the University of Granada. June 2011.
- ♦ Master in Research in Clinical Medicine. Miguel Hernández University of Elche. 2013-2014
- ♦ Optional specialist in the area of Anesthesiology and Resuscitation. Surgical Block Clinical Management Unit. Virgen del Rocío University Hospital (Seville)

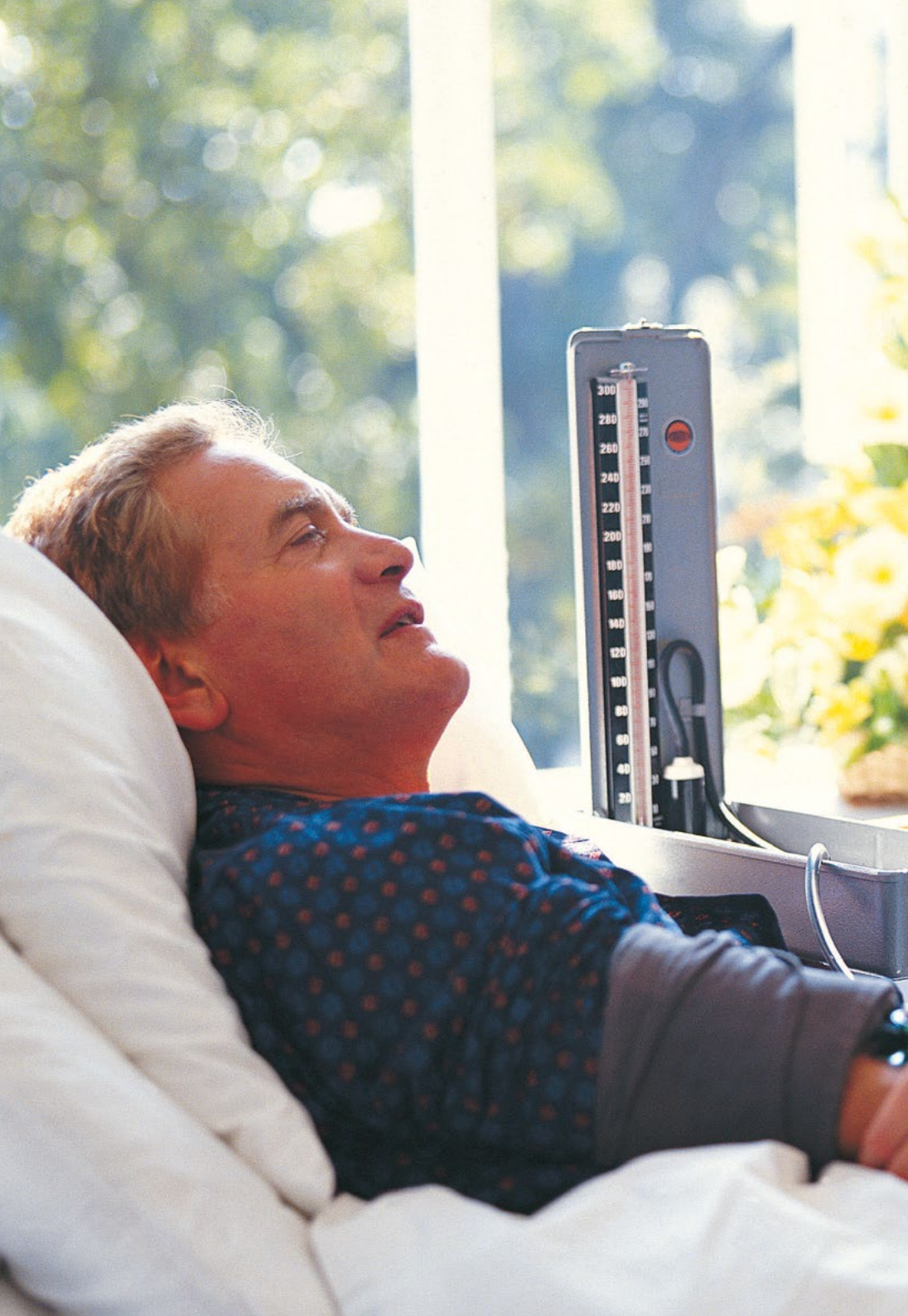
### Dra. Del Río Velloso, Mónica

- ♦ Bachelor of Medicine and Surgery. University of Valencia, July 25, 2003.
- ♦ Optional Area Specialist. Virgen de la Arrixaca University Hospital (Maternal-Infant Pavilion). Murcia. From 2010.
- ♦ Optional Area Specialist. La Fe University Hospital (Maternal Pavilion). Valencia. Since 2009

### Dra. Jiménez Pancho, Ana Isabel

- ♦ Graduated in Medicine and Surgery from the University of Seville in June 2006.
- ♦ Master in Pain Treatment. Edition 2012-2013 taught by the University of Seville.
- ♦ Facultative Specialist in the Area of Anesthesiology, Resuscitation and Pain Therapeutics of the Virgen del Rocío University Hospital. Since 2015





**Dra. Ángel Redondo, Lucía**

- ◆ Specialist Physician of the Anesthesia, Resuscitation and Pain Therapy Area. Virgen del Rocío University Hospital. Seville
- ◆ Specialty in Anesthesia, Resuscitation and Pain Therapy. San Pedro de Alcántara University Hospital, Cáceres
- ◆ Degree in Medicine. University of Seville

**Dra. Casado Pérez, Gloria**

- ◆ Degree in Medicine and Surgery from the University of Seville, 2004.
- ◆ Own Master's Degree in Pain Treatment. 2013. Sevilla University.
- ◆ Specialist in Anesthesiology, Resuscitation and Pain Treatment. MIR training during the 2010-2014 period at Virgen del Rocío University Hospitals. Seville.
- ◆ Facultative Specialist in the Anesthesiology and Resuscitation Area. Clinical Management Unit Surgical Block General Hospital Pain Treatment Unit. Virgen del Rocío University Hospital (Seville). Since 2014

05

# Structure and Content

The structure of the content has been designed by leading professionals in the Diagnostic and Therapeutic Approach to Pain, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to anesthesiology.



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*This Postgraduate Diploma in Foundations in the Diagnostic and Therapeutic Approach to Pain contains the most complete and up-to-date scientific program on the market”*



### Module 1. General Aspects of Pain Management and Control

- 1.1. Epidemiology, Key Concepts and Classification of Pain.
- 1.2. Neuroanatomy and Neurobiology of Pain.
- 1.3. Pathophysiology of Pain.
- 1.4. Pain Assessment.
- 1.5. Clinical History in Patients with Acute Postoperative Pain or Chronic Pain.
- 1.6. Physical Examination of the Patient with Pain.
- 1.7. Complementary Tests for the Diagnosis of Pain.
- 1.8. Psychological, Psychosocial, and Cognitive-Behavioral Aspects of Pain.  
Psychological Therapy
- 1.9. Therapeutic Bases for the Treatment of Pain.
- 1.10. Education in Pain for People Outside the Health Care Field.

### Module 2. Pharmacology of Pain

- 2.1. General Information on Pharmacological Management of Pain.
- 2.2. Analgesic Antipyretic Medications.
- 2.3. Nonsteroidal Anti-inflammatory Drugs (NSAIDs).
- 2.4. Steroid Anti-inflammatory Drugs.
- 2.5. Opioid Analgesics
- 2.6. Local Anesthetic.
- 2.7. Analgesic Adjuvants
- 2.8. Routes and Techniques of Analgesic Administration.
- 2.9. Multimodal Analgesia
- 2.10. Pre-emptive Analgesia and Pre-emptive Analgesia.





### Module 3. Interventional Pain Treatment

- 3.1. General Considerations on the Interventional Treatment of Pain.
- 3.2. Diagnostic-therapeutic Blockade of Trigger and Musculotendinous Points. Deep Muscle Blockade.
- 3.3. Joint Blockade of Shoulder, Knee, Coxo-femoral, Sacroiliac, and Other Joints.
- 3.4. Interlaminar and Transforaminal Epidural Blockade Under Image Control.
- 3.5. Blockade and Radiofrequency of Peripheral Nerves.
- 3.6. Radiofrequency of Dorsal Root Ganglions: Cervical, Dorsal, Lumbar, or Sacral.
- 3.7. Blockage and Radiofrequency of Medial Facet Branch at Cervical, Dorsal, and Lumbar Level.
- 3.8. Cooled Radiofrequency
- 3.9. Blockade and Radiofrequency of Sympathetic Ganglia: Stellate, Lumbar Sympathetic, Hypogastric, Impar.
- 3.10. Diagnostic-therapeutic Epidurolisis and Epiduroscopy.
- 3.11. Neurosurgical Techniques I: Neurostimulation: Epidural Electrode Implantation for Spinal Cord Stimulation, Dorsal Root Ganglion (DRG) Electrode Implantation, Peripheral Stimulation Subcutaneous Electrode.
- 3.12. Neurosurgical Techniques II: Implant of Intrathecal Infusion System.



*This training will allow you to advance in your career comfortably"*

06

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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 Re-learning, 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 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. Specialists learn better, faster, 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. Gervas, 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, trying to recreate the real conditions in professional medical 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. Students 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 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.



## 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.



*The physician 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 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 250,000 physicians 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.

*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



In this program you will have access to the best educational material, prepared with you 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.

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.



#### Latest Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. 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 & Retesting**

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.



06

# Certificate

The Postgraduate Diploma in Foundations in the Diagnostic and Therapeutic Approach to Pain guarantees you, in addition to the most rigorous and updated specialization, access to a university title of Postgraduate Diploma issued by **TECH** Technological University.





*Successfully complete this training and receive your university degree without the hassle of travel or laborious paperwork”*



This **Postgraduate Diploma in Foundations in the Diagnostic and Therapeutic Approach to Pain** contains the most complete and up-to-date scientific program on the market.

After passing the assessments, students receive by mail their Postgraduate Diploma issued by **TECH Technological University**.

The certificate issued by TECH Technological University will specify the qualification obtained through the Postgraduate Diploma and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional from career evaluation committees.

Title: **Postgraduate Diploma in Foundations in the Diagnostic and Therapeutic Approach to Pain**

Official Number of Hours: **450**



\*Apostille Convention. In the event that the student wishes to have their paper diploma Apostilled, TECH EDUCATION will make the necessary arrangements to obtain it at an additional cost of €140 plus shipping costs of the Apostilled diploma.

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



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