

# Postgraduate Certificate

## Spinal Pathology. Tumors, Fractures, and Infections



## Postgraduate Certificate Spinal Pathology. Tumors, Fractures, and Infections

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

Website: [www.techtute.com/medicine/postgraduate-certificate/spinal-pathology-tumor-fracture-infections](http://www.techtute.com/medicine/postgraduate-certificate/spinal-pathology-tumor-fracture-infections)

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01

# Introduction

This intensive program addresses traumatic, tumor and infectious spine pathology which, although less prevalent than degenerative pathology, is subsidiary to the application of therapeutic principles.



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*A comprehensive program that will help you keep up to date with the latest techniques in Neurosurgery”*

The Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections is an updated compilation of the pathologies that are subject to study and treatment with Neurosurgery. The application of diagnostic and therapeutic algorithms enhances student learning and synthesizes the flow of information to facilitate its practical application in the student's environment.

Post-traumatic spinal cord injury is a severe neurological injury that has substantial socioeconomic implications for the patient and society. Adapting the evaluation of the post-traumatic spinal cord injury patient according to the updated classifications is essential to focus the next steps in the management of these patients. Recent advances in the treatment of patients with post-traumatic spinal cord injury have significantly improved the diagnosis, survival rate and neurological prognosis. Learning in this subject is complemented with chapters on the different types of fractures that may be related to post-traumatic spinal cord injury, with emphasis on the classification and therapeutic indication of cervical fractures, dorsal fractures and fractures of the atlas-axis complex.

Knowledge of spinal tumor pathology includes both spinal tumors (primary or metastatic) and intrathecal tumors, which can be classified into extramedullary intradural tumors and intramedullary tumors. While spinal tumors are related to bone tumors in other parts of the body, intradural and intramedullary tumors have similar pathologic characteristics to intracranial tumors, which leads to a parallelism in their management. The student will be able to distinguish the different types of spinal tumors, as well as the latest surgical indications and other more recent complementary treatment modalities.

Spondylodiscitis is the most common spinal infection in clinical practice and requires a multidisciplinary approach that also includes medical specialists, considering that its incidence is progressively increasing. This increased incidence has led to a growing interest focused especially on the diagnostic protocol and surgical indications. Learning focused especially on these points and illustrated with clinical cases will be very useful to apply in the clinical management of patients.

The **Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections** contains the most complete and up-to-date Educational program on the market. The most important features include:

- ♦ The development of case studies presented by experts in international cooperation of the peoples of the world.
- ♦ 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.
- ♦ New developments in Spinal Pathology. Tumor, Fracture, and Infections
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Emphasis on innovative methodologies in International Cooperation
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*Expand your knowledge through this Postgraduate Certificate that will allow you to specialize with a view to achieving excellence in this field"*



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*This Postgraduate Certificate is the best investment you can make when selecting a refresher program for two reasons: in addition to updating your knowledge of Neurosurgery, you will obtain a qualification endorsed by TECH"*

The teaching staff includes professionals from the Neurosurgery sector, who bring their experience to this training 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 an immersive training experience designed to train for real-life situations.

The design of this program is centered around Problem-Based Learning, in which the medical professional will resolve professional practice situations that may arise throughout the program. For this purpose, the specialist will be assisted by an innovative interactive video system created by renowned and experienced Spinal Pathology experts. Tumor, Fracture, and Infections, and with great experience.

*Do not hesitate to take this training with us. You will find the best teaching material with virtual lessons.*

*This Postgraduate Certificate 100% online course will allow you to combine your studies with your professional work while increasing your knowledge in this field.*



# 02 Objectives

The Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections is aimed at aiding the professional's performance with the latest advances and most innovative treatments in the sector.





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*Thanks to this Postgraduate Certificate you will be able to specialize in Neurosurgery and learn about the latest advances in the field”*



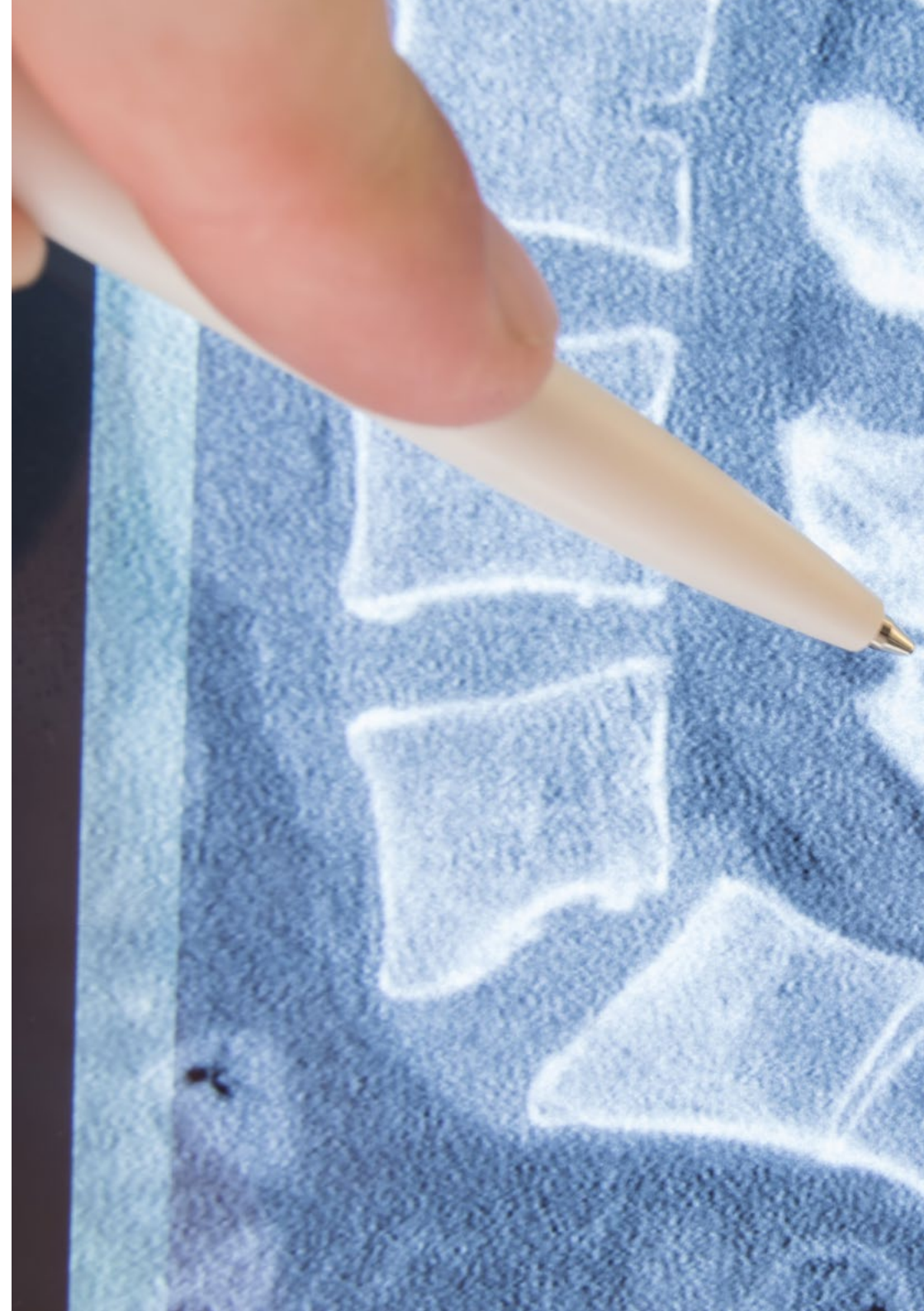
## General Objectives

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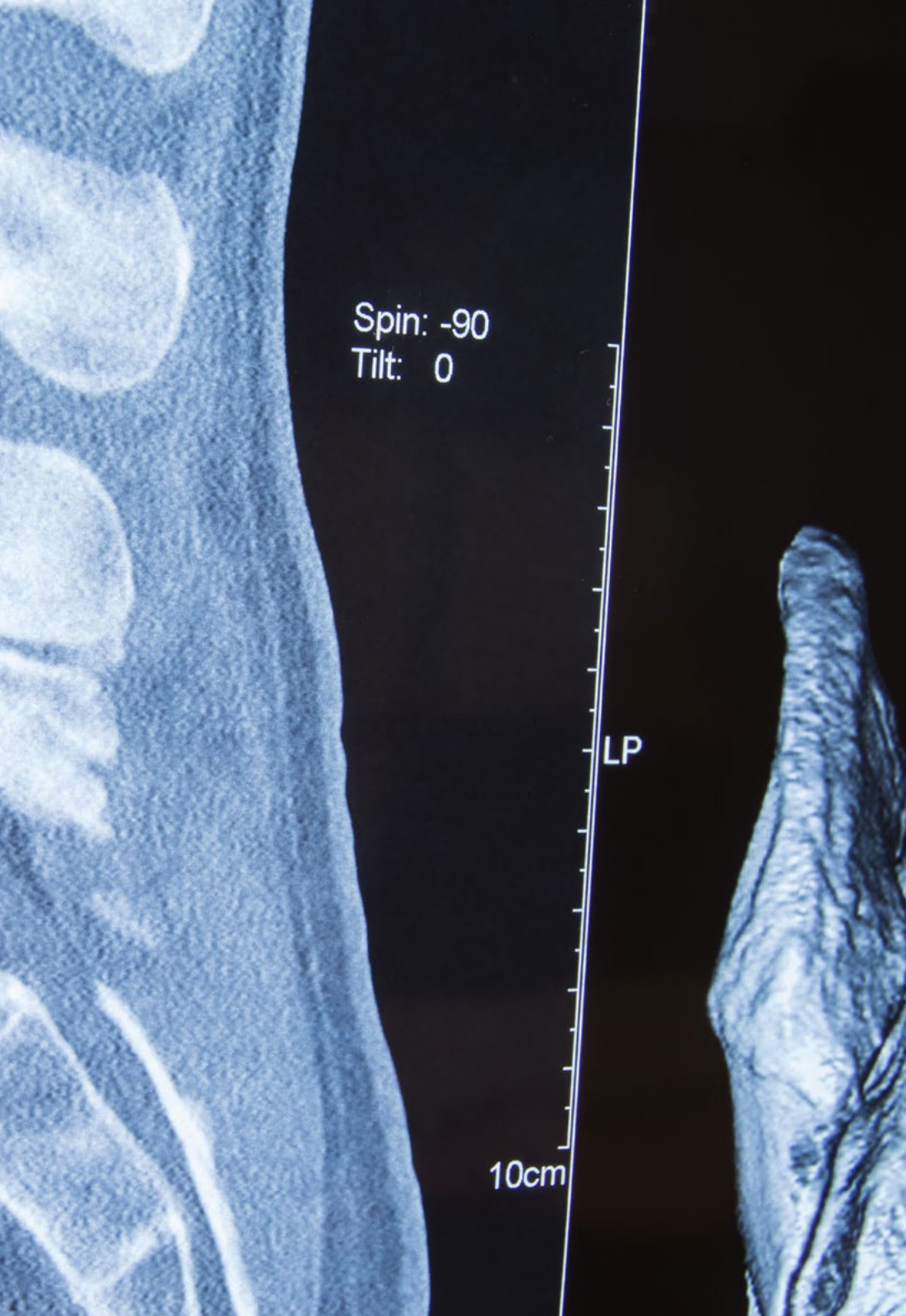
- ♦ Acquire more in-depth knowledge of the speciality, with a practical approach to help professionals apply the information learned in their clinical practice, focusing on the latest diagnostic and therapeutic guidelines and the most recent scientific evidence.
- ♦ Learn the latest surgical techniques that have been implemented in recent years along with the knowledge of technological development in multiple areas of Neurosurgery



*Take the opportunity and take the step to get up-to-date on the latest developments in Spinal Pathology. Tumors, Fractures, and Infections"*







### Specific Objectives

- ♦ Utilize the various classifications used for the evaluation of the post-traumatic spinal cord injury patient and understand their value in prognosis. Understand the evolution of the treatment of post-traumatic spinal cord injury and correlate it with its impact on the functional prognosis of the patients
- ♦ Describe the most common types of vertebral fractures, with special attention to the most commonly used classifications and how they determine the type of treatment
- ♦ Manage spinal and intrathecal tumor pathology routinely treated in neurosurgery.
- ♦ Manage the treatment guidelines for spondylodiscitis and what are the indications for surgery

03

# Course Management

The program includes in its teaching staff leading experts in Neurosurgery, who bring to this training the experience from their work. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.





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*Leading experts in Neurosurgery  
have joined forces to share all their  
knowledge in the field with you”*



## Management



### Dr. Fernández Carballal, Carlos

- ♦ Head of the Spinal Pathology Section. Neurosurgery Service
- ♦ Gregorio Marañón General University Hospital
- ♦ Associate Neurosurgery Professor. Faculty of Medicine. Complutense University of Madrid
- ♦ PhD in Surgery from the Autonomous University of Madrid Faculty of Medicine, obtaining the qualification of outstanding cum laude.
- ♦ Member of the Spanish Society of Neurosurgery, Member of the Neurorachis Society, Member of the Spanish Society of Functional Neurosurgery (SENEFE)
- ♦ Master's Degree in Medical and Clinical Management from the Spanish Distance University (UNED).
- ♦ Degree in Medicine (University of Navarra, 1999)

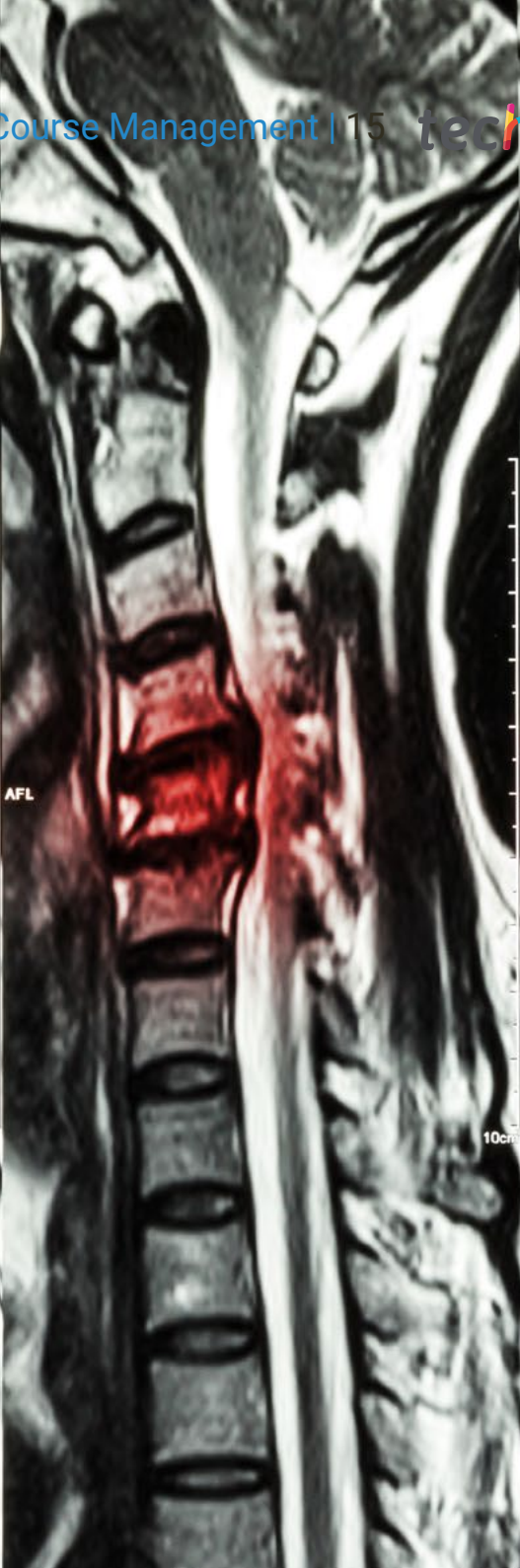
## Professors

### Dr. Manuel Poveda, José

- ♦ Neurosurgery Department. Gregorio Marañón General University Hospital
- ♦ Degree in Medicine. Central University of Venezuela

### Dr. Gil de Sagredo del Corral, Oscar Lucas

- ♦ Neurosurgery Department. Gregorio Marañón General University Hospital
- ♦ Degree in Medicine and Surgery. Complutense University of Madrid
- ♦ Member of the Spanish Society of Neurosurgery (SENEC)





# 04

## Structure and Content

The structure of the content has been designed by the best professionals in the Neurosurgery sector, 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 teaching.



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*The Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections contains the most complete and up-to-date scientific program on the market”*



## Module 1. Spinal Pathology, Tumor, Fracture, and Infection

- 1.1. Evaluation of Patients with Post-Traumatic Spinal Cord Injury
- 1.2. Treatment of Patients with Post-Traumatic Spinal Cord Injury
- 1.3. Atlas and Axis Fractures
- 1.4. Classifications and Treatment Indications for Subaxial Cervical Fractures
- 1.5. Classifications and Surgical Indications for Dorso-Lumbar Fractures
- 1.6. Primary Spinal Tumors
- 1.7. Metastatic Spinal Tumors
- 1.8. Extramedullary Intradural Spinal Tumors
- 1.9. Intramedullary Tumors
- 1.10. Infectious Spondylodiscitis
  - 1.10.1. Surgical Treatment Indications
  - 1.10.2. Postoperative Discitis







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*A unique, key, and decisive  
training experience to boost  
your professional development”*

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



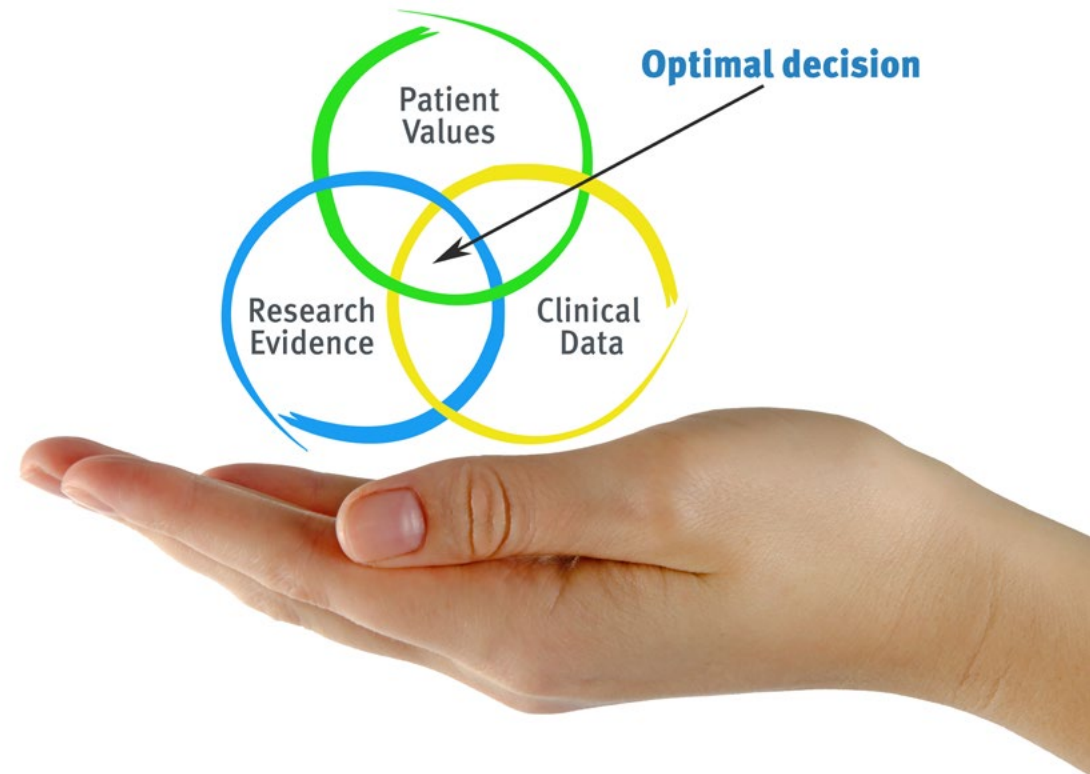
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*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

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 abundant scientific evidence on the effectiveness of the method. Specialists 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 in the physician's professional 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 achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into 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.

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.

*Professionals will learn through real cases and by resolving 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, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive 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 (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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



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



#### Study Material

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

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



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. 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

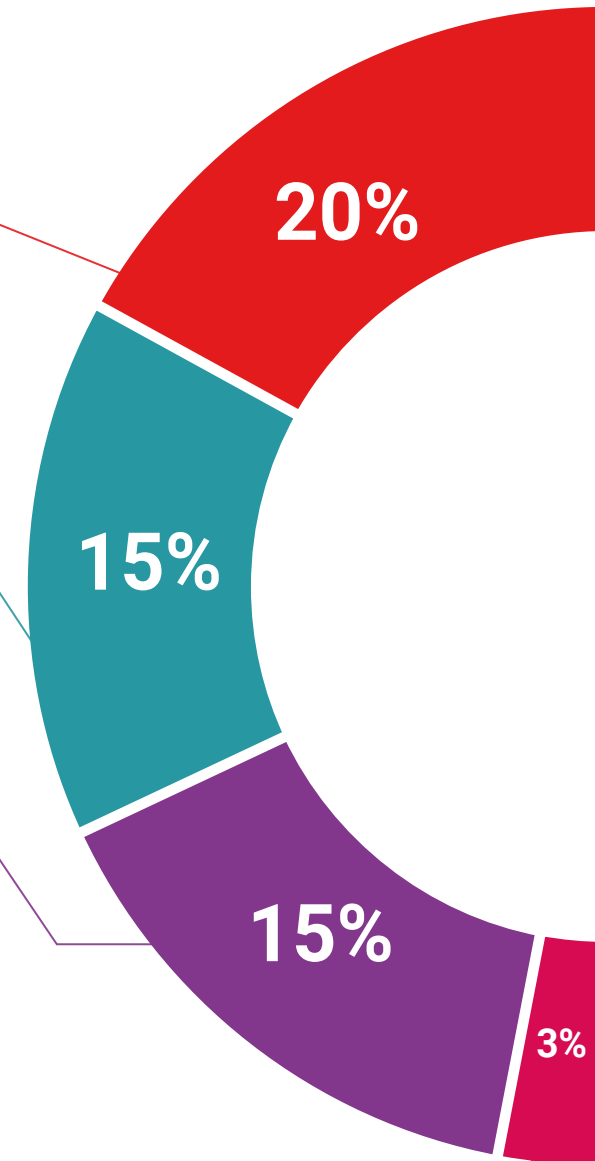
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

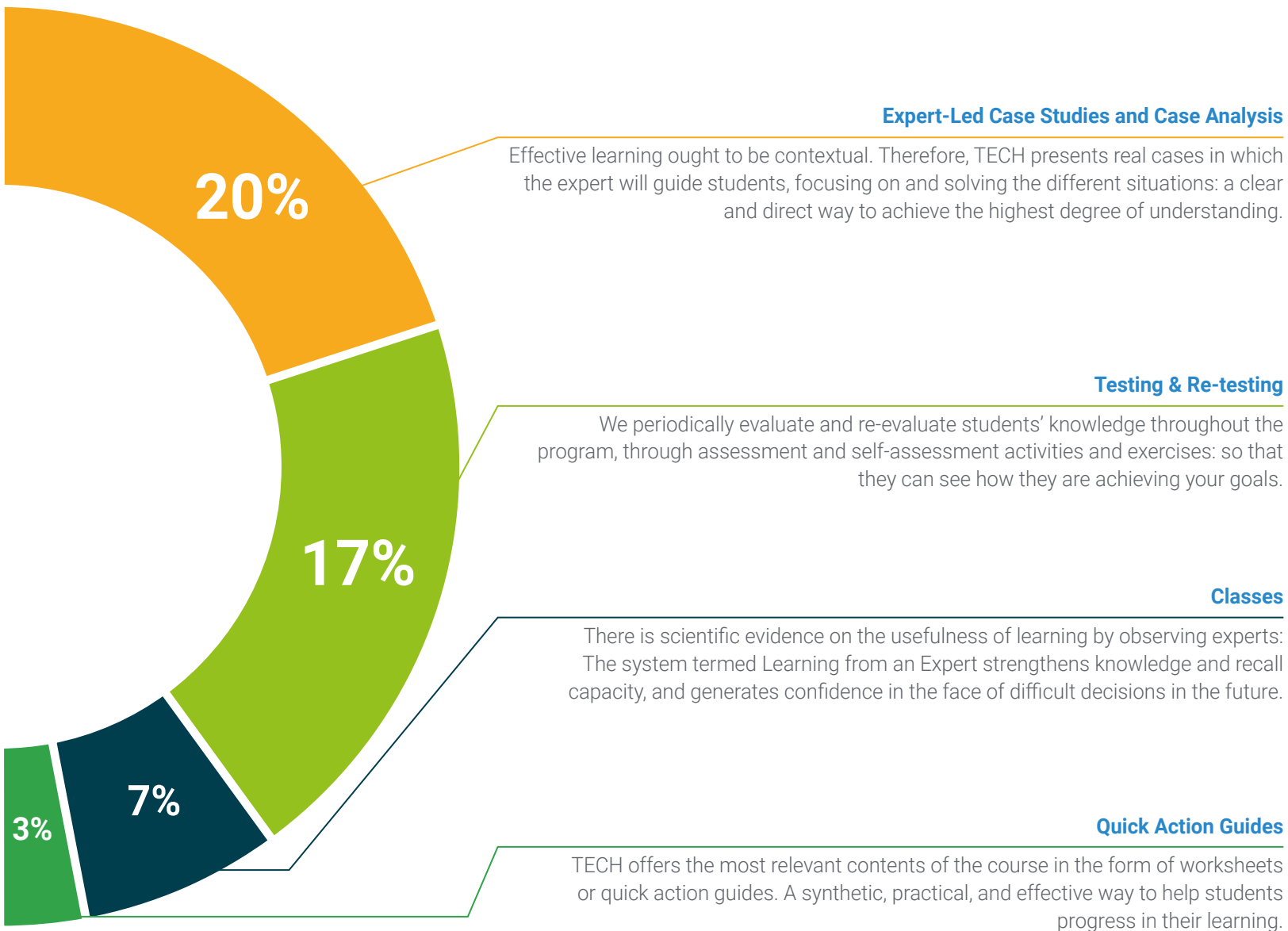
This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



#### 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.







# 06 Certificate

The Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH Global University.





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*Successfully complete this training program  
and receive your university certificate without  
travel or laborious paperwork”*

This private qualification will allow you to obtain a **Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections** 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.

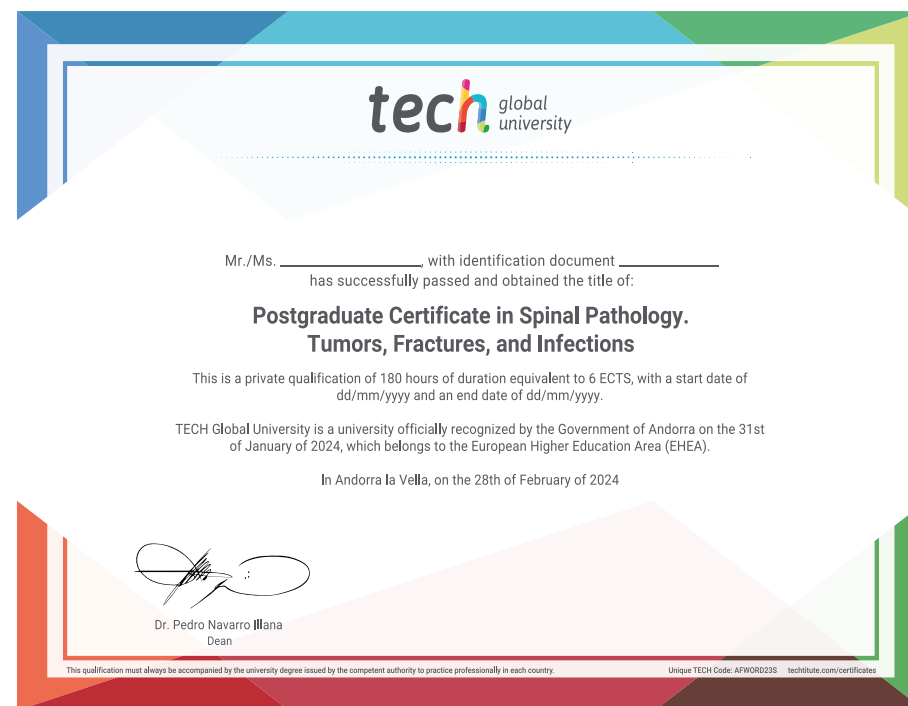
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Spinal Pathology. Tumors, Fractures, and Infections**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
online training  
development language  
virtual classroom



## Postgraduate Certificate

Spinal Pathology. Tumors,  
Fractures, and Infections

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

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