

Postgraduate Diploma

Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology





Postgraduate Diploma Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 22 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-advances-treatment-vertebral-deformities-dorsolumbar-degenerative-pathology

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01 Introduction

Update your knowledge in Advances in the Treatment of Vertebral Deformities, from the hand of distinguished experts in the field, who will guide you throughout the training process. You will learn the latest surgical techniques and tools used for the treatment of vertebral deformities, and apply them safely in daily clinical practice.

Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology are constantly growing due to technological advances that allow the use of minimally invasive techniques.





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Specialize in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology and be the best in your profession thanks to this multimedia training"

There is an increasing trend towards subspecialization within the medical-surgical specialties. There are so many different areas in the human body, that it is difficult to be up to date in the knowledge of a specialty as broad as Spinal Surgery. Hence, the need for a complete and quality scientific program to help and guide in this specific and exciting field.

With this Postgraduate Diploma, the professional will have a complete vision of the Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology. The program will highlight advances in surgical practice and treatments that directly affect patient's quality of life and improvement of pain. These will be transmitted so that the specialists can have the most up-to-date view possible of the knowledge available in the field. For this purpose, experts in Spinal Surgery from Spain and South America will collaborate with us.

This intensive training will teach the surgical techniques that are currently setting trends in the sector, used in the Specialized Surgery Centers. This will allow the professional, in addition to expanding his personal knowledge, to be able to apply it with greater skill in his daily clinical practice.



Expand your knowledge through this Postgraduate Diploma in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology that will allow you to specialize until you achieve excellence in this field"

This **Postgraduate Diploma in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ Theoretical multimedia content developed with the latest educational technologies, accessible at all times.
- ♦ Video lessons on the different pathologies, as well as surgeries, will be shown.
- ♦ Practical workshops in which clinical cases of daily practice are developed, which will help in decision making, through diagnostic and treatment algorithms.
- ♦ Practical cases that will serve as self-evaluation and will mark the progress of the specialist's knowledge.
- ♦ Online surgical procedures, performed in the daily practice of these advances, live or previously recorded.
- ♦ Theoretical lessons, via videoconference, with the possibility of participating in a discussion forum to comment and clarify doubts.
- ♦ Chats for consultation of doubts about clinical cases with the students participating in the Postgraduate Diploma.
- ♦ Possibility to interact with the professors of the Postgraduate Diploma and to solve in a simulated environment, pathologies that arise in their daily practice.
- ♦ Review of all the classic techniques that have not changed the way they work, and are the basis of the knowledge to come.

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This Postgraduate Diploma is the best investment you can make in the selection of an updating program for two reasons: in addition to updating your knowledge in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology, you will obtain a certificate from TECH Global University"

We offer you the best didactic material and dozens of video case studies that will allow you a contextual study that will facilitate your learning

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

Its teaching staff includes professionals belonging to the field of surgery, who contribute their work experience to this training, as well as renowned specialists from reference 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 training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the specialist 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 created by renowned and experienced experts in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology.



02 Objectives

The **Postgraduate Diploma in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology** is oriented to facilitate the performance of the professional dedicated to health with the latest advances and newest treatments in the sector. This will allow you to develop the skills that will turn your daily clinical practice into a bastion of the standards of the best available scientific evidence, with a critical, innovative, multidisciplinary and integrative sense.





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This is the best option to learn about the latest in Advances in the Treatment of Vertebral Deformities and Degenerative Dorsolumbar Pathology”



General Objectives

- ♦ Establish biological, biomechanical, indication, procedure and result analysis criteria in Spinal Fusion
- ♦ Learn the surgical steps of the cervical surgical procedure
- ♦ Evaluate the patient's spine correctly and effectively
- ♦ Know how to recognize those pathologies that represent a serious and urgent disease, and may compromise the life or functionality of a patient
- ♦ Know the current options in the management of spinal tumor through decision making processes, therapeutic planning, surgical techniques and perioperative care
- ♦ Analyze the classifications of primary tumors, as well as the importance of obtaining the correct biopsy
- ♦ Know the management of vertebral metastases
- ♦ Correctly select and interpret the most appropriate radiographic, computed tomography (CT) and magnetic resonance imaging (MRI) for the diagnosis of traumatic spinal injuries
- ♦ Analyze the appropriate plan to prevent complications of spinal cord trauma
- ♦ Know the main complications that occur in Minimally Invasive Surgery in elderly patients
- ♦ Learn what are the neurological complications in spinal surgery





Specific Objectives

- ♦ Know the anatomical areas of the cervical, thoracic, lumbar and sacral spine, as well as their surgical approaches
- ♦ Know the anatomy of the usual sites of access to the spine by Minimally Invasive Techniques
- ♦ Learn what lumbar canal stenosis is and its clinical features
- ♦ Identify key structures and assess risks related to local vascular and neurological anatomy
- ♦ Identify by Fluoroscopy the targets for posterior and lateral approaches to the lumbar spine
- ♦ Perform a minimally invasive lateral approach to the L2-L3, L3-L4 and L4-L5 discs
- ♦ Address the disc using Neuro-monitoring and tubular system
- ♦ Know how and when to perform laminectomies and foraminotomies
- ♦ Identify entry points for insertion of the pedicle screw
- ♦ Prepare the pedicles for insertion of the lumbar pedicle screws
- ♦ Learn and review the neural anatomy of the lumbar spine
- ♦ Conversion of the approach to a mini lumbotomy and access to the disc by resection of the psoas muscle
- ♦ Perform a facetectomy, prepare the intervertebral disc and vertebral plates
- ♦ Performance of discectomy
- ♦ Insert Intersomatic Boxes
- ♦ Know the advances in the design of new fixation and intersomatic implants
- ♦ Learn the diagnosis and treatment of coronal and sagittal spinal deformities
- ♦ Know the types of scoliosis depending on the age of onset
- ♦ Identify risk factors and know the diagnostic tests and evolutionary patterns
- ♦ Learn conservative therapies for the treatment of scoliosis. The use of corsets and functional therapies
- ♦ Know the surgical treatment algorithms of the different scoliosis, taking into consideration the new technologies
- ♦ Understand surgical principles and how they apply to each patient's needs and expectations
- ♦ Know the frequent complications and postoperative management of these patients.
- ♦ Know the main benign tumors of the spine
- ♦ Know how to apply the indications in percutaneous surgery
- ♦ Learn the latest advances in surgical treatment
- ♦ Know how to identify major and minor trauma
- ♦ Learn the management and use of radiological images
- ♦ Know how to define the indications for the appropriate use of CT or MRI
- ♦ Recognize special circumstances that compromise spinal cord function
- ♦ Learn to formulate treatment objectives
- ♦ Know how to explain how to restore sagittal balance
- ♦ Learn to evaluate surgical options
- ♦ Know how to justify the approach by a multidisciplinary team
- ♦ Know the surgical complications in minimally invasive surgical procedures in elderly patients
- ♦ Know the advances in the use of new instrumentation, in the improvement of manufacturing materials and in the use of new grafts

03

Course Management

The program includes in its teaching staff reference experts in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology, who pour into this training the experience of their work. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.



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A team of professionals in the field has come together to teach you the latest in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology"

International Guest Director

Awarded by the American Association of Neurological Surgeons for his advances in this clinical field, Dr. Jeremy Steinberger is a renowned physician specialized in the treatment of various spinal disorders. His philosophy is based on developing individualized therapeutic plans according to the specific needs of each patient, using minimally invasive techniques.

In this way, he has carried out his work in health institutions of international reference such as the Mount Sinai Health System in New York. Among his main contributions, he has led a wide range of surgical interventions that have managed to significantly reduce patients' chronic pain and, therefore, their quality of life. At the same time, he has developed different clinical protocols that have contributed to reduce the risks associated with post-surgical complications.

On the other hand, he has balanced these functions with his facet as a Scientific Researcher. In this sense, he has written numerous specialized articles on subjects such as preserving the mobility of individuals affected by spinal cord injuries, the use of emerging technology tools such as Robotics to guide operations and even the use of Virtual Reality to optimize precision during procedures. Thanks to this, he has managed to consolidate himself as a reference that has driven innovation in his field of work.

Committed to excellence, he has actively participated as a speaker at various international scientific congresses. In these events, he has shared his vast experience and the results of his research on Minimally Invasive Spinal Surgery; in addition to exposing the advantages of the use of cutting-edge instruments such as Augmented Reality in the treatment of diseases. This has allowed professionals to optimize their daily clinical practice, increasing the quality of care services and also improving the health of multiple people in the long term.



Dr. Steinberger, Jeremy

- Director of Minimally Invasive Surgery at Mount Sinai Health System, New York, United States
- Specialist in Neck and Spinal Pain Management
- Clinical Researcher with an extensive scientific production
- Internship in Orthopedic Spinal Surgery at Hospital for Special Surgery, New York
- Residency in Complex Spinal Surgery at Mount Sinai School of Medicine, New York
- PhD in Medicine from Yeshiva University
- Awarded on different occasions for his advances in the area of Spinal Surgery
- Member of: American Association of Neurological Surgeons, Society of Lateral Access Surgery and AO Spine

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

Management



Dr. Losada Viñas, Jose Isaac

- Coordinator of the Spine Unit of Alcorcón Foundation University Hospital
- PhD in Medicine and Surgery from the University of Navarra
- Member of the Communication Committee of GEER (Raquis Diseases Study Group).
- National Basic Research Award SECOT 1995
- Numerous national and international articles and books



Dr. González Díaz, Rafael

- Head of the Spinal Surgery Unit at Niño Jesús Hospital (pediatric surgery) and at Rosario Hospital and Sanitas la Moraleja Hospital in Madrid (adult and pediatric surgery).
- Doctor of Medicine and Surgery, Extraordinary Prize. University of Salamanca
- Specialist in Orthopedic and Trauma Surgery. Spine Surgery
- Master's Degree in Medical Management and Clinical Management by the School of Health/UNED
- Former president of the Spanish Spinal Society GEER (Study Group of Spine Diseases)
- Secretary General of SILACO (Ibero-Latin American Spine Society)

Coordinators

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- ♦ Head of the COT department at Paraplegics National Hospital of Toledo

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- ♦ Head of Rachis Unit, Serv COT. U.C.H. Santiago de Compostela

Dr. García de Frutos, Ana

- ♦ Spine Unit of the Vall d'Hebron Hospital in Barcelona and in the ICATME Spine Unit at the Quirón-Dexeus Clinic in Barcelona

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- ♦ Dr Peset Hospital Valencia. Head of Spine Section, COT Service. Dr Peset University Hospital Valencia

Dr. Sanfeliu Giner, Miguel

- ♦ Head of the Spine Unit Section. COT service. General Hospital of Valencia

Professors

Dr. Olmos, Matías Alfonso

- ♦ PhD in Medicine and Surgery
- ♦ Medical specialist in COT
- ♦ COT Department Director. Navarra University Clinic. Pamplona
- ♦ COT Professor. Faculty of Medicine of the University of Navarra

Dr. Rodríguez de Lope Llorca, Ángel

- ♦ Doctor of Medicine and Surgery, Doctor specialized in Neurosurgery
- ♦ Assistant Physician, Neurosurgery Department, Virgen de la Salud Hospital, Toledo

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- ♦ Assistant Physician, COT Service, Paraplegic National Hospital of Toledo

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- ♦ Medical specialist in COT Head of COT Villalba Hospital. Madrid
- ♦ Associate Professor at the COT. Autonomous University of Madrid

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- ♦ Specialist Degree in Orthopedic Surgery and Traumatology Raquis Surgery Unit.
- ♦ University Health Care Complex of León

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- ♦ Marqués de Valdecilla University Hospital
- ♦ Specialist in Traumatology and Orthopedic Surgery attached to the Surgical Raquis Unit.

Dr. Cueto-Felgueroso, Paloma de la Dehesa

- ♦ Marque de Valdecilla University Hospital (Santander - Cantabria)
- ♦ Orthopedic Surgery and Traumatology Area Specialist - Spine Unit

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- ♦ Spine Unit. COT service. La Paz University Hospital

Dr. Pernal Duran, Carlos

Dr. Puente Sánchez, Luís

- ♦ Santiago de Compostela University Hospital Complex

Dr. Bas Hermida, Teresa

- ♦ Spine Unit. La Fe University Hospital (Valencia)



04

Structure and Content

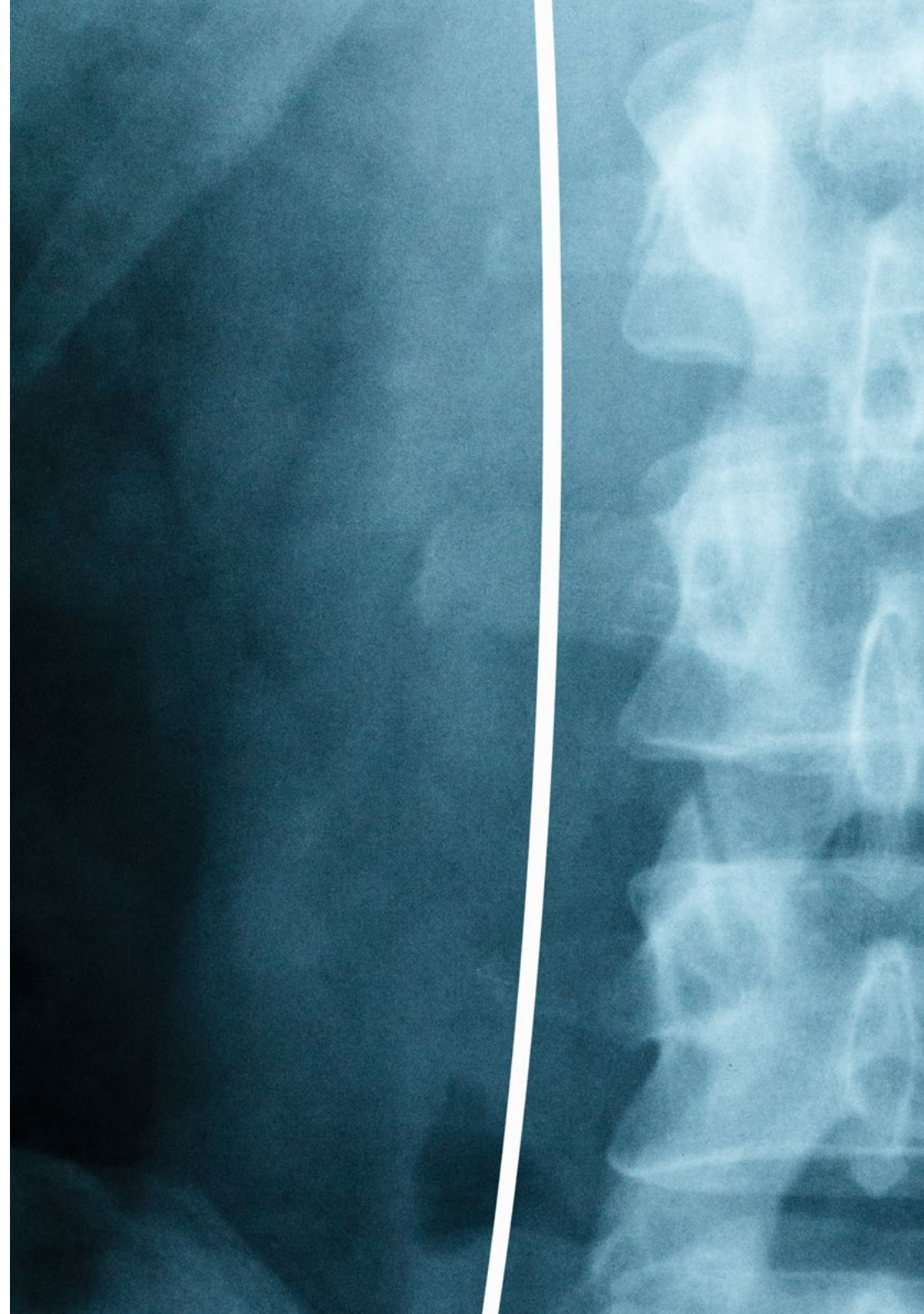
The structure of the content has been designed by the best professionals in the sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to teaching.



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This Postgraduate Diploma contains the most complete and up-to-date scientific program on the market"

- 1.1. Thoracic Column Approaches
 - 1.1.1. General Indications
 - 1.1.2. Absolute and Relative Contraindications
 - 1.1.3. Preoperative Planning
 - 1.1.4. Anterior Approaches to Thoracic Spine.
 - 1.1.4.1. DIV-DXI Transthoracic Approach
 - 1.1.4.2. Transpleural Anterior Approach DIII-DXI. Louis
 - 1.1.5. Thoracolumbar Junction Approaches
 - 1.1.5.1. Transpleural-Retroperitoneal Approach
 - 1.1.5.2. Extrapleural Approaches
 - 1.1.6. Video-endoscopic Approach to the Thoracic Spine
 - 1.1.7. Posterior and Posterolateral Approaches to the Thoracic Spine. Thoracic Disc Access
 - 1.1.8. Costotransversectomy
 - 1.1.9. Postoperative Management
- 2.1. Lumbar Spine Approaches
 - 2.1.1. L2-L5 Retroperitoneal Anterior Approaches
 - 2.1.2. Extrapleural Anterior Approach with Median Incision for L2-L5 Levels
 - 2.1.3. Anterior Pararectal Approach Retroperitoneal to L5-S1
 - 2.1.4. Laparoscopic Transperitoneal Approach to L5-S1
 - 2.1.5. Lateral Oblique Approach of the Lumbar Spine to L2-L5
 - 2.1.6. En Bloc Sacrectomy
 - 2.1.7. Lateral Approach:
 - 2.1.7.1. Lateral Approach for Discectomies, Foraminotomies or XLIF Lateral Fusions
 - 2.1.7.2. Microscopic or Minimally Invasive Lumbar Discectomy
 - 2.1.8. Posterior Approach:
 - 2.1.8.1. Posterior Approaches to the Cervical Spine
 - 2.1.8.2. Lumbar Paraspinal Spinal Cord Approaches
 - 2.1.8.3. Foraminal Approach to the Lumbar Disc
 - 2.1.9. Complications of Thoracolumbar and Lumbar Spine Approaches

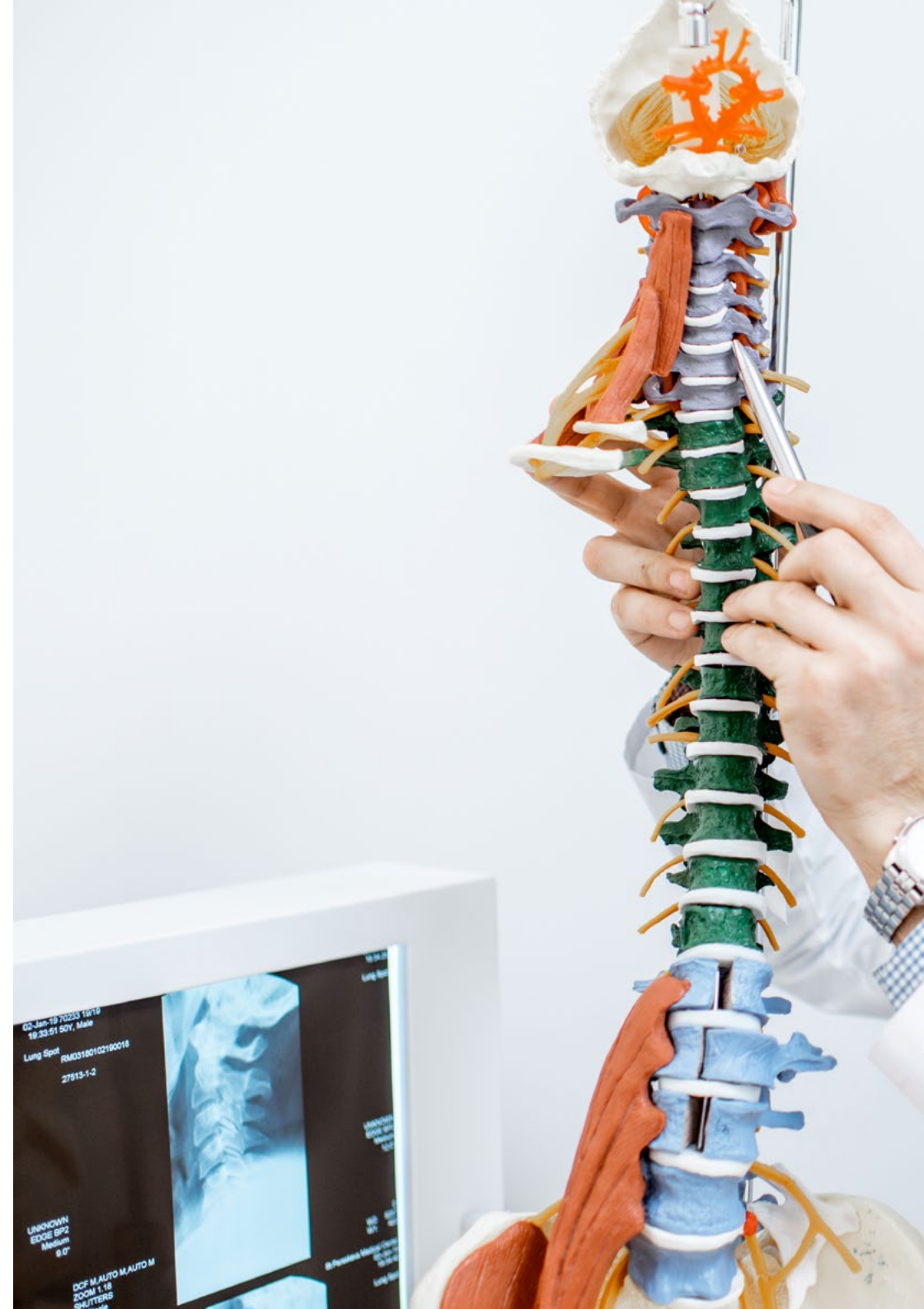


- 3.1. Spinal Canal Stenosis and Degenerative Spondylolisthesis
 - 3.1.1. Presentation, Clinical and Nonsurgical Treatment of Lumbar Canal Stenosis
 - 3.1.1.1. Knowledge of the Signs and Symptoms of Lumbar Spinal Stenosis (LSS)
 - 3.1.1.2. Know the Clinical Characteristics and Natural History of Neurogenic Claudication
 - 3.1.1.3. Classify Lumbar Canal Stenosis
 - 3.1.1.4. Evaluate Surgical and Non Surgical Treatment Options
 - 3.1.1.5. Know the Alternatives of Rehabilitation
 - 3.1.2. Imaging of Lumbar Canal Stenosis and Degenerative Spondylolisthesis
 - 3.1.2.1. Describe the Different Imaging Techniques to Identify Lumbar Canal Stenosis and Degenerative Spondylolisthesis
 - 3.1.2.2. Classification and Degree of Lumbar Canal Stenosis
 - 3.1.2.3. Appreciate the Role of Complete and Functional Spine Radiographs in the Management of Patients with Lumbar Canal Stenosis and Degenerative Spondylolisthesis
 - 3.1.3. Surgical Treatment of Lumbar Canal Stenosis
 - 3.1.3.1. Formulate the Principles of Stenosis Surgery
 - 3.1.3.2. Individualize the Surgical Technique for Each Patient
 - 3.1.3.3. Recognize the Indications for Fusion in Patients with Lumbar Canal Stenosis
 - 3.1.4. Surgical Treatment of Degenerative Spondylolisthesis
 - 3.1.4.1. Evaluate Surgical and Non-Surgical Treatment Options in Degenerative Spondylolisthesis
 - 3.1.4.2. Summarize the Controversies in the Choice of Treatment in Degenerative Spondylolisthesis

- 4.1. Spondylolysis and Low-Grade Isthmic Spondylolisthesis
 - 4.1.1. Epidemiological Aspects and Natural History
 - 4.1.2. Describe the Signs and Symptoms of Spondylolysis and Low Grade Spondylolisthesis
 - 4.1.3. Formulate the Principles of its Therapeutic Management.
 - 4.1.4. Evaluate the Different Therapeutic Options
 - 4.1.5. Anticipate Possible Complications of the Instrumentation and its Positioning
 - 4.1.6. Analyze the Alternatives of Rehabilitation.
- 5.1. Degenerative Deformity
 - 5.1.1. Describe the Pathogenesis and Natural History of Lumbar Degenerative Deformity
 - 5.1.2. Explain the Concept of Spinal Balance and the Different Spino-Pelvic Parameters
 - 5.1.3. Evaluate the Risk-Benefit Balance for Surgery and Potential Complications
 - 5.1.4. Formulate a Surgical Plan for Degenerative Kyphoscoliosis
 - 5.1.5. Pelvis Fixations
- 6.1. Advances in the Design of New Implants
 - 6.1.1. Posterior or Posterolateral Instrumentations
 - 6.1.2. Anterior Instrumentation
 - 6.1.3. Intersomatic Implants
 - 6.1.4. Disc Prosthesis
- 7.1. Neuromuscular Scoliosis. Management and Advances
 - 7.1.1. Classification, Generalities and Preoperative Planning of Neuromuscular Scoliosis
 - 7.1.2. Assessment of Respiratory Function in Neuromuscular Scoliosis. Indications for the use of BIPAP Before or After Surgery
 - 7.1.3. Anesthesia in Neuromuscular Patients
 - 7.1.4. Intraoperative Monitoring
 - 7.1.5. Use of Evoked Potentials in Patients with Nonambulatory Neuromuscular Scoliosis
 - 7.1.6. Indication and Contraindication of the Anterior Approach in Neuromuscular Scoliosis
 - 7.1.7. Surgical Treatment by Posterior Approach, Pedicle Screws and Instrumentation with Sublaminar Wires
 - 7.1.8. Techniques and Indications for Lumbosacral Fixation
 - 7.1.9. Indications for Growth Systems in Severe Neuromuscular Infantile Scoliosis
 - 7.1.10. Evolution and Treatment of Neuromuscular Scoliosis in Adulthood.
- 8.1. Congenital Scoliosis. Generalities and Diagnosis
 - 8.1.1. Classification of Congenital Scoliosis. Surgical Action Protocol
 - 8.1.2. Alterations Associated with Vertebral Deformities. Preoperative Evaluation
 - 8.1.3. Neurosurgical Performance of Spinal Cord Disorders in Congenital Deformities
 - 8.1.4. Surgical Strategy in Congenital Kyphosis. Classification and Types
 - 8.1.5. Complex Congenital Scoliosis. Indications for Pedicular Subtraction Osteotomies
 - 8.1.6. Hemivertebra Resection by Double Anterior Posterior Approach versus Posterior Approach
 - 8.1.7. Treatment of Rib Malformations Associated with Congenital Malformations, VERTR Indications
 - 8.1.8. Treatment and Evolution of Klippel-Feil Syndrome in Adulthood

- 9.1. Idiopathic Juvenile Scoliosis. Advances
 - 9.1.1. Current State of Knowledge on the Etiology of Idiopathic Scoliosis
 - 9.1.2. Natural History of Idiopathic Scoliosis after Maturation
 - 9.1.3. Clinical Assessment of the Patient with Idiopathic Scoliosis
 - 9.1.4. Cardio-Pulmonary Assessment
 - 9.1.5. Review of Non-Fusion Techniques in Early Onset Scoliosis. What We Have Done and What's Next
 - 9.1.6. Factors Predicting Progression During Growth
 - 9.1.7. Conservative Treatment
 - 9.1.7.1. Orthotic Treatment of Idiopathic Scoliosis
 - 9.1.7.2. Observation as a Treatment
 - 9.1.8. Surgical Treatment
 - 9.1.8.1. Posterior Arthrodesis and Hybrid Instrumentation: Standard Technique
 - 9.1.8.2. Posterior Arthrodesis with Thoracic Pedicle Screws
 - 9.1.9. Treatment of Thoracolumbar Curves
 - 9.1.9.1. Instrumented Anterior Arthrodesis
 - 9.1.9.2. Instrumented Posterior Arthrodesis
 - 9.1.10. Systematic Work in the Choice of Fusion Levels
 - 9.1.11. Growth Bar Gradation. When and Which Options
 - 9.1.12. Are the Current Results of Instrumented Fusion in Adolescent Idiopathic Scoliosis Acceptable
 - 9.1.13. "Tethering" in Adolescent Idiopathic Scoliosis
 - 9.1.14. Tricks and Errors to Limit Arthrodesis and Avoid Trunk Imbalance in Adolescent Idiopathic Scoliosis
 - 9.1.15. Severe Untreated Deformities
 - 9.1.16. Pediatric Reconstructive Surgery
 - 9.1.17. Building Multidisciplinary Teams in the Care of Patients with Spinal Deformity
 - 9.1.18. Clinical and Functional Results
 - 9.1.18.1. Results of Idiopathic Scoliosis Surgery
 - 9.1.18.2. Radiological Results of the Different Fusion Techniques
- 10.1. Adult Deformities
 - 10.1.1. What is the Evidence for Conservative Treatment of Adult Scoliosis
 - 10.1.2. Toward a Classification Scheme in Adult Scoliosis that Predicts Quality Outcomes
 - 10.1.3. How Does the Degenerative Process Affect Surgical Decisions/Approach
 - 10.1.4. Reconstruction of Sagittal Alignment. Lessons Learned over the last 10 Years
 - 10.1.5. Surgical Management of Spinal Deformity in Frail Patients
 - 10.1.6. Value of Databases and Predictive Models for Improving Results in Adult Scoliosis. Risk Calculators
 - 10.1.7. Care of Patients with Adult Scoliosis
 - 10.1.8. Failed Adult Scoliosis Surgery. Reconstruction
 - 10.1.9. Cost-Effectiveness of Surgical Treatment of Adult Scoliosis Deformity
- 11.1. Reconstructive Surgery and Vertebral Osteotomies
 - 11.1.1. Vertebral Osteotomies: Types and Historical Evolution
 - 11.1.2. Reconstructive Surgery in Pediatric Spine: Causes and Prevention
 - 11.1.3. Reconstructive Surgery in Adult Spine: Causes and Prevention
 - 11.1.4. Reconstructive Surgical Strategy. Choice of Osteotomy
 - 11.1.5. Cervical Spine and Cervical/Thoracic Hinge. Surgical Strategy
 - 11.1.6. Reconstructive Surgery of Coronal Imbalance
 - 11.1.7. Reconstructive Surgery of Sagittal Imbalance. Thoracic and Lumbar Osteotomies
 - 11.1.7.1. Tri-Columnar Osteotomies. Pedicular Subtraction
 - 11.1.7.2. Ponte Osteotomies. Smith-Petersen
 - 11.1.7.3. Other Osteotomies
 - 11.1.8. Lumbosacral Reconstructive Surgery. Spondylolisthesis. Sacral/Pelvis Osteotomies
 - 11.1.9. Optimize Safety in Reconstructive Spinal Surgery
 - 11.1.10. Outcome of Thoracolumbar Osteotomies in the Adult
- 12.1. Benign Primary Tumors
 - 12.1.1. Main Benign Tumors of the Spine
 - 12.1.2. Description and Indications for Percutaneous Surgery
 - 12.1.3. Surgical Treatment

- 13.1. Trauma of the Thoracolumbar Spine and Sacrum
 - 13.1.1. Imaging in Thoracolumbar and Sacral Fractures
 - 13.1.1.1. Use of the AO Classification
 - 13.1.1.2. Selection of the Most Appropriate Images to Identify Major or Minor Trauma
 - 13.1.1.3. Management and Use of Radiological Images
 - 13.1.1.4. Define the Indications for Appropriate Use of CT or MRI
 - 13.1.1.5. Recognize Special Circumstances that Compromise Spinal Cord Function
 - 13.1.2. Thoracic-Lumbar Spine Trauma; Classification and Management
 - 13.1.2.1. Recognize the Signs and Symptoms of Thoracolumbar Fractures
 - 13.1.2.2. Differentiate between Denis, AO and TLICS Classifications
 - 13.1.2.3. Explain the Role of Ligaments in Burst Fractures
 - 13.1.2.4. Evaluate the Different Surgical Techniques: Anterior Approach including MIS Techniques or Posterior Approach including MIS Technique or Both Approaches
 - 13.1.3. Sacral Fractures: Classification and Treatment
 - 13.1.3.1. Description of Important Anatomical Aspects
 - 13.1.3.2. Differentiate the Different Types of Sacral Fractures
 - 13.1.3.3. Use of the AO Classification
 - 13.1.3.4. Recognize the Signs and Symptoms of Sacral Fractures
 - 13.1.3.5. Compare Surgical or Conservative Treatment
 - 13.1.3.6. Evaluate the Correct Surgical Options
- 14.1. Posttraumatic Kyphosis
 - 14.1.1. Prevention and Treatment of Posttraumatic Kyphosis
 - 14.1.2. Discussion of the Reasons for Posttraumatic Kyphosis
 - 14.1.3. Formulate Treatment Objectives
 - 14.1.4. Explain How to Restore Sagittal Balance
 - 14.1.5. Evaluate the Surgical Options
 - 14.1.6. Justify the Approach by a Multidisciplinary Team





- 15.1. Surgical Aspects of Scoliosis in Elderly Patients
 - 15.1.1. The Sagittal Profile in the Over 65 Years of Age: Characteristics and Radiographic Analysis
 - 15.1.2. Clinical Evaluation of the Sagittal Plane: How to Integrate Sagittal Balance into Clinical Practice
 - 15.1.3. Scoliosis in Elderly Patients: Prevalence. Pathophysiology. Classification. Indications and Objective of Surgery
 - 15.1.4. Levels of Fusion in Scoliosis of Elderly Patients. Spinal Instrumentation
 - 15.1.5. Dual Versus All Posterior Approach in Scoliosis in the Elderly
 - 15.1.6. Vertebral Osteotomies. How to Choose the Correct Surgical Approach
- 16.1. Complications Derived from the Surgical Procedure
 - 16.1.1. Failed Back Syndrome. Classification
 - 16.1.1.1. Reasons for Failure of Surgical Instrumentation
 - 16.1.1.2. Postoperative Vertebral Instability
 - 16.1.1.3. Postoperative Deformities
 - 16.1.1.2. Pseudarthrosis
 - 16.1.2. Adjacent Level Diseases. Therapeutic Attitude
 - 16.1.3. Revision Surgery. Strategies



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

05

Methodology

This training program provides you with 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.



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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. 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.

“

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.



Relearning Methodology

At TECH we enhance the Harvard 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.

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 Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 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 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 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.





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 your goals.



Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



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 Diploma in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology guarantees you, in addition to the most rigorous and up-to-date training, access to a certificate issued by TECH Global University.





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

This program will allow you to obtain your **Postgraduate Diploma in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology** 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.

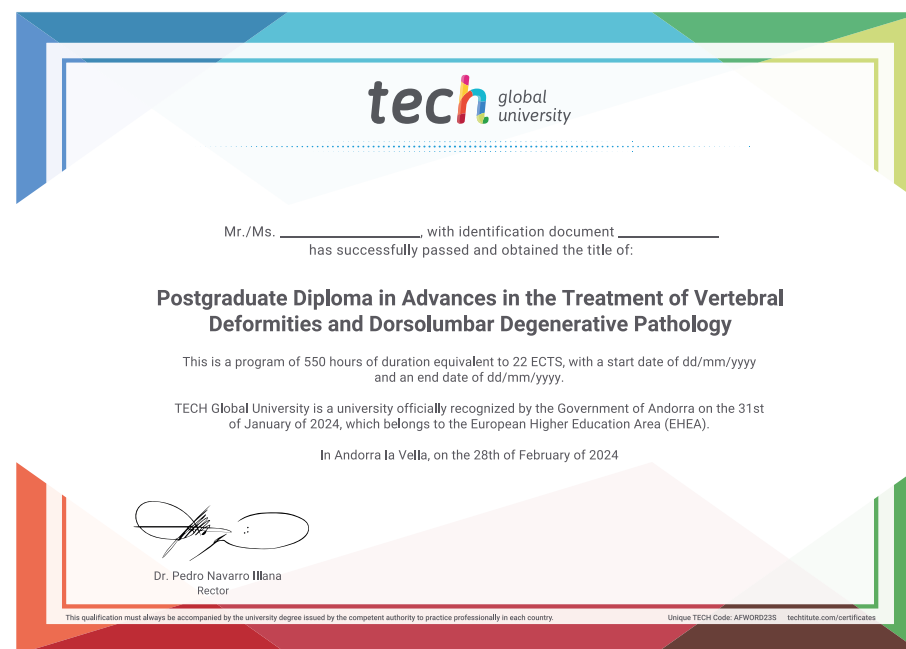
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Advances in the Treatment of Vertebral Deformities and Dorsolumbar Degenerative Pathology**

Modality: **online**

Duration: **6 months**

Accreditation: **22 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

future

health

confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present

online training

development languages

virtual classroom

tech global
university

Postgraduate Diploma
Advances in the Treatment
of Vertebral Deformities
and Dorsolumbar
Degenerative Pathology

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 22 ECTS
- » Schedule: at your own pace
- » Exams: online

Postgraduate Diploma

Advances in the Treatment of Vertebral
Deformities and Dorsolumbar
Degenerative Pathology