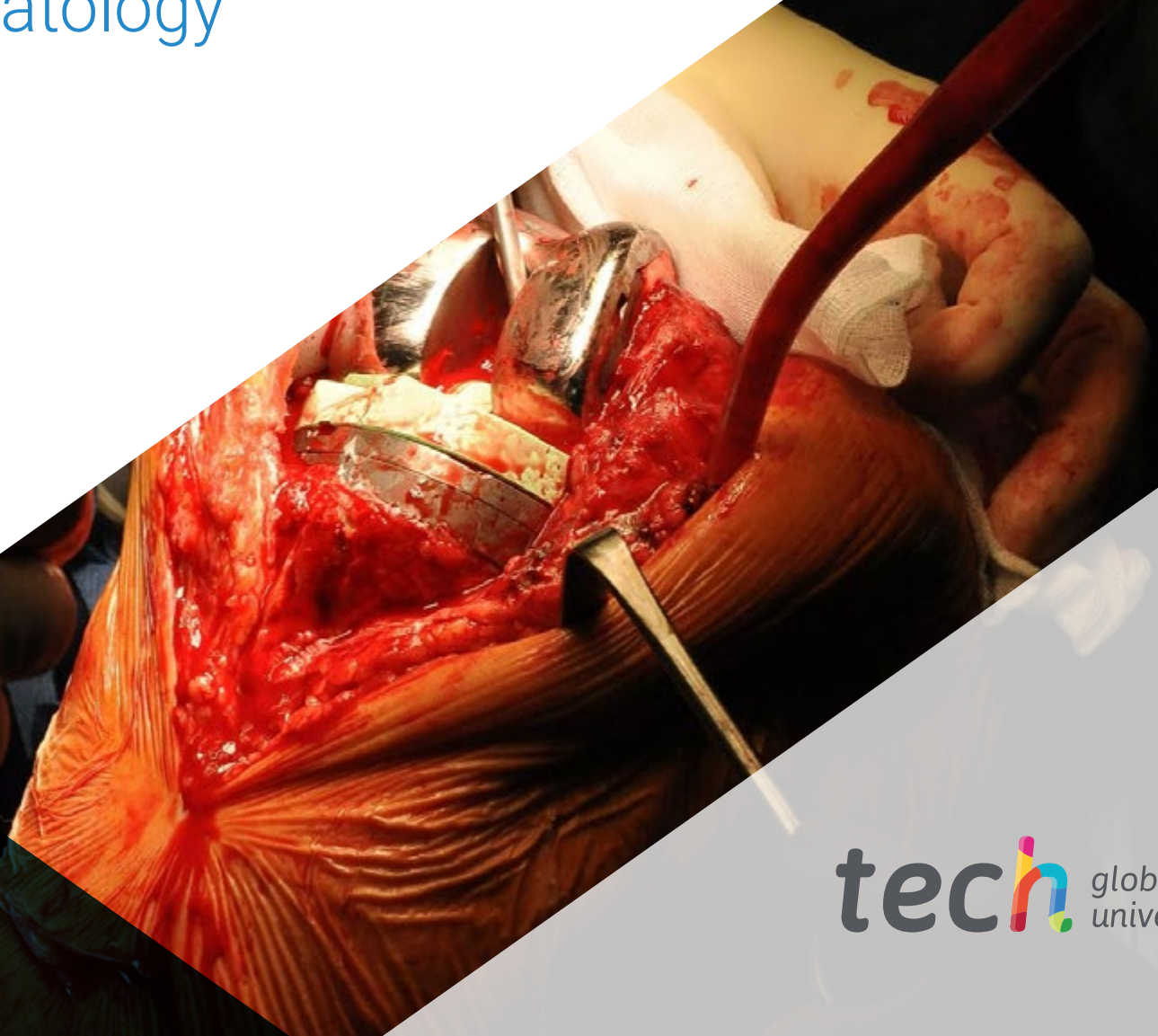


Master's Degree

Update on Orthopedic Surgery and Traumatology

Endorsed by:





Master's Degree Update on Orthopedic Surgery and Traumatology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/medicine/master-degree/master-update-orthopedic-surgery-traumatology

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01

Introduction

Orthopedic Surgery and Traumatology have undergone a spectacular development in recent years. Advances in molecular biology, biomaterials, imaging diagnostic and minimally invasive techniques have come together to offer new possibilities in the management of patients. This program is focused on incorporating the most important advances in Orthopedic Surgery and Traumatology from a practical point of view.



“

New scenarios in traumatology drive us to propose new specialization programs that meet the real needs of experienced professionals, so that they can incorporate new advances into their daily practice”

The field of Orthopedic Surgery and Traumatology is constantly evolving. The amount of information is increasing exponentially every year and it has become impossible to keep up to date in all areas of the specialty, unless you have a team of experts, in different sub-areas, to work together, making intelligent differentiations between all of the information.

In addition, the current tendency to sub-specialize in a specific anatomical area or surgical technique makes it more difficult to keep up to date in those areas that are less commonly treated and, at times, makes it difficult and costly to keep up to date with the latest developments. It should also be noted that the increase in the average life expectancy is leading to a higher number of degenerative and disabling osteoarticular injuries.

For this reason, trauma surgery has undergone enormous development, especially in joint replacements, spine surgery, arthroscopic surgery, surgical management of fractures through different osteosynthesis techniques, reparative surgery, etc. This means that in the future there will be great medical and surgical progress in the improvement of patients affected by pathologies of the locomotor apparatus.

This **Master's Degree in Update on Orthopedic Surgery and Traumatology** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ More than 120 clinical cases presented by experts in the different specialties
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and healthcare information on those medical disciplines that are essential to professional practice
- ♦ Presentation of practical workshops on procedures and techniques
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- ♦ Clinical practice guides on the different pathologies with special emphasis on test-based medicine and research methodologies in surgical procedures
- ♦ All of this will be complemented by 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



Bring your knowledge up to date with this Master's Degree in Update on Orthopedic Surgery and Traumatology"

“

This Master's Degree may be the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Orthopedic Surgery and Traumatology, you will obtain a qualification from TECH Global University"

Increase your decision-making confidence by updating your knowledge through this Master's Degree.

Improve your daily medical practice with this specialized training.

The teaching staff includes a team of healthcare professionals, who bring their experience to this training program, as well as renowned specialists from leading scientific societies.

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 for training in real situations.

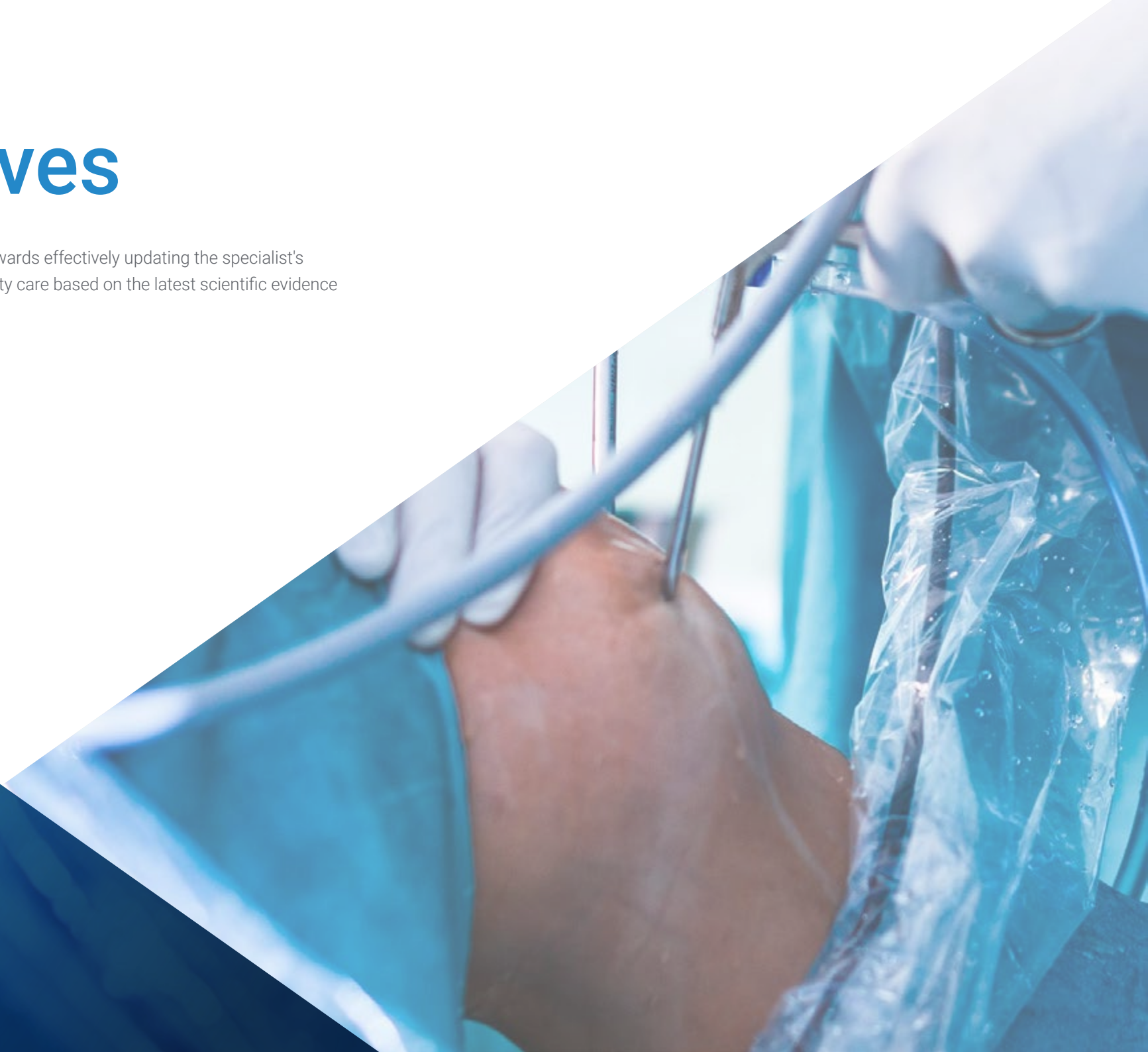
This program is designed around Problem-Based Learning, whereby the specialist must try to solve the different professional practice situations, that arise throughout the program. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of urologic surgery with extensive teaching experience.



02

Objectives

This Master's Degree is oriented towards effectively updating the specialist's knowledge, in order to provide quality care based on the latest scientific evidence that guarantees patient safety.



“

This refresher program will generate a sense of security when practicing medicine, which will help you grow both personally and professionally”



General Objectives

- Identify the main changes in Orthopedic Surgery and Traumatology treatments, based on the latest scientific evidence
- Differentiate between the pathologies of the spinal column and implement the correct treatment
- Recognize and distinguish between the most common diseases of the shoulder and elbow in order to implement the most appropriate treatment
- Classify the diseases of the hand and forearm to ensure the correct treatment is chosen
- Differentiate between the pathologies of the pelvis, hips and femur and implement the correct treatment
- Recognize and distinguish the ailments of the knee to apply the correct treatment
- Differentiate between the pathologies of the foot and ankle and implement the correct treatment
- Compare and contrast the different treatments in orthopedics for children
- Interpret and justify the best treatment choice for tumors of the locomotor system
- Identify the causes of the main infections in the locomotor system and the choice of treatment



Specific Objectives

Module 1. General Aspects

- Define the ethical aspects of Orthopedic Surgery and Traumatology
- Apply the criteria of Evidence-Based Medicine when choosing the correct treatment
- Update knowledge of antibiotic prophylaxis
- Correctly apply the thromboprophylaxis guidelines in orthopedic surgery and traumatology
- Update knowledge of blood-saving policies used
- Distinguish the different applications of cell cultures in Orthopedics and Traumatology
- Explain in which cases it is correct to use BMPs in Orthopedics and Traumatology
- Interpret the clinical evidence on platelet-rich plasma in tendon and joint pathology

Module 2. Foot and Ankle

- Review latest evidence on forefoot minimally invasive surgery
- Review surgical techniques for flatfoot in adults
- Review surgical techniques in pes cavus
- Update knowledge on hindfoot pathology
- Review the steps to follow in foot and ankle arthrodesis
- Review of the different types of congenital malformations
- Classify degrees of diabetic foot injuries and correct treatment in each case
- Explain the reasons for ankle instability and decide on the right treatment
- Distinguish and classify ligament injuries
- Review reconstructive techniques
- Recognize ankle impingement syndrome
- Recognize the correct steps to follow in the event of osteochondral lesions

- ◆ Recognize the correct steps to follow in case of tibial pylon fracture and ankle fracture
- ◆ Recognize the correct steps to follow in case of fractures and dislocations of the calcaneus and talus
- ◆ Recognize the correct steps to follow in case of midfoot and forefoot fractures and dislocations

Module 3. Infections

- ◆ Recognize spondylodiscitis and vertebral infections
- ◆ Adapt the basics for diagnosing infections of the locomotor system to the specific needs of each patient
- ◆ Identify spondylodiscitis and vertebral infections
- ◆ Revise the current status of the surgical approach in Total Knee Replacements and Total Hip Replacements
- ◆ Gain up-to-date knowledge on the antibiotic management of a patient with an osteoarticular infection

Module 4. Tumors of the Locomotor System

- ◆ Perform correct imaging diagnosis of locomotor system tumors
- ◆ Perform a differential diagnosis of benign and potentially aggressive tumors
- ◆ Distinguish in which cases the radiofrequency ablation technique should be used
- ◆ Identify malignant tumors of bone and cartilage origin
- ◆ Recognize round cell lesions
- ◆ Adapt the basics of surgical treatment of musculoskeletal tumors of the locomotor system to the specific needs of each patient
- ◆ Establish a correct diagnostic and therapeutic approach to bone metastases
- ◆ Review and update knowledge on the management of vertebral tumors
- ◆ Interpret the important aspects of tumors

- ◆ Identify bone and soft tissue tumors and their correct treatment
- ◆ Classify and apply appropriate treatment in tendinitis, tenosynovitis, tendon cysts and tendon tumors
- ◆ Interpret the important aspects of tumors

Module 5. knee

- ◆ Review the meniscal suture technique
- ◆ Revise the techniques and indications in a meniscal transplant
- ◆ Analyze actions to be taken in case of degenerative meniscal tears
- ◆ Review the current evidence on surgical treatment
- ◆ Review the current evidence on conservational treatment
- ◆ Evaluating anterior knee pain syndrome
- ◆ Assess proximal and distal stabilization techniques in patellar instability
- ◆ Medial patellofemoral ligament plasty in patellar instability
- ◆ Establish criteria to monitor complications and failures of patellar stabilization techniques
- ◆ Recognize indications and action guidelines for extensor apparatus rupture and reconstruction techniques
- ◆ Evaluate extensor device transplantation procedure
- ◆ Review high and low patella reconstructive techniques
- ◆ Review primary knee prosthesis technique
- ◆ Analyze the MIS approach in knee arthroplasty
- ◆ Understand new designs in the total prosthesis of the knee
- ◆ Apply indications and surgical techniques in unicompartmental prosthesis
- ◆ Interpret management of femoral defects and total knee replacement
- ◆ Interpret management of tibial defects and total knee replacement

- ♦ Apply indications and surgical techniques in constrained and semi-constrained knee prostheses
- ♦ Apply indications and surgical techniques in knee denervation in painful total knee replacements
- ♦ Review the technique of arthroscopic knee mosaicplasty
- ♦ Identify the correct sequence of steps to be followed in the implantation of chondrocyte culture in articular pathology in the knee
- ♦ Evaluate microfracture performance in chondral pathology of the knee

Module 6. Pelvis, Hip and Femur

- ♦ Recognize and apply appropriate treatment in fractures of the pelvis and acetabulum
- ♦ Recognize and apply appropriate treatment in fractures of the hips
- ♦ Review latest evidence on the hip arthroscopy technique for femoral head fractures
- ♦ Review implementation techniques in hip fractures in osteoporotic patients
- ♦ Recognize and apply the appropriate treatment in diaphyseal fractures of the femur
- ♦ Recognize and apply appropriate treatment in periprosthetic fractures
- ♦ Identify the differences between the minimally invasive approaches to hip arthroplasty
- ♦ Review total hip replacement in patients with developmental dysplasia of the hip
- ♦ Interpreting results in painful hip prostheses
- ♦ Check total hip replacement
- ♦ Correctly perform the sequence of hip arthrodesis reconversion steps in an arthroplasty
- ♦ Review reconstructive techniques in total hip replacement dislocation
- ♦ Identify femoroacetabular impingement syndrome
- ♦ Review the anterior hip approach with mini-open technique in femoroacetabular impingement
- ♦ Recognize the appropriateness of performing acetabular osteotomies
- ♦ Recognize the appropriateness of performing femoral neck and pertrochanteric osteotomies

- ♦ Review percutaneous surgical techniques in tendon friction syndromes around the hip
- ♦ Identify avascular necrosis of the femoral head
- ♦ Review indications and surgical techniques in femoral osteotomies

Module 7. Spinal Column

- ♦ Recognize the biopsychosocial model in musculoskeletal pathology
- ♦ Classify and update performance measurement systems in Orthopedic Surgery and Traumatology
- ♦ Correctly interpret results in interventional radiology of musculoskeletal pathology
- ♦ Recognize the current concepts of Neurophysiology in Orthopedic Surgery
- ♦ Confirm that the information we have on the treatment of herniated discs is up to date
- ♦ Identifying and recognizing cervical myelopathy
- ♦ Explain the steps to be followed in an anterior cervical corpectomy
- ♦ List the steps to be followed for posterior fixation with pedicle screws and lateral masses
- ♦ Compare the different types of cervical disc prostheses
- ♦ Classify fractures of the cervical column
- ♦ Recognize and classify a lumbar disc hernia and lumbar spinal stenosis
- ♦ Examine the anterior access to the thoracic spine by thoracoscopy
- ♦ Evaluate extraforaminal lumbar disc herniation with paravertebral access
- ♦ Examine the posterior approach for a thoracolumbar corpectomy
- ♦ Confirm that the knowledge we have on scoliosis is up to date
- ♦ Distinguish between ponte osteotomies and arthrodesis in Scheuermann's disease
- ♦ Classification of sagittal spinal alterations
- ♦ Recognize the different degrees of spondylolisthesis
- ♦ Review the steps to be followed in a minimally invasive TLIF lumbar arthrodesis
- ♦ Recognize and classify the different degrees of disc degeneration

Module 8. Shoulder and Elbow

- ♦ Apply percutaneous treatment of thoracolumbar vertebral fractures according to the latest recommendations
- ♦ Distinguish clavicle, scapula and humeral head fractures, as well as deciding on the appropriate treatment for each case
- ♦ Differentiate between diaphyseal and distal humerus fractures
- ♦ Decide on the appropriate treatment of olecranon fractures, radial head fractures and dislocations
- ♦ Typify post-traumatic shoulder and elbow stiffness and decide the correct course of action
- ♦ Review shoulder instability and its diagnostic and therapeutic algorithm
- ♦ Apply arthroscopic stabilization of recurrent shoulder dislocation
- ♦ Apply monopolar radiofrequency in arthroscopic surgery of shoulder instability
- ♦ Recognize subacromial syndrome
- ♦ Apply reconstructive techniques in massive rotator cuff tears
- ♦ Recognize tenodesis techniques on the shoulder
- ♦ Compare and evaluate treatment options in shoulder prosthesis
- ♦ Update knowledge on the treatment of shoulder arthrodesis
- ♦ Describe the different types of elbow prosthesis
- ♦ Analyze the limitations and indications in elbow arthroscopy
- ♦ Examine new surgical techniques in epicondylitis and epitrochleitis
- ♦ Analyze supracondylar osteotomies in the correction of axial deviations

Module 9. Hand and Forearm

- ♦ Identify phalangeal and metacarpal fractures and select correct treatment
- ♦ Identify scaphoid and carpal bone fractures and select correct treatment
- ♦ Identify fractures of the distal end of the radius and select the correct treatment
- ♦ Identify ulna and radius diaphyseal fractures and select correct treatment
- ♦ Review therapeutic options in hand and forearm coverage flaps

- ♦ Evaluate compartment syndrome of the forearm
- ♦ Review and gain up-to-date knowledge on Kienböck disease
- ♦ Gain up-to-date knowledge on the interventions for wrist arthrodesis and partial carpal arthrodesis procedures
- ♦ Review techniques of carpectomy of the proximal carpal row
- ♦ Distinguish scaphoid pseudarthrosis
- ♦ Gain up-to-date knowledge on distal radioulnar pathology
- ♦ Recognize Dupuytren's disease and select a treatment according to its stage and severity
- ♦ Revise trachelectomy and hemithrachelectomy
- ♦ Describe percutaneous and ultrasound-guided techniques in synovial and tendon pathology
- ♦ Revise carpal tunnel syndrome
- ♦ Review the latest evidence on wrist arthroscopy technique
- ♦ Classify carpal instabilities
- ♦ Describe the pathology of the extensor apparatus of the fingers
- ♦ Analyze tendon transpositions. Paralytic hand
- ♦ Evaluate the reconstruction of flexor tendons

Module 10. Child Orthopedics

- ♦ Review indications, types and surgical techniques in tibial osteotomies in the pediatric patient
- ♦ Review indications and techniques in femoral osteotomy in the pediatric patient
- ♦ Review indications and surgical techniques for cushioning system implants in gonarthrosis in the pediatric patient
- ♦ Review the latest evidence on the management of lesser toe deformities and metatarsalgias
- ♦ Review the pathophysiology, clinic and approach to acute and chronic osteomyelitis in the pediatric patient
- ♦ Review the pathophysiology, clinical and therapeutic management of septic arthritis in the pediatric patient

03 Skills

After passing the assessments on the Master's Degree in Update on Orthopedic Surgery and Traumatology, the student will have acquired the necessary professional skills for quality, up-to-date practice based on the most recent scientific evidence.



“

With this program you will be able to master the new diagnostic and treatment procedures for patients with any type of osteoarticular pathology”



General Skills

- ◆ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ◆ Know how to apply the acquired knowledge and problem-solving skills in new or unfamiliar environments, within broader (or multidisciplinary) contexts related to their area of study
- ◆ Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- ◆ Know how to communicate conclusions, knowledge, and supporting arguments to specialized and non-specialized audiences in a clear and unambiguous way
- ◆ Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner
- ◆ Develop within the Profession in terms of working with other Health Professionals, acquiring skills to work as a team
- ◆ Recognize the need to maintain your professional skills and, keep them up to date, with special emphasis on autonomous and continuous learning of new information
- ◆ Develop the capacity for critical analysis and research in your professional field





Specific Skills

- ◆ Apply the criteria of Evidence-Based Medicine when choosing the correct treatment in orthopedic surgery and traumatology
- ◆ Update knowledge of antibiotic prophylaxis
- ◆ Distinguish the different applications of cell cultures in Orthopedics and Traumatology
- ◆ Interpret the clinical evidence on platelet-rich plasma in tendon and joint pathology
- ◆ Recognize the biopsychosocial model in musculoskeletal pathology
- ◆ Classify and update performance measurement systems in Orthopedic Surgery and Traumatology
- ◆ Correctly interpret results in interventional radiology of musculoskeletal pathology
- ◆ Recognize the current concepts of Neurophysiology in Orthopedic Surgery
- ◆ Confirm that the information we have on the treatment of herniated discs is up to date
- ◆ Identifying and recognizing cervical myelopathy
- ◆ Explain the steps to be followed in an anterior cervical corpectomy, and when performing posterior fixation with pedicle screws and lateral masses
- ◆ Compare the different types of cervical disc and classify the fractures of the cervical column
- ◆ Recognize and classify a lumbar disc hernia and lumbar spinal stenosis
- ◆ Examine the anterior access to the thoracic spine by thoracoscopy and evaluate extraforaminal lumbar disc herniation with paravertebral access
- ◆ Examine the posterior approach for a thoracolumbar corpectomy
- ◆ Highlight the differences between ponte osteotomies and arthrodesis in Scheuermann's disease, and classify sagittal alterations of the spine
- ◆ Recognize the different degrees of spondylolisthesis
- ◆ Describe the steps to be followed in a minimally invasive TLIF lumbar arthrodesis and the management of vertebral tumors
- ◆ Recognize and classify the different degrees of disc degeneration
- ◆ Apply percutaneous treatment to thoracolumbar vertebral fractures

- ◆ Distinguish clavicle, scapula and humeral head fractures, as well as deciding on the appropriate treatment for each case
- ◆ Differentiate between diaphyseal and distal humerus fractures
- ◆ Decide on the appropriate treatment of olecranon fractures, radial head fractures and dislocations
- ◆ Describe shoulder instability and its diagnostic and therapeutic algorithm
- ◆ Explain the applications of arthroscopic stabilization of recurrent shoulder dislocation and monopolar radiofrequency in arthroscopic surgery for shoulder instability
- ◆ Apply reconstructive techniques in massive rotator cuff tears
- ◆ Define the therapeutic options in shoulder prostheses and the different types of elbow prostheses
- ◆ Analyze the limitations and indications in elbow arthroscopy
- ◆ Examine new surgical techniques in epicondylitis and epitrochleitis
- ◆ Analyze supracondylar osteotomies in the correction of axial deviations
- ◆ Identify phalangeal and metacarpal fractures, scaphoid and carpal bone fractures, and apply the correct treatment
- ◆ Identify fractures of the distal end of the radius and diaphyseal fractures of the ulna and radius
- ◆ Highlight the therapeutic options in hand and forearm coverage flaps
- ◆ Describe the interventions for wrist arthrodesis and partial carpal arthrodesis
- ◆ Distinguish scaphoid pseudarthrosis
- ◆ Characterize Dupuytren's disease and select a treatment according to its stage and severity
- ◆ Describe percutaneous and ultrasound-guided techniques in synovial and tendon pathology
- ◆ Define carpal tunnel syndrome
- ◆ Classify carpal instabilities
- ◆ Describe the pathology of the extensor apparatus of the fingers
- ◆ Apply appropriate treatment in tendinitis, tenosynovitis, tendon cysts and tendon tumors
- ◆ Apply appropriate treatment in fractures of the pelvis and acetabulum and in fractures of the hip



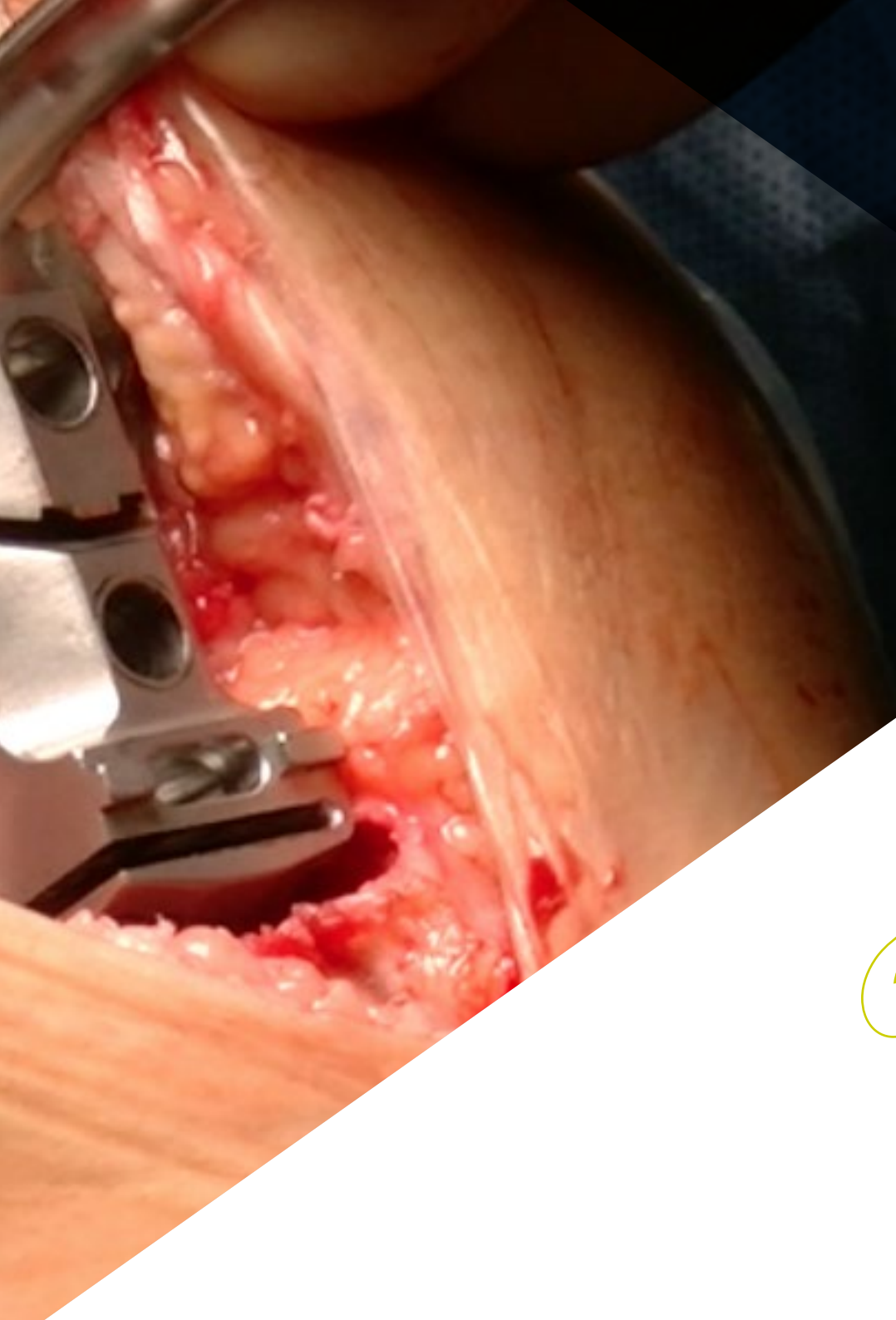
- ♦ Analyze the implementation techniques in hip fractures in osteoporotic patients
- ♦ Apply the appropriate treatment in diaphyseal fractures of the femur and in periprosthetic fractures
- ♦ Describe the minimally invasive approaches for hip arthroplasty
- ♦ Interpreting results in painful hip prostheses
- ♦ Check total hip replacement
- ♦ Correctly perform the sequence of hip arthrodesis reconversion steps in an arthroplasty
- ♦ Identify femoroacetabular impingement syndrome
- ♦ Review percutaneous surgical techniques in tendon friction syndromes around the hip
- ♦ Identify avascular necrosis of the femoral head
- ♦ Analyze actions to be taken in case of degenerative meniscal tears
- ♦ Evaluating anterior knee pain syndrome
- ♦ Assess proximal and distal stabilization techniques in patellar instability
- ♦ Medial patellofemoral ligament plasty in patellar instability
- ♦ Monitor complications and failures of patellar stabilization techniques
- ♦ Extensor apparatus rupture and reconstruction techniques
- ♦ Evaluate extensor device transplantation procedure
- ♦ Analyze the MIS approach in knee arthroplasty
- ♦ Apply indications and surgical techniques in unicompartmental prosthesis
- ♦ Interpret management of femoral defects and total knee replacement
- ♦ Interpret management of tibial defects and total knee replacement
- ♦ Apply indications and surgical techniques in constrained and semi-constrained knee prostheses
- ♦ Apply indications and surgical techniques in knee denervation in painful total knee replacements
- ♦ Identify the correct sequence of steps to be followed in the implantation of chondrocyte culture in articular pathology in the knee
- ♦ Evaluate microfracture performance in chondral pathology of the knee
- ♦ Highlight the indications, types and surgical techniques in tibial osteotomies and femoral osteotomy
- ♦ Describe the surgical techniques for implanting cushioning systems in gonarthrosis
- ♦ Identify bone and soft tissue tumors and their correct treatment
- ♦ Classify degrees of diabetic foot injuries and correct treatment in each case
- ♦ Explain the reasons for ankle instability and decide on the right treatment
- ♦ Distinguish and classify ligament injuries
- ♦ Review reconstructive techniques
- ♦ Interpret the important aspects of tumors
- ♦ Perform correct imaging diagnosis of locomotor system tumors
- ♦ Perform a differential diagnosis of benign and potentially aggressive tumors
- ♦ Distinguish in which cases the radiofrequency ablation technique should be used
- ♦ Identify malignant tumors of bone and cartilage origin
- ♦ Adapt the basics of surgical treatment of musculoskeletal tumors of the locomotor system to the specific needs of each patient
- ♦ Adapt the basics for diagnosing infections of the locomotor system to the specific needs of each patient
- ♦ Identify spondylodiscitis and vertebral infections

04

Course Management

The materials have been created by a team of renowned professionals in both the surgical field and the field of traumatology, who work in the top hospitals in the country. Bringing to the program the experience they have gained throughout their careers.





“

Learn about the latest advances in orthopedic surgery and traumatology from leading professionals”

International Guest Director

Dr. Michael Gardner is a leading international leader in the field of **Orthopedic Traumatology**, with an exceptional track record in both **practice** and **clinical research**. He is recognized for his expertise in the treatment of **fractures** of the **upper and lower limbs**, as well as the **pelvis**, the management of **pseudarthrosis** and **malunions**.

Of particular note is his work as **co-founder** and **CEO** of the **National Scoliosis Clinic**, a center that leverages **Artificial Intelligence** and **Telehealth** to transform the way **Scoliosis** is detected and managed. In addition, he has worked as an **Orthopedic Trauma surgeon** at the University of Washington and, since joining the staff at Stanford University, has held key roles, including **Head** of the **Orthopedic Trauma Service** and **Deputy Chairman** of the **Department of Orthopedic Surgery**.

He has also been internationally recognized for his **innovative research** and leadership in the development of **advanced surgical techniques**. In this way, he has patented **Systems and Methods for the Detection of Musculoskeletal Anomalies and Fractures; Bone Stabilizing Implants and Methods of Placement through the Joints; and Grafts for the Repair of Segmental Bone Defects**.

He has also been invited to participate in numerous national and international activities and has played important roles in various organizations, such as the **Orthopedic Trauma Association**. In addition, he has been honored with multiple **awards** and **recognitions** for his **excellence in research** and **service to the medical community**. In this regard, his research program has been recognized for its efficient and productive approach, with more than 100 published scientific articles, 38 book chapters and the edition of 5 textbooks.



Dr. Gardner, Michael J.

- Co-founder and CEO of National Scoliosis Clinic
- Orthopedic Traumatology Physician
- Deputy Chairman of the Department of Orthopedic Surgery at Stanford University
- Head of the Orthopedic Trauma Service at Stanford University
- Director of the Orthopedic Traumatology Research Program at Stanford University
- Surgeon of Orthopedic Traumatology at Washington University
- M.D., Drexel University
- B.S. in Chemistry from Williams College
- Member of: Association of Orthopedic Traumatology , AO Trauma ,American Orthopedic Association , Orthopedic Trauma Foundation ,Orthopedic Research Society , Western Orthopedic Association , California Orthopedic Association

“

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

Management



Dr. Doménech Fernández, Julio

- Degree in Medicine from the University of Navarra
- PhD in Medicine from the University of Valencia
- Specialist in Orthopedic Surgery and Traumatology at the Ramón y Cajal Hospital in Madrid
- Professor in the Faculty of Medicine at Cardenal Herrera University CEU, Valencia
- Master's Degree in Healthcare from the University of Valencia
- Head of Service of the Arnau de Vilanova Hospital in Valencia and Liria Hospital
- Pro Academia Award of the European Society of NMR
- Best Paper Award from the Spine Society of Europe
- Spanish Spine Society Award (GEER)
- Head researcher in several research projects with competitive funding from public agencies.

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- ♦ Head of the Clinical Research Unit at Cemtro Clinic- Amplicel

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- ♦ Head of the Upper Limb Unit at Sant Joan de Déu Hospital

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- ♦ Head of the Musculoskeletal Tumor Unit at Sant Joan de Déu Hospital

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Maculé Beneyto, Francisco

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Popescu, Dragos

- ♦ Senior Consultant at the Clinical Hospital, Barcelona

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- ♦ Specialist in Pathological Anatomy, Lluís Alcanyís Hospital, Xàtiva

Dr. Villanueva Martínez, Manuel

- ♦ Attending Physician at the Orthopedic Surgery and Traumatology Department at Gregorio Marañón Hospital, Madrid

Dr. Sánchez Zarzuela, Victor Manuel

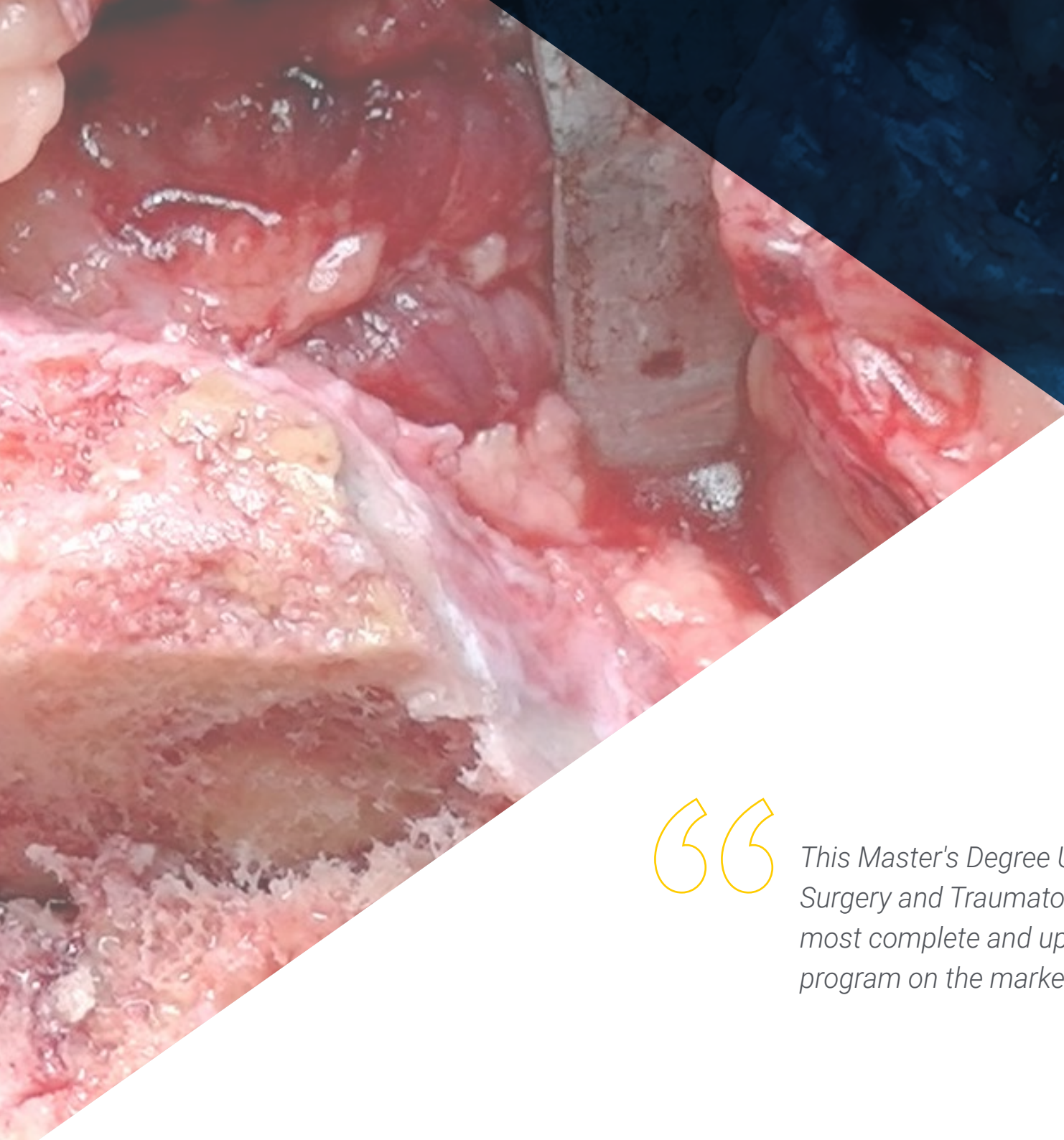
- ♦ Attending Physician at the Orthopedic Surgery and Traumatology Services, Tumor Unit at Valencia General Hospital

05

Structure and Content

The structure of the study plan has been designed by a team of professionals, knowledgeable about the implications of medical training in the approach to the patient with osteoarticular pathology, aware of the current relevance of training and committed to quality teaching through new educational technologies.





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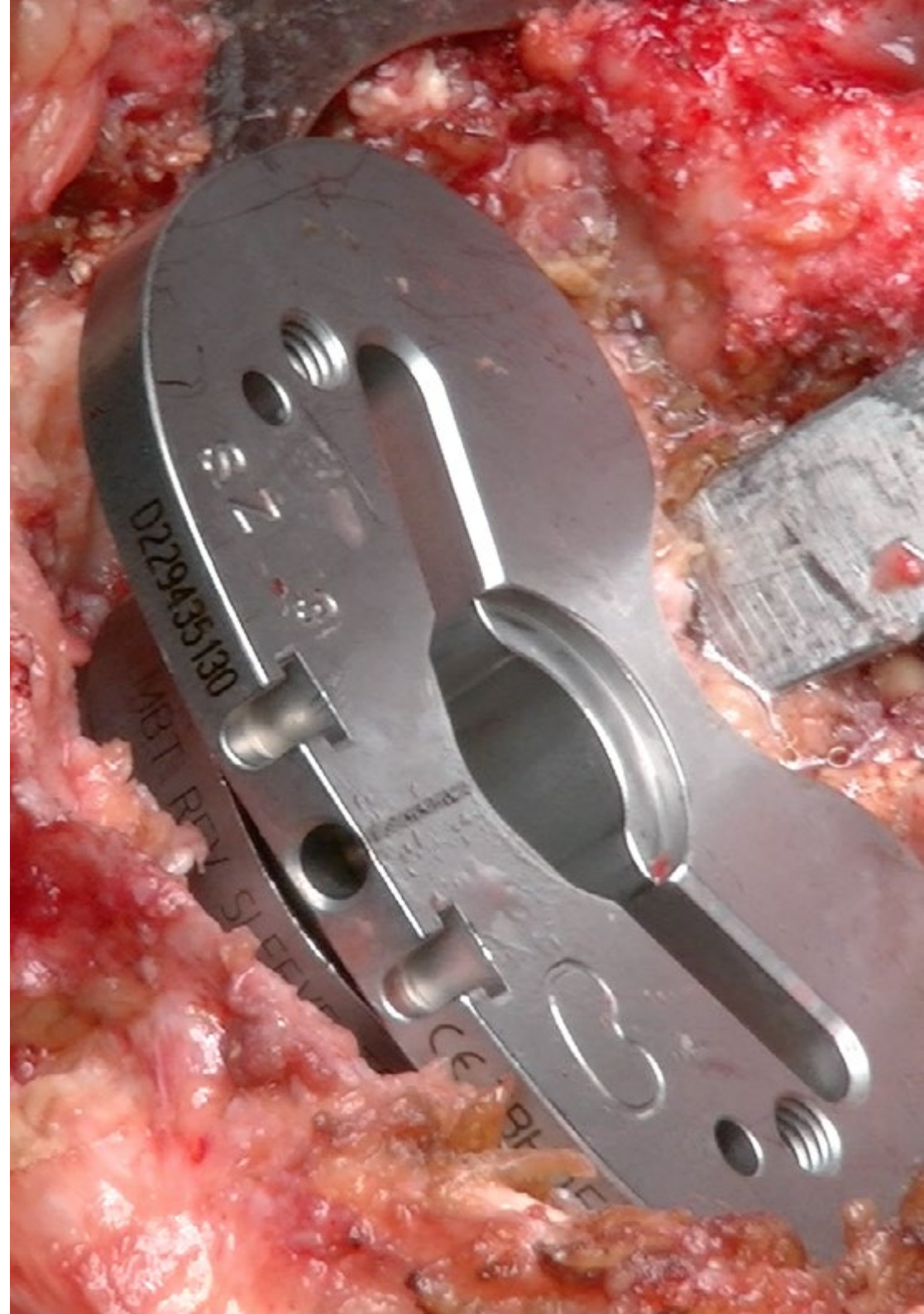
This Master's Degree Update on Orthopedic Surgery and Traumatology contains the most complete and up to-date-scientific program on the market”

Module 1. General Aspects

- 1.1. Evidence-Based Medicine For Choosing the Correct Treatment in Orthopedic Surgery and Traumatology
- 1.2. Bone Bank
- 1.3. Update on Antibiotic Prophylaxis in Orthopedic Surgery and Traumatology
- 1.4. Thromboprophylaxis in Orthopedic Surgery and Traumatology
- 1.5. Update on Blood-Saving Policies Used
- 1.6. Applications of Cell Cultures in Orthopedics and Traumatology
- 1.7. Use of BMP in Orthopedics and Traumatology
- 1.8. Clinical Evidence on Platelet-rich Plasma in Tendon and Joint Pathology
- 1.9. Update in the Management of a Polytraumatized Patient
- 1.10. Biopsychosocial Model in Musculoskeletal Pathology
- 1.11. Update on Results Measurement in Orthopedic Surgery and Traumatology
- 1.12. Interventional Radiology in Musculoskeletal Pathology
- 1.13. Current Concepts of Neurophysiology in Orthopedic Surgery

Module 2. Foot and Ankle

- 2.1. Hallux Valgus and Hallux Rigidus
- 2.2. Deformities of the Little Toes and Metatarsalgia
- 2.3. Minimally Invasive Surgery (MIS) of the Forefoot
- 2.4. Update on Flat Foot in Adults
- 2.5. Update on Pes Cavus
- 2.6. Ankle Arthrodesis and Ankle Arthroplasty
- 2.7. Ankle Instability
- 2.8. Osteochondral Injuries
- 2.9. Tibial Pylon Fracture
- 2.10. Calcaneus and Talus Fractures and Dislocations
- 2.11. Fractures and Dislocations of the Midfoot and Forefoot



Module 3. Infections

- 3.1. Basis of Diagnosis of Periprosthetic Joint Infection and Osteosynthesis Material Infections
- 3.2. Current Status of the Treatment in Total Knee Replacements and Total Hip Replacements
- 3.3. Acute and Chronic Osteomyelitis
- 3.4. Septic Arthritis
- 3.5. Spondylodiscitis and Vertebral Infections
- 3.6. Antibiotic Management of a Patient With an Osteoarticular Infection
- 3.7. Skin Coverage Techniques

Module 4. Tumors of the Locomotor System

- 4.1. General Aspects
- 4.2. Morphological Diagnosis of Tumors
- 4.3. Benign and Potentially Aggressive Tumors
- 4.4. Malignant Tumors of Bone and Cartilage Origin
- 4.5. Round Cell Lesions
- 4.6. Basics of Surgical Treatment of Locomotor System Tumors
- 4.7. Diagnostic and Therapeutic Approach to Locomotor Metastases

Module 5. knee

- 5.1. Meniscal Pathology
 - 5.1.1. Meniscal Suture
 - 5.1.2. Meniscal Transplant
- 5.2. Ligament Pathology
 - 5.2.1. Anterior Cruciate Ligament Surgery
 - 5.2.2. LCP and CPL Surgery
 - 5.2.3. New Perspectives in ACL Surgery
- 5.3. Patellofemoral Pathology
 - 5.3.1. Previous Knee Pain
 - 5.3.2. Patellar Instability
 - 5.3.3. Femoropatellar Prostheses and Tibial Tubercle Osteotomies
- 5.4. Degenerative Pathology
 - 5.4.1. Navigated Osteotomies in the Knee Region
 - 5.4.2. Unicompartmental Femorotibial Prostheses
 - 5.4.3. Bone Defects in Revision Surgery
 - 5.4.4. New Perspectives in Knee Prosthesis Surgery

Module 6. Pelvis, Hip and Femur

- 6.1. Traumatology
 - 6.1.1. Fractures of the Pelvis and Acetabulum Open Reconstruction Techniques and Percutaneous Treatment of Pelvic Ring Fractures
 - 6.1.2. Hip Fractures Current Criteria for Implant Selection Percutaneous Sliding Nail Plate in Pertrochanteric Fractures Implementation Techniques in Hip Fractures in Osteoporotic Patients
- 6.2. Orthopedics
 - 6.2.1. Friction Torques in Total Hip Replacement Surgery Current Concepts and Criteria for Implant Selection
 - 6.2.2. Total Hip Replacement Surgery with Short Stem and Overlay Prosthetics
 - 6.2.3. Periprosthetic Fractures, Salvage Techniques
 - 6.2.4. Minimally Invasive Approaches for Hip Arthroplasty
 - 6.2.5. Total Hip Replacement in Developmental Dysplasia of the Hip
 - 6.2.6. Painful Hip Prosthesis Diagnostic and Therapeutic Algorithm
 - 6.2.7. Total Hip Replacement Surgery Replacement: Management of Cup and Femur Defects
 - 6.2.8. Reconversion of Hip Arthrodesis to Arthroplasty
 - 6.2.9. Femoroacetabular Impingement Syndrome Hip Arthroscopy

Module 7. Spinal Column

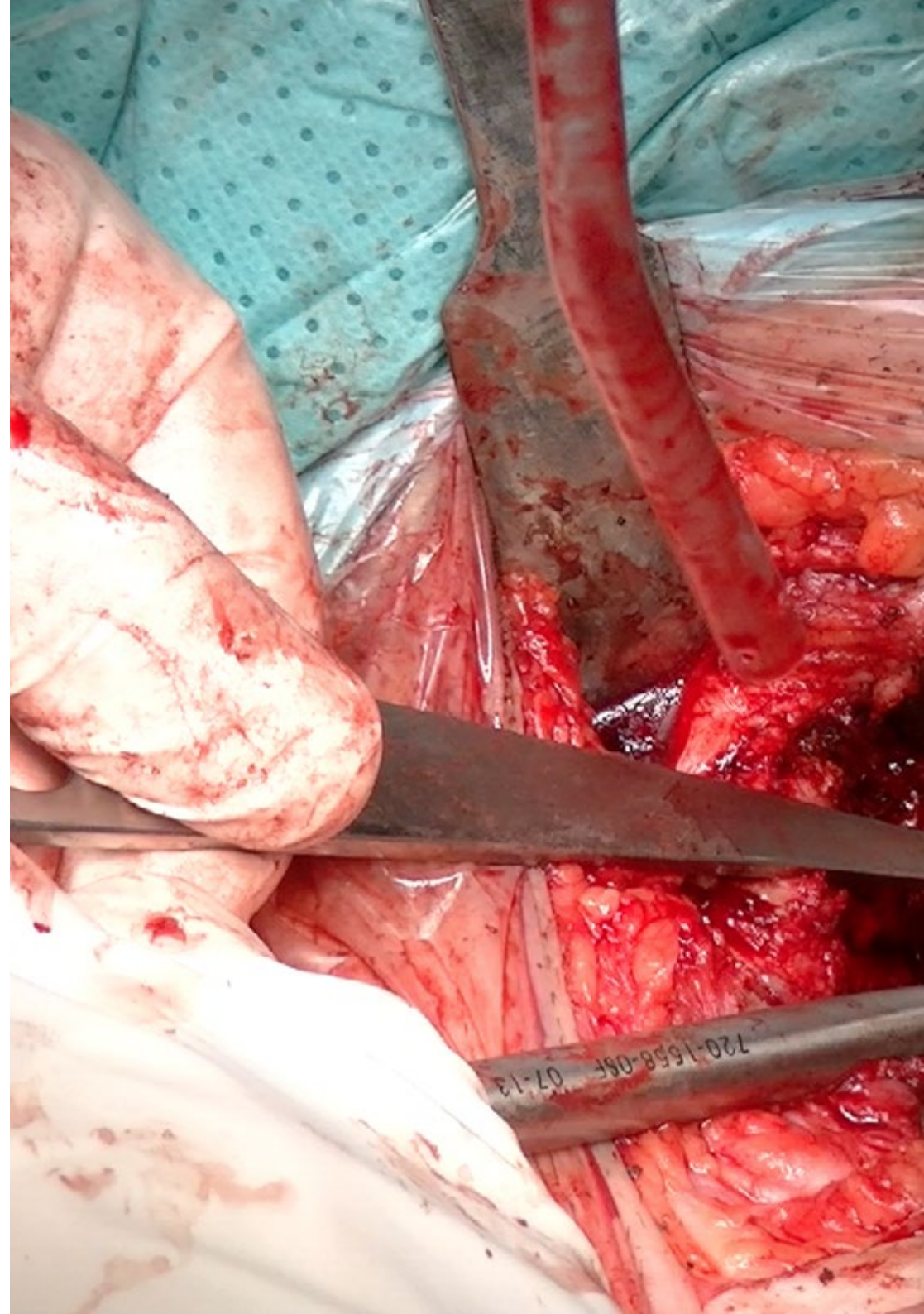
- 7.1. Herniation and Degeneration of the Cervical Disc Anterior and Posterior Cervical Microdiscectomy Anterior and Posterior Release-Arthrodesis Techniques
- 7.2. Degenerative Disc Disease Cervical and Lumbar Disc Prosthesis
- 7.3. Cervical Column Fractures Reconstruction and Osteosynthesis Techniques
- 7.4. Osteoporotic Fractures Vertebroplasty and Kyphoplasty
- 7.5. Lumbar Disc Hernia and Lumbar Spinal Stenosis Minimally Invasive and Endoscopic Release Techniques
- 7.6. Scoliosis Update in Surgical Techniques
- 7.7. Scheuermann Disease Indications and Correction Techniques
- 7.8. Alterations of the Sagittal Balance of the Spine Pedicular Subtraction Osteotomy, Smith Pedersen, Burgos y Ponte
- 7.9. Spondylolisthesis Current Concepts in Indications and Treatment
- 7.10. Update on the Management of Vertebral Tumors
- 7.11. Thoracolumbar Vertebral Fractures Reconstruction and Osteosynthesis Techniques

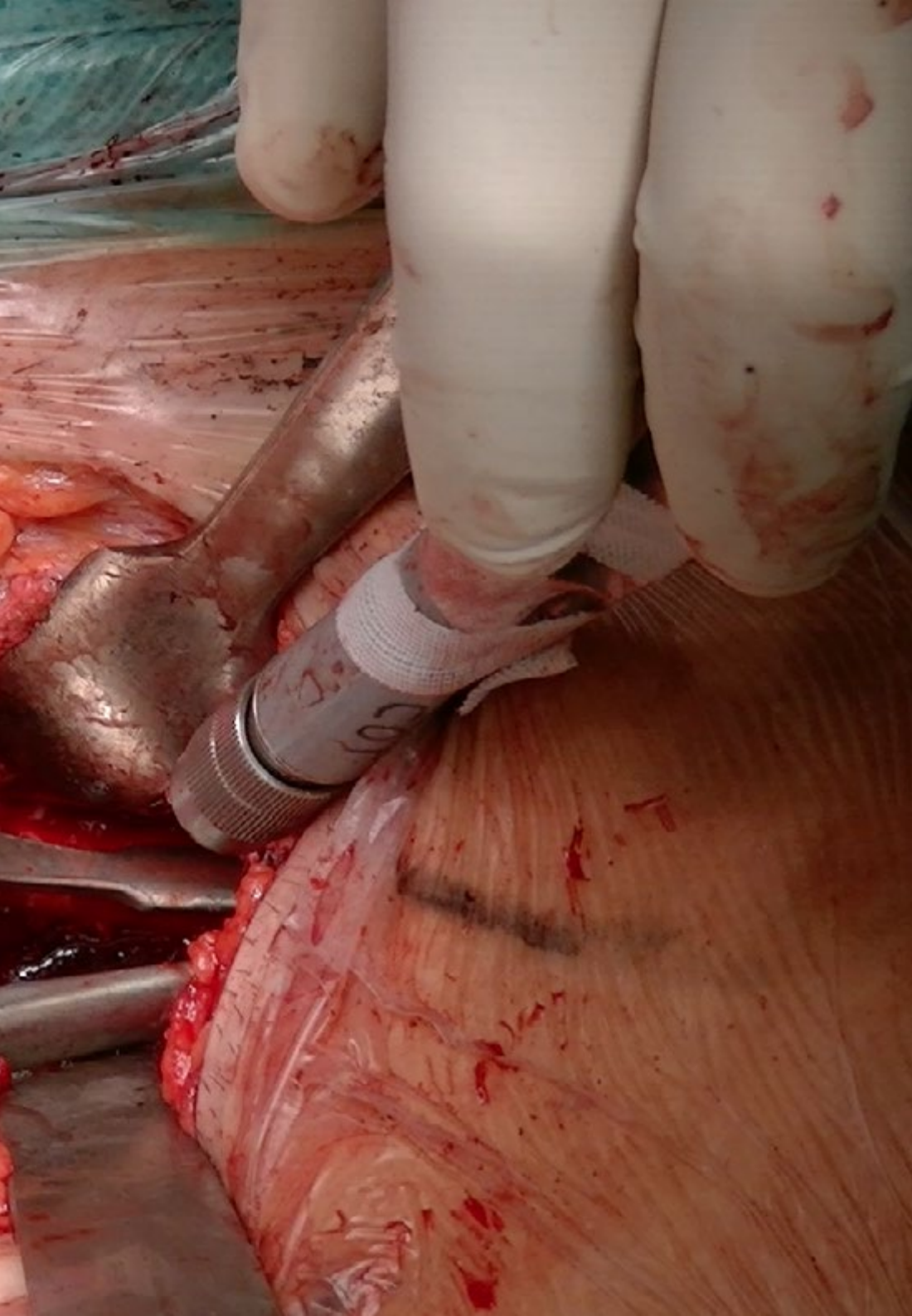
Module 8. Shoulder and Elbow

- 8.1. Traumatology
 - 8.1.1. Fundamentals of Treatment of Scapula Fractures Conservation Treatment vs. Surgery Scientific Evidence
 - 8.1.2. Fractures of the Proximal Extremity of the Humerus in 3 and 4 Fragments Surgical Reduction or Arthroplasty
- 8.2. Orthopedic Surgery of the Shoulder
 - 8.2.1. Arthroscopic Stabilization of Recurrent Shoulder Dislocation
 - 8.2.2. Shoulder Instability Diagnostic and Therapeutic Algorithm
 - 8.2.3. Arthroscopic Release of the Subscapular Nerve
 - 8.2.4. Bicipital Pathology and SLAP Tears
 - 8.2.5. Critical Concepts in the Reparation of Rotator Cuff Tears Biology vs. Biomechanics
 - 8.2.6. Massive Rotator Cuff Tears Indications and Limitations of Inverted Prosthesis
 - 8.2.7. Glenohumeral Arthrosis
- 8.3. Orthopedic Surgery of the Elbow
 - 8.3.1. Elbow Arthroscopy Indications and Limitations
 - 8.3.2. Epicondylitis and Epitrochleitis New Surgical Techniques

Module 9. Hand and Forearm

- 9.1. Traumatology
 - 9.1.1. Fractures of Phalanges and Metacarpals
 - 9.1.2. Scaphoid and Carpal Bone Fractures
 - 9.1.3. Fractures of the Distal End of the Radius
 - 9.1.4. Traumatic Peripheral Nerve Pathology
 - 9.1.5. Complex Hand Injuries: Catastrophic Hand





- 9.2. Orthopedic Surgery of the Hand
 - 9.2.1. Wrist Arthrodesis and Partial Carpal Arthrodesis Carpectomy of the Proximal Carpal Row
 - 9.2.2. Dupuytren's Disease, Rhizarthrosis, Surgical Techniques
 - 9.2.3. Compressive Nervous Syndromes of the Upper Limbs
 - 9.2.4. Wrist Arthroscopy
- 9.3. Tendon Surgery
 - 9.3.1. Pathology of the Extensor Apparatus of the Fingers Boutonnière, Swan-Neck and Mallet Finger Deformities Reconstruction of Extensor Tendons
 - 9.3.2. Tendon Transpositions Paralytic hand

Module 10. Child Orthopedics

- 10.1. Arthroscopic Techniques in Children
- 10.2. Musculoskeletal Tumors in Children
- 10.3. Clubfoot and Congenital Foot Pathology
- 10.4. Spondylolisthesis in Childhood
- 10.5. Surgery in Childhood Paralysis
- 10.6. Early Onset Scoliosis



A unique, key, and decisive educational experience to boost your professional development"

06

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. 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 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 educational system for presenting multimedia content 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.



07 Certificate

The Master's Degree in Update on Orthopedic Surgery and Traumatology guarantees you, in addition to the most rigorous and up-to-date education, access to a Master's Degree issued by TECH Global University.



“

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

This private qualification will allow you to obtain a **Master's Degree diploma in Update on Orthopedic Surgery and Traumatology** 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.

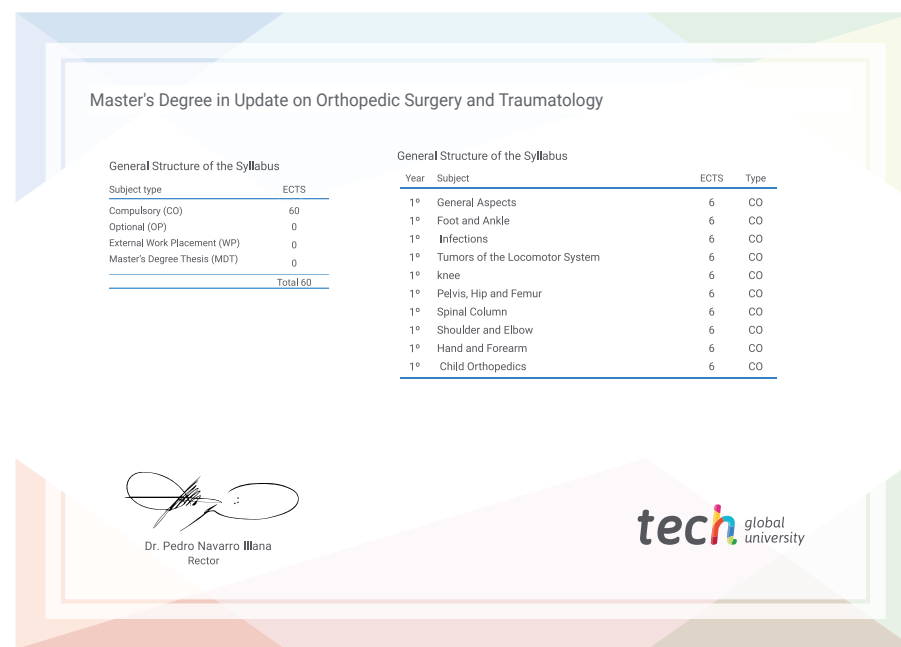
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Master's Degree in Update on Orthopedic Surgery and Traumatology**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



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



Master's Degree

Update on Orthopedic
Surgery and Traumatology

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Master's Degree

Update on Orthopedic Surgery and Traumatology

Endorsed by:

The background of the slide is a photograph of an operating room. Several surgeons in green scrubs and masks are visible, working on a patient. The room is filled with medical equipment, including monitors and surgical lights. The image is partially obscured by a large blue diagonal graphic element.

tech global
university