

# Professional Master's Degree

## Trauma Nursing





## Professional Master's Degree Trauma Nursing

Course Modality: Online

Duration: 12 months

Certificate: TECH Technological University

Official N° of hours: 1,500 h.

Website: [www.techtute.com/pk/nursing/professional-master-degree/master-trauma-nursing](http://www.techtute.com/pk/nursing/professional-master-degree/master-trauma-nursing)

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# 01

# Introduction

This Professional Master's Degree in Trauma Nursing covers all the trauma situations that a nurse may encounter. It provides content from primary care to specialized care, including the emergency room, hospitalization unit and operating room.

Throughout these months, the students will acquire knowledge in Traumatology and Orthopedics, both surgical and healthcare, which will allow them to have a holistic understanding of Traumatology for Nursing.





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*This program will provide you with a sense of confidence in nursing practice, which will help you grow personally and professionally”*

During the nursing degree there is no broad and specific specialization in traumatology, as is the case with other specialties such as mental health or maternal and child health. In relation to the discipline of traumatology, only slight glimpses are offered and, if hospital internships are not performed in a traumatology department, the nurses finish their studies without the necessary knowledge to work in that department.

The idea of this program arises precisely from this lack of adequate training, so that nursing practitioners can specialize in this area and work with the guarantee that what they are doing is right. The main objective of this program is to equip nurses with the best knowledge and practices in the trauma field.

The program consists of several modules, divided into different areas, with the most up-to-date advances on each topic, videos and different resources for the student to acquire the necessary training.

It provides content from primary care to specialized care, including the emergency room, the hospitalization unit and the operating room; (the least known and most complex area) that will be approached in a holistic manner and with the collaboration of different specialists. It includes videos and clinical case studies.

The program is designed to provide online instruction that provides the student with all the theoretical and practical knowledge presented through high quality multimedia content, analysis of clinical cases prepared by experts, master classes and video techniques that allow the exchange of knowledge and experience. This program aims to maintain and update the skill level of its members, create protocols for action and disseminate the most important developments in the field. With online teaching, students can organize their time and pace of learning, adapting it to their schedules, in addition to being able to access the contents from any computer or mobile device.

This **Professional Master's Degree in Trauma Nursing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of clinical cases presented by experts in Trauma Nursing
- ◆ Its graphic, schematic and practical contents are designed to provide scientific and useful information on those disciplines that are essential for professional practice
- ◆ New developments in nursing care and intervention in the Trauma Service
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Algorithm-based interactive learning system for decision-making in the situations that are presented to the student
- ◆ Its special emphasis on evidence-based medicine and nursing research methodologies in the Trauma Service
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an internet connection



*Update your knowledge through  
this Professional Master's Degree  
in Trauma Nursing"*

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*This Professional 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 Trauma Nursing, you will obtain a qualification endorsed by TECH Technological University"*

The teaching staff includes professionals from the field of Trauma Nursing, 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 an immersive training program designed to train in real situations.

The design of this program is based on Problem-Based Learning, through which the nursing professional must try to solve the different professional practice situations that arise throughout the program. For this reason, they will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Traumatology with extensive teaching experience.

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

*Make the most of this opportunity to learn about the latest advances in Trauma Nursing and improve your patient care.*



02

# Objectives

The Professional Master's Degree in Trauma Nursing is aimed at improving the nurse's performance in the care of patients with trauma pathology.







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*This program is designed for you to update your knowledge in Traumatology, with the use of the latest educational technology, to contribute with quality and confidence to decision-making, care, monitoring and support of the patient with trauma pathology"*



## General Objectives

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- ♦ Provide the nurse practitioner with more precise theoretical and practical knowledge that will help them in their daily practice in the traumatology service and at all times when patients require their attention in this specialty
- ♦ Describe the role of nursing in each of the trauma services
- ♦ Perfect the techniques of trauma nursing



*Get up to date on the latest developments in Trauma Nursing"*



## Specific Objectives

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### **Module 1. Assessment and Diagnosis of the Trauma Patient for Nursing**

- ♦ In-depth knowledge of the different examination and assessment techniques in traumatology
- ♦ Manage the different methods of interview and diagnosis in trauma nursing
- ♦ Assess patients with musculoskeletal and neurological problems

### **Module 2. Nursing Care in Traumatic Pathology**

- ♦ Acquire specific knowledge about traumatic pathology, fractures, their treatments and complications
- ♦ Specialize in nursing interventions in trauma emergencies

### **Module 3. Nursing Care in Non-Traumatic Pathology**

- ♦ Obtain an in-depth knowledge of osteoporosis and osteoarthritis, the most prevalent non-traumatic diseases
- ♦ Management of nursing care in patients with non-traumatic pathology

### **Module 4. Trauma and Orthopedic Nursing in Spine Pathology**

- ♦ Provide state-of-the-art knowledge of spinal pathology
- ♦ Manage the different techniques for the assessment and diagnosis of patients with spinal pathology
- ♦ Discern and correctly apply the different types of treatment in spinal pathology; surgical, conservative and rehabilitative

**Module 5. Trauma and Orthopedic Nursing in the Pathology of the Upper Limb**

- ♦ Provide up-to-date knowledge of upper limb pathology
- ♦ Manage the different techniques for the assessment and diagnosis of patients with shoulder, elbow and hand pathology
- ♦ Discern and correctly apply the different types of treatment in upper limb pathology; surgical, conservative and rehabilitative

**Module 6. Trauma and Orthopedic Nursing in Lower Limb Pathology**

- ♦ Provide up-to-date knowledge of lower limb pathology
- ♦ Manage the different techniques for the assessment and diagnosis of patients with hip, knee and foot pathology
- ♦ Discern and correctly apply the different types of treatment in lower limb pathology; surgical, conservative and rehabilitative

**Module 7. Nursing Care in Orthogeriatrics**

- ♦ Instruct different nursing professionals who wish to acquire a deeper and more specific knowledge of the traumatological processes affecting the elderly
- ♦ Gain an in-depth knowledge of the attention and care required by orthogeriatric patients

**Module 8. Traumatology and Orthopedic Nursing in Musculoskeletal Tumors**

- ♦ Become familiar with the knowledge about the different types of cancer associated with traumatology
- ♦ Gain a strong understanding of both primary and palliative treatments
- ♦ Develop care planning strategies for oncology patients

**Module 9. Nursing Care in the Traumatology Operating Room**

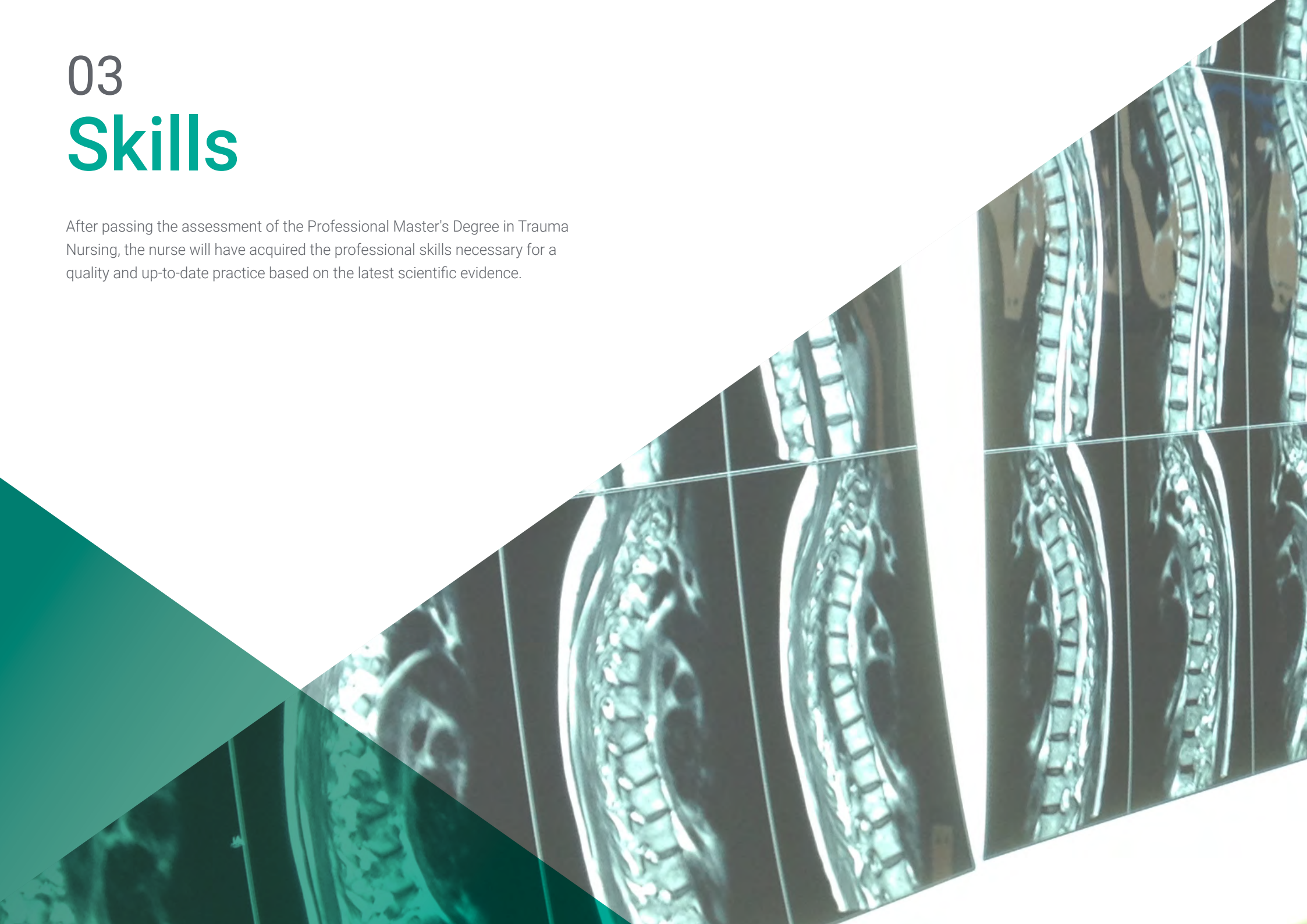
- ♦ Gain knowledge about the different surgical techniques in traumatology
- ♦ Specialize in postural and specific operating room care
- ♦ Identify possible problems that may arise in the trauma operating room and be aware of the different solutions
- ♦ Be up to date on all aspects of patient safety in the surgical environment

**Module 10. Nursing Care in Trauma Hospitalization**

- ♦ Identify and plan nursing care in hospitalization of trauma patients
- ♦ Appropriate use of the main standardized care plans in orthopedic and trauma surgery
- ♦ Have up-to-date knowledge and the latest scientific research on trauma patients focused on day-to-day healthcare practice

# 03 Skills

After passing the assessment of the Professional Master's Degree in Trauma Nursing, the nurse will have acquired the professional skills necessary for a quality and up-to-date practice based on the latest scientific evidence.





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*With this program, you will be able to master the new guidelines and apply the best nursing care in Trauma Nursing”*



## General Skills

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- ♦ 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
- ♦ Apply 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
- ♦ Communicate their conclusions and both the knowledge and rationale behind them - to specialized and non-specialized people in a clear and unambiguous manner
- ♦ Acquire the learning skills that will enable them to continue studying in a manner that will be largely self-directed or autonomous





## Specific Skills

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- ♦ Know how to differentiate the types of trauma patients we may encounter
- ♦ Perform a correct assessment of the trauma patient
- ♦ Improve the role of nurses in the radiology unit
- ♦ Manage the different methods of interview and diagnosis in trauma nursing
- ♦ Specialize in all nursing interventions in trauma emergencies
- ♦ Gain an in-depth knowledge of diseases osteoporosis and osteoarthritis
- ♦ Gain an in-depth knowledge of the attention and care required by ortho-geriatric patients
- ♦ Develop care planning strategies for oncology patients
- ♦ Gain knowledge about the different surgical techniques in traumatology
- ♦ Apply the main standardized care plans in orthopedic and trauma surgery



*Make the most of this opportunity and take the step to get up to date on the latest developments in Trauma Nursing”*

04

# Course Management

The program includes in its teaching staff leading specialists in trauma nursing who bring to this program their work experience. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.





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*Learn about the latest advances in the procedures in Trauma Nursing from leading experts in the field"*

## Management



### Ms. Alvarez Calvo, Alicia

- ◆ Diploma in Nursing
- ◆ Diploma in Public Health
- ◆ Master's Degree in Clinical Process Management and University Expert in Emergencies
- ◆ Associate Professor of Surgical Conditions in Traumatology of the Degree in Physiotherapy. UEMC
- ◆ Collaborator in practical training for the UVA nursing degree
- ◆ Member of the Spanish Association of Traumatology Nursing and the Spanish Association of Vascular and Injury Nursing
- ◆ Head Nurse of the Traumatology and Spine Operating Room of the Hospital of Valladolid

## Professors

### Dr. León Andrino, Alejandro Ángel

- ◆ Specialist in Orthopedic Surgery in private practice at the Campo Grande Hospital, Valladolid
- ◆ Degree in Medicine from the University of Valladolid
- ◆ PhD in "Research in Surgery" from the University of Valladolid

### Mr. Álvarez Brewers, Héctor

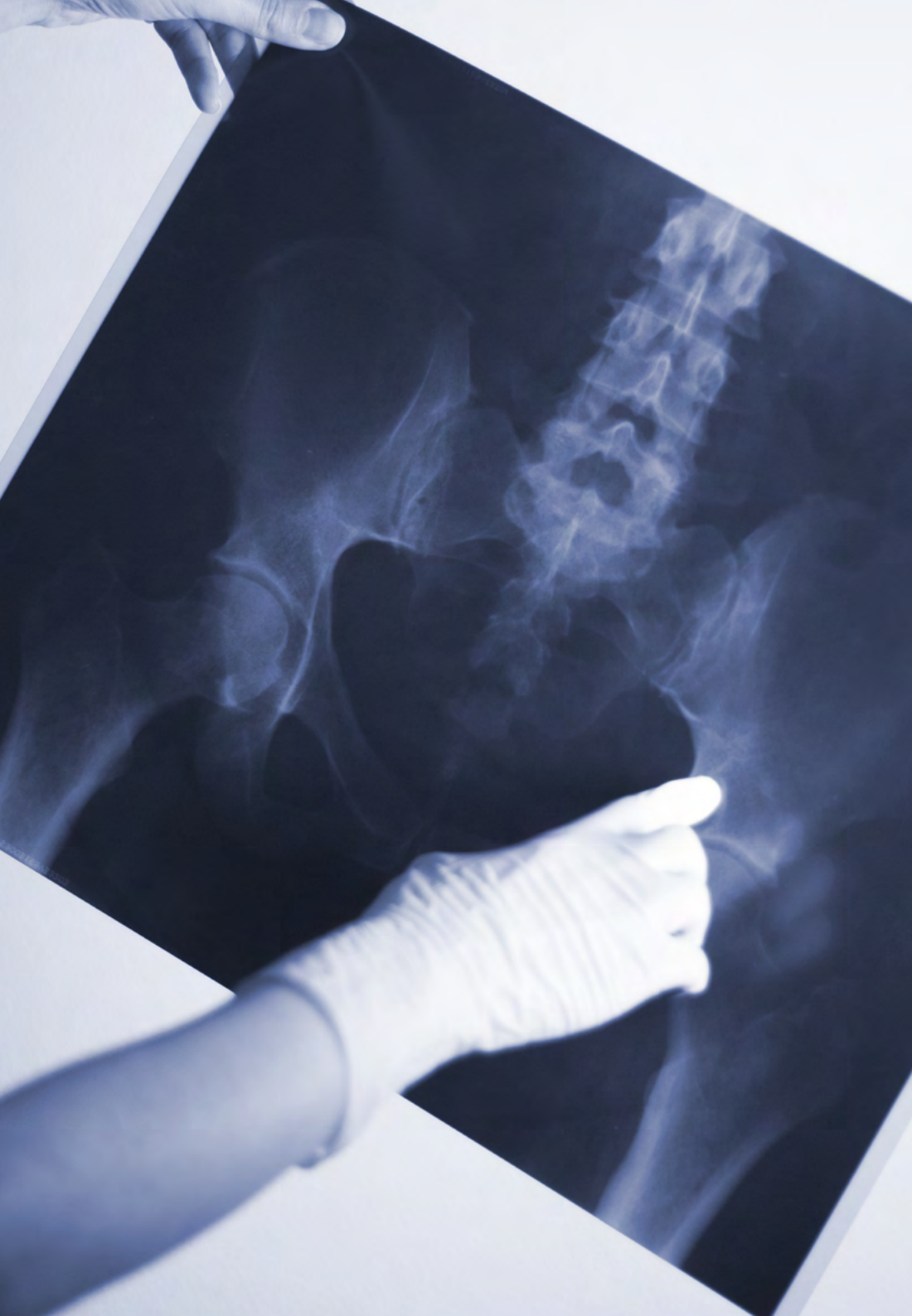
- ◆ Physiotherapist at Medrano Clinic, Aguilar de Campoo
- ◆ Diploma in Physiotherapy at the Alfonso X el Sabio University

### Dr. Santiago Maniega, Silvia

- ◆ Degree in Medicine from the University of Salamanca
- ◆ Member of SECOT (Spanish Society of Orthopedic Surgery and Traumatology)
- ◆ Member of GEER (Society for the Study of Spine Diseases)
- ◆ Member of AEA (Spanish Association of Arthroscopy)

### Ms. Nicolas Sacristán, Teresa

- ◆ University Diploma in Nursing from the Faculty of Health Sciences of Valladolid
- ◆ Nurse Resident of Mental Health at the Valladolid Clinical University Hospital
- ◆ Pedagogical Training Course in the specialty of Health Services (PHC) at the University of Valladolid



**Ms. Cabero García, Begoña**

- ◆ University Expert in Care and Cure of Chronic Wounds by the University of Cantabria
- ◆ Degree in Nursing from the University of León

**Mr. Mate Espeso, Adriano**

- ◆ Supervisor and Head of Nursing Unit of the Pediatric Emergency Unit at the Clinical University Hospital of Valladolid
- ◆ Degree in Nursing from the University of León
- ◆ Master's Degree in Health Services Management at the University of León
- ◆ Master's Degree in Social and Health Sciences Research at the University of León

**Ms. García Rodríguez, Laura**

- ◆ Diploma in Nursing from the University School of Nursing and Physiotherapy of the University of Salamanca
- ◆ Obstetrics and Gynecology Specialty (Midwife) at the UDENFOBG of the Basque Health Service
- ◆ Expert in Assisted Reproduction by the Rey Juan Carlos University and SEF



*A path to achieve training and professional growth that will propel you towards a greater level of competitiveness in the employment market"*

05

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities, aware of the relevance of current training to provide quality care to patients with trauma problems, and committed to quality teaching through new educational technologies.



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*This Professional Master's Degree contains the most complete and up-to-date scientific program on the market”*

### Module 1. Assessment and Diagnosis of the Trauma Patient for Nursing

- 1.1. Musculoskeletal Examination for Nursing
- 1.2. Medical History and Personal Interview
  - 1.2.1. Medical History
  - 1.2.2. Key Questions: Start, Duration, Frequency and Location
  - 1.2.3. Main Symptoms in Traumatology
    - 1.2.3.1. Inflammatory Process
- 1.3. Objective Examination for Nursing
  - 1.3.1. Inspection of Body Alignment and Gait
  - 1.3.2. Muscle Tendon Palpation
  - 1.3.3. Examination of Reflexes
  - 1.3.4. Active, Passive and Resisted Mobility
- 1.4. Nursing Assessment and Examination of the Scapulohumeral Girdle
  - 1.4.1. Inspection
  - 1.4.2. Mobility Assessment (Active, Passive and Resisted)
  - 1.4.3. Palpitation
  - 1.4.4. Specific Diagnostic Tests
- 1.5. Nursing Assessment and Examination of the Elbow, Wrist and Hand
  - 1.5.1. Inspection
  - 1.5.2. Mobility (Active, Passive and Resisted)
  - 1.5.3. Palpitation
  - 1.5.4. Specific Diagnostic Tests
- 1.6. Cervical and Thoracic Spine Assessment and Examination in Nursing
  - 1.6.1. Inspection
  - 1.6.2. Mobility (Active, Passive and Resisted)
  - 1.6.3. Palpitation
  - 1.6.4. Specific Diagnostic Tests
- 1.7. Assessment and Diagnosis of the Lumbar Spine and Pelvis for Nursing
  - 1.7.1. Inspection
  - 1.7.2. Mobility (Active, Passive and Resisted)
  - 1.7.3. Palpitation
  - 1.7.4. Specific Diagnostic Tests

- 1.8. Hip Assessment and Diagnosis for Nursing
  - 1.8.1. Inspection
  - 1.8.2. Mobility (Active, Passive and Resisted)
  - 1.8.3. Palpitation
  - 1.8.4. Specific Diagnostic Tests
- 1.9. Nursing Assessment and Examination of the Knee, Ankle and Foot
  - 1.9.1. Inspection
  - 1.9.2. Mobility (Active, Passive and Resisted)
  - 1.9.3. Palpitation
  - 1.9.4. Specific Diagnostic Tests
- 1.10. Neurological Examination

### Module 2. Nursing Care in Traumatic Pathology

- 2.1. Cutaneous and Musculoskeletal Traumas
  - 2.1.1. Contusions and Trauma
  - 2.1.2. Contusions and Injuries
  - 2.1.3. Characterization of Scarring
  - 2.1.4. Nursing Care in Different Wounds
- 2.2. Sprains and Dislocations
  - 2.2.1. Diagnosis and Classification
  - 2.2.2. Treatment Principles
  - 2.2.3. Main Complications
- 2.3. Tendon Ruptures
  - 2.3.1. Diagnosis and Classification
  - 2.3.2. Treatment Principles
  - 2.3.3. Main Complications
- 2.4. Amputations
- 2.5. Burns
  - 2.5.1. Classification
  - 2.5.2. Treatment and Complications
  - 2.5.3. Nursing Care of Burns

- 2.6. Bone Trauma. Fractures in Adults
  - 2.6.1. Diagnosis and Classification
  - 2.6.2. Treatment Principles
  - 2.6.3. Main Complications
- 2.7. Bone Trauma. Fractures in Pediatrics
  - 2.7.1. Diagnosis and Classification
  - 2.7.2. Treatment Principles and Complications
- 2.8. General Complications of Fractures
  - 2.8.1. Fat Embolism Syndrome
  - 2.8.2. Vascular/Nerve Complications
  - 2.8.3. Thromboembolism
- 2.9. Local Complications of Fractures
  - 2.9.1. Compartment Syndrome
  - 2.9.2. Delayed Consolidation and Vicious Consolidation
  - 2.9.3. Sympathetic Reflex Dystrophy
  - 2.9.4. Alteration of Longitudinal Bone Growth
  - 2.9.5. Avascular Necrosis
  - 2.9.6. Joint Stiffness, Post-Traumatic Osteoarthritis and Periarticular Ossification
- 2.10. Polyfractured and Trauma Patient
  - 2.10.1. Severe Trauma Assessment
  - 2.10.2. Post-Traumatic Shock (Hypovolemic, Neurogenic, Septic, Cardiogenic)
  - 2.10.3. Nursing Care in the Different Types of Shock
- 2.11. Principles of Immobilization
- 2.12. Pharmacological Treatment
  - 2.12.1. Calcium and Vitamin D
  - 2.12.2. Inhibition of Bone Formation. Bisphosphonates. Calcitonin. Raloxifen
  - 2.12.3. Bone Formation. Strontium Ranelate. Teriparatide
- 2.13. Principles of Fracture Rehabilitation

### Module 3. Nursing Care in Non-Traumatic Pathology

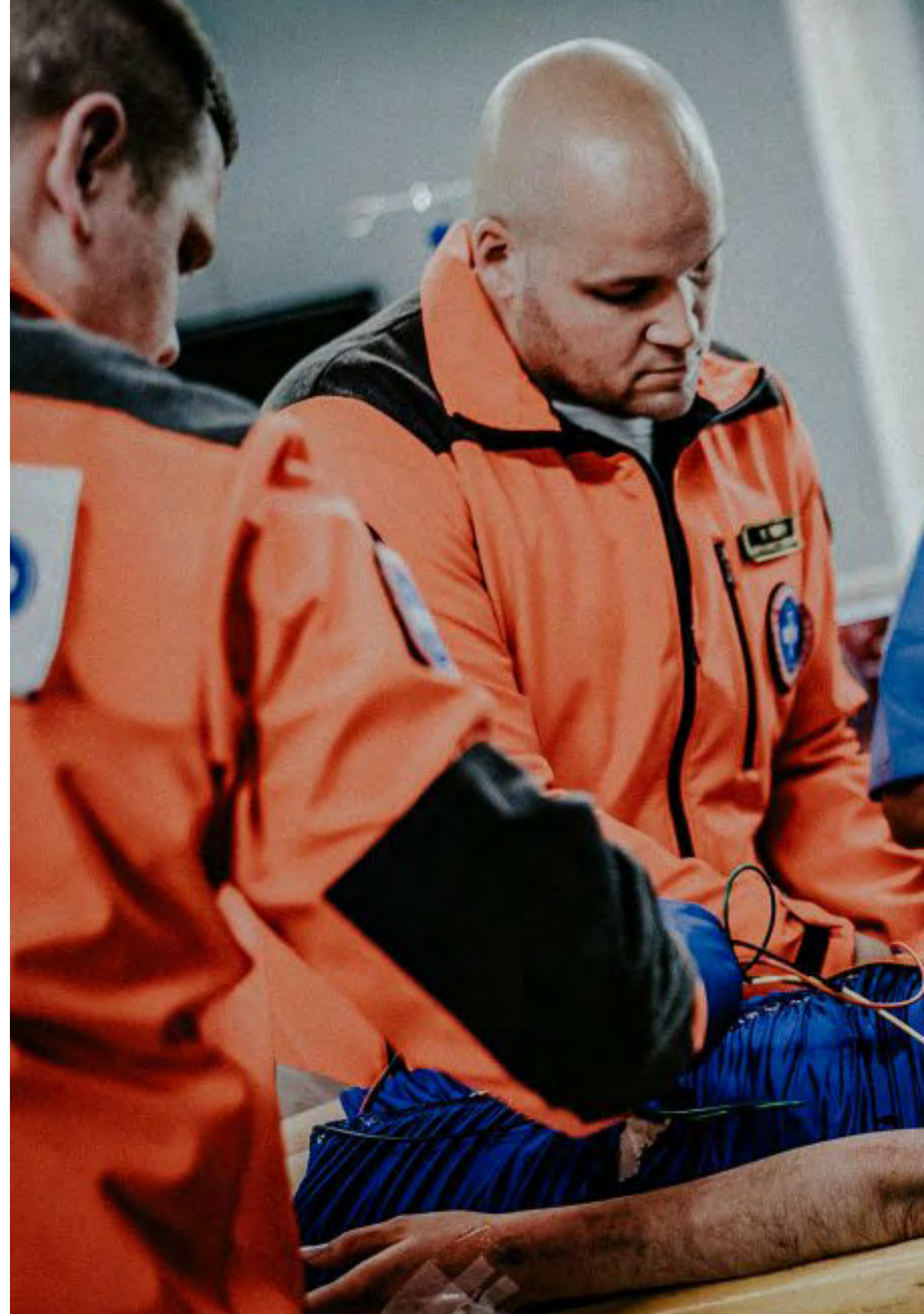
- 3.1. Degenerative Diseases of the Musculoskeletal System
  - 3.1.1. Arthrosis
  - 3.1.2. Arthropathies
- 3.2. Metabolic and Autoimmune Diseases
  - 3.2.1. Osteoporosis and Osteomalacia
  - 3.2.2. Rheumatoid Arthritis
- 3.3. Mobility Limitations, Stiffness and Ankylosis
- 3.4. Neurological Lesions
  - 3.4.1. Peripheral Nerve Injuries
- 3.5. Nerve Compression Injuries
  - 3.5.1. Carpal Tunnel Syndrome
  - 3.5.2. Tarsal Tunnel Syndrome
- 3.6. Infection in Traumatology
  - 3.6.1. Most Frequent Infections in Traumatology
  - 3.6.2. Diagnostic Methods and Classification of Infections
  - 3.6.3. Treatment and Prophylaxis of Infection
  - 3.6.4. Osteomyelitis
  - 3.6.5. Nursing Care in Locomotor System Infections
- 3.7. Pain in Traumatology
  - 3.7.1. Diagnosis and Classification
  - 3.7.2. Treatment Principles
  - 3.7.3. Nursing Care in Pain
- 3.8. Inflammation Processes
  - 3.8.1. Inflammatory Process
  - 3.8.2. Main Treatments
  - 3.8.3. Nursing Care in the Inflammatory Process
- 3.9. Prevention and Health Education in Non-Traumatic Pathologies
- 3.10. Physiotherapy and Rehabilitation in Non-Traumatic Processes

#### Module 4. Trauma and Orthopedic Nursing in Spine Pathology

- 4.1. Anatomic-Physiologic Memory with the Biomechanics of the Spine
- 4.2. Imaging and Diagnostic Techniques in the Spine
- 4.3. Spinal Trauma Pathology
  - 4.3.1. General Information on Vertebral Fractures
  - 4.3.2. Traumatic Instability of the Vertebral Column
    - 4.3.2.1. Spinal Cord Injury. Evaluation and Management
- 4.4. Pathology of Disk Disorders and Degenerative Disc Disease
  - 4.4.1. Herniated Disc. Adjacent Disc Syndrome
  - 4.4.2. Osteoporotic Vertebral Fractures
  - 4.4.3. Canal Stenosis
  - 4.4.4. Ankylosing Spondylitis
- 4.5. Deformities
  - 4.5.1. Scoliosis
  - 4.5.2. Spondylolisthesis
  - 4.5.3. Hyperkyphosis
  - 4.5.4. Hyperlordosis
- 4.6. Infections of the Spine
- 4.7. Rheumatic Spinal Disorders
- 4.8. Surgical Navigation and Neurophysiological Monitoring
- 4.9. Spine Rehabilitation
- 4.10. Conservative Treatment of the Spine

#### Module 5. Trauma and Orthopedic Nursing in the Pathology of the Upper Limb

- 5.1. Anatomical-Physiological Refresher Course
- 5.2. Techniques of Diagnostic Imaging of the Upper Limb
- 5.3. Traumatic Pathology of the Scapulohumeral Girdle
  - 5.3.1. Clavicle Fractures and Dislocations
  - 5.3.2. Humeral Fractures
  - 5.3.3. Rotator Cuff Tears and SLAP Tear
- 5.4. Traumatic Pathology of the Elbow and Forearm
  - 5.4.1. Fractures of the Olecranon and Radial Head
  - 5.4.2. Post-Traumatic Stiffness







- 5.5. Traumatic Pathology of the Hand and Wrist
  - 5.5.1. Metacarpal Fractures
- 5.6. Non-Traumatic Pathology of the Scapulohumeral Girdle
  - 5.6.1. Glenohumeral Arthrosis
  - 5.6.2. Subacromial Syndrome
  - 5.6.3. Shoulder Instability
- 5.7. Non-traumatic Pathology of the Elbow and Forearm
  - 5.7.1. Arthrosis
- 5.8. Non-traumatic Pathology of the Hand
- 5.9. Physiotherapy and Rehabilitation of the Upper Limbs
- 5.10. Nursing Care of the Patient with Upper Limb Injuries

## Module 6. Trauma and Orthopedic Nursing in Lower Limb Pathology

- 6.1. Anatomical-Physiological Refresher Course
- 6.2. Techniques of Diagnostic Imaging of the Lower Limb
- 6.3. Traumatic Pelvis and Hip Pathology
  - 6.3.1. Pelvis and Hip Fractures
  - 6.3.2. Hip Dislocation
- 6.4. Traumatic Pathology of the Lower Limbs
  - 6.4.1. Fractures of the Femur, Tibia and Fibula
  - 6.4.2. Ankle and Foot Fractures
- 6.5. Non-traumatic Pathology of the Lower Limbs
  - 6.5.1. Coxarthrosis
  - 6.5.2. Gonarthrosis
- 6.6. Pathology of the Extensor Apparatus
  - 6.6.1. Anterior Cruciate Ligament
  - 6.6.2. Posterior Cruciate Ligament
- 6.7. Pathology of the Ankle
- 6.8. Pathology of the Foot
- 6.9. Physiotherapy and Rehabilitation of the Lower Limbs
- 6.10. Nursing Care in Pathologies of the Lower Limbs

## Module 7. Nursing Care in Orthogeriatrics

- 7.1. Nursing Assessment and Diagnosis in the Elderly
  - 7.1.1. Assessment Scales in the Elderly
- 7.2. Special Considerations for the Elderly Population
  - 7.2.1. Home and Residential Care
  - 7.2.2. Drug Use in the Elderly
- 7.3. Major Geriatric Syndromes
  - 7.3.1. Constipation and Urinary Incontinence
  - 7.3.2. Mild Cognitive Impairment and Acute Confusional State
  - 7.3.3. Malnutrition
  - 7.3.4. Depression
- 7.4. Major Geriatric Syndromes in Traumatology
  - 7.4.1. Gait Disturbance (Orthopedics and Technical Aids)
  - 7.4.2. Falling Syndrome
  - 7.4.3. Immobilization Syndrome (Sarcopenia)
- 7.5. Prevention and Promotion of Musculoskeletal Health in the Elderly
- 7.6. Geriatric Surgical Patient
  - 7.6.1. Prevention of Perioperative Complications in the Elderly Patient
  - 7.6.2. Preparation for Intervention
  - 7.6.3. Antithromboembolic Prophylaxis
  - 7.6.4. Pathologies and Drugs Contraindicating Early Surgery
- 7.7. Postoperative Period in the Elderly in Traumatology
  - 7.7.1. Anemia as a Prognostic Factor. Transfusion Saving Measures
- 7.8. Nursing Care in the Elderly with Traumatic Pathology
- 7.9. Nursing Care of the Elderly with non-Traumatic Pathology
  - 7.9.1. Care Plans for the Orthogeriatric Patient
- 7.10. Principles of Physiotherapy in Geriatrics

## Module 8. Traumatology and Orthopedic Nursing in Musculoskeletal Tumors

- 8.1. Oncology in Traumatology
- 8.2. Primary Bone Tumors, Bone-Forming
  - 8.2.1. Primary Malignant Tumors
  - 8.2.2. Primary Intermediate Tumors
  - 8.2.3. Benign Primary Tumors
- 8.3. Primary Bone Tumors, Cartilage-forming
  - 8.3.1. Chondrosarcoma
  - 8.3.2. Chondroblastoma
- 8.4. Giant Cell Tumor
  - 8.4.1. Malignant Giant Cell Tumor
  - 8.4.2. Intermediate Giant Cell Tumor
  - 8.4.3. Benign Giant Cell Tumor
- 8.5. Malignant Round Cell Tumors (Bone Marrow)
- 8.6. Vascular Tumours
  - 8.6.1. Malignant tumours
  - 8.6.2. Intermediate Tumors
  - 8.6.3. Benign Tumors
- 8.7. Malignant Soft Tissue Tumors
- 8.8. Benign Soft Tissue Tumors
- 8.9. Bone Metastases
- 8.10. Nursing Care in Oncologic Patients in Trauma Orthopedic Surgery

**Module 9. Nursing Care in the Traumatology Operating Room**

- 9.1. Asepsis and Antisepsis
  - 9.1.1. Sterilization
- 9.2. Patient Positioning in the Orthopedic and Trauma Surgery Operating Room
  - 9.2.1. Surgical Positions
  - 9.2.2. Key Aspects of Placing the Patient in Proper Surgical Positioning
- 9.3. Surgical Ischemia
  - 9.3.1. Application Methods
  - 9.3.2. Complications and Contraindications of Ischemia
- 9.4. Anesthesia in Traumatology
  - 9.4.1. Patient Monitoring
  - 9.4.2. Main Anesthetic Techniques in Traumatology
- 9.5. Materials Used in the Traumatology Operating Room
  - 9.5.1. Biomaterials
  - 9.5.2. Metals, Polymers and Ceramics
  - 9.5.3. Principles of Surgical Cementation
- 9.6. Bone Grafts and Tissue Bank
  - 9.6.1. Biological Bone Grafts
  - 9.6.2. Synthetic Bone Grafts
  - 9.6.3. Tissue Bank. Bone and Tissue Explant
- 9.7. Instrumentation in the Main Traumatologic Surgical Techniques
  - 9.7.1. Basic Instruments in Traumatology
  - 9.7.2. Instruments in Osteosynthesis. The Surgical Reduction of Fractures
  - 9.7.3. Instrumentation in Minimally Aggressive Techniques
- 9.8. Instrumentation in the Main Orthopedic Surgical Techniques
  - 9.8.1. Instrumentation in Arthroscopic Surgery
  - 9.8.2. Instrumentation in Arthroplasty Surgery
  - 9.8.3. Instrumentation in Spine Surgery
- 9.9. Main Complications in the Trauma Operating Room
  - 9.9.1. Complications of the Different Surgical Positions
  - 9.9.2. Most Frequent Anesthetic Complications in the Trauma Operating Room
  - 9.9.3. Bone Cement Implantation Syndrome
- 9.10. Nursing Care in Surgical Patients in Orthopedic and Trauma Surgery
  - 9.10.1. Surgery in the Context of Covid-19 and Multidrug-Resistant Infections

**Module 10. Nursing Care in Trauma Hospitalization**

- 10.1. Assessment of Hospitalized Patients in the Traumatology Unit
- 10.2. Multidisciplinary Treatment of Patients in the Traumatology Unit
  - 10.2.1. Application of Pharmacological Treatments
  - 10.2.2. Application of Hot-Cold Therapies
- 10.3. Nursing Care for Postoperative Orthopedic and Trauma Surgery Patients
  - 10.3.1. Nursing Care after Trauma Surgery
  - 10.3.2. Nursing Care after Orthopedic Surgery
  - 10.3.3. Nursing Care after Spine Surgery
- 10.4. Immobilization of Patients in the Different Trauma Processes
  - 10.4.1. Safe Immobilization and Body Alignment Techniques
  - 10.4.2. Effects of Immobilization
  - 10.4.3. Assessment and Care of Patients in Splints and Casts
  - 10.4.4. Assessment and Care of Patients with Skin and Skeletal Traction
- 10.5. Mobilization of Patients in Different Trauma Processes
  - 10.5.1. Safe Mobilization Techniques
  - 10.5.2. Lifting and Ambulation Techniques
- 10.6. Risk Assessment and Prevention of Pressure Ulcers in Trauma Patients
  - 10.6.1. General Concepts about Pressure Ulcers (PU's)
  - 10.6.2. Most used Scales
- 10.7. Nutrition in Trauma Patients
  - 10.7.1. Nutritional Assessment in Trauma Patients
  - 10.7.2. Use of Nutritional Supplements
- 10.8. Rapid Recovery Program in Trauma Surgery
  - 10.8.1. Rapid Recovery. (Fast-Track or Rapid Recovery)
- 10.9. Inpatient Care Safety
  - 10.9.1. RNAO Best Practice Guidelines
  - 10.9.2. Recommendations for What "Not To Do"
- 10.10. Standardized Care Plans in Orthopedic and Trauma Surgery Hospitalization
  - 10.10.1. Standard Plan: Herniated Disc
  - 10.10.2. Standard Plan: Hip Fracture
  - 10.10.3. Standard Plan: Knee Prosthesis

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.





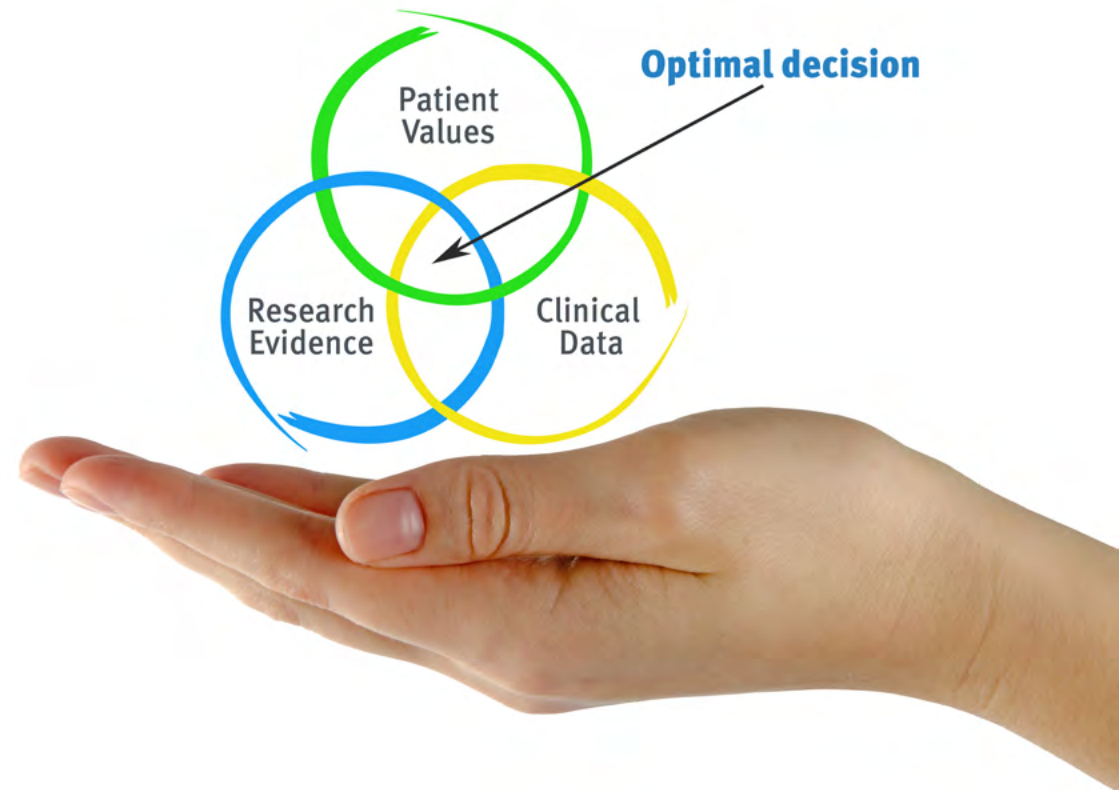
“

*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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, in an attempt to recreate the real conditions in professional nursing 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. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.



*The nurse will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



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

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your 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 really specific and precise.

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



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

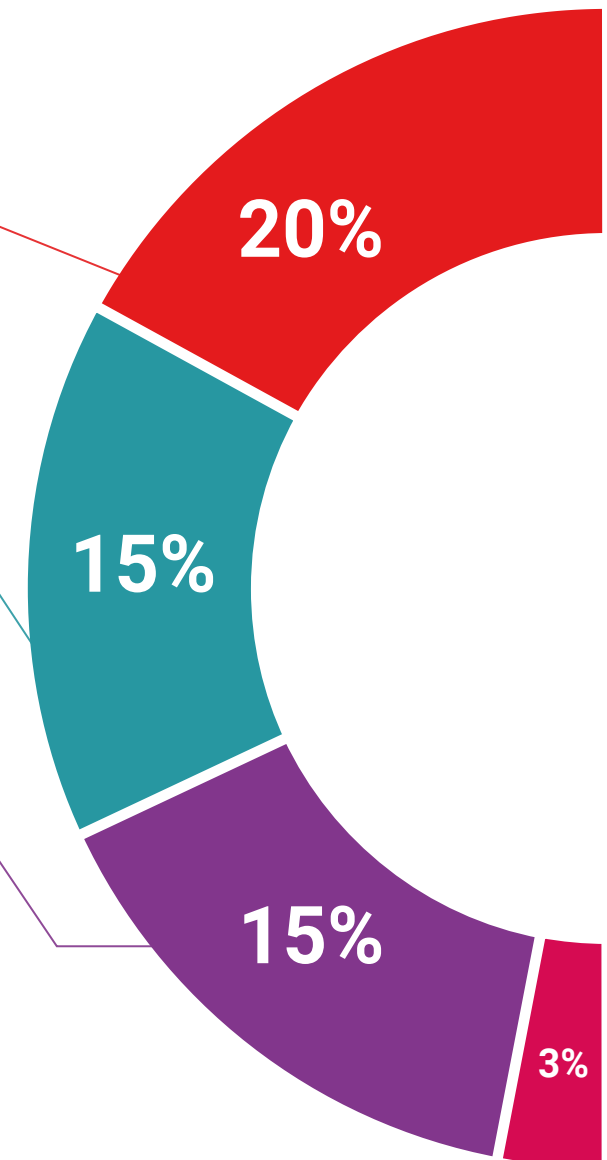
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

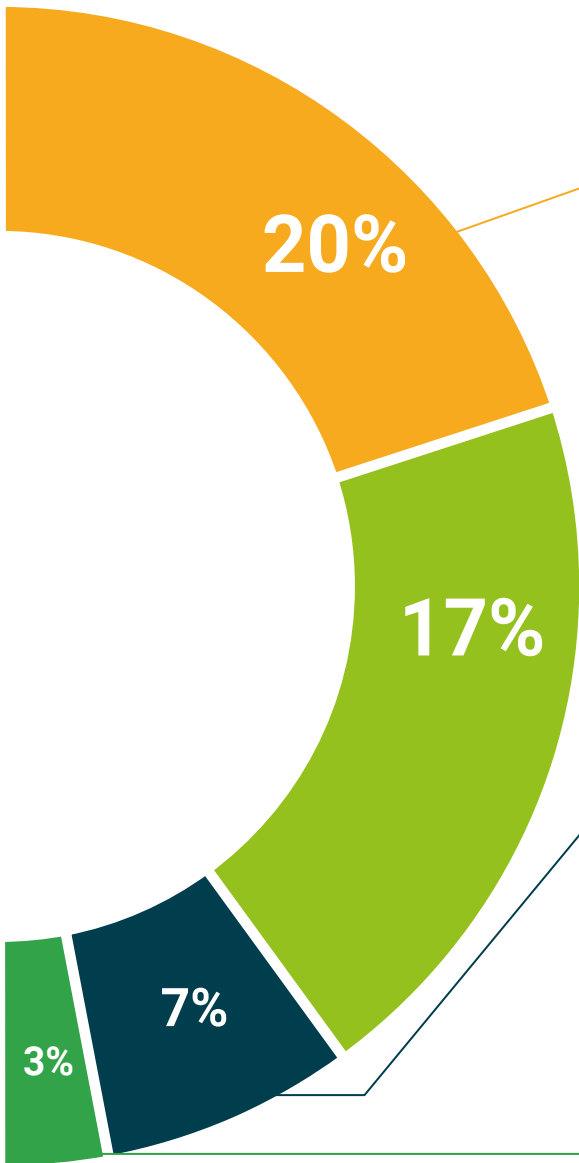
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 suggesting that observing third-party experts can be useful.

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 Professional Master's Degree in Trauma Nursing guarantees students, in addition to the most rigorous and updated education, access to a Professional Master's Degree diploma issued by TECH Technological University.





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

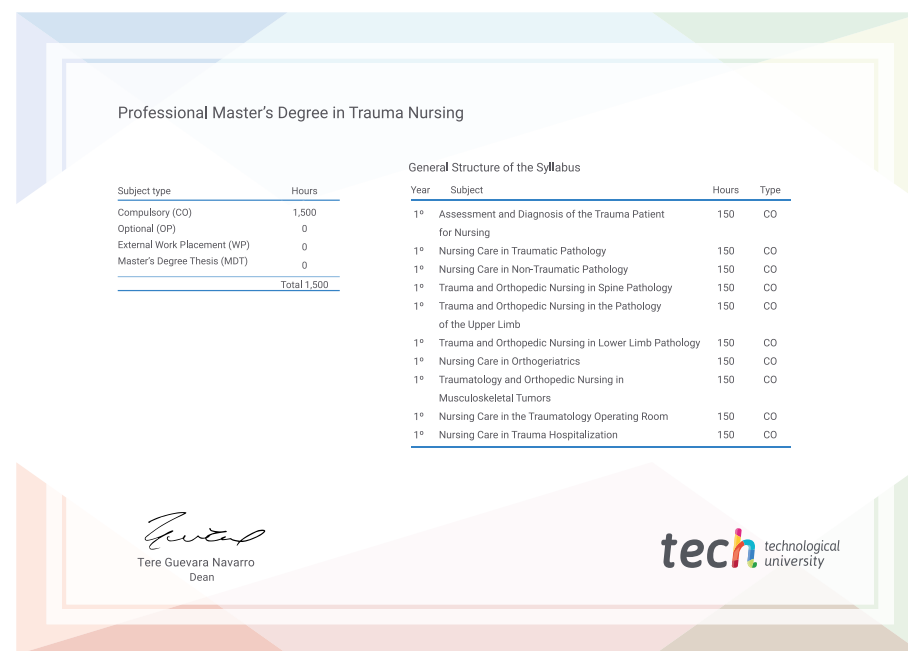
This **Professional Master's Degree in Trauma Nursing** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Professional Master's Degree in Trauma Nursing**

Official N° of hours: **1,500 h.**



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

future  
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education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom

**tech** technological  
university

**Professional Master's  
Degree**

Trauma Nursing

Course Modality: Online

Duration: 12 months

Certificate: TECH Technological University

Official N° of hours: 1,500 h.

# Professional Master's Degree

## Trauma Nursing

