

# Postgraduate Certificate

## Orthopedic and Traumatology Surgery for Nurses





## Postgraduate Certificate Orthopedic and Traumatology Surgery for Nursing

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

Website: [www.techtute.com/us/nursing/postgraduate-certificate/orthopedic-traumatology-surgery-nursing](http://www.techtute.com/us/nursing/postgraduate-certificate/orthopedic-traumatology-surgery-nursing)

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# 01

# Introduction

Continuous training is nowadays required to achieve professional development and to be fully qualified to face the daily challenges of a constantly changing field such as healthcare. The surgical area is an environment whose characteristics differentiate it from the rest of the services where the majority of nursing professionals habitually develop competencies in their care, management, teaching and research functions. The evolution of techniques and technological advances make it essential for nursing professionals to update their knowledge in order to provide excellent surgical care.





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*This Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses contains the most complete and up-to-date scientific program on the market”*

Each of the wide variety of surgical interventions that are performed requires a specific procedure, a specific technique and the exclusive surgical material for that intervention. One thing they all have in common is a series of steps and rules that all team members should know in detail. They must also know the general functioning of the surgical department in order to prevent and avoid common risks while carrying out professional work. Being institutions aware of this, they demand academic profiles with a training that adapts to the requirements of their job and that are qualified and endorsed for the performance of the same.

This knowledge will facilitate the provision of quality care throughout the surgical process to ensure the safety of the patient and the professional at all times.

This **Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses** contains the most complete and up-to-date scientific program on the market. The most important features of the University Course are:

- ♦ Clinical cases presented by experts in the different fields of multidisciplinary knowledge. The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional.
- ♦ Novelties on Orthopedic and Traumatology Surgery for Nurses
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ♦ With special emphasis on evidence-based and surgical nursing research methodologies.
- ♦ 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



*Increase your skills in the approach to orthopedic and Traumatology surgery for nurses through this program"*

“ *This Postgraduate Certificate may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Orthopedic and Traumatology Surgery for Nurses, you will obtain a certificate issued by TECH Technological University*”

Forming part of the teaching staff is a group of professionals in the world of surgical nursing who bring to this training their work experience, as well as a group of renowned specialists, recognised by esteemed scientific communities.

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 program to train in real situations.

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

*Increase your decision-making confidence by updating your knowledge with this Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses.*

*Don't miss the opportunity to update your knowledge in Orthopedic and Traumatology Surgery for Nurses to improve patient care.*

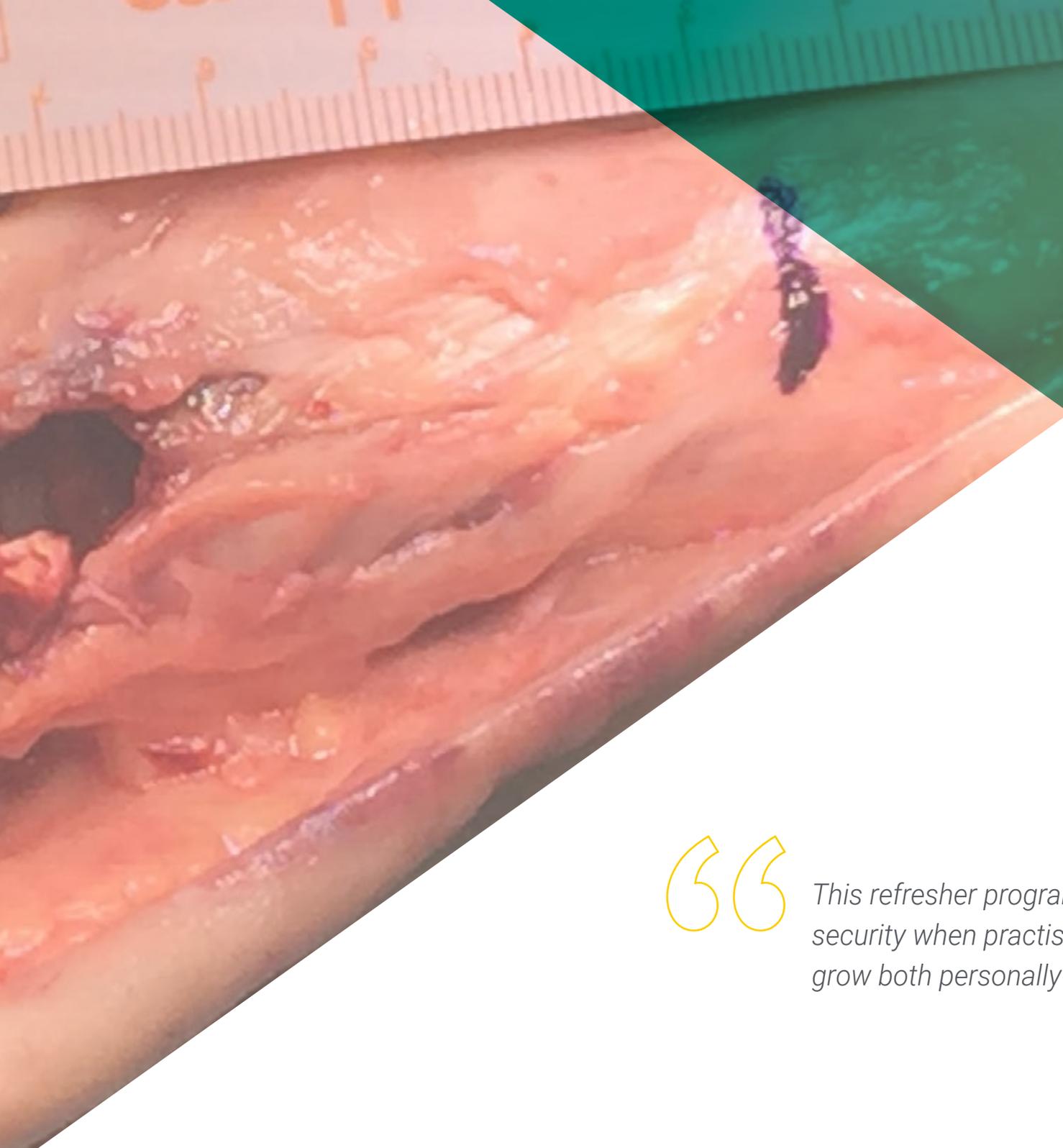


02

# Objectives

The main objective of the program is the development of both theoretical and practical learning, so that nurses in can master, in a practical and rigorous way, the study of Orthopedic and Traumatology Surgery for Nurses.





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



## General Objectives

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- Update your knowledge on advanced nursing practice in perioperative care within the different medical-surgical specialities through nursing based on evidence
- Promote work strategies based on perioperative patient care, as a reference model in the achievement of healthcare excellence.
- Encourage the acquisition of technical skills and abilities, through a powerful audiovisual system, and the possibility of development through online simulation workshops and/or specific training
- Encouraging professional development through research and dynamic and up-to-date continuous training



## Specific Objectives

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- Master the surgical technique in arthroscopy, as well as the positioning of the different devices and the layout of the operating room, which is very different from other surgeries in orthopedic and trauma surgery.
- Differentiate between cemented and uncemented arthroplasties and explain and perform the surgical cementation procedure.
- List the essential components for each type of prosthesis, according to the joint to be repaired/replaced, and verify the stock of implants before surgery
- Be able to act efficiently and quickly in the event of eventualities such as periprosthetic fracture, bleeding, or improvised change of type of prosthesis or osteosynthesis material.
- Acquire the necessary knowledge to collaborate in surgeries with osteosynthesis.
- Know how to correctly apply the ischemia technique to the extremities for when it is needed in order to perform surgery.
- Explain the process of bone donation/reception and learn how the bone bank works.
- Manage the lavage system and spacer implantation technique when there is an infection in the joint.
- Know the risks of the frequent use of radiation in orthopedic and trauma surgery operating rooms and the measures to be taken to prevent them.



“

*Seize the opportunity and take the step to get up-to-date on the latest developments in orthopedic and Traumatology surgery for nurses”*

03

# Course Management

This program includes highly regarded health professionals in the field of healthcare in its teaching staff, who bring the experience of their work to this training.

In addition, renowned specialists, members of prestigious national and international scientific communities, are involved in designing and preparing the program.





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*Learn about the latest advances in orthopedic and Traumatology surgery for nurses from leading professionals”*

## Management



### Guzmán Almagro, María Isabel

- ♦ Diploma in Nursing
- ♦ Master's Degree in Social Gerontology: Longevity, Health and Quality of Life
- ♦ Postgraduate Diploma in Urgent and Emergency Care. Complutense University of Madrid
- ♦ Professional Master's Degree in Comprehensive Nursing Care in Critical and Emergency Situations in Adults
- ♦ Surgical Block Nurse at the La Paz University Hospital. Madrid



### Bárzano Saiz, Mª Estela

- ♦ Diploma in Nursing
- ♦ Diploma in Physiotherapy
- ♦ Current Operating room nurse with several years of experience in Orthopaedic and Traumatological Surgery, Plastic Surgery and General Surgery operating rooms at University Hospital La Paz of Madrid
- ♦ Master's Degree in Counselling. San Camilo Health Humanization Center.



### Alba López, Alicia

- ◆ Diploma in Nursing
- ◆ More than 10 years of experience as a Surgical Block Nurse in Orthopedic and Traumatology Surgery, Plastic Surgery and General Surgery operating rooms at "La Paz" Hospital University, Madrid

## Professors

### Carrero Villareal, Mercedes

- ◆ Operating room nurse in traumatology, plastic surgery and cardiothoracic surgery
- ◆ Lecturer in Nursing Degree at the University of Albacete

### Martín, Cristina

- ◆ Traumatology and plastic surgery operating room nurse at La Paz University Hospital

### Muñiz Gonzalez, Sara

- ◆ Traumatology and plastic surgery operating room nurse at La Paz University Hospital

### Palomares Gracia, Vanesa

- ◆ Operating room nurse in orthopaedic and trauma surgery and plastic surgery since April 2014 at University Hospital "La Paz" in Madrid

### Somoza, María

- ◆ Traumatology and plastic surgery operating room nurse at La Paz University Hospital

### Valero Villar, Ana Maria

- ◆ Operating room nurse since 2008 in the specialities of traumatology and plastic surgery at Gregorio Marañón University hospital and La Paz University Hospital in Madrid. Posgraduate Diploma in surgical nursing, anaesthesia and resuscitation. Posgraduate Diploma in community health promotion. UNED Business School 2010

### Valverde Girón, Laura

- ◆ Surgical nurse with 9 years of experience in the specialities of orthopaedic and trauma surgery, general surgery, plastic surgery and gynaecological surgery, in La Paz University Hospital, Cantoblanco Hospital and Santa Cristina University Hospital in Madrid.

### Zunino, Judith

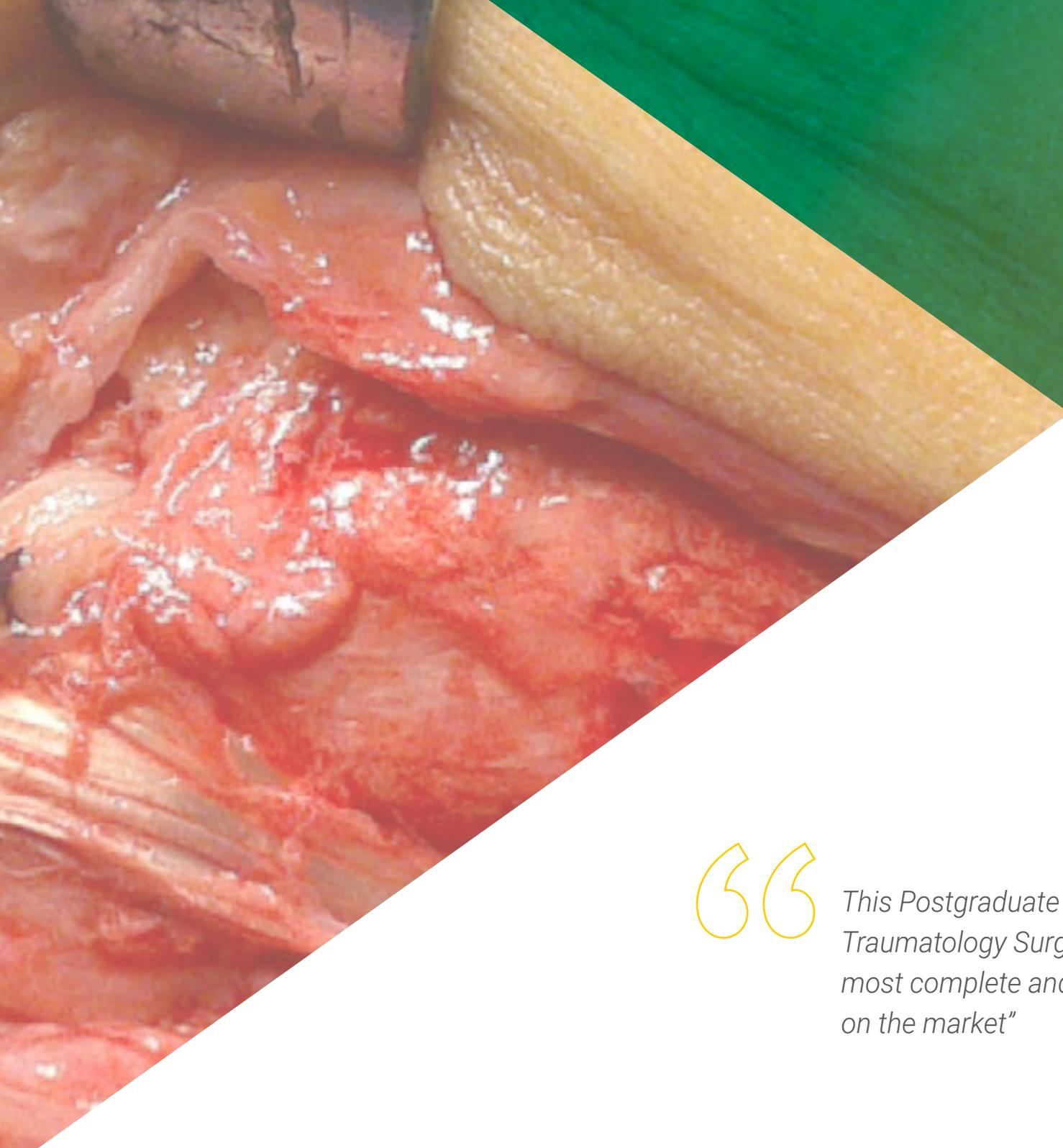
- ◆ Traumatology and plastic surgery operating room nurse at La Paz University Hospital

04

# Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the implications of training in the daily praxis of the nurse, aware of the relevance of current training to treat surgical patients and are committed to quality teaching using new educational technologies.





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*This Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses contains the most complete and up-to-date scientific program on the market”*

## Module 1: Orthopedic Surgery and Traumatology

- 1.1. Particularities in TOC
  - 1.1.1. Specific Aspects to Consider in Each Surgery
    - 1.1.1.1. Anatomical Review in the Different Intervention Areas
    - 1.1.1.2. Apparatus, Expendable Material and Instruments
    - 1.1.1.3. Anesthesia of Choice
    - 1.1.1.4. Patient positioning
    - 1.1.1.5. Surgical Care of the Patient
  - 1.1.2. Specific Nursing Training in Traumatology
    - 1.1.2.1. Ischemia
    - 1.1.2.2. X-Ray-Dosimeter
    - 1.1.2.3. Intraoperative Blood Salvage
    - 1.1.2.4. Bone Deficit Repair
      - 1.1.2.4.1. Autologous: Iliac Crest Bone Graft Extraction
      - 1.1.2.4.2. Allograft: Bone Bank
      - 1.1.2.4.3. Bone Substitute
- 1.2. Surgical Cementation and Primary Prosthesis in Upper Limbs
  - 1.2.1. Shoulder Arthroplasty Anatomical and Inverted
  - 1.2.2. Elbow Arthroplasty
  - 1.2.3. Wrist Arthroplasty
  - 1.2.4. Metacarpal Arthroplasty
- 1.3. Lower Limb Primary Protheses
  - 1.3.1. Partial Hip Prosthesis
  - 1.3.2. Total Hip Prosthesis
  - 1.3.3. Total Knee Prosthesis
  - 1.3.4. Debridement, Surgical Lavage and Placement of Spacers in Infectious Processes
- 1.4. Primary Prosthesis Replacements
  - 1.4.1. Hip
  - 1.4.2. knee
- 1.5. Reducción de Fracturas



- 1.5.1. Kirschner Needles
- 1.5.2. Traction Table
- 1.5.3. Intramedullary Guides
- 1.5.4. Closed Reduction Through X-Rays
- 1.6. Osteosynthesis for Fractures and Deformities in Extremities
  - 1.6.1. External Fixators
  - 1.6.2. Anchoring
  - 1.6.3. Plates and Screws
    - 1.6.3.1. Types of Plates
    - 1.6.3.2. Types of Screws: LCP, Spongy, Cortical
    - 1.6.3.3. Cannulated Screws
    - 1.6.3.4. Intramedullary Nails
- 1.7. Osteosynthesis in Extremities II
  - 1.7.1. Sliding Screw Plate
  - 1.7.2. Periprosthetic Plates
  - 1.7.3. Removal of Osteosynthesis Material
  - 1.7.4. Osteosynthesis with OARM Navigator
- 1.8. Osteosynthesis for Fractures and Deformities in the Axial Skeleton and Polytraumatized Patient
  - 1.8.1. Circumferential Spine Arthrodesis for Different Pathologies
    - 1.8.1.1. Cervical Spine: Anterior and Posterior Approach
    - 1.8.1.2. Dorsal/Thoracic Spine
    - 1.8.1.3. Lumbosacral Spine
  - 1.8.2. Kyphoplasty for Vertebral Fractures
  - 1.8.3. Vertebroplasty in Tumor Processes
- 1.9. Arthroscopy of Joints and Repair of Tendon Structures

- 1.9.1. Shoulder
- 1.9.2. knee
  - 1.9.2.1. Meniscus
  - 1.9.2.2. Ligamentoplasty
- 1.9.3. Wrist
- 1.9.4. Carpal Tunnel Unroofing
- 1.9.5. Dupuitren
- 1.9.6. Tendon Transpositions
- 1.10. Experimental and Tumor Surgery
  - 1.10.1. Stem Cell Procurement and Injection for Necrosis and Pseudarthrosis Processes
  - 1.10.2. Resection and Reconstruction
  - 1.10.3. Tailor-Made Tumor Prostheses



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

05

# Methodology

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

This teaching system is used in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.





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

## At TECH Nursing School we use the Case Method

In a given clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is abundant scientific evidence on the effectiveness of the method. 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. 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, in an attempt to recreate the real conditions in professional nursing practice.

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*Did you know that this method was developed in 1912 at Harvard for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. 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 university program.



## Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*The 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success, in all specialties regardless of from the workload. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (we learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

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



In this program you will have access to the best educational material, prepared with you in mind:



### Study Material

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

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current nursing procedures and techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

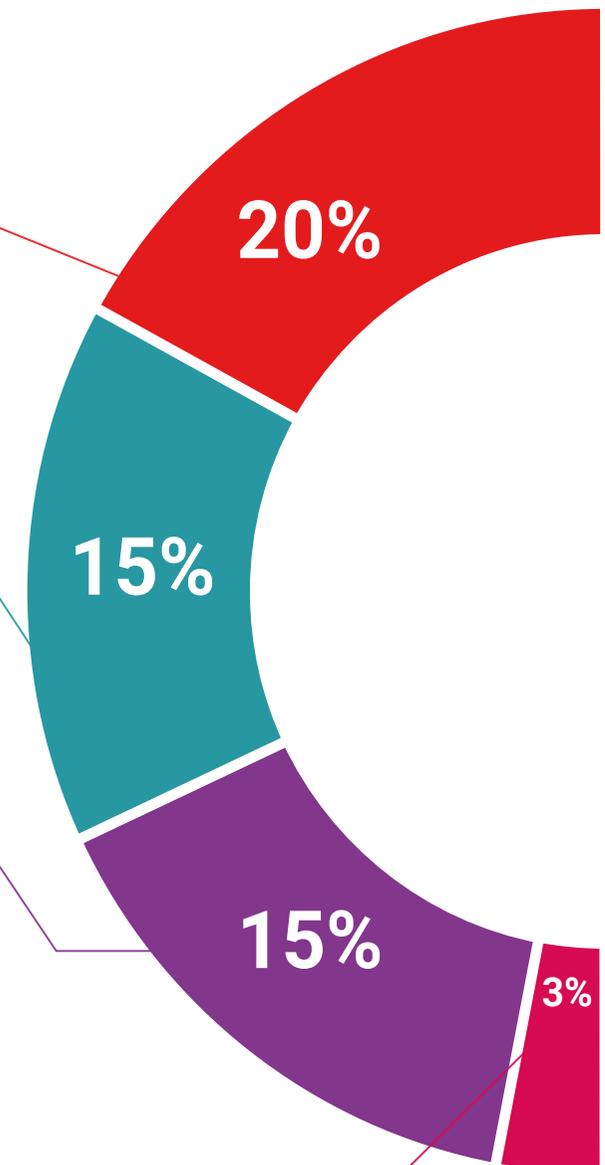
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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



### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.





### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



### Testing & Retesting

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence in our future difficult decisions.



### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

The Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses guarantees, in addition to the most rigorous and updated specialization, access to a university title of Postgraduate Certificate issued by TECH Technological University.



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

This **Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses** contains the most complete and up-to-date scientific program on the market.

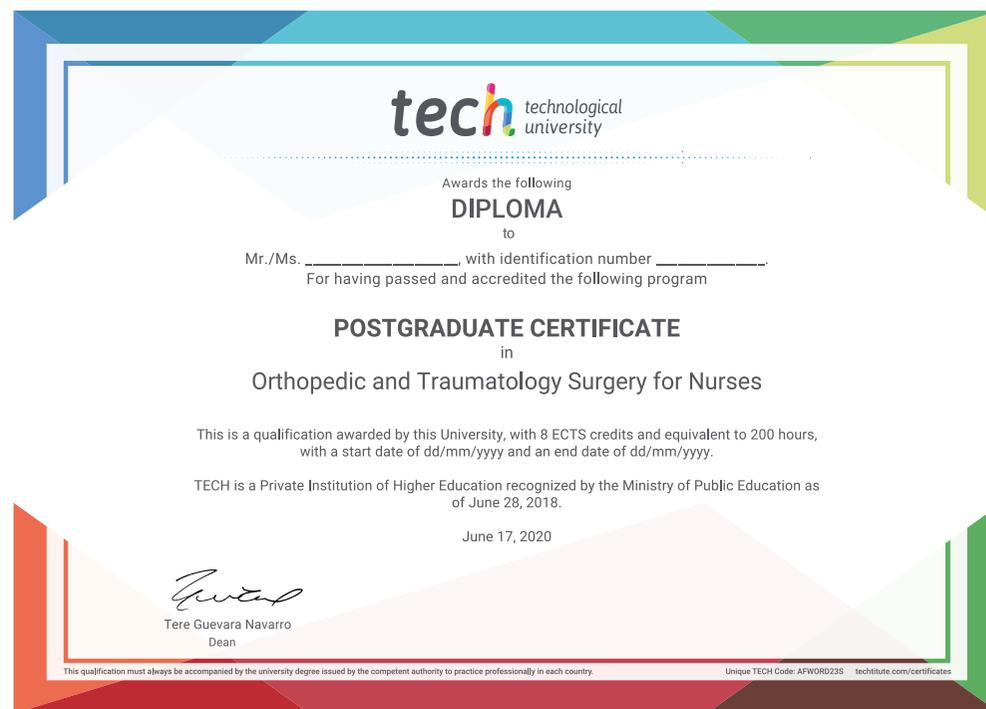
After students have passed the assessments, they will receive by certified mail their **Postgraduate Certificate** issued by **TECH Technological University**.

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

**Title: Postgraduate Certificate in Orthopedic and Traumatology Surgery for Nurses**

**ECTS: 8**

**Official Number of Hours: 200**



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

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



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