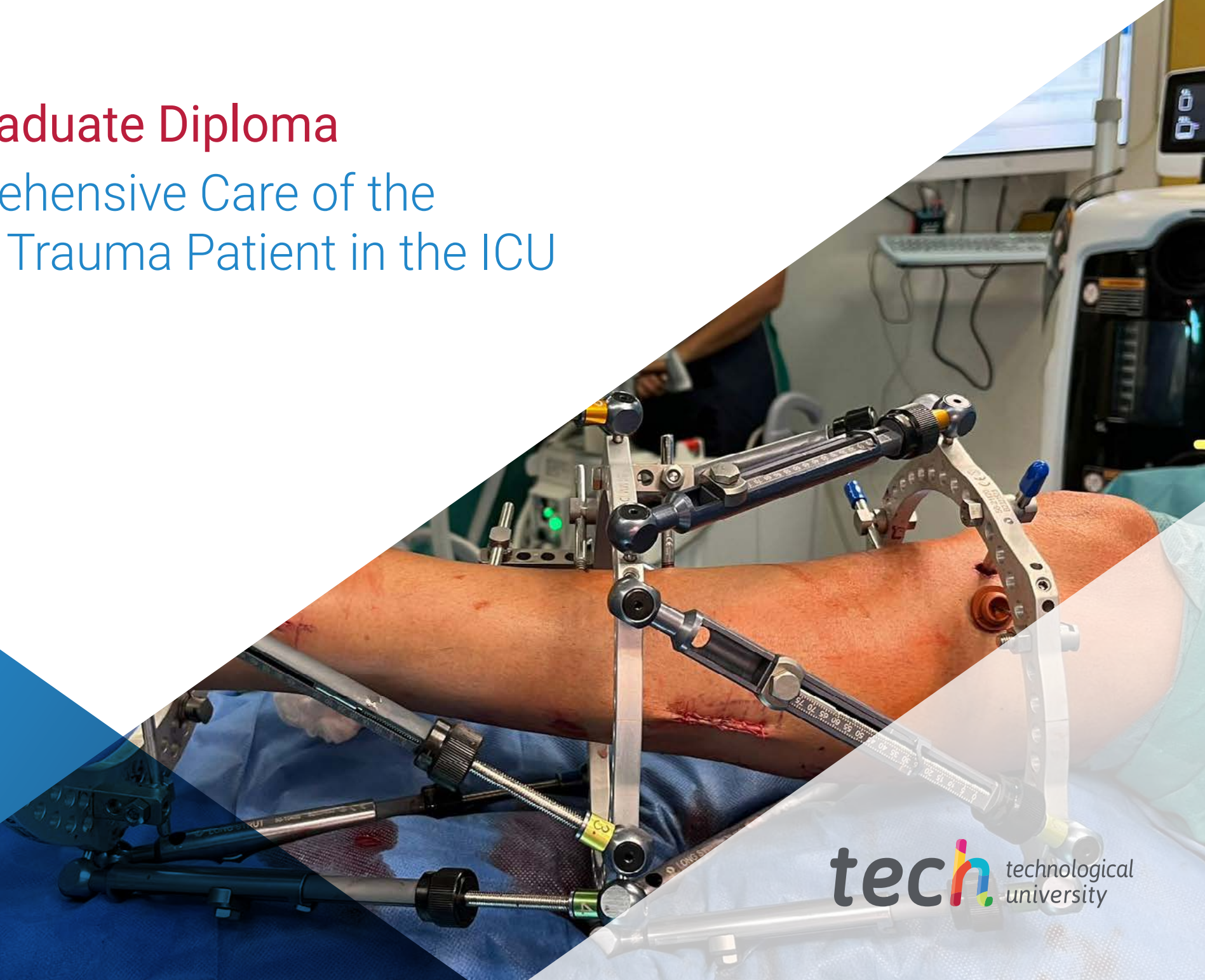


# Postgraduate Diploma

## Comprehensive Care of the Severe Trauma Patient in the ICU





## Postgraduate Diploma Comprehensive Care of the Severe Trauma Patient in the ICU

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

Website: [www.techtitute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-comprehensive-care-severe-trauma-patient-icu](http://www.techtitute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-comprehensive-care-severe-trauma-patient-icu)

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# 01

# Introduction

Experience has demonstrated the critical role of the health professional in responding to trauma in vulnerable communities and health systems. For this reason, it is essential for physicians to keep up-to-date in terms of action protocols, the most advanced diagnostic technology and research in trauma. Therefore, this academic program is born, thanks to which the graduate will acquire advanced competencies for the management of urgent pathologies in particular contexts, improving the response capacity and patient care in critical situations. All this through numerous multimedia materials at the forefront of technology and education, accessible at any place or time through a 100% online study methodology.







*Get the skills you need thanks to TECH!  
You'll get up to speed on the management  
of the Severe Trauma Patient in ICU"*

Specialized care for patients with traumatic injuries has become an indispensable requirement in Intensive Care Units (ICU). From admission to discharge, the patient will go through different situations that will require continuous monitoring. Because of this, the preparation and updating of senior healthcare personnel is vital.

Thanks to this Postgraduate Diploma, the physician will develop advanced competencies in the management of traumatic injuries in particular and challenging contexts. Therefore, protocols for assessment, monitoring and care in critical situations will be analyzed. Professionals will acquire skills in the use of medical devices, medication administration and emotional support for patients and families. They will also learn strategies to prevent complications, manage pain and optimize interprofessional communication.

Likewise, the most current imaging techniques to detect traumatic injuries will be addressed. In fact, the graduate will delve into the interpretation of X-rays, CT and MRI scans to evaluate tissue and organ damage. They will also delve into specific imaging protocols to identify fractures, internal injuries and other serious conditions, including the ethical and safety implications in the use of radiation.

Finally, space will be devoted to trauma in special populations, such as children, the elderly, pregnant women and patients with chronic diseases. Likewise, the student will delve into specific protocols for critical situations, such as natural disasters, armed conflicts and massive traffic accidents. Not to mention triage strategies, resource coordination and interdisciplinary collaboration.

In summary, this program will provide students with a solid theoretical foundation, enabling them to apply it in real situations, thanks to the leadership and support of a distinguished faculty of experts with extensive professional experience. In this way, TECH offers students the exclusive Relearning methodology, an innovative teaching methodology based on the reiteration of essential concepts, therefore guaranteeing an efficient assimilation of knowledge.

This **Postgraduate Diploma in Comprehensive Care of the Severe Trauma Patient in the ICU** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Initial Care of Severe Trauma Patients in the ICU
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ 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



*You will excel in the Comprehensive Care of traumatic injuries and take the lead in a multidisciplinary medical team"*

“

*You will acquire advanced skills to treat traumatic injuries in special cases, such as children, pregnant women and the elderly, all through the innovative Relearning methodology”*

The program's teaching team includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will delve into diagnostic imaging and rehabilitation in ICU trauma with this Postgraduate Diploma.*

*You will renew your skills in the most innovative techniques in emergency care. And in only 6 months!*



# 02 Objectives

This program will allow the physician to acquire the necessary knowledge and competencies to update their professional profile, focusing on the fundamental aspects of the Comprehensive Care of the Severe Trauma Patient in the ICU. The carefully designed components of the syllabus will guide the graduate throughout his or her Postgraduate Diploma pathway. They will equip them with the essential skills to achieve the established objectives and guarantee optimal academic results. In this way, students will acquire a comprehensive mastery of a field that is undergoing constant change.







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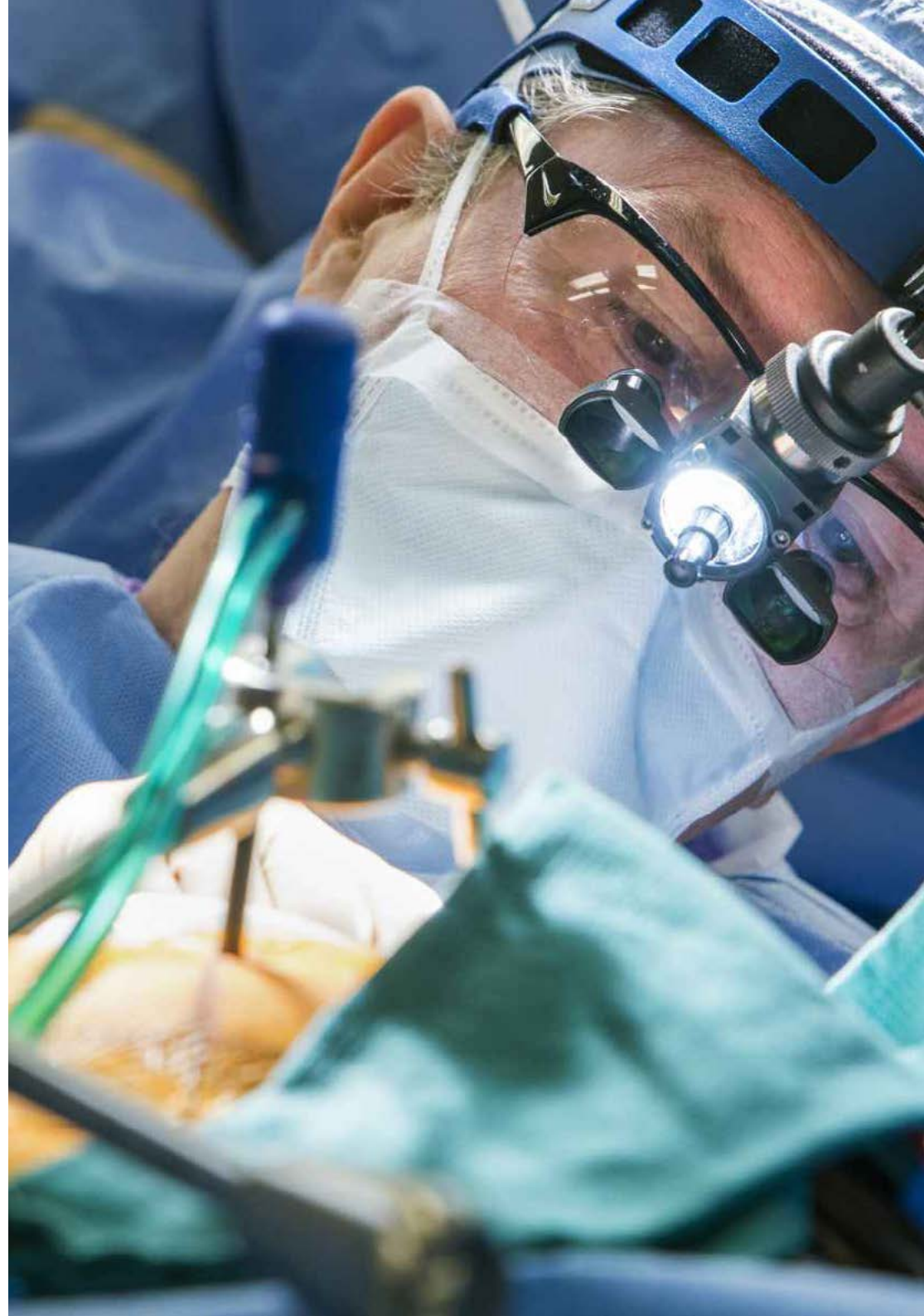
*A unique opportunity to recycle your skills with the latest advances in Comprehensive Care of the Severely Traumatized ICU Patient"*



## General Objectives

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- ♦ Delve into a thorough understanding of the anatomophysiological, pathophysiological, and clinical basis of severe traumatic injuries, as well as associated complications and comorbidities
- ♦ Effectively communicate injury prevention information to different audiences and utilize health promotion strategies
- ♦ Delve into protocols for the prehospital management of specific trauma, such as head, chest, and orthopedic trauma
- ♦ Integrate quality and safety practices in the management of trauma patients, minimizing risks and optimizing outcomes
- ♦ Be aware of the specific nutritional requirements of severe trauma patients and develop appropriate nutrition plans
- ♦ Implement triage protocols in mass trauma situations and prioritize care





## Specific Objectives

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### Module 1. Advanced ICU care

- ♦ Advance the clinical assessment of trauma patients in the ICU, identifying signs of shock, bleeding, and deterioration
- ♦ Manage and care for complex medical devices used in patients with severe traumatic injuries, such as catheters and probes
- ♦ Be up-to-date on the administration of specific medications for pain management, sedation, and shock control in trauma patients
- ♦ Update knowledge for interpretation and utilization of monitoring data, such as vital signs and hemodynamic parameters, to make care decisions
- ♦ Identify and prevent common complications in trauma patients in the ICU, such as infections and pressure ulcers

### Module 2. Radiology, complications and rehabilitation in trauma in the ICU

- ♦ Delve into the interpretation of radiographs, computed tomography and magnetic resonance imaging to identify traumatic injuries
- ♦ Differentiate between acute injuries and pre-existing conditions on radiologic images of trauma patients
- ♦ Describe traumatic injuries in areas such as the musculoskeletal system, internal organs, and soft tissues
- ♦ Delve into the technologies and equipment used in medical imaging and understand how they influence diagnosis
- ♦ Delve into the role of the radiologist and develop skills in communicating radiologic findings to the health care team
- ♦ Delve into radiologic findings to make informed clinical decisions about the management and treatment of trauma patients

### Module 3. Trauma in special situations

- ♦ Understand how traumatic injuries affect special populations such as children, the elderly and pregnant women
- ♦ Manage trauma situations in contexts of natural disasters, mass accidents and armed conflicts
- ♦ Delve into specific protocols and procedures for trauma management in special contexts



*Update your knowledge thanks to TECH! You will be able to keep up-to-date with the latest scientific research in the field of your interest"*

# 03

# Course Management

TECH has brought together renowned specialists in the field of Comprehensive Care of Severe Trauma Patients in ICU, with the purpose of providing the professional with the fundamental knowledge in this sector. Therefore, this Postgraduate Diploma has the support of a highly competent team, with a vast experience in the field, which will provide the graduate with the latest tools to enhance their capabilities. This guarantees their specialization in the international arena, providing a unique opportunity for physicians to achieve success in their careers.







“

*Get qualified by the hand of the most renowned specialists! The teaching team has designed this program of academic excellence"*

## Management



### Dr. Bustamante Munguira, Elena

- ♦ Head of the Intensive Care Medicine Department of the Hospital Clínico de Valladolid
- ♦ Medical Director of the Health Area of Ibiza and Formentera
- ♦ Specialist in Intensive Care Medicine
- ♦ Teacher of refresher courses and workshops
- ♦ Illustrious Official College of Physicians of Salamanca Award
- ♦ Ramón Llul Award of the Patient Safety Unit
- ♦ PhD in Medicine and Surgery
- ♦ Master's Degree in Management
- ♦ Medical and Healthcare Management
- ♦ Master in Patient Safety

## Professors

### Ms. De Pedro Sánchez, María Ángeles

- ♦ Nurse at the Regional Health Management of Valladolid
- ♦ Nurse at the Sagrado Corazón Hospital of Valladolid
- ♦ Nurse at Insalud in Valladolid
- ♦ Teacher of courses of the College of Nursing of Palencia and the Department of Social Welfare of the City of Palencia
- ♦ Collaborating teacher at the University School of Nursing in Valladolid
- ♦ Postgraduate Certificate in Nursing at the University of Valladolid
- ♦ Degree in Nursing from the University of León
- ♦ Master's Degree in Nursing Unit Management by the European University Miguel de Cervantes
- ♦ MBA in Skills Development and Effective Communication from the Asevegue European School of Health Education
- ♦ Nursing Leadership Program. Nightngale Challenge by ISFOS and UNIR
- ♦ Master's Degree in Humanization of Health Care by the European University Miguel de Cervantes

### Ms. Curieses Andrés, Celia

- ♦ Intensive Care Physician at the Hospital Clínico Universitario de Valladolid, Spain
- ♦ Physician at Babcock International Group
- ♦ Physician at Ambuibérica
- ♦ Physician at the Hospital Recoletas Castilla y León
- ♦ Physician at Sanatorio Sagrado Corazón
- ♦ Physician at Valladolid City Hall
- ♦ Teacher at the Training and Employment Foundation of Castilla y León
- ♦ Graduate in Medicine from the University of Valladolid
- ♦ Degree in Chemistry from the University of Valladolid



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

# Structure and Content

This university program covers the diagnosis and treatment of patients with traumatic injuries in the ICU, from advanced care and imaging tests, such as radiography, to personalized attention to special groups within the community. These topics are addressed fully online through a comprehensive Virtual Campus, offering the flexibility to adjust to the individual needs and schedules of each student. In addition, the innovative Relearning methodology, a pioneer in TECH, facilitates the immediate understanding of complex subjects through the repetition of fundamental concepts.





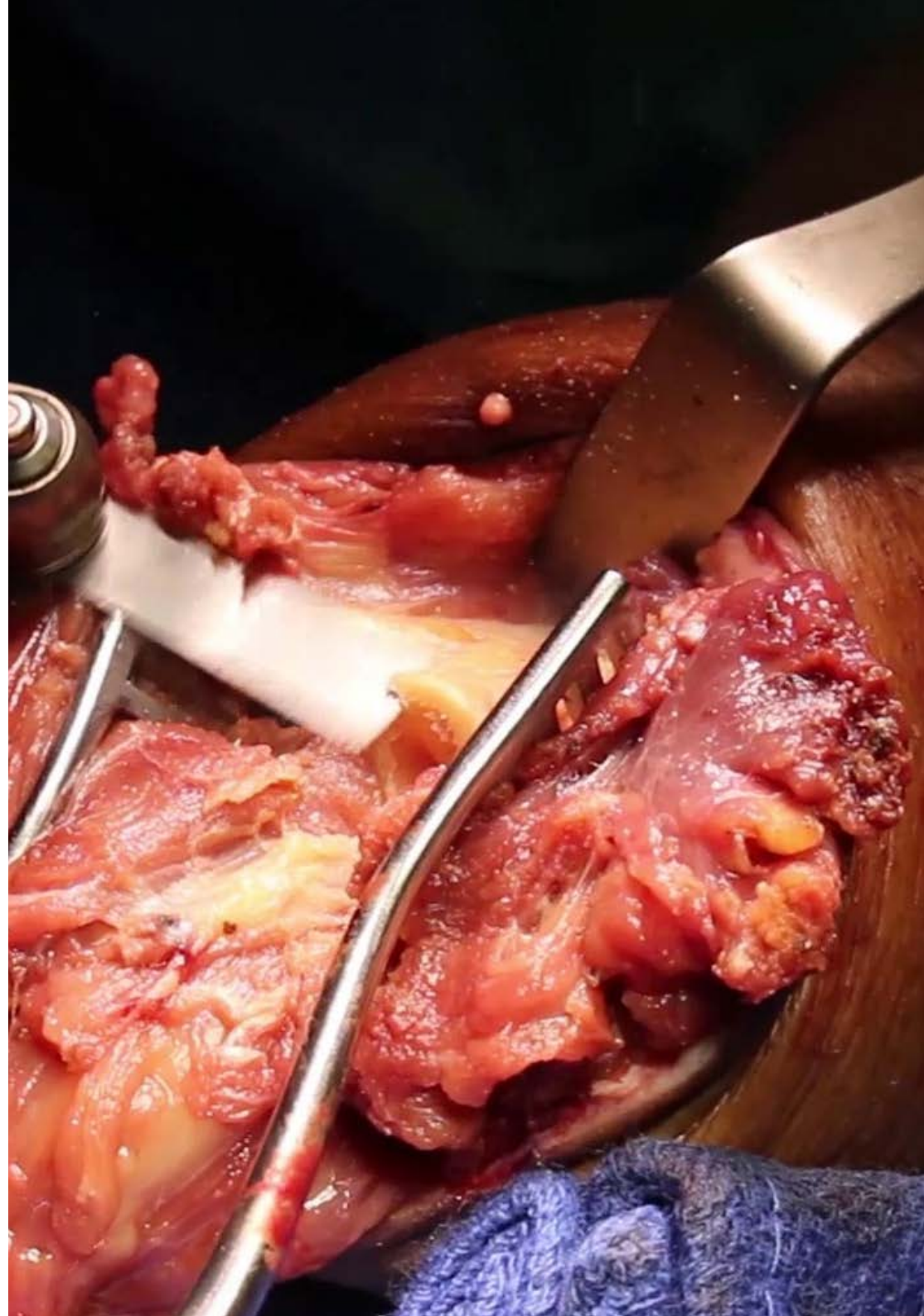


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*You will benefit from a continuously updated program on the most current tools in the field of Intensive Care"*

## Module 1. Advanced ICU care

- 1.1. The role of care in the trauma care team
  - 1.1.1. Caregiving
  - 1.1.2. Out-of-hospital care, a field in its own right
  - 1.1.3. Care nucleus
  - 1.1.4. Research
  - 1.1.5. Teaching
  - 1.1.6. Administration and management
  - 1.1.7. Bioethical Aspects
  - 1.1.8. Legal aspects
  - 1.1.9. Techniques, skills, signs and symptoms in emergency care
- 1.2. Pre-hospital care in severe trauma care
  - 1.2.1. Pre-hospital care
  - 1.2.2. Nursing care in TBI
    - 1.2.2.1. Nursing care in the emergency phase
      - 1.2.2.1.1. Neurologic
      - 1.2.2.1.2. Hemodynamic
      - 1.2.2.1.3. Respiratory
      - 1.2.2.1.4. Renal
    - 1.2.2.2. Nursing care in acute spinal cord trauma
      - 1.2.2.2.1. Hemodynamic complications
      - 1.2.2.2.2. Respiratory Complications
    - 1.2.2.3. Nursing care in thoracic trauma
    - 1.2.2.4. Nursing care in abdominal and pelvic trauma
    - 1.2.2.5. Nursing care in orthopedic trauma



- 1.3. Phases of prehospital care
  - 1.3.1. Pre-hospital care
  - 1.3.2. Scene assessment
    - 1.3.2.1. Approach to the scene of intervention
    - 1.3.2.2. Scene management and handling
    - 1.3.2.3. Triage
    - 1.3.2.4. Management of additional resources
- 1.4. The process of initial care in severe trauma
  - 1.4.1. Review and preparation of the reception area
  - 1.4.2. Activation of the team
  - 1.4.3. Reception of the patient
  - 1.4.4. Patient transfer
- 1.5. Development of actions in the initial assessment
  - 1.5.1. Nurse A: airway
    - 1.5.1.1. Airway and Ventilation
  - 1.5.2. Nurse B: circulation
    - 1.5.2.1. Control of exsanguinating hemorrhages
  - 1.5.3. Assessment of neurological status
- 1.6. Secondary examination
  - 1.6.1. Assessment
  - 1.6.2. Concomitant management in initial care
    - 1.6.2.1. Controlling Temperature
    - 1.6.2.2. Bladder catheterization and oropharyngeal gastric catheterization
    - 1.6.2.3. Analgesia and techniques requiring sedation
    - 1.6.2.4. Tetanus prophylaxis and antibiotherapy
  - 1.6.3. Coordination with the trauma team leader and team for intrahospital transfer after imaging tests or urgent therapeutic actions
  - 1.6.4. Assessment and sterile dressing of traumatic or postoperative wounds
  - 1.6.5. Initiation of pharmacological treatment as appropriate
- 1.7. Systematic review
  - 1.7.1. Reassessment of life-threatening emergency priorities
  - 1.7.2. Record sheet completed and signed
  - 1.7.3. Secondary examination
  - 1.7.4. Continued re-evaluation during the initial hours
    - 1.7.4.1. Vital signs
    - 1.7.4.2. Pupils, level of consciousness, GCS
    - 1.7.4.3. Control of catheters, perfusions, drains and catheters
    - 1.7.4.4. Monitoring: EKG, pulse oximetry, respirator, etc
- 1.8. Family Care
  - 1.8.1. Family
  - 1.8.2. Information division
    - 1.8.2.1. Current Situation
    - 1.8.2.2. Evolution and Prognosis
  - 1.8.3. Accompaniment: Explain operation and schedules
- 1.9. Management of psychic trauma
  - 1.9.1. Psychic trauma
  - 1.9.2. How to understand psychic trauma
  - 1.9.3. Families
  - 1.9.4. How To Act
  - 1.9.5. Attitude in the out-of-hospital and hospital environment
  - 1.9.6. How to communicate
  - 1.9.7. Prevention
- 1.10. Intrahospital Transport
  - 1.10.1. Intrahospital Transport
  - 1.10.2. ABC-SBAR for patient transfer
  - 1.10.3. Intrahospital transfer protocol
    - 1.10.3.1. Transfer checklist
    - 1.10.3.2. Transfer nurse report
    - 1.10.3.3. Documentation

## Module 2. Radiology, complications and rehabilitation in trauma in the ICU

- 2.1. Radiology in ICU
  - 2.1.1. Definition
  - 2.1.2. Structure
  - 2.1.3. Conclusions
- 2.2. Imaging management and protocols in the severely polytraumatized patient
  - 2.2.1. Assessment of clinical criteria
    - 2.2.1.1. Criteria for severity and suspicion of severe trauma
      - 2.2.1.1.1. Vital Signs
      - 2.2.1.1.2. Obvious injuries
      - 2.2.1.1.3. High energy injury mechanism
    - 2.2.1.2. Assessment according to signs and vital signs
      - 2.2.1.2.1. Dynamically stable hemo: Complete CT scan
      - 2.2.1.2.2. Dynamically unstable hemo: Echo-fast
  - 2.2.2. Standard CT Protocol: Patients with severity criteria without signs of shock
    - 2.2.2.1. Cranial CT without contrast
    - 2.2.2.2. Cervical spine CT without contrast
      - 2.2.2.2.1. Bone window
      - 2.2.2.2.2. Soft tissue window
    - 2.2.2.3. Thorax-abdomen-pelvis CT with contrast
      - 2.2.2.3.1. Arterial phase study
      - 2.2.2.3.2. Portal phase study
  - 2.2.3. Shock protocol: Severity criteria and with signs of shock
    - 2.2.3.1. CT without VSD: Chest, abdomen and pelvis
      - 2.2.3.1.1. Arterial and venous phase
      - 2.2.3.1.2. Late phase
  - 2.2.4. Protocol for high suspicion of bladder-urethral injury
    - 2.2.4.1. CT scan without VSD of the abdomen and pelvis
  - 2.2.5. Other situations
    - 2.2.5.1. Suspicion of cervical vessel lesion
    - 2.2.5.2. Clinical suspicion of large complex facial fractures
    - 2.2.5.3. Suspected traumatic rupture of the esophagus
- 2.3. Ultrasound in the initial care of the polytraumatized patient
  - 2.3.1. Ultrasound
  - 2.3.2. What is Echo-fast?
  - 2.3.3. Indications
  - 2.3.4. Information provided and attitude derived according to findings
- 2.4. TBI
  - 2.4.1. TBI
  - 2.4.2. Study Protocol
  - 2.4.3. Systematic search for findings
    - 2.4.3.1. Intra-extraxial hematomas
    - 2.4.3.2. Mass effect exerted by these hematomas: ventricular or sulcus collapse, obstruction of basal cisterns, signs of cerebral herniation
    - 2.4.3.3. Traces of bone fracture, calotte and skull base
    - 2.4.3.4. Fracture traces and alignment of vertebral somas in sagittal plane
- 2.5. Cervical trauma
  - 2.5.1. Cervical trauma
  - 2.5.2. Study Protocol
  - 2.5.3. Systematic search for findings
    - 2.5.3.1. Lesions of large cervical vessels
    - 2.5.3.2. Cervical vertebral fractures, assess signs of instability, assess possible extravasation of associated contrast
- 2.6. Trauma of the dorsolumbar spine
  - 2.6.1. Dorsolumbar spine
  - 2.6.2. Study Protocol
  - 2.6.3. Systematic search for findings
    - 2.6.3.1. Thoracoabdominal great vessels lesions
    - 2.6.3.2. Dorsolumbar vertebral fractures, assess signs of instability, assess for possible extravasation of associated contrast





- 2.7. Thoracic Trauma
  - 2.7.1. Thorax
  - 2.7.2. Study Protocol
  - 2.7.3. Systematic search for findings
    - 2.7.3.1. Injury of great thoracic vessels
    - 2.7.3.2. Hemo or pneumomediastinum
    - 2.7.3.3. Hemo or pneumothorax: Secondary mediastinal deviation
    - 2.7.3.4. Pulmonary laceration, pulmonary contusive foci, airway lesion
    - 2.7.3.5. Single/multiple costal fracture traces
    - 2.7.3.6. Dorsal vertebral fractures, assess if listhesis, signs of instability
- 2.8. Abdominal Trauma
  - 2.8.1. Abdomen
  - 2.8.2. Study Protocol
  - 2.8.3. Systematic search for findings
    - 2.8.3.1. Lesion of great abdominal vessels
    - 2.8.3.2. Hemo or pneumoperitoneum, high/low density free fluid
    - 2.8.3.3. Splenic or hepatic visceral lesion
    - 2.8.3.4. Lumbar vertebral fractures, assess signs of instability, assess possible points of associated contrast extravasation
- 2.9. Pelvic Trauma
  - 2.9.1. Pelvis
  - 2.9.2. Study Protocol
  - 2.9.3. Systematic search for findings
    - 2.9.3.1. Pelvic great vessels lesion
    - 2.9.3.2. Hemo or pneumoperitoneum, high/low density free fluid
    - 2.9.3.3. Renal injury
- 2.10. Endovascular techniques and the hybrid operating room
  - 2.10.1. Operating Theatre
  - 2.10.2. Intervention Techniques
    - 2.10.2.1. Interventionism in pelvic trauma
      - 2.10.2.1.1. Indications

- 2.10.2.2. Interventional procedures in liver trauma
  - 2.10.2.2.1. Indications
- 2.10.2.3. Interventional procedures in splenic and renal trauma
  - 2.10.2.3.1. Indications
- 2.10.2.4. Interventional procedures in thoracic trauma
- 2.10.2.5. Indications
- 2.10.3. What is the hybrid operating room?
- 2.10.4. Present and future of the hybrid OR

### Module 3. Trauma in special situations

- 3.1. Recommendations for child trauma care
  - 3.1.1. Childhood trauma
  - 3.1.2. Types and patterns of injury
  - 3.1.3. Unique characteristics of the pediatric patient
  - 3.1.4. Airway
  - 3.1.5. Breathing
  - 3.1.6. Circulation and Shock
  - 3.1.7. Cardiopulmonary Resuscitation
  - 3.1.8. Thoracic Trauma
  - 3.1.9. Abdominal Trauma
  - 3.1.10. TBI
  - 3.1.11. Spinal cord Injury
  - 3.1.12. Musculoskeletal trauma
  - 3.1.13. Child Abuse
- 3.2. Trauma in the elderly
  - 3.2.1. Trauma in the elderly
  - 3.2.2. Effects of aging and impact of prevalent diseases
  - 3.2.3. Mechanisms of injury
  - 3.2.4. Primary screening and resuscitation
  - 3.2.5. Specific injuries
  - 3.2.6. Specific circumstances
- 3.3. Trauma in the anticoagulated patient
  - 3.3.1. Anticoagulation
  - 3.3.2. Patient with antiplatelet therapy
  - 3.3.3. Patient with warfarin treatment
  - 3.3.4. Patient with heparin treatment
  - 3.3.5. Patient with treatment with low molecular weight heparin
  - 3.3.6. Patient treated with direct thrombin inhibitors (dabigatran etexilate)
  - 3.3.7. Patient treated with rivaroxaban
- 3.4. Trauma During Pregnancy
  - 3.4.1. Pregnancy
  - 3.4.2. Anatomic and physiologic alterations during pregnancy
  - 3.4.3. Anatomic Differences
  - 3.4.4. Mechanisms of injury
  - 3.4.5. Injury severity
  - 3.4.6. Evaluation and Management
  - 3.4.7. Perimortem cesarean section
  - 3.4.8. Domestic violence
- 3.5. Aggressions by external agents
  - 3.5.1. Thermal injuries: Burns
    - 3.5.1.1. Primary check-up and resuscitation of the burned patient
      - 3.5.1.1.1. Stopping the burn process
      - 3.5.1.1.2. Establish airway control
      - 3.5.1.1.3. Ensure adequate ventilation
      - 3.5.1.1.4. Management of circulation with burn shock resuscitation
      - 3.5.1.1.5. Patient Evaluation
      - 3.5.1.1.6. Secondary review:
        - 3.5.1.1.6.1. Documentation
        - 3.5.1.1.6.2. Baseline determinations for the patient with severe burns
        - 3.5.1.1.6.3. Peripheral circulation in circumferential extremity burns
        - 3.5.1.1.6.4. Nasogastric tube placement
        - 3.5.1.1.6.5. Narcotics, analgesia and sedatives
        - 3.5.1.1.6.6. Antibiotics
        - 3.5.1.1.6.7. Tetanus

- 3.5.2. Specific burn injuries
  - 3.5.2.1. Chemical burns
  - 3.5.2.2. Electrical burns
  - 3.5.2.3. Tar burns
- 3.5.3. Cold exposure injuries: Local tissue effects
  - 3.5.3.1. Types of cold injury
    - 3.5.3.1.1. Frostbite injury
    - 3.5.3.1.2. Injury without freezing
    - 3.5.3.1.3. Systemic hypothermia
- 3.6. Hanging trauma
  - 3.6.1. Hanging
  - 3.6.2. Anatomy Recap
  - 3.6.3. Mechanism of injury
  - 3.6.4. Management
  - 3.6.5. Prognostic factors and associated injuries
    - 3.6.5.1. Treatment
    - 3.6.5.2. Surgical Management
    - 3.6.5.3. Treatment by organs
      - 3.6.5.3.1. Airway lesions
      - 3.6.5.3.2. Esophageal Injuries
      - 3.6.5.3.3. Vascular injuries
- 3.7. Injuries due to chemical and biological agents
  - 3.7.1. Chemical Agents
  - 3.7.2. Explosion injuries
  - 3.7.3. Chemical injuries
  - 3.7.4. Chemical illnesses
- 3.8. Disaster response
  - 3.8.1. Handling of mass casualty events
  - 3.8.2. Tools for the effective management of mass casualty events
  - 3.8.3. Management priorities
  - 3.8.4. Challenges
  - 3.8.5. Safety and communication
  - 3.8.6. War wounds (military trauma)
- 3.9. Organization of assistance to multiple victims and catastrophes
  - 3.9.1. Victims
  - 3.9.2. Casualty triage card: approach and preparedness
  - 3.9.3. Patient transport, evacuation
  - 3.9.4. Destination
  - 3.9.5. Transfer
  - 3.9.6. Decontamination
- 3.10. Management of the polytraumatized as a potential organ donor
  - 3.10.1. Polytraumatized Patients
  - 3.10.2. Etiopathogenesis, most frequent causes
  - 3.10.3. Clinical Symptoms
  - 3.10.4. Diagnosis
  - 3.10.5. Treatment
- 3.11. Limitation of effort in trauma
  - 3.11.1. Effort
  - 3.11.2. Definition
  - 3.11.3. Futility and components of futility
  - 3.11.4. Special Situations
    - 3.11.4.1. TBI and catastrophic brain injury
    - 3.11.4.2. Severe traumatic illness in the elderly
    - 3.11.4.3. Cadaveric admission in trauma
  - 3.11.5. Process of evaluation and decision to limit advanced life support based on the "four quadrant" model
  - 3.11.6. Process of withdrawal of life support measures

05

# 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.





# 06 Certificate

The Postgraduate Diploma in Comprehensive Care of the Severe Trauma Patient in the ICU guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.





“

*Successfully complete this program  
and receive your university certification  
without traveling or complex paperwork”*

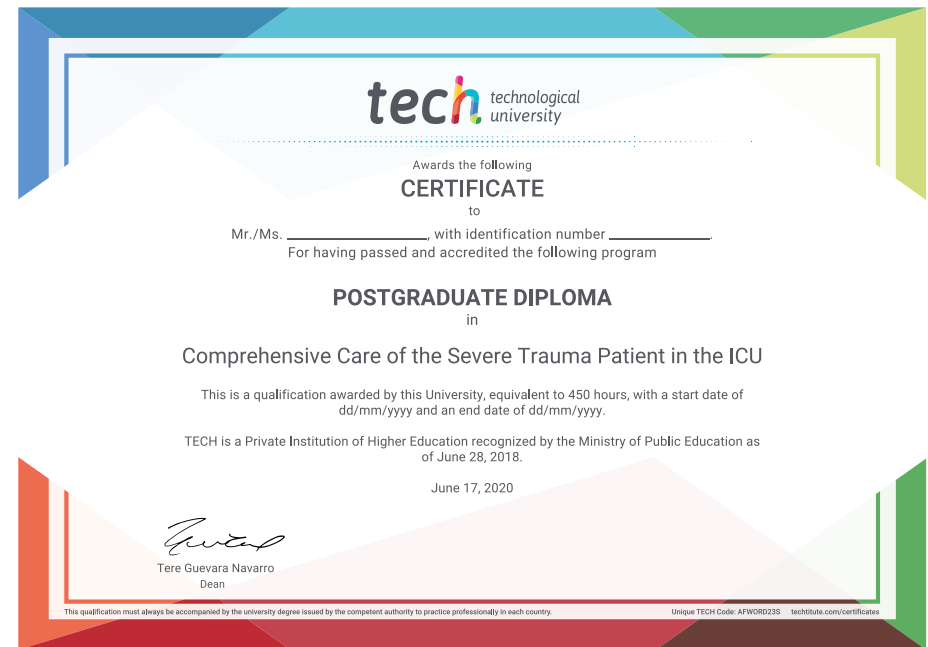
This **Postgraduate Diploma in Comprehensive Care of the Severe Trauma Patient in the ICU** contains the most complete and up-to-date scientific on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Diploma in Comprehensive Care of the Severe Trauma Patient in the ICU**

Official N° of Hours: **450 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.



**Postgraduate Diploma**  
Comprehensive Care  
of the Severe Trauma  
Patient in the ICU

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

# Postgraduate Diploma

Comprehensive Care of the  
Severe Trauma Patient in the ICU