Postgraduate Diploma

Trauma Intensive Care

tech global university

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Postgraduate Diploma

Trauma Intensive Care

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **18 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-trauma-intensive-care

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01

Introduction

The evident evolution in monitoring, diagnostic devices and protocols for the management of trauma patients in the ICU has improved intervention strategies, as well as the approach in complicated clinical situations. Therefore, it is essential for professionals to keep up-to-date in terms of action protocols, the latest diagnostic technology and research in trauma. Traumatology in Intensive Care, this fully online program arises, which provides graduates with an effective update. All this through numerous multimedia materials at the forefront of technology and education, accessible from any electronic device with internet connection.

Enroll now in the best online university in the world according to Forbes! Acquire the skills you need to manage trauma patients in ICU"

The improvements and technological advances in diagnostic technology in the assessment of trauma patients in Intensive Care Units are indisputable. At the same time, significant progress has been made in the field of drugs used, as confirmed by scientific and medical research. A scenario that forces specialists, now more than ever, to keep up-to-date and recycle their skills with new therapeutic strategies.

This Postgraduate Diploma will first address the importance of traumatic injuries from a public health perspective. In this way, students will gain a comprehensive understanding of how traumatic injuries affect society at large and how effective prevention and management strategies can be implemented.

Likewise, they will delve into the comprehensive care of patients with severe traumatic injuries in the ICU. Therefore, the graduate will be up-to-date in advanced evaluation, diagnosis and treatment of complex injuries in different areas, such as cranioencephalic, thoracic and abdominal trauma. In addition, they will acquire the necessary skills to interpret diagnostic test results, make treatment decisions and coordinate multidisciplinary care.

The use of life support therapies, surgical procedures and infection control strategies, as well as effective communication with the medical team and family members, will also be relevant concepts in this program. Likewise, stabilization strategies, hemorrhage control and management of critical situations will be analyzed. The objective is for the professional to acquire advanced competencies to provide comprehensive care in cases of severe trauma, improving results and prognosis.

Thanks to all this, this program will provide the physician with an excellent theoretical basis with which to face real cases. This program is backed by the experience of the best teaching team, and is based on a revolutionary and pioneering method in TECH. This is Relearning, which is based on the repetition of fundamental concepts for a better acquisition of knowledge.

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

- The development of practical cases presented by experts in Trauma Intensive Care
- 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 self-assessment can be used 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

Complete this Postgraduate Diploma at your own pace, without schedules, through any electronic device with internet connection"

Delve into the most advanced imaging techniques to detect traumatic injuries in various areas of the body"

Update your clinical practice in the diagnosis and treatment of the different types of trauma you may encounter in the ICU.

Cover the key concepts of traumatic diseases from a public health point of view.

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.

02

Objectives

The design of this Postgraduate Diploma will allow the graduate to acquire the necessary competencies to keep up-to-date in their profession, delving into the fundamental aspects of Trauma Intensive Care. The knowledge acquired throughout the program will boost the professional's career, providing him/her with the complete and up-to-date preparation to achieve their goals. This university program will foster the development of solid and long-lasting skills in the highly sought-after medical area of traumatology. And always with the guarantee of TECH to get the best academic results.

TECH is your best option to reach your goals and get up to speed on traumatic injuries, both severe and minor"

General Objectives

- 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

It delves into the most current techniques and tools in Traumatology through the most innovative pedagogical contents"

Specific Objectives

Module 1. Traumatic Disease in Public Health

- Apply the concepts of epidemiology to analyze the incidence, prevalence and patterns of traumatic injuries in the population
- Evaluate the impact of traumatic injuries on public health, considering economic, social and quality of life factors
- Analyze injury prevention programs, considering vulnerable populations and intervention strategies
- Delve into the role of health policy in the prevention and management of traumatic injuries, considering relevant regulations and legislation
- Interpret epidemiological data and assess traumatic injury trends, identifying areas of focus for effective interventions
- Plan public health responses to mass trauma situations, considering resource coordination and crisis management
- Evaluate the effectiveness of public health interventions in preventing traumatic injuries and adjust strategies according to the findings

Module 2. Management of Severe Trauma in ICU

- Evaluate advanced clinics to determine the severity and extent of traumatic injuries in critically ill patients
- Be up-to-date on the interpretation of diagnostic test results, such as medical imaging and laboratory tests, to identify injuries and complications
- Increase informed decision making about the most appropriate medical and surgical treatment for each trauma patient
- Master advanced strategies for managing shock and controlling bleeding in patients with severe traumatic injuries
- Perform advanced surgical procedures, such as damage control surgeries and tissue repair procedures
- Utilize advanced life support therapies, including mechanical ventilation and use of vasoactive medications
- Identify and manage common complications in trauma patients and develop long-term care plans

Module 3. Management of mild trauma in ICU

- Update knowledge of advanced clinical evaluations of patients with severe traumatic injuries in intensive care units
- Interpret diagnostic tests and clinical findings to identify and assess the extent of traumatic injuries
- Be up-to-date on techniques to control bleeding and prevent excessive blood loss in trauma patients
- Learn about the medical and surgical management of specific trauma, such as head and thoracic injuries
- Be aware of advanced medical technologies and life-sustaining therapies in the ICU for severe trauma patients
- Evaluate ethical and legal situations related to trauma management and make informed decisions

03

Course Management

In its commitment to provide high quality education, TECH bets on renowned specialists, in order to provide students with a comprehensive knowledge in the field of Trauma Intensive Care. That is why this Postgraduate Diploma has a highly qualified teaching team with extensive experience in the sector. They will offer the graduate the most effective tools for the full development of their skills throughout the program. In this way, international specialization is closer than ever for the student, opening the doors to success in their professional career and ensuring new job opportunities.

Learn from the best experts! TECH's teaching team includes doctors with extensive professional experience"

International Guest Director

Doctor George S. Dyer is an eminent orthopedic surgeon, specializing in Upper Limb Traumatology and Complex Post Traumatic Reconstructions of the Shoulder, Elbow, Wrist and Hand. In fact, he has served as an Upper Limb Surgeon at Brigham and Women's Hospital in Boston, where he has also held the prestigious Barry P. Simmons Chair in Orthopedic Surgery.

Therefore, one of his most significant contributions has been his work in Haiti, where he has had a lasting impact. After the devastating earthquake of 2010, he was one of the first surgeons to arrive in the country, providing assistance at a critical time. In doing so, he has worked closely with local surgeons and other health professionals to strengthen Haiti's capacity to manage medical emergencies. As such, his efforts have been instrumental in training a new generation of Haitian orthopedic surgeons, who demonstrated their skill and preparedness during the 2021 earthquake, handling the situation with great efficiency and professionalism.

Likewise, during his time as Director of the Harvard Combined Orthopedic Residency Program, he has strived to improve the working and educational conditions of the residents, fostering a more balanced and healthy work environment. This focus on resident well-being reflects his commitment to preparing future physicians and his concern for the mental and professional health of his colleagues.

As such, Doctor George S. Dyer's impact on his field has been recognized through various honors, such as the Humanitarian Award given by the Hippocrates Society at Brigham and Women's Hospital, as well as being named a Top Doctor in Massachusetts. These awards have underscored his influence and significant contribution to global Orthopedic Surgery, reflecting his dedication and commitment to all aspects of his career.

Dr. Dyer, George S.

- Upper Limb Surgeon at Brigham and Women's Hospital, Boston, United States
- Barry P. Simmons Chair in Orthopedic Surgery at Brigham and Women's Hospital, Boston, United States
- Commandant Surgeon in the Medical Corps of the U.S. Navy
- Director of the Harvard Combined Orthopedic Residency Residency Program
- Fellowship in Upper Limb Fellowship at Brigham and Women's Hospital and Children's Hospital
- Doctor of Medicine from Harvard Medical School
- B.A. in Political Science and Government from Harvard University
- Humanitarian Award from the Hippocratic Society of Brigham and Women's Hospital
- Massachusetts Top Doctor

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

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

Dr. Velasco García, Álvaro

- Intensive Care Physician at the Hospital Clínico Universitario de Valladolid
- Graduate in Medicine from the University of Valladolid
- Professional Master's Degree in Integration of medical knowledge and its application to the resolution of clinical problems Universidad Católica San Antonio de Murcia

Dr. Artola Blanco, Mercedes

- Intensive Care Physician at Hospital Clínico Universitario de Valladolid
- Collaborator of the Working Group SINDROME POST-ICU, attached to the Hospital Commission of Humanization of Health Care of the Clinical Hospital of Valladolid
- Degree in Medicine from the University of Cantabria
- Master in Updating in Intensive Care Medicine by the CEU-Cardenal Herrera University
- Member of the Castilian-Leonese Society of Intensive Care Medicine, Critical Care and Coronary Units (SCLMICYUC) and the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units (SEMICYUC)

Dr. Portugal Rodríguez, Esther

- Medical Specialist in Intensive Care Medicine at the Hospital Clínico Universitario
- Specialist in Intensive Care Medicine at the Lucus Augusti Hospital
- Specialist in Intensive Care Medicine at the Hospital Recoletas in Campo Grande
- Specialist in Intensive Care Medicine, Critical Care and Coronary Units at the
- Instructor in Clinical Simulation in Intensive Care Medicine at the Spanish Society of Intensive Care Medicine and Coronary Units (SEMICYUC)
- Degree in Medicine from the University of Valladolid
- Master's Degree in Clinical Nutrition from the University of Granada University

Dr. Aguado Hernández, Héctor José

- Medical specialist at the Hospital Clínico Universitario de Valladolid
- Specialist Physician at the Río Hortega University Hospital
- Attending physician at the Hospital San Juan de Dios del Aljarafe in Seville
- Attending Physician at the Hospital Príncipe de Asturias de Alcalá de Henares
- Medical specialist at the Hospital Ramón Y Cajal
- PhD in Medicine and Surgery from the University of Valladolid
- SACYL Grant 2022, PIPPAS study
- AO Trauma 2020 Fellowship, PIPPAS study
- Rotation in the Vascular Surgery Service at Kaplan Hospital in Rehovot
- Rotation in the Cardiovascular Surgery Service at Mount Sinai Hospital in New York
- Rotation at the Trauma Emergency Unit of the Centre de Traumatologie et d'Orthopedie de Strasbourg

04

Structure and Content

The content of this program has been elaborated considering the specific requirements of the subject to be studied, in this case, Traumatology applied in ICU. In this way, a syllabus has been configured covering various modules to provide a comprehensive overview of this field from a global perspective, with the aim of its international application, covering the from diagnosis to treatment of patients with trauma injuries, both severe and mild. From the first module, students will broaden their skills and keep their professional profile up-to-date, with the support of a team of specialists.

High quality content that you can benefit from with just one click. Bet on TECH and enroll now!"

Module 1. Traumatic Disease in Public Health

1.1. Epidemiology of traffic accidents
- 1.1.1. Traffic Accidents
- 1.1.2. Definition
- 1.1.3. Importance
- 1.1.4. Epidemiology
- 1.1.5. Prevention

1.2. Influence of the consumption of medicines, alcohol, drugs and certain pathologies on driving
- 1.2.1. Drug and alcohol use
- 1.2.2. Influence of drug use on driving
- 1.2.3. Action of health professionals when prescribing medication to the driving patient
- 1.2.4. Action to be taken by driver-patients
- 1.2.5. Alcohol and driving
  - 1.2.5.1. Legal regulations on alcohol and driving
  - 1.2.5.2. Pharmacokinetics of alcohol and factors determining its concentration in blood
  - 1.2.5.3. Effects of alcohol on driving
- 1.2.6. Illegal drugs and driving
  - 1.2.6.1. Types of drugs and their effects on driving

1.3. Biomechanics of Accidents
- 1.3.1. Accidents
- 1.3.2. Historical Aspects
- 1.3.3. Fases de la colisión
- 1.3.4. Principles of biomechanics
- 1.3.5. Biomechanics of injuries according to anatomical area and type of accident
  - 1.3.5.1. Automobile accidents
  - 1.3.5.2. Motorcycle, moped and bicycle accidents
  - 1.3.5.3. Truck and bus accidents

1.4. Organization of care in severe traumatic pathology
- 1.4.1. Configuration of the trauma team
- 1.4.2. Characteristics of a successful team
- 1.4.3. Roles and responsibilities of the team leader
  - 1.4.3.1. Team perception
  - 1.4.3.2. Receiving the report
  - 1.4.3.3. Team management and reaction to information
  - 1.4.3.4. Team feedback
  - 1.4.3.5. Communication with the patient's family
- 1.4.4. Effective leadership
  - 1.4.4.1. Qualities and behavior of an effective team leader
  - 1.4.4.2. Culture and climate
- 1.4.5. Roles and responsibilities of team members
  - 1.4.5.1. Team members
  - 1.4.5.2. Responsibility of the members
    - 1.4.5.2.1. Prepare for the patient
    - 1.4.5.2.2. Receive report
    - 1.4.5.2.3. Assess and manage the patient
    - 1.4.5.2.4. Participate in feedback

1.5. Severity indexes in trauma
- 1.5.1. Valuation indexes
- 1.5.2. Glasgow Scale
- 1.5.3. Abbreviated injury scale
- 1.5.4. Injury severity assessment
- 1.5.5. Characterization of the severity of the traumatized patient

1.6. Records, severity and avoidable mortality scales
- 1.6.1. Scales
- 1.6.2. Physiological scales
  - 1.6.2.1. Glasgow
  - 1.6.2.2. Revised trauma score (RTS)
  - 1.6.2.3. Pediatric trauma score or pediatric trauma index (ITP)
- 1.6.3. Anatomical scales
  - 1.6.3.1. Abbreviated injury sclae (AIS)
  - 1.6.3.2. Injury severity score (ISS)
  - 1.6.3.3. New Injury severity score (NISS)
  - 1.6.3.4. Organ injury scales (OIS)
  - 1.6.3.5. Penetrating abdominal trauma index (PATI)

1.6.4. Combined scales
1.6.4.1. TRISS scale or model
1.6.4.2. International Classification of Diseases Injury Severity Score (ICISS)
1.6.4.3. Trauma Mortality Predition Model (TMPM)
1.6.4.4. Trauma Risk Adjustment Model (TRAM)
1.6.4.5. Sequential Trauma Score (STS)
1.6.5. Avoidable mortality and errors in trauma
1.7. Quality and safety in trauma care?
1.7.1. Quality and Safety
1.7.2. Definition of concepts, quality and safety
1.7.3. Ensuring effective team communication
1.7.4. Record keeping, protocols, checklists, etc
1.7.5. Risk Management
1.7.6. Conflict Management
1.8. Simulation-based trauma team training
1.8.1. Team building
1.8.2. Simulation-based training concepts
1.8.3. Development of a FEBS (Simulation Based Team Building) program
1.8.3.1. Comprehensive needs analysis
1.8.3.2. Simulation design: Event-based team building
1.8.3.2.1. Selection of competencies
1.8.3.2.2. Training Objectives
1.8.3.2.3. Clinical context
1.8.3.2.4. Development of the scenario
1.8.3.2.5. Expected responses
1.8.3.2.6. Measurement Tools
1.8.3.2.7. Scenario script
1.8.3.3. Debriefing
1.8.3.3.1. Debriefing
1.8.3.3.2. Briefing-prebriefing
1.8.3.3.3. Objectives
1.8.3.3.4. Conventional techniques and support for debriefing
1.8.3.3.5. Evaluation Systems
1.9. Bibliographic resources
1.9.1. New paths for training
1.9.1.1. Use of innovative teaching resources
1.9.1.1.1. Learning based on clinical cases
1.9.1.1.2. Inverted classroom model
1.9.1.1.3. Clinical simulation
1.9.1.1.4. Gamification
1.9.1.1.5. Clinical discussions
1.9.1.2. Adaptation to the current cognitive model
1.10. Trauma-related social networks
1.10.1. Use of new digital resources for training
1.10.1.1. FODMed and social networks
1.10.1.2. Twitter as an educational tool
1.10.2. Impact of digital transformation on research
1.10.2.1. Dissemination in social networks
1.10.2.2. Big Data
1.10.3. Impact of social networks on healthcare
1.10.3.1. Introduction
1.10.3.2. Use of social networks by health care professionals and organizations
1.10.3.3. Use of social networks and digital media by patients and their environment
1.10.3.4. Impact on the user
1.10.3.5. Impact on the relationship with health professionals
1.10.4. Good practices in social networks

Module 2. Management of Severe Trauma in ICU

2.1. Severe trauma
- 2.1.1. Severe trauma
- 2.1.2. Indications
- 2.1.3. Conclusions

2.2. Mechanism of injury and suspicious lesion patterns
- 2.2.1. Mechanism of injury
- 2.2.2. Frontal impact (vehicular collision)
  - 2.2.2.1. Cervical spine fracture
  - 2.2.2.2. Unstable anterior thorax
  - 2.2.2.3. Cardiac contusion
  - 2.2.2.4. Pneumothorax
  - 2.2.2.5. Traumatic rupture of the aorta
  - 2.2.2.6. Splenic or hepatic laceration
  - 2.2.2.7. Fracture, posterior dislocation of the knee and/or hip
  - 2.2.2.8. TBI
  - 2.2.2.9. Facial Fractures
- 2.2.3. Lateral impact (vehicular collision)
  - 2.2.3.1. Contralateral cervical sprain
  - 2.2.3.2. TBI
  - 2.2.3.3. Cervical spine fracture
  - 2.2.3.4. Lateral unstable thorax
  - 2.2.3.5. Pneumothorax
  - 2.2.3.6. Traumatic rupture of the aorta
  - 2.2.3.7. Diaphragmatic rupture
  - 2.2.3.8. Splenic/hepatic and/or renal laceration depending on the side of the impact
- 2.2.4. Rear impact (vehicular collision)
  - 2.2.4.1. Cervical spine injury
  - 2.2.4.2. TBI
  - 2.2.4.3. Cervical soft tissue injury
- 2.2.5. Vehicle ejection
  - 2.2.5.1. Ejection, prevents true prediction of injury patterns, higher risk patient
- 2.2.6. Vehicle impacts pedestrian
  - 2.2.6.1. TBI
  - 2.2.6.2. Traumatic rupture of the aorta
  - 2.2.6.3. Visceral abdominal injuries
  - 2.2.6.4. Fractures of lower extremities
- 2.2.7. Fall from height
  - 2.2.7.1. TBI
  - 2.2.7.2. Axial spine trauma
  - 2.2.7.3. Visceral abdominal injuries
  - 2.2.7.4. Fracture of the pelvis or acetabulum
  - 2.2.7.5. Bilateral fracture of lower extremities (including calcaneal fracture)
- 2.2.8. Stab wound
  - 2.2.8.1. Anterior thorax
    - 2.2.8.1.1. Cardiac Tamponade
    - 2.2.8.1.2. Hemothorax
    - 2.2.8.1.3. Pneumothorax
    - 2.2.8.1.4. Hemopneumothorax
  - 2.2.8.2. Left thoracoabdominal
    - 2.2.8.2.1. Injury of the left diaphragm, injury of the spleen, hemothorax
    - 2.2.8.2.2. Abdomen, possible abdominal visceral injury if peritoneal penetration
- 2.2.9. Wounded by firearm
  - 2.2.9.1. Trunk
    - 2.2.9.1.1. High probability of injury
    - 2.2.9.1.2. Retained projectiles help predict injury
  - 2.2.9.2. Extremity
    - 2.2.9.2.1. Neurovascular injury
    - 2.2.9.2.2. Fractures
    - 2.2.9.2.3. Compartment Syndrome
- 2.2.10. Thermal burns
  - 2.2.10.1. Circumferential eschar on extremity or thorax
  - 2.2.10.2. Occult trauma (mechanism of burn/means of escape)

2.2.11. Electrical burns
2.2.11.1. Cardiac arrhythmia
2.2.11.2. Myonecrosis / Compartment syndrome
2.2.12. Inhalation burns
2.2.12.1. Carbon Monoxide Poisoning
2.2.12.2. Airway edema
2.2.12.3. Pulmonary Edema

2.3. Importance of triage
2.3.1. Triage
2.3.2. Definition
2.3.3. Relevance

2.4. Resource mobilization
2.4.1. Resources
2.4.2. Configuration of the trauma team
2.4.3. Receiving the report
2.4.3.1. Mechanisms
2.4.3.2. Lesions
2.4.3.3. Signs
2.4.3.4. Treatment and travel
2.4.4. Direct the team and reacting to information: Assess and manage the patient
2.4.4.1. Airway control and cervical spine motion restriction
2.4.4.2. Breathing with ventilation
2.4.4.3. Circulation with hemorrhage control
2.4.4.4. Neurological Deficit
2.4.4.5. Exposure and environment
2.4.4.6. Record keeping

2.5. Dual Response Trauma Care
2.5.1. Triage as severe trauma. Definition
2.5.2. Triage as potentially severe trauma. Definition
2.5.3. Dual Response Trauma Care Teams
2.5.3.1. High level response
2.5.3.2. Low-level response
2.5.4. Dual-response attention management algorithm

2.6. Treatment of the potentially critically ill patient
- 2.6.1. Severe patient
- 2.6.2. Criteria for potentially severe patient
  - 2.6.2.1. Physiological criteria
  - 2.6.2.2. Anatomical criteria
  - 2.6.2.3. Injury mechanism
  - 2.6.2.4. Circumstances to take into account

2.7. Complementary tests in the screening for occult lesions
- 2.7.1. Tests
- 2.7.2. Initial Assessment
  - 2.7.2.1. Airway
  - 2.7.2.2. Ventilation
  - 2.7.2.3. Circulation
  - 2.7.2.4. Neurology
  - 2.7.2.5. Exhibition
- 2.7.3. Second Evaluation
  - 2.7.3.1. Head and face
  - 2.7.3.2. Neck
  - 2.7.3.3. Thorax
  - 2.7.3.4. Abdomen
  - 2.7.3.5. Perineum
  - 2.7.3.6. Back
  - 2.7.3.7. Extremities
- 2.7.4. Nexus/CRR criteria for cervical injury screening
- 2.7.5. Duty criteria for cervical vascular lesion screening

2.8. Laboratory Data
- 2.8.1. Laboratory
- 2.8.2. Request for Tests
- 2.8.3. Systematic review

2.9. Imaging Techniques
- 2.9.1. Image
- 2.9.2. TBI
- 2.9.3. Cervical Trauma and detection of cervical vascular injury
- 2.9.4. Thoracic Trauma
- 2.9.5. Dorsolumbar Spinal Trauma
- 2.9.6. Genitourinary Trauma
- 2.9.7. Pelvic and Orthopedic Trauma

2.10. Registration and transfer
- 2.10.1. Referring physician
- 2.10.2. ABC-SBAR for trauma patient transfer
- 2.10.3. Receiving Physician
- 2.10.4. Transfer protocol
  - 2.10.4.1. Referring physician information
  - 2.10.4.2. Information for transfer personnel
  - 2.10.4.3. Documentation
  - 2.10.4.4. Data for relocation

Module 3. Management of mild trauma in ICU

3.1. Mild TBI
- 3.1.1. TBI
- 3.1.2. Anatomical review
- 3.1.3. Physiological review
- 3.1.4. TBI Classification
- 3.1.5. Medical treatment of traumatic brain injuries

3.2. Severe TBI
- 3.2.1. Management of severe TBI
- 3.2.2. ICP monitoring
- 3.2.3. PIC Treatment
- 3.2.4. Severe hyperventilation
- 3.2.5. Decompressive techniques
- 3.2.6. Barbiturate coma
- 3.2.7. Hypothermia and anticonvulsants

3.3. Facial Trauma
- 3.3.1. Classification
- 3.3.2. Diagnosis
- 3.3.3. Treatment

3.4. Thoracic Trauma
- 3.4.1. Thorax
- 3.4.2. Anatomic and physiologic memory of the Thorax
- 3.4.3. Classification of thoracic traumas
- 3.4.4. Initial evaluation of thoracic trauma
- 3.4.5. Initial treatment of thoracic trauma
  - 3.4.5.1. Injuries with imminent risk of death
    - 3.4.5.1.1. Airway obstruction
    - 3.4.5.1.2. Tension pneumothorax
    - 3.4.5.1.3. Open pneumothorax
    - 3.4.5.1.4. Massive hemothorax
    - 3.4.5.1.5. Costal volet, unstable thorax
    - 3.4.5.1.6. Cardiac Tamponade
    - 3.4.5.1.7. Severe lesion of great vessels of the mediastinum
  - 3.4.5.2. Injuries with low risk of death
    - 3.4.5.2.1. Rib fractures
    - 3.4.5.2.2. Fractures of the clavicle, sternum and scapula

3.5. Abdominal Trauma. Damage control surgeryDamage control surgeries
- 3.5.1. Ultrasound
- 3.5.2. Anatomy of the abdomen
- 3.5.3. Mechanism of injury
  - 3.5.3.1. Blunt trauma
  - 3.5.3.2. Penetrating trauma
  - 3.5.3.3. Blast trauma
- 3.5.4. Evaluation and Management
  - 3.5.4.1. Physical Examination
    - 3.5.4.1.1. Inspection
    - 3.5.4.1.2. Pelvic evaluation
    - 3.5.4.1.3. Urethral and perineal examination
- 3.5.5. Diagnosis, complementary tests in the examination
  - 3.5.5.1. Peritoneal lavage puncture
  - 3.5.5.2. Ultrasound
  - 3.5.5.3. Radiography
  - 3.5.5.4. CAT SCAN
  - 3.5.5.5. Diagnostic laparoscopy
- 3.5.6. Damage control surgery
  - 3.5.6.1. Indications
  - 3.5.6.2. Phases of damage control surgery

3.6. Pelvic trauma
- 3.6.1. Pelvis
- 3.6.2. Anatomical Review
- 3.6.3. Evaluation and Management
  - 3.6.3.1. Urethral, perineal, rectal, vaginal and buttocks examination
- 3.6.4. Complementary Diagnostic Tests
  - 3.6.4.1. Simple radiology
  - 3.6.4.2. CAT SCAN

3.7. Orthopedic trauma
- 3.7.1. Orthopedics
- 3.7.2. Primary review and resuscitation of patients with potentially life-threatening extremity injuries
  - 3.7.2.1. Severe arterial hemorrhage and traumatic amputation
  - 3.7.2.2. Bilateral femur fracture
  - 3.7.2.3. Crush syndrome, catastrophic limb or complex limb injury
- 3.7.3. Secondary revision, limb-threatening injuries
  - 3.7.3.1. History
  - 3.7.3.2. Physical Examination
  - 3.7.3.3. Open fractures and joint injuries
  - 3.7.3.4. Vascular injuries
  - 3.7.3.5. Compartment Syndrome
  - 3.7.3.6. Neurological lesion secondary to fracture or dislocation

3.7.4. Other Lesions
- 3.7.4.1. Contusions and lacerations
- 3.7.4.2. Joint and ligament injuries
- 3.7.4.3. Fractures

3.7.5. Principles of Immobilization
- 3.7.5.1. Introduction and Indications
- 3.7.5.2. Femur Fracture
- 3.7.5.3. Knee injuries
- 3.7.5.4. Tibia fracture
- 3.7.5.5. Ankle Fracture
- 3.7.5.6. Injuries of upper extremity and hand

3.7.6. Rehabilitation
- 3.7.6.1. Introduction and justification of rehabilitation in the ICU
- 3.7.6.2. Training of the Teaching Staff
- 3.7.6.3. Rehabilitation therapies
  - 3.7.6.3.1. General care guidelines
    - 3.7.6.3.1.1. Nursing: general care
    - 3.7.6.3.1.2. Orthotic corrections
  - 3.7.6.3.2. Rehabilitative treatment
    - 3.7.6.3.2.1. Immobility syndrome
      - 3.7.6.3.2.1.1. Level 0
      - 3.7.6.3.2.1.2. Level 1
      - 3.7.6.3.2.1.3. Level 2
      - 3.7.6.3.2.1.4. Level 3
      - 3.7.6.3.2.1.5. Level 4
      - 3.7.6.3.2.1.6. Electrotherapy
    - 3.7.6.3.2.2. Respiratory techniques
      - 3.7.6.3.2.2.1. Secretion Drainage
      - 3.7.6.3.2.2.2. Ventilatory Techniques
      - 3.7.6.3.2.2.3. Occupational Therapy

3.8. Vertebro-spinal cord trauma
- 3.8.1. Vertebro-spinal cord
- 3.8.2. Anatomy Recap
- 3.8.3. Injury mechanism
- 3.8.4. Evaluation of the spinal cord injury
  - 3.8.4.1. Neurological evaluation of the spinal cord injured person
  - 3.8.4.2. Rectal Examination
- 3.8.5. Management of the spinal cord injury

3.9. Vertebro-spinal cord trauma
- 3.9.1. Classification of spinal cord injury
- 3.9.2. Treatment
- 3.9.3. Complications in spinal cord injury
- 3.9.4. Treatment of skin alterations
- 3.9.5. Prevention and treatment of joint contractures
- 3.9.6. Treatment of spasticity
- 3.9.7. Treatment of gastrointestinal disturbances
- 3.9.8. Treatment of genitourinary disorders
- 3.9.9. Sexuality and fertility
- 3.9.10. Occupational therapy and physiotherapy
- 3.9.11. Psychology
- 3.9.12. Functional outcomes

3.10. Penetrating trauma
- 3.10.1. Penetrating trauma
- 3.10.2. Definition
- 3.10.3. Evaluation of specific penetrating injuries
  - 3.10.3.1. Introduction
  - 3.10.3.2. Thoracoabdominal injuries
  - 3.10.3.3. Anterior abdominal wounds, non-surgical management
  - 3.10.3.4. Flank and dorsal injuries, non-surgical management
  - 3.10.3.5. Evaluation of other specific injuries
    - 3.10.3.5.1. Diaphragmatic lesions
    - 3.10.3.5.2. Duodenal lesions
    - 3.10.3.5.3. Pancreatic lesion
    - 3.10.3.5.4. Urogenital lesions
    - 3.10.3.5.5. Hollow viscera lesions
    - 3.10.3.5.6. Solid organ injuries
- 3.10.4. Management and Treatments

The best program, designed by the most qualified experts. Don't hesitate and enroll in this Postgraduate Diploma!"

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

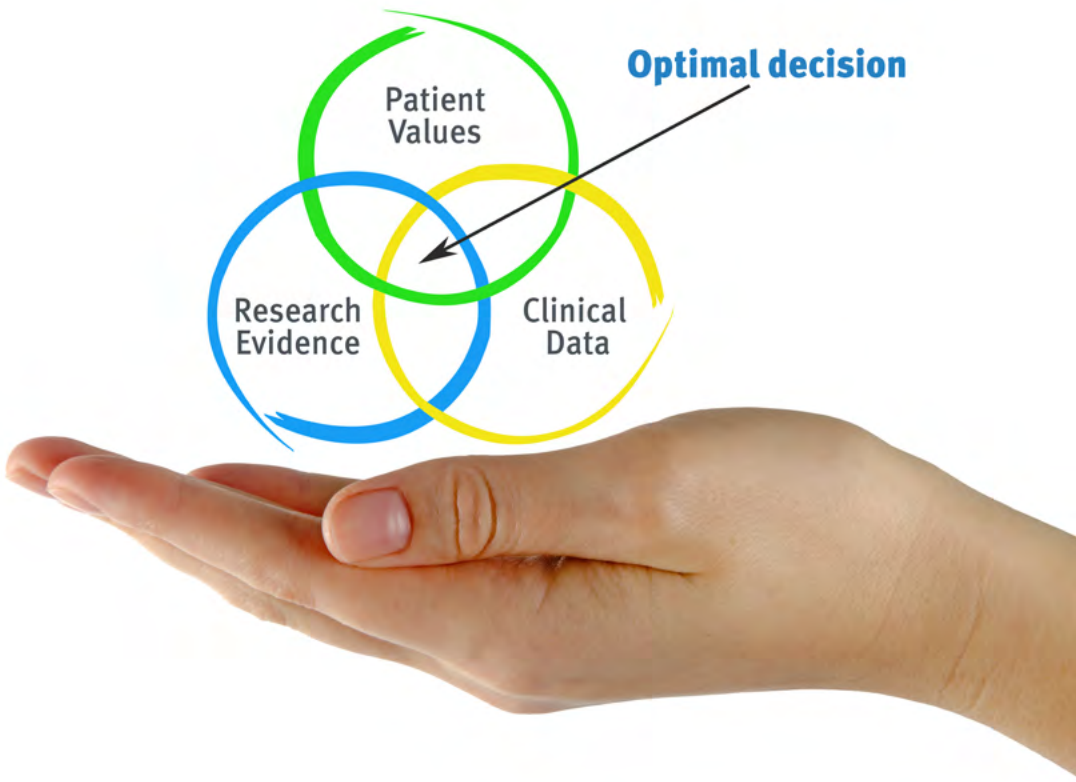
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

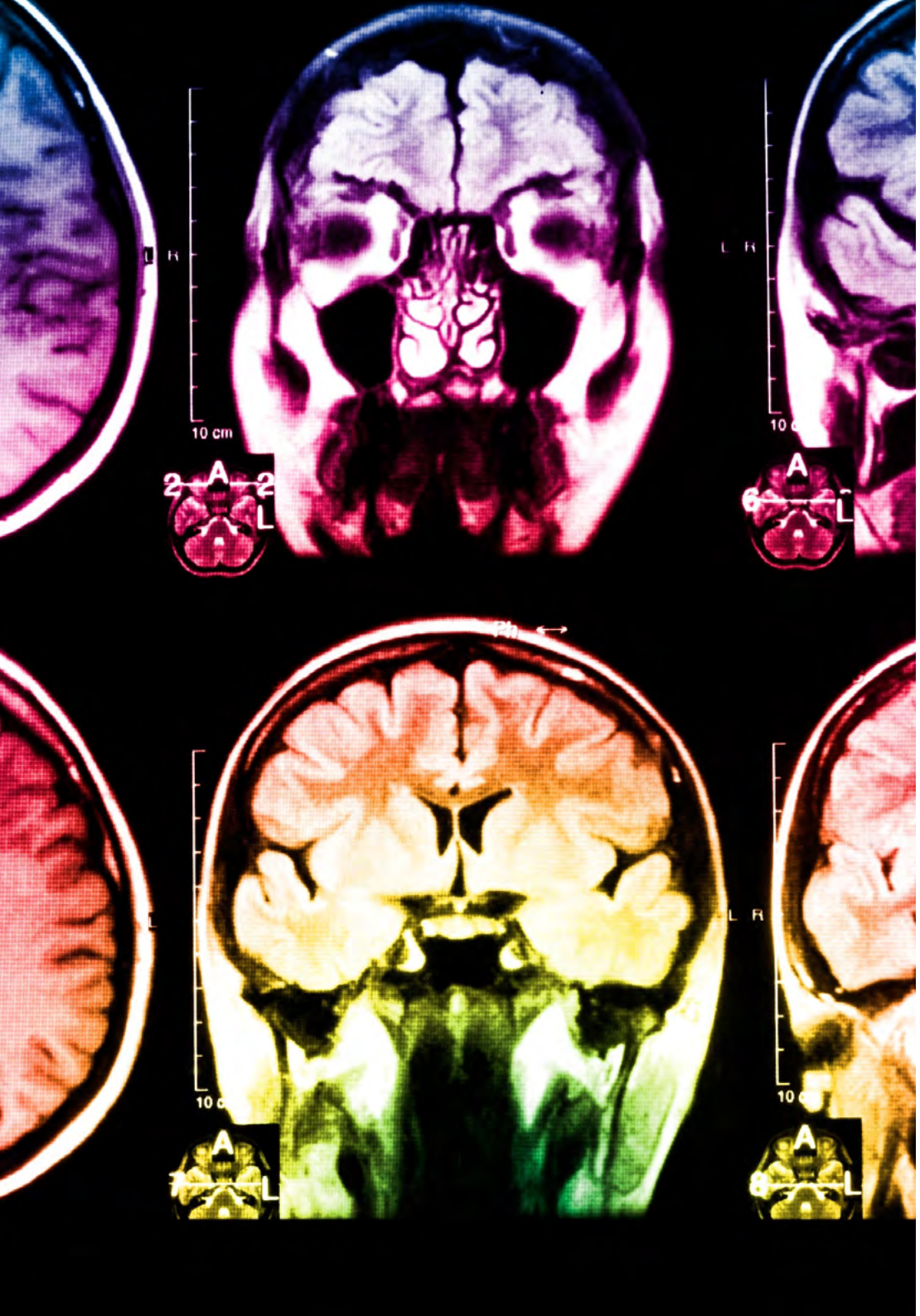
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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.

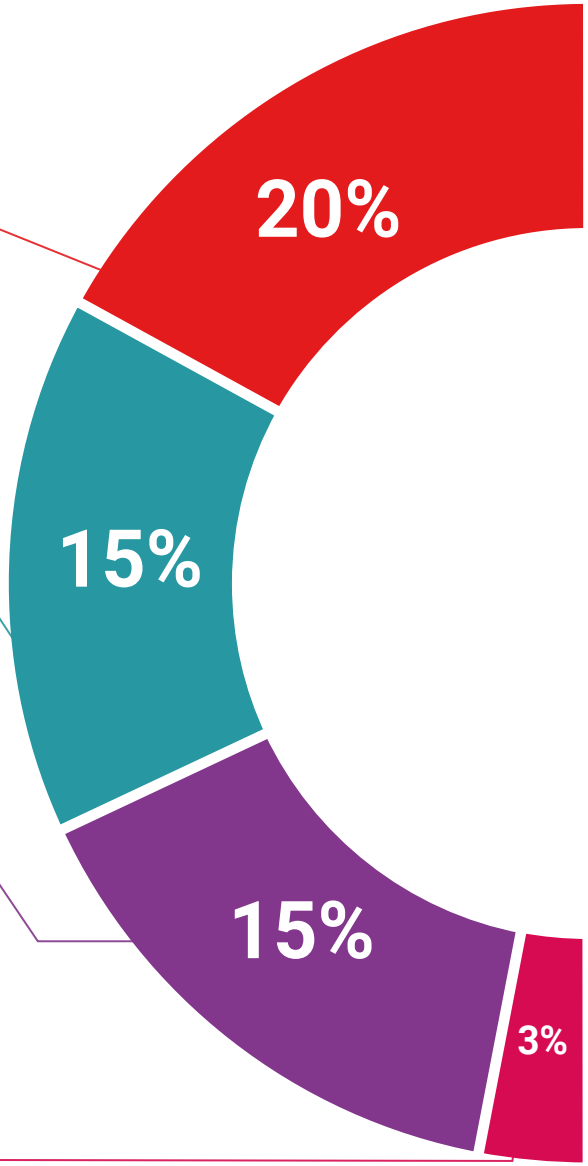
Interactive Summaries

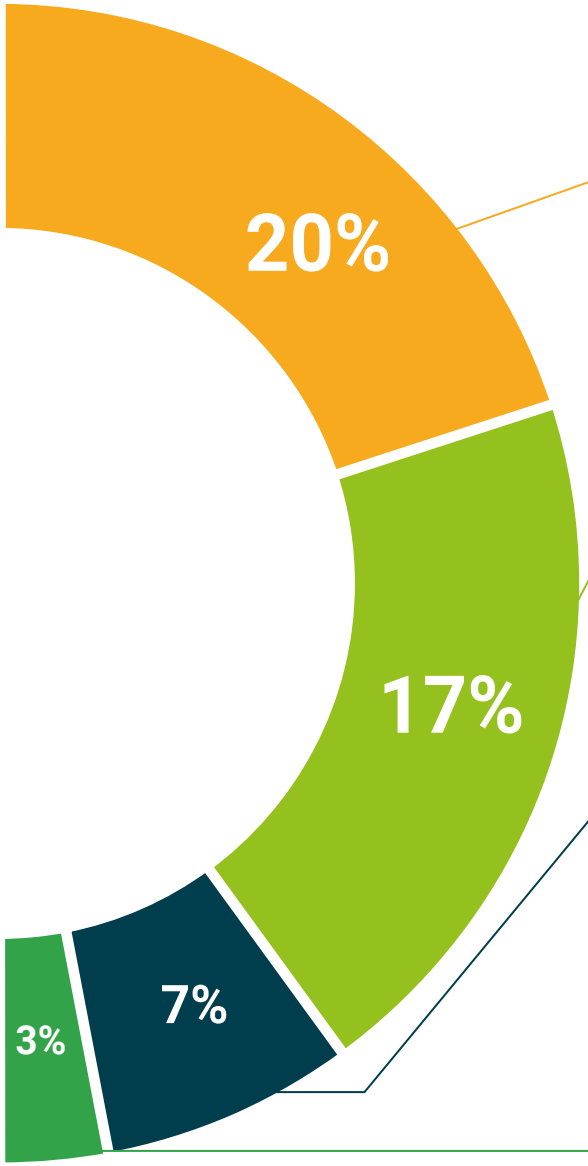
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Trauma Intensive Care guarantees, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Diploma in Trauma Intensive Care** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

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

Title: **Postgraduate Diploma in Trauma Intensive Care**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Trauma Intensive Care

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

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

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Postgraduate Diploma
Trauma Intensive Care

- Modality: **online**
- Duration: **6 months**
- Certificate: **TECH Global University**
- Credits: **18 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Postgraduate Diploma

Trauma Intensive Care

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