

# Postgraduate Certificate Traumatic Disease in ICU





## Postgraduate Certificate Traumatic Disease in ICU

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/traumatic-disease-icu](http://www.techtute.com/us/medicine/postgraduate-certificate/traumatic-disease-icu)

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# 01

# Introduction

The management of the latest techniques for pre-hospital and hospital assessment and care of severely injured patients helps to ensure the safety and quality of the rehabilitation and medical recovery process. However, anatomico-physiological measurement values and scales have undergone transformations and combinations due to the advancement of scientific research. Therefore, it can be challenging for medical personnel to keep up-to-date with the main innovations in this field. In this context, TECH offers this program focused on Traumatic Disease in ICU. The academic program guarantees professionals a mastery of the latest trends in diagnosis and treatment in this area of care. For this academic update, the syllabus has a modern faculty and a disruptive 100% online methodology.



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*You will delve into the most innovative procedures to face Traumatic Disease in ICU thanks to this program"*

According to the World Health Organization (WHO), Traumatic Disease accounts for 10% of all medical incidences faced by hospital systems. Regarding traumatic injuries as a biopsychosocial disease has ensured that specialists and health authorities treat individuals exposed to specific risks and causes in the same way as they do with other groups of conditions.

In fact, these changes in the procedures and care of the trauma patient have generated new multidisciplinary diagnostic and treatment techniques. This is why the need for specialists who are prepared and up-to-date with the latest paradigms is becoming more and more pressing.

With this program, TECH provides physicians with everything they need to get up-to-date in the care of patients with severe traumatic injuries, with their consequent internship in Intensive Care Units. The syllabus provides a comprehensive perspective of this type of pathology, from medical and surgical procedures to rehabilitation therapies. In addition to this, there is the required qualification to use the advanced technologies of the ICU.

In this case, the importance of Traumatic Disease is addressed from a public health perspective. Therefore, the graduate has within his or her reach a comprehensive understanding of how this kind of injuries affect society in general and how effective prevention and management strategies can be implemented. As an example, it also delves into the problem of alcohol and drugs as some of the main causes of accidents, due to how they affect a driver's condition.

This 100% online Postgraduate Certificate allows students to take it conveniently wherever and whenever they want, without restrictive schedules. You will only need an electronic device with internet access to add the most advanced competencies to your daily clinical practice. This is a unique opportunity for the graduate to renew their knowledge and skills, with the guarantee of the best academic results.

This **Postgraduate Certificate in Traumatic Disease in ICU** 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 Traumatic Disease in 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



*Get into the problem of the management of Traumatic Disease, a challenge for specialists in Intensive Care Units (ICU)"*

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*With TECH you will analyze the impact of medication, alcohol and drug consumption on driving as one of the main causes of traumatic injuries”*

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 proper communication between healthcare providers and prepare you to lead your own intensive care team in just 6 weeks.*

*This program will update you on the severity scales for trauma patients, as well as the avoidable mortality of many of the injuries that reach the ICU.*



# 02 Objectives

TECH provides the physician with a complete program to acquire the necessary competencies and successfully update themselves regarding Traumatic Disease in ICU. The points that make up this Postgraduate Certificate allow the specialist to develop their full potential, with the support of a team of expert teachers of recognized prestige. In this way, they will achieve the proposed objectives and increase their faculties in a field in continuous evolution, both in theory and in practical skills. From the consideration of trauma as a disease to prevention and care plans, the graduate will acquire the skills they need.





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*TECH offers you the best Postgraduate Certificate in Traumatic Disease in ICU. Don't miss this opportunity and enroll now!"*



## 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
- ♦ Integrate quality and safety practices in the management of trauma patients, minimizing risks and optimizing outcomes
- ♦ Implement triage protocols in mass trauma situations and prioritize care



*You will reach your goals thanks to TECH's pioneering teaching methodology: Relearning, consisting of the repetition of key concepts"*





## Specific Objectives

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- ◆ 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

03

# Course Management

This Postgraduate Certificate has been designed by an excellent teaching team, composed of renowned experts in Internal Medicine. Their extensive professional experience and broad knowledge in Traumatic Disease makes them a safe bet for students to be updated according to the demands of today's Intensive Care Units (ICU). In this way, the graduate will have at their disposal the best tools to develop their skills to the maximum, with the guarantee of quality that TECH offers to obtain optimal academic results.



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*TECH has selected the most qualified experts to be part of the teaching team for this program"*

## 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.

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- ♦ 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

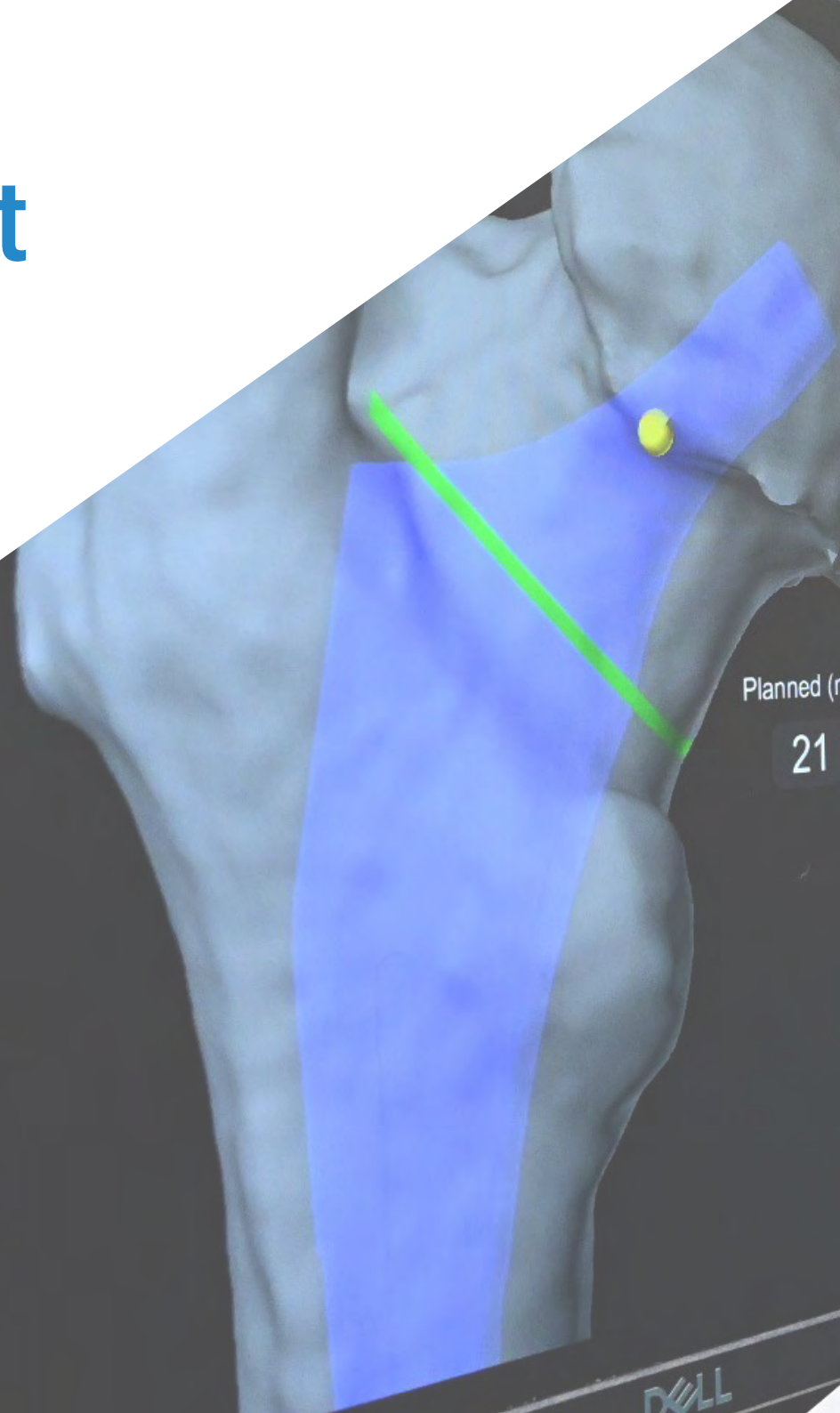


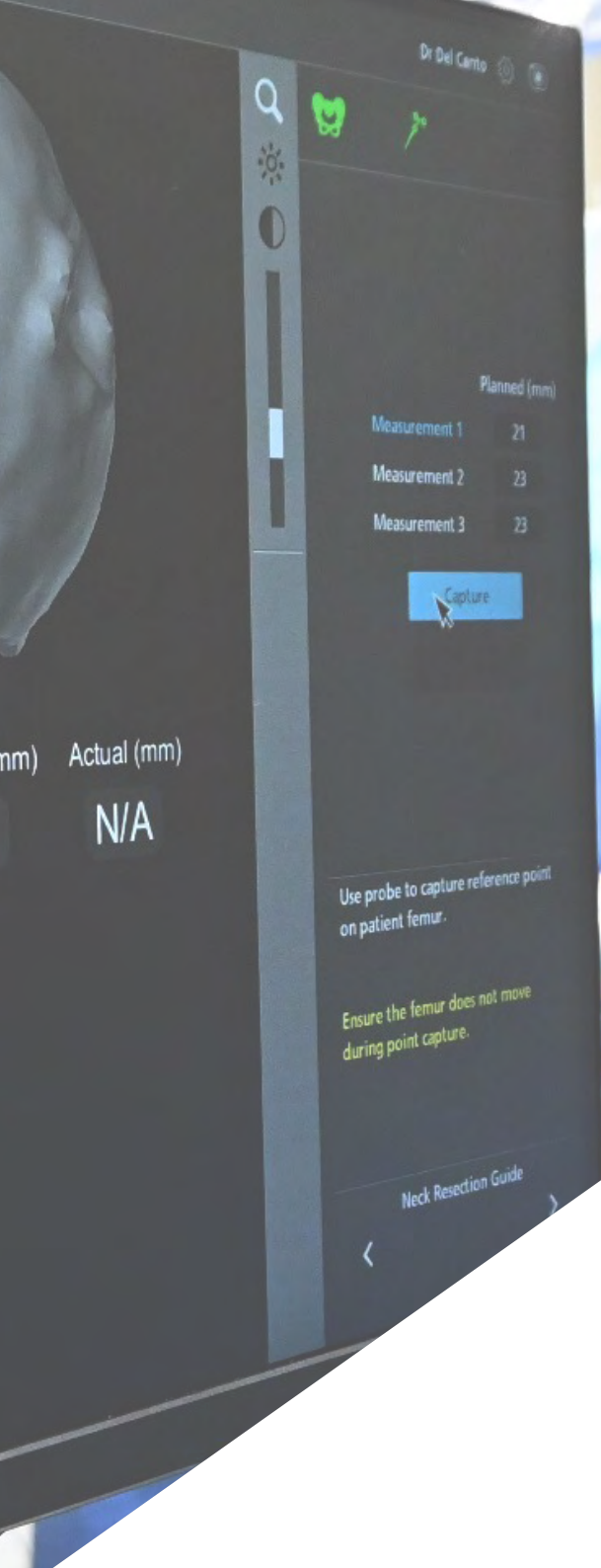


# 04

## Structure and Content

The topics included in this program on Traumatic Disease in ICU offer the physician a broad perspective of specialization, taking into account all the fields involved in Intensive Care Units (ICU). Therefore, the program delves into the epidemiology of accidents, through the roles and responsibilities of the medical team leader, to the social networks linked to trauma. That is why this complete syllabus, with a 100% online methodology, is presented as an optimal option for the graduate to get up-to-date in the most exhaustive way.



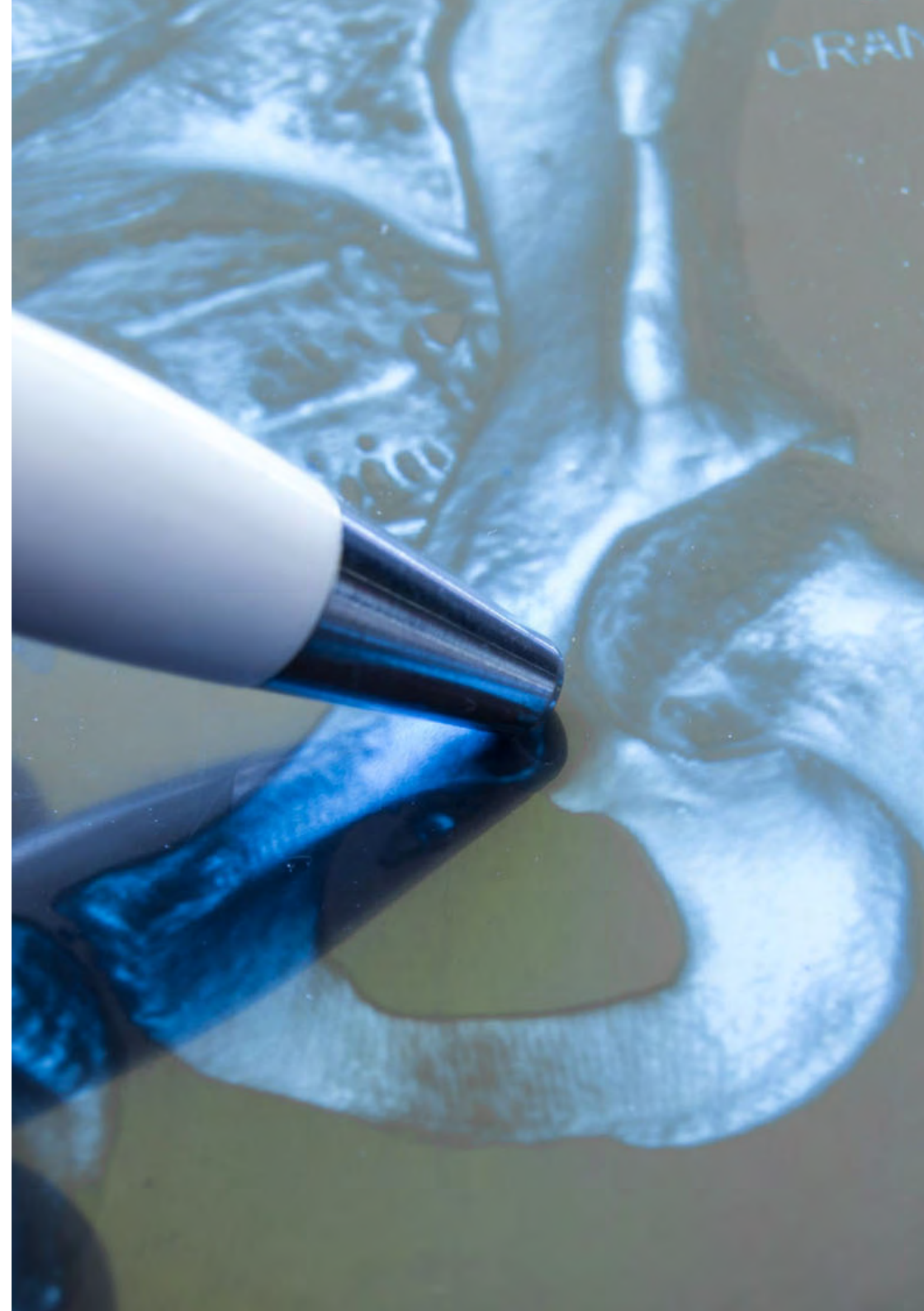


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*Benefit from a high quality syllabus where you will have at your disposal diverse multimedia resources and other complementary materials”*

## 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. Collision phases
  - 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 scale* (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 Prediction 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 Contexts
      - 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





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*Expand your clinical practice with the most innovative didactic resources and the Relearning methodology, at the forefront of TECH"*

# 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.





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*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.

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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. 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 Certificate in Traumatic Disease in ICU guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.







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

This program will allow you to obtain your **Postgraduate Certificate in Traumatic Disease in ICU** 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 Certificate in Traumatic Disease in ICU**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**.





## Postgraduate Certificate Traumatic Disease in ICU

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Credits: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate

## Traumatic Disease in ICU