

# Postgraduate Certificate

## Advanced Life Support in the Severe Trauma Patient



## Postgraduate Certificate Advanced Life Support in the Severe Trauma Patient

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/advanced-life-support-severe-trauma-patient](http://www.techtute.com/us/medicine/postgraduate-certificate/advanced-life-support-severe-trauma-patient)

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# 01

# Introduction

Many people suffer acquired brain damage as a result of traumatic brain injury. In view of this increase, most of the most prestigious health institutions demand the incorporation of health professionals capable of performing an effective therapeutic control. Faced with such opportunities, experts need to obtain competitive advantages to differentiate themselves from other candidates. The most appropriate alternative is to delve into the most advanced diagnostics and monitoring in this field. In this way, their clinical practices will be the most innovative. To help them with this task, TECH has developed a program that will address the most modern therapeutic control. All under a 100% online modality, guaranteeing the comfort of the graduates.







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*You will master the monitoring of Thoracic Trauma in the best digital university in the world, according to Forbes”*

In this context, TECH has implemented an advanced course that will offer the most innovative procedures for monitoring analgesia. Developed by an experienced faculty, the syllabus will address the impact of neuromuscular blockade in critically ill patients. In addition, the pathophysiology of Severe Traumatic Illness will be discussed in depth. On the other hand, the didactic contents will delve into special traumas such as Polytrauma, Chest Injuries or Severe Burns. The basic principles of analgesation and its application in severe trauma care will also be established.

In turn, the methodology implemented in this program reinforces its innovative character. TECH offers a 100% online educational environment, tailored to the needs of working professionals seeking to advance their careers. It also employs the *Relearning* teaching system, based on the repetition of key concepts to fix knowledge and facilitate learning. In this way, the combination of flexibility and a robust pedagogical approach makes it highly accessible. Students will have access to a library full of multimedia resources in different audiovisual formats, such as interactive summaries, explanatory videos and infographics. In addition, the program includes real case studies and exercises to bring the development of the program closer to routine clinical practice.

This **Postgraduate Certificate in Advanced Life Support in the Severe Trauma Patient** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Practice cases presented by experts in Advanced Life Support in the Severe Trauma Patient
- ♦ 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



*Do you want to perform the most precise approach to severe trauma in special situations? Achieve it in 6 weeks thanks to this revolutionary program"*

“

*You will analyze in depth the impact of biomechanics in severe trauma care”*

The program’s teaching staff includes professionals from the sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive 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.

*TECH's 100% online teaching system will allow you to update your knowledge without interrupting your professional work.*

*TECH offers you the best teaching methodology, with a multitude of practical cases so that you can develop your study as if you were facing real cases.*



# 02 Objectives

This syllabus will enable students to have a thorough understanding of the concept of Severe Traumatic Illness. Upon completion of the program, graduates will identify the epidemiological factors of both pre-hospital and in-hospital care. They will also effectively determine the impact of biomechanics on patients with these pathologies. In this way, they will apply the most advanced global treatments to users with Severe Trauma.





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*TECH's main objective is to help its students achieve academic and professional excellence"*



## General Objectives

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- Develop the concept of Severe Traumatic Illness
- Analyze epidemiological factors and outcomes of, both pre-hospital and in-hospital care
- Determine the impact of biomechanics on the care of the severe trauma patient
- Analyze and develop the overall care of the severe trauma patient
- Establish the principles of special trauma care



*Relearning will allow you to learn with less effort and greater performance, getting more involved in your professional specialization"*





## Specific Objectives

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- Develop epidemiological principles that are useful in Severe Traumatic Illness
- Assess the impact of biomechanical analysis on the overall management of the Severe Trauma patient
- Analyze and define the concept of Trauma Code
- Assess the ABCDE methodology
- Examine the different special traumas
- Analyze Severe Thermal Trauma
- Develop the principles for the care of the pregnant patient with severe trauma
- Establish the principles of analgosedation and its application within severe trauma care
- Determine diagnostic and monitoring systems



# 03

# Course Management

In order to provide the highest educational excellence, TECH has a first class teaching staff. These professionals have extensive work experience, which has allowed them to integrate the teams of prestigious hospitals. Therefore, the syllabus will be characterized by having the most updated and complete contents in Advanced Life Support in Severe Trauma Patients. In addition, they will provide students with the most advanced technological tools to contribute to the welfare of their patients.







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*You will have access to a syllabus designed by a distinguished teaching staff, which will guarantee you a successful learning process”*

## Management



### Dr. Antonio Cardenas Cruz

- Head of the Intensive Care Medicine Department, Motril Hospital
- Director of the Clinical Unit of Critical Care and Emergency Management of the Poniente University Hospital
- Institute Director of Continuing Education of the Andalusian Society of Intensive Care Medicine and Coronary Universities
- Training Program Director for Life Support Trainers of the IAVANTE Line of the Progreso y Salud Foundation of the Consejería de Salud y Consumo de la Junta de Andalucía (Andalusian Regional Government)
- Training Program Director for Sedation the IAVANTE Line of the Progreso y Salud Foundation of the Consejería de Salud y Consumo de la Junta de Andalucía (Andalusian Regional Government)
- Head of Critical Care and Emergency Department, Hospital Universitario de Poniente
- Professor of Medicine
- Degree in Medicine and Surgery from the UGR
- PhD in Medicine and Surgery, UGR
- Specialist in Intensive Care Medicine





## Professors

### **Dr. Martínez de Pinillos Sánchez, María Victoria**

- ♦ Area Specialist Physician at the Virgen de las Nieves Hospital
- ♦ Resident Physician in the Specialty of Intensive Care Medicine
- ♦ Official Master's Degree in Research Methodology in Health Sciences from the University of Cordoba
- ♦ Postgraduate Diploma in Comprehensive Airway Management
- ♦ Postgraduate Diploma in Current Management of Digestive Pathology in the Critically Ill Patient

### **Dr. Brea Salvago, Juan Francisco**

- ♦ Area Specialist in Intensive Care Medicine at the Ciudad de Jaén Hospital
- ♦ Intra-hospital Transplant Medical Coordinator at the University Hospital of Jaen
- ♦ Professional Master's Degree in Infectious Diseases in Intensive Care at the University of Valencia
- ♦ Professional Master's Degree in Clinical Management, Medical and Care Management by CEU Cardenal Herrera University
- ♦ Professional Master's Degree in Echocardiography in Emergency Medicine, Anesthesia, Resuscitation and Critical Care by Universidad Francisco de Vitoria UFV Madrid
- ♦ Postgraduate Diploma in Health Care Communication for Health Care Professionals
- ♦ Postgraduate Diploma in Quality and Patient Safety in Health Institutions
- ♦ Postgraduate Diploma in Clinical and Cardiothoracic Ultrasound for Emergencies and Critical Care

# 04

# Structure and Content

This program will allow students to understand the conceptual aspects that have conditioned the definition of Severe Traumatic Illness. Designed by a teaching staff of excellence, the syllabus will delve into both the epidemiology and the results of medical care for patients with severe trauma. In addition, the syllabus will delve into the elements of biomechanics with impact, with emphasis on the assessment of special cases.







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*An innovative and multidisciplinary program, which will help you improve your practice 100% online”*

## Module 1. Advanced Life Support in the Severe Trauma Patient

- 1.1. Severe Traumatic Illness in the 21st Century
  - 1.1.1. Severe Traumatic Illness
  - 1.1.2. Pathophysiology of Severe Traumatic Illness
  - 1.1.3. Epidemiology and Outcomes
- 1.2. Biomechanics
  - 1.2.1. Biomechanics
  - 1.2.2. Analysis of the Impact of Biomechanics in Severe Trauma Care
  - 1.2.3. Biomechanical Analysis of Special Traumas
- 1.3. Therapeutic Management of Severe Traumatic Brain Injury (TBI)
  - 1.3.1. Severe TBI
  - 1.3.2. Diagnostic and Monitoring Systems
  - 1.3.3. Therapeutic Control
- 1.4. Spinal Cord Trauma Monitoring
  - 1.4.1. Spinal Cord TBI
  - 1.4.2. Diagnostic and Monitoring Systems
  - 1.4.3. Therapeutic Control
- 1.5. Thoracic Trauma Monitoring
  - 1.5.1. Thoracic Trauma
  - 1.5.2. Diagnostic and Monitoring Systems
  - 1.5.3. Therapeutic Control
- 1.6. Abdominal Trauma Monitoring
  - 1.6.1. Abdominal Trauma
  - 1.6.2. Diagnostic and Monitoring Systems
  - 1.6.3. Therapeutic Control
- 1.7. Pelvic and Orthopedic Trauma Monitoring
  - 1.7.1. Pelvic and Orthopedic Trauma
  - 1.7.2. Diagnostic and Monitoring Systems
  - 1.7.3. Therapeutic Control







- 1.8. Monitoring and Care of Severe Trauma in Special Situations
  - 1.8.1. Severe Trauma Care in Special Situations
  - 1.8.2. Diagnostic and Monitoring Systems
  - 1.8.3. Therapeutic Control
- 1.9. Severe Thermal Trauma Monitoring
  - 1.9.1. Severe Thermal Trauma
  - 1.9.2. Diagnostic and Monitoring Systems
  - 1.9.3. Therapeutic Control
- 1.10. Analgosedation Monitoring
  - 1.10.1. Analgosedation
  - 1.10.2. Sedation and Analgesia. NMB (Neuromuscular Block)
  - 1.10.3. Monitoring



*TECH offers you an interactive video system that will make it easier for you to study this program"*

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

This Postgraduate Certificate in Advanced Life Support in the Severe Trauma Patient guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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*Successfully complete this program  
and receive your university qualification  
without having to travel or fill out  
laborious paperwork”*

This **Postgraduate Certificate in Advanced Life Support in the Severe Trauma Patient** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Certificate in Advanced Life Support in the Severe Trauma Patient**

Official N° of hours: **150 h.**



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



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



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

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