



Postgraduate Diploma

Advanced Life Support in Severe Trauma

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-advanced-life-support-severe-trauma

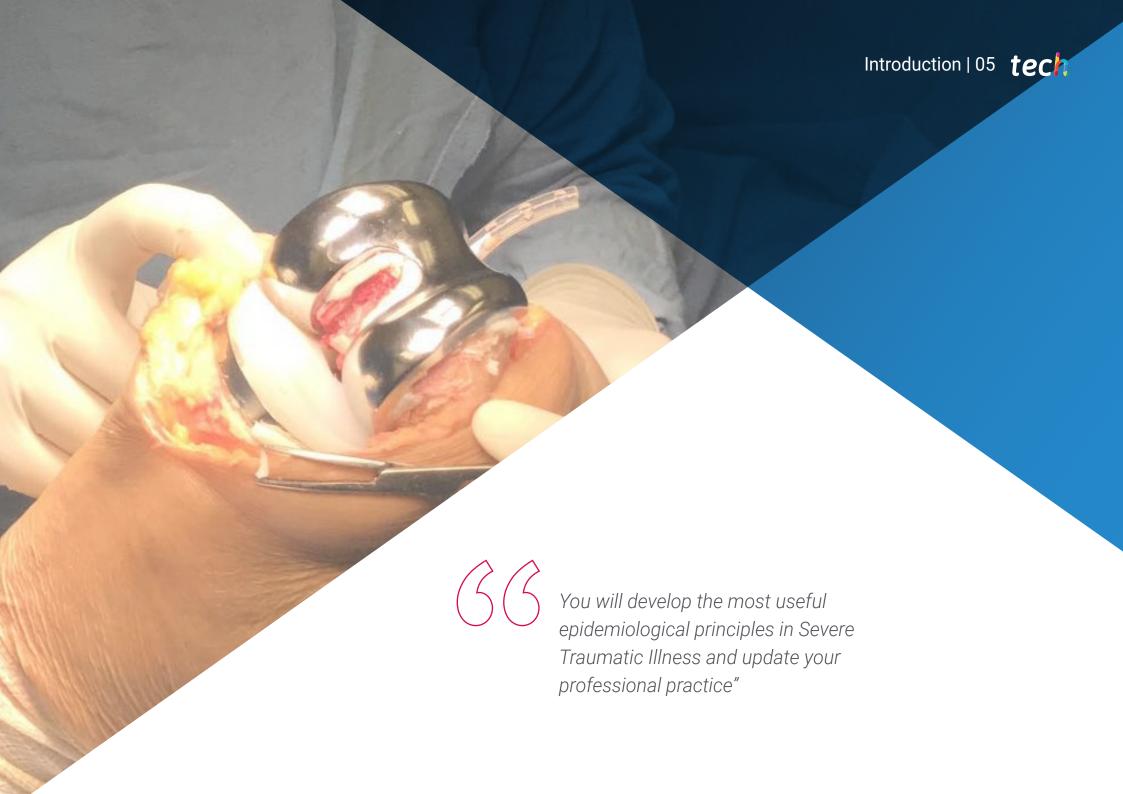
Index

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06 Certificate

p. 32





tech 06 | Introduction

Despite the fact that cardiopulmonary arrest kills around 45,000 people annually, some hospitals are not aware of new techniques for advanced monitoring of critically ill patients. This is extremely important, as the technology provides the opportunity to closely monitor vital functions as well as other physiological parameters in patients.

One of the most widely used new technologies is Transesophageal Echocardiography, which is used to produce images of the heart to appreciate its function. In this way, blood clots or infectious endocarditis can be detected and appropriate cardiac procedures can be planned.

In this context, TECH has implemented a program that will enable healthcare professionals to use the most advanced tools to treat cardiorespiratory arrest. Under the guidelines of a quality teaching staff, the syllabus will delve into the use of intra-PCR ultrasound diagnostic phase. Graduates will be able to effectively detect potentially reversible causes of cardiac origin.

Likewise, the different forms of electrical and hemodynamic monitoring will be addressed in order to verify the real situation of patients. In this sense, the didactic materials will analyze the benefits of Artificial Intelligence to detect early cases from the monitoring of users, knowing aspects such as heart rate, respiratory rate or blood pressure.

On the other hand, the only thing students will need is an electronic device with an Internet connection (such as a cell phone, computer or *tablet*) to access the teaching material. n this sense, the schedules and evaluation chronograms can be planned individually. In addition, it should be noted that the syllabus will be supported by the innovative *Relearning* teaching system, consisting of the reiteration of key concepts to ensure mastery of the contents. At the same time, it mixes the learning process with the study of real clinical cases, in order to acquire knowledge in a natural and progressive way, without the extra effort of memorizing.

This **Postgraduate Diploma in Advanced Life Support in Severe Trauma** 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 and Monitoring in the Critically III Patient
- The graphic, schematic and practical contents with which it is conceived scientific and practical information on those 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



Looking to delve into chest trauma monitoring procedures? Achieve it in only 450 hours!"



This program will give you the opportunity to update your knowledge with the maximum scientific rigor from an institution at the forefront of technology"

The program's teaching staff includes professionals from the sector who bring to this program the experience of their work, in addition to recognized specialists from prestigious reference societies and 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.

You will analyze in detail the particularities of the FEER Protocol in 5 months.

You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.







tech 10 | Objectives



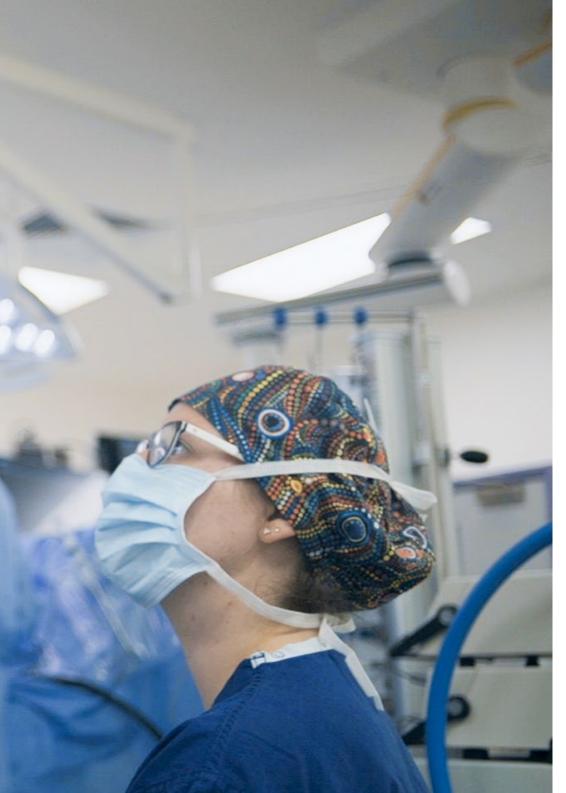
General Objectives

- Identify the main morphological and functional differences between pediatric and neonatal patients
- Establish the pathophysiological basis of pediatric and neonatal CRP
- Analyze the principles governing pediatric BLS, the principles governing pediatric ALS and the principles of neonatal CPR
- Analyze the impact of ultrasound studies in the global management of patients in CPR
- Determine the different existing protocols and their real value for the use of ultrasound in the CRA patient
- Examining the impact of echocardiography
- Analyze the impact of pulmonary ultrasonography
- Identify and analyze the principles governing basic, clinical, and translational research
- Develop the aspects that are immersed in the most important development and innovation programs in the world of CPR patient care
- Determine the basic actions that fall within the management models in the care of the CRA patient in particular and the critical patient in particular
- Analyze and put into practice the principles governing the prevention of CPA



In just 6 months, you will give your career the boost it needs thanks to this program"







Specific Objectives

Module 1. Advanced Life Support in the Severe Trauma Patient

- Assess the impact of biomechanical analysis on the global management of the severe trauma patient
- Analyze and define the concept of trauma code
- Assess the ABCDE D methodology
- Examine the different special traumas
- Analyze severe thermal trauma
- Establish the principles of analgosedation and its application within severe trauma care
- Determine diagnostic and monitoring systems

Module 2. Imaging Technology in Cardiorespiratory Arrest (CRA)

- Analyze the specific indications
- Study the exact moment to perform ultrasound tests
- Evaluate and analyze the echocardiography protocol in CRA and the lung ultrasound protocol in CRA

Module 3. Advanced Monitoring in the Critical Patient

- Analyze the indications, implementation and interpretation of results in relation to neuromonitoring, hemodynamic monitoring and monitoring of gas exchange and ventilatory mechanics
- Examine the indications, set-up and interpretation of results in relation to renal function and homeostasis and control of the internal milieu
- Study and analyze the indications, set-up and interpretation of results in relation to sedation monitoring and multimodal monitoring
- Analyze the use of AI in monitoring the critically ill patient and in the anticipation of adverse effects





tech 14 | Course Management

Management



Dr. Cárdenas Cruz, Antonio

- Head of the Intensive Care Medicine Department, Motril Hospital
- Director of the Clinical Unit of Critical Care and Emergency Management of the Poniente University Hospita
- 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



Course Management | 15 tech

Professors

Dr. Ocete Hita, Esther

- Head of the Pediatric Hospitalization Section of the Virgen de las Nieves University Hospital of Granada
- FEA Pediatrics in the Pediatric Intensive Care Unit of the Virgen de las Nieves University Hospital of Granada
- Associate Professor in the Faculty of Medicine at the University of Granada
- Specialist Pediatrician
- Ph.D. in Medicine
- Degree in Medicine

Dr. Abril Molina, Ana

- Medical Specialist in Pediatrics and its Specific Areas
- Assistant Physician in the Pediatric Intensive Care Unit at the Virgen de las Nieves University Hospital
- Collaborator in clinical trials and research projects with the Progreso y Salud Foundation
- Ph.D. in Medicine, University of Granada
- Degree in Medicine from the University of Córdoba

Dr. Gómez Luque, José María

- Specialist in Pediatric Intensive Care
- Assistant Physician of the Pediatric Intensive Care Unit of the Virgen de las Nieves Hospital
- Advanced CPR and Pediatric CPR Instructor
- Ph.D. in Medicine and Surgery from the University of Granada

tech 16 | Course Management

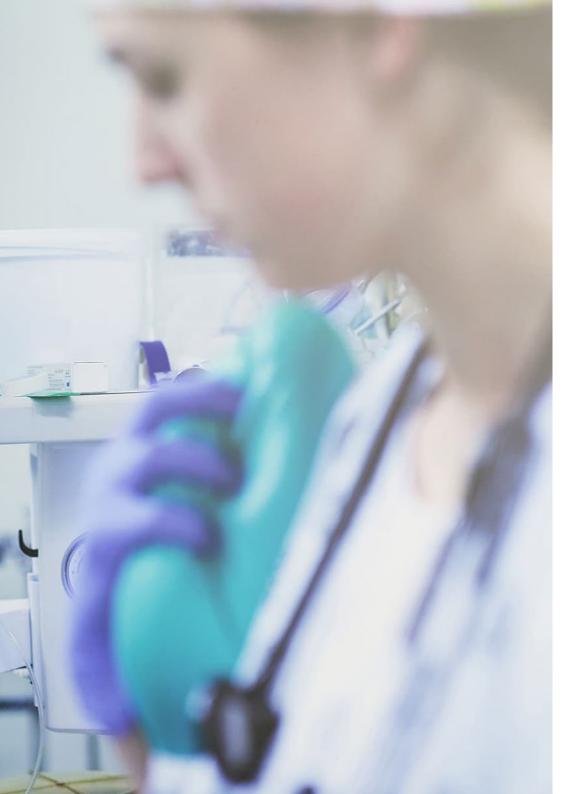
Dr. Díaz Rueda, Laura

- Physician in Emergency and Pediatric Intensive Care at the Virgen de las Nieves Maternal and Child Hospital
- · Doctor in Pediatric Intensive Care Unit, Reina Sofia University Hospital
- Professional Master's Degree in diagnosis and treatment in Pediatric Cardiology and Congenital Cardiopathies - CEU Cardenal Herrera University
- Degree in Medicine from the University of Granada

Dr. Jiménez Conde, Carlos

- Specialist in Intensive Care Medicine
- Intensive Care Physician at the Juan Ramón Jiménez Hospital in Huelva
- Huelva Provincial Head of the CPR and CPR Working Group
- Tutor of Internal Resident Specialists at the Juan Ramón Jiménez Hospital in Huelva
- Secretary of the Cardiopulmonary Resuscitation Commission
- Professional Master's Degree in Research Methodology, University of Seville
- Professional Master's Degree in Principles And Practice Of Clinical Research by Harvard Medical School
- Professional Master's Degree in Infectious Diseases in Intensive Care by the Valencia University-Business
- Degree in Medicine from the University of Seville





Course Management | 17 tech

Dr. Estella García, Ángel

- Specialist in Intensive Care Medicine
- Head of the Intensive Care Medicine Section at the University Hospital of Jerez
- President of the Health Care Ethics Committee of Jerez
- Professional Master's Degree in Bioethics, Complutense University of Madrid
- Professional Master's Degree in Infectious Diseases of the Critically III from the University of Valencia
- Coordinator of the Working Group on Infectious Diseases, Andalusian Society of Intensive Care Medicine and Coronary Units

Dr. Rivera Rubiales, Gloria

- Specialist in Intensive Care Medicine at the University Hospital of Jerez
- Intensive Care Physician in the Intensive Care Unit at the Virgen del Rocío University Hospital
- Professional Master's Degree in Clinical Ultrasound for Emergency and Critical Care by CEU Cardenal Herrera University
- Official Master's Degree in Biomedical Research from the University of Seville
- Official Master's Degree in Biomedical Research from the Institute of Biomedicine of Seville
- International Expert in Methodology Applied to noninvasive mechanical ventilation

Dr. Noguero Iriarte, Paloma

- Specialist in Intensive Care Medicine
- Head of the Intensive Care Unit Service at the Riotinto Hospital
- Intensive Care Physician at the Valme Hospital
- Local Transplant Coordinator
- Coordinator of the Integrated Care Process Ictus
- Postgraduate Diploma in Ventilatory Techniques and Parameters in NIMV

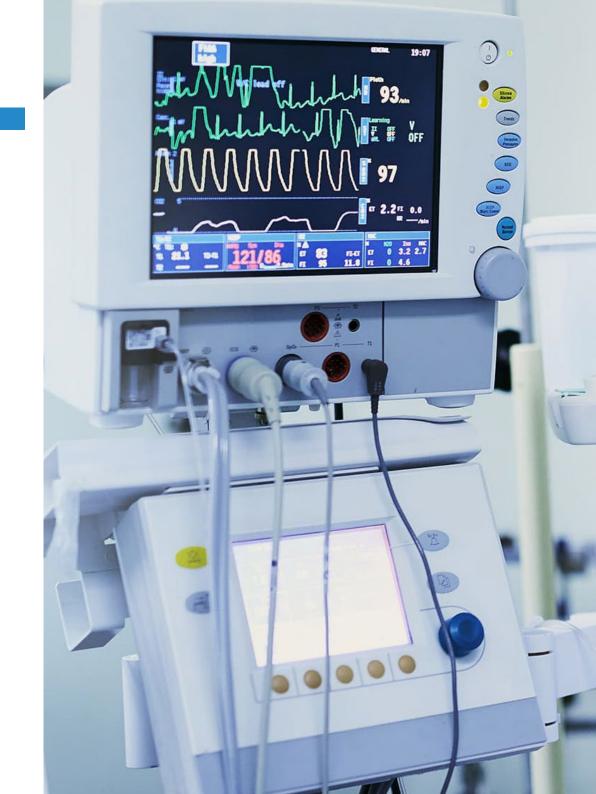




tech 20 | Structure and Content

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. Monitoring of Spinal / Spinal Cord Trauma
 - 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



Structure and Content | 21 tech

- 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. Monitoring of Severe Thermal Trauma
 - 1.9.1. Severe Thermal Trauma
 - 1.9.2. Diagnostic and Monitoring Systems
 - 1.9.3. Therapeutic Control
- 1.10. Monitoring of Analgosedation
 - 1.10.1. Analgesedation
 - 1.10.2. Sedation and Analgesia. BNM (Neuromuscular Block)
 - 1.10.3. Monitoring

Module 2. Imaging Technology in Cardiorespiratory Arrest (CRA)

- 2.1. Indications of Ultrasound Study in CRP
 - 2.1.1. Epidemiology
 - 2.1.2. Echocardiography
 - 2.1.3. Pulmonary Ultrasound
- 2.2. Use of Intra CRP Ultrasound: Diagnostic Phase
 - 2.2.1. Differential Diagnosis
 - 2.2.2. Diagnosis of Potentially Reversible Causes of Cardiac Origin
 - 2.2.3. Diagnosis of Pseudo-ESPA
- 2.3. Use of Intra CRP Ultrasound: Advanced Diagnostic Phase
 - 2.3.1. Diagnosis of Potentially Reversible Causes of Non-Cardiac Origin
 - 2.3.2. Assessment of the Normal Position of the TOT
 - 2.3.3. Assessment of Recovery of Spontaneous Circulation
- 2.4. FEER Protocol (Focused Echocardiographic Evaluation in Resuscitation). Preparation Phase
 - 2.4.1. CPR and Preparation of the Equipment
 - 2.4.2. Execution and Imaging
 - 2.4.3. Resumption of CPR

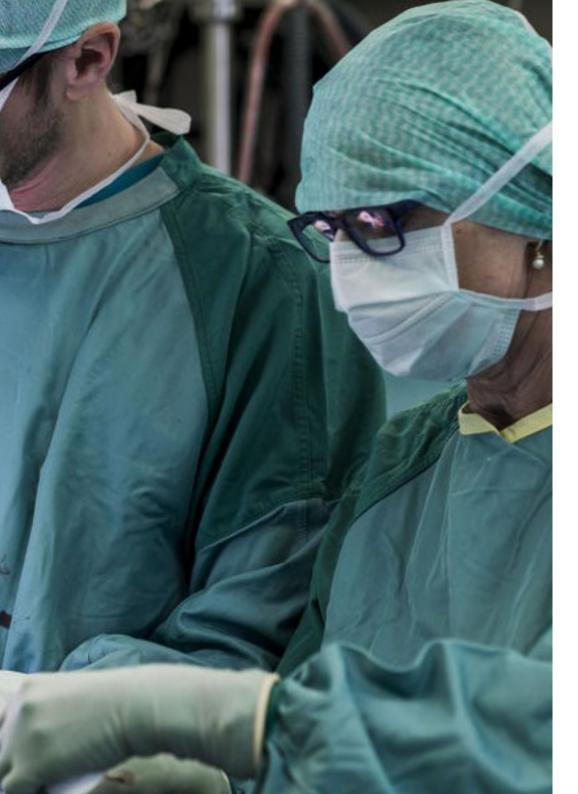
- 2.5. FEER Protocol (Focused Echocardiographic Evaluation in Resuscitation)
 - 2. Evaluation Phase
 - 2.5.1. Interpretation and Communication
 - 2.5.2. Determination of Underlying Causes
 - 2.5.3. Verification of Correct Intubation
- 2.6. FEER Protocol (Focused Echocardiographic Evaluation in Resuscitation)
 - 3. Implementation Phase
 - 2.6.1. Decision-Making Algorithms
 - 2.6.2. Ultrasound in the Development of Life Support
 - 2.6.3. Advanced Diagnostic and Therapeutic Processes
- 2.7. FEER Protocol (Focused Echocardiographic Evaluation in Resuscitation)
 - 4. Resuscitation Phase or Prognostic Phase
 - 2.7.1. Post CPR Care
 - 2.7.2. Resuscitation
 - 2.7.3. Prognostic Study
- 2.8. Other Protocols
 - 2.8.1. FEEL
 - 2.8.2. CAUSE
 - 2.8.3. E-FAST
 - 2.8.4. RUSH
 - 2.8.5. BLUE
- 2.9. Education and Training
 - 2.9.1. Training Criteria
 - 2.9.2. Protocols
 - 293 Simulation
- 2.10. Use of Transesophageal Echocardiography in CPR
 - 2.10.1. Differential Elements with Transthoracic Echocardiography
 - 2.10.2. Indications
 - 2.10.3. Technique

tech 22 | Structure and Content

Module 3. Advanced Monitoring in the Critical Patient

- 3.1. Monitoring in the Critically III Patient
 - 3.1.1. Epidemiology: Impact of Monitoring on the Prognosis of the Critically III Patient
 - 3.1.2. Physiological Basis
 - 3.1.3. Pathophysiological Bases
- 3.2. Neuromonitoring
 - 3.2.1. Indications
 - 3.2.2. Neuromonitoring Systems
 - 3.2.3. Multimodal Neuromonitoring
- 3.3. Electrical and Hemodynamic Monitoring
 - 3.3.1. Indications for Monitoring
 - 3.3.2. Electrical Monitoring Systems
 - 3.3.3. Hemodynamic Monitoring Systems
- 3.4. Electrical and Hemodynamic Monitoring. Advanced and Personalized Monitoring: Precision Monitoring
 - 3.4.1. Indications for Advanced and Personalized Monitoring
 - 3.4.2. Advanced Electrical Monitoring Systems
 - 3.4.3. Advanced Hemodynamic Monitoring Systems
- 3.5. Monitoring of Gaseous Exchange and Ventilatory Mechanics
 - 3.5.1. Indications
 - 3.5.2. Respiratory Monitoring Systems
 - 3.5.3. Ventilatory Mechanics Monitoring Systems
- 3.6. Renal Function Monitoring
 - 3.6.1. Indications
 - 3.6.1. Renal Function Monitoring Systems
 - 3.6.3. Monitoring of Renal Function in the Patient Subjected to Continuous Extrarenal Clearance Techniques
- 3.7. Tissue Perfusion Monitoring
 - 3.7.1. Indications
 - 3.7.2. Tissue Perfusion Monitoring Systems
 - 3.7.3. Evaluation of the Available Scientific Evidence and Its Use in Clinical Practice





Structure and Content | 23 tech

- 3.8. Sedation Monitoring
 - 3.8.1. Indications
 - 3.8.2. Sedation and Analgesia Monitoring Systems
 - 3.8.3. Computerized Systems vs. Prediction Scales
- 3.9. Multimodal Monitoring
 - 3.9.1. Applications
 - 3.9.2. Prediction Systems
 - 3.9.3. Pathophysiological and Technological Bases
- 3.10. Artificial Intelligence and Monitoring: Precision Monitoring and Prediction
 - 3.10.1. Applications
 - 3.10.2. Prediction Systems
 - 3.10.3. Pathophysiological and Technological Bases



You will learn through real cases and by solving complex situations in simulated learning environments"





tech 26 | Methodology

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:

- 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.



Methodology | 29 tech

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.









tech 34 | Certificate

This **Postgraduate Diploma in Advanced Life Support in Severe Trauma** 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 Diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma 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 Advanced Life Support in Severe Trauma

Official No of Hours: 450 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.

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guarantee accreditation teaching
institutions technology learning



Postgraduate Diploma Advanced Life Support in Severe Trauma

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

