

# Postgraduate Certificate Critical Patients





## Postgraduate Certificate Critical Patients

- » Modality: online
- » Duration: 8 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-certificate/postgraduate-certificate-critical-patients](http://www.techtute.com/us/medicine/postgraduate-certificate/postgraduate-certificate-critical-patients)

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# 01

# Introduction

Anesthesia procedures in critical care medicine have undergone significant development in recent years. Advances in techniques performed on critically ill patients have established new procedural models, transforming reference paradigms and contributing decisively to reduce patient morbidity and mortality. This program updates specialists in a practical way.



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*The new scenarios in anesthesia procedures in critically ill patients motivate us to propose new training programs that meet the real needs of experienced professionals, so that they can incorporate advances in anesthesia procedures management in critically ill patients into their medical practice”*

The evolution of anesthesiology toward the concept of perioperative medicine has required greater professional involvement in critically ill patient management.

The complexity of critical care medicine translates into great diversity in the medical and surgical management of critically ill patients. Hence, there is an interest and a need to increase knowledge, analysis, and intervention in the field of Critical Care Medicine. It is therefore necessary to make a commitment to reality, which implies furthering knowledge and generating conditions that improve patient health.

This Postgraduate Certificate covers the advances made in the last decade in the discipline, reviewing the major clinical syndromes of critical medicine. Advances in neurological and hemodynamic monitoring, new ventilation and lung protection strategies, ventricular assistance with significant future projection, nutritional aspects of critically ill patients, programs aimed at achieving "zero bacteremia", management of severe bleeding, as well as the integral approach to polytraumatized patients, severe burn patients, and patients undergoing transplantation (hepatic, cardiac, pulmonary, renal), donor maintenance, are, among others, extraordinarily current topics, discussed here by authors with great experience and teaching capacity.

This **Postgraduate Certificate in Critical Patients** is the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ Development of clinical cases, presented by specialists in anesthesiology and other specialties. Their graphic, schematic and eminently practical contents provide scientific information on the medical disciplines essential for professional practice.
- ♦ Real high-resolution images of pathologies, diagnostic imaging tests and guided procedures.
- ♦ Practical workshops on anesthesia procedures and techniques for critically ill patients.
- ♦ An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course.
- ♦ All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*You will be able to learn, through the latest educational technology, the most recent advances in anesthesia procedures for critical patients"*

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*This Postgraduate Certificate may be the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge of critical patients, you obtain a qualification from TECH Technological University”*

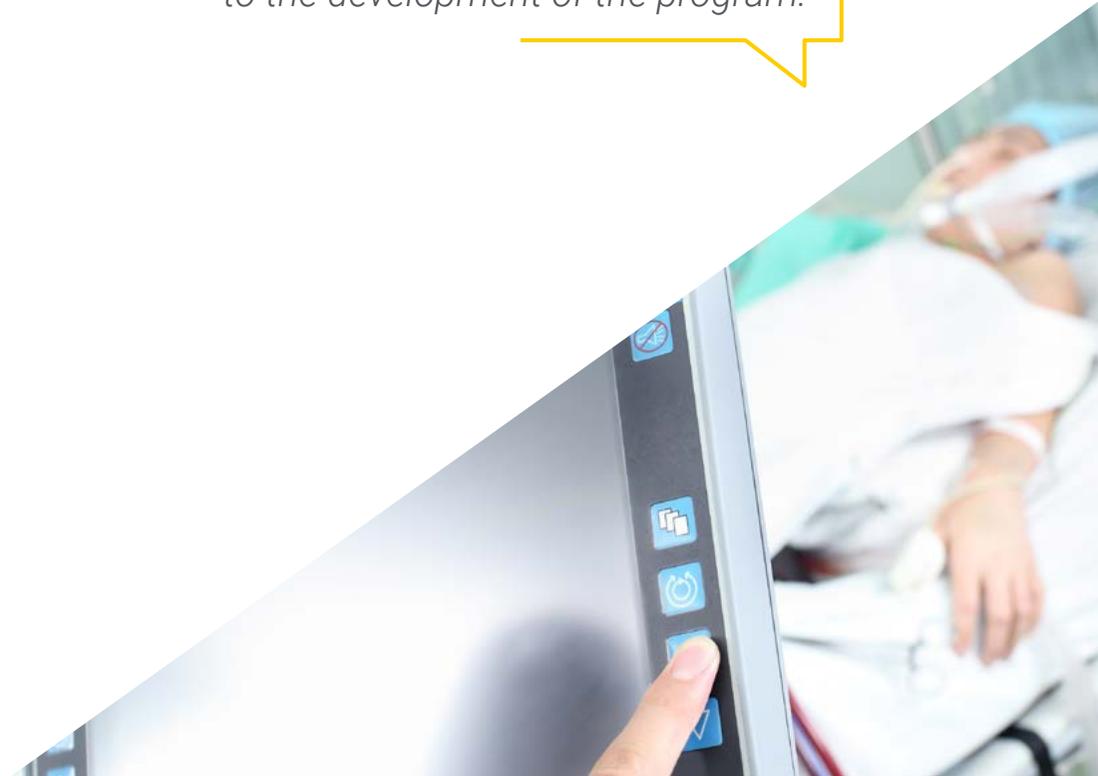
The teaching staff is made up of a team of leading anesthesiologists, who bring to this training the experience of their work, in addition to recognized specialists in other medical areas.

The multimedia content developed with the latest educational technology will provide the physician with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the student must try to solve the different professional practice situations that arise during the course. For this reason, you will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of psychology with extensive teaching experience.

*This Postgraduate Certificate offers training in simulated environments, which provides an immersive learning experience designed to train for real-life situations.*

*It includes real clinical cases to bring medical practice as close as possible to the development of the program.*



# 02 Objectives

The main objective is to facilitate the incorporation of advances in anesthesia in critical patients, so that specialists can update their knowledge in a practical way, using the latest educational technology and adapting the educational process to their real needs.



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*This refresher program will generate a sense of confidence in decision making during anesthesia procedures for the critically ill, and will help you grow professionally”*



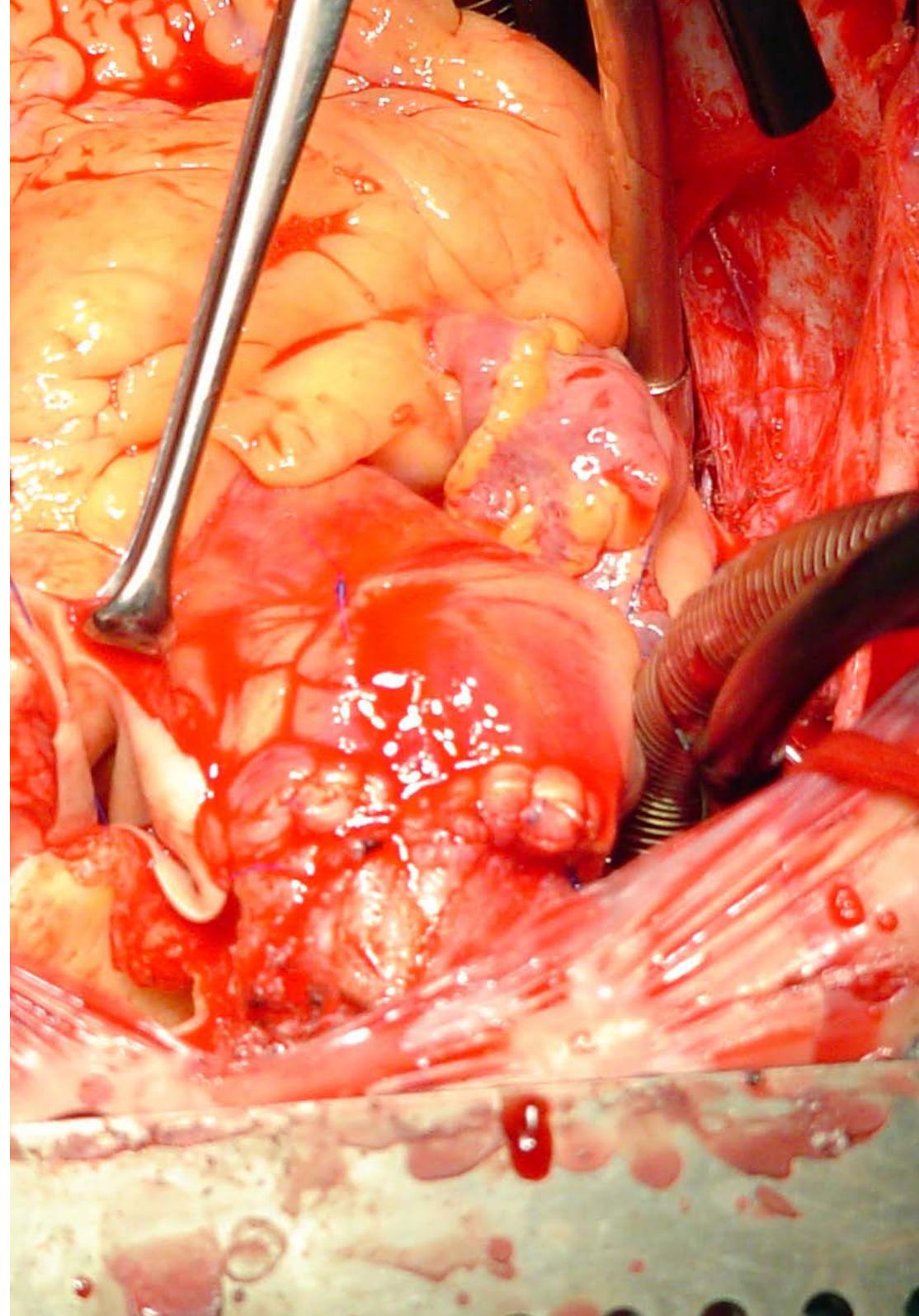
## General Objective

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- Update specialist physicians on the procedures and techniques performed for critical patients, incorporating the latest advances to increase the quality of their daily medical practice and improve patient prognosis.

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*Seize the opportunity and take the step to get up-to-date on the latest developments in critical patients”*





## Specific Objectives

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- Review advances in neuroprotection and comprehensive brain monitoring.
- Reflect on severe TBI management.
- Discuss the new invasive and non-invasive mechanical ventilation modalities.
- Update on right ventricular dysfunction and pulmonary hypertension management.
- Incorporate new therapies in the management of patients in shock (cardiogenic, hemorrhagic, distributive) into daily practice.
- Update the procedures in echocardiography as an essential monitor in hemodynamic evaluation.
- Update on current ventricular assist devices, ECMO, IABP or IABP.
- Update procedures from post-surgical management of adult congenital heart disease.
- Describe updates related to infection and its treatment in critical care units.
- Review the therapeutic Update related to the management of adult respiratory distress syndrome.
- Analyze the new mechanical ventilation strategies.
- Update on the procedure for perioperative anesthetic management in organ transplantation (cardiac, pulmonary, hepatic and renal).
- Review the approach to critical patient monitoring.
- Evaluate the new monitoring algorithms and clinical management of polytraumatized and severe burn patients.
- Incorporate new donor patient maintenance algorithms into daily practice.
- Update the recommendations for advanced CPR.
- Explain new management strategies for renal failure in critically ill patients.
- Update on the nutritional aspects in critically ill patients.
- Analyze the implication of anesthesiology in perioperative medicine, its contributions and interest.
- Review the new drugs included in the anesthetic therapeutic arsenal.
- Incorporate new antiplatelet and anticoagulant drugs and new hemostasis monitoring systems into medical practice.
- Analyze the implications of these drugs on anesthetic procedures.
- Update on strategies for hemodynamic management.
- Raise new perspectives in clinical training through virtual simulators.
- Question therapeutic empiricism versus goal-directed monitoring and determine the role of advanced hemodynamic optimization.
- Evaluate the predictive factors in morbi-mortality risk determinants.

03

# Course Management

The materials have been created by a team of leading professionals in the field of anesthesia in critically ill patients, who work in prestigious hospitals. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.





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*Learn about the latest advances in anesthesia procedures for the critically ill from leading professionals”*

## Management



### Dr. Muedra Navarro, Vicente

- ♦ Head of the Anesthesia Service at the General University Hospital Consortium of Valencia.
- ♦ Professor-Doctor of Anesthesiology at the Universitat de Valencia
- ♦ Degree in Medicine from the University of Valencia
- ♦ MIR Specialist in Anesthesiology, Resuscitation and Pain Therapeutics at La Fe University Hospital in Valencia
- ♦ PhD in Medicine and Surgery from the University of Valencia
- ♦ Professor of the Department of Biomedical Sciences. Faculty of Medicine. CEU Cardenal Herrera University. Valencia
- ♦ Director of doctoral theses and Master's Degree theses
- ♦ Member of several Health Care Improvement Commissions at La Ribera University Hospital
- ♦ University Expert in the Comprehensive Management of the Airway, by the Catholic University of Valencia
- ♦ Vice-president of the Department of Anesthesiology and Critical Care in Cardiac Surgery of the Valencian Community
- ♦ Member of the Spanish Society of Anesthesiology, Resuscitation and Pain Therapy
- ♦ Member of the Spanish Society of Multimodal Rehabilitation
- ♦ Head researcher in several research projects with competitive funding from Public Institutions (Carlos III Health Institute)
- ♦ Collaborating Researcher in the Prometeo Program for research groups of Excellence in the Department of Education and Science at Generalitat Valenciana.
- ♦ Research member of the Translational Medicine Doctoral Program in the research line Multidisciplinary Intervention in Prevention and Clinical Therapeutics of International Doctoral School CEINDO

## Professors

### Dr. Vicente Guillén, Rosario

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Head of the Anaesthesiology Department
- ◆ La Fe Polytechnic and University Hospital. Valencia Dr. Alexandre, Anabel
- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

### Dr. Aparicio, Rosa

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

### Dr. Ferre, Ángeles

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

### Dr. Femeneía, Francisco

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

### Dr. Ferrandis, Raquel

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

### Dr. Galán, Juan

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

### Dr. Herrera, Pablo

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Justo, Pilar**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. López, Cristina**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Moret, Ana**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Moreno Ignacio**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain



**Dr. Osseyran, Faisa.**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Pérez, Amparo**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Porta, Joan**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Tur, Ana**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Sánchez, Anabel**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Vicente, Rosario**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Vicente, Lara**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Vidal, Ana**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

**Dr. Novoa, Emma**

- ◆ Degree in Medicine and Surgery
- ◆ Doctor Specialist in Anesthesiology, Resuscitation and Pain Therapy
- ◆ Attending Physician
- ◆ La Fe i Politècnic University Hospital Valencia, Spain

# 04

## Structure and Content

The syllabus structure has been designed by a team of professionals who understand the implications of medical training in anesthesia procedures for the critically ill, aware of the relevance of current training and committed to quality teaching through new educational technologies.



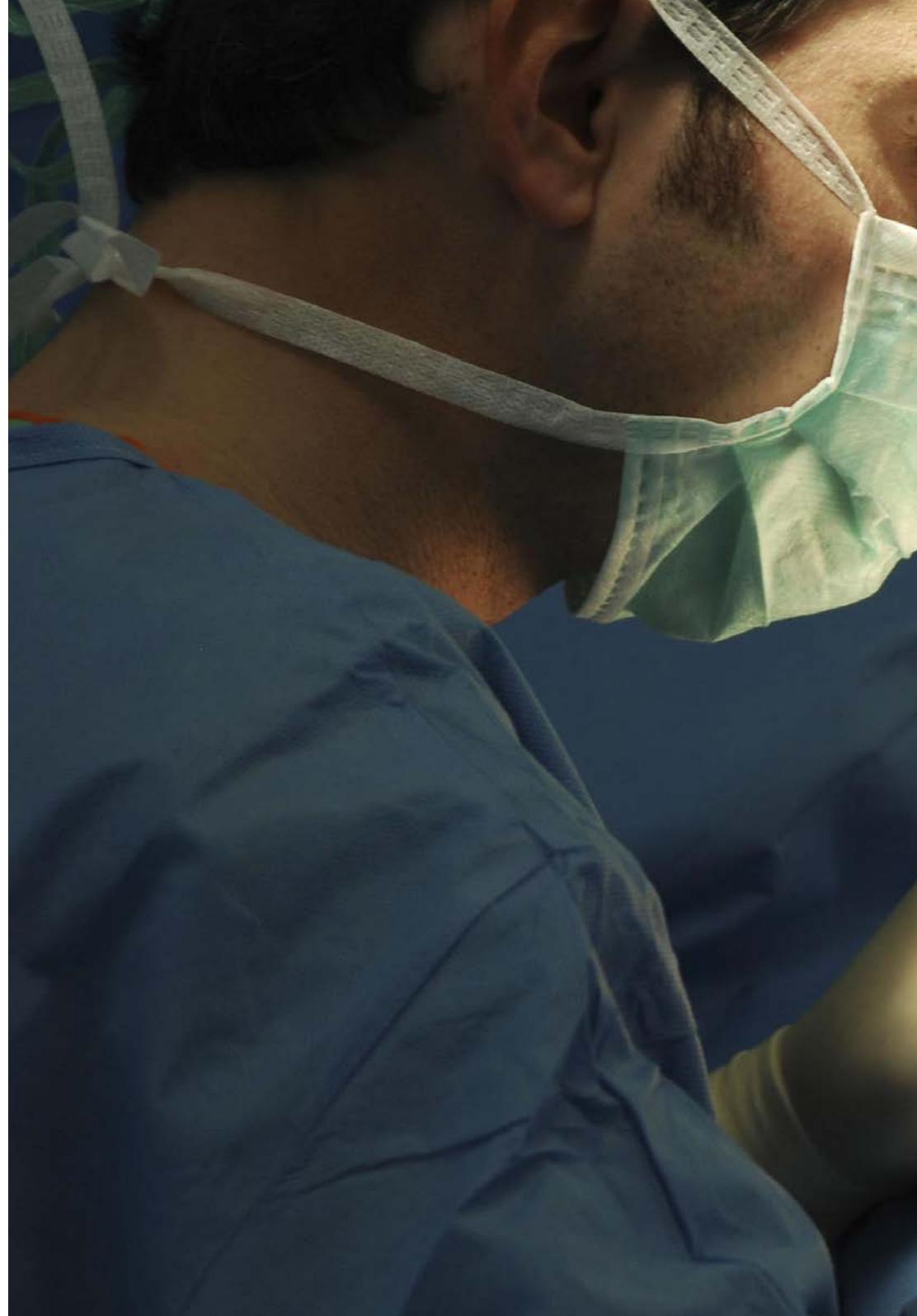


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*This Postgraduate Certificate in Critical Patients is the most complete and up-to-date scientific program on the market”*

## Module 1. Latest Advances in the Critically Ill Patient

- 1.1. Approach to the Neurocritical Patient
- 1.2. Management of the Patient with Acute Respiratory Insufficiency (ARI)
- 1.3. Syndromes of Adult Respiratory Distress (ARDS)
- 1.4. Approach to the Patient in a Situation of Cardiogenic Shock
- 1.5. Congenital Heart Disease in Adults
- 1.6. Right Ventricular Dysfunction and Pulmonary Hypertension
- 1.7. Hemorrhagic Shock Patient Management
- 1.8. Enteral and Parenteral Nutrition in the Critically Ill Patient
- 1.9. Infections in the Critically Ill Patient
- 1.10. Sepsis and Septic Shock
- 1.11. Acute (IRA) and Chronic Kidney Failure (IRC)
- 1.12. Multi-Organ Donor Maintenance
- 1.13. Comprehensive Approach to the Polytraumatized Patient
- 1.14. Comprehensive Approach to Severe Burn Patients
- 1.15. Comprehensive Approach to Cardiac Transplantation
- 1.16. Comprehensive Approach to Lung Transplantation
- 1.17. Comprehensive Approach to Hepatic Transplantation
- 1.18. Comprehensive Approach to Renal Transplantation
- 1.19. Advanced Cardiopulmonary Resuscitation





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*A unique, key, and decisive training experience to boost your professional development”*

05

# Methodology

This training program provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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 Re-learning, 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 can 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 potential 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their 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.



## Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

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 simple 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

Over 250,000 physicians have been trained using this methodology, with unprecedented success in all clinical specialties regardless of surgical load. This teaching methodology is developed in a highly demanding environment, with a university student body of high socio-economic profile and an average age of 43.5 years.

*Re-learning 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 really 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 multimedia content presentation training Exclusive system 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

The student's knowledge is periodically assessed and re-assessed throughout the program, through evaluative and self-evaluative activities and exercises: in this way, students can check how they are doing in terms of achieving their goals.



#### Classes

There is scientific evidence on the usefulness of learning by observing experts: The system termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.



#### 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 Critical Patients guarantees , in addition to the most accurate and updated training, access to a qualification issued by TECH Technological University.





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*Successfully complete this training and receive your diploma without the hassle of travel or paperwork”*

This **Postgraduate Diploma in Critical Patients** contains the most complete and updated scientific program”.

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 specify the qualification obtained through the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Certificate in Critical Patients**

Hours: **125**



\*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 quality

online training

development languages

virtual classroom

**tech** technological  
university

Postgraduate Certificate

Critical Patients

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