

# Postgraduate Diploma

## Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care





## Postgraduate Diploma Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care

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

Website: [www.techtute.com/pk/nursing/postgraduate-diploma/postgraduate-diploma-comprehensive-approach-critically-ill-patient-advanced-resuscitation-care](http://www.techtute.com/pk/nursing/postgraduate-diploma/postgraduate-diploma-comprehensive-approach-critically-ill-patient-advanced-resuscitation-care)

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# 01

# Introduction

The situations that may arise in accidents and emergencies services are undoubtedly very diverse. In this sense, the nurse may encounter from very simple cases to complex situations in which the patient is between life and death. Therefore, it is crucial that the professional is properly prepared to take on the challenges of each stage of patient care in the emergency department, from primary care to resuscitation. This is especially what this TECH program will focus on, with an additional focus on the cases of people in cardiorespiratory arrest, as well as on the ways to implement Advanced Life Support.





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*Knowing how to administer the necessary care in each of the phases the patient goes through in the emergency department is a vital competency in the nurse's curriculum”*

Hospital emergency care cannot be understood without an approach to the out-of-hospital emergency setting. Therefore, this Postgraduate Diploma, designed by TECH, will focus on an in-depth approach to both care environments, where triage will play a fundamental role in identifying those patients who are in the most serious and/or vulnerable conditions. Therefore, in this environment, the professional will learn to understand nursing as the professional group in charge of prioritization, together with the rest of the healthcare personnel, who will also have to deal with disaster situations and implement emergency plans with other non-healthcare groups.

In addition, this educational program will delve into the outcome of these complex situations, where not only will the patient have to be cared for with quality, but also to manage the aid and, in special situations, initiate rescue maneuvers. Similarly, this degree will also focus on medical transport, since Nursing professionals are continuously present during the transfer of the patient from the hostile environment in which the event takes place to the hospital itself, providing assistance and care support.

On the other hand, this program will try to go a step further and unpack the advanced life support algorithm that most health professionals are familiar with. In this sense, emphasis will be placed on those special situations where nursing actions have to be adapted, and an in-depth study will be made of those advanced procedures and techniques that are frequently performed in this environment, such as intraosseous line cannulation or the use of the capnograph. The aim of this is that the Nursing professional achieves excellence in the most critical situation for the patient, when they are in cardiorespiratory arrest, but also in the immediate aftermath.

For this reason, this Postgraduate Diploma describes in detail the post-resuscitation care that this patient should have, since its knowledge and application will be crucial for an early and quality recovery. Additionally, the ethical dilemmas involved in the management of this situation are described, with special mention of the protocol for organ donation and transplantation.

This **Postgraduate Diploma in Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The graphic, schematic and practical contents of the course are designed to provide all the essential information required for professional practice
- ♦ Exercises where the self-assessment process can be carried out to improve learning
- ♦ An algorithm-based interactive learning system, designed for decision-making for patients with nutritional problems
- ♦ 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



*Improve your knowledge in the comprehensive patient approach in Accidents, Advanced Emergencies and Disasters Nursing through this program, where you will find the best educational material with real cases"*

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*This Postgraduate Diploma is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Advanced Care and Resuscitation, you will obtain a qualification from one of the most reputable educational institutions: TECH”*

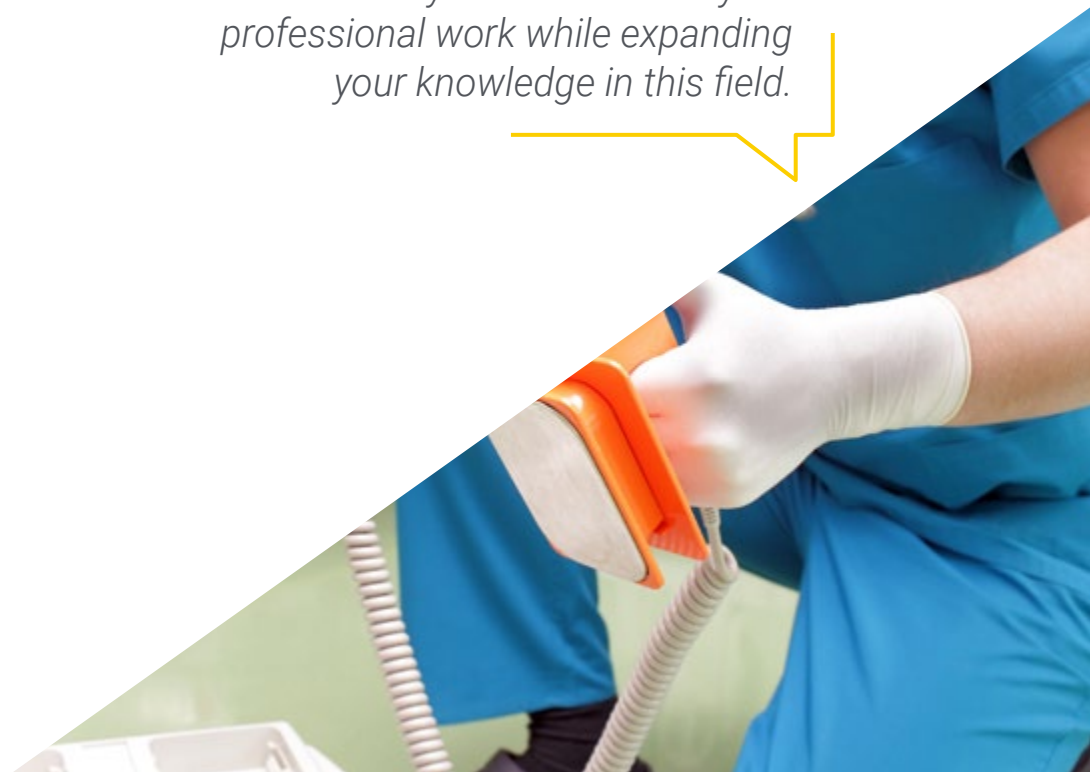
The program's teaching staff includes professionals from the fields of Medicine and Nursing, who bring their work experience to this education, as well as renowned specialists from prestigious reference societies and universities.

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 prepare in real situations.

The design of this program focuses on Problem Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and highly experienced experts in emergency nursing.

*The Postgraduate Diploma allows education through simulated environments, which provide immersive learning programmed to train for real situations.*

*This 100% online Postgraduate Diploma will allow you to balance your studies with your professional work while expanding your knowledge in this field.*



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the professional achieves in a practical and rigorous way the study of Emergencies and Advanced Disasters in the daily practice of their profession. In this sense, the Postgraduate Diploma in Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care responds to the continuous demand of professionals for quality study, which serves as a means to use the different types of approaches and treatments as a preventive or therapeutic tool in maintaining the health of their patients.







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*This refresher program will provide you with a sense of confidence in your daily work, which will help you grow both personally and professionally”*



## General Objectives

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- ♦ Prepare students to act appropriately in vital emergency situations according to internationally recognized updated protocols
- ♦ Provide accurate theoretical knowledge to be able to understand and correctly apply Basic Life Support and Advanced Life Support maneuvers and treatments
- ♦ Master the algorithms for advanced life support in both adult and pediatric patients.
- ♦ Learn the peculiarities of resuscitation in special situations
- ♦ Recognize the main cardiovascular diseases that are highly life-threatening
- ♦ Differentiate the multiple therapies and treatments recommended for the resolution of a heart disease event
- ♦ Identify time-dependent cardiac pathology to achieve an orderly response from the different resources involved
- ♦ Improve the necessary knowledge for the management of patients in need of advanced respiratory support
- ♦ Know the basics of mechanical ventilation, the different existing ventilatory therapies, as well as the challenges and complications that the artificial airway itself entails
- ♦ Examine alternatives to conventional mechanical ventilation through new ventilatory devices
- ♦ Delve into the advanced care applicable to a patient with a respiratory pathology



## Specific Objectives

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### Module 1. Advanced Vital Support

- ♦ Gain in-depth knowledge of life support and management of action protocols. AHA and ERC
- ♦ Know and understand the chains of survival for the optimal care of patients in different situations of imminent vital risk
- ♦ Acquire advanced knowledge of life support in the adult patient
- ♦ Acquire advanced knowledge on advanced life support in the pediatric patient
- ♦ Obtain advanced knowledge on advanced life support in special situations (pregnant women, traumatic emergencies, drowning, hypothermia and drug intoxication)
- ♦ Learn advanced knowledge on advanced life support in the SARS-CoV-2 patient
- ♦ Show the procedures performed on the CPR patient and knowledge of the most pioneering techniques
- ♦ Delve into the knowledge of the ethical-legal framework for donors
- ♦ Review on epidemiology, organization and coordination of transplant system
- ♦ Address the main bioethical and legal dilemmas faced by health professionals: no CPR and therapeutic effort limitation

**Module 2. Advanced Approach to the Patient with Heart Disease**

- ♦ Delve into the theoretical and practical knowledge of advanced electrocardiography and its applicability in clinical nursing practice
- ♦ Identify and learn the management of bradyarrhythmias Acquire knowledge and skills for patient diagnosis and management
- ♦ Identify and learn the management of Tachyarrhythmias Acquire knowledge and skills for patient diagnosis and management
- ♦ Increase knowledge on implantable devices (pacemakers, implantable Holter and ICD), identification of indications, results and complications
- ♦ Improve skills in the advanced management of cardioversion and defibrillation. Acquire knowledge and skills about the different therapeutic options: cardioversion (electrical and pharmacological) and/or defibrillation
- ♦ Delve into the knowledge of new devices and therapies for the management of patients with heart disease
- ♦ Identify and classify atherosclerotic disease: angina, SCASET, NSTEACS. Approach ACS and identify the management of the "Heart Attack Code" action protocol

**Module 3. Advanced approach to the patient with respiratory pathology**

- ♦ Develop advanced theoretical knowledge of respiratory physiology and fundamentals of mechanical ventilation
- ♦ Identify and recognize the main peculiarities and differences between spontaneous breathing and mechanical ventilation
- ♦ Delve into the pathophysiological concepts of gas exchange and respiratory mechanics related to respiratory failure
- ♦ Identify the main pathological ventilatory patterns
- ♦ List existing devices for advanced airway management (supraglottic devices, Fastrach laryngeal mask, Combitube, etc.)
- ♦ Define the Difficult Airway, both anticipated and emergent, main aspects of its detection and management strategy through recommended algorithms
- ♦ Review the phases of Rapid Sequence Intubation (RSI)
- ♦ Acquire advanced knowledge on the different methods of invasive mechanical ventilation, as well as the different ventilatory methods
- ♦ Delve into advanced knowledge of noninvasive mechanical ventilation modalities, their parameters and alarms
- ♦ Demonstrate new ventilation devices and therapies in the emergency patient
- ♦ Identify the main complications of mechanical ventilation and advanced management of the respiratory patient
- ♦ Acquire advanced knowledge in individualized and quality care for the respiratory patient as a basis for excellence in care

# 03

# Course Management

The program includes in its teaching staff reference to specialists in Nursing of Accidents and Emergencies and other related areas, who bring their years of work experience to this training program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner. All of this, with the aim of providing nurses with the most complete information and contents of the educational panorama so that they can practice their profession with greater guarantees of success.



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*Learn from leading professionals, the latest advances in procedures in the field of nursing practice in each and every one of the phases that an emergency patient goes through”*

## Management



### Ms. Souto Novas, Ana María

- ♦ Nurse Emergency Supervisor at La Paz University Hospital
- ♦ Admission Nurse at La Paz University Hospital
- ♦ Master's Degree in Integration and Critical Problem Solving in Nursing from the University of Alcalá
- ♦ Postgraduate Diploma in Management and Nursing Services Leadership given by the School of Health Sciences
- ♦ Postgraduate Diploma in Accidents and Emergencies from the Complutense University of Madrid
- ♦ Postgraduate Certificate in Nursing from the Pontificia University of Salamanca



### D. Ruiz López, Daniel

- ♦ Nurse specialized in Nursing Services Direction and Management
- ♦ Nursing Supervisor in the Adult Emergency Department of La Paz University Hospital of Madrid
- ♦ Diploma in Nursing (D.U.E.), University School of Nursing, Cordoba
- ♦ Master's Degree in Nursing Management. Cardenal Herrera University
- ♦ University Expert in Nursing in the Hospital Emergency Department. Cardenal Herrera University
- ♦ University Expert in Management Skills for Nursing. Cardenal Herrera University
- ♦ University Expert in Quality Management for Nursing. Cardenal Herrera University
- ♦ University Expert in Management and Services Supervision for Nursing. Cardenal Herrera University
- ♦ University Expert in Direction and Management of Health Services for Nurses. Cardenal Herrera University
- ♦ Instructor of Instructors and Auditors in Triage Manchester. Spanish Triage Group
- ♦ Triage System Training Course. Spanish Triage Group



## Professors

### Dr. Estebaranz Santamaría, Cristina

- ◆ Nurse and Researcher
- ◆ Nurse at the Adult Emergency Department of La Paz University Hospital
- ◆ Associate Professor of Nurses, Autonomous University of Madrid
- ◆ Main advisor for Nursing Clinical internships at the Autonomous University of Madrid
- ◆ PhD in Medicine and Surgery from the Autonomous University of Madrid.
- ◆ Graduate in Nursing from the Autonomous University of Madrid.
- ◆ Master's Degree in Accidents, Emergencies and Critical Nursing Care given by the European University of Madrid

### D. Galbis Palma, Alejandro

- ◆ Nurse at the Adult Emergency Department of La Paz University Hospital
- ◆ Postgraduate Certificate in Nursing
- ◆ Postgraduate Certificate in Nursing Application of Techniques in Accident and Emergency Care
- ◆ Postgraduate Certificate in Nursing Interventions in Disaster Situations
- ◆ Postgraduate Certificate in Instrumentalized Life Support
- ◆ Postgraduate Certificate in Intravenous Therapy and PICC Implantation

**D. García Garrido, Miguel Ángel**

- ◆ Nurse of the Adult Emergency Department of La Paz University Hospital
- ◆ University Diploma in Nursing
- ◆ Master's Degree in Health Emergency and Disasters given by the University of León
- ◆ Master's Degree in Critical Illness and Emergencies given by the University of Barcelona
- ◆ Master's Degree in Clinical Research given by the University of Barcelona
- ◆ Postgraduate Certificate in Advanced Life Support
- ◆ Postgraduate Certificate in Trauma Advanced Life Support
- ◆ Postgraduate Certificate in Basic and Advanced CPR in Pediatrics

**Ms. Gómez Lage, Laura**

- ◆ Nurse at the Adult Emergency Department of La Paz University Hospital
- ◆ Degree in Nursing from the Complutense University of Madrid
- ◆ Expert in Nursing Processes and Interventions for Pediatric Patients in Life-Threatening Situations by FUDEN and the Catholic University of Avila
- ◆ Expert in Emotional Development and Parenting by FUDEN and Catholic University of Avila
- ◆ Basics of Accident and Emergency Nursing by FMAE
- ◆ Emergencies in the Institutionalized Patient Care by the Puerta de Hierro Majadahonda University Hospital
- ◆ Pharmacology Residency in Accident and Emergency Care by FUDEN
- ◆ Nursing Care of the Healthy Newborn by FMAE
- ◆ Frequently Used Drugs by Diffusion Nursing Advances







**Ms. Peinado Quesada, María Angustias**

- ◆ Nurse at the Adult Emergency Department of La Paz University Hospital
- ◆ Nurse in the Intensive Care Unit of St Helier Hospital (London)
- ◆ Nurse in the Heart Unit of La Paz University Hospital
- ◆ Nurse in the Intensive Care Unit of La Paz University Hospital
- ◆ Full Professor at the Autonomous University of Madrid
- ◆ Diploma in Nursing from the Autonomous University of Madrid.
- ◆ Master's Degree in Assessment and Management of the Critically Ill Patient by St. George's University (London)
- ◆ Expert in Advanced Mechanical Ventilation for Nurses from ST George's University
- ◆ Expert in Accident Emergency and Critical Care Nursing Care by FUDEN
- ◆ American Heart Association BLS/AVS Instructor

04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities of the national territory, aware of the relevance of current education in order to prevent, detect and intervene in those situations in which the patient may come to the emergency department and require specific attention. All this, with the aim of educating nurses who are much more competent and prepared to care for patients with different symptomatology in Accident and Emergency Departments both in and out-of-hospital.



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*This Postgraduate Diploma in Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care contains the most complete and up-to-date scientific program on the market”*

### Module 1. Advanced Vital Support

- 1.1. Introduction to Life Support
- 1.2. Advanced Life Support in Adults
- 1.3. Advanced Pediatric Life Support
- 1.4. Life Support in Special Situations
- 1.5. Advanced Life Support in the Patient with SARS-CoV-2 Infection
- 1.6. Advanced CPR Procedures and Techniques
- 1.7. Post-Resuscitation Care
- 1.8. Organ and Transplants Donation
- 1.9. Ethical Dilemmas and Legal Framework

### Module 2. Advanced Approach to the Patient with Heart Disease

- 2.1. Electrocardiography
- 2.2. Bradyarrhythmias
- 2.3. Tachyarrhythmias
- 2.4. Other Alterations in Electrical Conductivity
- 2.5. Implantable Devices
- 2.6. Cardioversion and Defibrillation
- 2.7. Mechanical Devices and other Therapeutic Techniques
- 2.8. Acute Coronary Syndrome. The Heart Attack Code





### Module 3. Advanced approach to the patient with respiratory pathology

- 3.1. Respiratory Physiology and Mechanical Ventilation
- 3.2. Gas Exchange Alterations
- 3.3. Advanced Airway Management
- 3.4. Difficult Airway
- 3.5. Potentially Severe Respiratory Pathology
- 3.6. Invasive Mechanical Ventilation
- 3.7. Non-Invasive Mechanical Ventilation
- 3.8. Update on Ventilatory Therapies
- 3.9. Advanced Nursing Care of the Respiratory Patient

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

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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, 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, in an attempt to recreate the real conditions in professional nursing 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. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.



*The nurse will learn through real cases and by solving 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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 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.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, 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 them as many times as you want.



### 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 suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



**Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



# 06 Certificate

The Postgraduate Diploma in Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care 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 Diploma in Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care** 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 certificate 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 Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care**

Official N° of Hours: **450 h.**



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





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# Postgraduate Diploma

## Comprehensive Approach to the Critically Ill Patient and Advanced Resuscitation Care

