Postgraduate Diploma

Advanced Cardiovascular Support in Intensive Care Medicine

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Postgraduate Diploma

Advanced Cardiovascular Support in Intensive Care Medicine

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

Website: **www.techtitute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-advanced-cardiovascular-support-intensive-care-medicine**

Index

01

Introduction

It is difficult for the emergency department not to be a basic and critical point of reference for health systems. And in the case of hemodynamically unstable patients in the intensive care unit, maintaining a level of excellence is an even greater challenge. Ongoing training of the specialists who care for them is essential to ensure the quality of care. This program includes the latest advances in life support.

New scenarios in intensive care medicine push us to propose new training programs that meet the real needs of experienced professionals, so that they can incorporate advances in patient life support"

Cardiorespiratory arrest of origin is one of the leading causes of death in the Western world, and there is sufficient evidence to demonstrate that early recognition of the situation, activation and appropriate response of emergency systems, and early initiation of CPR maneuvers and defibrillation can reduce mortality and its sequelae. In the case of the intensive care unit, the rapid care procedure is not very different, although sufficient human and technological resources are available to improve the patient's prognosis significantly.

The survival of hemodynamically unstable patients depends to a great extent on the response of the professionals who attend and manage them in the critical care units, with the use of appropriate technology and scientific evidence in the establishment of therapeutic procedures.

This Postgraduate Diploma is designed to facilitate the updating of diagnostic and therapeutic procedures in the specialist in the critical patient, in order to know the advances in Advanced Life Support and to be able to improve decision making, thus increasing life expectancy and patient prognosis.

Scientific evidence increases the quality of medical care. Staying up-to-date is key to providing better care for patients in life-threatening emergencies due to major trauma in the intensive care unit"

The **Postgraduate Diploma in Advanced Cardiovascular Support in Intensive Care Medicine** contains the most complete and updated scientific program on the market. The most important features of the program include:

- Contains Clinical cases presented by experts. The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice.
- New diagnostic and therapeutic developments in the care of the hemodynamically unstable patient.
- Presentation of practical workshops on procedures, diagnostic and therapeutic techniques in Life Support.
- Video lessons on differentpathologies and how to approach them.
- Algorithm-based interactive learning system for decision-making in the presented clinical situations.
- 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.

This Postgraduate Diploma may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in advanced cardiovascular support in intensive care medicine, you will obtain a Postgraduate Diploma from TECH Technological University"

Its teaching staff includes specialists of recognized prestige in emergencies and emergencies, who bring the experience of their work to this training.

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 physician must try to solve the different professional practice situations that arise during the course. For this purpose, the physician will be assisted by an innovative interactive video system developed by renowned experts in the field of emergency medicine with extensive teaching experience.

Increase your decision-making confidence by updating your knowledge with this Postgraduate Diploma course

Do not miss the opportunity to update your knowledge in Advanced Cardiovascular Support in Intensive Care Medicine to increase the quality of your patient care.

02

Objectives

The Postgraduate Diploma is oriented towards a review of the main aspects of the management of the hemodynamically unstable patient, based on scientific evidence and the experience of renowned professionals in the field of intensive care medicine.

The main objective of the program is the development of the theoretical and practical learning of the physician, in order to develop the necessary skills to establish the appropriate diagnosis and treatment in each case, and to exercise the correct medical care in the procedures.

This refresher program will generate a sense of security when practising medicine, which will help you grow both personally and professionally"

General objective

- - Be up-to-date with the procedures to deal with the vital emergencies faced by specialists in the intensive care unit, helping them to make decisions with agility and precision in hemodynamically unstable patients

Specific objectives

- Incorporate bioethics in decision making in emergency and catastrophic care procedures
- Determine the main medical advances in the analysis of tachyarrhythmias and bradyarrhythmias, and their therapeutic indication
- Update drug infusion procedures and routes of administration in the critically ill patient
- Describe the main aspects of intubation in pediatric and neonatal patients
- Point out new developments in the updated procedures of medical care in advanced life support in the severe trauma patient
- Review the main physiological parameters of the adult and child, and the most frequently used categories in emergency medicine
- Identify the fundamentals of emergency health care
- Describe advances in hemodynamic and neurological status monitoring, as well as address electrocardiography and sedoanalgesia in the critically ill patient

- Determine the main novelties in the management of mechanical ventilation, invasive and non-invasive, orotracheal intubation (OTI) and oxygen therapy
- Update on ultrasound-guided techniques in the critically ill patient, thoracentesis and pericaridocentesis,
- Establish the differences in medical action in emergencies, emergencies and catastrophes
- Review the procedure for rapid sequence intubation in the critically ill patient
- Use the clinical history in emergency medicine and integrate the most relevant legal and ethical aspects in emergency medical care
- Prioritize, organize and manage patient care in the most efficient way through triage
- Incorporate communication skills to medical performance in cardiovascular emergency situations
- Review the procedures for dose calculation in pharmacotherapy in advanced life support in the critically ill patient
- Update the main aspects of the basic operation of the emergency coordination center
- Identify the equipment and the communication systems in an EMS
- Describe the concept of continuity of care and hospital transfer
- Associate the updated techniques of basic and advanced CPR in all ages
- Review the latest advances in the correct use of the automatic external defibrillator
- Update recommendations on the application of neonatal cardiopulmonary resuscitation maneuvers
- Identify the main novelties in the management of drugs frequently used in emergency medicine
- Develop advanced life support techniques according to new international guidelines and recommendations

03

Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in good medical practice in pediatrics, aware of the relevance of training to be able to act before the pediatric patient and committed to quality teaching through new educational technologies.

The Postgraduate Diploma in Advanced Cardiovascular Support in Intensive Care Medicine contains the most complete and updated scientific program on the market"

Module 1. Intensive Care Unit Management

1.1. Patient Safety.
- 1.1.1. Quality Culture.
- 1.1.2. Event Notification.
- 1.1.3. Tools to Improve Patient Safety (SWOT, FMEA, RCA).

1.2. ICU Without Walls.
- 1.2.1. Early Detection Systems for the Critically Ill Patient in the Hospital.
- 1.2.2. Intensive Care Intervention Outside the ICU.
- 1.2.3. Experience and Results of a Proposed Model.

1.3. Information Systems.
- 1.3.1. Electronic Medical Record in the ICU.
- 1.3.2. Components of EHR in the ICU.
- 1.3.3. EHR as an Assistance and Management Tool.

1.4. Humanization in the ICU.

1.5. Quality and Excellence in the ICU.
- 1.5.1. Quality Models.
- 1.5.2. The FQM Model.
- 1.5.3. The Quality Group in the ICU.

1.6. Prognosis in the ICU.
- 1.6.1. Scales for Prognostic Assessment.
- 1.6.2. Usefulness for Clinical Decision Making.

1.7. The Family of the Critically Ill Patient.
- 1.7.1. Communicating Bad News.
- 1.7.2. Families in ICUs.
- 1.7.3. Participation in Care.

1.8. ICU at the End of Life.
- 1.8.1. Therapeutic Effort Limitation
- 1.8.2. Decision not to Resuscitate.
- 1.8.3. Rule Out Admission to ICU (Futility).

Module 2. Cardiovascular Disorders in the Patient

2.1. Current Hemodynamic Monitoring: from SwanGanz to the Present Day.
- 2.1.1. Fundamentals of Hemodynamic Monitoring.
- 2.1.2. Current Utility of SwanGanz in Intensive Care Medicine.
- 2.1.3. Minimally Invasive Hemodynamic Monitoring.
- 2.1.4. Practical Approach to Hemodynamic Monitoring.

2.2. Current Management of Acute Heart Failure and Cardiogenic Shock.
- 2.2.1. Pharmacological Treatment.
- 2.2.2. Mechanical Assistance: Balloon Counterpulsation and Ventricular Assist Devices.
- 2.2.3. Etiological Treatment

2.3. Role of Echocardiography in the Hemodynamic Management of the Critically Ill Patient.
- 2.3.1. Preload Assessment.
- 2.3.2. Assessing Ventricular Function.
- 2.3.3. The Echocardiogram in Severe Cardiology Patients.
- 2.3.4. Echocardiogram in the Non-Cardiologic Critically Ill Patient.

2.4. Key Points in Today's Postoperative Cardiac Surgery.
- 2.4.1. Coronary Revascularization Surgery.
- 2.4.2. Valve Replacement Surgery.

2.5. Current Management of Acute Coronary Syndrome (ACS).
- 2.5.1. ACS Without ST Elevation.
- 2.5.2. ACS With ST Elevation. The Heart Attack Code.
- 2.5.3. Complications of Acute Myocardial Infarction in the Acute Phase.

2.6. Arrhythmias in ICU.
- 2.6.1. Bradyarrhythmias
- 2.6.2. Tachyarrhythmias

2.7. Key Points in Acute Aortic Pathology.
- 2.7.1. Aortic Dissection
- 2.7.2. Aortic Aneurysms.

2.8. Use of Blood Derivatives in Critically Ill Patients.
- 2.8.1. Transfusion Policy.
- 2.8.2. Critical Hemorrhage.
- 2.8.3. Assessment of Coagulation in Critically Ill Patients.

2.9. New Anticoagulants.
- 2.9.1. Dabigatran.
- 2.9.2. Rivoraxaban.
- 2.9.3. Apixaban.
- 2.9.4. Indications, Advantages, Disadvantages and Reversal.

2.10. Venous Thromboembolic Disease.
- 2.10.1. Prevention in Critically Ill Patients.
- 2.10.2. Treatment in the ICU.

2.11. Adult Extracorporeal Membrane Oxygenation (ECMO).
- 2.11.1. Devices.
- 2.11.2. Indications.

Module 3. Update on Cardiopulmonary Resuscitation (CPR) in Intensive Care Medicine

3.1. Cardiopulmonary Resuscitation Algorithm.
- 3.1.1. Key Points in the Basic and Advanced CPR Algorithm.
- 3.1.2. Review of the 2015 ERC Recommendations.
- 3.1.3. CPR Teaching.

3.2. Management of Post-Resuscitation Syndrome.
- 3.2.1. Hypothermia.
- 3.2.2. Supportive Therapy.
- 3.2.3. Protocol Proposal.

3.3. Neurological Damage after Cardiopulmonary Resuscitation. Management and Prognostic Assessment.
- 3.3.1. Clinical Assessment.
- 3.3.2. Complementary Tests.

Module 4. Respiratory Management of Critically Ill Patients

4.1. Difficult Airway. Current Management Strategies.
- 4.1.1. Difficult Airway Management Techniques.
- 4.1.2. Protocol Proposal.

4.2. Alternatives to Conventional Mechanical Ventilation in ARDS.
- 4.2.1. Support Pressure.
- 4.2.2. Airway Pressure Release Ventilation (APRV).
- 4.2.3. Extracorporeal Membrane Oxygenation.

4.3. Disconnection of Mechanical Ventilation.

4.4. Prevention of Pneumonia Associated with Mechanical Ventilation.
- 4.4.1. Pharmacological Strategies.
- 4.4.2. Selective Digestive Decontamination.
- 4.4.3. Zero Pneumonia Project..

4.5. Non-Invasive Mechanical Ventilation: Indications.

4.6. Acute Respiratory Distress Syndrome.

4.7. Recruitment Strategies Based on Increased Airway Pressure.

04

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

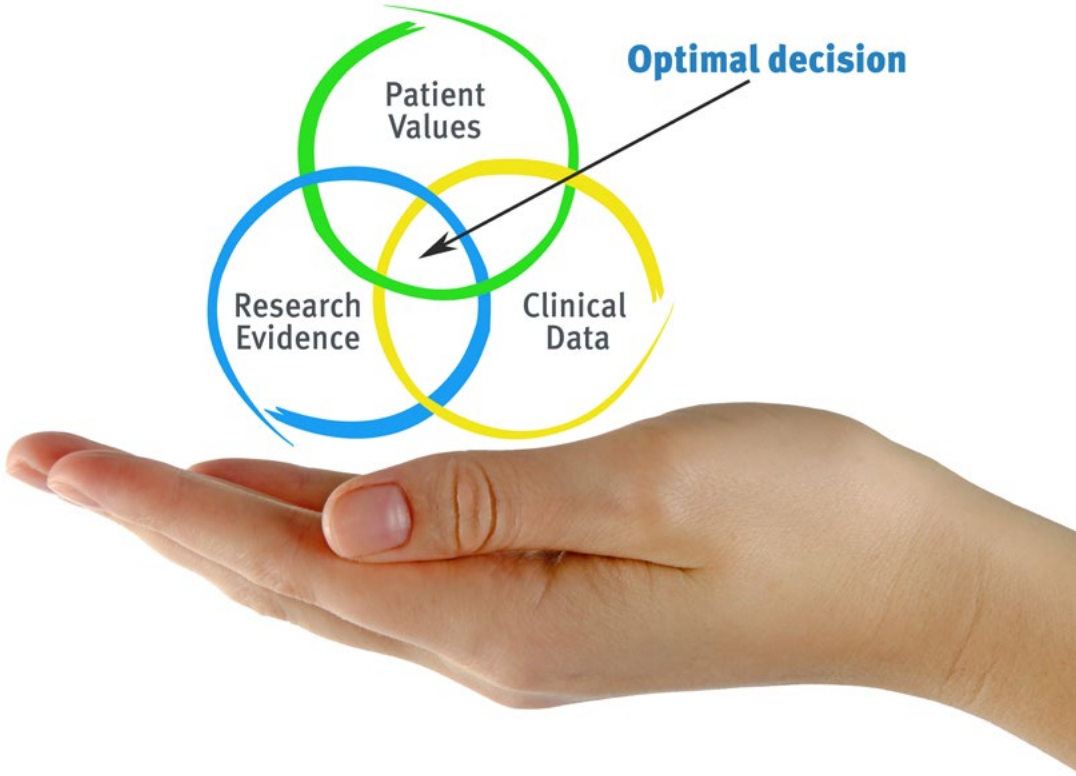
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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.

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:

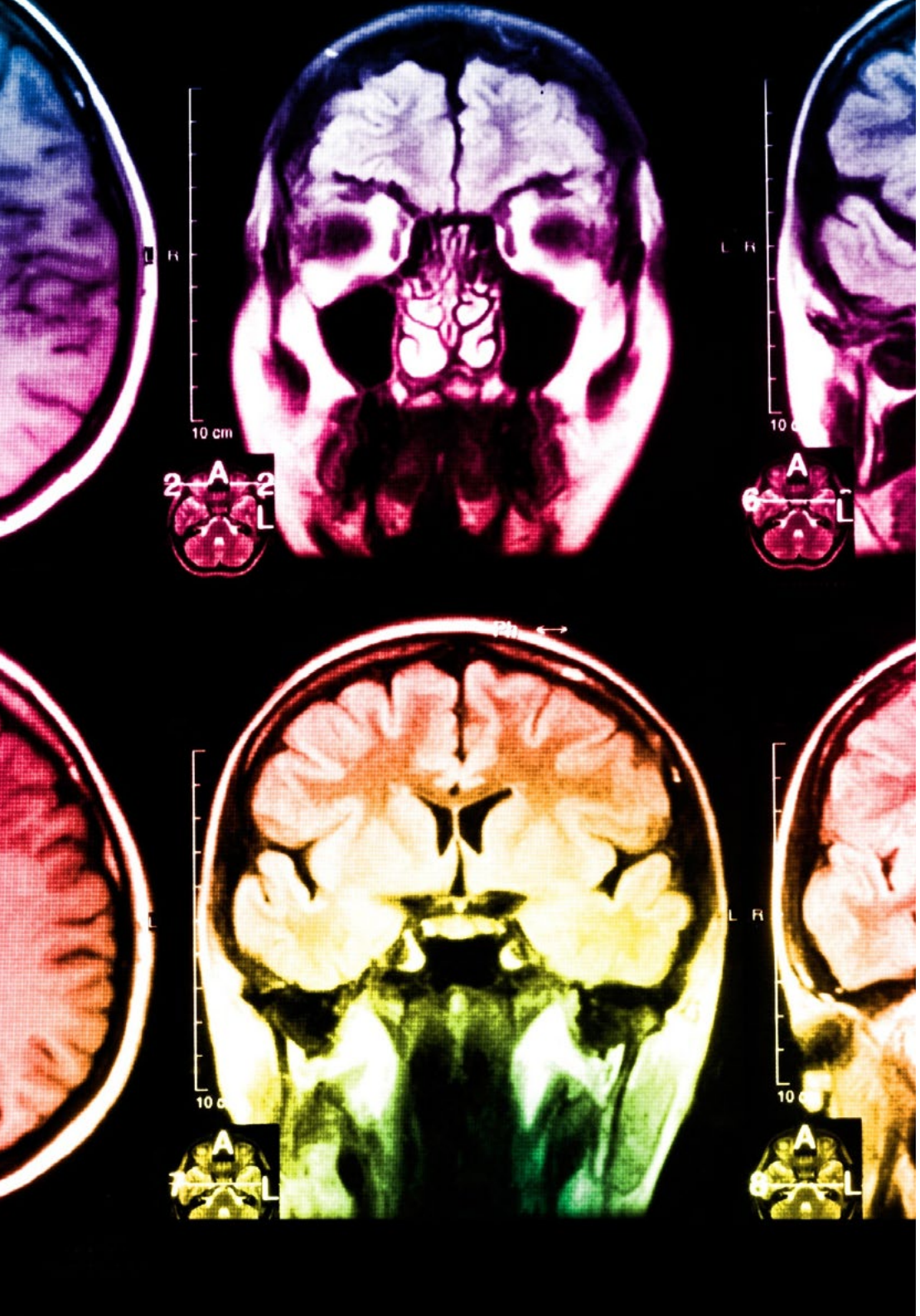
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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.

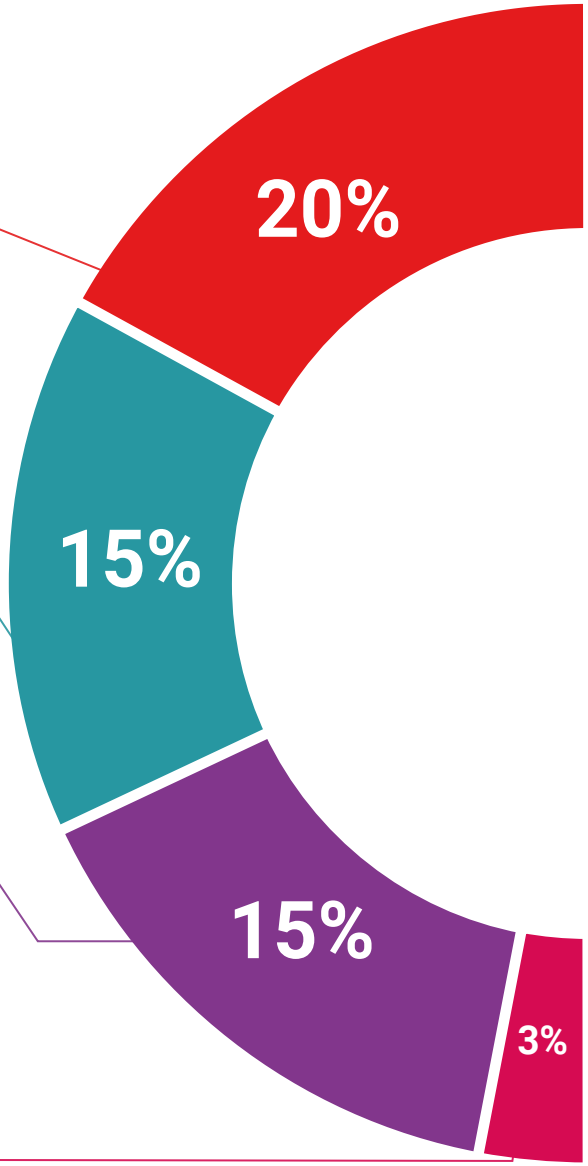
Interactive Summaries

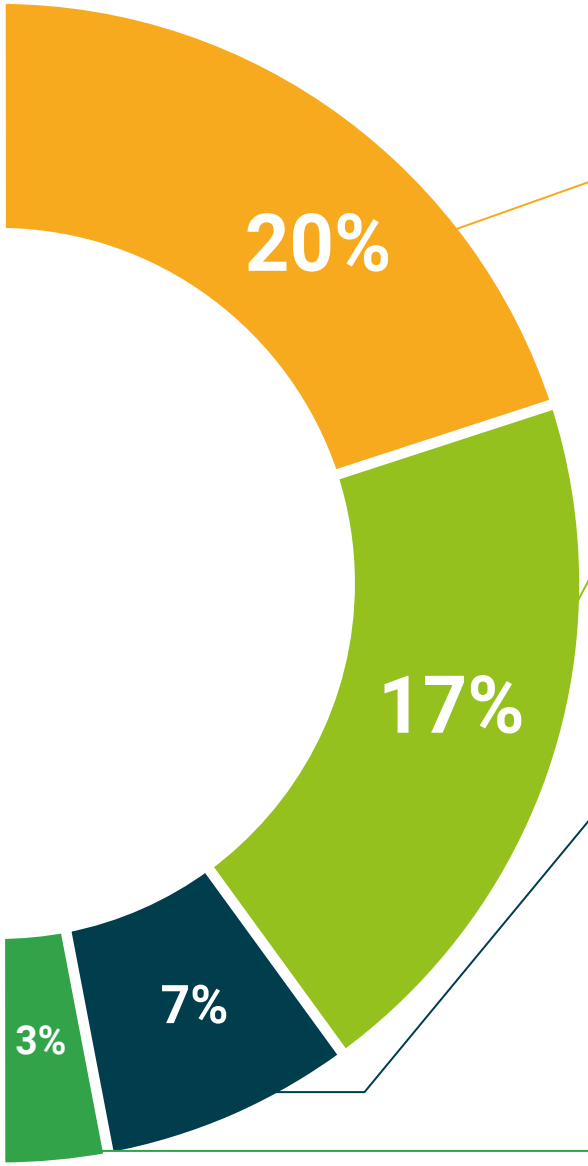
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

05

Certificate

The Postgraduate Diploma in Advanced Cardiovascular Support in Intensive care medicine guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.

Successfully complete this training and receive your university degree without travel or laborious paperwork"

The **Postgraduate Diploma in Advanced Cardiovascular Support in Intensive Care Medicine** contains the most complete and updated scientific program on the market.

After the student has passed the evaluations, they will receive by mail their corresponding **Postgraduate Diploma** issued by TECH Technological University via tracked delivery.

The certificate issued by **TECH Technological University** , specifies the qualification obtained through the Postgraduate Diploma course, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Advanced Cardiovascular Support in Intensive Care Medicine**
Official Nº of hours: **500 h.**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Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.
For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE
in

Advanced Cardiovascular Support in Intensive Care Medicine

This is a qualification awarded by this University, equivalent to 1,500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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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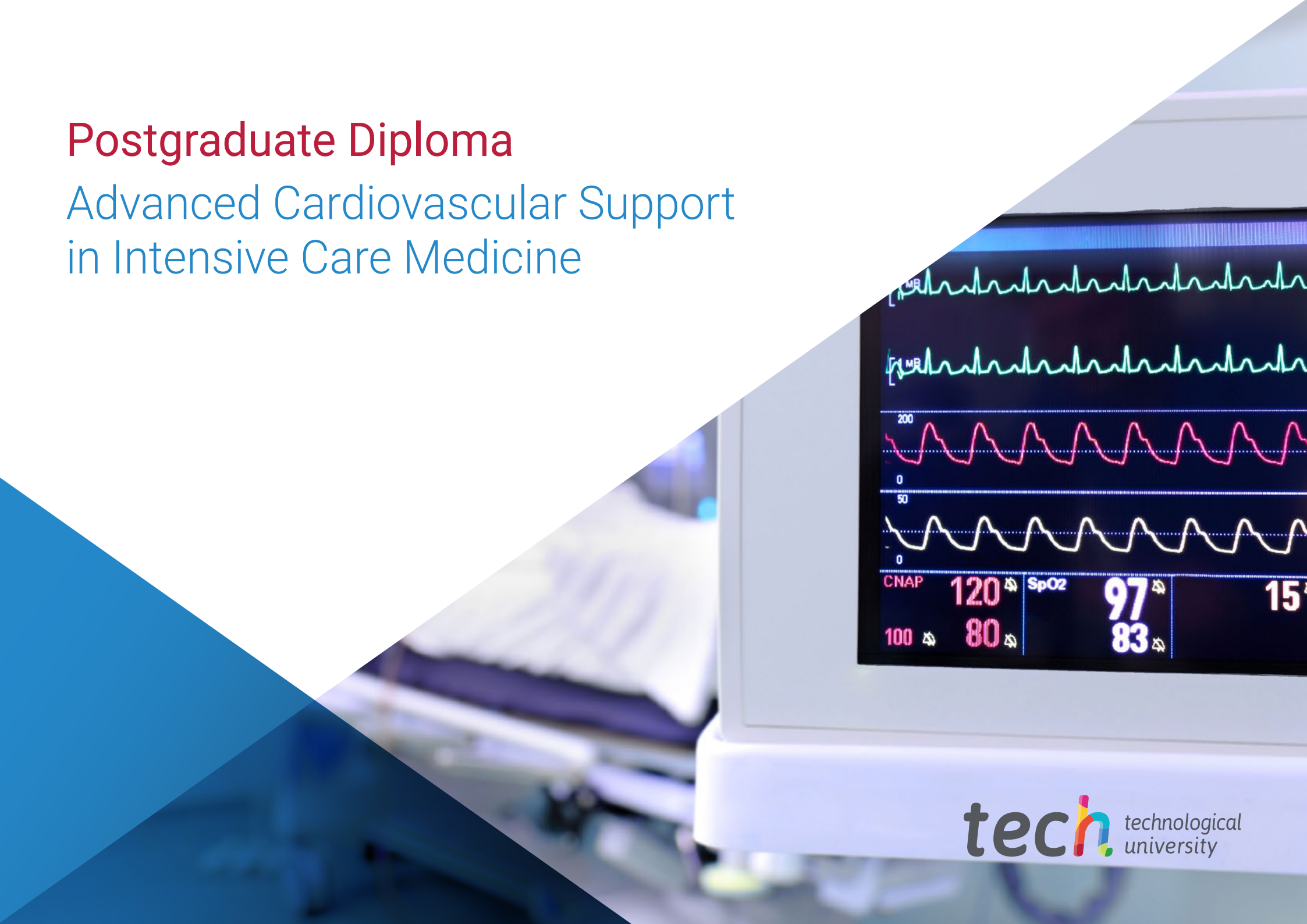

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