

# Postgraduate Certificate

Technological Advances in Advanced  
Life Support for Nursing



## Postgraduate Certificate Technological Advances in Advanced Life Support for Nursing

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nursing/postgraduate-certificate/technological-advances-advanced-life-support-nursing](http://www.techtute.com/us/nursing/postgraduate-certificate/technological-advances-advanced-life-support-nursing)

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# 01

# Introduction

With the high demand for emergency care, it is imperative that nurses have a basic understanding of Advanced Life Support. As patient survival can change in a matter of minutes, these professionals have a responsibility to provide comprehensive care and be prepared to address the occurrence of secondary conditions or complications. In this regard, it is important that they are familiar with both the operation and application of state-of-the-art equipment and technologies in this healthcare field. For this reason, TECH implements a university program that will address these innovations to optimize advanced critical care. In addition, the program is delivered in a convenient 100% online mode to provide greater flexibility.





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*Through this Postgraduate Certificate, based on Relearning, you will be aware of the latest technological trends in Advanced Life Support and therefore optimize your care to Critical Patients”*

The role of nurses in Advanced Life Support is critical in providing high quality care and improving outcomes for users in critical situations. These professionals play a key role in identifying vital signs, assessing consciousness and determining the severity of events. In this way, they are able to implement measures ranging from oxygen administration or mechanical ventilation to medication administration. In this context, the technological advances that have occurred in this health field offer numerous benefits and facilitate the provision of high quality care in emergency scenarios.

Aware of this, TECH has developed a revolutionary program in Technological Advances in Advanced Life Support for Nursing. In this way, graduates will keep abreast of technological developments and the latest guidelines in the management of users in serious conditions. To this end, the academic itinerary will delve into the use of mechanical assistance materials, detailing their respective typologies and indications. At the same time, the academic materials will provide the keys for graduates to make the most of cutting-edge instruments such as Echocardiography, Biomarkers or Extracorporeal Circulation devices. The syllabus will also delve into the approach of the FEER Protocol, used to guide professionals in the evaluation and treatment of individuals in critical situations.

Regarding the methodology of the university program, TECH employs the revolutionary educational system of Relearning. This system is based on the repetition of the key concepts of the syllabus, ensuring that graduates understand the content and that it lingers in their minds. To access the Virtual Campus, all you need is an electronic device connected to the Internet. Therefore, they will be able to enjoy the most complete, updated and dynamic educational resources in the academic market.

This **Postgraduate Certificate in Technological Advances in Advanced Life Support for Nursing** contains the most complete and up-to-date scientific program on the market.

The most important features include:

- ♦ The development of case studies presented by experts in Advanced Life Support and Monitoring in the Critical Patient for Nursing
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable 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



*A syllabus designed to renew your knowledge in a real scenario, with the maximum scientific rigor of an institution at the forefront of technology”*

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*Do you want to keep up with the latest technological trends in Advanced Life Support? Achieve it with this program in just 6 weeks”*

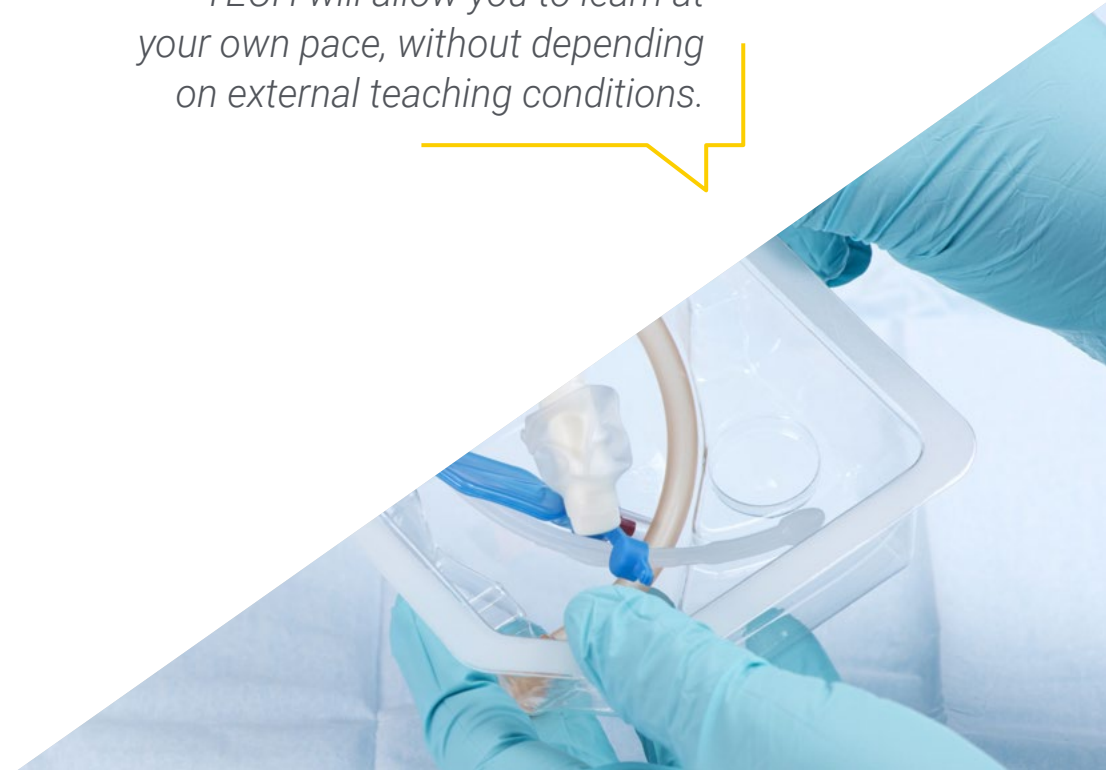
The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing program, as well as renowned specialists from leading societies and prestigious universities.

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

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will incorporate into your daily practice the most advanced Real Time Feedback Devices to obtain valuable information about your patients' condition, such as their blood pressure.*

*The Relearning system used by TECH will allow you to learn at your own pace, without depending on external teaching conditions.*



# 02 Objectives

Through this program, graduates will have an up-to-date understanding of Technological Advances in the field of Advanced Life Support for Nursing. Professionals will develop practical skills in the use of advanced technologies used in Critical Care situations. In this way, they will facilitate the highest quality care that minimizes patients' risk of complications. In turn, nursing staff will foster interprofessional collaboration to ensure the overall safety of users.





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*This university program will make you a more complete nurse, prepared to successfully face the current challenges of Advanced Life Support”*



## General Objectives

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- ♦ Generate curiosity for the use and incorporation of technological advances in Advanced Life Support for Nursing
- ♦ Compile the most widely used technological advances
- ♦ Substantiate the need for further exploration of new technological advances
- ♦ Examine the advantages of technological advances in Advanced Life Support





## Specific Objectives

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- ◆ Develop different diagnostic imaging protocols for Nursing
- ◆ Determine ultrasound-guided techniques for Nursing
- ◆ Evaluate the use of mechanical equipment during the performance of Advanced Life Support
- ◆ Examine the importance of the development of telecare in Advanced Life Support



*Update your knowledge through educational materials in a variety of formats that will enhance your academic experience, including interactive summaries and specialized readings”*

# 03

# Course Management

In its philosophy of offering first class university programs, TECH brings together in this Postgraduate Certificate a teaching team specialized in Advanced Life Support and Critical Patient Monitoring. These professionals have worked in hospitals of international prestige, where they have contributed to the recovery of patients in critical situations.

In addition, they keep abreast of the latest trends in these areas to provide excellent quality care. All this makes them more than authoritative voices for both the design and delivery of this educational experience, which will expand the employment horizons of graduates.



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*The teaching team of this program is made up of experts in Advanced Life Support, who will provide you with the most professionally applicable knowledge in this area”*

## Management



### Dr. Ramirez Torres, Carmen Amaia

- ♦ Nurse of the Intensive Care Unit at the San Pedro University Hospital
- ♦ Nurse of the Intensive Care Unit at the Hospital Viamed Los Manzanos
- ♦ Radiodiagnostic Nurse at Alliance Medical
- ♦ Nurse at the Residence for Elderly People of La Rioja
- ♦ Nurse in Gynecology and Obstetrics Operating Room at La Paz University Hospital
- ♦ Doctor in Nursing Sciences by the University Jaume I of Castellón
- ♦ Master's Degree in Management and Direction of Nursing Units from the University of La Rioja
- ♦ Master's Degree in Surgical Nursing, Medical Practice Group
- ♦ Graduate in Nursing from the Autonomous University of Madrid

## Professors

### Ms. Giménez Luzuriaga, Marta

- ♦ Emergency Nurse at SES 061 La Rioja
- ♦ Nurse Assistant in Helicopter Emergency Medical Service (HEMS)
- ♦ Hospital Nurse in the Aragonese Health Service
- ♦ CPR-DESA Instructor
- ♦ University Diploma in Traffic Accidents: Emergencies, Resuscitation and Medical Transport by the University of Zaragoza
- ♦ University diploma in Emergency Health Care from the Public University of Navarra
- ♦ Diploma in Nursing from the University of Zaragoza

### Ms. Oserín Pérez, María Teresa

- ♦ Nurse of the 061 Service for Urgencies and Health Emergencies of the Community of La Rioja.
- ♦ Nurse at Policlínico Riojano Nuestra Señora de Valvanera
- ♦ Nurse at the Hospital of La Rioja
- ♦ University Diploma in Nursing from the University of La Rioja
- ♦ Member of: Professional College of Nursing, Spanish Society of Emergency Medicine (SEMES)



**Ms. Martín Parra, Marta**

- ◆ Nurse in ICU and Resuscitation Unit, Hospital Viamed Santa Elena
- ◆ Nurse in the Digestive Endoscopy Unit of the Hospital Universitario 12 de Octubre
- ◆ Intensive Care Nurse at the Hospital Universitario de Cruce
- ◆ Cardiovascular and Thoracic Surgery Operating Room Nurse, Cruces University Hospital
- ◆ Intensive Care Nurse at the Alcorcón Foundation University Hospital
- ◆ Primary Care Nurse in different Primary Care centers in the Community of Madrid
- ◆ Intensive Care Nurse at Quirónsalud Madrid University Hospital
- ◆ Nurse in the Intermediate Coronary Care Unit of la Princesa University Hospital
- ◆ Nurse in the Post-Surgical Intensive Care Unit of la Paz University Hospital
- ◆ Nurse in the Intensive Care Unit of the Ramón y Cajal University Hospital
- ◆ Nurse in the Hospitalization Unit of the CEMTRO Clinic
- ◆ Master's Degree in Critical Care at Rey Juan Carlos University
- ◆ Certified in Basic Life Support in Extracorporeal Membrane Oxygenation (ECMO)
- ◆ Degree in Nursing from the Autonomous University of Madrid



*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

# Structure and Content

This university program will provide nurses with a solid understanding of the theoretical and practical principles of Advanced Life Support. To this end, the academic itinerary will delve into the operation of the most innovative technological tools for Critical Care (among which echocardiograms or endovascular balloons stand out). Likewise, graduates will acquire skills to carry out Teleassistance processes and provide remote assistance in health emergencies such as diabetes. In line with this, the didactic materials will delve into the FEER Protocol so that professionals can provide the best possible care to users who suffer cardiac arrest.







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*The skills you will acquire after completing this Postgraduate Certificate will significantly optimize your care for patients in emergency situations”*

## Module 1. Technological Advances in the Management of Advanced Life Support for Nursing

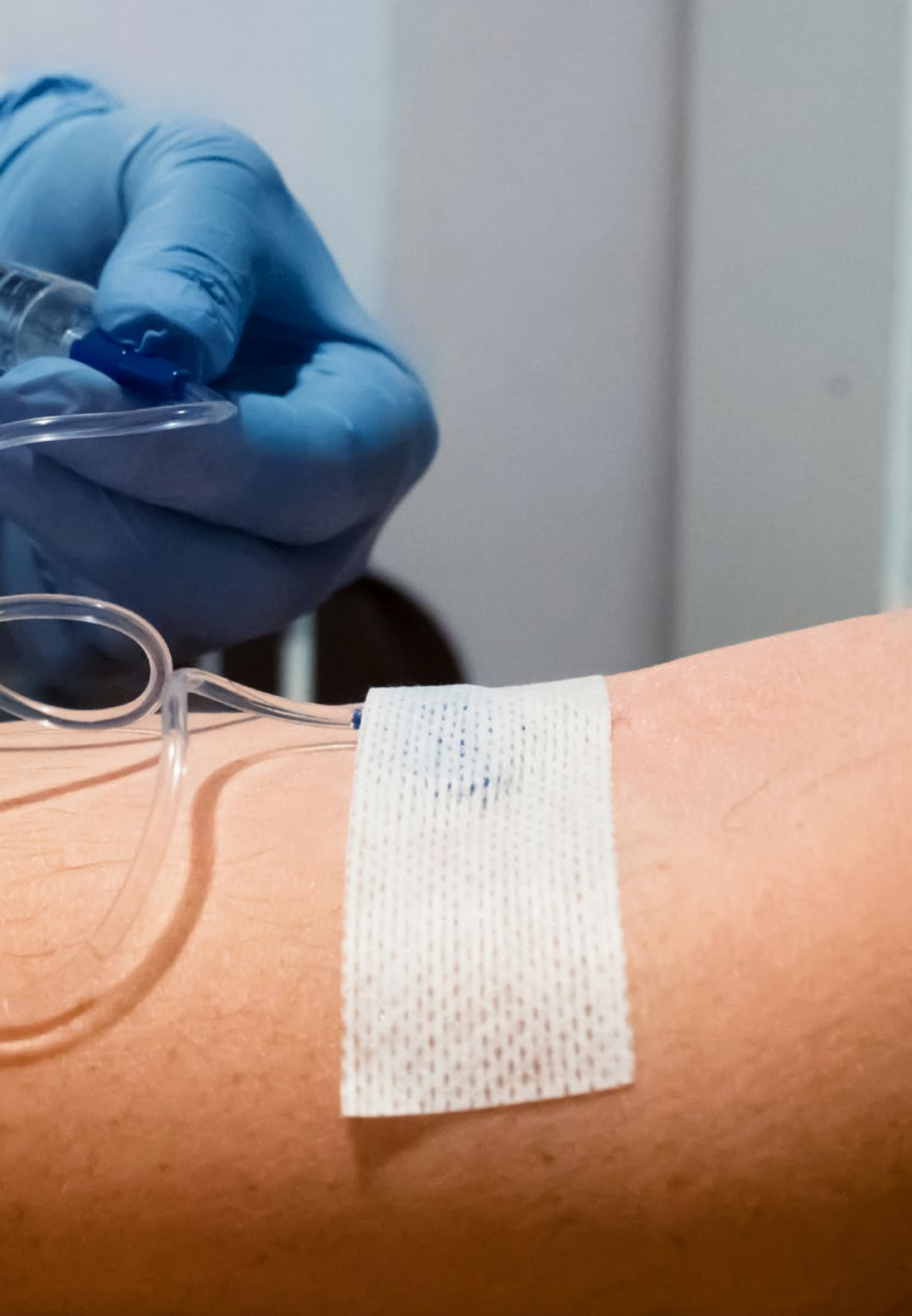
- 1.1. Use of Echocardiography for Vascular Access Cannulation for Nursing
  - 1.1.1. Use of Ultrasound
  - 1.1.2. Indications
  - 1.1.3. Technique for Nursing
- 1.2. Use of the Echocardiogram in Advanced Life Support for Nursing
  - 1.2.1. Indications
  - 1.2.2. Diagnostic Phase for Nursing
  - 1.2.3. Advanced Diagnostic Phase for Nursing
- 1.3. Technologies in Advanced Life Support for Nursing
  - 1.3.1. Surgical Monitoring
  - 1.3.2. Use of Endovascular Intra-Aortic Balloon Resuscitation (REBOA)
  - 1.3.3. Use of Extracorporeal Circulation Devices (ECMO) in AVR
- 1.4. Prediction of Neurological Outcome after CRA for Nursing
  - 1.4.1. Imaging Tests
  - 1.4.2. Use of Biomarkers
  - 1.4.3. Electroencephalogram: Evoked Potentials
- 1.5. FEER Protocol for Nursing
  - 1.5.1. Diagnostic Phase
  - 1.5.2. Resuscitation Phase
  - 1.5.3. Resuscitation or Prognosis Phase
- 1.6. Use of Transesophageal Echocardiography for Nursing
  - 1.6.1. Indications
  - 1.6.2. Technique
  - 1.6.3. Basic Interpretation for Nursing
- 1.7. Echocardiography Protocols in Advanced Life Support for Nursing
  - 1.7.1. Rapid Ultrasound in Shock (RUSH)
  - 1.7.2. Focused Echocardiographic Evaluation in Life Support (FEEL)
  - 1.7.3. Cardiac Arrest Ultrasound Exam (CAUSE)
  - 1.7.4. Extended Focused Assessment with Sonography in Trauma (E-FAST)
  - 1.7.5. Basic Lung Ultrasound Examination (BLUE)



- 1.8. Mechanical Aids during Advanced Life Support for Nursing
  - 1.8.1. Use and Evolution
  - 1.8.2. Indications and Types
  - 1.8.3. Results Obtained
- 1.9. Teleassistance for Advanced Life Support for Nursing
  - 1.9.1. The Role of Nursing
  - 1.9.2. Use and Indications
  - 1.9.3. Results for Advanced Life Support
- 1.10. Other Technological Advances for Nursing
  - 1.10.1. Real-Time Feedback Devices
  - 1.10.2. Use of Unmanned Aerial Vehicles
  - 1.10.3. Video Recordings



*Take advantage of the opportunity and get up to date with the latest trends in Technological Advances in Advanced Life Support. Enroll now!"*



# 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. 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, 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.

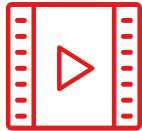
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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 adapted in 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

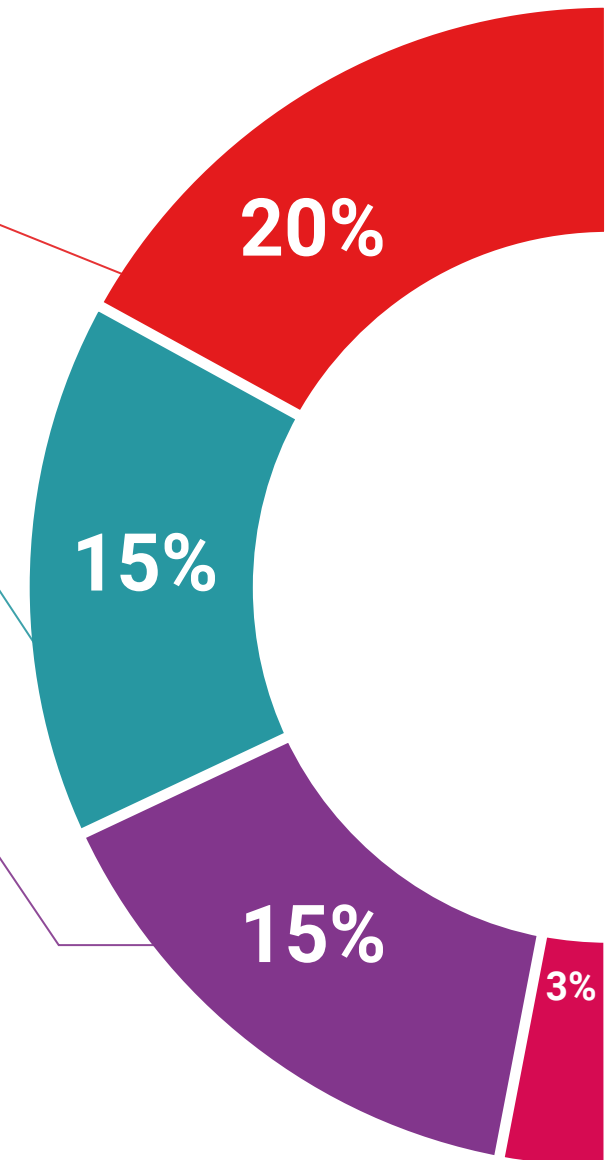
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

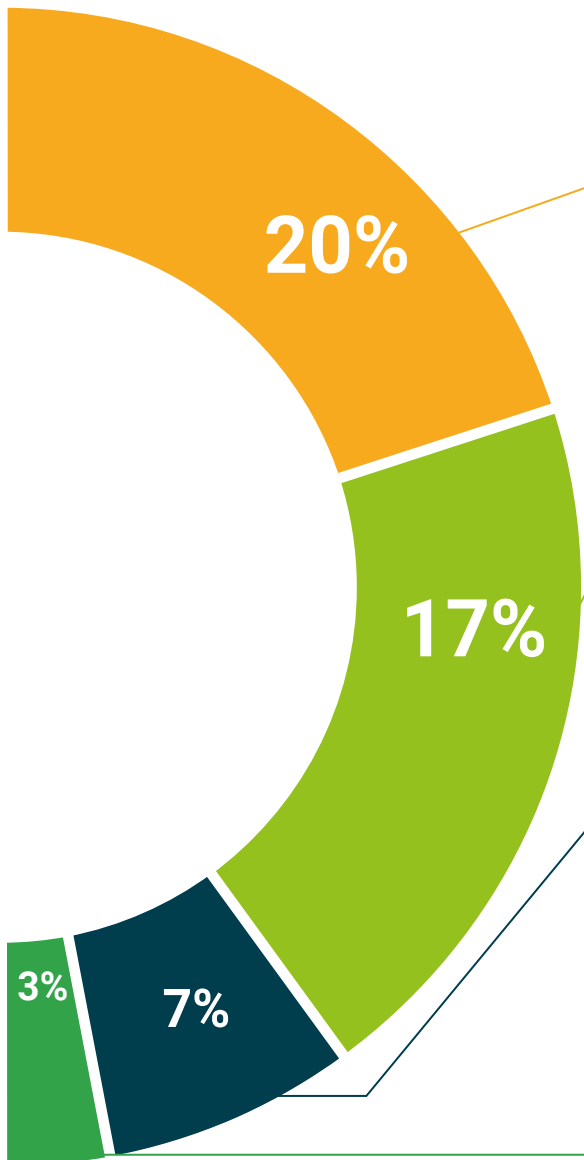
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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

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 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 Certificate in Technological Advances in Advanced Life Support for Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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

This private qualification will allow you to obtain a **Postgraduate Certificate in Technological Advances in Advanced Life Support for Nursing** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Technological Advances in Advanced Life Support for Nursing**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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**Postgraduate Certificate**  
Technological Advances in  
Advanced Life Support for Nursing

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