





## Hybrid Master's Degree **Emergency Nursing**

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

Accreditation: 60 + 4 ECTS

Website: www.techtitute.com/us/nursing/hybrid-master-degree/hybrid-master-degree-emergency-nursing

## Index

02 03 Why Study this Hybrid Introduction **Objectives** Skills Master's Degree? p. 4 p. 8 p. 12 p. 18 06 05 **Course Management Educational Plan Clinical Internship** p. 24 p. 32 p. 38 80 Where Can I Do the Clinical Methodology Certificate Internship? p. 44 p. 48 p. 56





## tech 06 | Introduction

Nursing professionals in emergency units or who must attend to people in disaster situations must have extensive skills to make appropriate decisions in a matter of seconds.

A fundamental knowledge that must also incorporate advances in life support devices, in the detection of diseases or in patient safety, whether pediatric or adult.

A scenario that leads to professionals involved and with great interest in being aware of the advances made in this field to improve and expand their skills in the care provided, especially in critical moments. In this sense, TECH has created a university program that provides nursing professionals with the most advanced and recent knowledge through a 100% online syllabus and a practical internship in a first class hospital center.

In this way, through multimedia content, you will learn about the progress made in emergency services, medical transport, severe trauma care, emergency pharmacology and the main diagnostic and therapeutic techniques in emergencies. All this, in addition to a syllabus that can be easily accessed from any electronic device with an Internet connection

At the same time, the university program has a prestigious teaching staff, among which a specialist of international relevance stands out. This expert will deliver 10 Masterclasses throughout the syllabus that will allow graduates to update their competencies and skills in the most rigorous way.

The culmination of this program will come with the completion of a clinical internship of 120 hours of professional practice in a first level hospital center in the care of patients in the Emergency Department. In addition, in this journey, the nurse will be accompanied by a professional specialized in this field, who will show the latest advances achieved in the care of patients who require immediate intervention of health professionals, as well as the challenges faced by coronavirus infections.

This **Hybrid Master's Degree in Emergency Nursing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of more than 100 clinical cases presented by nursing professionals with expertise in Emergencies
- The graphic, schematic, and practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- Patient assessment and monitoring in cardiovascular, respiratory, neurological or digestive emergencies
- Comprehensive systematized action plans for the main conditions in emergency units
- Presentation of practical workshops on procedures, diagnosis, and treatment techniques in critical patients
- Algorithm-based interactive learning system for decision-making in the presented clinical situations
- Practical clinical guides on approaching different pathologies
- With a special emphasis on evidence-based medicine and research methodologies in Emergencies
- 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
- Furthermore, you will be able to carry out a clinical internship in one of the best hospital centers



You will have the privilege of enjoying an intensive 3-week internship, where you will acquire all the knowledge to grow personally and professionally"

In this Hybrid Master's Degree, of a professionalizing nature and blended learning modality, the program is aimed at updating nursing professionals who develop their functions in Emergency Departments, and who require a high level of qualification. The content is based on the latest scientific evidence and is organized in a didactic way to integrate theoretical knowledge into nursing practice. The theoretical-practical elements allow professionals to update their knowledge and help them to make the right decisions in patient care.

Thanks to the multimedia content, developed with the latest educational technology, nursing professionals will benefit from situated and contextual learning, i.e., a simulated environment that will provide immersive learning 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, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

This Hybrid Master's Degree will take you to delve into the latest developments on the challenges in prevention and diagnosis of coronavirus infections.

You are just one click away from updating your knowledge through the Hybrid Master's Degree in Emergency Nursing, in a practical way and adapted to your needs.







## tech 10 | Why Study this Hybrid Master's Degree?

#### 1. Updating from the latest technology available

The new technological devices used for patient resuscitation, diagnostic imaging or localization of people in disaster situations have improved the care activity of nursing professionals. This is why TECH brings students in this university program closer to the latest cutting-edge technology used in the most innovative hospital centers.

#### 2. Gaining in-depth knowledge from the experience of top specialists

In this university program TECH has gathered an excellent team of professionals with extensive experience in the practice of care in emergency services and participation in the care of patients in disasters. In the practical phase, students will also have a highly qualified nursing professional who will accompany them at all times and will show them the most notable advances in this field.

#### 3. Entering first-class clinical environments

This Hybrid Master's Degree introduces the nursing professionals to real situations from the very beginning, in which they must have the most recent knowledge on the management of patients in emergency situations. For this purpose, TECH provides clinical case studies and a clinical internship, which will allow you to apply all the concepts covered in the theoretical phase. And all this in just 12 months.





## Why Study this Hybrid Master's Degree? | 11 tech

#### 4. Combining the best theory with state-of-the-art practice

In this university program, this educational institution moves away from the pedagogical methodology based on long hours of study and memorization. On this occasion, it offers nursing professionals a disruptive updating concept, based on a 100% online theory and a 100% on-site practical phase. In this way, students will conclude this program increasing their capacity to face the most demanding procedures in Emergency and Disaster situations.

#### 5. Expanding the boundaries of knowledge

With this Hybrid Master's Degree, TECH gives the opportunity to expand the frontiers of knowledge to health professionals, who will expand their skills through the instruction of nurses with extensive experience in first class hospital centers. In this way, students will have an unrepeatable opportunity to keep abreast of innovations in Emergency Nursing from the hands of the best experts.







## tech 14 | Objectives

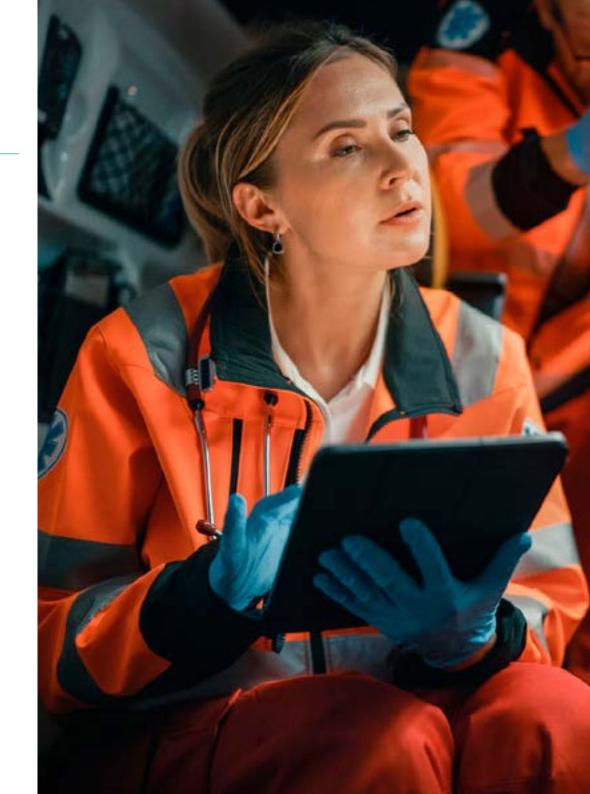


## **General Objective**

• The general objective of the Hybrid Master's Degree in Emergency Nursing is to ensure that the professional updates the diagnostic and therapeutic procedures of the specialty in an exclusively practical way, through the most complete theoretical contents of the field and a hospital internship designed with clinical and academic rigor, under the guidance of renowned professionals in a hospital center of the highest scientific quality and technological innovation. In this Hybrid Master's Degree the professional will address the main interventions of the specialists, which will allow them to improve and enhance their skills in the medical care of their patients in emergency situations



You are looking at an immersive program that will generate a sense of confidence in the performance of nursing practice in emergency situations and serious pediatric emergencies"







## **Specific Objectives**

#### Module 1. Overview

- Differentiate between the concepts of emergencies, accidents and disasters
- Identify the fundamentals of emergency health care
- Apply clinical and non-clinical professional skills in emergencies
- Define the structure and organization of the accident and emergency services
- Use medical records in the emergency department and understand the most relevant legal and ethical aspects of health care in emergencies

#### Module 2. Hospital Emergency Services

- Prioritize, organize and manage patient care in the most efficient way through triage
- Understand the basic workings of an emergency coordination center
- Incorporate the criteria for selecting the most appropriate mode of medical transport in daily practice

#### Module 3. Emergency Services and Healthcare Transport

- Describe the main characteristics of medical transport, its pathophysiology and the different EMS transport devices
- Analyze the risk management of transport for patients and staff
- Identify the equipment and the communication systems in an EMS
- Describe the concept of continuity of care and hospital transfer
- Apply up-to-date basic and advanced CPR techniques for all ages

## tech 16 | Objectives

#### Module 4. Life Support

- Gain up-to-date understanding of the procedures for the use of an automated external defibrillator
- Describe and apply the procedures for neonatal resuscitation
- Gain up-to-date knowledge of the process for performing an ECG
- Interpret the electrocardiogram tracing in emergency situations

#### Module 5. Medical-Surgical Emergencies in Adults (I)

- Apply protocols for medical care in cases of heart rhythm alterations
- Identify the life-threatening pathophysiological processes
- Describe the different pathologies that cause chest pain and apply the appropriate protocols in each case
- Recognize the different signs and symptoms typical of ischemic heart disease

#### Module 6. Medical-Surgical Emergencies in Adults (II)

- Apply the specific procedures in Acute Coronary Syndrome and assess the possibility of prehospital fibrinolysis
- · Know how to address congestive heart failure and acute pulmonary edema
- Correctly use non-invasive mechanical ventilation
- Know how to address cardiac tamponade and pericardial effusion
- Describe pericardiocentesis and pericardial drainage techniques

#### Module 7. Other Emergencies

- Identify the behavior of a patient with dyspnea in the emergency room
- Gain up-to-date knowledge of processes for addressing an asthmatic patient, bronchospasm, and exacerbation of chronic obstructive pulmonary disease
- Recognize the symptoms of the main acute vascular disorders
- Treat a patient with suspected aortic dissection
- Identify the main emergency immunological pathologies and gain up-to-date knowledge of how to treat patients suffering from anaphylactic reactions
- Acquire up-to-date knowledge on how to care for intoxicated patients and injuries caused by environmental agents
- Gain up-to-date understanding of the procedures for dealing with terminal patients
- Understand the medical-legal documents and how to act in situations of gender violence and child abuse
- Identify the main emergency neurological disorders
- Describe the out-of-hospital care for neurological vascular disorders and code stroke

#### Module 8. Adult and Pediatric Severe Trauma Care

- Identify the different traumatology conditions in emergency situations
- Describe the healthcare procedures for different types of traumas and their correct application
- Specify the priority actions to be taken in polytraumatized patients
- Select the best option when mobilizing and immobilizing a trauma patient

#### Module 9. Multiple Victim Incidents and Disasters

- Organize material and human healthcare resources in multiple casualty incidents and disasters
- Implement disaster action plans with certainty
- Know the main consequences and initial handling of CBRN (Chemical Biological Radiological Nuclear) risk situations
- Explain new forms of bioterrorism
- Establish the criteria and guidelines for appropriate and efficient communication between the various agents involved in the emergency and critical care systems
- Apply teamwork, motivation, leadership and uncertainty management techniques

#### Module 10. Pharmacology of Accidents and Emergencies

- Gain up-to-date knowledge of the procedures for the use of drugs frequently used in emergency medicine
- Identify the different groups of antiarrhythmic drugs
- Describe the main pharmacokinetic and pharmacodynamic characteristics of the constituent drugs, taking into account adverse reactions and toxic effects
- Learn about and acquire skills in the different forms of preparation and administration of this type of drug, taking into account dosage, dilution, stability and compatibility

## Module 11. Diagnostic and Therapeutic Techniques in Accident and Emergency Care

- Gain up-to-date knowledge of the procedures for immediate action in cases of syncope, acute confusional syndrome, headache, coma and vertigo
- Differentiate the main causes of acute abdomen and how to manage acute abdominal pain
- Recognize the principle pathologies of the gastrointestinal tract and the related consequences

- Understand the fundamental alterations of glycemic metabolism
- Understand the main consequences of electrolyte alterations
- Describe the main acute ENT and ophthalmologic diseases
- Adequately resolve a psychomotor agitation crisis
- Categorize the risk of a self-harm attempt

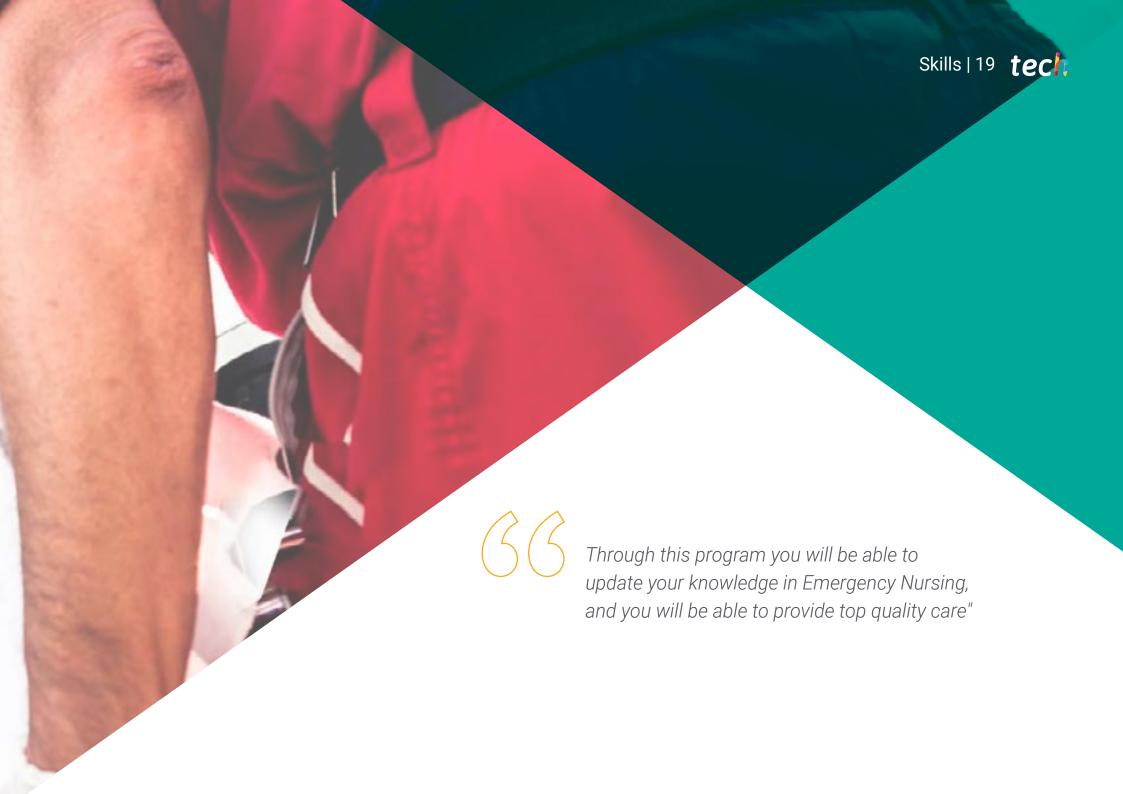
#### Module 12. Other Important Aspects in Caring for a Critically III Patient

- Identify the most common gynecological-obstetric conditions in emergency care and state the precise guidelines to correctly resolve each case
- Review the main aspects of childbirth care, previous care, basic techniques of assistance, types of presentations, and dilatation, expulsion and delivery timings
- Identify the skills needed to deliver a baby in the out-of-hospital setting
- Identify the different emergencies in the pediatric unit
- Highlight the priority actions in emergency pediatric situations
- Use general procedures and techniques applied to critical patients in emergency situations

#### Module 13. Update on Coronavirus Infections

- Know the microbiological characteristics of coronaviruses
- Know how to assess the morbidity and mortality of coronavirus infections
- Identify the main risk groups and mechanisms of coronaviruses
- Be able to perform the necessary tests for diagnosing Coronavirus
- Know how to apply the necessary preventive measures, as well as the most accurate treatments according to the type of patient





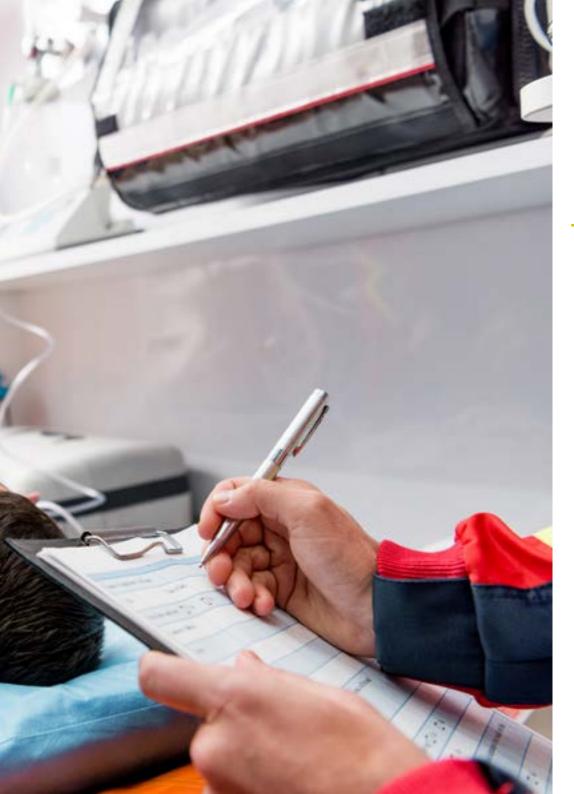
## tech 20 | Skills



#### **General Skills**

- Possess and understand knowledge that allows originality in the development and/ or application of ideas, often in a research context
- Know how to apply the acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to its area of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of student knowledge and judgments
- Know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way
- Acquire study skills that will enable further study in a largely self-directed or autonomous manner







#### **Specific Skills**

- Manage emergency health care at an advanced level and in critical situations, collaborating with other professionals and providing an appropriate response for the public
- Adopt attitudes in accordance with the code of ethics in health care both in ethical decision-making and its application
- Recognize the need to maintain your professional skills and keep them up to date, with special emphasis on autonomous and continuous learning of new information
- Develop the capacity for critical analysis and research in the professional field
- Recognize and distinguish between different accident, emergency and disaster situations
- Plan integral health care management in the process of care and recovery of critically ill patients
- Prioritize situations, resolve problems and make decisions when caring for patients in critical or emergency situations
- Analyze and interpret scientific information and draw conclusions from scientific results
- Provide comprehensive care to the person, to solve the health problems that affect them at the time of the emergency and in the immediate future, either individually or as members of a multidisciplinary team
- Understand and apply different strategies that allow an effective therapeutic relationship with patients and their family members to be established. This will help them to cope more effectively with emergency situations

## tech 22 | Skills

- Assess the risks and avoid problems associated with medical transport of a patient in a serious condition
- Successfully resolve emergency situations by selecting the most appropriate means of medical transport based on stage of development, environment, time and available resources
- Effectively implement the correct techniques, protocols and treatments in the field of basic and advanced cardiopulmonary resuscitation, in all age groups
- Interpret the electrocardiographic tracing in rhythm disturbances, cardiac arrest and cardiovascular processes related to cardiac perfusion
- Distinguish the different emergency pathological processes in adults and children
- Provide quality medical care to patients with various conditions and emergency health problems which affect a variety of organs and systems in the body
- Understand and implement primary and secondary examination techniques of a polytraumatized patient, as well as adapting the protocols to give advanced life support
- Lead in the organization and management of a MCI or disaster
- Prevent risks related to Chemical Biological Radiological Nuclear (CBRN) incidents and take all the necessary precautions when dealing with such incidents
- Through your work within a multidisciplinary team, contribute to the process of organ and tissue donation
- Safely and confidently use diagnostic aids characterized by complex technology
- Use web resources and ICT for personal and professional use
- Manage healthcare resources with efficiency and quality criteria





- Work as part of a team providing expert knowledge in the field of emergency care
- Work with patients that have been diagnosed with or present symptoms of Coronavirus, complying with all safety measures
- Perform diagnostic tests to detect possible cases of Coronavirus



Boost your career path with holistic teaching, allowing you to advance both theoretically and practically"





#### **International Guest Director**

Dr. Fadi Salah Issa has become one of the world's leading experts in the field of Emergency Medicine. For more than 20 years he has developed a tireless work in the field of Emergency Medicine.

This work stems from his role as an emergency physician at the King Faisal Specialist Hospital & Research Centre, where he implemented a new rapid care system and facility that reduced waiting times for patients. This allowed him to improve care and to attend more efficiently to complex cases of Oncology, transplant patients and congenital diseases. Thanks to his deep interest in providing the best health response to disaster situations, Salah Issa has turned his efforts to academia and research, promoting specialized and continuous education for medical professionals.

In this regard, he is the Director of Education for the Disaster Medicine Fellowship at the BIDMC Harvard Medical School. A role that joins the co-supervision of the European Disaster Medicine Thesis Board at the University of Eastern Piedmont. His impact in this area has been positive, contributing to the better preparation of healthcare workers. In addition, his concern for humanitarian work has led him to become involved in the World Association of Disaster and Emergency Medicine (WADEM) where he is chairman of the special interest group against terrorism.

In this line, his scientific studies also include his analysis of attacks on educational institutions, the prevention of post-traumatic stress and the promotion of the resilience of healthcare personnel in the event of COVID-19, anti-terrorist medicine and the analysis of variability in the training of expatriate pre-hospital providers in Bahrain.



## Dr. Salah Issa, Fadi

- Director of the BIDMC Disaster Medicine Fellowship at Harvard Medical School, Boston, USA.
- Co-supervisor of the European Board of Disaster Medicine Thesis at the University of Eastern Piedmont
- Fellowship in Disaster Medicine Research at Harvard Medical School
- Emergency Physician at King Faisal Specialist Hospital & Research Center
- Team Leader and Emergency Physician at Armed Forces Hospitals-Southern Region, Khamis Mushayt, KSA
- Bachelor of Medicine and Surgery from the University of Medicine and Pharmacology at Cariova, Romania
- Disaster Medicine and Emergency Management from Harvard Medical School Medical Doctors in BIDMC

- Master's Degree in Disaster Medicine from the University of Piemonte Orientale
- Member of: Chairman of the Counterterrorism Special Interest Group of the World Association of Disaster and Emergency Medicine (WADEM), Academia of the Faculty of Medicine of Harvard



Thanks to TECH you will be able to learn with the best professionals in the world"

#### **Guest Directors**



#### Mr. 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
- University Diploma in Nursing from the University School of Nursing of Cordoba
- Master's Degree in Nursing Management from the Cardenal Herrera University
- University Expert in Nursing in the Hospital Emergency Department from the Cardenal Herrera University
- University Expert in Management Skills for Nursing at Cardenal Herrera University
- University Expert in Quality Management for Nursing at Cardenal Herrera University
- University Expert in Management and Supervision of Nursing Services by the Cardenal Herrera University
- University Expert in Direction and Management of Health Services for Nursing by Cardenal Herrera University
- Instructor of Trainers and Auditors in Triage Manchester in the Spanish Group of Triage
- Manchester Triage System Course by the Spanish Triage Group



#### Ms. Souto Novas, Ana María

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





#### Dr. Roig D'Cunha-Kamath, Francisco Vicente

- Hospital Emergency Physician at Valencia University Clinical Hospital
- Degree in Medicine from the University of Valencia
- Specialist via MIR in Family and Community Medicine
- · Assistant Physician of the Emergency Medicine Department at the Clinical University Hospital of Valencia
- Professor of Human Anatomy at the European University of Valencia
- Physician at the Valencia Health and Community Foundation
- Doctor for the ASCIRES group

## tech 30 | Course Management

#### **Professors**

#### Ms. Forés Rivas, Ana

- Nurse in the Health and Community Foundation
- Member of the Intensive Care Unit of the Doctor Peset University Hospital
- Technical Laboratory Specialist
- Diploma in Nursing
- Diploma in Business Nursing
- Master's Degree in Prevention and Treatment of Addictive Behaviors
- Expert in Pedagogical Aptitude (CAP)

#### Ms. Gómez Lage, Laura

- \* Nurse at the Adult Emergency Department of La Paz University Hospital, Madrid
- 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 the 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. Chamizo Alberto, Leticia

- Nurse of Emergency and Internal Medicine at La Paz University Hospital
- Nurse of the Vascular, Thoracic and Abdominal Surgery Service at the Gregorio Marañon General University Hospital
- Hospitalization Nurse at the Ruber Juan Bravo Hospital Complex
- \* Transport and Care Coverage Nurse at Enfermerías Móviles Emilio SL
- Diploma in Nursing from the Autonomous University of Madrid
- University Expert in Out-of-Hospital Emergencies in the School of Health Sciences

#### Vega Vega, Luis

- Emergency Department Nurse
- Nurse at the Adult Emergency Department of La Paz University Hospital
- Nurse at HM Hospitals
- SUMMA 112 Nurse
- EPI Training Referent in Infectious Diseases at La Paz University Hospital
- Degree in Nursing from the Red Cross School
- \* Master's degree in Emergency Nursing and Emergencies from the European University
- Expert in Outpatient Nursing, Emergency and Critical Care Nursing at the European University of Madrid
- University Expert in Comprehensive Management of Adults in Infectious Diseases Care Processes in Nursing
- Ultrasound Course for Emergency Nursing
- Certified in ACLS Advanced Cardiovascular Life Support by the American Heart Association
- Member of the Red Cross ERIE Health Care

#### Dr. Balaguer Martínez, José Vicente

- Specialist in Internal Medicine at the Clinical University Hospital of Valencia
- Master's Degree in Management for the Humanization of Healthcare by EVES and CEU-San Pablo University Foundation
- \* Certificate in Emergency Medicine by the Spanish Society of Emergency Medicine
- Diploma in Clinical Services Management by IVESP
- Diploma in Human Resources Management in Health by the Valencian Institute of Public Health Studies
- Diploma in Healthcare Marketing Management by EVES
- Diploma of Specialization in Short Stay Units by EVES

#### Dr. Brasó Aznar, José Vicente

- Head of the Emergency Medicine Department at La Ribera University Hospital
- Hospital Emergency Physician
- Associate Professor of Emergency Medicine in the Faculty of Medicine of the University of Valencia



You will combine theory and professional practice through a demanding and rewarding educational approach"

# 06 Educational Plan

The success and effectiveness of the *Relearning* system has led this academic institution to use it in all its programs. For this reason, students will have before them an advanced syllabus that they will be able to go through in a natural and progressive way, thereby reducing the long hours of study and memorization. This method favors the updating of knowledge and consolidates the concepts that will be addressed on techniques and procedures used in Emergency Nursing. This study plan is completed with 120 hours of professional practice in a first level health environment and with the best specialists in this field.



## tech 34 | Educational Plan

#### Module 1. Overview

- 1.1. Definitions and Concepts
- 1.2. Comprehensive Care
- 1.3. Emergency Nursing Functions
- 1.4. Bioethics and Law in Emergencies and Disasters

#### Module 2. Hospital Emergency Services

- 2.1. Organization of Hospital Emergency Services
- 2.2. Nursing Records in the Emergency Department
- 2.3. Triage Systems in Hospitals

#### Module 3. Emergency Services and Healthcare Transport

- 3.1. SEM Organization
- 3.2. Coordination and Health Regulation
- 3.3. Emergency Information and Communication Systems
- 3.4. Types of Medical Transport
  - 3.4.1. Intrahospital Transport
  - 3.4.2. Interhospital Transport
  - 3.4.3. Ground Medical Transport
  - 3.4.4. Air Medical Transport
- 3.5. Pathophysiology of Medical Transport and Transfer Positions
- 3.6. Patient Transfer. Models

#### Module 4. Life Support

- 4.1. Overview
- 4.2. Basic Life Support and AED in Adults
- 4.3. Basic Life Support and AED in Children
- 4.4. Basic Electrocardiography and Arrhythmias

- 4.5. Advanced Life Support in Adults
  - 4.5.1. Action in Response to Bradyarrhythmias
  - 4.5.2. Action in Response to Tachyarrhythmias
  - 4.5.3. Peripartum Arrhythmia
  - 4.5.4. Advanced Airway Management
  - 4.5.5. Drug Administration Routes
- .6. Pediatric and Neonatal Advanced Life Support
  - 4.6.1. Recognition and Management of Critically III Children
  - 4.6.2. Advanced Airway Management
  - 4.6.3. Basics of Mechanical Ventilation in Pediatrics
  - 4.6.4. Infusion Routes and Drugs in Pediatric CPR
  - 1.6.5. Pediatric VAS Algorithms and Arrhythmia Treatment
- 4.7. Neonatal Resuscitation
  - 4.7.1. Post-resuscitation Stabilization and Neonatal Transport
- 4.8. Advanced Life Support in Serious Trauma Patients
- 4.9. Resuscitation in Special Cases

#### Module 5. Medical-Surgical Emergencies in Adults (I)

- 5.1. Cardiovascular Emergencies
  - 5.1.1. Anatomophysiological Review of the Cardiovascular System
  - 5.1.2. Ischemic Heart Disease
  - 5.1.3. Acute Heart Failure
  - 5.1.4. Pericarditis, Cardiac Tamponade
  - 5.1.5. Cardiac Contractility Disorders
  - 5.1.6. Heart Failure
  - 5.1.7. Vascular Emergencies
  - 5.1.8. Inflammatory-Infectious Disorders
  - 5.1.9. Aortic Dissection and Aneurism
  - 5.1.10. Hemoptysis.
  - 5.1.11. Acute Pulmonary Edema
  - 5.1.12. Deep Vein Thrombosis (DVT)
  - 5.1.13. Pulmonary Thromboembolism (PTE)
  - 5.1.14. Pulmonary Hypertension

- 5.1.15. Aortic Dissection
- 5.1.16. Hypertensive Emergencies
- 5.1.17. Shock
- 5.1.18. Acute Peripheral Vascular Disease
- 5.2. Respiratory Emergencies
  - 5.2.1. Anatomophysiological Review of the Respiratory System
  - 5.2.2. Acute Respiratory Failure
  - 5.2.3. ARDS
  - 5.2.4. Respiratory Emergencies
  - 5.2.5. Asthma and Asthmatic Status
  - 5.2.6. Bronchitis, Bronchiolitis, Pneumonia
  - 5.2.7. Pneumonia
  - 5.2.8. Exacerbation of Chronic Obstructive Pulmonary Disease
  - 5.2.9. Pleuritis and Pleural Effusion
- 5.3. Neurological Emergencies
  - 5.3.1. Anatomophysiological Review of the Nervous System
  - 5.3.2. Neurological Assessment of a Critically III Patient. Most Common Scales
  - 5.3.3. Vascular Disorders, Ictus Code
  - 5.3.4. Central Nervous System Infections
  - 5.3.5. Alterations in the Level of Consciousness: Syncope, Coma, Acute Confusional Syndrome
  - 5.3.6. Vertigo.
  - 5.3.7. Seizures and Status Epilepticus
  - 5.3.8. Intracranial Hypertension (IH)
  - 5.3.9. Acute Vascular Accident
  - 5.3.10. Inflammatory-Infectious Disorders: Meningitis, Encephalitis, Meningococcal Sepsis etc.
- 5.4. Digestive Emergencies
  - 5.4.1. Anatomophysiologic Review of the Digestive System
  - 5.4.2. Acute Abdominal Pain
  - 5.4.3. Acute Gastrointestinal Hemorrhage and Vascular Disorders
  - 5.4.4. Inflammatory-Infectious Disorders
  - 5.4.5. Mechanical Disorders of the Digestive System
  - 5.4.6 Acute Pancreatitis
  - 5.4.7. Acute Anal Disease

#### Module 6. Medical-Surgical Emergencies in Adults (II)

- 6.1. Nephrourological Emergencies
  - 6.1.1. Anatomophysiologic Review of the Genitourinary System
  - 6.1.2. Renal and Excretory System Lithiasis
  - 6.1.3. Uriniary Retention
  - 6.1.4. Inflammatory/ Infectious Disorders
  - 6.1.5. Acute Renal Failure
  - 6.1.6. Hematuria
  - 6.1.7. Acute Scrotal Syndrome: Testicular Torsion
  - 6.1.8. Urethral Pathology
- 6.2. Endocrinometabolic and Hydroelectrolytic Emergencies
  - 6.2.1. Glucose Metabolism Disorders
  - 6.2.2. Thyroid Diseases
  - 6.2.3. Acid Base Balance Disorders
  - 6.2.4. Water Balance Disorders
  - 6.2.5. Electrolyte Balance Disorders
- 6.3. Hematological, Immunilogical and Infectious Emergencies
  - 6.3.1. Thrombopenia
  - 6.3.2. Allergies and Anaphylactic Reactions
  - 6.3.3. Sepsis and Septic Shock
  - 6.3.4. Febrile Syndrome
- 6.4. Intoxications
  - 6.4.1. General Aspects of an Intoxicated Patient
  - 6.4.2. Most Common Intoxications
- 5.5. Obstetrical-Gynecological Emergencies
  - 6.5.1. Inflammatory, Infectious and Other Emergencies
  - 6.5.2. Gynecological Bleeding
  - 6.5.3. Pregnancy and Postpartum Emergencies
  - 6.5.4. Emergency Delivery Assistance
  - 6.5.5. Sexual Abuse

## tech 36 | Educational Plan

- 6.6. Psychiatric Emergencies
  - 6.6.1. Psychopathologies
  - 6.6.2. Psychomotor Agitation
  - 6.6.3. Acute Alcoholic Disease
  - 6.6.4. Self-Harm Attempt
  - 6.6.5. Anxiety Attack
  - 6.6.6. Neuroleptic Malignant Syndrome

#### Module 7. Other Emergencies

- 7.1. Pediatric Emergencies
  - 7.1.1. Infantile Colic
  - 7.1.2. Febrile Syndrome
  - 7.1.3. Seizures
  - 7.1.4. Airway Anatomy
  - 7.1.5. Exanthematous Diseases
  - 7.1.6. Digestive Pathology
  - 7.1.7. Child Abuse
  - 7.1.8. Transport of Critical Pediatric Patients
- 7.2. Otolaryngologic Emergencies
  - 7.2.1. ENT Anatomophysiological Recall
  - 7.2.2. ENT Emergencies
  - 7.2.3. Ophthalmologic Emergencies
  - 7.2.4. Skin Emergencies
- 7.3. Terminal Patient in Emergencies.
  - 7.3.1. Emergency Complications in Terminal Patients
  - 7.3.2. Attention to the Situation in the Last Few Days of a Terminal Patient's Life
  - 7.3.3. Organ Donation in Accident and Emergencies

#### Module 8. Adult and Pediatric Severe Trauma Care

- 8.1. Overview
- 8.2. Biomechanics of Accidents
- 8.3. Primary and Secondary Assessment
- 8.4. TBI
- 8.5. Thoracic Trauma
- 8.6. Abdominal Trauma
- 8.7. Vertebral Trauma and Spinal Cord Injury
- 8.8. Locomotor System Trauma and Hemorrhage
- 8.9. Injuries
- 8.10. Hypovolemic Shock
- 8.11. Pediatric Trauma
- 8.12. Trauma During Pregnancy
- 8.13. Special Traumas
- 8.14. Injuries due to Physical, Chemical and Environmental Agents
- 8.15. Bites and Stings
- 8.16. Dysbarism
- 8.17. Analgesia and Sedation
- 8.18. Mobilization and Immobilization
- 8.19. Rescue and Medical Care in Confined and Remote Places.

#### Module 9. Multiple Victim Incidents and Disasters

- 9.1. General Concepts
- 9.2. MCI and Disasters Management: Organization
- 9.3. Sectorization
- 9.4. Deployment and Logistics
- 9.5. Triage
- 9.6. Multiple Victim Care
- 9.7. Evacuation
- 9.8. MVI Management in a Hospital
- 9.9. CBRN Incidents
- 9.10. Emergency Planning

### Module 10. Pharmacology of Accidents and Emergencies

- 10.1. Overview
- 10.2. Drug Administration Routes in Accidents and Emergencies
- 10.3. Drug Administration Safety
- 10.4. Fluid Therapy
- 10.5. Most Common Drugs Used in Accident and Emergency Care
- 10.6. Formulas and Dosage Calculation

# **Module 11.** Diagnostic and Therapeutic Techniques in Accident and Emergency Care

- 11.1. Probes
- 11.2. Peripheral and Central Vein Cannulation
- 11.3. Intraosseous Route
- 11.4. Orotracheal Intubation (OTI)
- 11.5. Difficult Airway
- 11.6. Mechanical Ventilation
- 11.7 Use of Non-invasive Mechanical Ventilation
- 11.8. Pericardiocentesis
- 11.9. Thoracocentesis and Pleural Drainage
- 11.10. Ultrasound for Nurses Eco-guided Techniques
- 11.11. Electrical Therapy (MP, CV, DF)
- 11.12. Monitoring of Hemodynamic Status
- 11.13. Capnography and Pulsiometry
- 11.14. Oxygen Therapy
- 11.15. Monitoring of Neurological Status
- 11.16. Monitoring of Sedoanalgesia
- 11.17. Collecting Analytical Samples
- 11.18. Frequently Used Scales in Accident and Emergency Medicine
- 11.19. Physiological Parameters in Adults and Children

### Module 12. Other Important Aspects in Caring for a Critically III Patient

- 12.1. Patient Safety
- 12.2. Teamwork. Communication and Leadership
- 12.3. New Professional Skills in Accident and Emergency Care
- 12.4. New Technologies in Accident and Emergency Care

### **Module 13.** Update on Coronavirus Infections

- 13.1. Discovery and Evolution of Coronaviruses
- 13.2. Main Microbiological Characteristics and Members of the Coronavirus Family
- 13.3. Epidemiological Changes in Coronavirus Infections since its Discovery to Present Day
- 13.4. The Immune System and Coronavirus Infections
- 13.5. Pathogenesis and Pathophysiology of Coronavirus Infections
- 13.6. Risk Groups and Transmission Mechanisms of Coronaviruses
- 13.7. Natural History of Coronavirus Infections
- 13.8. Latest Information on Microbiological Diagnosis of Coronavirus Infections
- 13.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
- 13.10. Up-to-date Management of Coronavirus Infections
- 13.11. Future Challenges in the Prevention, Diagnosis, and Treatment of Coronavirus



Improve your skills in the management of critical situations with patients with cardiovascular emergencies thanks to this program"





### tech 40 | Clinical Internship

The Internship Program period of this Emergency Nursing program consists of a practical clinical stay, lasting 3 weeks, from Monday to Friday with 8 consecutive hours of practical training alongside a health professional with extensive knowledge in this area. This internship will allow to see real patients alongside a team of reference professionals, applying the most innovative diagnostic procedures and intervening effectively in different situations with pediatric and adult patients.

With all this, this 100% on-site and practical training is aimed at ensuring that nursing professionals are aware of the incorporation of new technologies and scientific advances in the techniques and methods used with patients who require immediate attention, either because of the severity of their injuries or because of the state of the patient's condition. A program that meets the real needs of healthcare professionals, who are looking for an update in a cutting-edge environment.

Undoubtedly, TECH offers a unique opportunity to improve skills in this area in a unique health space and surrounded by real experts who have had to deal with critical situations of Emergency and Disasters. An opportunity to integrate the most relevant advances from the hand of the best professionals.

The practical teaching will be carried out with the accompaniment and guidance of teachers and other fellow trainees who facilitate teamwork and multidisciplinary integration as transversal skills for medical practice (learning to be and learning to relate).





## Clinical Internship | 41 tech

The procedures described below will be the basis of the specialization, and their realization will be subject to the center's own availability, its usual activity and workload, the proposed activities being the following:

Module	Practical Activity
Techniques of Life Support	Use effective techniques in basic life support and AED of adults
	Perform health actions in the event of bradyarrhythmias or tachyarrhythmias
	Collaborate in advanced airway management
	Recognize and manage critically ill children who come to the emergency department
	Contribute to the stabilization and neonatal transport
Emergency medical- surgical care in adults	Attend to patients with cardiovascular diseases requiring immediate intervention
	Collaborate in the initial testing of patients with acute vascular accidents
	Assist in the diagnosis of patients with digestive system disorders
	Assist in the resolution of the main urgent complications of the terminally ill patient
Diagnostic and therapeutic techniques in Emergency Medicine	Assist in the collection of analytical samples
	Collaborate in ultrasound-guided diagnostic tests
	Perform orotracheal intubation techniques, mechanical ventilation and non-invasive mechanical ventilation management
	Monitor the patient and check the neurological status and sedoanalgesia
Use of pharmacology in Emergency Medicine	Use the latest drugs in critically ill patients requiring emergency care
	Collaborate in the route of drug administration in emergency patients
	Perform dose administration calculations
	Control drug administration procedures established by hospital protocols



### **Civil Liability Insurance**

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the Internship Program period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



### **General Conditions of the Internship Program**

The general terms and conditions of the internship agreement for the program are as follows:

- 1. TUTORIAL: During the Hybrid Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.
- **2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.
- 3. ABSENCE: If the students does not show up on the start date of the Hybrid Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

- **4. CERTIFICATION:** Professionals who pass the Hybrid Master's Degree will receive a certificate accrediting their stay at the center.
- **5. EMPLOYMENT RELATIONSHIP:** the Hybrid Master's Degree shall not constitute an employment relationship of any kind.
- **6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed
- 7. DOES NOT INCLUDE: The Hybrid Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

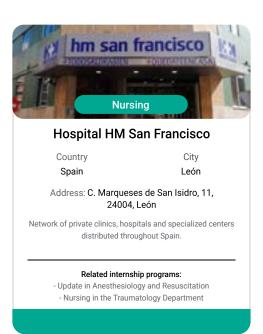
However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.





## tech 46 | Where Can I Do the Clinical Internship?

The student will be able to complete the practical part of this Hybrid Master's Degree at the following centers:



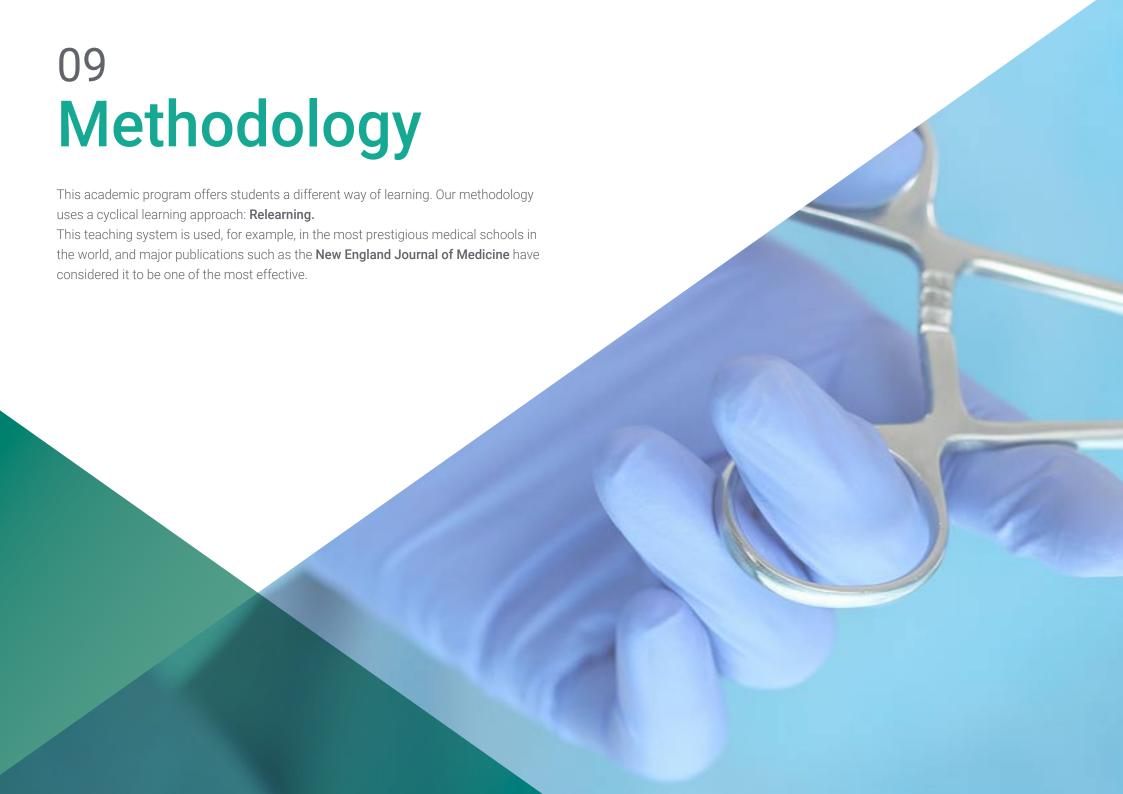


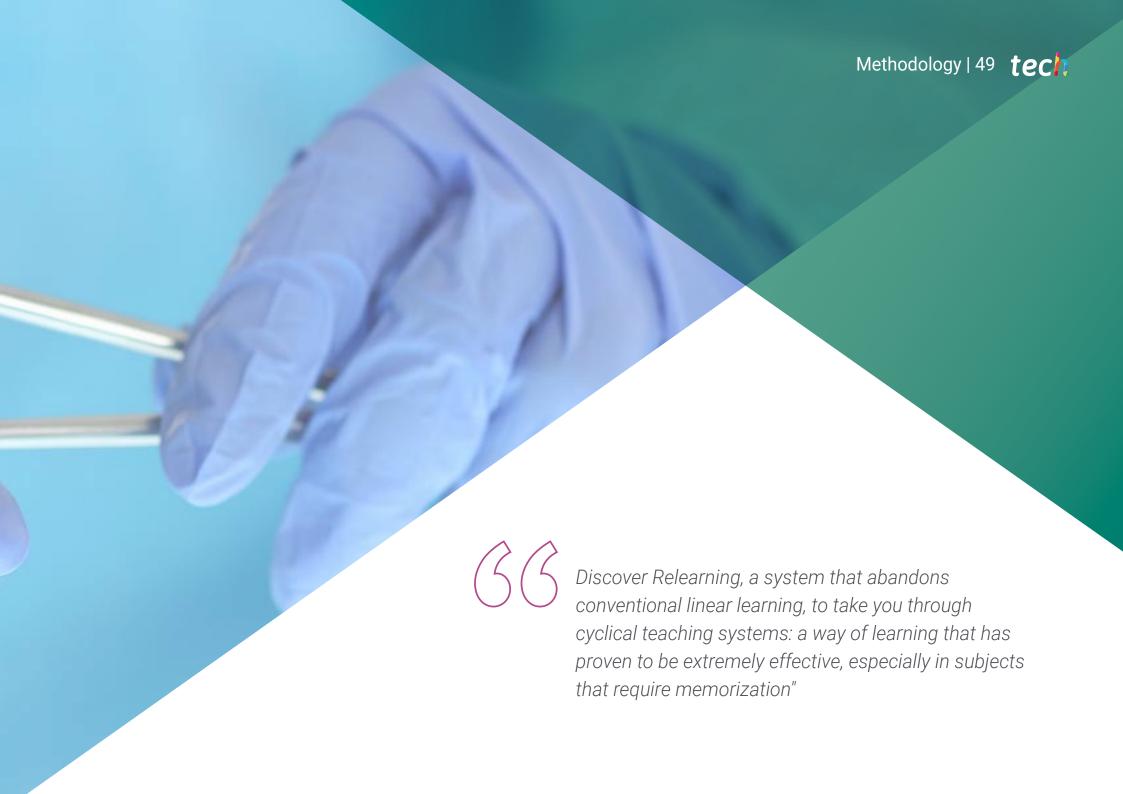




You will combine theory and professional practice through a demanding and rewarding educational approach"





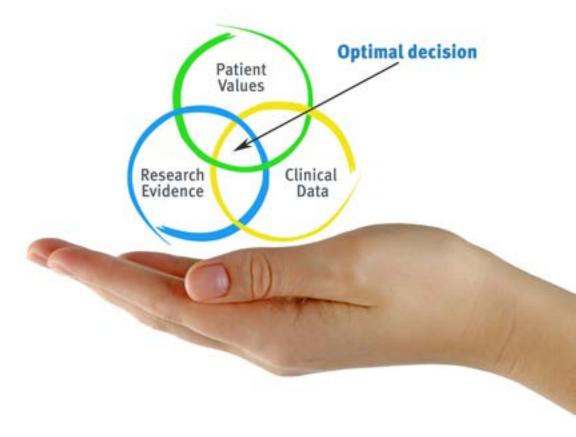




### At TECH Nursing School we use the Case Method

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.



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:

- 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**

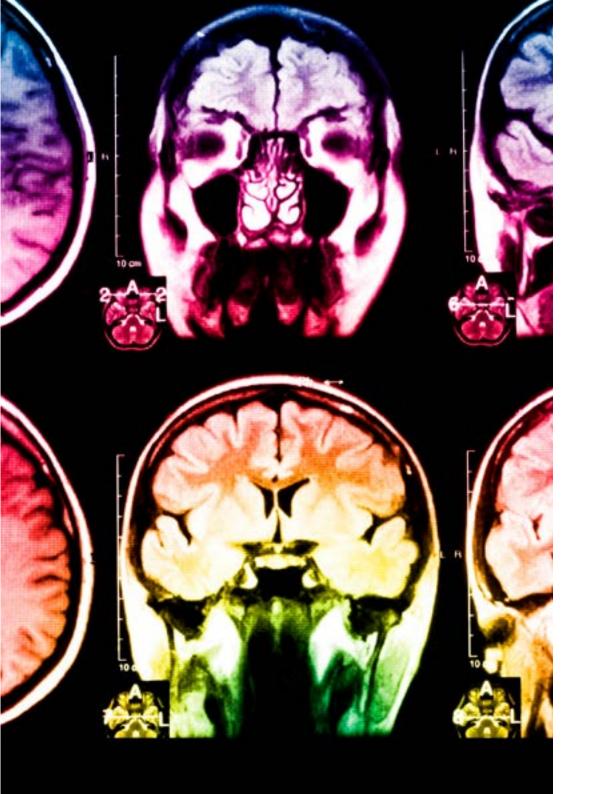
At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

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.





### Methodology | 53 tech

At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology 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.

## tech 54 | Methodology

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**

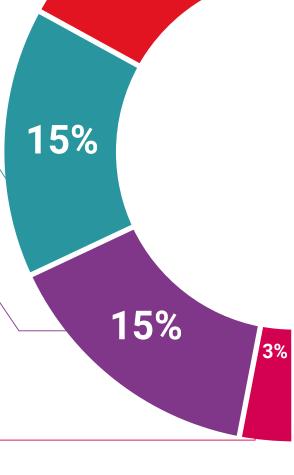
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you 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".



20%



#### **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



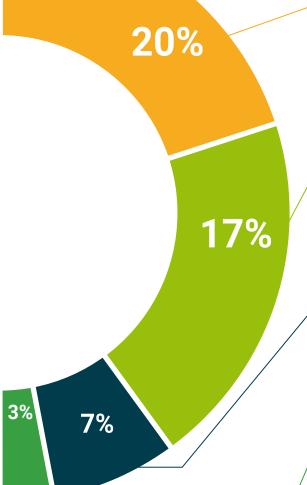
There is scientific evidence suggesting that observing third-party experts can be useful.

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.







### tech 58 | Certificate

This private qualification will allow you to obtain a **Hybrid Master's Degree in Emergency 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: Hybrid Master's Degree in Emergency Nursing

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Accreditation: 60 + 4 ECTS





<sup>\*</sup>Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment



## Hybrid Master's Degree Emergency Nursing

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

Accreditation: 60 + 4 ECTS

