



Advanced Master's Degree Accident and Emergency Care

» Modality: online

» Duration: 2 years

» Certificate: TECH Global University

» Accreditation: 120 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/medicine/advanced-master-degree/advanced-master-degree-accident-emergency-care

Index

02 Introduction to the Program Why Study at TECH? p. 4 p. 8 05 03 Syllabus **Teaching Objectives** Study Methodology p. 20 p. 12 p. 28 06 **Teaching Staff** Certificate p. 38 p. 48





tech 06 | Introduction to the Program

According to a new report prepared by the World Health Organization, respiratory emergencies represent a significant burden for health systems on a global scale. In this regard, the organization highlights that approximately 5 million children die each year mainly due to preventable and treatable causes such as pneumonia, bronchitis or laryngotracheitis. Faced with this reality, professionals have the responsibility to incorporate into their daily clinical practice the most innovative strategies based on scientific evidence both to reduce mortality and to improve the prognosis for recovery.

In this context, TECH presents an exclusive Advanced Master's Degree in Accident and Emergency Care. Designed by references in this field, the curriculum will delve into issues ranging from the implementation of the most effective advanced life support procedures or the management of complex neurological cases to the use of cutting-edge technological tools to optimize care in critical situations such as natural disasters. Thanks to this, graduates will obtain advanced clinical skills to make quick decisions, manage available resources efficiently and ensure the highest quality in patient care.

To reinforce all these concepts, TECH uses its disruptive Relearning system, which involves the progressive repetition of key concepts to ensure their proper assimilation. In addition, the university program provides graduates with a variety of real case studies, allowing professionals to exercise in simulated environments to bring them closer to the reality of emergency care. In this sense, to access the educational resources, you will only need an electronic device capable of connecting to the Internet. In addition, the syllabus includes rigorous Masterclasses given by renowned International Guest Directors.

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

- The development of practical cases presented by experts in Accident and Emergency Care
- 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
- Practical exercises where the self-assessment process can be carried out to improve learning
- Its special emphasis on innovative methodologies in financial practice
- 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



Prestigious International Guest Directors will provide comprehensive Masterclasses on the latest advances in the proper management of out-of-hospital Accident and Emergency Care"

Introduction to the Program | 07 tech



You will be highly prepared to address toxicological conditions such as chemical, drug or medication abuse intoxications"

The teaching staff includes professionals belonging to the field of Finance, who bring to this program the experience of their work, as well as recognized specialists from leading companies 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 an immersive learning experience designed to prepare for real-life situations.

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

You will handle advanced diagnostic tools such as Clinical Ultrasound, Hemodynamic Monitoring and Mechanical Ventilation.

With the innovative Relearning method applied by TECH, you will not have to invest a great amount of study hours and you will focus on the most relevant concepts.







tech 10 | Why Study at TECH?

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.



The most complete syllabus





World's
No.1
The World's largest
online university

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.









0

Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.





tech 14 | Syllabus

Module 1. General Overview

- 1.1. Definitions and Concepts
- 1.2. Comprehensive Care
- 1.3. Bioethics and Legislation in Accident and Emergency Care

Module 2. Emergency Services and Medical Transport

- 2.1. Organization of Emergency Medical Systems
- 2.2. Coordination and Health Regulation
- 2.3. Information and Record Systems
- 2.4. Types of Medical Transport
 - 2.4.1. Intrahospital Transport
 - 2.4.2. Interhospital Transport
 - 2.4.3. Ground Medical Transport
 - 2.4.4. Air Medical Transport
- 2.5. Pathophysiology of Medical Transport and Transfer Positions
- 2.6. Patient Transfer. Models

Module 3. Advanced Cardiovascular Support

- 3.1. Basic Life Support in Adults
 - 3.1.1. General Overview
- 3.2. Advanced Life Support in Adults
 - 3.2.1. Action in Response to Bradyarrhythmias
 - 3.2.2. Action in Response to Tachyarrhythmias
- 3.3. Basic Pediatric Life Support
- 3.4. Pediatric and Neonatal Advanced Life Support
 - 3.4.1. Recognition and Management of Critically III Children
 - 3.4.2. Advanced Airway Management
 - 3.4.3. Basics of Mechanical Ventilation in Pediatrics
 - 3.4.4. Infusion Routes and Drugs in Pediatric Cardiopulmonary Resuscitation
 - 3.4.5. Pediatric Advanced Life Support Algorithms and Arrhythmia Management
- 3.5. Neonatal Resuscitation
 - 3.5.1. Post-resuscitation Stabilization and Neonatal Transport
- 3.6. Advanced Life Support in Serious Trauma Patients
- 3.7. Advanced Life Support in Special Cases

Module 4. Cardiovascular Emergencies

- 4.1. Arrhythmias
- 4.2. Syncope
- 4.3. Acute Chest Pain
- 4.4. Acute Heart Failure
- 4.5. Pericarditis, Cardiac Tamponade
- 4.6. Heart Failure
- 4.7. Acute Pulmonary Edema
- 4.8. Deep Vein Thrombosis
- 4.9. Pulmonary Embolism
- 4.10. Aortic Dissection
- 4.11. Hypertensive Emergencies
- 4.12. Shock

Module 5. Respiratory Emergencies

- 5.1. Respiratory Emergencies
- 5.2. Pneumonia
- 5.3. COPD Exacerbation
- 5.4. Pleuritis and Pleural Effusion
- 5.5. Pneumothorax
- 5.6. Hemoptysis

Module 6. Neurological Emergencies

- 6.1. Neurological Assessment of a Critically III Patient
- 6.2. Vascular Disorders, Stroke Code
- 6.3. Alterations in the Level of Consciousness
- 6.4. Intracranial Hypertension
- 6.5. Central Nervous System Infections
- 5.6. Seizure Crises and Status Epilepticus
- 6.7. Headaches
- 6.8. Vertiginous Syndrome (Vertigo)

Module 7. Digestive Emergencies

- 7.1. Acute Abdominal Pain
- 7.2. Acute Digestive Bleeding and Vascular Disorders
- 7.3. Intestinal Obstruction
- 7.4. Acute Gastroenteritis
- 7.5. Acute Pancreatitis
- 7.6. Acute Biliary Disease
- 7.7. Acute Anal Pathology

Module 8. Endocrine and Metabolic Emergencies

- 8.1. Glucose Metabolism Disorders
- 8.2. Thyroid Emergencies
- 8.3. Acid-Base Balance Disorders
- 8.4. Water Balance Disorders
- 8.5. Electrolyte Balance Disorders

Module 9. Renal and Urological Emergencies

- 9.1. Renal and Urological Emergencies
- 9.2. Renal and Excretory System Lithiasis
- 9.3. Urinary Retention
- 9.4. Urinary Tract Infections
- 9.5. Acute Renal Failure
- 9.6. Hematuria
- 9.7. Acute Scrotal Syndrome
- 9.8. Urethral Pathology

Module 10. Hematological, Immunological, and Infectious Emergencies

- 10.1. Hemotherapy
- 10.2. Thrombocytopenia
- 10.3. Anticoagulation and Thromboprophylaxis
- 10.4. Allergies and Anaphylactic Reactions
- 10.5. Risk Exposure and Exposure to Potentially Contaminated Material
- 10.6. Fever of Unknown Origin
- 10.7. Sepsis and Septic Shock

Module 11. Psychiatric Emergencies

- 11.1. Psychopathologies
- 11.2. Psychomotor Agitation
- 11.3. Acute Alcoholic Pathology
- 11.4. Self-Harm Attempt
- 11.5. Anxiety Crisis
- 11.6. Neuroleptic Malignant Syndrome

Module 12. Ophthalmological Emergencies

- 12.1. Eyelid and Lacrimal System Diseases
- 12.2. Red Eye
- 12.3. Sudden Loss of Vision
- 12.4. Ocular Injuries

Module 13. Otorhinolaryngological Emergencies

- 13.1. Infectious Processes in ENT
- 13.2. Foreign Objects in ENT
- 13.3. Epistaxis
- 13.4. Sudden Deafness

Module 14. Toxicological Emergencies

- 14.1. General Aspects of the Intoxicated Patient
- 14.2. Most Common Intoxications

Module 15. Terminally III Patients in the Emergency Department

- 15.1. Urgent Complications in Terminal Patients
- 15.2. End-of-Life Care
- 15.3. Dermatology in Emergency Care

tech 16 | Syllabus

Module 16. Obstetric Emergencies

- 16.1. Inflammatory, Infectious Disorders, and Other Emergencies
- 16.2. Gynecological Bleeding
- 16.3. Emergencies During Pregnancy and Puerperium
- 16.4. Assistance in Childbirth in Emergencies
- 16.5. Sexual Abuse

Module 17. Pediatric Accidents and Emergencies

- 17.1. Infant Colic
- 17.2. Fever Syndrome
- 17.3. Seizures
- 17.4. Respiratory Tract Pathology
- 17.5. Exanthematous Diseases
- 17.6. Gastrointestinal Pathology
- 17.7. Child Abuse
- 17.8. Transport of the Pediatric Critically III Patient

Module 18. Severe Trauma Care

- 18.1. General Overview
- 18.2. Biomechanics of Accidents
- 18.3. Primary and Secondary Assessment
- 18.4. Traumatic Brain Injury (TBI)
- 18.5. Thoracic Trauma
- 18.6. Abdominal Trauma
- 18.7. Spinal Trauma and Spinal Cord Injury
- 18.8. Trauma of the Locomotor System
- 18.9. Wounds
- 18.10. Hypovolemic Shock
- 18.11. Pediatric Trauma
- 18.12. Trauma in Pregnant Women
- 18.13. Special Traumas
- 18.14. Trauma from Physical and Environmental Agents
- 18.15. Bites and Stings
- 18.16. Analgesia and Sedation
- 18.17. Mobilization and Immobilization. Materials and Techniques
- 18.18. Rescue and Medical Assistance in Confined and Remote Locations

Module 19. Multiple Victims Incidents (MVI) and Disasters

- 19.1. General Overview
- 19.2. MVI Management and Disasters
- 19.3. Sectorization
- 19.4. Deployment and Logistics
- 19.5. Triage
- 19.6. Multiple Victim Care
- 19.7. Evacuation
- 19.8. MVI Management in a Hospital
- 19.9. CBRN Incidents
- 19.10. Emergency Plans

Module 20. Diagnostic and Therapeutic Techniques (Humanitarian Emergencies and Disasters)

- 20.1. Catheters
- 20.2. Peripheral and Central Venous Access
- 20.3. Intraosseous Access
- 20.4. Endotracheal Intubation (ETI)
- 20.5. Difficult Airway
- 20.6. Invasive Mechanical Ventilation
- 20.7. Non-Invasive Mechanical Ventilation Management
- 20.8. Pericardiocentesis
- 20.9. Thoracocentesis and Pleural Drainage
- 20.10. Emergency Ultrasound
- 20.11. Electrical Therapy (MP, CV, DF)
- 20.12. Hemodynamic Status Monitoring and Electrocardiography
- 20.13. Capnography and Pulse Oximetry
- 20.14. Oxygen Therapy
- 20.15. Neurological Status Monitoring
- 20.16. Sedation and Analgesia Monitoring
- 20.17. Collection of Analytical Samples
- 20.18. Common Scales in Emergency Care
- 20.19. Physiological Parameters in Adults and Children

Module 21. Pharmacology in Emergency Care

- 21.1. Basic Concepts
- 21.2. Routes of Drug Administration in Accident and Emergency Care
- 21.3. Safety in Drug Administration
- 21.4. Fluid Therapy
- 21.5. Most Common Drugs in Emergency Care
- 21.6 Formulas and Dose Calculation

Module 22. Other Important Aspects in Accident and Emergency Care

- 22.1. Communication Skills in Emergency Care
- 22.2. Patient Safety
- 22.3. New Competencies for Professionals in Accident and Emergency Care
- 22.4. New Technologies in Accident and Emergency Care

Module 23. Current Status of Coronavirus Infections

- 23.1. Discovery and Evolution of Coronaviruses
- 23.2. Main Microbiological Characteristics and Members of the Coronavirus Family
- 23.3. Epidemiological Changes in Coronavirus Infections from Discovery to the Present
- 23.4. The Immune System and Coronavirus Infections
- 23.5. Pathogenesis and Pathophysiology of Coronavirus Infections
- 23.6. Risk Groups and Transmission Mechanisms of Coronaviruses
- 23.7. Natural History of Coronavirus Infections
- 23.8. Updated Microbiological Diagnosis of Coronavirus Infections
- 23.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
- 23.10. Updated Management of Coronavirus Infections
- 23.11. Future Challenges in Prevention, Diagnosis, and Therapy of Coronavirus Infections

Module 24. Current Challenges in the Management of a Modern Emergency Department

- 24.1. Advanced Basic Concepts in Accident and Emergency Care
- 24.2. Basic Concepts in Accident and Emergency Care
- 24.3. Management Challenges During a Pandemic
- 24.4. Quality Challenges in the Emergency Department24.4.1. Quality Care in the Emergency Department. Indicators
- 24.5. Patient Safety Challenges in the Emergency Department24.5.1. Clinical Safety in the Emergency Department. Indicators
- 24.6. Biosecurity in the Field of Accident and Emergency Medicine Care
- 24.7. Integrating the Emergency Department into the Rest of the Hospital
- 24.8. Emergency Services and the Problem of Gender Violence
- 24.9. Clinical Research in the Emergency Department: Is It Possible?
- 24.10. Teaching in the Emergency Department: Beyond Assistance
- 24.11. Humanizing Management in Emergency Departments

Module 25. Donation Processes in Emergency Services

- 25.1. Concept of End-of-Life Care in Emergency Services
- 25.2. Donation Concepts in Emergency Care
- 25.3. Advance Directives
- 25.4. Do Not Resuscitate Order
- 25.5. Pre-Interview in Emergency Services
- 25.6. Coordination Between Emergency Services and Transplant Team
- 25.7. Bioethics in Emergency Services
- 25.8. The Role of the Family in the Donation Process in Emergency Services
- 25.9. Ethical Aspects in the Donation Process in Emergency Services

tech 18 | Syllabus

Module 26. New Technologies in Emergency Services

- 26.1. What Do We Mean by New Technologies?
- 26.2. Development of Software Applications for Emergency Medical Providers
- 26.3. New Triage Systems in Emergencies
- 26.4. Artificial Intelligence in Emergency Medicine
- 26.5. New Technologies in Disaster Situations
- 26.6. New Technologies in Pandemic Situations
- 26.7. New Systems for Optimizing Diagnostic Testing in Emergency Services
- 26.8. Integrating Technology in Patient and Family Information
- 26.9. Bringing Patients Closer to Emergency Services via Technology

Module 27. Advanced Life Support

- 27.1. Advanced Life Support in Adults
- 27.2. Advanced Airway Management
- 27.3. Rapid Sequence Intubation
- 27.4. Advanced Life Support Protocols in Adults
- 27.5. Advanced Life Support in Pediatric Patients
- 27.6. Special Situations in Advanced Life Support in Adults
- 27.7. Special Situations in Advanced Life Support in Pediatric Patients

Module 28. Rare Diseases in Emergency Care

- 28.1. Epidemiology and Magnitude of the Rare Diseases Problem
- 28.2. Rare Diseases and Consultations in Emergency Services
- 28.3. Hereditary Angioedema
- 28.4. Congenital Coagulopathies
- 28.5. Porphyrias
- 28.6. Other Rare Diseases
- 28.7. Implementing Emergency Protocols. Current Situation
- 28.8. Development of Software Applications to Aid Emergency Physicians
- 28.9. Integration of Rare Disease Associations in Emergency Services

Module 29. Emergency Ultrasound

- 29.1. Introduction. Clinical Ultrasound Indications and Limitations in the Emergency Department
- 29.2. Clinical Ultrasound Utility in Different Acute Abdominal Pain Manifestations
- 29.3. Clinical Ultrasound in Acute Renal Failure and Urological Manifestations
- 29.4. Clinical Ultrasound in Chest Pain and Other Cardiovascular Symptoms (Syncope, Murmur, Electrocardiographic Changes)
- 29.5. Clinical Ultrasound in Patients with Dyspnea of Uncertain Origin
- 29.6. Clinical Ultrasound in Patient with Edema or Pain in the Lower Limb
- 29.7. Clinical Ultrasound in Patients with Fever without Apparent Focus
- 29.8. Clinical Ultrasound in Hypotension and Undifferentiated Shock
- 29.9. Ultrasound in Cardiac Arrest and in the Advanced Airway Management
- 29.10. Ultrasound in Patients with Polytrauma
- 29.11. Ultrasound-Guided Procedures: Central and Peripheral Venous Access, Arterial Puncture, Pericardiocentesis, Paracentesis, Thoracocentesis, Lumbar Puncture

Module 30. Clinical Simulation in Emergency Care

- 30.1. Basic Principles of Clinical Simulation
- 30.2. Types of Clinical Simulation
- 30.3. Importance of Communication in Clinical Simulation
- 30.4. Types of Simulators
- 30.5. Briefing and Debriefing
- 30.6. Leadership, Teamwork, and Role Distribution
- 30.7. Types of Evaluations in Clinical Simulation
- 30.8. Scenario Preparation

Module 31. Clinical Toxicology in Emergency Services

- 31.1. General Information about Intoxicated Patients
- 31.2. The Language of Drugs
- 31.3. New Drugs of Abuse
- 31.4. Chemical Submission
- 31.5. Chemsex (Chemical Sex)
- 31.6. Toxicity of Alternative Medicines and Pseudotherapeutic Practices
- 31.7. Toxicity from Other Living Organisms I
- 31.8. Toxicity from Other Living Organisms II
- 31.9. New Antidotes
- 31.10. Organ Donation in Brain Death from Toxic Origins



Module 32. Patients with Special Needs

- 32.1. General Management
- 32.2. Specific Management Based on Special Needs
- 32.3. Specific Protocols and Use of Tools
- 32.4. Importance of Accompanying Patients with Special Needs
- 32.5. Diagnosis of Patients with Autism Spectrum Disorder
- 32.6. Severity of Autism Spectrum Disorder
- 32.7. Complications in Their Management
- 32.8. Integration of Special Needs Patient Associations in Emergency Services
- 32.9. Role of Family Members of Special Needs Patients in Emergency Services

Module 33. High-Risk Infectious Diseases

- 33.1. Introduction
- 33.2. PPE (Personal Protective Equipment)
- 33.3. Diversification of Emergency Services. Emergency Care Pathways
- 33.4. Healthcare Staff Training
- 33.5. Simulations in Emergency Care
- 33.6. Transfer and Transport of Patients to High Isolation Units
- 33.7. One Health
- 33.8. Respiratory Disease Protocols
- 33.9. Hemorrhagic Fever Protocols
- 33.10. Future Threats: How We Prepare



Design strategies for response to mass emergencies such as traffic accidents, natural disasters, or health crises, enabling you to lead critical interventions with precision"





tech 22 | Teaching Objectives



General Objectives

- Understand the definitions, concepts, and fundamental principles of emergency and urgent care
- Apply the principles of bioethics and legislation in emergency and urgent care
- Analyze the organization and functioning of medical emergency systems and patient transport
- Differentiate between types of medical transport and their implications on patient pathophysiology
- Coordinate the safe transfer of patients across various clinical settings
- Execute basic and advanced life support protocols for adult, pediatric, and neonatal patients
- Identify and effectively manage arrhythmias, syncope, chest pain, and other cardiovascular emergencies
- Diagnose and treat respiratory emergencies, including pneumonia, COPD, and pneumothorax
- Assess critical neurological disorders and apply care protocols for stroke, epileptic seizures, and traumatic brain injury
- Provide care for digestive emergencies, such as gastrointestinal bleeding, acute pancreatitis, and intestinal obstruction
- Manage endocrine-metabolic emergencies, such as thyroid crises, glucose metabolism disorders, and electrolyte imbalances
- Handle renal and urological emergencies, such as urinary tract infections, acute renal failure, and renal lithiasis
- Apply intervention strategies in hematological, immunological, and infectious emergencies, including sepsis and septic shock

- Intervene in psychiatric crises, such as suicide attempts, psychomotor agitation, and neuroleptic malignant syndrome
- Diagnose and treat ophthalmological and otolaryngological emergencies, such as red eye, epistaxis, and sudden hearing loss
- Address acute poisonings and establish protocols for managing intoxicated patients
- Provide comprehensive care for terminally ill patients in the emergency department
- Manage obstetric and gynecological emergencies, including hemorrhages, childbirth assistance, and sexual abuse
- Identify and treat pediatric emergencies, such as seizures, fever syndromes, and child abuse
- Apply care protocols for severe trauma, including primary and secondary assessments
- Evaluate and manage specific trauma types, such as thoracic, abdominal, vertebral, and trauma caused by physical agents
- Develop strategies for mobilization, immobilization, and rescue in trauma scenarios
- Manage multiple victim incidents (MVI) and disasters through emergency plans and triage
- Master essential diagnostic and therapeutic techniques in emergency and urgent care
- · Administer emergency medications accurately and safely
- Optimize communication and teamwork in emergency situations
- Implement patient safety strategies in emergency and urgent care settings
- Explore the impact of new technologies in emergency and urgent care
- Stay updated on the evolution of emerging infectious diseases, such as Coronavirus
- Foster a proactive and problem-solving approach in emergency and urgent care to improve the quality of care



Module 1. General Overview

- Differentiate between the concepts of accidents, emergencies and disasters
- Identify the fundamentals of emergency health care
- Apply clinical professional skills in accident and emergency care
- Prioritize, organize and manage patient care in the most efficient way through triage

Module 2. Emergency Services and Medical Transport

- Incorporate the criteria for selecting the most appropriate mode of medical transport in daily practice
- Delve into the main characteristics of medical transport, its physiopathology and the different transport devices
- Identify the equipment and communication systems in an emergency medical system
- Delve into the concept of continuity of care and hospital transfer

Module 3. Advanced Cardiovascular Support

- Have a comprehensive understanding of the healthcare protocols for cardiac rhythm disturbances and the management of acute coronary syndrome
- Early recognition of the common signs of ischemic heart disease
- Delve into the different pathologies that produce Chest Pain, Congestive Heart Failure and Acute Pulmonary Edema
- Efficiently manage noninvasive mechanical ventilation techniques to manage conditions such as pericardial effusion

Module 4. Cardiovascular Emergencies

- Analyze the most advanced diagnostic methods to recognize signs of acute pericarditis and cardiac tamponade
- Delve into the specificities of the conduct of Acute Coronary Syndrome

Module 5. Respiratory Emergencies

- Establish the diagnostic approach to acute dyspnea in the emergency department
- Identify the main clinical manifestations of aggravation of acute bronchial asthma crisis

Module 6. Neurological Emergencies

- Be able to identify cases of stroke and provide the most appropriate treatments to improve the well-being of individuals
- Develop personalized management plans based on the individual characteristics of each user and the severity of the emergency

Module 7. Digestive Emergencies

- Address the particularities of Acute Abdominal Pain
- Effectively perform anamnesis for Digestive Hemorrhage and the most common Vascular Disorders
- Establish procedures to identify Acute Gastroenteritis
- Establish protocols for action in Pancreatitis

tech 24 | Teaching Objectives

Module 8. Endocrine and Metabolic Emergencies

- Deepen the definition, pathophysiology, and classification according to severity of the most common endocrine-metabolic emergencies
- Establish diagnosis and apply effective treatment in response to these emergencies

Module 9. Renal and Urological Emergencies

- Optimally manage the most common renal and urological diseases
- Establish the types of anticoagulation and thromboprophylaxis to be applied in each case
- Explore risk exposure and exposure to potentially contaminating materials
- Delve into the management of Sepsis and Septic Shock

Module 10. Hematological, Immunological, and Infectious Emergencies

- Characterize the main mechanisms in hemostasis to maintain blood fluidity and the integrity of the vascular system
- Identify the most common acquired and congenital causes of coagulation disorders

Module 11. Psychiatric Emergencies

- Understand the psychopathology at the prehospital level, as well as the factors related to both the doctor and the patient
- · Carry out the psychiatric clinical interview with maximum efficiency

Module 12. Ophthalmological Emergencies

- Examine the most common diseases in the eyelids and lacrimal system
- Apply the most effective treatments for sudden vision loss

Module 13. Otorhinolaryngological Emergencies

- Delve into the specifics of the anatomy of the external auditory canal
- Establish clinical classifications and diagnostic criteria, as well as referral guidelines

Module 14. Toxicological Emergencies

- Establish general aspects of the intoxicated patient, along with their management protocols
- Address the most common types of poisoning, including narcotic substances

Module 15. Terminally III Patients in the Emergency Department

- Examine urgent complications in terminal patients
- Apply high-quality care during the last days of life
- Apply dermatological care in emergency services
- Explore organ and tissue donation, addressing the approach with the patient and their family

Module 16. Obstetric Emergencies

- Identify the general aspects of gynecological hemorrhages and dysfunctional uterine conditions
- Delve into the diagnosis and treatment characteristics of dysfunctional uterine bleeding

Module 17. Pediatric Accidents and Emergencies

- Recognize the most frequent gynecological-obstetric pathologies in the emergency service
- Acquire the necessary clinical skills to assist in childbirth in an out-of-hospital setting
- Investigate the priorities for action in pediatric emergency situations
- Gain an in-depth knowledge of medicolegal documents and attitudes regarding gender-based violence and child abuse situations

Module 18. Severe Trauma Care

- Identify the various trauma pathologies in Emergency and Urgent Care
- Analyze the healthcare action parameters for different types of trauma and their correct application
- Detect priorities for managing polytrauma patients
- · Select the best option for immobilizing an injured individual due to trauma

Module 19. Multiple Victims Incidents (MVI) and Disasters

- Manage material and human resources efficiently in healthcare assistance during mass casualty incidents or disasters
- Apply disaster response plans safely and effectively

Module 20. Diagnostic and Therapeutic Techniques (Humanitarian Emergencies and Disasters)

- Deepen understanding of the main consequences and initial management of situations with nuclear, radiological, biological, and chemical risks
- Apply cutting-edge team work techniques, motivation, leadership, and management in situations of uncertainty

Module 21. Pharmacology in Emergency Care

- Address procedures for using commonly used medications in Emergency and Urgent Care
- Identify the main immunological pathologies and manage procedures for handling patients with anaphylactic reactions

Module 22. Other Important Aspects in Accident and Emergency Care

- Develop assertive communication skills in critical situations
- Create innovative strategies to enhance patient safety

Module 23. Current Status of Coronavirus Infections

- Be capable of performing necessary tests for diagnosing Coronavirus infections
- Know how to apply necessary preventive measures and the most accurate treatments based on the patient's profile

Module 24. Current Challenges in the Management of a Modern Emergency Department

- Understand the general aspects of Emergency Department management and its evolution as a response to healthcare needs
- Recognize the importance of quality care in emergency services, including objectives and indicators
- Acquire knowledge of the humanization of healthcare processes
- Deepen understanding of how to handle gender-based violence cases in the emergency setting

tech 26 | Teaching Objectives

Module 25. Donation Processes in Emergency Services

- In-depth knowledge of advance directives
- Deepen knowledge of advance directives in the context of emergency care

Module 26. New Technologies in Emergency Services

- Acquire general knowledge about the applications of emerging technologies such as Artificial Intelligence in the clinical setting
- Delve into the correct use of tools for the adequacy of diagnostic tests in Emergency Services

Module 27. Advanced Life Support

- Acquire the ability to develop protocols for action in risk situations
- Perform endotracheal intubation and other advanced methods of airway management to ensure adequate ventilation in critically ill patients

Module 28. Rare Diseases in Emergency Care

- Acquire general and epidemiological knowledge of rare diseases
- Delve into the techniques for diagnosis and emergency treatment of congenital coagulopathies

Module 29. Emergency Ultrasound

- Analyze the tools for the use of clinical ultrasound in Acute Abdominal Pain
- Perform rapid and accurate ultrasound scans for the evaluation of critically ill patients





Module 30. Clinical Simulation in Emergency Care

- Execute emergency procedures in realistic simulation scenarios, improving manual dexterity and accuracy in performing critical interventions
- Promote the ability to make quick and effective decisions in high-pressure situations

Module 31. Clinical Toxicology in Emergency Services

- Acquire solid knowledge of the basic principles of toxicology, including pharmacokinetics and pharmacodynamics of toxic agents
- Implement clinical guidelines and updated protocols for the immediate treatment of different types of poisoning

Module 32. Patients with Special Needs

- Gain a solid understanding of the various physical, cognitive, sensory and emotional disabilities that patients may present with in emergency situations
- Apply clinical assessment methods that consider the limitations and particularities of each special needs patient

Module 33. High-Risk Infectious Diseases

- Analyze outbreak patterns and transmission dynamics in emergency settings to implement effective preventive measures
- Recognize clinical signs and symptoms characteristic of high-risk infectious diseases through clinical assessment and use of advanced diagnostic tools



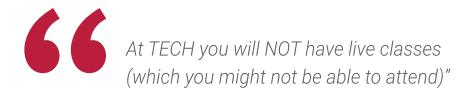


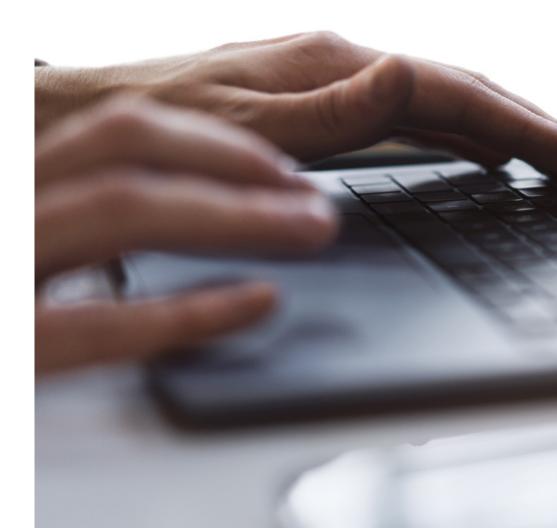
The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.







The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

tech 32 | Study Methodology

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.





A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

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 assess 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.

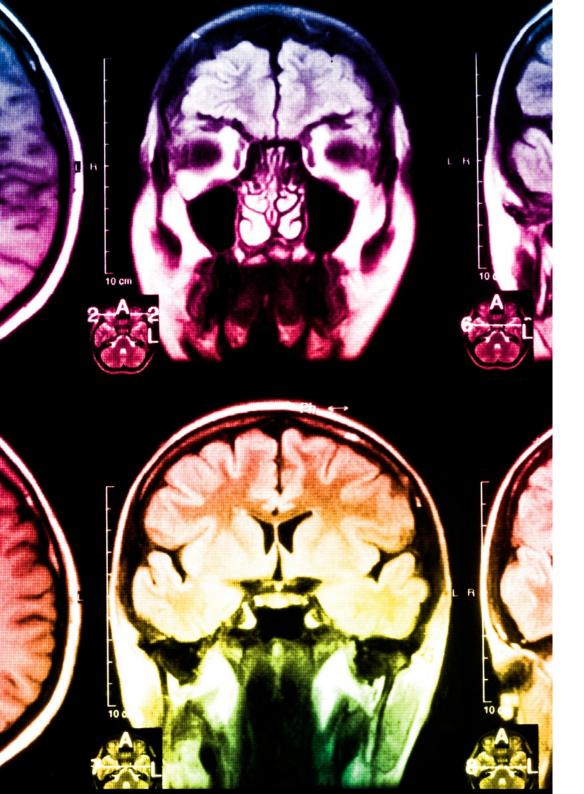


The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

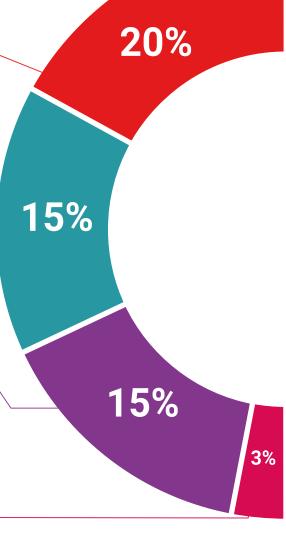
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

We present 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, international guides... In our virtual library you will have access to everything you need to complete your education.

Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting



We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

Classes



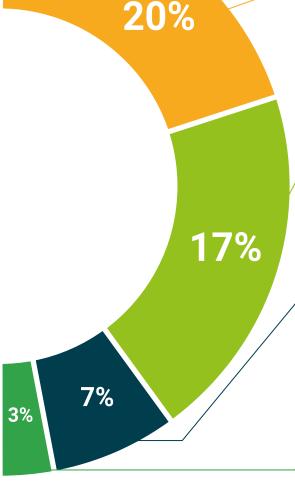
There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.

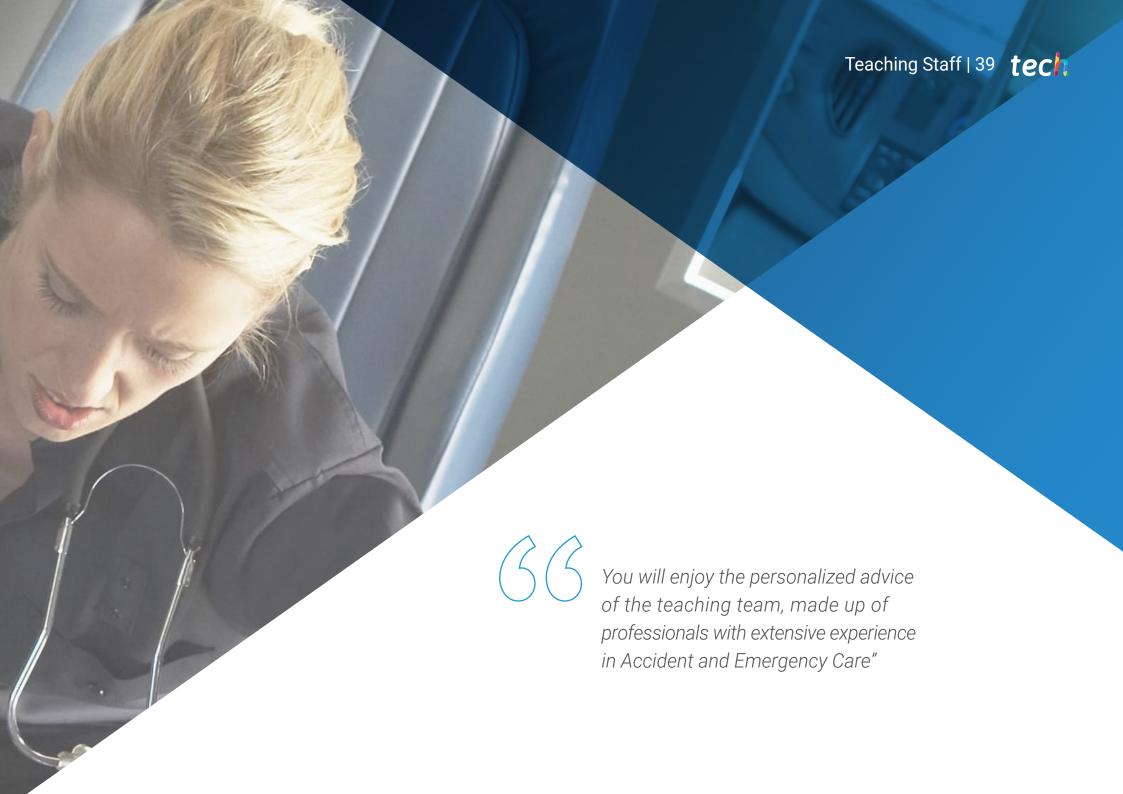
Quick Action Guides



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.







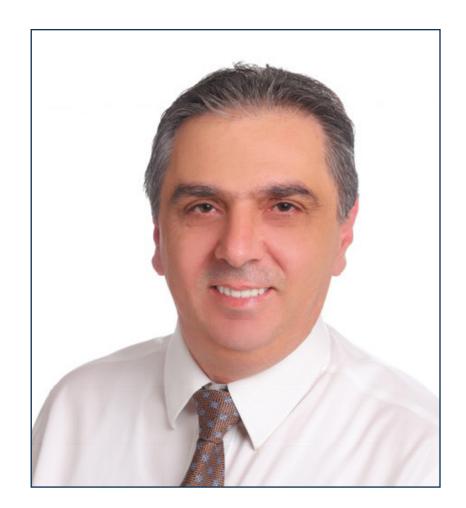
International Guest Director

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 **Accident and Emergency Care**.

This work stems from his work as an emergency physician at the King Faisal Specialist Hospital & Research Center, 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 Medical Harvard 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. Additionally, 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, United States
- 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) and Academia of the Faculty of Medicine of Harvard



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

International Guest Director

Dr. Ugo Ezenkwele is an eminent expert in the field of emergency medicine and managerial leadership in healthcare. His extensive experience in healthcare is coupled with his clinical and academic management skills. In this regard, his deep medical knowledge has led him to become **Head** of **Emergency Medicine** at **Mount Sinai Queens**. With his arrival in the position, innovative programs such as the ED Observation Unit, ED Geriatric Certification, Telemedicine, Emergency Management and Disaster Preparedness were launched to improve performance and patient experience.

In 2021, Dr. Ezenkwele received recognition for his outstanding work with the Crains New York award for Notable Black Leader and Executive. He has also earned numerous prestigious recognitions such as the Vituity Award in Executive Leadership, the National Medical Association's Service Excellence Award and the Visionary Educator Award from the Academic Society of Emergency Medicine.

His excellent management skills have led him to assume leadership roles in major medical organizations, serving as president of the National Medical Association's Section of Emergency Medicine and vice president of the Society for Academic Emergency Medicine's Academy of Diversity and Inclusion in Emergency Medicine. In both positions, he worked to implement policy changes with the goal of positively impacting the next generation of physician leaders and the communities they serve. In addition, he is an advisor to the American College of Emergency Physicians (ACEP) and an oral examiner for the American Board of Emergency Medicine (ABEM), responsibilities that demonstrate his commitment to continuous improvement in medical practice and his dedication to training skilled physicians.



Dr. Ezenkwele, Ugo

- Head of the Department of Emergency Medicine at Mount Sinai Queens, Astoria, New York, USA
- Attending Physician at Woodhull Medical and Mental Health Center an NYU Langone Affiliate Hospital
- Vice Chair of Emergency Medicine at Woodhull Medical and Mental Health Center an NYU Langone Affiliate Hospital
- Physician Liaison for Clinical Faculty Recruitment NYULMC Clinical Affairs Department
- Doctor of Medicine from Johns Hopkins University
- MPH International Health Johns Hopkins University
- BS in Biology Johns Hopkins University
- Vituity Wes Curry Award for Executive Leadership
- Crains New York Business Notable Black Leader & Health Executive

- Excellence in Leadership Woodhull Medical and Mental Health Center
- National Medical Association's Emergency Medicine Section Leadership Award
- National Medical Association Excellence in Service Award (2013 and 2014)
- President of the American College of Emergency Physicians (ACEP) Diversity, Equity and Inclusion Committee
- ABEM Oral Board Examiner
- Member of: American College of Emergency Physicians (ACEP) Strategic Planning Advocacy Action Team, American Board of Emergency Medicine (ABEM) Stakeholder Advisory Group (SAG) for Becoming Certified Initiative, FEMA Region II Advisory Task Force for Vaccine Outreach, ACEP Medical Legal Committee, American College of Emergency Physicians

tech 44 | Teaching Staff

Management



Dr. Torres Santos-Olmo, Rosario María

- Coordinator at the Adult Emergency Department at La Paz University Hospital
- Emergency Doctor at La Paz University Hospital
- Specialist in Family and Community Medicine at La Paz University Hospital
- PhD in Medicine from the Autonomous University of Madrid
- Degree in Medicine from the University of Granada
- Master's Degree in Patient Safety
- Master's Degree in Bioethics
- Master's Degree in Palliative Medicine
- Life Support Instructor (BLS, ALS, ILS, ATLS)
- Clinical Simulation Instructor
- Member of the Healthcare Ethics Committee at La Paz University Hospita



Dr. Rivera Núñez, María Angélica

- Assistant Coordinator of the Emergency Department at La Paz University Hospital
- Director of Patient Safety in the Emergency Department at La Paz University Hospital
- Instructor of Advanced Life Support National Cardiopulmonary Resuscitation Plan of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units
- Degree in Medicine and Surgery from the Autonomous University of Madrid
- Bachelor's Degree in Medicine and Surgery
- Surgeon Specialist in Internal Medicine
- Diploma in Clinical Teaching Teacher Training Unit Pontificia Catholic University in Chile
- Certificate in Emergency Medicine (CME)
- Training in Thrombotic Pathology Faculty of Medicine, University of Navarra



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

Teachers

Dr. Maroun Eid, Charbel

- Assistant Emergency Physician at Infanta Sofia University Hospital
- Doctorate in Biomedical Sciences from the Complutense University of Madrid.
- Executive MBA in the pharmaceutical industry and biotechnology

Dr. Mayayo Alvira, Rosa

- Physician and Researcher specialized in Internal Medicine
- Head of the Toxicology Unit of the Emergency Department at La Paz University Hospital
- Attending Physician in the Emergency Department at La Paz University Hospital
- Degree in Medicine from Rovira i Virgili University

Dr. Martín Quirós, Alejandro

- Head of the Urgent and Emergent Pathology Research Group of the Research Institute of the University Hospital La Paz.
- Secretary of the Teaching Commission of the Research Institute of La Paz University Hospital
- Associate of the Emergency Department of the Hospital Universitario de la Paz
- Assistant of Internal Medicine/Infectious Diseases of the High-Level Isolation Unit of the University Hospital La Paz At Hospital Carlos III
- Internist at Olympia Quirón Hospital



Dr. Cancelliere, Nataly

- Physician specializing in Allergology
- Attending physician in the emergency department of Hospital Universitario La Paz
- PhD in Medicine from the Autonomous University of Madrid
- Master's Degree in Emergency Medicine by the Spanish Society of Emergency Medicine (SEMES)
- Specialist in Allergology by the Hospital Universitario La Paz

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
- Professional Master's Degree in Prevention and Treatment of Addictive Behaviors
- Postgraduate Diploma in Pedagogical Aptitude (CAP)

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.





tech 50 | Certificate

This private qualification will allow you to obtain a diploma for the **Advanced Master's Degree in Accident and Emergency Care** 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.

Mr./Ms. ______ with identification document ______ has successfully passed and obtained the title of:

Advanced Master's Degree in Accident and Emergency Care

This is a private qualification of 3,600 hours of duration equivalent to 120 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

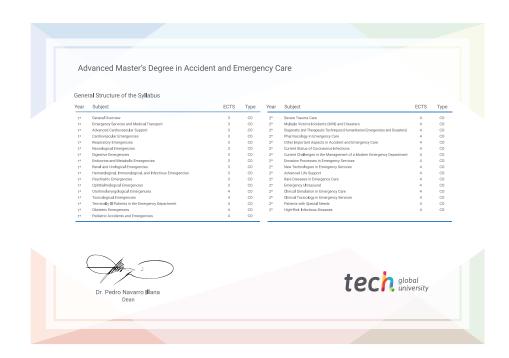
This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: Advanced Master's Degree in Accident and Emergency Care

Modality: online

Duration: 2 years

Accreditation: 120 ECTS



tech global university **Advanced Master's** Degree Accident and

Emergency Care

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Accreditation: 120 ECTS
- » Schedule: at your own pace
- » Exams: online

