

Hybrid Master's Degree

Emergency and Catastrophic Medicine





Hybrid Master's Degree

Emergency and Catastrophic Medicine

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

Website: www.techtute.com/us/medicine/hybrid-master-degree/hybrid-master-degree-emergency-catastrophic-medicine

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01

Introduction

The emergency physician must have a wide knowledge of the available means and equipment, their applications and their complications, so that they can be used in each serious situation in the correct way. With this program, the professional will specialize in Emergency Medicine, Emergencies and Catastrophes from the hand of experts with years of experience in the sector and through a very complete modality of studies that integrates theory and practice with excellence.





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Throughout these months you will learn to apply the clinical and non-clinical competencies of emergency and disaster medicine"

Health professionals play a key role in caring for a patient with an emergency medical condition or in an emergency situation, in order to maintain the required level of quality and safety. Adequate updating of specialists in these areas is essential to ensure better early diagnosis and the operability of hospital and out-of-hospital services. On the other hand, in disaster situations, the preparation of material and human resources remains inadequate. Because of this, many health facilities emphasize the need for experts with an emphatic preparation for this kind of care response.

It is from this context that this TECH academic program arises. It integrates the latest advances in the diagnosis and treatment of patients injured during serious accidents or natural phenomena. In addition, you will learn more about the importance of equipping the means of transport in an optimal way and the knowledge that a professional in this sanitary branch must have to prepare these transports. It will also discuss the most current trends that differentiate the care of adult patients from those of pediatric age during medical care following an emergency or disaster.

This program combines very complete theoretical contents with a face-to-face and exhaustive stay in a first class medical facility. This practice will be extended from Monday to Friday, in 8-hour shifts, for 3 weeks. They will be supervised by a designated tutor, who will be in charge of facilitating the students' insertion into the most demanding and rigorous work dynamics. In this way, the student will develop new knowledge from the subjects taught on TECH's 100% online platform, and then achieve the skills most demanded by the sector with the help of the most competent specialists. This innovative learning modality will favor the immediate insertion of graduates in first level jobs in the healthcare field.

This **Hybrid Master's Degree in Emergency and Catastrophic Medicine** 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 experts in the care of patients in emergencies, emergencies and catastrophes and university professors with extensive experience in this field
- ♦ 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
- ♦ News on patient care in emergencies, emergencies and catastrophes
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its emphasis on innovative methodologies in emergency, urgent and catastrophic patient care
- ♦ All this will be complemented with theoretical lessons, questions to the expert, discussion forums on controversial issues and individual reflection work
- ♦ Availability of content from any fixed or portable device with an Internet connection
- ♦ In addition, you will be able to carry out a clinical internship in one of the best hospitals in the world



Add to your online study the realization of clinical practices with the highest standards of quality and technological level in an elite hospital center"

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Take an intensive 3-week program at a prestigious medical institution and acquire all the knowledge you need to grow personally and professionally”

In this Professional Master's Degree proposal, of a professionalizing nature and blended learning modality, the program is intended to update nursing professionals who develop their functions in high performance centers, clinical or hospital centers, 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.

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 education program to learn in real situations. This program's design is based on Problem Based Learning, by means of which the student must try to solve different professional practice situations that will be presented throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

Enroll now in this unique Hybrid Master's Degree, which stands out for the quality of its contents and its excellent teaching staff, composed of elite professionals.

This program gives you the opportunity to update your knowledge in a real scenario, with the maximum scientific rigor of an institution at the forefront of technology.



02

Why Study this Hybrid Master's Degree?

In the medical sector, it is not enough to have specialists who are prepared and updated from a theoretical point of view. In healthcare areas, and particularly in the context of emergency and disaster care, professionals must have a broad command of the practical skills and diagnostic and treatment technologies available to them. For this reason, TECH has created this innovative learning modality that combines the most recent knowledge about immobilization, transfer and care according to age groups of patients, with a face-to-face stay. This opportunity will take place in a renowned hospital center where the student will be guided by prestigious experts in the development of different competencies within this area of health care.





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This high-level program will allow you to identify the most common pathophysiological processes in people after accidents or other medical emergencies through the personalized guidance of leading experts"

1. Updating from the latest technology available

In this academic syllabus, TECH students will be updated on the most advanced cardiopulmonary resuscitation techniques guidelines of the moment. They will also examine the protocols for the movement and transfer of patients in serious condition after experiencing a catastrophe. They will also analyze the most modern equipment that is now integrated into means of transport and mobile hospitals.

2. Gaining In-Depth Knowledge from the Experience of Top Specialists

This Hybrid Master's Degree will have the assistance of experts in Emergency Medicine and Catastrophes in two fundamental instances. The first will take place during the theoretical development of the program and from the 100% online platform TECH where teachers will clarify doubts and concepts of interest. Subsequently, a team of experts will welcome the students for a practical stay in first level health centers, where they will share their experiences with them through personalized guidance and direct assistance to the patients.

3. Entering First-Class Clinical Environments

TECH has chosen in detail the medical facilities that will host its students during the 3-week internship included in this program. These institutions have a high prestige thanks to the health personnel that work in them and their high specialization in the disciplines that comprise Emergency Medicine, Emergency and Disaster Medicine. In addition, the centers in question have the most sought-after and comprehensive



technological resources in this field today.

4. Combining the Best Theory with State-of-the-Art Practice

This program breaks several schemes in the current pedagogical market, where there is a prevalence of programs with little focus on the proper didactic training of students. TECH wants to combat this reality by presenting an innovative learning model, 100% practical and that facilitates the access of students to first level health institutions. From this classroom-based training, your graduates will have the most sought-after expertise in the emergency, urgent and catastrophic medical care landscape.

5. Expanding the Boundaries of Knowledge

During this Hybrid Master's Degree, students will have access to international centers located in different latitudes. This availability will facilitate students' access to different standards and modalities of care for patients who suffer accidents or are victims of catastrophes. In this way, they will expand their career horizons and enhance their resumes with a unique career path of its kind.

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You will have a total practical immersion in the center of your choice"

03

Objectives

TECH and its team of experts in Emergency Medicine have invested hundreds of hours in shaping this Hybrid Master's Degree in order to offer an academic experience that meets the highest and most ambitious expectations of its graduates. Therefore, the specialist who decides to take this program will have access to the most exhaustive and innovative information based on the most modern scientific evidence in relation to the clinical management of patients who are victims of emergencies and catastrophes.





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Would you like to implement into your practice the most innovative and effective diagnostic and therapeutic techniques in emergency medical care? Choose this TECH program and you will get it"



General Objective

- The main objective of this Hybrid Master's Degree in Emergency and Catastrophic Medicine is to serve as a guide for the specialist in updating their knowledge for patient care in serious situations. Thanks to this, you will be able to increase the quality and safety of your healthcare practice by improving your professional skills in a theoretical and practical way in a reference hospital in the healthcare sector



The best university program to perfect your triage skills in emergency and disaster situations through a unique multidisciplinary experience"





Specific Objectives

Module 1. General Aspects

- ♦ Differentiate between the concepts of accidents, emergencies 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
- ♦ Prioritize, organize and manage patient care in the most efficient way through triage
- ♦ Understand the basic workings of an emergency coordination center

Module 2. Emergency Services and Medical Transport

- ♦ Incorporate the criteria for selecting the most appropriate mode of medical transport in daily practice
- ♦ Describe the main characteristics of medical transport, its pathophysiology and the different EMS transport options
- ♦ 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

Module 3. Advanced Cardiovascular Support

- ♦ Gain up-to-date knowledge of the process for performing an ECG
- ♦ Interpret the electrocardiogram tracing in emergency situations
- ♦ Apply protocols for medical care in cases of heart rhythm alterations
- ♦ Identify the life-threatening pathophysiological processes
- ♦ Describe the different conditions that cause chest pain and apply the appropriate protocols in each case
- ♦ Recognize the different signs and symptoms typical of ischemic heart disease
- ♦ 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 4. Cardiovascular Emergencies

- ♦ Establish the diagnosis and management of acute pericarditis and cardiac tamponade
- ♦ Establish the diagnosis and conduct of acute coronary syndrome
- ♦ Detect urgent patterns in diabetic patients, elderly or dementia patients, as they are paucisymptomatic and this could mask the characteristics of a potentially life-threatening pain

Module 5. Respiratory Emergencies

- ♦ Recognize acute dyspnea and its most frequent causes
- ♦ Establish the diagnostic approach to acute dyspnea in the emergency department
- ♦ Identify the main clinical manifestations of exacerbation of acute bronchial asthma attacks
- ♦ Describe the therapeutic behavior in bronchial asthma exacerbations according to their severity

Module 6. Neurological Emergencies

- ♦ Identify the case of cerebral vascular accident (CVA) and provide timely treatment
- ♦ Review the types of studies for the identification of the stroke
- ♦ Enable the approach of physicians involved in the initial care of AVE to a practical and simple way of updated guidance
- ♦ Present an update on current diagnostic methods and the various therapies available, on a case-by-case basis, for acute ischemic stroke

Module 7. Digestive Emergencies

- ♦ Define acute abdominal pain
- ♦ Effectively perform anamnesis for acute gastrointestinal bleeding and vascular disorders
- ♦ Establish procedures to identify acute gastroenteritis

- ♦ Establish protocols for acute pancreatitis

Module 8. Endocrinometabolic Emergencies

- ♦ Have a broad knowledge of the definition, pathophysiology and classification according to severity of the most frequent endocrinometabolic emergencies
- ♦ Establish diagnosis and apply effective treatment to these emergencies

Module 9. Nephrourological Emergencies

- ♦ Deal with the most common nephrourological diseases and how to approach their diagnosis
- ♦ Establish the types of anticoagulation and thromboprophylaxis that should be applied in each case
- ♦ Understand risk exposure and exposure to potentially contaminating materials
- ♦ Delve into the understanding of sepsis and septic shock

Module 10. Hematologic, immunologic, and infectious emergencies

- ♦ Characterize the main mechanisms in hemostasis to maintain blood flow and the integrity of the vascular system
- ♦ Correlate its two major components: primary hemostasis and secondary hemostasis
- ♦ Identify the most common acquired and congenital causes of coagulation disorders
- ♦ Analyze diagnostic criteria and their therapeutic implication when caring for a patient with disseminated intravascular coagulation (DIC) and sepsis

Module 11. Psychiatric Emergencies

- ♦ Understand psychopathology at the prehospital level, as well as the factors that relate to the physician and the patient
- ♦ Approach an urgent case efficiently

- ♦ Learn how to conduct the psychiatric clinical interview
- ♦ Describe the different types of pathologies in psychiatry

Module 12. Ophthalmologic Emergencies

- ♦ Delve into the most common diseases of the eyelids and lacrimal system
- ♦ Address red eye, diagnosis and treatment
- ♦ Know the reasons and treatments for sudden vision loss

Module 13. Otolaryngologic Emergencies

- ♦ Review the anatomy of the external auditory canal
- ♦ Establish clinical and diagnostic classifications and referral criteria
- ♦ Attend foreign bodies in the nasal cavity and/or pharynx

Module 14. Toxicology Emergencies

- ♦ Establish the general aspects of intoxicated patients, as well as their action protocols
- ♦ Know the most frequent types of intoxications: drugs, mushrooms, medicinal, domestic

Module 15. Terminally Ill Patient in the Emergency Department

- ♦ Define the urgent complications in the terminally ill patient
- ♦ Apply end-of-life care in the last days of life
- ♦ Apply dermatological care in the emergency department
- ♦ Delve into organ and tissue donation and discuss the approach with the patient and family members

Module 16. Obstetric Emergencies

- ♦ Detail the generalities of gynecological bleeding, abnormal uterine bleeding and dysfunctional uterine bleeding. As well as, outline aspects related to the types

and classification

- Describe the characteristics in the diagnosis and treatment of dysfunctional uterine bleeding

Module 17. Pediatric Accidents and Emergencies

- 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

Module 18. Severe Trauma Care (Catastrophes or EEH)

- Identify the different traumatology conditions in emergency situations
- Describe the action of health professionals in different types of traumas and their correct usage
- Specify the priority actions to be taken in polytraumatized patients
- Select the best option when mobilizing and immobilizing a trauma patient
- Use general procedures and techniques applicable to critical patients in emergency situations

Module 19. Multiple Casualty Incidents (MCI and Disasters)

- Organize material and human healthcare resources in multiple casualty incidents and disasters
- Implement disaster action plans with certainty
- Establish the criteria and guidelines for appropriate and efficient communication between





the various agents involved in the emergency and critical care systems

Module 20. Diagnostic and Therapeutic Techniques (HHD and Catastrophic)

- ♦ Know the main consequences and initial handling of CBRN (Chemical Biological Radiological Nuclear) risk situations
- ♦ Explain new forms of bioterrorism
- ♦ Implement techniques for teamwork, motivation, leadership and dealing with uncertainty in situations

Module 21. Pharmacology in an Emergency

- ♦ Gain up-to-date knowledge of the procedures for the use of drugs frequently used in emergency medicine
- ♦ 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

Module 22. Other Important Aspects in Accident and Emergency Care

- ♦ Develop assertive communication skills in emergencies and emergencies
- ♦ Providing patient safety
- ♦ Understanding the new competencies of the emergency professional

Module 23. 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

04

Skills

After passing the evaluations of the Hybrid Master's Degree in Emergency and Catastrophe Medicine, the medical student will have acquired the professional competencies necessary for quality medical care, and updated based on the latest scientific evidence.



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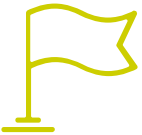
Through this program you will be able to update your knowledge and be able to provide quality patient care based on the latest scientific evidence"



General Skills

- ♦ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ♦ Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field 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 related to the application of their knowledge and judgments
- ♦ Know how to communicate conclusions, knowledge, and supporting arguments to specialized and non-specialized audiences in a clear and unambiguous way
- ♦ Acquire the learning skills that will enable further studying in a largely self-directed or autonomous manner
- ♦ Develop within the profession in terms of working with other health professionals, acquiring skills to work as a team
- ♦ 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 your professional field





Specific Skills

- Provide comprehensive care to the person to solve, individually or as members of a multidisciplinary team, the health problems affecting the patient and his or her immediate future
- Prioritize situations, resolve problems and make decisions when caring for critical patients in emergency situations
- Plan and deliver medical care for critically ill patients, their families and caregivers, based on quality standards
- Establish effective communication with patients, families and groups served, as well as with the rest of the work team
- Through your work within a multidisciplinary team, contribute to the process of organ and tissue donation
- Safely and appropriately manage frequently used medications in the intensive care unit
- Use rigorously, safely and confidently the diagnostic aids characterized by complex technology
- Establish an effective therapeutic relationship with patients and their family members to be established. This will help them to cope more effectively with emergency situations
- Manage scientific databases for carrying out reviews and bibliographic searches of scientific studies
- Formulate, implement and evaluate standards, action guidelines and protocols specific to the practice of medicine in the intensive care unit
- Conduct a critical and in-depth study on a topic of scientific interest in the field of intensive care
- Communicate result findings after having analyzed, evaluated, and synthesized the data
- Manage healthcare resources with efficiency and quality criteria
- Work as part of a team providing expert knowledge in the field of Critical Care
- Educate users on health issues so that they acquire healthy lifestyles, in order to avoid situations that may compromise their health



Through this program, you will update your knowledge of the protocols for the care of critically ill patients received in emergency and catastrophe units and medical services".

05

Course Management

TECH has integrated a teaching staff of excellence to teach this program. These professionals have extensive experience in the field of Emergency and Catastrophic Medicine. Thanks to these experiences, they have put together a very complete syllabus that includes the most up-to-date technological tools for the diagnosis and treatment of patients severely affected by accidents and disasters. At the same time, the most advanced care protocols of the moment are integrated.



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The faculty members of this program are distinguished in the healthcare landscape for their mastery of the most revolutionary scientific aspects and practical tools of Emergency and Catastrophe Medicine”

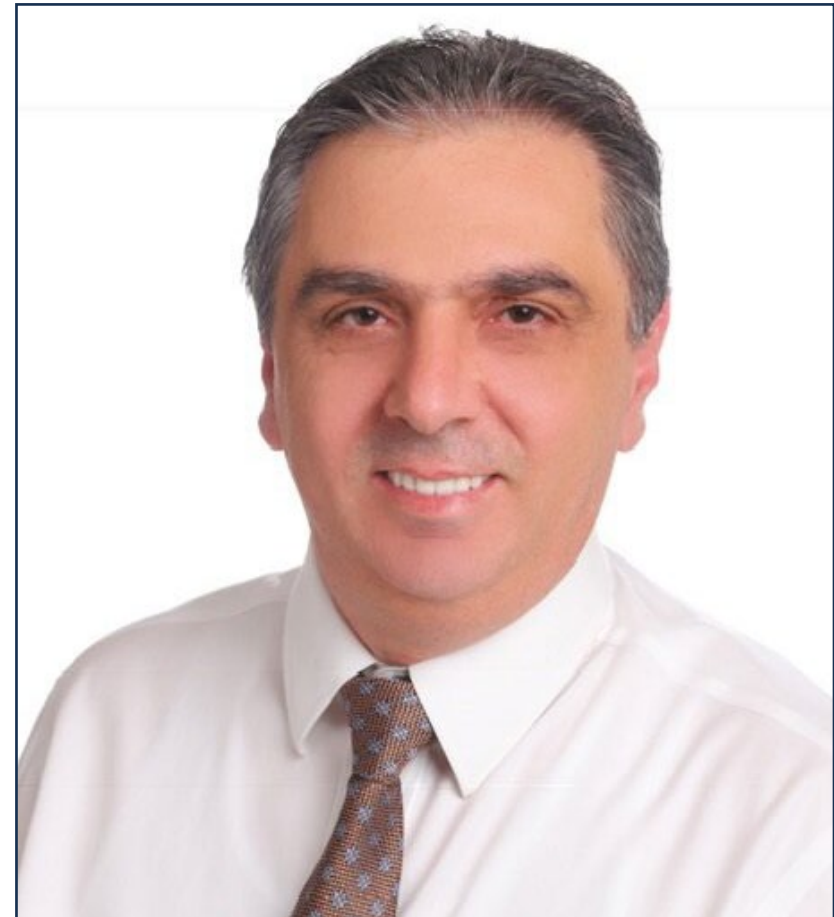
International Guest Director

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 worked tirelessly in this subspecialty of Emergency Medicine.

This work stems from his work 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 assistance and attend complex cases of oncology, transplant patients and congenital diseases with greater efficiency. Thanks to his deep interest in providing the best health response to disaster situations, Salah Issa has focused his efforts on academia and research, promoting specialized and continuous education for medical professionals.

In this capacity, he is the Director of Education for the Disaster Medicine Fellowship at the BIMC Harvard Medical School of Medicine. A role that joins the co-supervision of the European Disaster Medicine Thesis Board at the University of Eastern Piedmont. Its 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 serves as chairman of the special interest group against terrorism.

His scientific studies are also in this line, in which his analyses on attacks on educational institutions, the prevention of post-traumatic stress and the promotion of resilience of healthcare personnel in the face of COVID-19, anti-terrorist medicine or the analysis of variability in the training of expatriate pre-hospital providers in Bahrain stand out.



Dr. Fadi Salah Issa

- Emergency Physician specializing in Emergency Medicine
- Co-supervisor of the European Disaster Medicine Thesis Board at the University of Eastern Piedmont
- Director of Education for the BIMC Disaster Medicine Fellowship at Harvard Medical School BIMC Physicians
- Director of Disaster Preparedness Education Initiatives at Harvard Medical School BIDMC Physicians
- Fellowship in Disaster Medicine Research at Harvard Medical School
- Emergency Physician at King Faisal Specialist Hospital & Research Centre
- Team Leader and Emergency Physician, Armed Forces Hospitals-Southern Region, Khamis Mushayt, KSA
- Degree in Medicine and Surgery from the University of Medicine and Pharmacology in Cariova, Romania
- Disaster Medicine and Emergency Management by Harvard Medical School

Physicians at BIDMC

- Master's Degree in Disaster Medicine from the University of Piemonte Orientale, Italy
- Chairman of the Counterterrorism Special Interest Group of the World Association of Disaster and Emergency Medicine (WADEM)
- Fellow of the Academy of Harvard Medical School

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

Guest Directors



Dr. María Angélica Rivera Núñez

- ♦ Director of Patient Safety in the Emergency Department of La Paz University Hospital
- ♦ Instructor of Advanced Life Support National Cardiopulmonary Resuscitation Plan of the Esp Society of Intensive Care Medicine, Critical Care and Arias Units
- ♦ Degree in Medicine and Surgery from the Autonomous La University of Madrid
- ♦ Degree in Medicine and Surgery
- ♦ Specialist Surgeon 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. María Elena Calvín García

- ♦ Clinical Assistant and Mentor, Emergency Department, La Paz University Hospital
- ♦ HULP Emergency Department Attending Physician
- ♦ Clinical Reference in Emergency Services HULP



Dr. Rosario María Torres Santos-Olmo

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

Management



Dr. Francisco Vicente Roig D'Cunha-Kamath,

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

Professors

Dr. José Vicente Brasó Aznar

- ♦ Chief of Section of the Emergency Medicine Service at the la Ribera University Hospital
- ♦ Hospital Emergency Physician
- ♦ Associate Professor of Emergency Medicine at the Faculty of Medicine of the University of Valencia



Educational Plan

The curriculum of this Hybrid Master's Degree is composed of different academic modules, with a wide range of topics of interest. In them, students will learn about the organization, coordination and regularization of emergency services and their medical transports. At the same time, they will study in depth the most advanced cardiovascular supports in current medical practice, as well as the most studied neurological and respiratory pathologies from the scientific parameters of Emergency and Catastrophic Medicine . On the other hand, students will analyze the most effective diagnostic and treatment techniques for this kind of traumatic situations and the most accurate pharmacology according to the discussion of real cases of daily practice.



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With this program of study you will examine biosafety and other protocols for caring for physicians during the care of patients affected by toxicological emergencies"

Module 1. General Aspects

- 1.1. Definitions and Concepts
- 1.2. Comprehensive Care
- 1.3. Bioethics and Legislation in Emergency Medicine and Emergencies
- 1.4. Bioethics
- 1.5. Legislation

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. Types of Out-of-Hospital Health Resources
- 2.6. Pathophysiology of Medical Transport and Transfer Positions
- 2.7. Patient Transfer. Models

Module 3. Advanced Cardiovascular Support

- 3.1. Basic Life Support in Adults
 - 3.1.1. General Aspects
- 3.2. Advanced Life Support in Adults
 - 3.2.1. Action in Case of Bradyarrhythmia
 - 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 Ill 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 CPR
 - 3.4.5. Pediatric VAS Algorithms and Arrhythmia Treatment
- 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 (DVT)
- 4.9. Pulmonary Thromboembolism (PTE)
- 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 Ill Patient
- 6.2. Vascular Disorders, Ictus Code
- 6.3. Alterations in the Level of Consciousness
- 6.4. Intracranial Hypertension
- 6.5. Central Nervous System Infections
- 6.6. Seizures and Status Epilepticus
- 6.7. Headaches
- 6.8. Vertiginous Syndrome (Vertigo)

Module 7. Digestive Emergencies

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

Module 8. Endocrinometabolic 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. Nephrourological Emergencies

- 9.1. Nephrourological 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. Hematologic, immunologic, and infectious emergencies

- 10.1. Hemotherapy
- 10.2. Thrombopenia
- 10.3. Anticoagulation and Thromboprophylaxis
- 10.4. Allergies and Anaphylactic Reactions
- 10.5. Risk Exposure and Exposure to Potentially Harmful 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 Disease
- 11.4. Self-Harm Attempt
- 11.5. Anxiety Attack
- 11.6. Neuroleptic Malignant Syndrome

Module 12. Ophthalmologic Emergencies

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

Module 13. Otolaryngologic Emergencies

- 13.1. Infectious Processes in ENT
- 13.2. Foreign Objects in ENT
- 13.3. Epistaxis
- 13.4. Sudden Loss of Hearing

Module 14. Toxicology Emergencies

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

Module 15. Terminally Ill Patient in the Emergency Department

- 15.1. Emergency Complications in Terminal Patients
- 15.2. Attention to the Situation in the Last Few Days of a Terminal Patient's Life
- 15.3. Dermatology in Emergencies
- 15.4. Organ and Tissue Donation

Module 16. Obstetric Emergencies

- 16.1. Inflammatory, Infectious and Other Emergencies
- 16.2. Gynecological Bleeding
- 16.3. Pregnancy and Postpartum Emergencies
- 16.4. Emergency Delivery Assistance
- 16.5. Sexual Abuse (Doc Not Sent Retro)

Module 17. Pediatric Accidents and Emergencies

- 17.1. Infantile Colic
- 17.2. Febrile syndrome
- 17.3. Seizures

- 17.4. Airway Anatomy
- 17.5. Exanthematous Diseases
- 17.6. Digestive Pathology
- 17.7. Child Abuse
- 17.8. Transport of Critical Pediatric Patients

Module 18. Severe Trauma Care (Catastrophes or EEH)

- 18.1. General Aspects
- 18.2. Biomechanics of Accidents
- 18.3. Primary and Secondary Assessment
- 18.4. TBI
- 18.5. Thoracic Trauma
- 18.6. Abdominal Trauma
- 18.7. Vertebral Trauma and Spinal Cord Injury
- 18.8. Trauma of the Locomotor System
- 18.9. Injuries
- 18.10. Hypovolemic Shock
- 18.11. Pediatric Trauma
- 18.12. Trauma During Pregnancy
- 18.13. Special Traumas
- 18.14. Injuries due to 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 Care in Confined and Remote Places

Module 19. Multiple Casualty Incidents (MCI and Disasters)

- 19.1. General Aspects
- 19.2. VMI and Disaster Management
- 19.3. Sectorization
- 19.4. Deployment and Logistics

- 19.5. Triage
- 19.6. Multiple Victim Care
- 19.7. Evacuation
- 19.8. MCI Management in a Hospital
- 19.9. CBRN Incidents
- 19.10. Emergency Planning

Module 20. Diagnostic and Therapeutic Techniques (HHD and Catastrophes)

- 20.1. Probes
- 20.2. Peripheral and Central Vein Cannulation
- 20.3. Intraosseous Route
- 20.4. IOT
- 20.5. Difficult Airway
- 20.6. Invasive Mechanical Ventilation
- 20.7. Management of Noninvasive Mechanical Ventilation
- 20.8. Pericardiocentesis
- 20.9. Thoracocentesis and Pleural Drainage
- 20.10. Emergency Department Ultrasonography
- 20.11. Electrical Therapy (MP, CV, DF)
- 20.12. Monitoring of Hemodynamic Status and Electrocardiography
- 20.13. Capnography and Pulse Oximetry
- 20.14. Oxygen Therapy
- 20.15. Monitoring of Neurological Status
- 20.16. Monitoring of Sedoanalgesia
- 20.17. Collecting Analytical Samples
- 20.18. Frequently Used Scales in Accident and Emergency Medicine
- 20.19. Physiological Parameters in Adults and Children

Module 21. Pharmacology in an Emergency

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





Module 22. Other Important Aspects in Accident and Emergency Care

- 22.1. Communication Skills in Emergencies
- 22.2. Patient Security
- 22.3. New Professional Skills in Accident and Emergency Care
- 22.4. New Technologies in Accident and Emergency Care

Module 23. Update on 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 its 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. Latest Information on Microbiological Diagnosis of Coronavirus Infections
- 23.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
- 23.10. Up-to-Date Management of Coronavirus Infections
- 23.11. Future Challenges in the Prevention, Diagnosis, and Treatment of Coronavirus



It delves into the most relevant theory in this field, subsequently applying it in a real work environment"

07

Clinical Internship

Upon completion of the online study phase, this innovative program begins a second educational period. During this academic stage, students will have access to practical training in a renowned and rigorous healthcare center. In addition, during this face-to-face and comprehensive stay, students will be accompanied by a designated tutor who will accompany them throughout the process of acquiring new skills.





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You will combine, in an exceptional way, your practical knowledge with highly demanded practical skills through the contents of this Hybrid Master's Degree"

This program includes an updated Internship Program, consisting of a 3-week stay in a prestigious hospital. This educational process will extend from Monday to Friday until 120 consecutive hours of learning have been completed. At the same time, the entire process will be supervised and governed by a designated tutor. This professional will ensure that the student applies the most innovative diagnostic procedures and participates in the most up-to-date therapeutic planning for pathologies generated by a wide variety of accidents.

Throughout this educational period, students will rub shoulders with leading experts in the field of Emergency Medicine. They will instruct them on the working dynamics of the services and hospital units dedicated to this kind of specialized care. They will also allow each of them to intervene in clinical discussions to address patients' survival status and chances of survival.

This learning modality is undoubtedly a learning opportunity that will enhance students' mastery of complex technologies. Likewise, this practical experience will positively enhance the resumes of graduates and allow them to access demanding and competitive jobs in the healthcare field.

The practical part will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of the professors and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of the medical for Nursing(learning to be and





learning to relate).

The procedures described below will be the basis of the practical part of the training, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:

Module	Practical Activity
Emergency services and medical transport	To know the organization and operation of medical transport with emphasis on the tasks of communication, reporting and coordination
	Working in the state-of-the-art advanced intensive care medical transport unit
Diagnostic and therapeutic techniques and pharmacology in emergency care	Monitoring, by means of clinical imaging equipment, the neurological and cardiovascular status of patients
	Calculating drug doses and using advanced infusion pumps
	Apply fluid therapy techniques, according to the recommendations of internationally approved guidelines.
	Manage different electrical therapies (transcutaneous pacemakers, electrical cardioversion and defibrillation) in health emergency situations.
Emergencies and medical emergencies in adults	Classify different health conditions, during acute patient care.
	Apply analgesia and sedation of the polytraumatized patient according to standardized recommendations
	Master the instruments and techniques for performing minor surgeries for critically ill patients
	To know the most modern Invasive and Non Invasive Mechanical Ventilation strategies in the healthcare field
Medical emergencies and emergencies in pediatric patients	Manage difficult to access airways with specialized instruments
	Interpret electrocardiograms according to the specific parameters of the child and adolescent organism
	Apply up-to-date peripheral and central venous system access practices

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 practical training 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. TUTOR: 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.

08

Where Can I Do the Clinical Internship?

In order to ensure that the updating process is the best possible, TECH proposes the realization of this on-site stay in a prestigious center that can provide the physician with the latest advances in the field of emergency medicine. This is a very complex and broad field, so it requires updating by the specialist, and the role of the hospital institutions proposed here is vital in this process, since they will offer the most advanced knowledge in the specialty.



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*Get up to date in the most effective way
by putting into practice everything you
have learned in a prestigious center with
the best professionals”*

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



Medicine

Hospital San Juan de Dios Córdoba

Country: Spain City: Córdoba

Address: Av. del Brillante, 106, 14012 Córdoba

Clinical center specialized in social and health care

Related internship programs:
Emergency Medicine



Medicine

Hospital HM Modelo

Country: Spain City: La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

Hospital HM Nou Delfos

Country: Spain City: Barcelona

Address: Avinguda de Vallcarca, 151, 08023 Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
- Aesthetic Medicine
- Clinical Nutrition in Medicine



Medicine

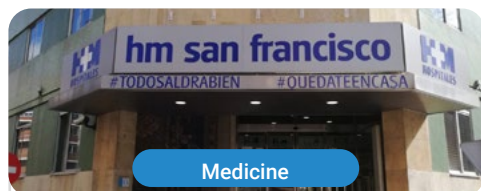
Hospital HM Regla

Country: Spain City: León

Address: Calle Cardenal Landázuri, 2, 24003, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
- Update on Psychiatric Treatment in Minor Patients



Medicine

Hospital HM San Francisco

Country: Spain City: León

Address: C. Marqueses de San Isidro, 11, 24004 León

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
Update in Anesthesiology and Resuscitation
Trauma Nursing



Medicine

Hospital HM Puerta del Sur

Country: Spain City: Madrid

Address: Av. Carlos V, 70, 28938 Móstoles, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
- Palliative Care
- Clinical Ophthalmology



Medicine

Hospital HM Madrid

Country: Spain City: Madrid

Address: Pl. del Conde del Valle de Súchil, 16, 28015 Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
- Palliative Care
- Anaesthesiology and Resuscitation



Medicine

Hospital HM Vallés

Country: Spain City: Madrid

Address: Calle Santiago, 14, 28801 Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain

Related internship programs:
- Gynecologic Oncology
- Clinical Ophthalmology



Medicine

Hospital HM Torrelodones

Country

Spain

City

Madrid

Management: Av. Castillo Olivares, s/n, 28250
Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers
distributed throughout Spain

Related internship programs:

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

Hospital HM Sanchinarro

Country

Spain

City

Madrid

Management: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers
distributed throughout Spain

Related internship programs:

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

Hospital HM Montepíncipe

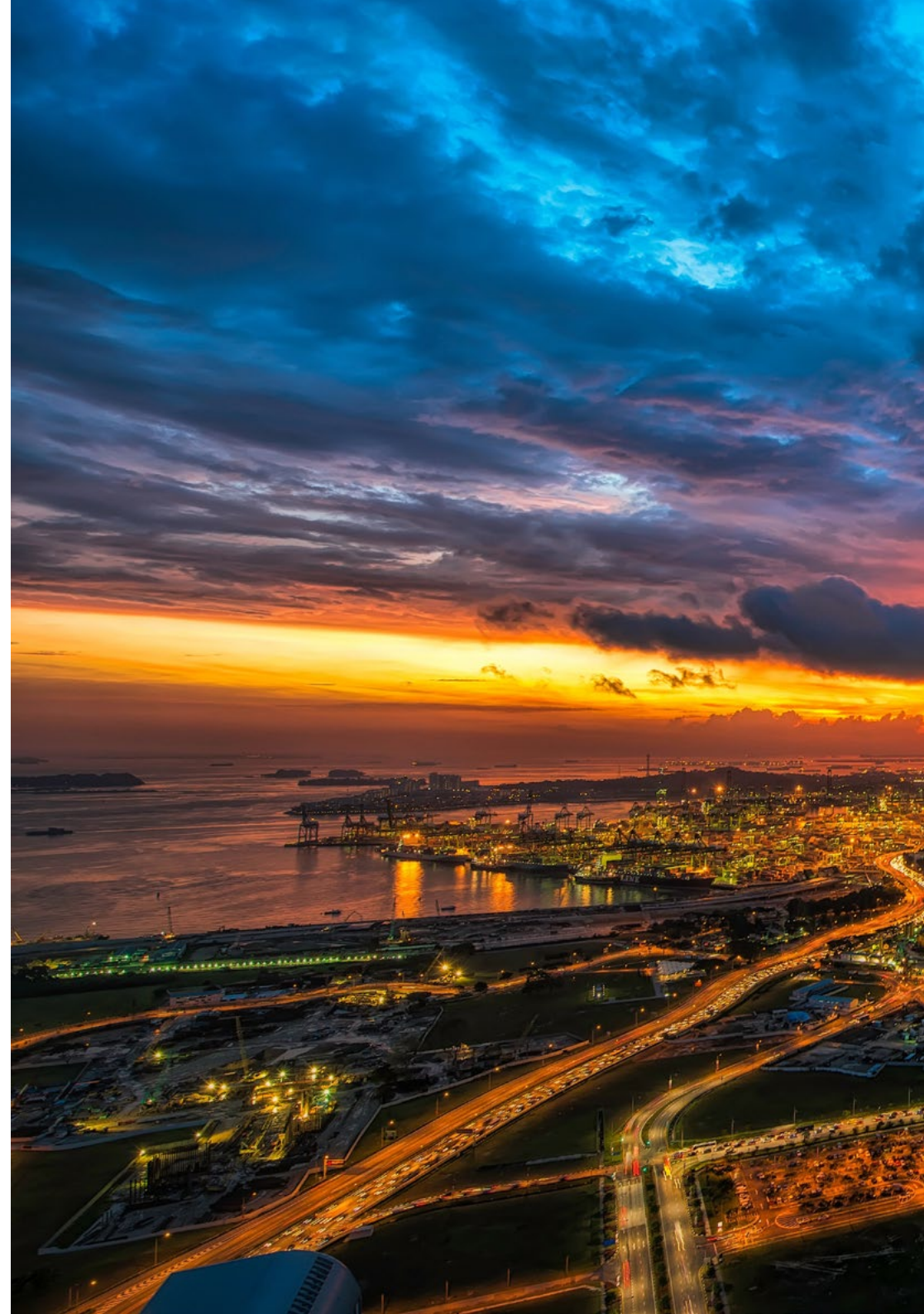
Country	City
Spain	Madrid

Address: Av. de Montepíncipe, 25 28660
Boadilla del Monte, Madrid

Network of private clinics, hospitals and specialized centers
distributed throughout Spain

Related internship programs:

- Palliative Care
- Aesthetic Medicine





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Take advantage of this opportunity to surround yourself with expert professionals and learn from their work methodology”

09

Methodology

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

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



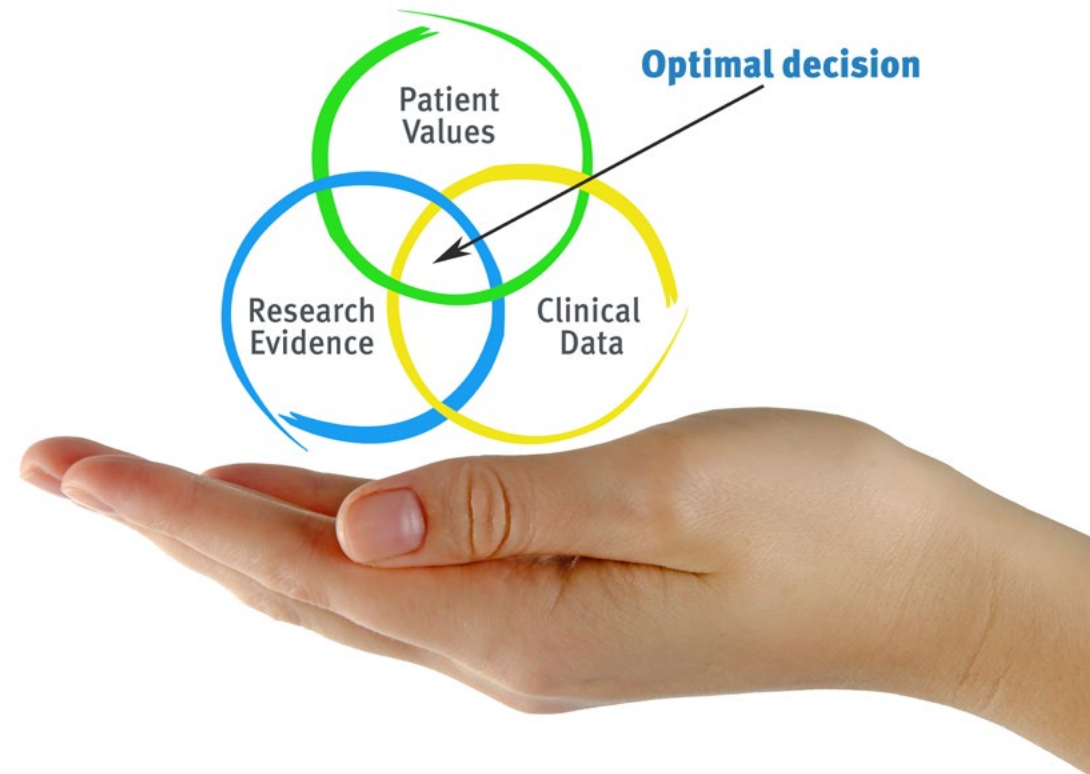
“

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



Relearning Methodology

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

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

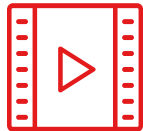
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Surgical Techniques and Procedures on Video

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



Interactive Summaries

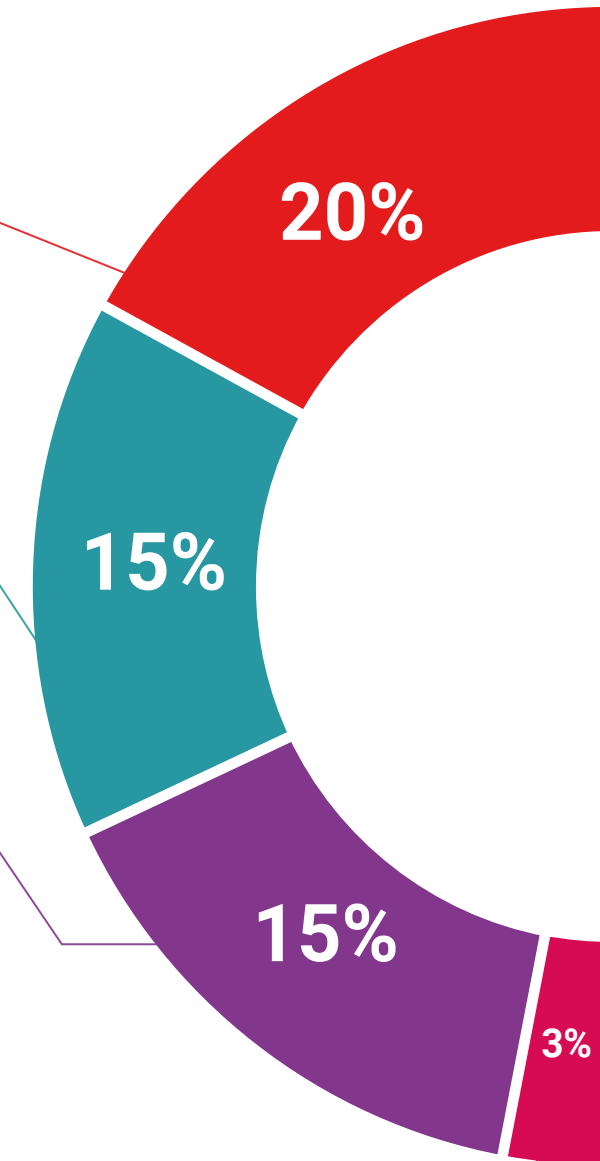
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

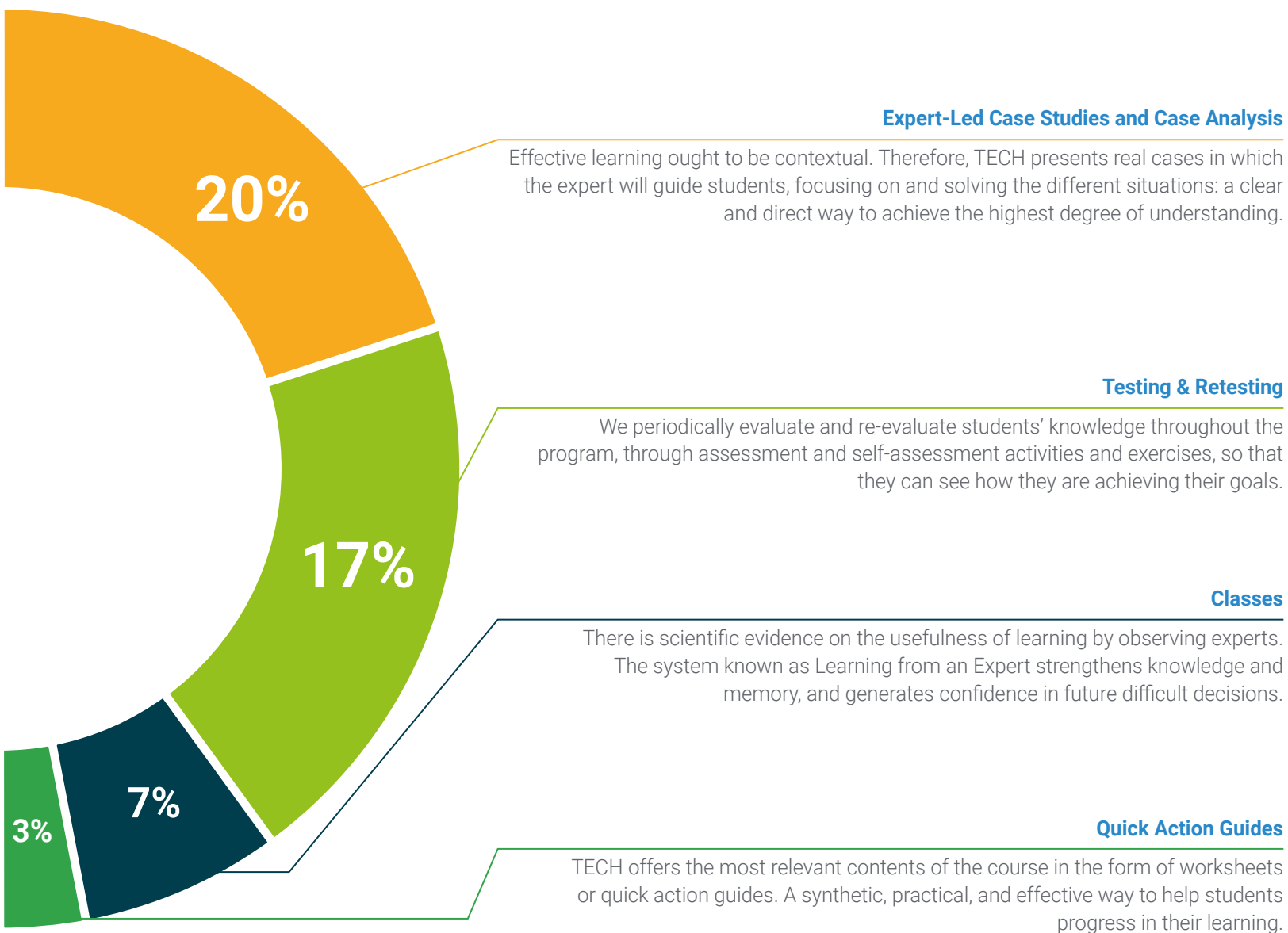
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





10

Certificate

The Hybrid Master's Degree in Emergency and Catastrophic Medicine guarantees, in addition to the most rigorous and updated training, access to a Hybrid Master's Degree issued by TECH Global University.



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

This program will allow you to obtain your **Hybrid Master's Degree diploma in Emergency and Catastrophic Medicine** 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** title 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.

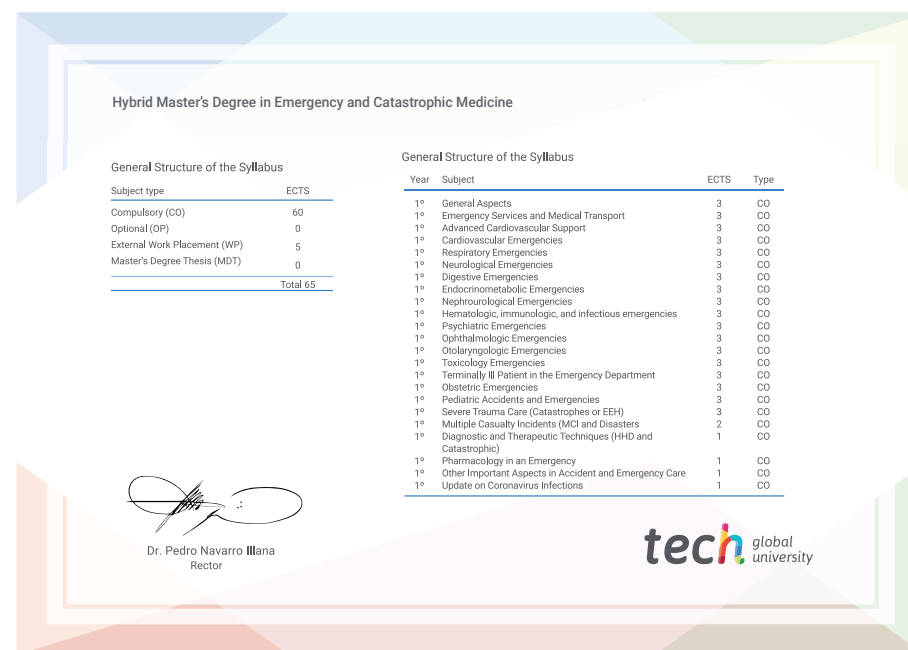
Title: **Hybrid Master's Degree in Emergency and Catastrophic Medicine**

Course Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**





Hybrid Master's Degree Emergency and Catastrophic Medicine

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

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Hybrid Master's Degree

Emergency and Catastrophic Medicine