Advanced Master's Degree

Emergency Nursing in Adult and Pediatric Patients

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Advanced Master's Degree
Emergency Nursing in Adult and Pediatric Patients

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/in/nursing/advanced-master-degree/advanced-master-degree-emergency-nursing-adult-pediatric-patients**

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01

Introduction

Nurses are multidisciplinary professionals, as they participate in all healthcare areas and, therefore, their knowledge must be specialized to the field in which they work.. They are the first health professionals on the scene and in contact with patients and this allows them to create a bond, but, in emergency situations, this can be complicated. Through this TECH program, nurses will be able to obtain a higher qualification in emergency department work, both for adult and pediatric patients, achieving a specific qualification that will enable them to successfully develop in the field. Furthermore, these studies open the door to work in emergency and disaster situations, so students will acquire the specialized knowledge that will allow them to work in emergency teams, NGOs, hospital and outpatient centers or emergency services, among others.

Knowing the peculiarities of the emergency department will be fundamental for your professional development in this area, but, above all, for the specialized care of adults and pediatric patients"

Healthcare in emergency situations is more complex than in other areas, since, given each patient's situation, the first intervention and diagnosis may be complicated. The sick or injured person in need of urgent or emergency care presents acute symptoms, in various forms, which change and evolve in a short period of time. They could be fighting for their lives, depending on which organs are affected, and they may need rapid response care to be saved.

Moreover, the organization of services for patient care in urgent and emergency situations often differentiates between adults and children, which explains why students can find different programs to specialize in emergency nursing. However, this has also created a need for those professionals who are looking for comprehensive, useful and relevant specialization to be able to intervene in all types of patients.

To this end, this program compiles the best of emergency nursing studies, urgent response and catastrophes, as well as the most relevant aspects of pediatric emergencies for nurses, so that they acquire a global and specialized knowledge of the factors that can affect all patients. Specifically, it presents the means and equipment available for urgent interventions, their applications and complications so that they can be used appropriately in each emergency situation, including basic and advanced life support, which is essential for critical patients. Furthermore, taking into account the current COVID-19 pandemic, the program includes a specific syllabus to explain its microbiological characteristics, diagnostic tests and treatments, as well as ways of intervening in coronavirus patients.

It should be noted that this program is totally different from others that can be found on the market, since it places experience as the foundation of the theory, providing sufficient global knowledge to practice.

This **Advanced Master's Degree in Emergency Nursing in Adult and Pediatric Patients** is the most complete and up-to-date program on the market. The most important features include:

- Practical cases presented by experts in Emergency Nursing
- The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Special emphasis on innovative methodologies in Emergency Nursing
- 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

When pediatric patients get to the emergency room, they require specialized care that you will learn about by studying this Advanced Master's Degree"

TECH is a 21st century university and is committed to online teaching as its main method of learning"

Specialize in emergency nursing and learn to care for adult and pediatric patients with different conditions.

A 100% online update that will allow you to balance your studies with the rest of your daily obligations.

The teaching staff includes nursing professionals who bring their experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed using the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training experience designed to train 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 during the course. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

This Advanced Master's Degree has been designed by TECH professors with the main objective of offering nurses a first level training, thanks to which they will be able to access the most up-to-date content on the main emergencies they will have to deal with in their daily practice. Consequently, everything from the different types of infections to the most serious traumas, pediatric emergencies or the latest updates on COVID-19 will be covered. A program with a wide range of content that will be essential for their professional growth.

This program will teach you the main procedures to care for patients with respiratory infections or severe trauma"

General Objectives

- Gain the necessary up-to-date knowledge of caring for a patient in a serious condition, with the aim of improving the quality and security of your healthcare practice in accident, emergency and disaster situations
- Update the necessary knowledge in nursing care for pediatric patients in emergency situations, in order to increase the quality and safety of their praxis in approaching different techniques and nursing procedures in the most frequent pediatric emergencies
- Know the main procedures to be carried out in the different types of emergencies that may occur in adult and pediatric patients

Get first-hand knowledge of the emergency department and offer more specialized care to your patients"

Specific Objectives

- 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
- Use medical records in the emergency department and understand the most relevant legal and ethical aspects of health care in emergencies
- Prioritize, organize and manage patient care in the most efficient way through triage
- Understan|d the basic workings of an emergency coordination center
- 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
- Apply up-to-date basic and advanced CPR techniques for all ages
- Gain up-to-date understanding of the procedures for the use of an automated external defibrillator
- Describe and apply the procedures for neonatal resuscitation
- Gain up-to-date knowledge of the process for performing an ECG

- Interpret the electrocardiogram tracing in emergency situations
- 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
- Identify the behavior of a patient with dyspnea in the emergency room
- Gain up-to-date knowledge of processes for addressing an asthmatic patient, bronchospasm, and exacerbation of chronic obstructive pulmonary disease
- Recognize the symptoms of the main acute vascular disorders
- Treat a patient with suspected aortic dissection
- Identify the main emergency immunological pathologies and gain up-to-date knowledge of how to treat patients suffering from anaphylactic reactions
- Acquire up-to-date knowledge on how to care for intoxicated patients and injuries caused by environmental agents
- Gain up-to-date understanding of the procedures for dealing with terminal patients
- Understand the medical-legal documents and how to act in situations of gender violence and child abuse
- Identify the main emergency neurological disorders
- Describe the out-of-hospital care for neurological vascular disorders and code stroke
- Gain up-to-date knowledge of the procedures for immediate action in cases of syncope, acute confusional syndrome, headache, coma and vertigo
- Differentiate the main causes of acute abdomen and how to manage acute abdominal pain
- Recognize the principal pathologies of the gastrointestinal tract and the related consequences
- Understand the fundamental alterations of glycemic metabolism
- Understand the main consequences of electrolyte alterations
- Describe the main acute ENT and ophthalmologic diseases
- Adequately resolve a psychomotor agitation crisis
- Categorize the risk of a self-harm attempt
- Gain up-to-date knowledge of the procedures for the use of drugs frequently used in emergency medicine
- 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
- 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
- Highlight the priority actions in emergency pediatric situations
- Use general procedures and techniques applied to critical patients in emergency situations
- Organize material and human healthcare resources in multiple casualty incidents and disasters
- Implement disaster action plans with certainty
- Know the main consequences and initial handling of CBRN (Chemical Biological Radiological Nuclear) risk situations
- Establish the criteria and guidelines for appropriate and efficient communication between the various agents involved in the emergency and critical care systems
- Implement techniques for teamwork, motivation, leadership and dealing with uncertainty in situations
- Describe the procedures that nurses can perform to safely resolve potentially dangerous situations
- Carry out the correct sequence of basic cardiopulmonary resuscitation maneuvers
- Point out indications and procedure for complete upper airway clearance due to foreign bodies
- Carry out advanced cardiopulmonary resuscitation maneuvers according to the latest life support recommendations
- Define the concept of pain, its types and methods of evaluation
- Describe sedoanalgesia procedure preparation and performance
- Analyze the specific action protocols by age for pediatric patients with a fever
- Establish the correlation between the different types of brain damage and their clinical manifestations
- Describe the diagnostic process, assessment and care of pediatric patients with traumatic brain injury
- Specify evaluation and treatment priorities in traumatized children and the characteristics of pediatric patients in general
- Increase the ability to manage the acutely intoxicated child or adolescent
- Define anaphylaxis and its severity, clinical manifestations and diagnosis
- Indicate the management and treatment methods for wounds and burns
- Establish the differential organizational and management characteristics of pediatric emergency departments
- 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

03

Skills

Adults and children may face different health emergency situations throughout their lives. Intervention in both has a series of particularities given each of their characteristics. With this program, TECH goes a step further to offer nurses a unique opportunity to develop the competencies that will allow them to efficiently care for patients in the emergency department, secure in the knowledge when performing the latest procedures.

Specialize at TECH and improve your ability to provide emergency patient care"

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 area of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of 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
- Address different emergency situations that can happen to adults and children

Specific Skills

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

- Successfully resolve emergency situations by selecting the most appropriate means of medical transport based on stage of development, environment, time and available resources
- Effectively implement the correct techniques, protocols and treatments in the field of basic and advanced cardiopulmonary resuscitation, in all age groups
- Interpret the electrocardiographic tracing in rhythm disturbances, cardiac arrest and cardiovascular processes related to cardiac perfusion
- Distinguish the different emergency pathological processes in adults and children
- Provide quality medical care to patients with various conditions and emergency health problems which affect a variety of organs and systems in the body
- Understand and implement primary and secondary examination techniques of a polytraumatized patient, as well as adapting the protocols to give advanced life support
- Lead in the organization and management of an MCI or disaster
- Prevent risks related to incidents of CBRN and take all the necessary precautions when dealing with such incidents
- Through your work within a multidisciplinary team, contribute to the process of organ and tissue donation
- Safely and confidently use diagnostic aids characterized by complex technology
- Manage healthcare resources with efficiency and quality criteria
- Work as part of a team providing expert knowledge in the field of emergency care
- Perform the different procedures nurses can carry out to safely resolve potentially dangerous situations in pediatric emergencies
- Perform basic and advanced cardiopulmonary resuscitation on children
- Describe the procedure to completely clear the upper airway due to foreign body obstruction
- Perform nursing care on children with endocrinometabolic emergencies
- Assess the degree of pain in the pediatric patient
- Explain the sedoanalgesia procedure and know how to prepare the drugs required for it
- Apply the specific protocols of action for pediatric patients with fever
- Connect the different types of brain damage and their clinical manifestations
- Perform initial assessment of traumatic brain injury
- Identify characteristics of the traumatized child and priorities for assessment and treatment
- State and describe the differences between viral and bacterial meningitis
- Manage pediatric patients with acute intoxication
- Respond to emergencies in special needs children
- Explain and identify the most frequent causes of an apparently lethal episode
- Define anaphylaxis and its clinical manifestations to guide the diagnosis
- List the situations where child abuse is suspect
- Describe burn care, including cleanup, phlyctenas management, draping and analgesia and prophylaxis
- Identify the differential organizational and management characteristics of pediatric emergency departments
- Adapt their decision-making to the current situation, environment, time, and available resources
- Work with patients that have been diagnosed with or present symptoms of Coronavirus, complying with all safety measures
- Perform diagnostic tests to detect possible cases of Coronavirus

Develope the skills needed to safely and efficiently care for patients with Coronavirus"

04

Course Management

TECH has the best teaching team of the moment in order to meet its goal of offering truly innovative and quality content to its students. It consists of professionals specialized in emergency nursing, urgent response and catastrophes, as well as pediatric emergencies. A first-class teaching staff who have compiled the most relevant content on the work in hospital and outpatient centers are acutely aware of the importance of offering programs of great interest to nurses that prove to be useful for their professional development.

A team trained and specialized in emergency nursing care will support you throughout your learning process, helping you acquire the most up-to-date and useful knowledge for daily practice"

Guest Directors

Ruiz López, Daniel

- Nursing Supervisor in the Adult Emergency Department of the Hospital Universitario La Paz (Madrid)
- Diploma in Nursing (D.U.E.), University School of Nursing, Cordoba
- Master's Degree in Nursing Management Cardenal Herrera University
- Postgraduate Diploma in Nursing in the Hospital Emergency Department Cardenal Herrera University
- Postgraduate Diploma in Management Skills for Nursing Cardenal Herrera University
- Postgraduate Diploma in Quality Management for Nursing Cardenal Herrera University
- Postgraduate Diploma in Management and Services Supervision for Nursing Cardenal Herrera University
- Postgraduate Diploma in Direction and Management of Health Services for Nurses Cardenal Herrera University
- Training Course for Trainers and Auditors in Triage Manchester Spanish Triaje Group
- Triaje System Training Course Spanish Triaje Group

Ms. Souto Novas, Ana María

- Emergency Supervisor at La Paz University Hospital
- University Diploma in Nursing from the Universidad Pontificia of Salamanca
- Master's Degree in Integration and Critical Problem Solving in Nursing from the University of Alcalá
- Degree in Social and Cultural Anthropology from the Autonomous University of Madrid
- Advanced Training in Dialysis Techniques for Nurses
- Postgraduate Diploma in Accidents and Emergencies from the Complutense University of Madrid
- Training Course on Out-of-Hospital Emergencies from the Complutense University of Madrid
- Postgraduate Diploma in Management and Services Leadership for Nursing
- Priority Triage in the Emergency Department Manchester System
- Training in Emergency Planning and Self-Protection

Mr. García Briñón, Miguel Ángel

- Emergency Services Supervisor at HCSC
- Supervisor at the Neonatal Unit at HCSC
- Degree in Nursing
- Master's Degree in Health Services and Health Companies Management
- Expert in Out-of-Hospital Accidents and Emergencies at the European University of Madrid
- Nurse collaborator in the Multipharma pharmaceuticals "InMEDIATE" study

Co-Direction

Dr. Vicente Fco Roig D´Cunha-Kamath

- 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

Professors

Ms. Alonso Pérez, Marta

- Nurse in the Emergency Department at Clinical Hospital San Carlos in Madrid
- Degree in Nursing from the Complutense University of Madrid
- Master's Degree in Intensive Care Nursing from CEU San Pablo University
- Postgraduate Diploma in Nursing Processes and Interventions for Pediatric Patients in Life-threatening situations from the University of Avila
- Expert in Out-of-Hospital Accidents and Emergencies with FUDEN
- Diploma in advanced pediatric and neonatal cardiopulmonary resuscitation

Ms. Alfaro Ramírez, Concepción

- Pediatric Emergency Services Supervisor 9 de Octubre Hospital NISA Valencia
- Specialist Nurse in Pediatric Nursing
- University Professor in: Diploma in Neonatal Nursing and Neonatal Intensive Care CEU – Cardenal Herrera University Moncada Valencia
- Lecturer in Child Nutrition Course at Fundación Hospitales Nisa
- Diploma in Nursing Catholic University of Valencia (UCV)

Dr. Brasó Aznar, José Vicente

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

Mr. Cozar López, Gabriel

- Nurse in the Emergency Department at Clinical Hospital San Carlos
- Degree in Nursing from the University of Alcalá
- Master's Degree in Emergency and Critical Care in Nursing from the European University of Madrid
- Collaborator with the Health Research Institute at the Clinical Hospital San Carlos in Madrid
- Member of the teaching body of the Foundation for the Development of Nursing

Ms. Chamizo Alberto, Leticia

- Emergency Services Nurse at La Paz University Hospital
- Nurse in Internal Medicine in Services at La Paz University Hospital
- Nurse for Vascular Surgery, Thoracic Surgery and Abdominal Surgery Services at Gregorio Marañón Hospital
- Nurse in Hospitalization at the Ruber Juan Bravo Hospital Complex
- Nurse in medical transport services and medical coverage in television filming, sporting events, congresses, bullfighting shows and medical examinations at Enfermerías Móviles Emilio S.L.
- Diploma in Nursing from the Red Cross School, Autonomous University of Madrid (Degree validated as a Degree in Nursing)
- Postgraduate Diploma in Out-of-Hospital Emergency Care at the School of Health Sciences
- Continuing Education and Training with PPE for infectious diseases at La Paz University Hospital

Ms. Espílez Laredo, Irene

- Nurse in the Emergency Department at Clinical Hospital San Carlos in Madrid
- Degree in Nursing from the Complutense University of Madrid
- Master's Degree in Intensive Care from the University of Avila
- Pediatric Specialist in life-threatening situations with CODEM
- Expert in Out-of-Hospital Accidents and Emergencies

Mr. Estevez García, Adolfo

- Nurse in the Emergency Department, Hospital Clínico San Carlos, Madrid
- Nurse teaching collaborator in the Faculty of Nursing, Physiotherapy and Podiatry, at Complutense University of Madrid for the clinical practice teaching of the nursing degree
- Laboratory technician, specialized in Anatomic Pathology
- Degree in Nursing from the European University of Madrid
- Specialist in Emergency Nursing and Outpatient Emergencies from the European University of Madrid
- Course on Pediatric Triage at Gregorio Marañón Hospital

Ms. Forés Rivas, Ana

- Nurse in the Intensive Care Unit at Dr. Peset University Hospital, Valencia
- University Diploma in Nursing
- Diploma in Corporate Nursing
- Master's Degree in the Prevention and Treatment of Addictive Behaviors
- Technical Labjoratory Specialist
- Certificate of Pedagogical Aptitude (CAP)
- Health and Community Foundation 7/2006-512012 and 6/2017 - present

Ms. Gómez Lage, Laura

- Adult Emergency Services Nurse at HULP
- Degree in Nursing from the Complutense University of Madrid
- Postgraduate Diploma in the Nursing Processes and Interventions of Pediatric Patients in Life Threatening Situations
- Postgraduate Diploma in the Emotional Development and Upbringing of a Child FUDEN - Catholic University of Ávila
- Postgraduate Certificate in Emergency Nursing Basics
- Postgraduate Certificate in Emergencies in the Care of Institutionalized Patients
- Postgraduate Certificate in Pharmacology Residency in Emergency Medicine
- Postgraduate Certificate in Nursing Care of Healthy Newborns
- Postgraduate Certificate in Commonly Used Drugs

Ms. Lorenzo Salinas, Almudena

- Nurse in the Emergency Department for adult and pediatric patients at Clinical Hospital San Carlos in Madrid
- Graduate in Nursing from the University School of Nursing Fundación Jiménez Díaz
- Specialist in Accidents and Emergencies at the School of Health Sciences of the Nursing Collegiate Organization, Center attached to the Complutense University of Madrid
- Course in Nursing in the neonatal adaptation to extrauterine life

Dr. López Ruiz, María Amparo

- Doctor of Medicine Cum Laude from the CEU - Cardenal Herrera University. Thesis: Analysis of Medication in Pediatric Population Who Attend the Emergency Department
- Degree in Medicine and Surgery from the University of Valencia
- Postgraduate Diploma in Neonatology Premature Newborn Care
- University professor of Nursing, Medicine and Pharmacy Faculty of Biomedical Sciences CEU - Cardenal Herrera University, Moncada (Valencia)
- Professor for the Online Master's Degree in Pediatric Emergency Nursing CEU - Cardenal Herrera University -- Health Class
- Professor for the Master's Degree in Advanced Esthetic and Laser Techniques CEU Cardenal Herrera University - Moncada (Valencia) and NISA Hospitals Foundation (Valencia)
- Postgraduate course director: Diploma in Neonatal Nursing and Neonatal Intensive Care CEU - Cardenal Herrera University, Moncada (Valencia) and NISA Hospitals Foundation (Valencia) Class of 2014, 2015, 2016
- Postgraduate course coordinator: First Aid, Cardiopulmonary Resuscitation and Emergency Situations CEU - Cardenal Herrera University, Moncada (Valencia)
- Erasmus coordinator for Medicine CEU - Cardenal Herrera University, since the class of 2014
- NESTLÉ Award for Best Oral Communication, XXIV National Congress of the Spanish Society of Outpatient and Primary Care Pediatrics

Ms. Lospitao Gómez, Sara

- Nurse at Intensive Care Department at University Hospital in Fuenlabrada (Madrid)
- Cardiac Surgery Post-Surgical Intensive Care Unit (PCU) 12 de Octubre Hospital
- Coronary Intensive Care Unit 12 de Octubre Hospital
- Bachelor's Degree in Humanities European University of Madrid
- Master's Degree in Critical Care Rey Juan Carlos University I
- Advanced Nursing Degree European University of Madrid
- Postgraduate Diploma in Continuing Education Complutense University of Madrid
- Internship tutor for undergraduate and graduate students in Nursing at the European University of Madrid (UEM) and Juan Carlos I University (URJC)
- Instructor for SVA by the National CPR Plan of SEMICYUC

Mr. Mora Rivero, Jorge

- Emergency Department Nurse in Elche University General Hospital
- University tutor for clinical training
- Professional teaching experience in Master's Degrees and Postgraduate Courses
- Degree in Nursing from the University of Alicante
- Master's Degree in Nursing Sciences
- Postgraduate Diploma in Primary Care Emergencies
- Degree in Emergency Medical Transportation (SAMU)

Ms. Roldán del Amo, Adela

- Pediatric Nurse in the Pediatric Hospitalization Unit 9 de Octubre NISA Hospital
- Specialist Nurse in Pediatric Nursing
- University Professor in: Diploma in Neonatal Nursing and Neonatal Intensive Care CEU – Cardenal Herrera University Moncada Valencia
- University Professor in: First Aid, Cardiopulmonary Resuscitation and Emergency Situations CEU – Cardenal Herrera University Moncada Valencia
- University Diploma in Nursing University School of Nursing Nuestra Señora de los Desamparados of Valencia

Mr. Vega Vega, Luis

- Nurse in the Emergency Services at La Paz University Hospital
- SUMMA 112 Nurse
- Degree in Nursing from the Red Cross School
- Postgraduate Diploma in Out-of-hospital Care and Master's Degree in Nursing in Emergency and Critical Care at the European University of Madrid
- Member of the Red Cross ERIE Health Care
- Referent training EPIs infectious diseases at La Paz University Hospital
- Postgraduate Diploma in Comprehensive Management of Adults in Infectious Diseases Care Processes in Nursing
- Postgraduate Certificate in Nursing Emergencies and Urgent Response

05

Structure and Content

This TECH Advanced Master's Degree syllabus includes the most advanced concepts and procedures in nursing care for adult and pediatric patients who have suffered some kind of health emergency. Consequently, students will be able to implement the precise skills and competencies that will be very useful for their professional development in the field, both in hospital and out-of-hospital emergency care, as well as in emergency and disaster situations.

A complete syllabus that will guide you through the main techniques and procedures used in nursing emergencies"

Module 1. General aspects

1.1. Definitions and Concepts
1.2. Comprehensive Study of Health Emergencies
1.3. Functions of Emergency and Disaster Nursing
1.4. Bioethics in Emergencies and Disasters

Module 2. Hospital Emergency Services

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

Module 3. Emergency Services and Healthcare Transport

3.1. SEM Organization
3.2. Coordination and Health Regulation
3.3. Information and Record Systems
3.4. Types of Medical Transport
  3.4.1. Intrahospital Transport
  3.4.2. Interhospital Transport
  3.4.3. Ground Medical Transport
  3.4.4. Air Medical Transport
3.5. Types of Out-of-Hospital Health Resources
3.6. Pathophysiology of Medical Transport and Transfer Positions
3.7. Patient Transfer Models
3.8. Transport and Emergencies Legislation

Module 4. Life Support

4.1. General aspects
4.2. Basic Life Support and AED in Adults
4.3. Basic Life Support and AED in Children
4.4. Basic Electrocardiography and Arrhythmias
4.5. Advanced Life Support in Adults
4.6. Advanced Pediatric Life Support
4.7. Neonatal Resuscitation
4.8. Resuscitation in Special Cases

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

5.1. Cardiovascular Emergencies
- 5.1.1. Ischemic Heart Disease
- 5.1.2. Cardiac Contractility Disorders: CHF, PAD, Cardiogenic Shock, Cardiac Tamponade
- 5.1.3. Vascular Emergencies
- 5.1.4. Inflammatory-Infectious Disorders: Pericarditis, Myocarditis, Endocarditis
- 5.1.5. Aortic Dissection and Aneurism
- 5.1.6. Deep Vein Thrombosis
- 5.1.7. Pulmonary Embolism
- 5.1.8. Pulmonary Hypertension
- 5.1.9. Acute Peripheral Vascular Disease
- 5.1.10. Hypertensive Crisis

5.2. Respiratory Emergencies
- 5.2.1. Anatomophysiological Review of the Respiratory System
- 5.2.2. Acute Respiratory Failure
- 5.2.3. ARDS
- 5.2.4. Asthma and Asthmatic Status
- 5.2.5. Bronchitis, Bronchiolitis, Pneumonia
- 5.2.6. Exacerbation of Chronic Obstructive Pulmonary Disease
- 5.2.7. Pleuritis and Pleural Effusion

5.3. Neurological Emergencies
- 5.3.1. Anatomophysiological Review of the Nervous System
- 5.3.2. Neurological Evaluation for Critically Ill Patients Most Common Scales
- 5.3.3. Vascular Disorders: Stroke, Transient Ischemic Attack, Subarachnoid Hemorrhage, Subdural and Extradural Hematoma, Venous Thrombosis of the Sinuses
- 5.3.4. Inflammatory-Infectious Disorders: Meningitis, Encephalitis, Meningococcal Sepsis, Peripheral Facial Paralysis, Trigeminal Neuralgia
- 5.3.5. Syncope, Coma, Headache, Acute Confusional Syndrome, Dizziness, Vertigo
- 5.3.6. Vertigo
- 5.3.7. Seizures and Status Epilepticus
- 5.3.8. Intracranial Hypertension

5.4. Digestive Emergencies
- 5.4.1. Anatomophysiological Review of the Digestive System
- 5.4.2. Acute Abdomen and Abdominal Pain
- 5.4.3. Vascular Disorders: Esophageal Varices, Ischemic Colitis, Hemorrhage, Mesenteric Ischemia
- 5.4.4. Inflammatory-Infectious Disorders: Reflux Esophagitis Caustic Injuries Appendicitis, Cholecystitis, Cholangitis, Diverticulitis, Exacerbations and Complications of Inflammatory Bowel Diseases, Gastritis, Gastroenteritis, Peptic Ulcer, Hepatitis, Pancreatitis, Peritonitis Acute Complications of Cirrhosis Fulminant Liver Failure and Hepatorenal Syndrome
- 5.4.5. Trauma and Mechanical Problems: Foreign Bodies, Esophageal Rupture and Tear, Hernia Strangulation, Intestinal Obstruction and Occlusion Gastric Volvulus
- 5.4.6. Acute Anal Disease

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

6.1. Nephrourological Emergencies
- 6.1.1. Anatomophysiological Review of the Genitourinary System
- 6.1.2. Renal and Excretory System Lithiasis
- 6.1.3. Urinary Retention
- 6.1.4. Inflammatory/ Infectious Disorders
- 6.1.5. Acute Renal Failure
- 6.1.6. Hematuria
- 6.1.7. Acute Scrotal Syndrome: Testicular Torsion
- 6.1.8. Acute Urethral Disease

6.2. Endocrinometabolic and Hydroelectrolytic Emergencies
- 6.2.1. Thyroid Diseases
- 6.2.2. Acid-base Balance Disorders

6.3. Hematological, Immunological and Infectious Emergencies
- 6.3.1. Allergies and Anaphylactic Reactions
- 6.3.2. Sepsis and Septic Shock
- 6.3.3. Febrile Syndrome

6.4. Intoxications
- 6.4.1. General Aspects of an Intoxicated Patient
- 6.4.2. Attitude toward the Most Common Intoxications: Alcohol, Sedatives and Hypnotics, Hallucinogens and Designer Drugs, Antidepressants, AAS and Paracetamol, Corrosive Drugs and Others

6.5. Obstetrical-Gynecological Emergencies
- 6.5.1. Inflammatory-Infectious Disorders: Mastitis, Pelvic Inflammatory Disease, Vulvovaginitis
- 6.5.2. Hemorrhages
- 6.5.3. Pregnancy and Postpartum Emergencies
- 6.5.4. Emergency Delivery Assistance
- 6.5.5. Sexual Abuse

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

Module 7. Other Emergencies

7.1. Pediatric Emergencies
- 7.1.1. Infantile Colic
- 7.1.2. Fever Syndrome in Children
- 7.1.3. Febrile Seizures
- 7.1.4. Abdominal Pain, Vomiting, Diarrhea
- 7.1.5. Child Abuse
- 7.1.6. Transport of Critical Pediatric Patients

7.2. Otolaryngologic Emergencies
- 7.2.1. Angioedema, Epiglottitis, Laryngitis, Paratonsillar Abscess
- 7.2.2. Foreign Bodies in ENT
- 7.2.3. Epistaxis
- 7.2.4. Angioedema
- 7.2.5. Acute Hearing Loss

7.3. Ophthalmologic Emergencies
- 7.3.1. Anatomy Recap of the Eye
- 7.3.2. Non-painful Red Eye
- 7.3.3. Painful Red Eye
- 7.3.4. Extraocular Foreign Body
- 7.3.5. Intraocular Foreign Bodies

7.4. Skin Emergencies

7.5. Terminal Patient in Emergencies
- 7.5.1. Emergency Complications in Terminal Patients
- 7.5.2. Attention to the Situation in the Last Few Days of a Terminal Patient's Life

7.6. Encephalic Death and Organ and Tissue Donation Process

Module 8. Adult and Pediatric Severe Trauma Care

8.1. General aspects

8.2. Biomechanics of Accidents

8.3. Primary and Secondary Evaluation

8.4. TBI

8.5. Thoracic Trauma

8.6. Abdominal Trauma

8.7. Vertebral Trauma and Spinal Cord Injury

8.8. Trauma of the Locomotor System

8.9. Injuries

8.10. Hypovolemic Shock

8.11. Pediatric Trauma

8.12. Trauma During Pregnancy

8.13. Special Traumas
- 8.13.1. Crush Syndrome
- 8.13.2. Shock or Blast Wave Injuries

8.14. Injuries due to Physical, Chemical and Environmental Agents
- 8.14.1. Bites and Stings
- 8.14.2. Dysbarism

8.15. Analgesia and Sedation

8.16. Mobilization and Immobilization Materials and Techniques

8.17. Rescue and Medical Care in Confined and Remote Places

Module 9. Multiple Victim Incidents and Disasters

9.1. General Concepts
9.2. IMV Management and Disasters
9.3. Sectorization
9.4. Deployment and Logistics
9.5. Triage
9.6. Multiple Victim Care
9.7. Evacuation
9.8. MCI Management in a Hospital
9.9. CBRN Incidents
  9.9.1. Individual Protection Equipment
9.10. Emergency Planning

Module 10. Pharmacology of Accidents and Emergencies

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

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

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

Module 12. Other important Aspects in Caring for a Critically Ill Patient

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

Module 13. Health Care Organization for Pediatric Emergencies

13.1. Equipment in the Pediatric Emergency Department (PED)
  13.1.1. Differential Characteristics of PEDs
  13.1.2. Infrastructure, Staffing
  13.1.3. Material
13.2. Triage in Pediatrics
  13.2.1. Definition
  13.2.2. Classification Systems
13.3. Transport of Critical Pediatric Patients
  13.3.1. Intrahospital Transfer
  13.3.2. Neonatal and Pediatric Transportation

Module 14. Advanced Pediatric and Neonatal Cardiovascular Support

14.1. Apparently Lethal Syndromes
- 14.1.1. Sudden Infant Death
- 14.1.2. Treatment
- 14.1.3. Home Monitoring

14.2. Recognition and Management of Critically Ill Children
- 14.2.1. Epidemiology, Etiology and Prevention of CRP in Childhood
- 14.2.2. Pediatric Assessment Triangle (PAT) and its Utility
- 14.2.3. Pediatric ABCDE Evaluation

14.3. Basic Pediatric Cardiopulmonary Resuscitation

14.4. Advanced Pediatric Cardiopulmonary Resuscitation Advanced Airway Management

14.5. Basic Concepts of Mechanical Ventilation

14.6. Infusion Routes and Drugs

14.7. Pediatric AVS Algorithms and Treatment of Arrhythmias

14.8. Neonatal Resuscitation

14.9. Post-resuscitation Stabilization and Neonatal Transport

Module 15. Invasive Techniques in Critically Ill Pediatric Patients

15.1. Peripheral and Central Vein Access
- 15.1.1. Peripheral Route
- 15.1.2. Central Route

15.2. Intraosseous Puncture

15.3. Capnography, Pulse Oximetry

15.4. Oxygen Therapy

15.5. Rapid Intubation Sequence

15.6. Analgesia and Sedation
- 15.6.1. Approaching Pain
- 15.6.2. Procedure
- 15.6.3. Reference Drugs in Analgesia and Sedation

15.7. Protocol for Child Death

Module 16. Pediatric Nursing Care in Cardiology Emergencies

16.1. Arrhythmias and Syncope
- 16.1.1. Bradyarrhythmias Diagnosis and Treatment
- 16.1.2. Tachyarrhythmias Diagnosis and Treatment

16.2. Congenital Heart Disease
- 16.2.1. Cyanotic Congenital Heart Disease
- 16.2.2. Non-Cyanotic Congenital Heart Disease
- 16.2.3. Diagnostic Approach
- 16.2.4. Treatment

16.3. Hypertensive Crisis
- 16.3.1. Diagnostic Guidance for Hypertension in Children and Adolescents
- 16.3.2. Therapeutic Guidance for Hypertension in Children and Adolescents

16.4. Heart Failure
- 16.4.1. Etiology
- 16.4.2. Diagnosis
- 16.4.3. Treatment Mechanical Ventricular Assistance Techniques Extracorporeal Membrane Oxygenation (ECMO)

16.5. Techniques and Procedures
- 16.5.1. Quick Reading of an ECG
- 16.5.2. Defibrillation
- 16.5.3. Cardioversion and Temporary Pacemaker

Module 17. Nursing Care in Respiratory Emergencies

17.1. Respiratory Pathology in Recent Newborns
- 17.1.1. Incomplete Pulmonary Fluid Reabsorption Syndrome
- 17.1.2. Meconium Aspiration Syndrome
- 17.1.3. Hyaline Membrane Disease
- 17.1.4. Pneumothorax
- 17.1.5. Pneumonia
- 17.1.6. Apnea in Newborns

17.2. Airway Diseases
- 17.2.1. Acute Pharyngotonsillitis
- 17.2.2. Laryngitis or Croup
- 17.2.3. Spasmodic Croup
- 17.2.4. Otitis
- 17.2.5. Sinusitis

17.3. Community-Acquired Pneumonia (CAP)
- 17.3.1. Diagnosis
- 17.3.2. Hospital Admission Criteria
- 17.3.3. Latest Advances in Treatment

17.4. Managing a Child with a Persistent Cough. Chronic Cough
- 17.4.1. Etiology
  - 17.4.1.1. Persistent Bacterial Bronchitis
  - 17.4.1.2. Asthma
  - 17.4.1.3. Gastroesophageal Reflux, etc
- 17.4.2. Treatment

17.5. Caring for Asthmatic Children
- 17.5.1. Clinical Diagnosis. Functional Diagnosis
- 17.5.2. Pharmacological Treatment. Non-Pharmacological Treatment
- 17.5.3. Education of Health

17.6. Techniques and Procedures
- 17.6.1. Inhalation Techniques Oxygen Therapy
- 17.6.2. Thoracentesis and Chest Tube Placement
- 17.6.3. Forced Spirometry Bronchodynamic Tests PEF (Peak Expiratory Flow Meter Management)

Module 18. Nursing Care for Unintentional Injuries Child Accidents

18.1. Burns and Wounds

18.2. Drowning

18.3. Stings and Bites

18.4. Drug and Non-drug Intoxications

18.5. Anaphylaxis
- 18.5.1. Classification of Severity
- 18.5.2. Diagnostic Procedures
- 18.5.3. Treatment and Discharge Recommendations

18.6. Techniques and Procedures
- 18.6.1. Extraction of Foreign Body from the Ear
- 18.6.2. Extraction of Foreign Bodies from the Nose
- 18.6.3. Incarcerated Inguinal Hernia Reduction
- 18.6.4. Freeing of Trapped Penis or Scrotum

Module 19. Nursing Care in Pediatric Trauma and Osteoarticular Injuries

19.1. Initial Pediatric Trauma Care
- 19.1.1. Types and Patterns of Injury in Pediatrics
- 19.1.2. Primary and Secondary Assessment
- 19.1.3. Spinal Cord Injuries

19.2. Head Trauma in Children

19.3. Limping
- 19.3.1. Types of Lameness
- 19.3.2. Treatment
- 19.3.3. Referral Criteria

19.4. Upper Extremity Trauma

19.5. Lower Extremity Trauma

19.6. Thoracic Trauma Rib Fractures and Contusions

19.7. Techniques and Procedures
- 19.7.1. Mobilization and Immobilization Workshop
- 19.7.2. Painful Pronation Reduction
- 19.7.3. Hyperpronation
- 19.7.4. Supination-Flexion
- 19.7.5. Active Mobilization Stimulation
- 19.7.6. Classification of Pediatric Fractures

Module 20. Nursing Care in Neurological Emergencies

20.1. Alterations of Consciousness
20.2. Bacterial and Viral Meningitis
20.3. Febrile Seizures
20.4. Acute Headache
- 20.4.1. Migraine
- 20.4.2. Tension Headache
- 20.4.3. Periodic Syndromes of Childhood

20.5. Epilepsies and Non-Epileptic Seizure Disorders in Childhood
- 20.5.1. Epileptic Syndromes in Childhood and Adolescence
- 20.5.2. General Treatment of Epilepsies

20.6. Acute Ataxia
20.7. Techniques and Procedures
- 20.7.1. Ventriculoperitoneal Shunt Puncture
- 20.7.2. Lumbar Puncture

Module 21. Nursing Care in Digestive Emergencies

21.1. Acute Abdominal Pain
21.2. Gastrointestinal Disorders
21.3. Acute Dehydration
- 21.3.1. Isonatremic Dehydration
- 21.3.2. Hyponatremic Dehydration
- 21.3.3. Hypernatremic Dehydration

21.4. Acid-base Balance Disorders
- 21.4.1. Metabolic Acidosis. Respiratory Acidosis
- 21.4.2. Metabolic Alkalosis. Respiratory Alkalosis

21.5. Coeliac Disease
- 21.5.1. Diagnostic Algorithm
- 21.5.2. Treatment

21.6. Gastroesophageal Reflux (GER)
21.7. Constipation
21.8. Hepatitis
- 21.8.1. HAV, HBV, HCV, HDV, HEV
- 21.8.2. Autoimmune hepatitis

21.9. Gastrointestinal Bleeding
21.10. The Infant with Food Refusal
21.11. Jaundice
21.12. Techniques and Procedures
- 21.12.1. Inguinal Hernia Reduction
- 21.12.2. Gastric Explorations
- 21.12.3. Managing Children Suffering from Ostomy

Module 22. Nursing care in Endocrinometabolic Emergencies

22.1. Emergencies in the Diabetic Patient
22.2. Hydroelectrolytic Alterations
22.3. Adrenal Insufficiency

Module 23. Nursing Care in Infectious Emergencies

23.1. Exanthematous Diseases
23.2. Whooping Cough and Pertussis Syndrome
- 23.2.1. Medical treatment
- 23.2.2. Control Measures

23.3. Febrile Syndrome without Focus
23.4. Sepsis. Septic Shock
23.5. Osteoarticular Infections
23.6. Fever and Neutropenia

Module 24. Nursing Care in Ophthalmological and Otorhinolaryngology Emergencies

24.1. Conjunctivitis and Blepharitis Pink Eye
- 24.1.1. Most Frequent Infectious Pathology
- 24.1.2. Non-Infectious Pathology
- 24.1.3. Protocol for Pediatric Ophthalmologic Emergencies

24.2. Eyelids and Lacrimal System
- 24.2.1. Palpebral Alterations and Malformations
- 24.2.2. Inflammatory Pathology
- 24.2.3. Cysts and Tumors
- 24.2.4. Lacrimal Pathology in Children
- 24.2.5. Palpebral Traumatology in Infancy

24.3. Acute Pharyngotonsillitis Acute Otitis Media Sinusitis

24.4. Techniques and Procedures
- 24.4.1. Managing Children Suffering from Tracheostomy
- 24.4.2. Fluorescein and Eversion Inspection
- 24.4.3. Extraction of Foreign Bodies from the Eye
- 24.4.4. Ophthalmologic Examination with Fluorescein
- 24.4.5. Eversion of the Upper Eyelid

Module 25. Nursing Care in Nephrourologic Emergencies

25.1. Urinary Infections
- 25.1.1. Diagnostic Criteria
- 25.1.2. Referral Indications

25.2. Hematuria

25.3. Renal Lithiasis and Renal Colic

25.4. Acute Scrotum
- 25.4.1. Frequency in the Pediatric Age Group

25.5. Techniques and Procedures
- 25.5.1. Suprapubic Puncture
- 25.5.2. Bladder Catheterization
- 25.5.3. Reduction of Paraphimosis

Module 26. Nursing Care in Critically Ill Pediatric Patients

26.1. Communication with the Pediatric Intensive Care Patient

26.2. Most Common Alterations

26.3. Evaluating Critical Pediatric Patients
- 26.3.1. Needs Assessment
- 26.3.2. Most Common Pediatric Rating Scales

26.4. Pediatric Assessment Triangle

26.5. Critical Pediatric Patient Care
- 26.5.1. Airway and Ventilatory Management for Critically Ill Pediatric Patients
- 26.5.2. Nursing Techniques in Critically Ill Pediatric Patients: Monitoring, Venous Access, Safety and Comfort
- 26.5.3. Administrating Medication for Pediatric Patients
- 26.5.4. Interhospital Transport for Critically Ill Pediatric Patients

26.6. Administering Drugs
- 26.6.1. Peripheral Vein Routes
- 26.6.2. Intraosseous Route
- 26.6.3. Intratracheal Route
- 26.6.4. Central Routes
- 26.6.5. Most Used Drugs and Fluids

Module 27. Nursing Care in Special Emergency Situations

27.1. Children with Special Needs
- 27.1.1. Tracheostomy and Home Mechanical Ventilation
- 27.1.2. Gastrostomies and Feeding Tubes
- 27.1.3. Peritoneal Ventriculo-Peritoneal Shunt Valves
- 27.1.4. Central Catheters and Prosthetic Vascular Accesses

27.2. Medication in Pediatrics

27.3. Psychiatry in the Emergency Department
- 27.3.1. Assessment and Initial Treatment
- 27.3.2. Psychomotor Agitation and Violence
- 27.3.3. Suicidal Behavior
- 27.3.4. Psychotic Disorders

27.4. Child Abuse
- 27.4.1. Attitude in the Emergency Room
- 27.4.2. Assistance in the Case of Abuse

27.5. Techniques and Procedures
- 27.5.1. Mechanical Restraint of the Agitated or Aggressive Child

Module 28. Update on Coronavirus Infections

28.1. Discovery and Evolution of Coronaviruses
- 28.1.1. Discovery of Coronaviruses
- 28.1.2. Global Trends in Coronavirus Infections

28.2. Main Microbiological characteristics and Members of the Coronavirus Family
- 28.2.1. General Microbiological Characteristics of Coronaviruses
- 28.2.2. Viral Genome
- 28.2.3. Principal Virulence Factors

28.3. Epidemiological Changes in Coronavirus Infections from its Discovery to the Present
- 28.3.1. Morbidity and Mortality of Coronavirus Infections from their Emergence to the Present

28.4. The Immune System and Coronavirus Infections
- 28.4.1. Immunological Mechanisms Involved in the Immune Response to Coronaviruses
- 28.4.2. Cytokine Storm in Coronavirus Infections and Immunopathology
- 28.4.3. Modulation of the Immune System in Coronavirus Infections

28.5. Pathogenesis and Pathophysiology of Coronavirus Infections
- 28.5.1. Pathophysiological and Pathogenic Alterations in Coronavirus Infections
- 28.5.2. Clinical Implications of the Main Pathophysiological Alterations

28.6. Risk Groups and Transmission Mechanisms of Coronaviruses
- 28.6.1. Main Sociodemographic and Epidemiological Characteristics of Risk Groups Affected by Coronavirus
- 28.6.2. Coronavirus Mechanisms of Transmission

28.7. Natural History of Coronavirus Infections
- 28.7.1. Stages of Coronavirus Infection

28.8. Latest Information on Microbiological Diagnosis of Coronavirus Infections
- 28.8.1. Sample Collection and Shipment
- 28.8.2. PCR and Sequencing
- 28.8.3. Serology Testing
- 28.8.4. Virus Isolation

28.9. Current Biosafety Measures in Microbiology Laboratories for Coronavirus Sample Handling
- 28.9.1. Biosafety Measures for Coronavirus Sample Handling

28.10. Up-to-Date Management of Coronavirus Infections
- 28.10.1. Prevention Measures
- 28.10.2. Symptomatic Treatment
- 28.10.3. Antiviral and Antimicrobial Treatment in Coronavirus Infections
- 28.10.4. Treatment of Severe Clinical Forms

28.11. Future Challenges in the Prevention, Diagnosis, and Treatment of Coronavirus
- 28.11.1. Global Challenges for the Development of Prevention, Diagnostic, and Treatment Strategies for Coronavirus Infections

A specific syllabus on nursing emergencies that will be fundamental for your professional development"

06

Methodology

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

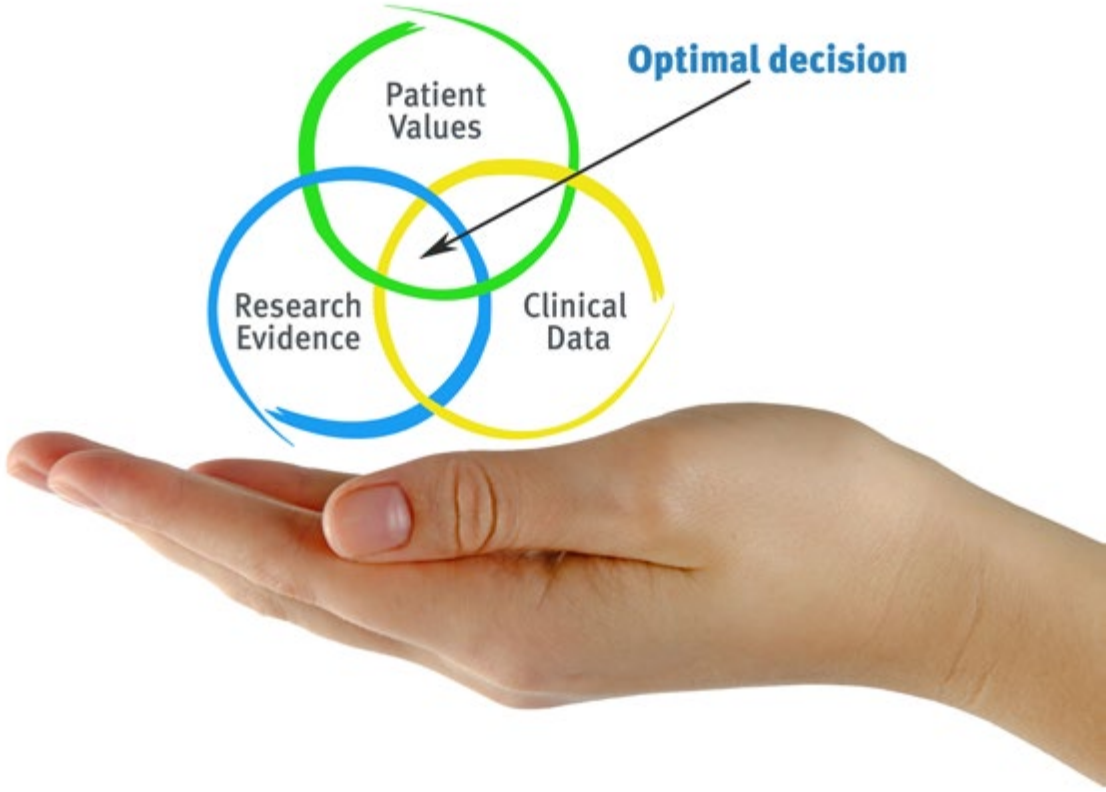
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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 Nursing School we use the Case Method

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

With TECH, nurses can experience a learning methodology that is shaking the foundations of traditional universities around the world.



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

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

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

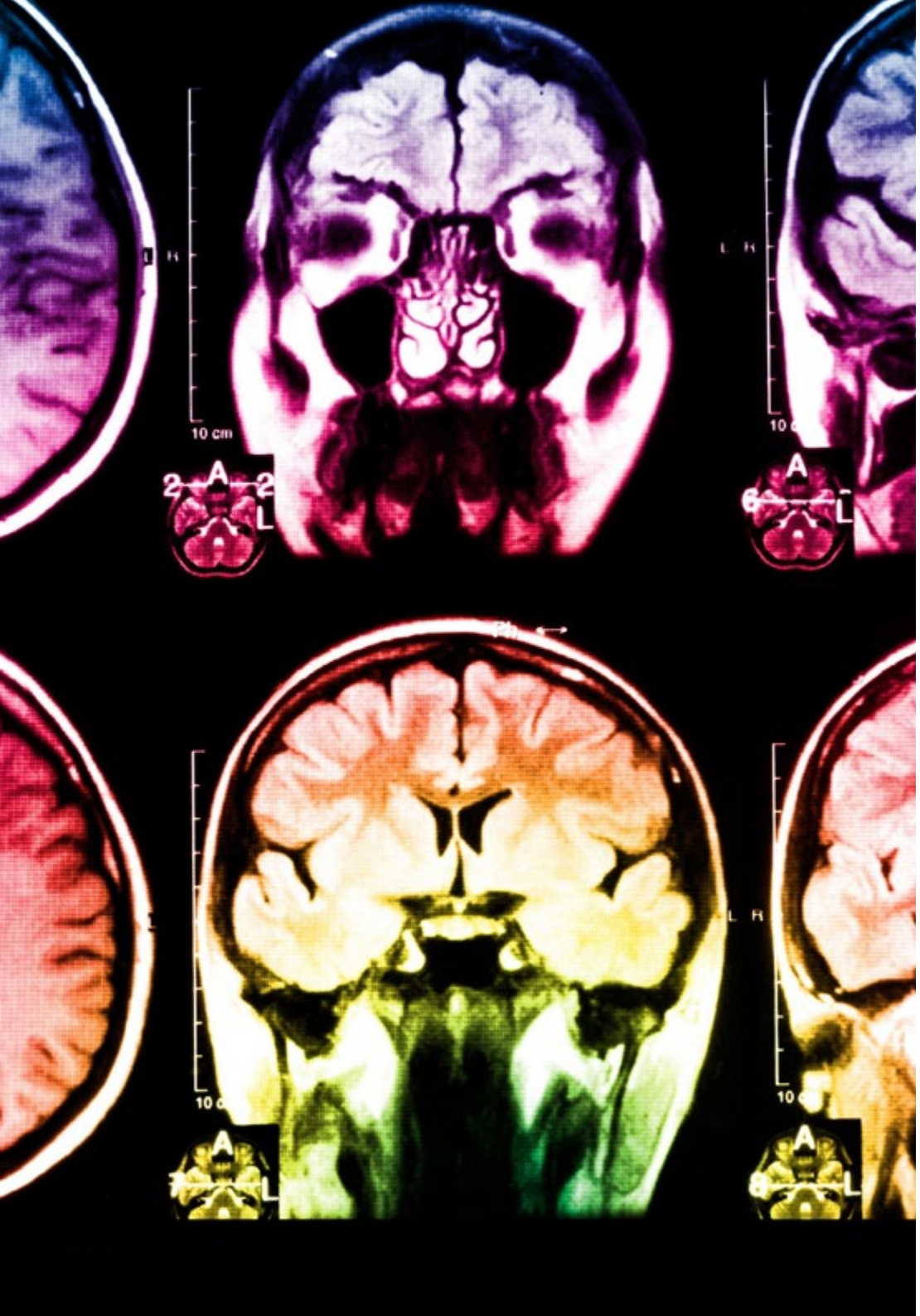
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

Relearning Methodology

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

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

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



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

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

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

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

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

Study Material

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

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

Nursing Techniques and Procedures on Video

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

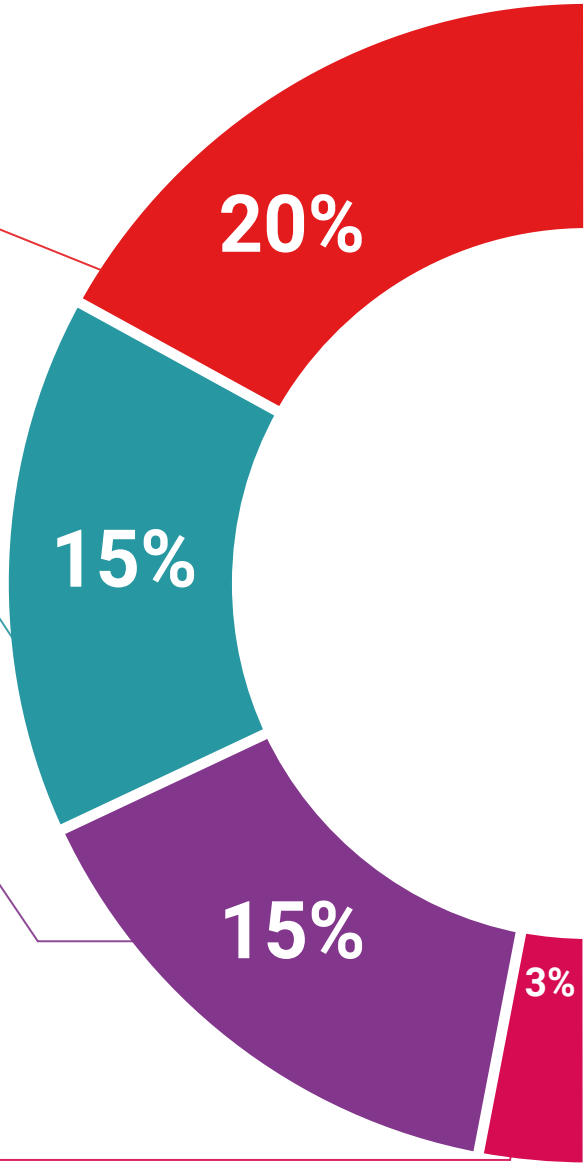
Interactive Summaries

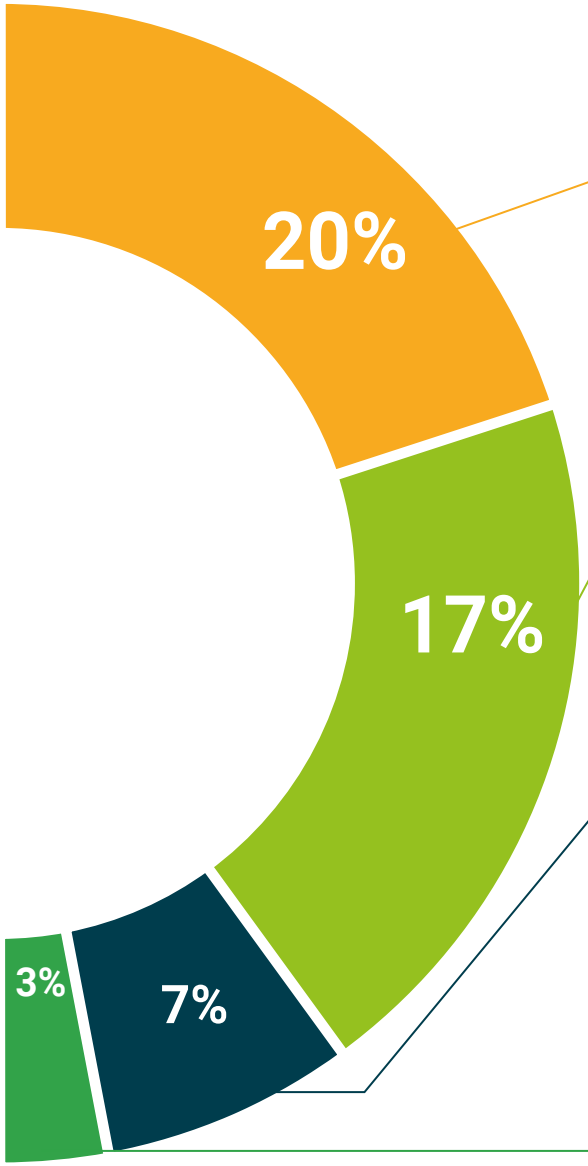
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

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





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Classes

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

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

07

Certificate

This Advanced Master's Degree in Emergency Nursing in Adult and Pediatric Patients guarantees you, in addition to the most rigorous and updated training, access to a Advanced Master's Degree issued by TECH Technological University.

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

This **Advanced Master's Degree in Emergency Nursing in Adult and Pediatric Patients** contains the most complete and updated program on the market.

After the student has passed the evaluations, they will receive their corresponding **Advanced Master's Degree** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Advanced Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional from career evaluation committees.

Title: **Advanced Master's Degree in Emergency Nursing in Adult and Pediatric Patients**

Official N.º of Hours: **3,000 h.**

tech technological university

Awards the following

CERTIFICATE

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

ADVANCED MASTER'S DEGREE

in

Emergency Nursing in Adult and Pediatric Patients

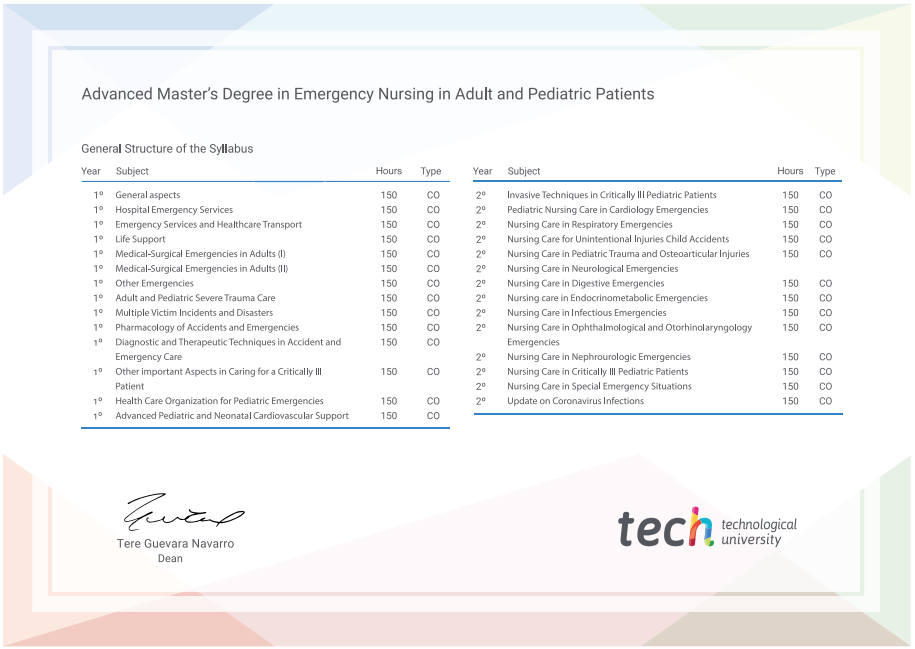
This is a qualification awarded by this University, equivalent to 3,000 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

June 17, 2020

Tere Guevara Navarro
Dean

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWOR023S techtitute.com/certificates



Advanced Master's Degree in Emergency Nursing in Adult and Pediatric Patients

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	General aspects	150	CO
1º	Hospital Emergency Services	150	CO
1º	Emergency Services and Healthcare Transport	150	CO
1º	Life Support	150	CO
1º	Medical-Surgical Emergencies in Adults (I)	150	CO
1º	Medical-Surgical Emergencies in Adults (II)	150	CO
1º	Other Emergencies	150	CO
1º	Adult and Pediatric Severe Trauma Care	150	CO
1º	Multiple Victim Incidents and Disasters	150	CO
1º	Pharmacology of Accidents and Emergencies	150	CO
1º	Diagnostic and Therapeutic Techniques in Accident and Emergency Care	150	CO
1º	Other important Aspects in Caring for a Critically Ill Patient	150	CO
1º	Health Care Organization for Pediatric Emergencies	150	CO
1º	Advanced Pediatric and Neonatal Cardiovascular Support	150	CO

Year	Subject	Hours	Type
2º	Invasive Techniques in Critically Ill Pediatric Patients	150	CO
2º	Pediatric Nursing Care in Cardiology Emergencies	150	CO
2º	Nursing Care in Respiratory Emergencies	150	CO
2º	Nursing Care for Unintentional Injuries Child Accidents	150	CO
2º	Nursing Care in Pediatric Trauma and Osteoarticular Injuries	150	CO
2º	Nursing Care in Neurological Emergencies		
2º	Nursing Care in Digestive Emergencies	150	CO
2º	Nursing care in Endocrinometabolic Emergencies	150	CO
2º	Nursing Care in Infectious Emergencies	150	CO
2º	Nursing Care in Ophthalmological and Otorhinolaryngology Emergencies	150	CO
2º	Nursing Care in Nephrourologic Emergencies	150	CO
2º	Nursing Care in Critically Ill Pediatric Patients	150	CO
2º	Nursing Care in Special Emergency Situations	150	CO
2º	Update on Coronavirus Infections	150	CO

Tere Guevara Navarro
Dean

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*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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Advanced Master's Degree

Emergency Nursing in Adult and Pediatric Patients

- Modality: **online**
- Duration: **2 years**
- Certificate: **TECH Technological University**
- Dedication: **16h/week**
- Schedule: **at your own pace**
- Exams: **online**

Advanced Master's Degree

Emergency Nursing in Adult and Pediatric Patients

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