Advanced Master's Degree
Intensive Care Unit Nursing

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Advanced Master's Degree
Intensive Care Unit Nursing

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

Website: **www.techtitute.com/us/nursing/advanced-master-degree/advanced-master-degree-intensive-care-unit-nursing**

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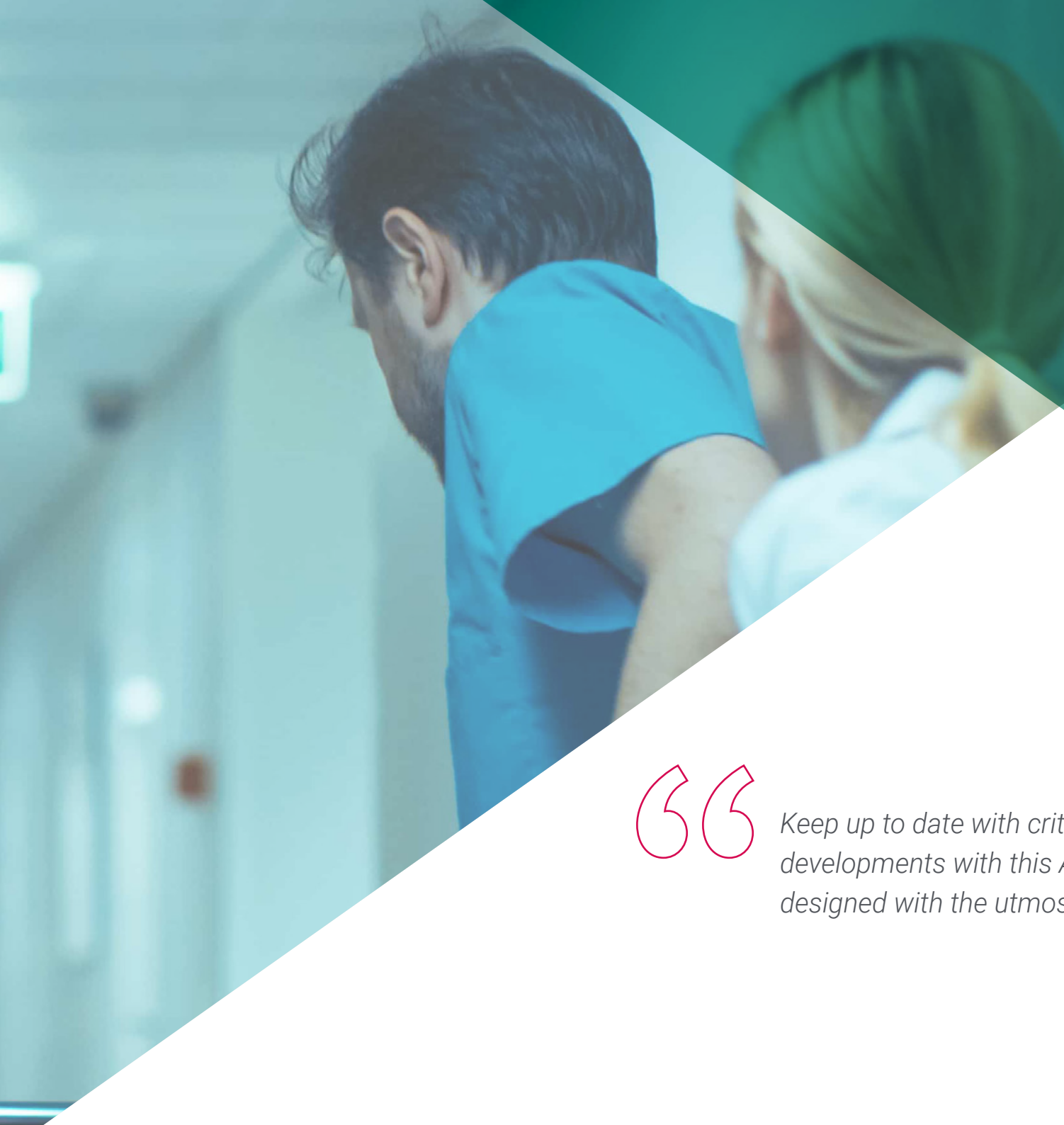
01

Introduction

The Intensive Care Unit (ICU) poses specialized and complex challenges in the healthcare sector, requiring constant updating for nursing professionals in order to meet the needs of critically ill patients. This Advanced Master's Degree arises in response to this situation, addressing key aspects such as ultrasound, advanced practice in specific areas, effective management of health services, research and evidence-based nursing, as well as the coordination of work teams. In addition, its online modality facilitates the compatibility of studies with the work and personal responsibilities of professionals, guaranteeing the acquisition of fundamental skills to face the challenges of critical patient care with efficiency and scientific rigor.



Keep up to date with critical patient care and scientific developments with this Advanced Master's Degree, designed with the utmost rigor"

Patient care in the Intensive Care Unit (ICU) is one of the most complex and specialized challenges in the healthcare field. The constant scientific and technological evolution demands that nursing professionals in this area acquire and update their knowledge and skills to adequately respond to the demands of critical patients. That is why it is essential for these professionals to be continuously updated.

Within this context, the Advanced Master's Degree in Intensive Care Unit Nursing emerges as a solution to meet the need for nurses to update their knowledge in this field. Therefore, the nurse will address key issues such as ultrasound and econavigation, the management of large cardiac, musculoskeletal or abdominal syndromes and problems, as well as advanced practice in areas such as cardiology, digestive system, minor surgeries, oncohematology or nephrourology.

In addition, the Advanced Master's Degree in Intensive Care Unit Nursing focuses on the detailed updating of nursing professionals, emphasizing the importance of evidence-based nursing, the supervision and coordination of nursing teams and the efficient management of healthcare services.

Precisely, one of the advantages of this Advanced Master's Degree is its online modality, which allows nursing professionals to combine their studies with their work and personal responsibilities. Through the Virtual Campus, students will have access to quality teaching materials, detailed videos, interactive diagrams and essential readings that will allow them to update their knowledge and skills in the care of critically ill patients.

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

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

Delve into advanced nursing practices in the Intensive Care Unit Nursing, including modules on echodiagnosis, patient management and approaching different cases"

Bring to your clinical practice in the ICU the latest scientific postulates in critical patient care"

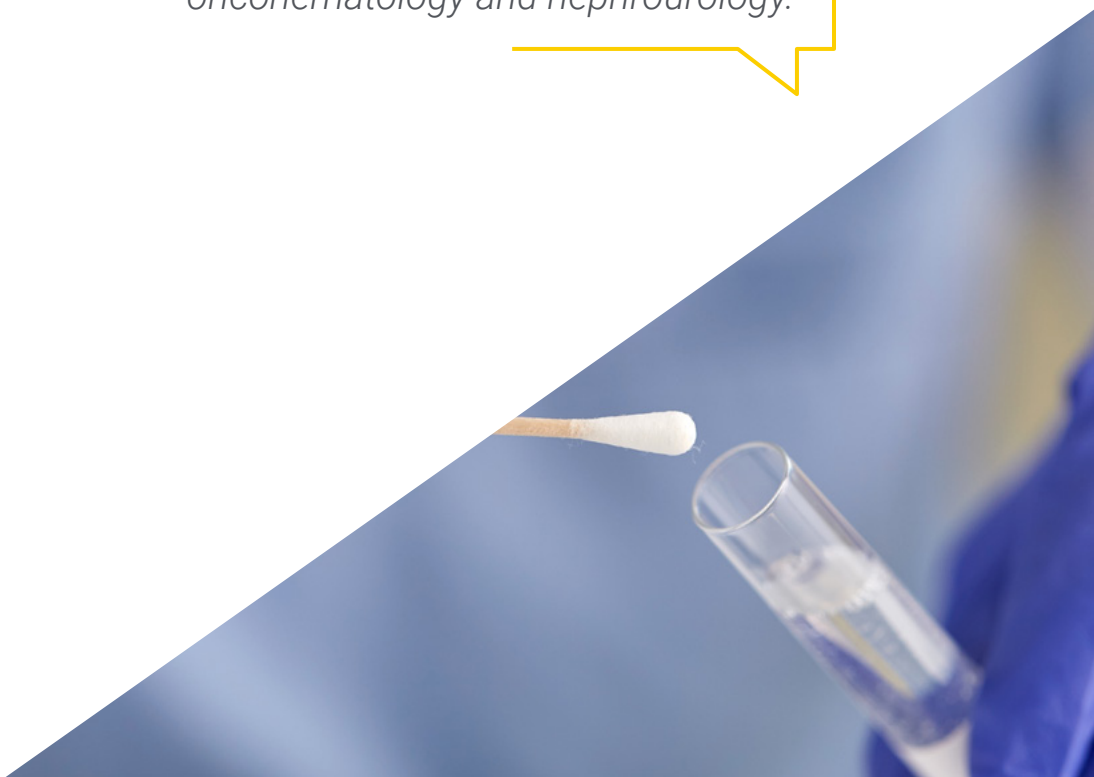
Delve into ultrasound imaging, econavigation and approach of complex syndromes in critically ill patients by enrolling now in this Advanced Master's Degree.

Get updated in advanced emergency practice in areas such as cardiology, minor surgeries, oncohematology and nephrourology.

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 with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

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



02

Objectives

The main objective of the Advanced Master's Degree in Intensive Care Unit Nursing is to provide nurses with a solid and up-to-date education in the care of critically ill patients. Through the study of advanced practice areas and the adoption of evidence-based approaches, they will develop skills in the supervision and coordination of nursing teams, as well as in intensive care research.

Meet the challenges of the most demanding healthcare emergencies with the most advanced knowledge in intensive care and critical patient care"

General Objectives

- Update the necessary knowledge in the nursing care of critical patients, in order to increase the quality and safety of nursing practice in the Intensive Care Unit
- Acquire the necessary skills to provide comprehensive care to the critical patient with criteria of speed, efficiency and quality
- Review the fundamental principles of critical care nursing
- Complete the educational curriculum by making physicians masters in the use of ultrasound for the management of emergency situations and critical patients, regardless of the environment in which they find themselves
- Update your knowledge on ultrasound imaging and its multiple possibilities
- Train nursing professionals for advanced practice in research, teaching and care
- Know the most complex specific procedures in nursing practice
- Acquire advanced knowledge in anatomy, physiology, pathology and pharmacology
- Adapt professional nursing profiles to perform organizational and/or care positions at the highest level, all related to the most innovative and booming topics in advanced nursing

Specific Objectives

Module 1. Organization and Management of an Intensive Care Unit

- Recognize the importance of proper management of the Intensive Care Unit
- Provide a safe patient environment in the intensive care unit by assessing and correcting the risk factors present

Module 2. Evaluating and Monitoring of a Critically Ill Patient

- Describe the different modes of invasive and non-invasive monitoring of the critically ill patient, as well as their correct technique
- Analyze the importance of filling out the different nursing records used in the Intensive Care Unit, and interpret their value in the patient's rehabilitation process

Module 3. Life Support

- Gain in-depth knowledge of life support and management of action protocols
- Know and understand the chains of survival for optimal patient care in different life-threatening situations
- Acquire advanced knowledge of life support in the adult patient
- Acquire advanced knowledge of life support in special situations
- Show the procedures carried out on the patient undergoing CPR and knowledge of the most pioneering techniques

Module 4. Critical Care in Patients with Cardiocirculatory Disorders

- In-depth knowledge of the anatomy and physiology of the cardiocirculatory system
- Identify the most frequent cardiocirculatory pathologies in the ICU
- Recognize different conditions and learn how to manage them in depth

Module 5. Advanced Practice in Cardiology

- Delve into the analysis and understanding of ECGs
- Gain in-depth knowledge of the main diagnostic tests in cardiology
- Learn the anatomy and physiology of the cardiovascular system at an expert level
- Learn all invasive techniques in hemodynamics
- Master cardiac rehabilitation guidelines and exercises

Module 6. Clinical Cardiac Ultrasound

- Explain the cardiac anatomy
- Describe the technical requirements of cardiac ultrasound
- Explain localization and visualization in pericardial windows
- Describe sonoanatomy and sonophysiology in cardiac ultrasound
- Explain the different structural alterations to identify in cardiac ultrasound
- Define the principles of hemodynamic ultrasound

Module 7. Critical Care in Patients with Respiratory Disorders

- Develop advanced theoretical knowledge of respiratory physiology and fundamentals of mechanical ventilation
- Identify the main pathological ventilatory patterns
- Demonstrate new ventilation devices and therapies in the patient

Module 8. Care in Patients with Neurological Disorders

- Gain in-depth knowledge of the anatomy and physiology of the nervous system
- Recognize the most common neurological pathologies in the ICU
- Identify cerebrovascular disease and delve into its approach and management
- Assess the coma patient, evaluate the degree of consciousness and provide specific care

Module 9. Digestive and Renal Pathology in the ICU and Other Pathologies
- Review the main digestive and renal pathologies treated in Intensive Care Nursing
- Review the procedures for ostomized digestive and urological patients
- Delve into critical care for intoxication and septic patients

Module 10. Critical Care for Severe Trauma Patients
- Apply the appropriate therapeutic procedures to the critically ill patient
- Anticipate the most common complications derived from the pathological processes of critically ill patients and their treatment in order to prevent their occurrence

Module 11. Pharmacology in Intensive Care
- Update the procedures for the use of the most frequent drugs in the intensive care unit
- Describe the therapeutic action and most important side effects of frequently used drugs in the intensive care unit
- Review the standards for administration of drug therapy in the intensive care unit

Module 12. Maternal and Child Health
- Follow up a normal pregnancy
- Learn how to interpret cardiotocographic records
- Know the procedures and protocols in cervical cancer prevention Take smear cytology and liquid cytology
- Delve into obstetric ultrasound
- Comprehensively manage children in pediatric intensive care
- Learn neonatal CPR in the delivery room

Module 13. Clinical Pediatric Ultrasound
- Describe the technical requirements of pediatric ultrasounds
- Explain the examination technique for pediatric ultrasounds
- Describe pediatric sonoanatomy and sonophysiology
- Explain the use of ultrasound in the major pediatric syndromes

Module 14. Critical Care for Paediatric Patients
- Recognize the most frequent pediatric and adult pathological processes in the Intensive Care Unit
- Adequate nursing care for the pediatric critical patient
- Perform the nursing role in a pediatric and adult basic and/or advanced life support situation according to the latest European Resuscitation Council recommendations

Module 15. Hospital Transport
- Gain an in-depth knowledge of the different types of medical transport used today and their evolution throughout history. Develop knowledge of the fundamental characteristics of each type of patient transport and transfer
- Prepare and supervise in-hospital and inter-hospital transfer of the adult critically ill patient

Module 16. Anesthesia and Surgery
- Describe the characteristics, process and treatment of malignant hyperthermia
- Identify and know how to apply the different types of anesthesia
- Provide care for the critical post-surgical patient
- Provide critical care to transplant patients
- Manage the crash cart in the nursing care of the anesthetized patient
- Intervene in possible perioperative complications
- Manage the patient admitted to post-anesthetic reanimation and recognize possible complications

Module 17. Research Methodology in Intensive Care Nursing

- Learn how to retrieve quality specialized information in the Health Sciences
- Handle different reference managers
- Design qualitative and quantitative research
- Know the different types of instruments for critical reading
- Learn to write articles with a scientific structure, as well as to write case reports, reviews, articles, theses and dissertations

Module 18. Ultrasound imaging

- Define the physical principles which are involved in ultrasound imaging
- Establish an appropriate ultrasound sequence for each examination of a patient
- Explain the different ultrasound modes
- Define the different types of sonographs and their applications
- Describe the different ultrasound planes
- Explain the principles of echonavigation

Module 19. Clinical Thoracic Ultrasound

- Explain the thoracic anatomy
- Describe the technical requirements of thoracic ultrasounds
- Explain the examination technique of thoracic ultrasounds
- Explain the principles of ultrasounds of the thoracic wall, the pleura and the mediastinum
- Define the principles of pulmonary ultrasounds
- Define the principles of diaphragmatic ultrasounds

Module 20. Clinical Vascular Ultrasound

- Explain the vascular anatomy
- Describe the technical requirements of vascular ultrasounds
- Explain the examination technique for vascular ultrasounds
- Explain the principles of ultrasound for the main thoracoabdominal vessels
- Define the principles of ultrasounds of the supra-aortic trunks
- Explain the principles of ultrasound of peripheral arterial circulation

Module 21. Clinical Cerebral Ultrasound

- Describe cerebral hemodynamics
- Explain the location and visualization of the windows in cerebral ultrasounds
- Define the different ultrasound modes in cerebral ultrasounds
- Explain the examination technique for cerebral ultrasounds
- Explain the different structural alterations to identify in cerebral ultrasounds
- Explain the different hemodynamic alterations to identify in cerebral ultrasound
- Describe the process for performing an ocular ultrasound

Module 22. Clinical Abdominal Ultrasound

- Explain the abdominal anatomy
- Describe the technical requirements of abdominal ultrasounds
- Explain the examination technique for abdominal ultrasounds
- Explain the ECO FAST methodology
- Explain the principles of ultrasound of the digestive system
- Explain the principles of genitourinary ultrasound

Module 23. Clinical Musculoskeletal Ultrasound

- Explain the anatomy of the musculoskeletal system
- Describe the technical requirements of musculoskeletal ultrasounds
- Explain the examination technique for musculoskeletal ultrasounds
- Define the sonoanatomy of the locomotor system
- Explain the principles of ultrasounds of the most common acute locomotor system injuries

Module 24. Ultrasonographic Approach to the Major Syndromes

- Explain the use of ultrasounds in cardiac arrest
- Describe the use of ultrasound in cases of shock
- Explain the use of ultrasounds in respiratory failure
- Describe the use of ultrasound in cases of sepsis
- Explain the use of ultrasounds in abdominal pain
- Describe the use of ultrasound in trauma cases
- Explain the use of ultrasounds in strokes

Module 25. Ultrasound-Guided Procedures

- Explain the process of performing ultrasound-guided intubation
- Describe the technique for vascular cannulation using ultrasound
- Explain the process of performing thoracentesis using ultrasound
- Describe the technique of ultrasound-guided pericardiocentesis
- Explain the process of performing paracentesis with ultrasound support
- Explain the process of performing ultrasound-guided lumbar puncture
- Describe the technique for performing ultrasound-guided drainage and probing

Module 26. Advanced Practice Nursing (APN)

- Study advanced nursing research in depth
- Study advanced nursing management
- Delve into the human aspect of patient care
- Know the history of advanced nursing practice
- Analyze clinical administration and accounting

Module 27. Fundamentals of Nursing and Advanced Practice

- Delve into the fundamentals of the nursing profession
- Understand nursing processes from an expert perspective
- Learn how to correctly perform nursing care processes in advanced practice
- Achieve the necessary knowledge to correctly prescribe medication

Module 28. Advanced Practice in Special Services

- Employ expert skills in hospital emergency services
- Know the main action protocols in out-of-hospital emergencies
- Expertly manage and assist nursing practices in critical care units
- Manage invasive and non-invasive ventilators at an advanced level
- Master the materials and drugs necessary to perform anesthetic methods
- Internalize the main basic and advanced life support guidelines

Module 29. Advanced Digestive, Endocrinology and Nutrition Practice

- Gain advanced knowledge of digestive anatomy and physiology
- Gain advanced knowledge of hormones and metabolism
- Skilfully manage enteral and parenteral nutrition
- Conduct diabetology education consultations

Module 30. Minor Surgery and Dressings

- Learn advanced techniques in chronic wound care Delve into dressings and vacuum cures
- Learn procedures in minor dermatological surgery, such as excision of small tumors like warts and condylomas
- Master different suture techniques
- Professionalize the performance of biopsy sample collection

Module 31. Oncohematology and Palliative Care

- Know the main drugs used in chemotherapy
- Internalize the processes of carcinogenesis
- Gain in-depth knowledge of radiotherapy and its subtypes
- Learn to master the handling of central catheters. Learn how to place a PICC line
- Learn how to manage patient and family at the end of life
- Know how to use and administer hematopoietic progenitor transplants

Module 32. Nephrourology

- Master advanced nephrourological anatomo-physiology
- Manage the different types of dialysis
- Learn how to cannulate dialysis accesses
- Know the main techniques used in incontinence rehabilitation
- Gain in-depth knowledge of bladder re-education
- Know how to interpret urinalysis, which ones should be requested and when

Module 33. Approach to Mental Health Problems in AP

- Evaluate the main mental health diagnoses based on the DSM-5 manual
- Learn how to analyze the needs of patients with mental health problems from a primary care perspective
- Use the main techniques of mental health therapies
- Carry out follow-up and rehabilitation strategies in psychiatric patients
- Demystify the taboos and social stigmatization suffered by people with psychiatric pathologies
- Acquire the necessary skills to manage a day center for people with mental illnesses

Consolidate your clinical practice by incorporating into your daily work the most outstanding innovations in intensive therapies and complex healthcare problem solving"

03

Skills

In this Advanced Master's Degree in Intensive Care Unit Nursing, nurses will acquire outstanding competencies in this area. These include the assessment and monitoring of critical patients, as well as the identification and nursing intervention based on best practices, provided by professionals with extensive experience in this field. Thus, the graduate will also have the ability to participate in research and quality improvement projects, contributing to the advancement of intensive care nursing and critical patient care.

Expand your competencies in nursing team supervision and coordination, evidence-based nursing and intensive care research"

General Skills

- Possess and understand knowledge that allows originality in the development and/or application of ideas, often in a research context
- Know how to apply 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 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 professional aptitude to work with other health professionals and acquire the necessary 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.
- Establish the difference between specialist nurses and advanced practice nurses and understand the relevance and the need for such professionals in a constantly changing society, while considering the changes in what the current population demands in terms of health care
- Know the professional opportunities of this "super specialization" and its scope of application
- Delve into specialized areas where advanced practice nursing is greatly relevant, such as teaching, research and high-level practices in all health branches
- Supervise and coordinate nursing teams by establishing recommendations that prove beneficial to the health care practice these professionals provide

Specific Skills

- Provide comprehensive care to the person to solve the health problems that affect them at medical care to patients who and in the immediate future, either, individually or as members of a multidisciplinary team
- Prioritize situations, resolve problems and make decisions when caring for critical patients in emergency situations
- Provide adequate technical and professional health care to the critically ill patient, in accordance with the scientific knowledge and technological development of each moment and with the quality and safety levels established in the applicable legal and deontological norms
- Plan and deliver nursing care to the critically ill patient and their families and caregivers, based on quality standards
- Incorporate safety principles including ergonomics, proper patient handling and mobilization, and infection control into the work routine
- 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 Emergency Nursing practice
- Conduct a critical and in-depth study on a topic of scientific interest in the field of Intensive Care Nursing
- 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
- Provide advanced management to patients with chronic pathologies
- Possess advanced knowledge in the management of complex clinical cases
- Carry out an advanced management of nursing assessment, developing a clinical nursing judgment to optimize care
- Approach nursing care in patients with chronic pathology, knowing the most current recommendations and precautions to be taken in these cases
- Identify triage systems both at an outpatient and inpatient levels to guarantee rapid, efficient and adequate care in each case
- Develop an adequate nursing practice in situations declared catastrophic, as well as in any other type of scenario in which basic knowledge of situation management and specific nursing techniques are required
- Manage various techniques, procedures and diagnostic tests for Cone patients with cardiac and hemodynamic nursing
- Apply the most current neonatal resuscitation maneuvers and techniques, such as the use of ventilation systems in the delivery room
- Gain advanced management skills for the main opioid drugs and their different administration routes, as well as the main adverse effects
- Delve into the interpretation of urinary analysis through the study of the sediment under the microscope and its relation the patient's clinical situation
- Conduct optimal interviews to establish the diagnosis and individualized treatment for each patient in the area of mental disorders

04

Course Management

The teaching staff of the Advanced Master's Degree in Intensive Care Unit Nursing is composed of renowned nurses and specialists with extensive experience in the area of intensive care. These professionals bring their extensive experience and up-to-date knowledge, combining theory and practice in teaching to offer a quality program adapted to the current needs of the healthcare environment.

Get updated with a renowned teaching staff, composed of nurses and specialists with extensive experience in the care of critically ill patients"

International Guest Director

Dr. Anselmo Caricato is a distinguished Italian physician and academic with a prestigious career in the field of Anesthesiology and Intensive Care. Throughout his career, this expert has continuously participated in research projects together with specialists from different European countries and scientific institutions. As a result, he has become a true reference in the management of traumatic injuries and other critical neurological conditions.

Among other lines of work, he has collaborated with several clinical trials, such as the Eurotherm 3235 Trial and with the European Brain Injury Consortium. He has also analyzed the efficacy and safety of several innovative treatments to further the study of neurological contusions.

His results have been widely endorsed by the most prestigious scientific publications. Proof of this are the more than 60 peer-reviewed articles that have been published in high impact global journals such as Stroke, Critical Care Medicine, International Journal of Critical Illness and Injury Science, Neurological Research, and many others. At the same time, he is listed as a member of the Editorial Board of the World Journal of Critical Care Medicine and the Austin Journal of Emergency and Critical Care Medicine.

As for his professional career, this expert, who obtained his degree in Medicine and Surgery at the Catholic University of the Sacred Heart in Rome, has been linked to the "A. Gemelli" University Hospital. From that institution he headed the Trauma Intensive Care Unit in the Emergency Department for several years.

He has also collaborated as an Intensive Care physician in the Vatican City. On the other hand, in parallel to his healthcare work, this specialist has held active academic functions, mainly in conjunction with his alma mater. Based on his distinguished career, he has been selected as Director of the American Trauma Life Support Program at the "A. Gemelli" University Hospital.

Dr. Caricato, Anselmo

- Chief of Neurosurgical Intensive Care at A. Gemelli University Hospital, Rome, Italy
- Intensive Care Physician in Vatican City, Italy
- Director of the ATLS (American Trauma Life Support) Program at "A. Gemelli" University Hospital, Rome, Italy
- Academic of the Faculty of Medicine and Surgery of the Catholic University of the Sacred Heart
- Reviewer and contributor to the Editorial Board of the World Journal of Critical Care Medicine and Austin Journal of Emergency and Critical Care Medicine
- Member of: Italian Society of Anesthesia, Analgesia, Resuscitation and Intensive Care Medicine, Neuroanesthesia and Neurointensive Care Study Coordination Group, Neuroanesthesia and Neurointensive Care Group

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

Guest Director

Ms. Díez Sáenz, Cristina

- Head of Critical Care Unit at HGU Gregorio Marañon
- Head Nurse of Adult Intensive Care Unit at Hospital General Universitario Gregorio Marañon
- Nursing supervisor at Gregorio Marañón ICU
- Nurse Assistant in different hospitalization areas in different health centers and hospitals
- Participation as collaborating researcher in the multicenter project "National validation of the scale of satisfaction with nursing care from the perspective of the critically ill patient"

Management

Ms. Lospitao Gómez, Sara

- Intensive Care and Interventional Cardiology Nurse at Hospital Universitario de Fuenlabrada (HUF)
- Nurse of the Post-Surgical Intensive Care Unit (PICU) of Cardiac Surgery at the Hospital Universitario 12 de Octubre (HUF)
- Coronary Intensive Care Unit Nurse at the 12 de Octubre University Hospital
- Nurse of the Interventional Cardiology Unit (Hemodynamics, EEF and Implants)
- Responsible for the #TEAyudamos program at HUF and member of the #JuntosXElCáncer group
- Instructor in Advanced Life Support by the National CPR Plan of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units (SEMICyUC)
- Member of: Care Sub-Commission (HUF); Care Commission (HUF);
- Secretary of the Ulcers and Wounds Working Group (HUF)

Dr. Álvarez Fernández, Jesús Andrés

- Chief Physician at the Juaneda Miramar Hospital
- Specialist in Intensive Care Medicine and Major Burns at the University Hospital of Getafe
- Associate Researcher in the Area of Neurochemistry and Neuroimaging at the University of La Laguna

Ms. Alonso Díaz, Verónica

- Nurse Practitioner in Primary Care
- Advanced Practice Nurse in the Community of Madrid
- Head of Nursing CAP Santa Isabel
- Head Nurse at CAP Cuzco
- University Diploma in Nursing., Escuela Universitaria Cruz Roja, associated to UAM

Mr. Jiménez Vales, Luis

- Nurse specialized in Obstetrics and Gynecology
- Nurse in the Donors and Blood Bank Area of the Fundación Jiménez Díaz University Hospital, Madrid
- Teaching Coordinator of Pediatrics EIR in CTO Nursing Group
- Teaching Coordinator of Oncohematology and Pain EIR in CTO Nursing Group
- Postgraduate Certificate in Nursing from the Universidad Autónoma de Madrid
- Specialist in Gynecology and Obstetrics at the Hospital General Universitario Gregorio Marañón, Madrid
- Higher Technician Specialist in Clinical Diagnostic Laboratory, IES SIGLO XXI

Professors

Ms. Álvarez Carrascal, Inmaculada

- Nurse in ICU of the Hospital General Universitario Gregorio Marañon
- Nurse referent of security in ICU the Hospital General Universitario Gregorio Marañon
- Instrumentalist nurse in operating rooms of Churchill Hospital
- Nurse in various hospital and health center services in the Andalusian Health Service
- Nursing Diploma from the University of Seville
- Expert in Intensive Care from the Complutense University of Madrid

Mr. González Palacios, Rubén

- Intensive Care Unit Nurse at Gregorio Marañón General: University Hospital
- Attending Nurse in the Internal Medicine Unit of the Doce de Octubre University Hospital
- Nurse assistant in different Primary Care centers in the Community of Madrid
- Co-creator of the mobile application "Compatibility drugs" for intravenous compatibility of drugs

Mr. Ruiz - Henestrosa Campos, Manuel Jesús

- Head of the Emergency Unit at HGU Gregorio Marañon
- Attending Nurse in HGU Puerta del Mar de Cádiz
- Attending Nurse Puerta del Mar General University Hospital from Cádiz
- Associate Professor Practicum III of Nursing
- Collaborating teacher at the International School of Health Sciences
- Nebrija University Collaborating Professor
- Esforem Collaborating Teacher
- Diploma in Nursing

Dr. Flores Herrero, Ángel

- Coordinator of the Angiology, Vascular and Endovascular Surgery Service of the Hospital
- FEA of Vascular Surgery at the Enova Medical Center
- Assistant Physician of Vascular Surgery at the Toledo Hospital Complex
- Member of the American Society of Surgeons
- Collaborating Professor at the Catholic University San Antonio de Murcia (UCAM)
- European Board of Vascular Surgery Examiner and Fellow of the American College of Surgeons
- Doctor of Medicine and Surgery
- Master's Degree in Hospital Management

Dr. López Rodríguez, Lucía

- Medical Specialist of the Department of Intensive Care Medicine and Major Burns of the Hospital Universitario de Getafe
- Doctor of Medicine, UCM
- Degree in Medicine and Surgery from the UCM
- Member of the Ecoclub of SOMIAMA

Dr. Fumadó Queral, Josep

- Family Physician at the Primary Care Center of Els Muntells
- Head of the Emergency Ultrasound Group of the Spanish Society of General and Family Physicians (SEMG)
- Graduate in Clinical Ultrasound and Training of Trainers from the University of Montpelier
- Lecturer at the Associació Mediterrània of General Medicine
- Teacher at the Spanish School of Ultrasound of the Spanish Society of General and Family Physicians (SEMG)
- Honorary Member of the Canary Society of Ultrasound (SOCANECO) and Professor of its Annual Symposium
- Lecturer on the Master's Degree in Clinical Ultrasound for Emergencies and Critical Care at the CEU Cardenal Herrera University

Dr. Igeño Cano, José Carlos

- Head of the Intensive Medicine. and Emergency Department at San Juan de Dios Hospital in from Córdoba
- Responsible for the Patient Welfare Area in HU-CI PROJECT
- Coordinator of the Organization, Planning and Management Group of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units
- Medical Director of the Resuscitation and Post-Surgical Care Unit of the Hospital IDC-Salud Virgen de Guadalupe
- Associate Physician of ICU in SESCAM
- Assistant Physician of the Medicine and Neuro Trauma Unit of the Hospital Nuetra Señora de la Candelaria

- Head of Critical Patient Transport Service in Ambulances Juan Manuel SL
- Master's Degree in Clinical Management, Medical and Healthcare Management from the CEU Cardenal Herrera University
- Member of: Pan-American and Iberian Federation of Critical Medicine and Intensive Care; Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units

Dr. Jiménez Díaz, Fernando

- Expert in Sport Medicine and University Professor
- Founder and Director of Sportoledo
- Researcher at the Laboratory of Sports Performance and Injury Readaptation of the University of Castilla La Mancha
- Member of the Medical Service at Club Baloncesto Fuenlabrada
- PhD in Medicine and Surgery by University of Cordoba
- President of the Spanish Society of Ultrasound
- Member of: Spanish Society of Sports Medicine; European Federation of Societies of Ultrasound in Medicine and Biology; European Federation of Ultrasound Societies in Medicine and Biology

Dr. Martínez Crespo, Javier

- Specialist in Intensive Care Medicine
- Assistant Physician of Radiodiagnostics, Hospital Universitario de Getafe
- Collaborator of the Ecoclub of SOMIAMA
- Degree in Medicine and Surgery
- Associate Professor at the European University of Madrid

Dr. Núñez Reiz, Antonio

- Intensive Care Medicine Physician at Hospital Clínico Universitario San Carlos
- Critical Care Unit Physician at the Hospital Universitario Fundación Alcorcón
- Specialist of the Intensive Care Medicine Unit at the Hospital Universitario Príncipe of Asturias
- Member of the European Society of Intensive Care Medicine

Dr. Pérez Morales, Luis Miguel

- Primary Care Physician in the Canarian Health Service
- Family physician at the Primary Care Center of Arucas (Gran Canaria, Canary Islands)
- President and Professor of the Canary Society of Ultrasound (SOCANECO) and Director of its Annual Symposium
- Lecturer of the Master's Degree in Clinical Ultrasound for Emergency and Critical Care CEU Cardenal Herrera University
- Expert in Thoracic Ultrasound by the University of Barcelona
- Expert in Clinical Abdominal and Musculoskeletal Ultrasound for Emergencies and Critical Care by the University CEU Cardenal Herrera
- Diploma of the Curs d'Ecografia en Atenció Primària by the University Rovira i Virgili from the Institut Catalá de la Salut

Dr. Osiniri Kippes, María Inés

- Pediatrics, Pediatric Ultrasound and Pediatric Nephrology at Clínica Bofill, Girona, Spain
- Doctor of Medicine. Research in medical and clinical laboratory with Cum Laude excellence by the University of Girona
- Master in Health Promotion, University of Girona
- Degree in Pediatric Ultrasound by the Spanish Society of Ultrasound
- Pediatric Ultrasonographer, Ecopedatrics. Figueres
- Assistant Pediatrician Head of Pediatric Ultrasound, Fundació Salut Empordá, Hospital de Figueres

Dr. Colinas Fernández, Laura
- Attending Physician of Intensive Care Medicine at the Toledo University Hospital Complex
- Degree in Medicine and Surgery
- Member of: Spanish Society for Ultrasound in Critical Cases (ECOCRITIC)

Dr. Vollmer Torrubiano, Iván
- Specialist Physician in the Radiology Department of the Hospital Clínic de Barcelona
- Adjunct Coordinator of the Lung Cancer Functional Unit at Hospital del Mar
- European Diploma in Radiology
- Specialized training in Radiodiagnosis at the Hospital del Mar in Barcelona
- Degree in Medicine and Surgery from the University of Barcelona
- Scientific responsible of the Spanish Society of Cardiothoracic Imaging (SEICAT)
- President of the Oncology Commission of the Spanish Society of Medical Radiology (SERAM)
- Member of the Scientific Committee of the National Congress of SERAM
- Member of the Scientific Committee of the National Congress of Radiologists of Cataluña

Dr. Abril Palomares, Elena
- Medical Specialist of the Department of Intensive Care Medicine and Major Burns of the Hospital Universitario de Getafe
- Degree in Medicine and Surgery
- Attending Physician of Intensive Care Medicine and Major Burns Unit

Dr. Álvarez González, Manuel
- Faculty Specialist at Hospital Clínico San Carlos
- Specialist in Intensive Care Medicine
- Founding Member of the Ecoclub of SOMIAMA
- Degree in Medicine and Surgery

Dr. Hernández Tejedor, Alberto
- Specialist in Intensive Care Medicine
- Attending Physician of Intensive Care Medicine at Hospital Universitario Fundación Alcorcón
- Intensivist at Hospital Universitario Quirón Madrid
- Author of dozens of scientific publications

Dr. Vicho Pereira, Raúl
- Clinical Head of ICU. Palmaplanas Clinic
- President of the Spanish Society of Critical Care Ultrasound (ECOCRITIC) of the National CPR Plan
- Specialist in Intensive Care Medicine, Quirónsalud Palmaplanas Hospital Palma de Mallorca
- Intensive Care Medicine Specialist in Seville. Virgen de Valme Hospital
- Intensive Care Unit Specialist. Palmaplanas Hospital
- Intensive Care Unit Specialist. Rotger Clinic
- Responsible for teaching of rotating Medical Resident Interns for critical care ultrasound
- Expert reviewer of the journal Medicina Intensiva
- More than 150 courses of ultrasound in the last 5 years in all autonomous communities of the country for ICU, Anesthesia, Emergency
- Organizer of the First Congress of ECOCRITIC, Denia, Alicante, Spain
- Trainer in Ultrasound of the entire ICU service of Hospital de Donosti
- Trainer in Ultrasound of the entire ICU Service of Hospital de Manises, Valencia, Spain
- Degree in Medicine and Surgery. University of Seville
- Member of: Editorial Board of the journal e-Anestesiar; Sociedad Española de of Critical Care Ultrasound

Dr. De la Calle Reviriego, Braulio
- Chief of Intensive Care Medicine and Transplant Coordinator at the Gregorio Marañón Hospital
- Chief of Service at the Hospital Quirón San José
- Collaborating Professor at the Complutense University of Madrid
- Trainer in Brain Ultrasound of the National Transplant Organization
- Member of: Instituto de Investigación Sanitaria Gregorio Marañón Health Research Institute Degree in Medicine and Surgery

Dr. Herrero Hernández, Raquel
- Specialist in Intensive Care Medicine
- Assistant Physician of the Intensive Medicine. Department, Getafe University Hospital
- Author of numerous scientific publications
- Doctorate in Medicine from the Autonomous University Madrid

Dr. Lamarca Mendoza, María Pilar
- Assistant Physician of the Department of Angiology, Vascular and Endovascular Surgery of the Toledo Hospital Complex
- Medical specialist in SESCAM (Health Service of Castilla-La Mancha)
- Author of numerous publications and scientific essays at national and international level
- Degree in Medicine and Surgery from the Autonomous University of Madrid

Dr. López Cuenca, Sonia
- Specialist in Family Medicine and Intensive Care at the Hospital Universitario Rey Juan Carlos
- Intensivist at the University Hospital of Getafe
- Researcher of the Madrid Health Service
- Intensivist at the Hospital Los Madroños
- Out-of-hospital emergency physician in SUMMA

Dr. Martínez Díaz, Cristina
- Specialist in Intensive Care Medicine
- Degree in Medicine and Surgery
- Doctor at the University Hospital Príncipe of Asturias. Alcalá de Henares, Madrid
- Member of the Ecoclub of SOMIAMA

Dr. Mora Rangil. Patricia
- Specialist in Intensive Care Medicine, Miguel de Servet Hospital, Zaragoza, Spain
- Doctor at Miguel Servet Hospital, Zaragoza, Spain
- Graduate of the Faculty of Medicine, Rovira I Virgili University, Tarragona, Spain
- Degree in Medicine. MIR Intensive Care, Hospital Universitario Miguel Servet
- Member of the Spanish Society of Critical Care Ultrasound, ECOCRITIC
- Author of the book Paciente crítico Drugs, frequently used fluid therapy and hydroelectrolytic alterations

Dr. Ortuño Andériz, Francisco
- Physician in the Neurocritical and Polytraumatized Section at Hospital Clínico San Carlos
- Specialist in Intensive Care Medicine
- PhD in Medicine and Surgery, UCM
- Master's Degree in Organization, Management and Administration of Social and Health Care Services

Dr. Palacios Ortega, Francisco de Paula
- Specialist in Intensive Care Medicine
- Associate Physician of the Intensive Care Unit at the University Hospital of Getafe
- Collaborating Physician of the Artificial Intelligence and Knowledge Engineering (AIKE) group, University of Murcia

- Research collaborator of the WASPSS group, whose objective is the Rational Use of Antibiotics
- Speaker at the Lecture Series of the Center for Surgical Studies, Complutense University of Madrid

Dr. Phillipps Fuentes, Federico

- Pediatrician
- Pediatric On-Call Physician of the Emergency Department at the Hospital Interzonal de Agudos Especializado en Pediatría Sor María Ludovica, La Plata
- Area Specialist in the Pediatric Emergency Department at the Hospital Universitario Materno Insular de Canarias
- Chief of Pediatric Resident Doctors at the Hospital General de Niños Pedro de Elizalde, Buenos Aires
- Pediatrician of Outpatient Specialties at the Hospital Perpetuo Socorro, Las Palmas de Gran Canaria

Dr. Serna Gandía, María

- Medical Specialist in Anesthesiology and Resuscitation at the Hospital de Dénia Marina Salud, Alicante
- Secretary of the Spanish Society of Critical Care Ultrasound (ECOCRITIC)
- Speaker at courses and workshops for the use of Ultrasound in Intensive Care.Secretary
- Degree in Medicine and Surgery
- Specialist in Anesthesiology and Resuscitation
- Course for the management of Ultrasonography in the ICU

Dr. Temprano Vázquez, Susana

- Attending Physician, Intensive Care Medicine Department, 12 de Octubre University Hospital
- Teacher's staff of the classroom part of the course ECMO Hybrid Course
- Founding Member of the Ecoclub of SOMIAMA
- Degree in Medicine and Surgery
- Specialist in Intensive Care Medicine

Dr. Villa Vicente, Gerardo

- Physician of the Spanish Paralympic Committee
- Medical Specialist in Physical Education and Sports Medicine
- Professor of Physical Education and Sports at the University of León
- Director of fourteen doctoral theses, three dissertations and thirteen Ph doctoral theses (DEA)
- PhD in Medicine and Surgery from the University of Salamanca
- Specialist in Physical Education and Sports Medicine from the University of Oviedo
- Expert in Ultrasound MSK (SEMED-FEMEDE)
- National Sports Medicine Award
- Member of: Institute of Biomedicine of León (IBIOMED); Spanish Paralympic Committee; Parliamentary Commission on the State of Sport (Healthy Lifestyle) of the Parliament of Castilla y León; Group of Experts in Physical Activity and Health for the Development of the A+D Plan of the Superior Sports Council (CSD)

Dr. Yus Teruel, Santiago

- Transplant Coordinator at the La Paz University Hospital of Madrid
- Specialist in Intensive Care Medicine
- Associate Physician of Intensive Care Medicine at the University Hospital Complex La Paz-Carlos III
- Member of the Ecoclub of SOMIAMA
- Degree in Medicine and Surgery

Ms. Fernández Rivas, Irene
- Nurse specialist in family and community nursing at the Severo Ochoa hospital of Leganés
- Nurse in adult consultation at the Peñaprieta Health Center
- Nurse in COVID and internal medicine at the Rey Juan Carlos Hospital in Móstoles
- Graduate in nursing from the Complutense University of Madrid
- Professional Master's Degree in Nursing Care, Procedures and Clinical Applications in Nursing at the Catholic University San Antonio

Ms. Casas Reche, Almudena
- Geriatric Nurse Practitioner and Sports Injury Expert
- Nurse at Forus
- Nurse at Nuestra Señora de Montserrat Nursing Home
- Nurse at Santa Isabel Health Center
- Graduate in Nursing from Rey Juan Carlos University
- University Specialist Out-Patient Emergency Nursing, University Rey Juan Carlos, Alcorcón
- Postgraduate Diploma in Physical Activity and Sport Nurses from the Complutense University of Madrid

Ms. Amores Ordóñez, Cristina
- Primary Care Nurse at the Santa Isabel Health Center
- Nurse in the Traumatology and Geriatrics Unit, Severo Ochoa University Hospital
- Nurse in the Psychiatry and Eating Disorders Unit, Quirón Madrid Hospital
- Diploma in Nursing, Francisco de Vitoria University
- Expert in International Cooperation and Health Promotion, Francisco de Vitoria University
- Expert in Family and Community Nursing Updates at the Universidad Autónoma de Madrid

Ms. Somoza Jiménez, Isabel
- Primary Care Nurse
- Degree in Nursing, CEU San Pablo University
- Postgraduate Diploma in Emotional Development and Parenting by La Catholic University of Avila
- University Expert in Nursing Processes and Interventions for Pediatric Patients in Common Hospitalization Situations, Catholic University of Avila
- Course in Leadership of the future: Advanced Practice Nursing
- Certification for indication, use and authorization of dispensing of drugs and medical devices for nursing professionals
- Course in Clinical Electrocardiography Nursing

05

Structure and Content

With a structure and content designed to provide the best possible update in the field of intensive care, this Advanced Master's Degree contains a comprehensive syllabus and multimedia library on the management of the critically ill patient in the ICU. Thus, the program is divided into modules that address advanced practice areas such as cardiology, digestive system, minor surgeries, oncohematology and nephrourology, among others. The program also includes fundamental topics such as teaching, research, management, and the supervision and coordination of nursing teams.

Get up to speed with modules dedicated entirely to cardiology, digestive system, minor surgeries, oncohematology and other critical areas in the Intensive Care Unit"

Module 1. Organization and Management of an Intensive Care Unit

1.1. Historical Review
1.2. Legislation
1.3. Professional Discretion
1.4. Features of the Critical Care Unit: ICU Equipment and Apparatus
1.5. Intensive Care Nursing
1.6. Role of the Critical Care Nurse: Burnout Syndrome
1.7. Intensive Care Unit Nursing Management
1.8. Security Culture
1.9. Humanization in the Intensive Care Unit
1.10. Patient rights and guarantees. Information to family members

Module 2. Evaluating and Monitoring of a Critically Ill Patient

2.1. Basic Aspects of Monitoring a Critically Ill Patient
2.2. Cardiac and Respiratory Activity
2.3. Hemodynamic Status
2.4. Neurological Status
2.5. Delirium in Intensive Care Units
2.6. Monitoring of Sedoanalgesia in Critical Care
2.7. Analytical Controls in ICU
2.8. Intensive Care Nursing Records
2.9. Peripheral Arterial System Examination
2.10. Preload Monitoring. Ultrasound

Module 3. Life Support

3.1. General Aspects
3.2. Basic Electrocardiography and Arrhythmias
3.3. Basic Life Support and AED in Adults
3.4. Peripartum Arrhythmia
3.5. Airway Management
3.6. Advanced Life Support in Adults
3.7. Routes of Administrating Medication
3.8. Resuscitation in Special Cases
3.9. Basic Life Support and AED in Children
3.10. Recognition and Management of Critically Ill Children
3.11. Advanced Airway Management in Pediatrics
3.12. Basics of Mechanical Ventilation in Pediatrics
3.13. Infusion Routes and Drugs in Pediatric CPR
3.14. Pediatric VAS Algorithms and Arrhythmia Treatment
3.15. Neonatal Resuscitation
3.16. Post-resuscitation Stabilization and Neonatal Transport

Module 4. Critical Care in Patients with Cardiocirculatory Disorders

4.1. Anatomy of the Cardiocirculatory System
4.2. Cardiocirculatory System Physiology
4.3. Heart Failure and Acute Pulmonary Edema
4.4. Ischemic Heart Disease
4.5. Cardiac Arrhythmias
4.6. Cardiogenic Shock
4.7. Valvulopathies
4.8. Pericarditis
4.9. Aneurysm and Aortic Dissection
4.10. Hypertensive Emergencies
4.11. ECG and Monitoring
4.12. Electrical Therapies: Cardioversion and Defibrillation
4.13. Fibrinolysis
4.14. Percutaneous Coronary Intervention
4.15. Aortic Counterpulsation Balloon Pump
4.16. Pacemaker

Module 5. Advanced Practice in Cardiology

5.1. Advanced ECG for Nursing
5.2. Pacemaker and Holter
5.3. Patient Management in the Coronary Care Unit
5.4. Role of Nursing Professionals in Hemodynamics
5.5. Cardiac Surgery
5.6. Nursing Interventions in Cardiological Diagnostic Tests
  5.6.1. Echocardiogram
  5.6.2. Ergometry
  5.6.3. Tilting Bed
  5.6.4. Ankle-Brachial Index (ABI) Doppler
5.7. Advanced Drug Management in Cardiology
5.8. Cardiology Nursing Techniques and Procedures
5.9. Nursing in Cardiopathy Patient Rehabilitation
5.10. Continuity of Care in Patients with Cardiopathies

Module 6. Clinical Cardiac Ultrasound

6.1. Cardiac Anatomy
  6.1.1. Basic Three-Dimensional Anatomy
  6.1.2. Basic Cardiac Physiology
6.2. Technical Requirements
  6.2.1. Probes
  6.2.2. Characteristics of the Equipment used in a Cardiac Ultrasound
6.3. Pericardial Windows and Cardiac Ultrasound
  6.3.1. Windows and Planes Applied in Emergencies and Intensive Care Situations
  6.3.2. Basic Doppler (Color, Pulsating, Continuous and Tissue Doppler)
6.4. Structural Alterations
  6.4.1. Basic Measures in Cardiac Ultrasound
  6.4.2. Thrombi
  6.4.3. Suspected Endocarditis
  6.4.4. Valvulopathies
  6.4.5. Pericardium
  6.4.6. How is an ultrasound reported in emergency and intensive care?

6.5. Structural Alterations I
  6.5.1. Left ventricle
  6.5.2. Right ventricle
6.6. Hemodynamic Ultrasound
  6.6.1. Left Ventricular Hemodynamics
  6.6.2. Right Ventricular Hemodynamics
  6.6.3. Preload Dynamic Tests
6.7. Transesophageal Echocardiogram
  6.7.1. Technique
  6.7.2. Indications in Emergencies and Intensive Care Cases
  6.7.3. Ultrasound-Guided Study of Cardioembolism

Module 7. Critical Care in Patients with Respiratory Disorders

7.1. Anatomophysiologic and Physiologic Memory of the Cardiocirculatory System
7.2. Acute Respiratory Failure
7.3. Adult Respiratory Distress Syndrome
7.4. Pulmonary Embolism
7.5. COPD Flare-up
7.6. Asthmatic Status
7.7. Pneumonia and Bronchopneumonia
7.8. Neuromuscular Alterations that Affect Respiration
7.9. Procedures: Oxygen Therapy
7.10. Procedures: Airway Access
7.11. Procedures: Aspiration of Tracheobronchial Secretions
7.12. Procedures: Thoracocentesis and Chest Drains
7.13. Extracorporeal Membrane Oxygenation System (ECMO)
7.14. Concept of Mechanical Ventilation. Respirators and Parameters
7.15. Mechanical Ventilation Methods
7.16. Ventilator Alarms
7.17. Nursing Care of Mechanically Ventilated Patients
7.18. Removing MV
7.19. Non-Invasive Mechanical Ventilation
7.20. Mechanical Ventilation in Tracheostomized Patients

Module 8. Care in Patients with Neurological Disorders

8.1. Anatomophysiological Review of the Nervous System
8.2. Cerebrovascular Disease. Stroke Code
8.3. Intracranial Hypertension
8.4. Delirium
8.5. Guillain-Barré Syndrome
8.6. Seizures and Status Convulsus
8.7. Meningitis and Lumbar Puncture Practice
8.8. Comatose Patient
8.9. Pain and Sedoanalgesia
8.10. Neurological Assessment in ICU: Most Frequently Used Diagnostic Tests

Module 9. Digestive and Renal Pathology in the ICU and Other Pathologies

9.1. Gastrointestinal bleeding
9.2. Intestinal Obstruction
9.3. Inflammatory Bowel Disease
9.4. Mesenteric Ischemia
9.5. Acute Abdomen
9.6. Fulminant Hepatic Failure
9.7. Albumin-Based Liver Replacement System
9.8. Acute Pancreatitis
9.9. Intestinal Ostomy Patient: Colostomy
9.10. Intestinal Ostomy Patient: Ileostomy
9.11. Disseminated Intravascular Coagulation
9.12. Multiorgan Failure
9.13. Endocrinometabolic Alterations
9.14. Acute Renal Failure in the ICU
9.15. Urostomy Patient
9.16. Critical Care in Poisoning
9.17. Critical Care in Digestive Pathologies
9.18. Nosocomial Infections in the ICU
9.19. Sepsis and Septic Shock
9.20. Nursing Care in the Septic Patient

Module 10. Critical Care for Severe Trauma Patients

10.1. The Critically Ill Burns Patient
10.2. The Polytraumatized Patient
10.3. Initial Assessment of the Polytraumatized Patient
10.4. TBI and Spinal Trauma. Spinal cord Injury
10.5. Thoracic and Abdominal Trauma. Hypovolemic Shock
10.6. Trauma to Extremities
10.7. Trauma in Special Situations I
10.8. Trauma in Special Situations II

Module 11. Pharmacology in Intensive Care

11.1. Basic Concepts in Pharmacology
11.2. Drug Administration Safety
11.3. Most Frequently Used Drugs: Analgesia, Sedation and Muscle Relaxants
11.4. Most Frequently Used Drugs: Antiarrhythmics, Vasodilators and Inotropes
11.5. Most Frequently Used Drugs: Respiratory System and Antibiotics
11.6. Drug Administration Precautions: Oral and Enteral, Parenteral, and Transfusion
11.7. Drug Administration Precautions: Cytostatics, Epidural, PCA and Insulin Pumps
11.8. Formulas and Dosis Calculation
11.9. Enteral Nutrition at and Parenteral
11.10. Pharmacology in Pediatrics

Module 12. Maternal and Child Health

12.1. Obstetric Ultrasound
12.2. Cardiotocographic Recording
12.3. Out-of-Hospital Birth
12.4. Diagnostic Techniques in Gynecologic Cancers
12.5. Application of Contraceptive Treatments
12.6. Neonatal Assessment and Resuscitation Maneuvers in the Delivery Room
12.7. Neonatal Extracorporeal Membrane Oxygenation (ECMO)
12.8. Neonatal Mechanical Ventilation
12.9. Pediatric Intensive Care
12.10. Catheter Insertion in Pediatrics

Module 13. Clinical Pediatric Ultrasound

13.1. Technical Requirements
  13.1.1. Ultrasound at the Patients Bedside
  13.1.2. Physical Space
  13.1.3. Basic Equipment
  13.1.4. Equipment for Interventionalist Ultrasounds
  13.1.5. Ultrasound Scanners and Probes
13.2. Examination Technique
  13.2.1. Pediatric Patient Preparation
  13.2.2. Tests and Probes
  13.2.3. Ultrasound Section Planes
  13.2.4. Examination System
  13.2.5. Ultrasound-Guided Procedures
  13.2.6. Images and Documentation
  13.2.7. Test Report
13.3. Pediatric Sonoanatomy and Sonophysiology
  13.3.1. Normal Anatomy
  13.3.2. Sonoanatomy
  13.3.3. Sonophysiology of a Child in the Different Stages of Development
  13.3.4. Variants of Normality
  13.3.5. Dynamic Ultrasound
13.4. Ultrasound of the Major Pediatric Syndromes
  13.4.1. Emergency Thorax Ultrasound
  13.4.2. Acute Abdomen
  13.4.3. Acute Scrotum
13.5. Ultrasound-Guided Procedures in Pediatrics
  13.5.1. Vascular Access
  13.5.2. Extraction of Superficial Foreign Bodies
  13.5.3. Pleural Effusion
13.6. Introduction to Neonatal Clinical Ultrasound
  13.6.1. Emergency Transfontanellar Ultrasound
  13.6.2. Most Common Examination Indications in Emergencies
  13.6.3. Most Common Pathologies in Emergencies

Module 14. Critical Care for Paediatric Patients

14.1. Most Common Disorders in Newborns
14.2. Polytraumatized Children
14.3. Needs Assessment and Pediatric Rating Scales
14.4. Pediatric Assessment Triangle
14.5. Airway and Ventilatory Management for Critically Ill Pediatric Patients
14.6. Nursing Techniques for Critically Ill Pediatric Patients
14.7. Pediatric Postoperative Care
14.8. Pediatric Pain
14.9. Care for Premature Infants
14.10. End of Life Care

Module 15. Hospital Transport

15.1. Intrahospital Transfer of the Critically Ill Patient
15.2. Out-of-hospital Transfer and ISOBAR
15.3. Intrahospital Neonatal Transport
15.4. Ambulance Equipment
15.5. Cardiopulmonary Resuscitation Trolleys and Backpacks
15.6. Driving and Road Safety
15.7. Immobilization and Transfer

Module 16. Anesthesia and Surgery

16.1. Malignant Hyperthermia
16.2. Types of Anesthesia
16.3. Critical Postoperative Patient
16.4. Cardiac Surgery
16.5. Critical Care in Transplant Patients
16.6. Nursing Care in Patients under Anesthesia Crash Cart
16.7. Postoperative Complications
16.8. Interventions that May Prevent Perioperative Complications
16.9. Patient Admission to the Post-Anesthesia Recovery Unit
16.10. Possible Complications to the Post-Anesthesia Recovery Unit

Module 17. Research Methodology in Intensive Care Nursing

17.1. Recovery of Quality Information Specializing in Health Sciences
  17.1.1. Development of a Bibliographic Search
  17.1.2. Knowledge of Different Information Sources: General Search Engines (Google Scholar, Scopus), Databases (PubMed, Embase, Cinahl) and Clearinghouse Clinical Practice Guidelines
  17.1.3. Designing Complex Search Strategies
  17.1.4. Refinement of Search Results
  17.1.5. Creating Bibliographic Alerts
17.2. Bibliographic Reference Management
  17.2.1. Introduction to Bibliographic Reference Managers
  17.2.2. Importing References into the Zotero Reference Manager
  17.2.3. PDF Metadata Extraction
  17.2.4. Use of Tags or Metatags to Classify the Bibliography
  17.2.5. Including References in the Text (Word). Vancouver Style
  17.2.6. Social Web and Group Work
17.3. Critical Reading on Outcomes Research
  17.3.1. Introduction. Critical Reading
  17.3.2. Some Basic Concepts in Epidemiology
  17.3.3. Qualitative Research Designs
  17.3.4. Quantitative Research Designs
  17.3.5. Instruments for Critical Reading
17.4. How to Prepare a Research Protocol
  17.4.1. Headings that Make Up the Protocol of a Research Project
  17.4.2. Editorial Staff articles with Scientific Structure
  17.4.3. Writing a Case Report, Review, Qualitative Research Article, and a Thesis or Dissertation
  17.4.4. Style in Scientific Communication
17.5. Master's Thesis: Academic Work of Bibliographic Review and Research
  17.5.1. The Importance of a Master's Thesis
  17.5.2. Proposal and Feasibility of a Master's Thesis
  17.5.3. Recommendations for the Preparation of the Master's Thesis
  17.5.4. Development and Evaluation of the Master's Thesis
  17.5.5. Recommendations for the Defence of the Master's Thesis

Module 18. Ultrasound imaging

18.1. Physical principles |
- 18.1.1. Sounds and Ultrasound
- 18.1.2. Nature of ultrasound
- 18.1.3. Interaction of ultrasound with matter
- 18.1.4. Concept of Ultrasound
- 18.1.5. Ultrasound safety

18.2. Ultrasound Sequence
- 18.2.1. Ultrasound emission
- 18.2.2. Tissue interaction
- 18.2.3. Echo formation
- 18.2.4. Echo reception
- 18.2.5. Ultrasound image generation

18.3. Ultrasound Modes
- 18.3.1. Mode A
- 18.3.2. M-Mode
- 18.3.3. Mode B
- 18.3.4. Color Doppler
- 18.3.5. Angio-Doppler
- 18.3.6. Spectral Doppler
- 18.3.7. Combined Modes
- 18.3.8. Other modalities and techniques

18.4. Ecography
- 18.4.1. Console Ecograph Ultrasound Scanners
- 18.4.2. Portable Ecograph Ultrasound scanners
- 18.4.3. Specialised Ecograph Ultrasound Scanners
- 18.4.4. Transducers

18.5. Ultrasound maps and Eco Navigation
- 18.5.1. Sagittal plane
- 18.5.2. Transverse plane
- 18.5.3. Coronal plane
- 18.5.4. Oblique planes
- 18.5.5. Ultrasound Marking
- 18.5.6. Transducer Movements

Module 19. Clinical Thoracic Ultrasound

19.1. Fundamentals of Thoracic Ultrasound and Anatomical Review
- 19.1.1. Study of the Normal Thorax
- 19.1.2. Pulmonary Ultrasound Semiology
- 19.1.3. Pleural Ultrasound Semiology

19.2. Technical Requirements. Examination Technique
- 19.2.1. Types of Probes Used
- 19.2.2. Ultrasound with Contrast in the Thorax

19.3. Ultrasound of the Thoracic Wall and the Mediastinum
- 19.3.1. Examination of Pulmonary Pathology
- 19.3.2. Examination of Pleural Pathology
- 19.3.3. Examination of Mediastinal and Thoracic Wall Pathology

19.4. Ultrasound of the Pleura
- 19.4.1. Pleural Effusion and Solid Pleural Pathology
- 19.4.2. Pneumothorax
- 19.4.3. Pleural Interventionism
- 19.4.4. Adenopathies and Mediastinal Masses
- 19.4.5. Adenopathies of the Thoracic Wall
- 19.4.6. Osteomuscular Pathology of the Thoracic Wall

19.5. Pulmonary Ultrasound Scan
- 19.5.1. Pneumonia and Atelectasis
- 19.5.2. Pulmonary Neoplasms
- 19.5.3. Diffuse Pulmonary Pathology
- 19.5.4. Pulmonary Infarction

19.6. Diaphragmatic Ultrasound
- 19.6.1. Ultrasound Approach to the Diaphragmatic Pathology
- 19.6.2. Usefulness of Ultrasound in the Study of the Diaphragm

Module 20. Clinical Vascular Ultrasound

20.1. Anatomy Recap
- 20.1.1. Venous Vascular Anatomy of the Upper Limbs
- 20.1.2. Arterial Vascular Anatomy of the Upper Limbs
- 20.1.3. Venous Vascular Anatomy of the Lower Limbs
- 20.1.4. Arterial Vascular Anatomy of the Lower Limbs

20.2. Technical Requirements
- 20.2.1. Ultrasound Scanners and Probes
- 20.2.2. Curve Analysis
- 20.2.3. Image-Color Media
- 20.2.4. Echo Contrasts

20.3. Examination Technique
- 20.3.1. Positioning
- 20.3.2. Insonation. Examining Technique
- 20.3.3. Study of Normal Curves and Speeds

20.4. Large Thoracoabdominal Vessels
- 20.4.1. Venous Vascular Anatomy of the Abdomen
- 20.4.2. Arterial Vascular Anatomy of the Abdomen
- 20.4.3. Abdomino-Pelvic Venous Pathology
- 20.4.4. Abdomino-Pelvic Arterial Pathology

20.5. Supra-Aortic Trunks
- 20.5.1. Venous Vascular Anatomy of the Supra-Aortic Trunks
- 20.5.2. Arterial Vascular Anatomy of the Supra-Aortic Trunks
- 20.5.3. Venous Pathology of the Supra-Aortic Trunks
- 20.5.4. Arterial Pathology of the Supra-Aortic Trunks

20.6. Peripheral Arterial and Venous Circulation
- 20.6.1. Venous Pathology of Lower and Upper Limbs
- 20.6.2. Arterial Pathology of Lower and Upper Limbs

Module 21. Clinical Cerebral Ultrasound

21.1. Cerebral Hemodynamics
- 21.1.1. Carotid Circulation
- 21.1.2. Vertebro-Basilar Circulation
- 21.1.3. Cerebral Microcirculation

21.2. Ultrasound Modes
- 21.2.1. Transcraneal Doppler
- 21.2.2. Cerebral Ultrasound
- 21.2.3. Special Tests (Vascular Reaction, HITS, etc.)

21.3. Acoustic Windows and Examination Technique
- 21.3.1. Acoustic Windows
- 21.3.2. Operator Position
- 21.3.3. Examination Sequence

21.4. Structural Alterations
- 21.4.1. Collections and Masses
- 21.4.2. Vascular Anomalies
- 21.4.3. Hydrocephalus
- 21.4.4. Venous Pathology

21.5. Hemodynamic Alterations
- 21.5.1. Spectral Analysis
- 21.5.2. Hyperdynamics
- 21.5.3. Hypodynamics
- 21.5.4. Asystole of the Brain

21.6. Ocular Ultrasonography
- 21.6.1. Pupil Size and Reactivity
- 21.6.2. Diameter of the Optic Nerve Sheath

21.7. Echodoppler in the diagnosis of encephalic death
- 21.7.1. Clinical diagnosis of encephalic death
- 21.7.2. Necessary conditions before transcranial Doppler (TCD) examination for the diagnosis of cerebral circulatory arrest
- 21.7.3. TCD Application Techniques
- 21.7.4. Advantages of a TCD
- 21.7.5. Limitations of TCD and interpretation
- 21.7.6. TCD Ultrasound the diagnosis of encephalic death
- 21.7.7. TCD ultrasound in the diagnosis of encephalic death

Module 22. Clinical Abdominal Ultrasound

22.1. Anatomy Recap
- 22.1.1. Abdominal Cavity
- 22.1.2. Liver
- 22.1.3. Gallbladder and Bile Ducts
- 22.1.4. Retroperitoneum and Great Vessels
- 22.1.5. Pancreas
- 22.1.6. Bladder
- 22.1.7. Kidneys
- 22.1.8. Bladder
- 22.1.9. Prostate and Seminal Vesicles
- 22.1.10. Uterus and Ovaries

22.2. Technical Requirements
- 22.2.1. Ultrasound Equipment
- 22.2.2. Types of Transductors for Abdominal Examination
- 22.2.3. Basic Ultrasound Settings
- 22.2.4. Patient Preparation

22.3. Examination Technique
- 22.3.1. Examination Planes
- 22.3.2. Probe Movements
- 22.3.3. Visualization of Organs According to Conventional Sectioning
- 22.3.4. Systematic Examination

22.4. ECO-FAST Methodology
- 22.4.1. Equipment and Transducers
- 22.4.2. FAST I
- 22.4.3. FAST II
- 22.4.4. FAST III. Perivesical Effusion
- 22.4.5. FAST IV. Pericardial Effusion
- 22.4.6. ECO-FAST V. Exclude ABD Aortic Aneurysm

22.5. Ultrasound Scan of the Digestive System
- 22.5.1. Liver
- 22.5.2. Gallbladder and Bile Ducts
- 22.5.3. Pancreas
- 22.5.4. Bladder

22.6. Genitourinary Ultrasound
- 22.6.1. Kidney
- 22.6.2. Urinary Bladder
- 22.6.3. Male Genital System
- 22.6.4. Female Genital System

22.7. Usefulness of ultrasound in renal, hepatic and pancreatic transplant patients
- 22.7.1. Normal ultrasound in the patient with renal transplantation
- 22.7.2. Acute Tubular Necrosis (ATN)
- 22.7.3. Acute rejection (AR)
- 22.7.4. Chronic transplant dysfunction
- 22.7.5. Normal ultrasound in the patient with liver transplantation
- 22.7.6. Normal ultrasound in the patient with pancreas transplantation

Module 23. Clinical Musculoskeletal Ultrasound

23.1. Anatomy Recap
- 23.1.1. Shoulder's Anatomy
- 23.1.2. Elbow's Anatomy
- 23.1.3. Wrist and Hand's Anatomy
- 23.1.4. Hip and Thigh's Anatomy
- 23.1.5. Knee's Anatomy
- 23.1.6. Ankle, Foot, and Leg's Anatomy

23.2. Technical Requirements
- 23.2.1. Musculoskeletal Ultrasound Equipment
- 23.2.2. Methodology of execution
- 23.2.3. Ultrasound imaging
- 23.2.4. Validation, Reliability, and Standardization
- 23.2.5. Ultrasound-Guided Procedures

23.3. Examination Technique
- 23.3.1. Basic Concepts in Ultrasound
- 23.3.2. Rules of a Correct Examinations
- 23.3.3. Examination Technique in Ultrasound Study of the Shoulder
- 23.3.4. Examination Technique in Ultrasound Study of the Elbow
- 23.3.5. Examination Technique in Ultrasound Study of the Wrist and Hand
- 23.3.6. Examination Technique in Ultrasound Study of the Hip
- 23.3.7. Examination Technique in Ultrasound Study of the Thigh
- 23.3.8. Examination Technique in Ultrasound Study of the Knee
- 23.3.9. Examination Technique in Ultrasound Study of the Leg and Ankle

23.4. Sonoanatomy of the Locomotor System: I. Upper Extremities
- 23.4.1. Shoulder Ultrasound Anatomy
- 23.4.2. Elbow Ultrasound Anatomy
- 23.4.3. Wrist and Hand's Anatomy

23.5. Sonoanatomy of the Locomotor System: II. Lower Extremities
- 23.5.1. Hip Ultrasound Anatomy
- 23.5.2. Thigh Ultrasound Anatomy
- 23.5.3. Knee Ultrasound Anatomy
- 23.5.4. Ultrasound anatomy of the leg and ankle

23.6. Ultrasound in the Most Frequent Acute Locomotor System Injuries
- 23.6.1. Muscle Injuries
- 23.6.2. Tendon Injuries
- 23.6.3. Ligament Injuries
- 23.6.4. Subcutaneous Tissue Injuries
- 23.6.5. Bone Injuries
- 23.6.6. Joint Injuries
- 23.6.7. Peripheral Nerve Injuries

Module 24. Ultrasonographic Approach to the Major Syndromes

24.1. Ultrasound in Acute Renal Failure
- 24.1.1. Introduction
  - 24.1.1.1. prerenal ARF
  - 24.1.1.2. Renal or intrinsic ARF
  - 24.1.1.3. Post-renal or obstructive ARF
- 24.1.2. Hydronephrosis
- 24.1.3. Lithiasis
- 24.1.4. Acute Tubular Necrosis
- 24.1.5. Doppler Ultrasound in Acute Renal Failure
- 24.1.6. Bladder Ultrasound in Acute Renal Failure

24.2. Ultrasound in trauma
- 24.2.1. FAST and E-FAST (Hemo and Pneumothorax)
- 24.2.2. Ultrasound Assessment in Special Situations
- 24.2.3. Hemodynamic Assessment Focused on Trauma

24.3. Ultrasound in Strokes
- 24.3.1. Introduction
- 24.3.2. Justification
- 24.3.3. Initial Assessment
- 24.3.4. Ultrasound Appraisal
- 24.3.5. Ultrasound-Guided Management

24.4. Ultrasound in Cardiac Arrest
- 24.4.1. Cerebral Hemodynamics
- 24.4.2. Hemodynamics in Cardiac Arrest
- 24.4.3. Usefulness of Ultrasound in Resuscitation
- 24.4.4. Usefulness of Ultrasound After Recovery of Spontaneous Circulation

24.5. Ultrasound in Shock
- 24.5.1. Definition, types of shock and echocardiographic findings
  - 24.5.1.1. Definition
  - 24.5.1.2. Types of Shock
  - 24.5.1.3. Advantages of ultrasound in the recognition and management of the different etiologies of shock
  - 24.5.1.4. ICU Considerations
  - 24.5.1.5. Hemodynamic monitoring by ultrasound

24.6. Ultrasound in respiratory failure
- 24.6.1. Clinical ethology of dyspnea
- 24.6.2. Approach to the patient with dyspnea
- 24.6.3. Usefulness of clinical ultrasound in the patient with dyspnea
- 24.6.4. Pulmonary Ultrasound Scan
- 24.6.5. Echocardiography

Module 25. Ultrasound-Guided Procedures

25.1. Airway
- 25.1.1. Advantages and Disadvantages
- 25.1.2. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 25.1.3. Orotracheal Intubation Technique
- 25.1.4. Percutaneous Tracheotomy Technique
- 25.1.5. Common Problems, Complications, and Practical Advice

25.2. Vascular Cannulation
- 25.2.1. Indications and Advantages of the Anatomical Reference Technique
- 25.2.2. Current Evidence on Ultrasound-Guided Vascular Cannulation
- 25.2.3. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 25.2.4. Ultrasound-Guided Central Venous Cannulation Technique
- 25.2.5. Single Peripheral Catheter and Peripherally Inserted Central Catheter (PICC) Cannulation Technique
- 25.2.6. Arterial Cannulation Technique
- 25.2.7. Implementation of an Ultrasound-Guided Vascular Cannulation Protocol
- 25.2.8. Common Problems, Complications, and Practical Advice

25.3. Thoracentesis and Pericardiocentesis
- 25.3.1. Indications and Advantages of the Anatomical Reference Technique
- 25.3.2. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 25.3.3. Ultrasound Specifications and Pericardial Drainage Technique
- 25.3.4. Ultrasound Specifications and Thoracic Drainage Technique
- 25.3.5. Common Problems, Complications, and Practical Advice

25.4. Paracentesis
- 25.4.1. Indications and Advantages of the Anatomical Reference Technique
- 25.4.2. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 25.4.3. Ultrasound Specifications and Technique
- 25.4.4. Common Problems, Complications, and Practical Advice

25.5. Lumbar Puncture
- 25.5.1. Indications and Advantages of the Anatomical Reference Technique
- 25.5.2. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 25.5.3. Technique
- 25.5.4. Common Problems, Complications, and Practical Advice

25.6. Drainage and drilling
- 25.6.1. Suprapubic Probing
- 25.6.2. Collection Drainage
- 25.6.3. Extraction of Foreign Bodies

Module 26. Advanced Practice Nursing (APN)

26.1. Advanced Practice Nursing (APN)
26.2. Advanced Practice in Professional Nursing
26.3. Present and Future
26.4. Scope of Application
26.5. Career Opportunities
26.6. APN in Research
26.7. APN in Teaching: PhD
26.8. APN in Management
- 26.8.1. Clinical Financial Management
- 26.8.2. Primary Care Center (PCC) Management
- 26.8.3. Hospital Management

26.9. APN in Spanish-Speaking Countries
26.10. APN Clinical Practice Application

Module 27. Fundamentals of Nursing and Advanced Practice

27.1. Theories and Models in EPA
- 27.1.1. Conceptual Modeling
- 27.1.2. Theories

27.2. Evidence-Based Nursing (EBN)
- 27.2.1. Origin and Evolution
- 27.2.2. Theoretical Framework
- 27.2.3. EBN Today: Clinical Implications
- 27.2.4. Main Factors Favoring the Application of EBN
- 27.2.5. Barriers to the Application of EBN

27.3. Developing Advance Care Plans
- 27.3.1. Nursing Care Processes (NCP)
- 27.3.2. Classification and Elaboration of Advanced Nursing Care Plans

27.4. Advanced Practice in Patient Assessment
- 27.4.1. Assessment Processes
  - 27.4.1.1. Obtaining Results
  - 27.4.1.2. Data Organization : Functional Health Patterns
  - 27.4.1.3. Data Validation

27.5. Nursing Diagnoses
- 27.5.1. Concept and Evolution of Nursing Diagnoses
- 27.5.2. Differences between nursing and medical diagnoses
- 27.5.3. Nursing Diagnoses
- 27.5.4. Classification of NANDA Diagnoses
- 27.5.5. Components of a Nursing Diagnosis
- 27.5.6. Types of Nursing Diagnoses
- 27.5.7. Nursing Diagnosis Statement
- 27.5.8. Nursing Diagnosis Management
- 27.5.9. Diagnostic Accuracy
- 27.5.10. Most Frequent Errors in Diagnostic Judgment
- 27.5.11. Recommendations to Correctly Establish Nursing Diagnoses

27.6. Therapeutic Judgment in Nursing
- 27.6.1. Planning
- 27.6.2. Implementation
- 27.6.3. Assessment

27.7. Advanced Practice in Patients with Chronic Pathology

27.8. Nursing in Case Management
- 27.8.1. Competencies of Nursing Case Managers

27.9. Nurse Prescriptions

27.10. Supervising and Coordinating Nursing Teams
- 27.10.1. Leadership Styles
- 27.10.2. Recommendations for Supervising and Coordinating Nursing Teams

Module 28. Advanced Practice in Special Services

28.1. Advanced Hospital Triage Systems

28.2. Advanced Procedures and Techniques in Hospital Emergency Departments

28.3. Advanced Out-of-Hospital Triage Systems

28.4. Advanced Medical Transportation

28.5. Nursing Techniques and Procedures in Out-of-Hospital Emergencies

28.6. Advanced Management of Polytraumatized Patients

28.7. Advanced Management of Patients in Major Disasters

28.8. Advanced Practice in Critically Ill Patients

28.9. Mechanical Ventilation

28.10. Advanced Practice Nursing in Anesthesia and Resuscitation

Module 29. Advanced Digestive, Endocrinology and Nutrition Practice

29.1. Semiology and Examination of the Digestive Tract

29.2. Special Nasogastric Probes

29.3. Advanced Management of Enteral Nutrition

29.4. Advanced Management of Parenteral Nutrition

29.5. Advanced Diet Therapy
- 29.5.1. Advanced Nutritional Assessment

29.6. Diabetic Education
- 29.6.1. Injection Techniques and Common Errors
- 29.6.2. Continuous Glucose Monitoring Systems

29.7. Ostomies

29.8. Advanced Practice Nursing in Digestive Surgery

29.9. Nursing Competencies in Digestive System Diagnostic Tests

29.10. Advanced Practice in Oral Health

Module 30. Minor Surgery and Dressings

30.1. Types of Wounds

30.2. Complex Chronic Wounds

30.3. Advanced Practice Nursing in Chronic Complex Wound Care

30.4. Debridement Techniques

30.5. Advanced Burn Management

30.6. Negative Pressure Therapy

30.7. Incision with Drainage, Skin and Subcutaneous Tissue Biopsy

30.8. Treating Warts, Molluscum Contagiosum and Papillomas

30.9. Extraction of Foreign Bodies

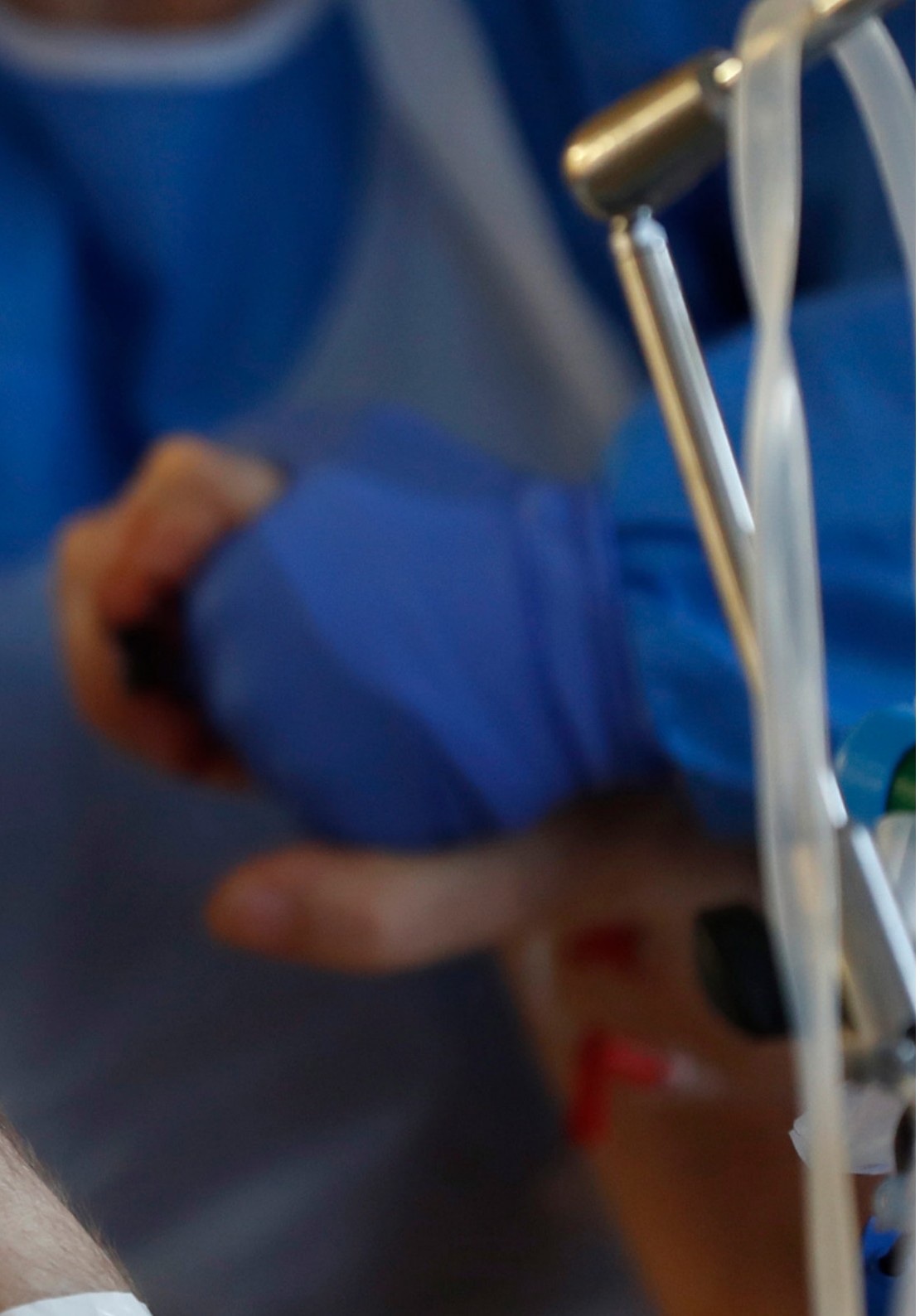
30.10. Sutures

Module 31. Oncohematology and Palliative Care

31.1. Chemotherapy
31.2. Radiotherapy
  31.2.1. External
  31.2.2. Brachytherapy and Intracavitary
  31.2.3. Systemic Coaching
31.3. Central catheter with subcutaneous reservoir.Hickman Catheter
31.4. Peripherally Inserted Central Catheter (PICC): Midline Catheter
31.5. Oncologic Emergencies
31.6. Special Care for Patients Undergoing Oncologic Treatment
  31.6.1. General Adverse Effects
  31.6.2. Mucositis
  31.6.3. Nausea and Vomiting
  31.6.4. Skin and Appendages Alterations
31.7. Advanced Management of Analgesic Pharmacotherapy in Oncologic Pain
31.8. Hematopoietic Progenitor Transplantation
31.9. Hemoderivatives
31.10. Advanced Palliative Care
  31.10.1. End-of-Life Care: Grief Management
  31.10.2. Family Care

Module 32. Nephrourology

32.1. Urinary and Renal System Exploration
32.2. Advanced Diagnostic Techniques in Nephrourology
32.3. Urinalysis and Urinary Sediment Interpretation
32.4. Bladder Catheterization
32.5. Using Drugs and Invasive Treatments in the Urinary System
32.6. Urinary Incontinence
  32.6.1. Effort
  32.6.2. Urgent Urination
  32.6.3. Overflow
32.7. Bladder Re-education Techniques
32.8. Hemodialysis
32.9. Vascular Accesses for Dialysis
32.10. Peritoneal Dialysis



Module 33. Approach to Mental Health Problems in Primary Care

33.1. Prevalence of Mental Disorders
33.2. Normal vs Pathological Anxiety
33.3. Classifications, Diagnostic Criteria and Differential Diagnostics
33.4. Medical treatment
33.5. Emergency Management
33.6. Non-Pharmacological Treatment: Psychotherapy and Medicinal Herbs
33.7. ADHD
33.8. Semi-Structured Interview and Scales
33.9. Other Disorders that Can Be Approached from Primary Care: Autism Spectrum Disorder (ASD) and Acceptance Commitment Therapy (ACT)
33.10. Advice for Patients and Care Plans

Delves through case studies, detailed videos, interactive diagrams and essential readings into the latest scientific postulates of Intensive Care Unit Nursing"

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:

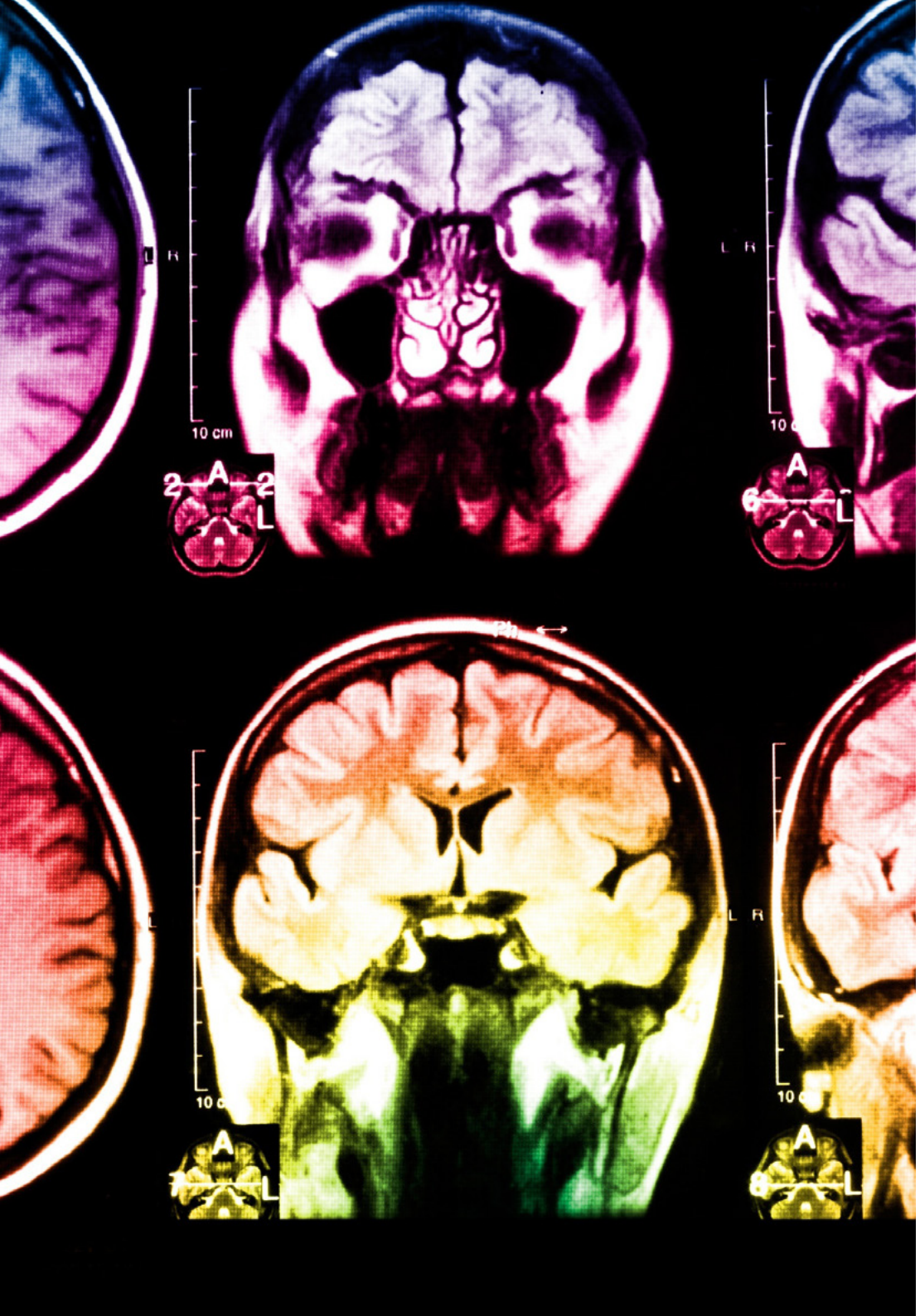
1. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into 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 re-learn). Therefore, we combine each of these elements concentrically.

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

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

Study Material

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

These contents are then 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.

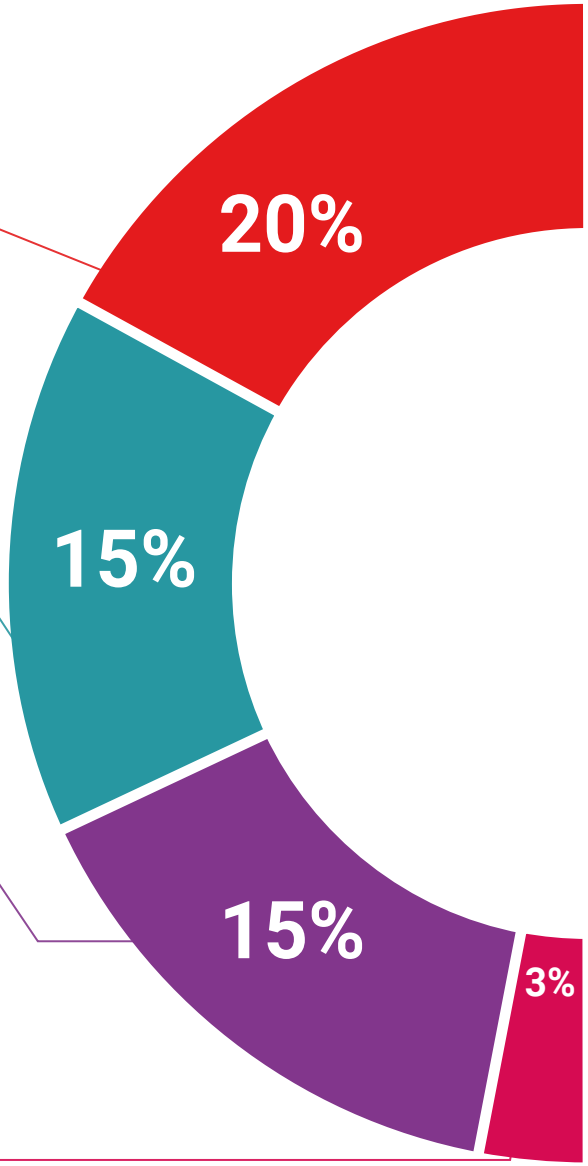
Interactive Summaries

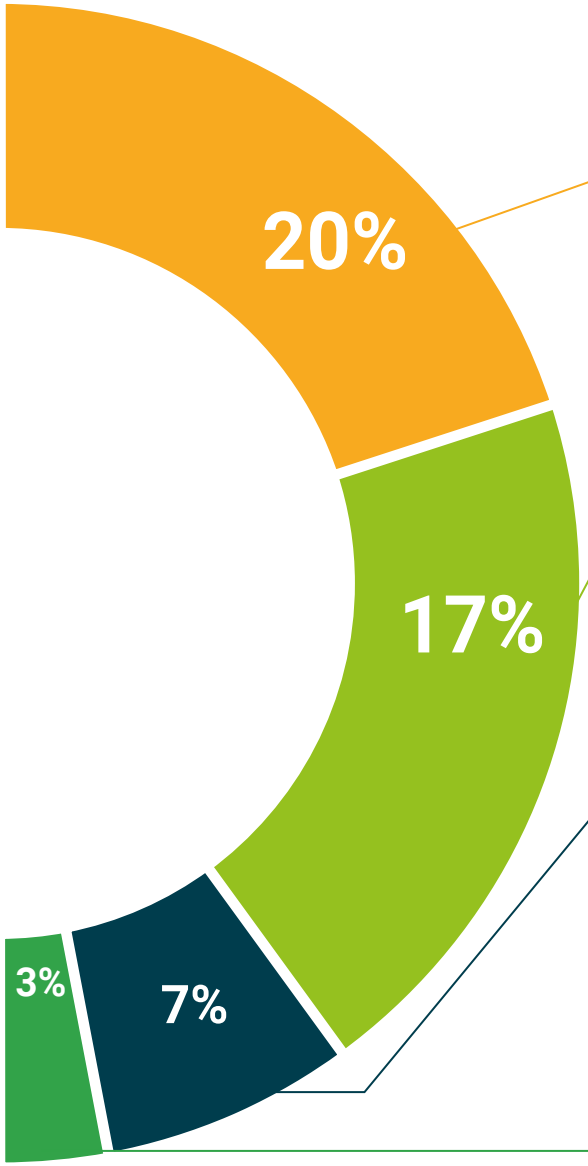
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

The Advanced Master's Degree in Intensive Care Unit Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Global University.

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 **Advanced Master's Degree diploma in Intensive Care Unit Nursing** endorsed by **TECH Global University**, the world's largest online university.

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

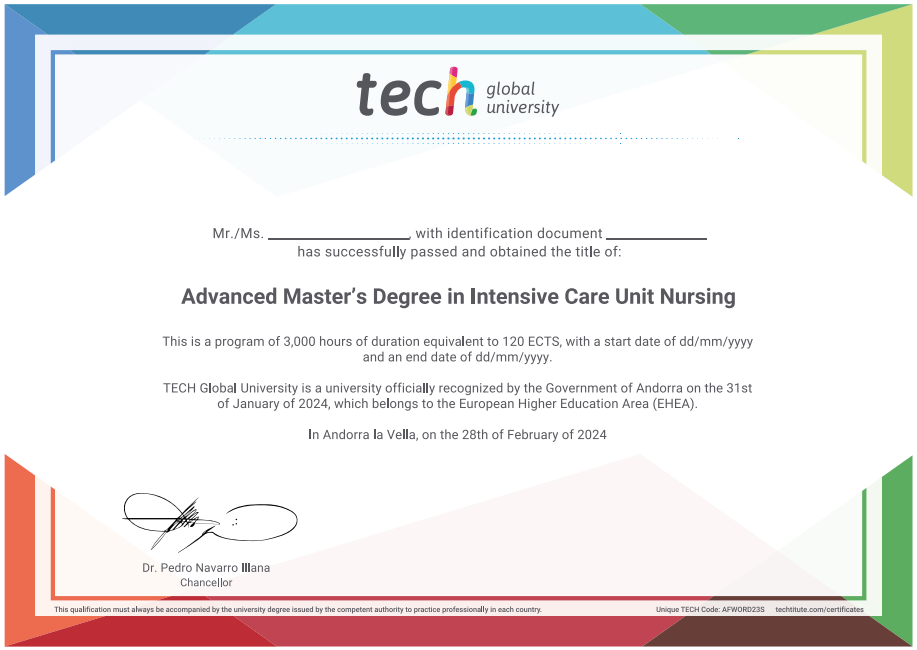
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Advanced Master's Degree in Intensive Care Unit Nursing**

Modality: **online**

Duration: **2 years**

Accreditation: **120 ECTS**


tech global university

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

Advanced Master's Degree in Intensive Care Unit Nursing

This is a program of 3,000 hours of duration equivalent to 120 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

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

Dr. Pedro Navarro Illana
Chancellor

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates


Advanced Master's Degree in Intensive Care Unit Nursing

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Organization and Management of an Intensive Care Unit	4	CO
1º	Evaluating and Monitoring of a Critically Ill Patient	4	CO
1º	Life Support	4	CO
1º	Critical Care in Patients with Cardiocirculatory Disorders	4	CO
1º	Advanced Practice in Cardiology	4	CO
1º	Clinical Cardiac Ultrasound	4	CO
1º	Critical Care in Patients with Respiratory Disorders	4	CO
1º	Care in Patients with Neurological Disorders	4	CO
1º	Digestive and Renal Pathology in the ICU and Other Pathologies	4	CO
1º	Critical Care for Severe Trauma Patients	4	CO
1º	Pharmacology in Intensive Care	4	CO
1º	Maternal and Child Health	4	CO
1º	Clinical Pediatric Ultrasound	4	CO
1º	Critical Care for Paediatric Patients	4	CO
1º	Hospital Transport	4	CO
1º	Anesthesia and Surgery	4	CO
1º	Research Methodology in Intensive Care Nursing	4	CO

Year	Subject	ECTS	Type
2º	Ultrasound imaging	4	CO
2º	Clinical Thoracic Ultrasound	4	CO
2º	Clinical Vascular Ultrasound	4	CO
2º	Clinical Cerebral Ultrasound	4	CO
2º	Clinical Abdominal Ultrasound	3	CO
2º	Clinical Musculoskeletal Ultrasound	3	CO
2º	Ultrasonographic Approach to the Major Syndromes	3	CO
2º	Ultrasound-Guided Procedures	3	CO
2º	Advanced Practice Nursing (APN)	3	CO
2º	Fundamentals of Nursing and Advanced Practice	3	CO
2º	Advanced Practice in Special Services	3	CO
2º	Advanced Digestive, Endocrinology and Nutrition Practice	3	CO
2º	Minor Surgery and Dressings	3	CO
2º	Oncohematology and Palliative Care	3	CO
2º	Nephrourology	3	CO
2º	Approach to Mental Health Problems in AP	3	CO

Dr. Pedro Navarro Illana
Rector

tech global university

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

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Advanced Master's Degree
Intensive Care Unit Nursing

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

Advanced Master's Degree
Intensive Care Unit Nursing

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