Professional Master's Degree
Advanced Intensive Care Nursing

tech technological university

Professional Master's Degree
Advanced Intensive Care Nursing

- » Modality: **online**
- » Duration: **12 months**
- » Certificate: **TECH Technological University**
- » Dedication: **16h/week**
- » Schedule: **at your own pace**
- » Exams: **online**

Website: **www.techtitute.com/pk/nursing/professional-master-degree/master-advanced-intensive-care-nursing**

Index

01
Introduction

Since the pandemic caused by COVID-19, it has become evident that there has been an acceleration in the improvement of respiratory support, action protocols and the improvement of techniques in the care of critical patients. For this reason, it is essential to have nurses at the forefront in this field, as well as in the resolution of complex clinical situations. Faced with this reality, TECH has developed this 100% online degree that leads the graduate to be aware of progress in patient safety, monitoring and support, transplants and organ donation or care of burn patients. A 12-month academic process, with the best didactic material, accessible 24 hours a day.

"
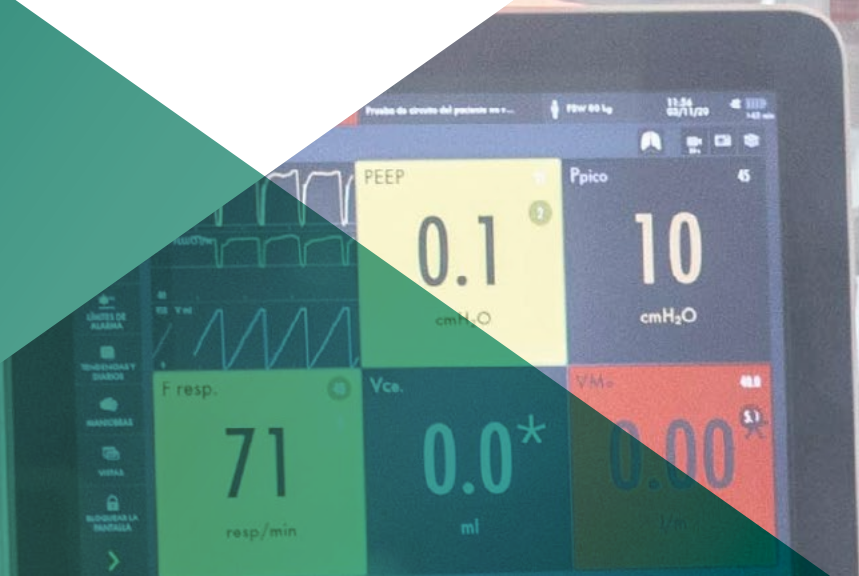
Update yourself throughout 1,500 hours in the most notorious advances in Advanced Intensive Care Nursing"

The worldwide emergency caused by the coronavirus led healthcare systems to integrate advanced respiratory support and to perfect techniques that improve intubation and stabilization processes. This progress is coupled with other advances in the monitoring of critical patients in the ICU, as well as in the protocols used in the care of family members in special situations.

A reality that has transformed the healthcare landscape and leads nurses to maintain a continuous updating of their care competencies in Intensive Care. In this context, this Master's Degree of 1,500 teaching hours is born.

It is a program that consists of an innovative syllabus, created by professionals with a consolidated career in this field, who pour their deep knowledge about the assessment and monitoring of the respiratory, neurological or digestive-nutritional patient into this degree. Likewise, students will study the approach to the burn patient, the organ donor patient or the postoperative transplanted patient in depth.

An academic itinerary that will acquire greater dynamism, thanks to the video summaries of each topic, the videos in detail, the case studies and the specialized readings, which will favor this process of updating. In addition, the Relearning method implemented by this institution will allow students to reduce the long hours of study and memorization.

Undoubtedly, a unique opportunity to keep abreast of advances in this health area through a didactic methodology that makes it possible to combine daily responsibilities with a first class update. Without attendance, or classes with established schedules, students only need a digital device with internet connection to access the syllabus hosted on the virtual platform and start their updating period.

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

- The development of case studies presented by experts in Intensive Care Nursing and Intensive Care Physicians
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information about the disciplines that are essential for professional practice
- Practical exercises where self-assessment can be used to improve learning
- Its special emphasis on innovative methodologies
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Availability to access content from any fixed or portable device with internet connection

Delve into the existing and updated protocols around the care of the critically ill patient with respiratory problems"

"TECH adapts to you and your motivation to update your knowledge. For this reason you have a Professional Master's Degree compatible with your daily life"at your finger tips"

Delve into Advanced Care for patients with neurological problems from the comfort of your home.

Delve, when you wish, into organ transplantation and donation through high quality videos.

The program's teaching staff includes professionals from sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

02
Objectives

This Professional Master's Degree has been designed to provide the nurse with the most current information on patient care in Intensive Care. An updating process, which not only focuses on the most advanced theory, but also provides a more humanistic vision focused on the patient, so that all the spheres that make up the needs of people are not left aside. A holistic and interdisciplinary approach that is provided by an excellent teaching team with extensive experience in the health sector.

You will increase your skills in rapid patient assessment and the application of Advanced Care in complex situations"

General Objectives

- Synthesizing data to inform the assessment of the critically ill patient
- Collecting data to inform the assessment of the critically ill patient
- Use data to inform the assessment of the critically ill patient
- Plan care collaboratively and in a patient-centered manner
- Incorporate the latest evidence-based practice in critical care nursing
- Act effectively in pressured and demanding situations
- Contextualize each action to the situation at hand

Specific Objectives

Module 1. Approach to the critical patient. Vision from the point of view of patient safety and quality

- Manage and follow up on activities, objectives, processes and compliance with indicators
- Identify and respond to serious or adverse incidents in clinical practice
- Delve into data collection for quality indicators, such as patient safety, maintenance of technical equipment and others
- Delve into the transfer of the critical patient out of the Intensive Care Unit regardless of the devices carried and the reason for transfer
- Involve the family and/or caregivers in the patient's evaluation process and interventions

Module 2. Advanced nursing care in the critically ill patient

- Modify priorities and adapt the work plan in light of the changes
- Encourage compliance with unit and hospital guidelines, as well as national regulations, regarding medication administration in the critical care setting
- Ensuring that medication errors are avoided
- Appropriately prioritize and provide patients with the necessary care in the Intensive Care Unit setting

Module 3. Hemodynamic monitoring and support. Advanced care of the patient with hemodynamic problems

- Provide nursing care in Cardiovascular Disorders
- Manage fluids and vasoactive drugs to aid circulation, including vasopressor and inotropic drugs
- Initiate and perform appropriate techniques to measure cardiac output and derived hemodynamic variables
- Perform cardiac pacing with pacemakers
- Perform cardiopulmonary resuscitation
- Perform post resuscitation period
- Perform defibrillation and cardioversion according to resuscitation protocols
- Cannulate an arterial catheter and remove specimens

Module 4. Rehabilitation monitoring and support. Advanced care of the patient with Rehabilitation problems

- Provide nursing care in Respiratory Disorders
- Initiating, managing and managing patients undergoing invasive mechanical ventilation
- Initiate, manage and manage patients undergoing non-invasive mechanical ventilation
- Manage the airway in processes that may be compromised
- Comprehensively assess the airway
- Set up and operate oxygen administration equipment

Module 5. Neurology monitoring and support. Advanced care of the patient with Neurologic problems

- Provide nursing care in Neurological and Neuromuscular Disorders
- Assess and measure the patient's level of analgesia
- Measure the patient's level of sedation
- Assess and measure the patient's level of relaxation
- Apply measurement scales for assessment and intervention
- Initiate and perform monitoring in all related and interventional variables that relate to the patient's neurological status

Module 6. Digestive and nutritional monitoring and support. Advanced care of the patient with digestive-nutritional problems

- Provide nursing care in gastrointestinal, metabolic and endocrine disorders
- Correctly recognize glucose disturbances
- Assess and implement nutritional support
- Initiate and carry out monitoring in everything related to and involving variables related to the patient's nutritional and metabolic status

Module 7. Monitoring and support in the elimination and hydroelectrolyte balance of the patient. Advanced care of the patient with elimination problems

- Provide nursing care in renal disorders and intoxications

- Correctly recognize electrolyte and acid-base balance disturbances

- Manage continuous renal replacement therapy

- Initiate and carry out monitoring in everything related to and involving variables related to the patient's elimination status

Module 8. Special Situations. Severe trauma patient. Advanced assessment and care

- Provide nursing care for The Polytraumatized Patient

- Anticipate potential problems

- Keep abreast of mobilization specific to the patient's needs

- Integrate all team members as part of the process

Module 9. Special Situations. Burn patient Advanced assessment and care

- Provide nursing care for The Burn. Patient

- Identify and Skin to value Condition

- Provide the necessary care according to the location and type of burn

Module 10. Special Situations. Organ Transplantation and Donation

- Provide nursing care to The Transplant Recipients

- Provide appropriate care to the organ donor patient

- Assisting in brain death diagnostic testing

- Integrate effective communication with the family in the process of a possible donation

Numerous clinical case studies will provide you with a comprehensive view of the care and management of the Intensive Care patient"

03
Skills

TECH provides first level pedagogical tools of great utility for the professional's daily performance. In this sense, it provides clinical case studies, which will be of great help for the integration of the most effective methodology around patient monitoring, follow-up and action in various situations in Intensive Care units. In addition, this program will favor the increase of communication and team leadership skills in this healthcare context.

Enhance your communication skills with family members in the event of a possible organ donation"

General Skills

- Anticipate potential problems in burn patients
- Offering support to patients and family in decision making
- Provide holistic and multidisciplinary care to critically ill patients
- Enhance scientific information-seeking skills to facilitate decision making
- Use the latest technology for monitoring the critically ill patient
- Promote interdisciplinary work in the ICU

Increase your competencies in decision-making and teamwork in Intensive Care settings thanks to this program"
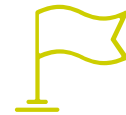
Specific Skills

- Promote collaboration among staff by encouraging different points of view from a constructivist point of view for and for the patient's well-being
- Follow up on patient care to ensure that it is carried out effectively and efficiently
- Coordinate the activities of colleagues and members of the clinical team
- Respond to and identify arrhythmias
- Initiate and perform monitoring in all related and intervening variables that relate to the patient's respiratory status
- Manage and position various devices to support patient nutrition

04
Course Management

One of the elements that distinguishes this university degree is its excellent management and teaching staff. Selected by TECH with maximum security, the teaching team is made up of healthcare professionals with extensive experience in the care of critically ill patients in reference hospitals. Their extensive background in this area and their deep knowledge of the latest scientific evidence in the approach to difficult clinical situations will allow the graduate to obtain a complete update from the hands of real experts.

A Professional Master's Degree that provides you with an innovative vision thanks to the professionals with extensive experience in ICU that make up the teaching staff"

Management

Ms. Fernández Lebrusán, Laura

- Nurse in the Medical ICU at the Puerta De Hierro Hospital
- ICU Nurse at the Hospital Universitario del Sureste
- Surgical ICU Nurse at Hospital General Universitario Gregorio Marañón
- ICU Nurse at the Hospital Quirón Salud
- Associate Teacher at the University Francisco of Vitoria
- Graduate in Nursing at the Francisco de Vitoria University
- Professional Master's Degree in Critical Care and Intrahospital Emergency Care
- HEMS Specialist (Helicopter Emergency Medical Services), University of Alicante
- Advanced Clinical Simulation Instructor by Francisco de Vitoria University

Professors

Ms. Gil Hernández, Cristina
- Nurse at the Ramón y Cajal University Hospital
- Nurse in Primary Care Management
- Nurse at San Francisco de Asis University Hospital
- Nurse at the Móstoles University Hospital
- Researcher in the BPSO Working Group at Hospital Sureste
- Graduate in Nursing from the Complutense University of Madrid
- Expert in Out-of-hospital Emergencies and Emergencies, Universidad Complutense de Madrid Expert in School Health, Universidad Católica de Ávila

Mr. Sánchez Álvarez, Armando
- Nurse in polytrauma and emergency ICU at Hospital Universitario 12 de Octubre
- Nurse in Medical ICU in Hospital Ramón y Cajal
- Medical ICU and Surgical Rea at Hospital Severo Ochoa de Leganés
- General Emergency Nurse at Hospital Universitario La Paz
- Master's Degree in Critical Care at Universidad Rey Juan Carlos
- Postgradute Diploma in Hospital and Outpatient Emergencies and Emergencies, Escuela de Ciencias de la Salud, Madrid

Ms. Ramos Ávila, Pilar
- Supervisor of the Intensive Care Unit, Transplant Unit and Cardiological Care Unit Hospital Puerto de Hierro
- La Luz Clinic Nurse
- Nurse at Gregorio Marañón General University Hospital
- Member of the Mortality and Policy Committee
- Postgraduate Certificate in Nursing from the Pontificia University of Salamanca

Dr. Mateos Rodríguez, Alonso
- Assistant Transplant Coordinator at the Regional Office of the Community of Madrid
- Adjunct physician in SUMMA 112 emergencies
- Visiting scientist at the Carlos III National Cardiovascular Research Center Foundation
- Emergency Doctor in Hospital Sanitas La Zarzuela
- Emergency Physician at Hospital Universitario 12 de Octubre

Ms. Barrero Almazán, María
- Nurse in the Trauma and Emergency ICU of Hospital 12 de Octubre
- Nurse at Hospital Universitario La Paz
- Nurse in Hospital General Universitario Gregorio Marañón
- Nurse at Hospital Universitario La Princesa
- Expert in Emergency Medicine by the European University of Madrid
- Postgraduate Certificate in Nursing from the Universidad Autónoma de Madrid

Dr. Domínguez Pérez, Laura
- Attending physician at the Acute Cardiac Care Unit and Clinical Cardiology Unit at Hospital Universitario 12 de Octubre
- Research stay at the Montreal Cardiology Institute
- Specialist in Cardiology at the Carlos III Hospital
- Doctorate in Medical Sciences from the Complutense University of Madrid
- Professional Master's Degree in Advances in Cardiology
- Professional Master's Degree in Acute Cardiac Care
- Expert in Diabetes Mellitus 2 and Cardiovascular Diseases
- Expert in Atrial Fibrillation
- Member of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units

Dr. Villén Villegas, Tomás
- Assistant to Medical Coordination in Emergency Hospital Nurse Isabel Zendal
- Adjunct Emergency Specialist at Hospital Universitario La Paz
- Assistant Emergency Specialist at Ramón y Cajal University Hospital
- Adjunct Emergency Specialist at Hospital Infanta Sofia
- Postdoctoral Fellow at Harvard University
- Vice-president of the World Interactive Network Focuse on Critical Ultrasound (WINFOCUS) Ibérica
- Member of the Working Group on Ultrasound of the European Society of Emergency Medicine (EuSEM), Society of Ultrasound in Medical Education (SUSME), Spanish Society of Emergency Medicine (SEMES)

Ms. Juncos Gonzalo, Mónica

- Head of the Surgical ICU Nursing Unit at the Hospital General Universitario Gregorio Marañón, Madrid
- ICU Nurse at the Hospital General Universitario Gregorio Marañón, Madrid, Spain
- ICU Nurse at the Southeast Hospital
- Critical Care Nurse Pool at the Hospital General Universitario Gregorio Marañon
- Researcher in the project "Assessment of analgesia, sedation, restraints and delirium in patients admitted to adult Intensive Care Units in Spain"
- Researcher in the project "Adaptation and validation of frailty scales in critically ill patients admitted to Critical Care Units in Spain"
- Degree in Nursing from the Complutense University of Madrid
- Professional Master's Degree in Human Resources Management from the European University of Madrid
- Postgraduate Diploma in Nursing Management and Leadership by the Catholic University of Avila
- Postgraduate Diploma in Processes and Interventions by the Catholic University of Avila
- Member of the Spanish Society of Intensive Care Nursing and Coronary Units (SEEIUC), Spanish Wound Society (SEHER), Spanish Society of Anesthesia, Resuscitation and Pain Therapy Nursing (A-SEEDAR)

Mr. Buenavida Camarero, Javier

- Nurse in the Medical ICU of the Hospital Universitario Puerta de Hierro Majadahonda
- Nurse at Móstoles University Hospital
- Nurse at University Hospital of Getafe
- Professional Master's Degree in Critical Illness and Emergencies given by the University of Barcelona

Mr. Martín De Castro, Javier

- Coronary Intensive Care Unit Nurse at the Hospital Universitario de la Hospital Universitario 12 de Octubre
- Nurse in the Post-Surgical Intensive Care Unit at the Puerta de Hierro Hospital
- Nurse in the Intensive Care Unit at the Ruber Juan Bravo Hospital Graduate in Nursing
- Professional Master's Degree in Critical Illness and Emergencies at Universitat de Barcelona
- Postgraduate Diploma in Nursing Processes and Interventions for Pediatric Patients in Life-Threatening Situations
- Expert in Simulation Instructor: Improving teamwork through TeamSTEPPS®

Dr. González González, Elena

- Assistant Physician of the Intensive Care Department, Torrejón University Hospital
- Assistant Physician of the Intensive Care Department, Getafe University Hospital
- Transplant Coordinator of the Hospital Universitario de Torrejón
- Pulmonary and Critical Care Division in the Northwestern Memorial Hospital in Chicago
- Clinical Simulation Instructor
- PNRCP SVA SVI Instructor
- Director and teacher of Advanced Life Support courses
- Degree in Medicine from the Autonomous University Madrid
- President of the CPR Committee of the Hospital Universitario de Torrejon

Ms. López Álvarez, Ana María
- Nurse in the Intensive Care Unit of La Paz University Hospital
- Nurse in the 3rd Resuscitation Unit of General Surgery, Maxillofacial, Neurosurgery, Urological H. La Paz
- Nurse in the Intensive Care Unit, H. Puerta de Hierro H. La Paz
- Nurse in the General Surgery Unit H. La Paz Hospital
- Instructor of ICU Simulation in UFV
- Postgraduate Certificate in Nursing at the University School of Nursing Puerta de Hierro (UAM)

Dr. Pérez Redondo, Marina
- Transplant Coordinator of at the Puerta De Hierro Hospital
- Assistant Physician of the Intensive Care Medicine Medicine Department at the Puerta de Hierro Majadahonda University Hospital
- Member of the Intensive Care Medicine Research Group in the areas of Cardiovascular, Digestive and Rheumatology Biopathology
- Scientist Collaborator, Faculty of Medicine, Autonomous University of Madrid(UAM)
- Degree in Medicine and Surgery from the University of Santiago de Compostela

Ms. Sánchez Hernández, Mónica
- Nurse in the Post-Surgical Critical Care Unit (UCPQ) at the "Puerta de Hierro" Majadahonda University Hospital
- Responsible for Patient Safety and referral nurse in Chronic Wound Care
- Nurse in Primary Care substitutes in several Area V Centers
- Collaborating Nurse in the Center for Vascular Ulcer Cures (CCUV)
- Clinical teaching collaborator at the UAM
- Postgraduate Certificate in Nursing from the Escuela Universitaria de Enfermería Puerta de Hierro, a center attached to the Universidad Autónoma de Madrid
- Member of the Commission of Dermal Ulcers, Commission of Pressure Ulcers and Chronic Wounds

Ms. Alonso Hernández, Vanesa
- Nurse in UCI Henares University Hospital
- Nurse in Clinical Analysis Laboratory at Labipah, S.A
- Nurse in the Intensive Care Unit at the Puerta de Asturias University Hospital
- National Cardiopulmonary Resuscitation Plan of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units
- Postgraduate Diploma from Nursing in Outpatient
- Postgraduate Certificate Nurse from the University of Alcalá, Spain

Mr. Domínguez García, Sergio
- Nurse in the Dental ICU of the Hospital Universitario Puerta de Hierro Majadahonda
- Nurse in Intensive Care Unit of Infanta Elena University Hospital
- Nurse in Acute Geriatrics Unit of the Hospital General Universitario Gregorio Marañon
- Nurse in Intensive Care Unit of Jiménez Díaz Foundation Hospital
- Professional Master's Degree in Respiratory and Mechanical Ventilation by the University of Valencia
- Master's Degree in Critical Care at Universidad Rey Juan Carlos
- Collaborating member of CPR in SEEIUC

05
Structure and Content

This 12-month academic experience is designed to offer, from the beginning, a complete update in Advanced Intensive Care. To this end, the healthcare professional has an advanced syllabus that will allow him/her to be up to date on critical patient safety, monitoring and advanced support in various areas, as well as the management of situations of great difficulty with severe trauma and burn patients. It also has an extensive virtual library, accessible 24 hours a day, from any electronic device with internet connection.

Thanks to the Relearning method you will be able to reduce the long hours of study and memorization"

Module 1. Approach to the critical patient. Vision from the point of view of patient safety and quality

1.1. The Intensive Care Unit
    1.1.1. Roles and competencies of ICU personnel
    1.1.2. Characteristics according to the level of complexity of the hospital
    1.1.3. Cost-effectiveness
1.2. Initial check-list
    1.2.1. Equipment and technology
    1.2.2. Physical design and space distribution
    1.2.3. Green ICU
1.3. The critical patient
    1.3.1. Profile of admitted patients
    1.3.2. Criteria for admission of the critically ill patient
    1.3.3. Acute and chronic critical patient
1.4. Humanization and anthropological vision
    1.4.1. HUCI Project
    1.4.2. Comprehensive care
    1.4.3. Music Therapy
1.5. The patient and the family: the backbone of nursing care
    1.5.1. Psychological Support
    1.5.2. The patient and the family: the backbone of nursing care
    1.5.3. Participation of Patients on Decision-Making
1.6. Teamwork
    1.6.1. NO Technical Abilities
    1.6.2. Customer Relationship Management (CRM)
    1.6.3. TeamSTEPPS
1.7. Quality and indicators in the intensive care service
    1.7.1. Internal and External Audit
    1.7.2. Quality indicators in ICU
    1.7.3. Recognition of excellence
1.8. Ethical principles in the ICU
    1.8.1. Conflict resolution in the ICU
    1.8.2. Ethical consultation and ethical committees
    1.8.3. Ethics as a pillar in making difficult decisions
1.9. Implementation of evidence-based protocols
    1.9.1. Bacteremia Zero
    1.9.2. Zero Pneumonia
    1.9.3. Zero Resistance
    1.9.4. ITU Zero
1.10. Patient Security
    1.10.1. Risk Management
    1.10.2. Safe Practices
    1.10.3. Safety Committee

Module 2. Advanced nursing care in the critically ill patient

2.1. Nursing care and planning in the day-to-day care of the critically ill patient
    2.1.1. Skin cleansing and hydration
    2.1.2. Early mobilization
    2.1.3. Considerations in the immobilized patient
2.2. Mobilization of the critically ill patient
    2.2.1. Preliminary Considerations
    2.2.2. Lateral decubitus
    2.2.3. Supine position
    2.2.4. Prone Position
2.3. Isolation measures
    2.3.1. Isolation criteria
    2.3.2. Contact insulation
    2.3.3. Isolation by droplets
    2.3.4. Airborne insulation
    2.3.5. Reverse insulation

2.4.	Wounds and PUs
2.4.1.	Pressure ulcers: prevention and devices
2.4.2.	Surgical wounds
2.4.3.	Moisture wounds
2.5.	Collaboration with other professionals. Transversal skills
2.5.1.	Intraprofessional and interprofessional communication
2.5.2.	Leadership
2.5.3.	Interprofessional support and support
2.6.	Post-ICU syndrome
2.6.1.	Physical sequelae
2.6.2.	Emotional and psychological sequelae
2.6.3.	Risk screening and prevention
2.7.	Therapeutic Effort Limitation
2.7.1.	Criteria and considerations
2.7.2.	How to proceed
2.7.3.	Spiritual considerations
2.8.	Ultrasound: assessment and nursing intervention
2.8.1.	Assessment and prevention
2.8.2.	Assessment and prevention
2.8.3.	A must in the cannulation of vascular accesses
2.9.	Vascular Access
2.9.1.	ICU catheters
2.9.2.	Nursing Care
2.9.3.	Drug management and compatibility
2.10.	Intrahospital transfers
2.10.1.	Before transfer
2.10.2.	During the transfer
2.10.3.	After the transfer

Module 3. Hemodynamic monitoring and support. Advanced care of the patient with hemodynamic problems

3.1.	EKG monitoring and telemetry + noninvasive HD monitoring
3.1.1.	Electrocardiography
3.1.2.	Arrhythmias
3.1.3.	Warning signs and alarms
3.2.	Temperature Monitoring
3.2.1.	Temperature measurement: central and peripheral thermometer, SV
3.2.2.	Methods to decrease it: Artic Sun and Coolgard, IV
3.2.3.	Methods to increase it
3.3.	Invasive monitoring I
3.3.1.	Arterial catheter
3.3.2.	Central Venous Pressure (CVP)
3.3.3.	Nursing care
3.4.	Invasive monitoring II: CG, PAP and other parameters
3.4.1.	Swan Ganz
3.4.2.	PiCCO System
3.4.3.	VolumeView
3.4.4.	LiDCO
3.4.5.	Monitoring
3.5.	Percutaneous Circulatory Assistances: Counterpulsation Balloon (BCiA), Impella CP + 2.5, ECMO VA
3.5.1.	Indications
3.5.2.	Operation
3.5.3.	Assessment and nursing care
3.6.	Non-percutaneous circulatory assists: HeartMate, Impella 5.0, Levitronix, Berlin-Heart Excor, ECMO VA
3.6.1.	Indications
3.6.2.	Operation
3.6.3.	Assessment and nursing care

3.7.   Pacemaker

    3.7.1.   Transcutaneous or external

    3.7.2.   Transvenous

    3.7.3.   Epicardial

3.8.   Advanced Life Support (ALS) in the critically ill patient

    3.8.1.   Action Protocol

    3.8.2.   Changes and differences with respect to other units

    3.8.3.   Post-resuscitation care

3.9.   The Heart Attack Code. Reception and in-hospital follow-up

    3.9.1.   Reception of the patient

    3.9.2.   Primary assessment and intervention

    3.9.3.   Catheterization

    3.9.4.   Follow-up and nursing care

3.10.   Administration of frequently used drugs

    3.10.1.   Vasoactive drugs: types

    3.10.2.   Pharmacodynamics and pharmacokinetics

    3.10.3.   Special considerations in administration and withdrawal

Module 4. Rehabilitation monitoring and support. Advanced care of the patient with Rehabilitation problems

4.1.   Basic monitoring of the respiratory pattern

    4.1.1.   SpO2

    4.1.2.   FR

    4.1.3.   Capnography

4.2.   Oxygen therapy systems

    4.2.1.   Low Flow

    4.2.2.   High Flow

    4.2.3.   Humidification

4.3.   Mechanical Ventilation. The starting point

    4.3.1.   Physiology and pathophysiology

    4.3.2.   Difference between ventilation and perfusion

    4.3.3.   Mechanical concepts

    4.3.4.   Gasometry. Interpretation and patient follow-up

4.4.   Invasive Mechanical Ventilation I

    4.4.1.   Indications and objectives

    4.4.2.   Modalities of total ventilatory support

    4.4.3.   Modalities of partial ventilatory support

4.5.   Invasive Mechanical Ventilation II

    4.5.1.   Zero Pneumonia

    4.5.2.   Endotracheal tube and nasotracheal tube. Nursing care

    4.5.3.   Tracheostomy cannula. Nursing care

4.6.   Noninvasive Mechanical Ventilation

    4.6.1.   Indications and objectives

    4.6.2.   Contraindications

    4.6.3.   Ventilatory support modes

4.7.   Noninvasive Mechanical Ventilation II

    4.7.1.   Choice of devices

    4.7.2.   Nursing care

4.8.   Extracorporeal membrane oxygenation system: ECMO

    4.8.1.   Implantation and operation

    4.8.2.   Assessment and nursing care

    4.8.3.   Weaning

4.9.   Extracorporeal CO2 removal

    4.9.1.   Indications and operation

    4.9.2.   Hemolung

    4.9.3.   Prolung

4.10.   Administration of inhaled drugs

    4.10.1.   Types and recommendations

    4.10.2.   AnaConDa system

    4.10.3.   Nitric Oxide

Module 5. Neurological monitoring and support. Advanced care of the patient with neurological problems

5.1.   Neurocritical patient
   5.1.1.   Nursing care and intervention
   5.1.2.   Neurological and pupillary assessment
   5.1.3.   Pupillometer
   5.1.4.   Scales
5.2.   Code Stroke Reception and in-hospital follow-up
   5.2.1.   Reception of the patient
   5.2.2.   Primary assessment and intervention
   5.2.3.   Fibrinolysis
   5.2.4.   Follow-up and nursing care
5.3.   External Ventricular Drainage (EVD)
   5.3.1.   Management and operation
   5.3.2.   Nursing care
   5.3.3.   Assessment and interpretation
5.4.   Invasive Monitoring
   5.4.1.   PIC
   5.4.2.   Pathway System
   5.4.3.   Interpretation and nursing performance
5.5.   Sedation management in the critically ill patient
   5.5.1.   Most frequent medication
   5.5.2.   RASS scales
   5.5.3.   RAMSAY Scale
   5.5.4.   SAS Scale
   5.5.5.   MAAS Scale
5.6.   Sedation Monitoring
   5.6.1.   BIS
   5.6.2.   INVOS
   5.6.3.   Interpretation and nursing performance

5.7.   Management of analgesia in the critically ill patient
   5.7.1.   Most frequent medication
   5.7.2.   EVA Scale
   5.7.3.   ESCID Scale
5.8.   Monitoring of Analgesia
   5.8.1.   ANI
   5.8.2.   NOL
   5.8.3.   Interpretation and nursing performance
5.9.   Management and monitoring of muscle relaxants in the critically ill patient
   5.9.1.   Most frequent medication
   5.9.2.   TOF
   5.9.3.   Interpretation and nursing performance
5.10.   Delirium management in intensive care units
   5.10.1.   Prevention and identification
   5.10.2.   CAM-ICU Scale
   5.10.3.   Associated Complications

Module 6. Digestive and nutritional monitoring and support. Advanced care of the patient with digestive-nutritional problems

6.1.   Indications and nutritional considerations according to the patient's needs
   6.1.1.   Selection of the access route for TMN according to the patient's characteristics
   6.1.2.   Application
   6.1.3.   Early implantation of nutrition in the critically ill patient
6.2.   Types of Nutrition
   6.2.1.   Enteral Nutrition
   6.2.2.   Parenteral Nutrition
   6.2.3.   Mixed nutrition
6.3.   Enteral nutrition devices
   6.3.1.   SNG/SOG
   6.3.2.   PEG
   6.3.3.   Nursing Care

6.4. Nutritional assessment and risk of malnutrition in the critically ill patient
    6.4.1. Classification
    6.4.2. Screening tools
    6.4.3. Nutritional Supplements
6.5. Monitoring and follow-up of nutritional treatment
    6.5.1. Bioelectrical impedance
    6.5.2. Muscle and visceral ultrasound
    6.5.3. Caloric-protein requirements
6.6. Dysphagia and other problems associated with the critically ill patient
    6.6.1. Early Prevention and Detection
    6.6.2. Types of dysphagia Prospective Foresight
    6.6.3. Associated Complications
6.7. Metabolism in the critically ill patient
    6.7.1. Metabolic response to stress
    6.7.2. Biomarkers
    6.7.3. Morphofunctional assessment of the critically ill patient
6.8. Management and monitoring of nutritional therapy in special situations
    6.8.1. Glycemic control in the ICU
    6.8.2. Patients with hemodynamic instability
    6.8.3. Patients with ARDS or prone position
    6.8.4. Traumatic/critically burned patient
6.9. Monitoring for efficacy and safety of nutritional support
    6.9.1. Importance of biochemical monitoring
    6.9.2. Most important monitoring parameters
    6.9.3. Refeeding Syndrome
6.10. Elimination devices: Flexi-seal
    6.10.1. Indications and Contraindications
    6.10.2. Handling and implantation
    6.10.3. Nursing care

Module 7. Monitoring and support in the elimination and water-electrolyte balance of the patient Advanced care of the patient with elimination problems. Advanced care of the patient with elimination problems

7.1. Water Balance
    7.1.1. Imperceptible losses
    7.1.2. Latest recommendations
    7.1.3. Special considerations
7.2. Ions and associated problems
    7.2.1. Ion imbalance
    7.2.2. pH change
    7.2.3. Associated Complications
7.3. Management of the most frequent intoxications
    7.3.1. Drug Intoxications
    7.3.2. Metal intoxications
    7.3.3. Drug Poisoning
7.4. Intra-abdominal pressure (IAP)
    7.4.1. Measuring devices
    7.4.2. Interpretation and assessment
    7.4.3. Indications
7.5. Vascular accesses for renal replacement therapy and its nursing care
    7.5.1. Catheter location and types
    7.5.2. Nursing Care
    7.5.3. Resolution of associated problems. Nursing assessment
7.6. Extrarenal depuration therapy
    7.6.1. Osmosis. Convection and diffusion
    7.6.2. Most frequent types of therapy
    7.6.3. Plasmapheresis

7.7.   Ostomies Types and nursing care

    7.7.1.   Nursing care

    7.7.2.   Colostomy and ileostomy

    7.7.3.   Ureterostomy and nephrostomy

7.8.   Surgical drainage

    7.8.1.   Nursing care

    7.8.2.   Types

    7.8.3.   Special considerations

7.9.   Negative pressure system

    7.9.1.   Operation and indications

    7.9.2.   Types

    7.9.3.   Nursing care

7.10.   Extracorporeal liver support

    7.10.1.   Indications and Contraindications

    7.10.2.   Types and special considerations

    7.10.3.   Nursing care and assessment

Module 8. Special Situations. Severe trauma patient. Advanced assessment and care

8.1.   Severe traumatic illness

    8.1.1.   General Aspects

    8.1.2.   Background

    8.1.3.   Accidentology and injury biomechanics

8.2.   Initial care of severe trauma: Primary and Secondary Assessment

    8.2.1.   Pre-hospital care and transfer

    8.2.2.   Primary assessment and stabilization

    8.2.3.   Second Evaluation

8.3.   Cranioencephalic trauma TBI

    8.3.1.   Lesions

    8.3.2.   Nursing care and management

    8.3.3.   Procedures and Techniques

8.4.   Facial and neck trauma

    8.4.1.   Lesions

    8.4.2.   Nursing care and management

    8.4.3.   Procedures and Techniques

8.5.   Thoracic trauma

    8.5.1.   Lesions

    8.5.2.   Nursing care and management

    8.5.3.   Procedures and Techniques

8.6.   Abdominal Trauma

    8.6.1.   Lesions

    8.6.2.   Nursing care and management

    8.6.3.   Procedures and Techniques

8.7.   Pelvic trauma

    8.7.1.   Lesions

    8.7.2.   Nursing care and management

    8.7.3.   Procedures and Techniques

8.8.   Spinal or vertebro-medullary (vertebro-medullary) trauma

    8.8.1.   Lesions

    8.8.2.   Nursing care and management

    8.8.3.   Procedures and Techniques

8.9.   Orthopedic trauma

    8.9.1.   Lesions

    8.9.2.   Nursing care and management

    8.9.3.   Procedures and Techniques

8.10.   Trauma in special situations and groups

    8.10.1.   Advanced trauma life support (ATLS)

    8.10.2.   Populations at risk

    8.10.3.   Crush and blast

Module 9. Special Situations. Burn patient Advanced assessment and care

9.1. Care of the burn patient
- 9.1.1. Skin Anatomy
- 9.1.2. Local and systemic pathophysiology of burns
- 9.1.3. Definition of burns and severe burns

9.2. Assessment and types of burns
- 9.2.1. Depending on the agent of injury
- 9.2.2. Depending on the extension
- 9.2.3. Depending on the depth

9.3. Approach and initial stabilization of the burned patient
- 9.3.1. Optimization of ventilation and hydric resuscitation
- 9.3.2. Pain Control
- 9.3.3. Early treatment of burns

9.4. Systemic treatment of the burn
- 9.4.1. Thermodilution-guided resuscitation
- 9.4.2. Administration of albumin and ascorbic acid
- 9.4.3. Nutritional Support

9.5. Frequent complications in the burn patient
- 9.5.1. Hydroelectrolytic Alterations
- 9.5.2. Shock, ARDS and MOF
- 9.5.3. Infectious processes

9.6. Local treatment of burns: debridement
- 9.6.1. Tangential debridement
- 9.6.2. Enzymatic Debridement
- 9.6.3. Scarotomy

9.7. Local treatment of burns: coverage
- 9.7.1. Synthetic and biosynthetic coverage
- 9.7.2. Graft coverage
- 9.7.3. Pain Control

9.8. Bioactive dressings
- 9.8.1. Hydrogels
- 9.8.2. Hydrocolloid
- 9.8.3. Alginate

9.9. Inhalation syndrome
- 9.9.1. Pathophysiology of carbon monoxide inhalation
- 9.9.2. Diagnosis of Carbon Monoxide poisoning
- 9.9.3. Treatment

9.10. Special burns
- 9.10.1. Burns caused by electrical agents
- 9.10.2. Burns caused by chemical agents
- 9.10.3. Infrequent burns

Module 10. Special Situations. Organ Transplantation and Donation

10.1. Death in the ICU
- 10.1.1. Death from another perspective
- 10.1.2. Legislation on dignified death
- 10.1.3. Bioethics and death in ICU

10.2. Humanization and bereavement support
- 10.2.1. Humanization protocol
- 10.2.2. Role of the nurse
- 10.2.3. Family support

10.3. Adequacy of life-sustaining therapies
- 10.3.1. Concept of ATSV
- 10.3.2. Types of ATSV
- 10.3.3. ATSV protocol

10.4. Evaluation of the potential donor
- 10.4.1. Absolute Contra-indications
- 10.4.2. Relative Contra-indications
- 10.4.3. Complementary Tests

10.5. Maintenance of the donor in encephalic death
- 10.5.1. Diagnosis of brain death
- 10.5.2. Physiological changes after encephalic death
- 10.5.3. Thoracic donor maintenance

10.6. Donation in controlled asystole
- 10.6.1. Concept of donation in controlled asystole
- 10.6.2. Procedure for donation in controlled asystole
- 10.6.3. Organ preservation in controlled asystole donation

You will be up to date on organ preservation in controlled asystole donation through an updated and advanced syllabus"

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

20%

15%

15%

3%

20%

17%

7%

3%
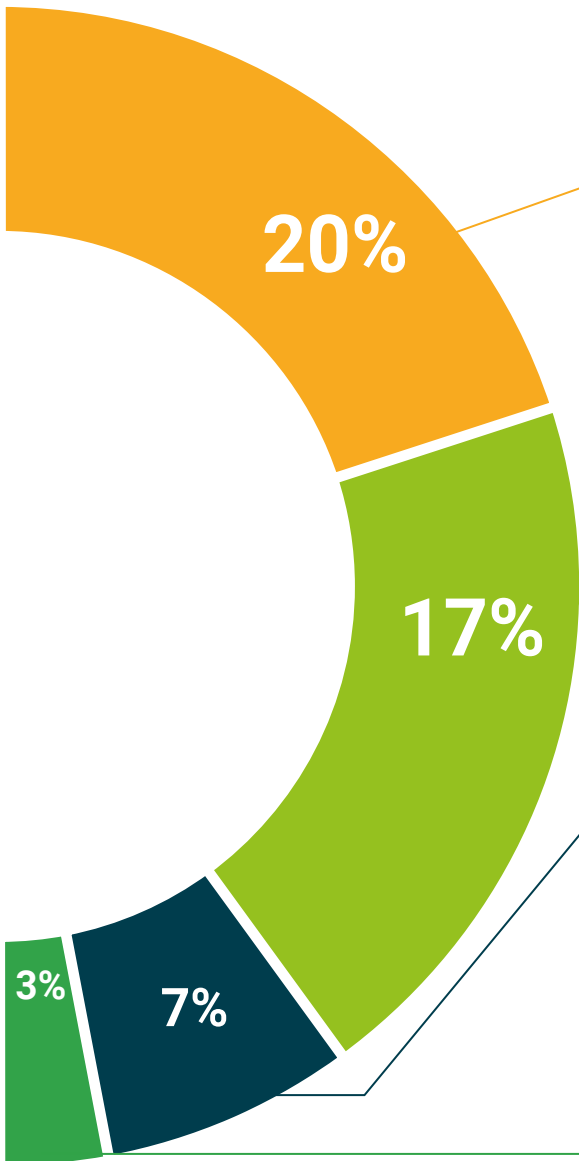
Expert-Led Case Studies and Case Analysis

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 Professional Master's Degree in Advanced Intensive Care 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 Technological University.

Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"
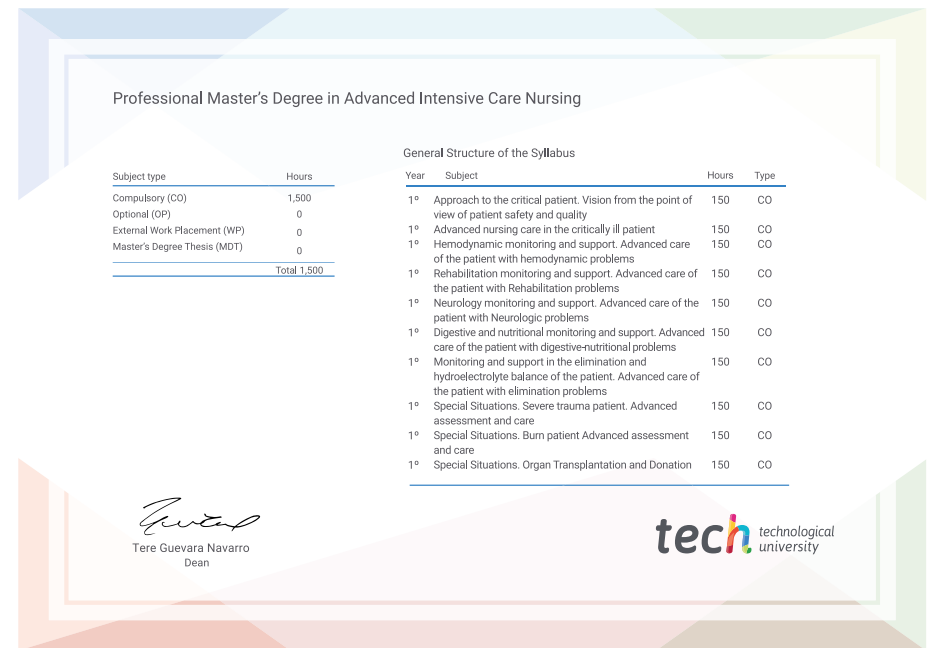
This **Professional Master's Degree in Advanced Intensive Care Nursing** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Professional 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 Professional Master's Degree, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

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

Official Nº of Hours: **1,500 h.**

tech technological university

Awards the following
CERTIFICATE
to

Mr./Ms. _____, with identification number _____.
For having successfully passed and accredited the following program

PROFESSIONAL MASTER'S DEGREE

in

Advanced Intensive Care Nursing

This is a qualification awarded by this University, equivalent to 1,500 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: AFWORD23S   techtitute.com/certificates

Professional Master's Degree in Advanced Intensive Care Nursing

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
Total	1,500

General Structure of the Syllabus

Year	Subject	Hours	Type
1º	Approach to the critical patient. Vision from the point of view of patient safety and quality	150	CO
1º	Advanced nursing care in the critically ill patient	150	CO
1º	Hemodynamic monitoring and support. Advanced care of the patient with hemodynamic problems	150	CO
1º	Rehabilitation monitoring and support. Advanced care of the patient with Rehabilitation problems	150	CO
1º	Neurology monitoring and support. Advanced care of the patient with Neurologic problems	150	CO
1º	Digestive and nutritional monitoring and support. Advanced care of the patient with digestive-nutritional problems	150	CO
1º	Monitoring and support in the elimination and hydroelectrolyte balance of the patient. Advanced care of the patient with elimination problems	150	CO
1º	Special Situations. Severe trauma patient. Advanced assessment and care	150	CO
1º	Special Situations. Burn patient Advanced assessment and care	150	CO
1º	Special Situations. Organ Transplantation and Donation	150	CO

Tere Guevara Navarro
Dean

tech technological university

*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.

tech technological university

Professional Master's Degree
Advanced Intensive Care Nursing

» Modality: **online**
» Duration: **12 months**
» Certificate: **TECH Technological University**
» Dedication: **16h/week**
» Schedule: **at your own pace**
» Exams: **online**

Professional Master's Degree
Advanced Intensive Care Nursing

tech technological university