

Master's Degree Radiological Nursing

Accreditation/Membership





Master's Degree Radiological Nursing

- » Modality: Online
- » Duration: 12 months.
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/nursing/master-degree/master-radiological-nursing

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01

Introduction to the Program

Technological advances have significantly boosted the field of Radiology, enabling the development of minimally invasive therapies and optimizing diagnostic accuracy. According to data from the World Health Organization, the use of imaging techniques in clinical practice has increased by 30% over the last decade, reflecting their impact on healthcare delivery. In this context, nursing professionals require continuous updating to stay current with the latest procedures. Therefore, TECH offers a unique academic experience with a 100% online university program in Radiological Nursing.



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A comprehensive and 100% online program, exclusive to TECH, with an international perspective supported by our membership with the British Institute of Radiology"

Advances in Radiology have revolutionized diagnostic and therapeutic capacities in healthcare, enabling the detection of pathologies with greater precision and enhancing patient safety. In this context, the role of Nursing specialists is crucial, as they are involved in the administration of medications, the management of the Diagnostic Imaging unit, and assistance in specialized procedures. With the growing use of radiological techniques, updating knowledge in this field has become essential to ensuring quality care.

In response to this reality, TECH presents a Master's Degree in Radiological Nursing, offering a comprehensive and advanced vision of this discipline. Throughout their academic journey, medical professionals will delve into key areas such as the management of care in Computed Tomography, Magnetic Resonance Imaging, Nuclear Medicine, and Radiation Oncology units, among others. All of this with a practical approach based on the latest scientific evidence.

To facilitate learning, TECH offers professionals an innovative academic system based on the Relearning methodology. Through a digital resource library—including video summaries, specialized readings, and clinical case studies—graduates will update their knowledge without fixed schedules and from any device with internet access. This not only reduces study time but also consolidates key knowledge effectively. A university qualification designed to meet the real demands of the sector, with the flexibility that healthcare professionals require to balance professional growth with daily life.

As a member of the British Institute of Radiology (BIR), TECH provides professionals with access to exclusive resources, such as the latest scientific research, specialized courses, and opportunities to participate in international events. This affiliation strengthens their competencies in radiology, fosters connections with global experts, and enhances their professional visibility at an international level.

This **Master's Degree in Radiological Nursing** contains the most complete and up-to-date university program on the market. Its most notable features are:

- ◆ The development of practical cases presented by experts in Radiological 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 the self-assessment process can be carried out to improve learning
- ◆ Special emphasis on innovative methodologies in Radiological Nursing.
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an internet connection



You will understand the physical and biological principles of radiation in the field of Radiological Nursing"

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With TECH's Relearning, you will be able to assimilate essential concepts in a quick, natural, and precise way”

The teaching staff includes professionals from the field of Radiological Nursing, who bring their work experience to this program, as well as recognized 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.

You will apply radiological protection protocols, minimizing exposure risks for patients.

Specialized readings will allow you to delve deeper into the latest advancements in Radiological Nursing, supported by the most current scientific evidence.



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs, available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it has a huge faculty of more than 6,000 professors of the highest international prestige.



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Study at the largest online university in the world and ensure your professional success. The future begins at TECH”

The world's best online university, according to FORBES

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

Forbes
The best online university in the world

The most complete
syllabus

The most complete syllabuses on the university scene

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

The best top international faculty

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

TOP
international faculty

The most effective methodology

A unique learning method

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

The world's largest online university

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

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

The official online university of the NBA

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

Leaders in employability

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



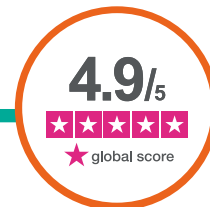
Google Premier Partner

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



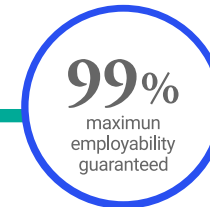
The official online university of the NBA

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The top-rated university by its students

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



Leaders in employability

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

03 Syllabus

The curriculum of this academic opportunity aims to provide a comprehensive update of knowledge in Radiological Nursing. Throughout the modules, the graduate will strengthen their competencies in the management of care in the Diagnostic and Imaging Treatment Area, acquiring skills in patient monitoring, contrast administration, and radiological safety. They will deepen their understanding of advanced techniques in Computed Tomography, Magnetic Resonance Imaging, and Nuclear Medicine, optimizing their analytical capacity in diagnostic studies.



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You will assist in interventional procedures guided by imaging, such as angiographies and biopsies”

Module 1. Radiological Nursing. Management of Care and Organization of the Diagnostic and Imaging Treatment Area

- 1.1. Diagnostic and Imaging Treatment
 - 1.1.1. History of Diagnostic and Imaging Treatment
 - 1.1.2. Introduction to X-rays: Ionizing Radiation
 - 1.1.3. Legislation and Current Regulations
 - 1.1.4. Biophysical Fundamentals of Radiation, Ultrasound and Magnetic Fields
 - 1.1.5. Health Equipment in the Field of Electromagnetic Radiations or Radioactive Sources
- 1.2. Radiological Nursing Training and Performance
 - 1.2.1. History of Radiological Nursing
 - 1.2.2. Radiological Nursing Scope of Action
 - 1.2.3. Radiological Anatomy and Physiology
 - 1.2.4. Management of the Surgical Environment, Life Support and Patient Safety
 - 1.2.5. Contrast Agents, Radiopharmaceuticals and Medication
- 1.3. Diagnostic and Imaging Treatment Area: Diagnostic and Imaging Treatment Services, Nuclear Medicine, Radiation Oncology, Brachytherapy, Radiophysics, and Radiological Protection
 - 1.3.1. Organizational Structure of the Hospital
 - 1.3.2. Organizational Chart of the Area
 - 1.3.3. Organizational Chart of the Service or Unit
 - 1.3.4. Service Portfolio
 - 1.3.5. Nursing Care Management
- 1.4. Organization and Coordination of Human Talent
 - 1.4.1. Theoretical Framework
 - 1.4.2. CPD and Competency Management
 - 1.4.3. Multidisciplinary Team
 - 1.4.4. Welcome Plan for New Professionals
- 1.5. Knowledge Management
 - 1.5.1. Undergraduate and Postgraduate Training
 - 1.5.2. Continuous and Refresher Training





- 1.5.3. Socialization of Knowledge
 - 1.5.3.1. Clinical Sessions
 - 1.5.3.2. Conferences
 - 1.5.3.3. Workshops
 - 1.5.3.4. Training Pills
- 1.5.4. Specific Trainings
- 1.6. Supervision and Control of Equipment and Installations
 - 1.6.1. Equipment Inventory
 - 1.6.2. Maintenance and Calibrations
 - 1.6.3. Technical and Legal Requirements for Structures
 - 1.6.4. Incident Management
- 1.7. Care process
 - 1.7.1. Reception and Unequivocal Identification
 - 1.7.2. Medical Records, Specific Digital Supports and Registers
 - 1.7.3. Effective Communication
 - 1.7.4. Standard Operating Procedures (SOPs), Protocols, and Clinical Guidelines
 - 1.7.5. Nursing Care Process (NCP)
- 1.8. Humanization of Care
 - 1.8.1. Holistic Health Care
 - 1.8.2. User and Professional Satisfaction
 - 1.8.3. The Nurse's Viewpoint
- 1.9. Environmental and Financial Sustainability
 - 1.9.1. Waste Management
 - 1.9.2. Sustainable Consumption: Recycling of contrasts
 - 1.9.3. Contrasts of the Future, Sustainable Use
- 1.10. Future Challenges
 - 1.10.1. Nursing Education: Clinical Rotation Practicum
 - 1.10.2. Specific Training in Radiological Nursing
 - 1.10.3. Performance Evaluation
 - 1.10.4. Day Hospital of the Diagnostic and Imaging Treatment Service

Module 2. Nursing in the Diagnostic and Imaging Treatment (DTI) Service. Nursing Consultation

- 2.1. Nursing Role in a DTI Service
 - 2.1.1. Definition of Advanced Practice Nursing (APN)
 - 2.1.2. History of Advanced Practice Nursing
 - 2.1.3. Current Situation of Advanced Practice Nursing
- 2.2. Role of the APN in the Nursing Consultation of a DTI Service
 - 2.2.1. Historical Development of a DTI Service
 - 2.2.2. Historical Evolution of Care in a DTI Service
 - 2.2.3. Role of the APN in the Nursing Consultation of a DTI Service
- 2.3. Contrast Agents in Diagnostic and Imaging Treatment
 - 2.3.1. Definition and Types of Contrast Agents
 - 2.3.2. Chemical Properties of Contrast Agents
 - 2.3.3. Classification of Contrast Agents
 - 2.3.4. Routes of Administration of Contrast Agents in Diagnostic and Imaging Treatment
- 2.4. Adverse Reactions Due to Contrast Agents Administration
 - 2.4.1. Toxicity Due to Contrast Agents Administration
 - 2.4.2. Renal Toxicity Due to Contrast Agents Administration
 - 2.4.3. Hypersensitivity Reactions Due to the Administration of Contrast Agents
 - 2.4.4. Others Toxicity Due to Contrast Agents Administration
 - 2.4.5. Extravasation of Peripheral Venous Route Due to Contrast Administration.
- 2.5. Contrast Screening. The Importance of Renal Function in the Administration of Contrast Agents
 - 2.5.1. Contrast-induced Nephropathy. Definition
 - 2.5.2. Risk Factors in Contrast-Induced Nephropathy.
 - 2.5.3. Risk Diagnosis in Contrast-Induced Nephropathy.
- 2.6. Contrast Screening. Role of the APN in the Indication of an Iodinated Contrast Medium according to Renal Function.
 - 2.6.1. Review of the Patient's Medical History
 - 2.6.2. General Recommendations Before the Administration of an Iodinated Contrast Medium.
 - 2.6.3. Prevention and Follow-up of Iodinated Contrast-induced Nephropathy

- 2.7. Contrast Screening. Role of APN in the Administration of Other Contrast Agents According to Renal Function
 - 2.7.1. Impact of Non-Iodinated Contrast Media on Renal Function
 - 2.7.2. Gadolinium-based Contrast Agents and Renal Function
 - 2.7.3. Impact of Other Contrast Agents on Renal Function
- 2.8. Contrast Screening. Hypersensitivity Reactions to Contrast Agents
 - 2.8.1. Definition of Hypersensitivity Reaction
 - 2.8.2. Classification of Hypersensitivity Reactions
 - 2.8.3. Risk Factors for Hypersensitivity Reactions to Contrast Agents
 - 2.8.4. Diagnosis of a Hypersensitivity Reactions to Contrast Agents
- 2.9. Contrast Screening. Role of the APN in the Case of a History of Hypersensitivity Reactions to Contrast Media
 - 2.9.1. Review of the Patient's Medical History
 - 2.9.2. Prevention of Hypersensitivity Reactions to Iodinated Contrast Agents
 - 2.9.3. Prevention of Hypersensitivity Reactions to Gadolinium-based Contrast Agents
 - 2.9.4. Prevention of Hypersensitivity Reactions to Other Contrast Agents
- 2.10. Management of Imaging Tests
 - 2.10.1. The Importance of the Diagnostic Imaging and Treatment Service in the Health System
 - 2.10.2. Nursing Knowledge
 - 2.10.3. The Need to Record

Module 3. Computerized Tomography

- 3.1. CT and Components of a CT Scanner
 - 3.1.1. History and Evolution of Computerized Tomography
 - 3.1.2. Definition and Application
 - 3.1.3. Physical Principles, Elements, and Components Involved in Image Acquisition by Computed Tomography
 - 3.1.4. Contrasts. Acquisition Time and Resolution
 - 3.1.5. Artifacts
 - 3.1.6. Room Characteristics

- 3.2. Scanning Objectives
 - 3.2.1. Introduction
 - 3.2.2. Musculoskeletal Disorders, Bone Tumors, and Fractures
 - 3.2.3. Localization of Tumors, Infections, or Blood Clots
 - 3.2.4. Guidance for Procedures such as Surgeries, Biopsies and Radiotherapy
 - 3.2.5. Detection and control of diseases such as Cancer, Heart Disease, Lung Nodules and Liver Tumors.
 - 3.2.6. Monitoring the Effectiveness of Certain Treatments
 - 3.2.7. Detecting Internal Injuries and Internal Bleeding
- 3.3. Risks of the Exploration
 - 3.3.1. Radiation Exposure
 - 3.3.2. Reactions to Contrast Material
 - 3.3.3. Sedation
- 3.4. Neurological Examination
 - 3.4.1. Description and Protocols
 - 3.4.2. Preparation
 - 3.4.3. Nursing Care Process
- 3.5. Musculoskeletal Examination
 - 3.5.1. Description and Protocols
 - 3.5.2. Preparation
 - 3.5.3. Nursing Care Process
- 3.6. Vascular Examinations I
 - 3.6.1. Description and Protocols
 - 3.6.2. Preparation
 - 3.6.3. Nursing Care Process
- 3.7. Vascular Examinations II: Cardiac Examinations
 - 3.7.1. Description and Protocols
 - 3.7.2. Preparation
 - 3.7.3. Nursing Care Process
- 3.8. Abdominal Examinations
 - 3.8.1. Description and Protocols
 - 3.8.2. Preparation
 - 3.8.3. Nursing Care Process

- 3.9. Pediatric Examinations
 - 3.9.1. Description and Protocols
 - 3.9.2. Preparation
 - 3.9.3. Nursing Care Process
- 3.10. Interventional Procedures
 - 3.10.1. Description and Protocols
 - 3.10.2. Preparation
 - 3.10.3. Nursing Care Process

Module 4. Magnetic Resonance Imaging (MRI)

- 4.1. What is Magnetic Resonance Imaging?
 - 4.1.1. Introduction
 - 4.1.2. History of Magnetic Resonance Imaging and its Evolution
 - 4.1.3. Definition and Application
 - 4.1.4. Physical Principles, Elements, and Components Involved in Image Acquisition by Magnetic Resonance Imaging
- 4.2. Components of a Magnetic Resonance Imaging Scanner
 - 4.2.1. Contrast Agents: Acquisition Time and Resolution
 - 4.2.2. Artifacts
 - 4.2.3. Room Characteristics
- 4.3. Scanning Objectives
 - 4.3.1. Introduction
 - 4.3.2. Diagnostic Studies of the Central Nervous System
 - 4.3.3. Abdominal and Gynecological Diagnostic Studies
 - 4.3.4. Diagnostic Studies of Breast and Pulmonary Angiography
 - 4.3.5. Diagnostic Studies of Musculoskeletal Injuries
 - 4.3.6. Cardiac Diagnostic Studies
- 4.4. Risks of the Exploration
 - 4.4.1. Implanted Metal Objects
 - 4.4.2. Reactions to Contrast Material
 - 4.4.3. Risks Related to Sedation

- 4.5. Neurological Examinations
 - 4.5.1. Description and Protocols
 - 4.5.2. Preparation
 - 4.5.3. Nursing Care Process
- 4.6. Pediatric Examinations
 - 4.6.1. Description and Protocols
 - 4.6.2. Preparation
 - 4.6.3. Nursing Care Process
- 4.7. Musculoskeletal Examination
 - 4.7.1. Description and Protocols
 - 4.7.2. Preparation
 - 4.7.3. Nursing Care Process
- 4.8. Abdominal and Gynecological Examinations
 - 4.8.1. Description and Protocols
 - 4.8.2. Preparation
 - 4.8.3. Nursing Care Process
- 4.9. Thoracic Examinations: Breast and Pulmonary Angiography
 - 4.9.1. Description and Protocols
 - 4.9.2. Preparation
 - 4.9.3. Nursing Care Process
- 4.10. Cardiac Examinations
 - 4.10.1. Description and Protocols
 - 4.10.2. Preparation
 - 4.10.3. Nursing Care Process

Module 5. Nuclear Medicine I

- 5.1. What is Nuclear Medicine?
 - 5.1.1. Introduction to Nuclear Medicine.
 - 5.1.2. History of Nuclear Medicine
 - 5.1.3. Fields of Application of Nuclear Medicine
 - 5.1.4. Radiopharmaceuticals

- 5.2. Physical Principles of Nuclear Medicine
 - 5.2.1. Key Concepts
 - 5.2.2. Structure of Matter
 - 5.2.3. Electromagnetic Radiation
 - 5.2.4. Atomic Structure. Bohr Atom
 - 5.2.5. Nuclear Structure
 - 5.2.6. Radioactivity and Nuclear Reactions
 - 5.2.7. Interaction of Radiation with Matter
- 5.3. Chemical Principles of Nuclear Medicine
 - 5.3.1. Key Concepts
 - 5.3.2. Obtaining Radionuclides
 - 5.3.3. Radionuclide Generators
 - 5.3.4. Structure of a Molybdenum/Tcnetium Generator
 - 5.3.5. Tagging Mechanisms
- 5.4. Radiopharmaceuticals
 - 5.4.1. Characteristics of the Ideal Radiopharmaceutical
 - 5.4.2. Physical Form and Routes of Administration of Radiopharmaceuticals
 - 5.4.3. Mechanisms of Radiopharmaceutical Localization
- 5.5. Radiological Protection in Nuclear Medicine
 - 5.5.1. Key Concepts
 - 5.5.2. Quantities and Units
 - 5.5.3. Fundamentals of Radiological Prevention in Nuclear Medicine.
 - 5.5.3.1. Patient
 - 5.5.3.2. Workers and Members of the Public
 - 5.5.3.3. Pregnancy and Breastfeeding
- 5.6. Fundamentals of Radiological Prevention and Medical Physics in Nuclear Medicine
 - 5.6.1. Key Concepts
 - 5.6.2. Radiological Protection and Medical Physics in Nuclear Medicine
 - 5.6.2.1. Gas Ionization Detectors
 - 5.6.2.2. Semiconductor Detectors
 - 5.6.2.3. Scintillation Detectors
 - 5.6.3. Radiological Protection Standards

- 5.7. Radioactive Waste
 - 5.7.1. Key Concepts
 - 5.7.2. Radioactive Sources out of Use
 - 5.7.3. Solid Waste Materials with Radioactive Content
 - 5.7.4. Liquid Radioactive Waste
- 5.8. Instrumentation in Nuclear Medicine
 - 5.8.1. Key Concepts
 - 5.8.2. Activimeter or Dose Calibrators
 - 5.8.3. Gamma Camera and SPECT
 - 5.8.3.1. Gammacamera Detectors
 - 5.8.3.2. Collimation
 - 5.8.3.3. Image Correctors
 - 5.8.3.4. Planar Image Formation
 - 5.8.3.5. Tomographic Acquisition
 - 5.8.4. PET (Polyethylene Terephthalate)
 - 5.8.4.1. Detectors Used in PET
 - 5.8.4.2. PET Image Formation
- 5.9. Radiometabolic Therapy
 - 5.9.1. Treatment of Bone Metastatic Pain
 - 5.9.2. Treatment of Differentiated Thyroid Cancer
 - 5.9.3. Treatment of Hyperthyroidism
 - 5.9.4. Treatment of Non-Hodgkin's Lymphoma
 - 5.9.5. Treatment of Neuroendocrine Tumors
 - 5.9.6. Radiosynoviorthesis
- 5.10. Examinations Performed in PET: Nursing Care and Attention
 - 5.10.1. Radionuclides and Radiopharmaceuticals in PET
 - 5.10.2. Types of Studies
 - 5.10.3. Nursing Care in PET-FDG
 - 5.10.4. Nursing Care in PET-Colina
 - 5.10.5. Nursing care in PET-Vizamil PET
 - 5.10.6. Nursing Care in PET-DOPA
 - 5.10.7. Nursing Care in PET-PSMA
 - 5.10.8. Nursing Care in the Myocardial Viability PET

Module 6. Nuclear Medicine II: Isotopic Studies

- 6.1. Isotopic Studies of the Musculoskeletal System. Nursing Care and Attention
 - 6.1.1. Bone Gammagraphy
 - 6.1.2. Three-Phase Bone Gammagraphy
 - 6.1.3. Bone Marrow Gammagraphy
 - 6.1.4. Isotopic Studies for Diagnosis in Inflammatory and Infectious Pathology
 - 6.1.4.1. ^{67}Ga
 - 6.1.4.2. Labeled Leukocytes
- 6.2. Isotopic Studies in Digestive Pathology. Nursing Care and Attention
 - 6.2.1. Anatomophysiological Review
 - 6.2.2. Salivary Gammagraphy
 - 6.2.3. Esophageal Transit Gammagraphy
 - 6.2.4. Gastric Gammagraphy: Detection of Ectopic Gastric Mucosa, Meckel's Diverticulum
 - 6.2.5. Gastric Emptying Gammagraphy
 - 6.2.6. Gammagraphy for Gastroesophageal Reflux Detection
 - 6.2.7. Gammagraphy for Diagnosis of Digestive Hemorrhage
- 6.3. Isotopic studies in splenic and biliary pathology. Nursing Care and Attention
 - 6.3.1. Anatomophysiological Review
 - 6.3.2. Hepatosplenic Gammagraphy
 - 6.3.3. Hepatobiliary Gammagraphy
 - 6.3.4. Bile Salt Malabsorption
- 6.4. Isotopic Studies in Endocrinology. Nursing Care and Attention
 - 6.4.1. Isotopic Studies for Thyroid Pathology Diagnosis
 - 6.4.2. Isotopic Studies for Parathyroid Pathology Diagnosis
 - 6.4.3. Isotopic Studies for Adrenal Gland Pathology Diagnosis
- 6.5. Isotopic Studies in Cardiology. Nursing Care and Attention
 - 6.5.1. Study of Cardiac Function
 - 6.5.1.1. Equilibrium Ventriculography
 - 6.5.1.2. First-Pass Ventriculography
 - 6.5.2. Study of Myocardial Perfusion
 - 6.5.2.1. SPECT Myocardial Perfusion Stress Test
 - 6.5.2.2. SPECT Myocardial Perfusion Rest Test
 - 6.5.3. PET (Positron Emission Tomography)

- 6.6. Isotopic Studies in Pulmonology. Nursing Care and Attention
 - 6.6.1. Anatomophysiological Review
 - 6.6.2. Studies for Pulmonary Thromboembolism Diagnosis
 - 6.6.2.1. Pulmonary Ventilation Gammagraphy
 - 6.6.2.2. Pulmonary Perfusion Gammagraphy
 - 6.6.3. Gammagraphy for Diffuse Interstitial Lung Disease Evaluation
 - 6.6.4. Gammagraphy in the Evaluation of Infectious Processes
 - 6.6.5. Gammagraphy in the Evaluation of Thoracic Neoplasms
- 6.7. Isotopic Studies in Neurology. Nursing Care and Attention
 - 6.7.1. Anatomophysiological Review
 - 6.7.2. Cerebral SPECT Perfusion: Techniques and Clinical Applications
 - 6.7.3. Studies for Epilepsy Diagnosis
 - 6.7.3.1. Detection of CSF Fistulas: Cisternography
 - 6.7.4. Studies for Movement Disorder Diagnosis
 - 6.7.4.1. Differential Diagnosis of Parkinsonisms
 - 6.7.4.2. Dopamine Transporter Study: DATSCAN
 - 6.7.4.3. Postsynaptic Dopamine Receptor Study: D2 123I-HBZM
 - 6.7.4.4. Sympathetic Denervation Study: 123I-MIBG
 - 6.7.5. Studies for Cerebrovascular Pathology and Brain Death Diagnosis: 99Tc-HMPAO
- 6.8. Isotopic Studies in Nephrourology. Nursing Care and Attention
 - 6.8.1. Anatomophysiological Review
 - 6.8.2. Studies for Renal Function Diagnosis: Glomerular Filtration
 - 6.8.3. Isotopic Renogram
 - 6.8.4. Renal Cortical Gammagraphy: DMSA
 - 6.8.5. Isotopic Cystography
 - 6.8.6. Scrotal or Testicular Gammagraphy
- 6.9. Isotopic Studies in Vascular Pathology. Nursing Care and Attention
 - 6.9.1. Anatomophysiological Review
 - 6.9.2. Isotopic Phlebography
 - 6.9.3. Lymphogrammagraphy

- 6.9.4. Sentinel Node Study
 - 6.9.4.1. Sentinel Node in Breast Cancer
 - 6.9.4.2. Sentinel Node in Malignant Melanoma
 - 6.9.4.3. Sentinel Node in Other Applications
- 6.10. Isotopic Studies in Oncology. Nursing Care and Attention
 - 6.10.1. Gammagraphy with ⁶⁷Ga Citrate
 - 6.10.2. Gammagraphy with ^{99m}Tc-SestaMIBI
 - 6.10.3. Gammagraphy with ¹²³I-MIBG and ¹³¹I-MIBG
 - 6.10.4. Gammagraphy with Labeled Peptides
 - 6.10.5. Gammagraphy with Labeled Monoclonal Antibodies

Module 7. Oncological Radiotherapy

- 7.1. What is Radiotherapy?
 - 7.1.1. Introduction
 - 7.1.2. Ionizing Radiation and Cancer Treatment
 - 7.1.3. Use of Ionizing Radiation in Benign Pathologies
 - 7.1.4. Types of Radiotherapy
- 7.2. Treatments with Ionizing Radiation: External Radiotherapy
 - 7.2.1. Linear Accelerators
 - 7.2.2. Simulation Equipment
 - 7.2.3. Different External Radiotherapy Treatments
 - 7.2.3.1. Three-Dimensional Radiotherapy (RTE 3D)
 - 7.2.3.2. Intensity-Modulated Radiotherapy (IMRT/VMAT)
 - 7.2.3.3. Stereotactic Body Radiotherapy (SBRT)
 - 7.2.3.4. Image-Guided Radiotherapy (Stereotactic Radiosurgery, SRS)
 - 7.2.3.5. Proton Beam Therapy
- 7.3. The Radiotherapy Process
 - 7.3.1. Initial Evaluation and Therapeutic Decision
 - 7.3.2. Simulation
 - 7.3.2.1. Masks and Other Immobilization Systems
 - 7.3.2.2. Nursing Consultation
 - 7.3.3. Delimitation or Localization of Volumes: Treatment Planning and Verification

- 7.4. Head and Neck Radiotherapy
 - 7.4.1. Introduction
 - 7.4.2. Nursing Consultation at the Start of Treatment
 - 7.4.3. Potential Complications and Nursing Care
 - 7.4.4. Specific Care for Ostomy
- 7.5. Breast Radiotherapy
 - 7.5.1. Introduction
 - 7.5.2. Nursing Consultation at the Start of Treatment: Nursing Indications
 - 7.5.3. Potential Complications and Nursing Care
- 7.6. Abdominopelvic Radiotherapy
 - 7.6.1. Introduction
 - 7.6.2. Nursing Consultation at the Start of Treatment: Nursing Indications
 - 7.6.3. Potential Complications and Nursing Care
- 7.7. Central Nervous System (CNS) Radiotherapy
 - 7.7.1. Introduction
 - 7.7.2. Nursing Consultation at the Start of Treatment: Nursing Indications
 - 7.7.3. Potential Complications and Nursing Care
- 7.8. Radiotherapy in Other Locations
 - 7.8.1. Pulmonary Radiotherapy (RTE). Nursing Care
 - 7.8.2. Skin Radiotherapy (RTE). Nursing Care
 - 7.8.3. Bone Localization Radiotherapy (RTE). Nursing Care
 - 7.8.4. Total Body Irradiation (TBI) TBI
- 7.9. Palliative Radiotherapy
 - 7.9.1. Introduction
 - 7.9.2. Pain Management
 - 7.9.3. Psychological Aspects
- 7.10. Radiotherapy Emergencies
 - 7.10.1. Introduction
 - 7.10.2. Superior Vena Cava Syndrome
 - 7.10.3. Compressing Syndromes
 - 7.10.4. Hemorrhages

Module 8. Nursing in Interventional Vascular Radiology and Neuroradiology

- 8.1. Interventional Procedures
 - 8.1.1. Interventional Radiology History
 - 8.1.2. Nursing in Interventional Radiology
 - 8.1.3. Interventional Vascular Radiology (IVR) Operating Room
- 8.2. Radiological Protection and Characteristics of the IVR Room
 - 8.2.1. Radiological Protection
 - 8.2.2. Composition of the IVR Room
 - 8.2.3. The Angiograph
- 8.3. Asepsis and Sterility in the IVR Operating Room
 - 8.3.1. Concept of Asepsis
 - 8.3.2. Concept of Sterility
 - 8.3.3. Circulation in the Operating Room
 - 8.3.4. Ventilation in the IVR Room
- 8.4. Anesthesia
 - 8.4.1. Anesthesia Cart
 - 8.4.2. Patient Monitoring
 - 8.4.3. General Anesthesia
 - 8.4.4. Allergic Reaction
 - 8.4.5. Medications
 - 8.4.6. Knowledge of Basic and Advanced CPR Techniques
- 8.5. Nursing Care in Interventional Radiology
 - 8.5.1. Review of Medical History
 - 8.5.2. Patient Admission to the Service
 - 8.5.3. Monitoring and Care of the Patient in the Operating Room
 - 8.5.4. Nursing Care Record (Nursing Care Process NCP)
 - 8.5.5. Transfer to the Hospital Ward
- 8.6. Non-Vascular Procedures
 - 8.6.1. Renal Access
 - 8.6.1.1. Percutaneous Nephrostomy
 - 8.6.1.2. Nephrostomy Catheter Replacement
 - 8.6.1.2.1. Simple
 - 8.6.1.2.2. Mixed

- 8.6.2. Biliary Access
 - 8.6.2.1. Biliary Drainage
 - 8.6.2.2. Biliary Dilation
 - 8.6.2.3. Biliary Stents
 - 8.6.2.4. Biliary Brush and Biopsy
 - 8.6.2.5. Biliary Pressure Measurement
- 8.6.3. Gastric Access
 - 8.6.3.1. PEG (Percutaneous Endoscopic Gastrostomy)
 - 8.6.3.2. Alpha Maneuver
 - 8.6.3.3. *Rendezvous Procedure*
- 8.7. Diagnostic Vascular Procedures
 - 8.7.1. Diagnostic Arteriography
 - 8.7.2. Fistulography
 - 8.7.3. Phlebography
 - 8.7.4. Transjugular Liver Biopsy
 - 8.7.5. Caval Pressure Measurement
 - 8.7.6. Adrenal Vein Sampling
- 8.8. Therapeutic Vascular Procedures
 - 8.8.1. Hickman Catheter
 - 8.8.2. Shaldon Catheter
 - 8.8.3. Reservoir
 - 8.8.4. Arterial Angioplasty
 - 8.8.4.1. Angioplasty of Lower Limb Arteries
 - 8.8.4.2. Angioplasty of Visceral Arteries (Renal, Hepatic)
 - 8.8.5. Stent Placement
 - 8.8.6. Caval Filter Placement and Removal
 - 8.8.7. Portocaval Shunt
 - 8.8.8. Embolization of Active Bleeding
 - 8.8.8.1. Hemoptysis
 - 8.8.8.2. Prostate Embolization
 - 8.8.8.3. Postpartum Uterine Bleeding
 - 8.8.9. Tumor Embolizations (TACE, TARE)

- 8.8.10. Varicocele
- 8.8.11. Renal Embolization
- 8.8.12. Fibrinolysis
- 8.8.13. Pulmonary Thrombectomy
- 8.8.14. Angioplasty for Fistulography
- 8.8.15. Angioplasty in the Superior Vena Cava Territory
- 8.9. Diagnostic Neuroradiology Procedures
 - 8.9.1. Cerebral Arteriography
 - 8.9.1.1. Radial Access in Cerebral Arteriography: Benefits
 - 8.9.1.2. Spinal Arteriography
 - 8.9.1.3. T.S.A. Arteriography
 - 8.9.1.4. Occlusion Test
 - 8.9.1.5. Petrosal Sinus Test
- 8.10. Therapeutic Neuroradiology Procedures
 - 8.10.1. Epistaxis
 - 8.10.2. External Carotid Embolization
 - 8.10.3. Vasospasm
 - 8.10.4. Subarachnoid Hemorrhage Embolization (Aneurysm)
 - 8.10.5. Arteriovenous Malformation (AVM) Embolization
 - 8.10.6. Arteriovenous Fistula (AVF) Embolization
 - 8.10.7. Stroke (ICTUS)
 - 8.10.8. *Stents*
 - 8.10.8.1. Internal Carotid Stent
 - 8.10.8.2. Flow Diverter Stent
 - 8.10.8.3. Intracranial Stent
 - 8.10.9. Vertebroplasty

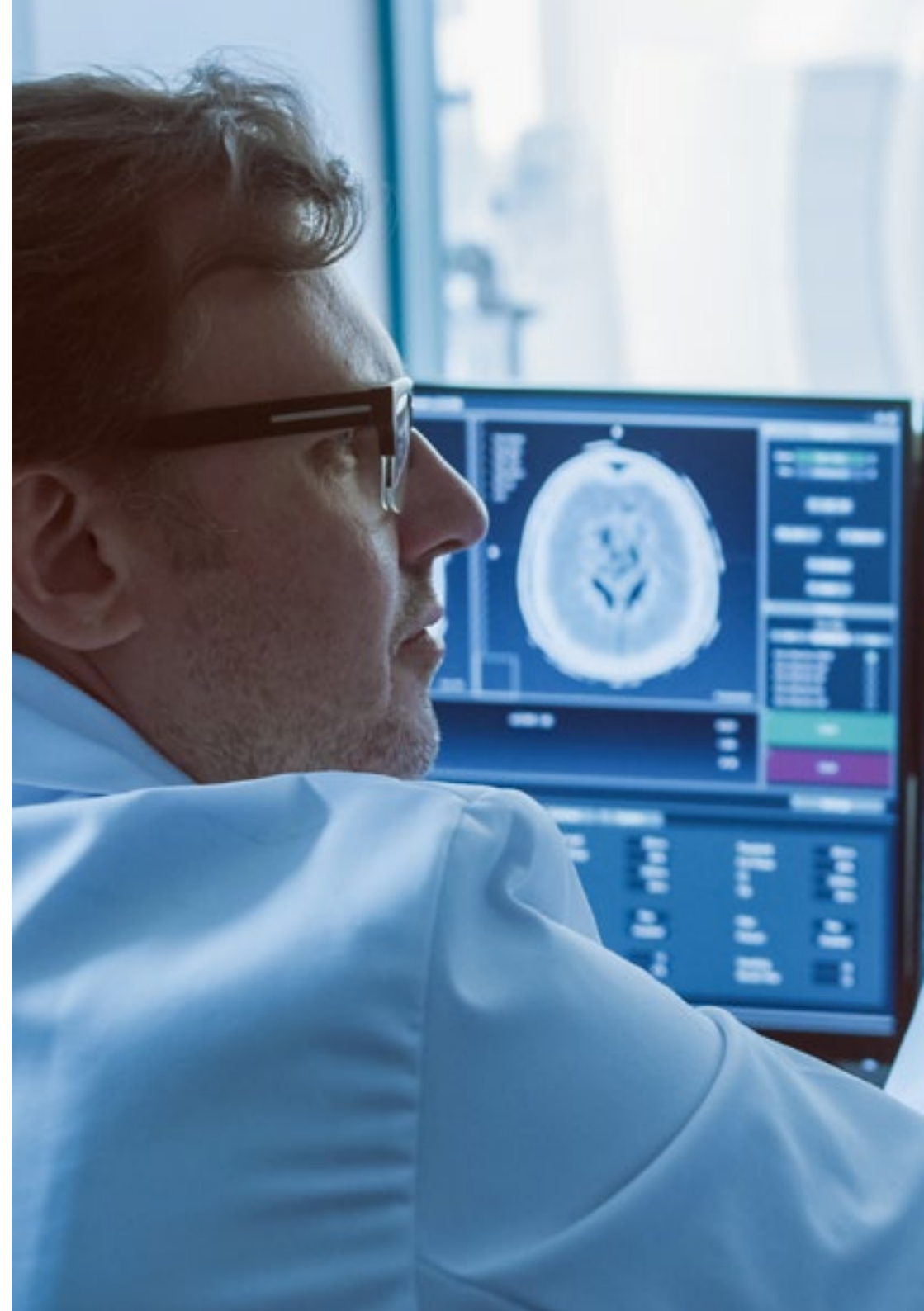
Module 9. Breast and Brachytherapy

- 9.1. Imaging Diagnosis in Breast Pathology
 - 9.1.1. History of Imaging Diagnosis in Breast Pathology
 - 9.1.2. Techniques: Mammography, Ultrasound, and Magnetic Resonance Imaging
 - 9.1.3. Techniques: Gammagraphy and Positron Emission Tomography (PET)

- 9.2. Mammography and MRI of the Breast
 - 9.2.1. Mammography with and without Contrast
 - 9.2.1.1. Vacuum-Assisted Stereotactic Biopsy
 - 9.2.1.1.1. Technique, Preparation, and Risks
 - 9.2.1.1.2. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.2.1.1.3. Nursing Care Process: Planning
 - 9.2.1.1.4. Nursing Care Process: Implementation of Care and Care Evaluation
 - 9.2.2. MRI
 - 9.2.2.1. Vacuum-Assisted Biopsy under MRI
 - 9.2.2.1.1. Technique, Preparation, and Risks
 - 9.2.2.1.2. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.2.2.1.3. Nursing Care Process: Planning
 - 9.2.2.1.4. Nursing Care Process: Implementation of Care and Care Evaluation
- 9.3. Ultrasound and Placement of the Hook Wire
 - 9.3.1. Ultrasound
 - 9.3.1.1. Vacuum-Assisted Biopsy under Ultrasound
 - 9.3.1.2. Cryoablation
 - 9.3.1.3. Technique, Preparation, and Risks
 - 9.3.1.4. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.3.1.5. Nursing Care Process: Planning
 - 9.3.1.6. Nursing Care Process: Implementation of Care and Care Evaluation
 - 9.3.2. Placement of Hook Wire for Scheduled Surgery
 - 9.3.2.1. Technique, Preparation, and Risks
 - 9.3.2.2. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.3.2.3. Nursing Care Process: Planning
 - 9.3.2.4. Nursing Care Process: Implementation of Care and Care Evaluation
- 9.4. FNA (Fine Needle Aspiration)
 - 9.4.1. Technique, Preparation, and Risks
 - 9.4.2. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.4.3. Nursing Care Process: Planning
 - 9.4.4. Nursing Care Process: Implementation of Care and Care Evaluation
- 9.5. CNB (Core Needle Biopsy)
 - 9.5.1. Technique, Preparation, and Risks
 - 9.5.2. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.5.3. Nursing Care Process: Planning
 - 9.5.4. Nursing Care Process: Implementation of Care and Care Evaluation
- 9.6. Breast Localization with Seeds or Scout
 - 9.6.1. Technique, Preparation, and Risks
 - 9.6.2. Nursing Care Process: Assessment and Diagnosis of Needs
 - 9.6.3. Nursing Care Process: Planning
 - 9.6.4. Nursing Care Process: Implementation of Care and Care Evaluation
- 9.7. Brachytherapy Unit
 - 9.7.1. Introduction and History
 - 9.7.2. Structure of a Brachytherapy Unit
 - 9.7.3. Types of Radioactive Sources
 - 9.7.4. Most Frequent Uses
- 9.8. Prostate Brachytherapy
 - 9.8.1. Introduction
 - 9.8.2. Nursing Care in Low Dose-Rate Prostatic Brachytherapy
 - 9.8.2.1. Pre-Treatment Care
 - 9.8.2.2. Pre-Implantation Care
 - 9.8.2.3. Post-Intervention Care
 - 9.8.3. Nursing Care in High Dose-Rate Prostatic Brachytherapy
- 9.9. Cervical and Uterine Brachytherapy
 - 9.9.1. Introduction
 - 9.9.2. Indications and Pre-Treatment Nursing Care
 - 9.9.3. Intraoperative Care
 - 9.9.4. Post-Intervention Care
- 9.10. Brachytherapy and Skin Lesions
 - 9.10.1. Introduction
 - 9.10.2. Pre-Treatment Nursing Care
 - 9.10.3. Intraoperative Care
 - 9.10.4. Post-Intervention Care

Module 10. Other Image-Guided Procedures

- 10.1. Ultrasound-Guided Interventions. Part One
 - 10.1.1. Principles of Ultrasound
 - 10.1.2. Pediatric radiology
 - 10.1.2.1. Echocystography
 - 10.1.2.2. Intussusception (Invaginations)
 - 10.1.2.3. FNA and CNB
 - 10.1.3. Thyroid FNA
 - 10.1.4. MSK (Musculoskeletal) CNB
 - 10.1.5. Ultrasound-Guided Intervention with Fine Needle Aspiration and Ultrasound-Guided Calcification Washout of the Shoulder
- 10.2. Ultrasound-Guided Interventions. Part Two. Ultrasound-Guided Intervention with Coarse Needle in Hepatic and Renal Pathology
 - 10.2.1. Hepatic CNB
 - 10.2.2. Renal CNB
 - 10.2.2.1. Native kidney
 - 10.2.2.2. Renal Graft
- 10.3. Other Ultrasound Procedures
 - 10.3.1. Contrast-Enhanced Ultrasound with Microbubbles
 - 10.3.2. Nursing Techniques Guided by Ultrasound
 - 10.3.3. Ultrasound with Prostaglandin or Cavernosography
- 10.4. Radiological Tests with Remote Control
 - 10.4.1. Retrograde Cystourethrography
 - 10.4.2. Hysterosalpingography
 - 10.4.3. Esophagogastroduodenal Transit (EGDT) and Intestinal Transit
 - 10.4.4. Barium Enema
 - 10.4.5. Videofluoroscopic Swallowing Study
 - 10.4.6. Trans-Kher Cholangiography
 - 10.4.7. Myelography
- 10.5. Optical Coherence Tomography (OCT)
 - 10.5.1. The Eye as an Imaging System
 - 10.5.2. Principles of OCT
 - 10.5.3. Role of Nursing





- 10.6. Dual-Energy X-ray Absorptiometry or Bone Density Test (DEXA or DXA)
 - 10.6.1. Osteoporosis and Indication for the Technique
 - 10.6.2. Preparation and DXA Examination
 - 10.6.3. Results and Benefits
- 10.7. Hemodynamics
 - 10.7.1. Introduction
 - 10.7.2. Indications
 - 10.7.3. Nursing Care
- 10.8. Cholangiopancreatography (CPR)
 - 10.8.1. Introduction
 - 10.8.2. Indications
 - 10.8.3. Nursing Care
- 10.9. Lithotripsy
 - 10.9.1. Introduction
 - 10.9.2. Indications
 - 10.9.3. Nursing Care
- 10.10. PACS, Picture Archiving and Communication Systems
 - 10.10.1. Definition and Objectives
 - 10.10.2. Components
 - 10.10.2.1. Image Acquisition
 - 10.10.2.2. Communication Networks
 - 10.10.3. Image Management, Viewing, and Processing
 - 10.10.4. Types of Storage
 - 10.10.5. Image Production Classification

“ You will refine your ability to address chronic diseases with advanced Nursing techniques in Primary Care, understanding their impact on healthcare management”

04

Teaching Objectives

The main purpose of this university program is to enhance the knowledge of Nursing professionals in the comprehensive management of care in diagnostic and imaging treatment procedures. Graduates will be trained to optimize patient safety, apply medication administration protocols, and actively collaborate in medical decision-making. Furthermore, they will develop advanced competencies in the management of radiological technology, care in key areas, and the execution of interventional techniques. Thanks to this update, you will play a crucial role in improving diagnostic accuracy and clinical outcomes.



“

You will manage advanced radiodiagnostic equipment such as computed tomography, magnetic resonance imaging, or ultrasound”

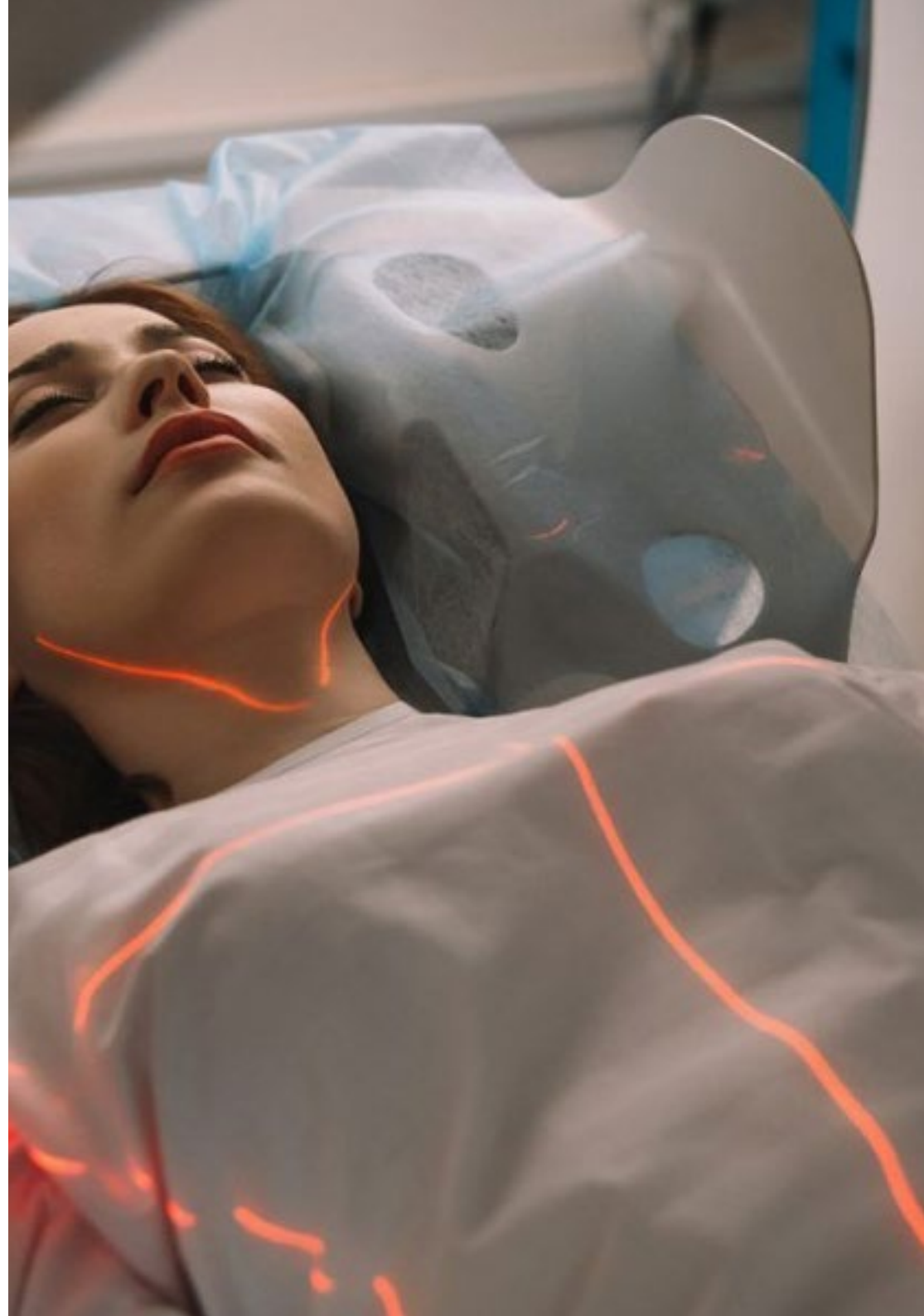


General Objectives

- ♦ Master the management of care in the diagnostic and imaging treatment area, ensuring effective and safe procedures
- ♦ Strengthen competencies in Radiological Nursing for improved interdisciplinary collaboration in decision-making
- ♦ Acquire advanced skills in contrast administration and the prevention of adverse reactions
- ♦ Ensure radiological safety for both patients and healthcare staff, complying with updated regulations
- ♦ Apply advanced protocols in isotopic studies and image-guided procedures
- ♦ Develop strategies to improve the patient experience in radiological diagnostic environments



Stay updated on innovative strategies in Radiological Nursing to enhance patient safety in each procedure"





Specific Objectives

Module 1. Radiological Nursing Management of Care and Organization of the Diagnostic and Imaging Treatment Area

- ♦ Explore the organization of the Diagnostic and Imaging Treatment Area, its history, legislation, regulations, and healthcare equipment
- ♦ Update knowledge in the scope of practice for radiological nurses within an organizational structure and their service portfolio

Module 2. Nursing in the Diagnostic and Imaging Treatment (DTI) Service. Nursing Consultation

- ♦ Delve into the competencies that nurses must develop in consultations
- ♦ Deepen the understanding of managing the prevention of unwanted effects following contrast administration, both in allergic patients and those with renal insufficiency

Module 3. Computerized Tomography

- ♦ Explore the history, physical principles, elements, and components involved in the acquisition of images through CT
- ♦ Deepen understanding of the risks involved in imaging: radiation exposure, reactions to contrast material, and those derived from sedation

Module 4. Magnetic Resonance Imaging (MRI)

- ♦ Deepen knowledge of the history, physical principles, elements, and components involved in the acquisition of images through MRI

Module 5. Nuclear Medicine I

- ♦ Describe the scope of Nuclear Medicine, including its physical and chemical principles
- ♦ Update knowledge in the handling of radiopharmaceuticals
- ♦ Deepen understanding of the radioprotection standards appropriate for each radiopharmaceutical

Module 6. Nuclear Medicine II: Isotopic Studies

- ♦ Implement the nursing care process for patients undergoing studies in gamma cameras
- ♦ Manage various radiological protection recommendations and ensure their correct explanation to patients and healthcare personnel not specialized in Nuclear Medicine

Module 7. Oncological Radiotherapy

- ♦ Describe the applications of the radiotherapy process
- ♦ Implement the nursing care process in the various interventions carried out in the service

Module 8. Nursing in Interventional Vascular Radiology and Neuroradiology

- ♦ Delve into the history of interventional radiology, the role of the nurse, and the requirements of the operating room for vascular and neuroradiological intervention
- ♦ Explore the concepts of radioprotection and the specific standards of the interventional operating room

Module 9. Breast and Brachytherapy

- ♦ Describe the evolution of diagnostic equipment in breast pathology imaging units
- ♦ Delve into updated working procedures, diagnostic procedures guided by ultrasound, and those guided by mammography, as well as sample collection

Module 10. Other Image-Guided Procedures

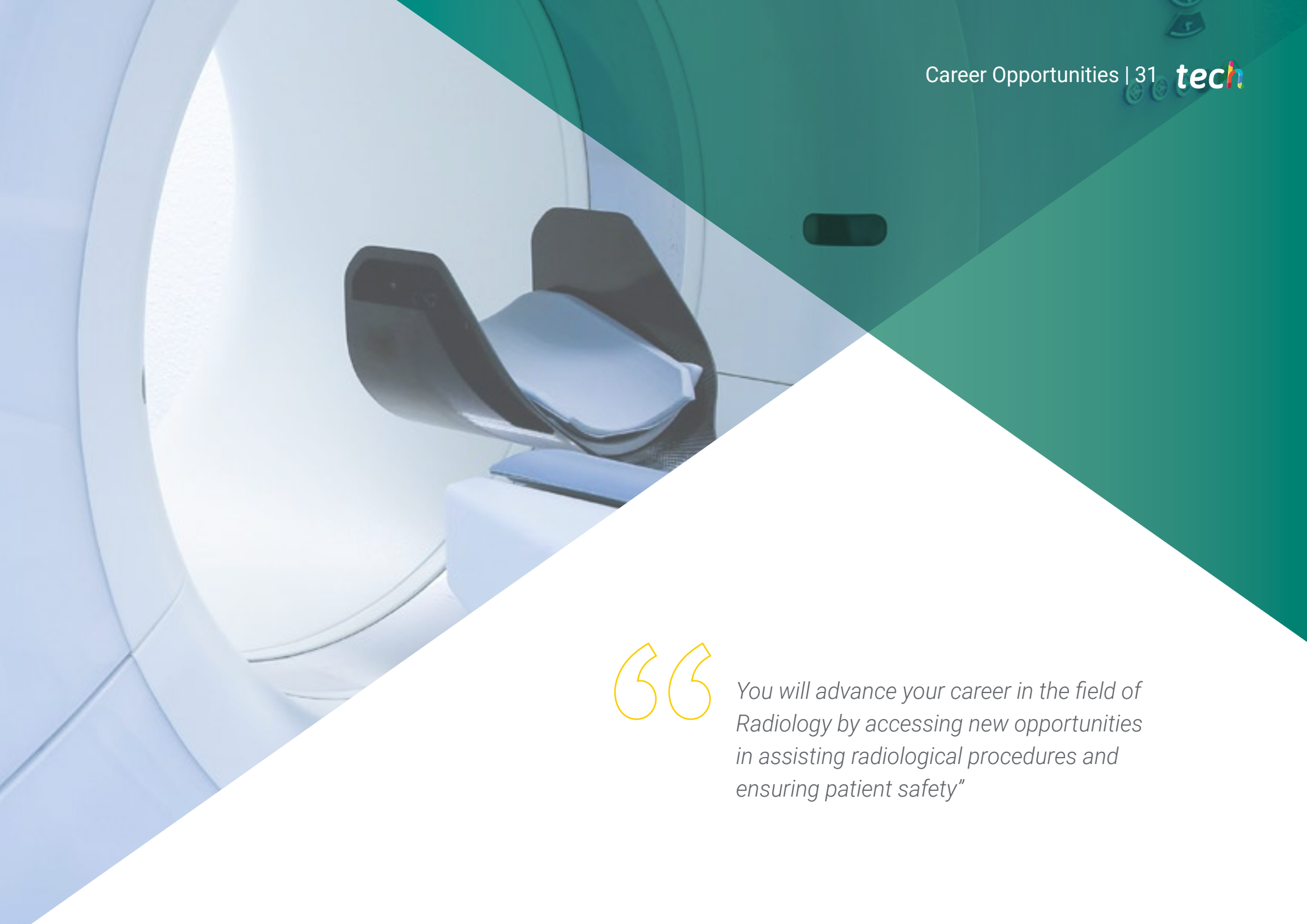
- ♦ Update knowledge on radiological techniques developed in remote control
- ♦ Stay up to date with the various nursing techniques performed with Ultrasound: catheterizations, vascular access, etc.

05

Career Opportunities

Graduates of this Master's Degree in Radiological Nursing will be able to work in radiology departments of public and private hospitals, diagnostic imaging centers, and specialized clinics. They will also have the opportunity to integrate into multidisciplinary teams within areas such as Nuclear Medicine, Radiation Oncology, and Interventional Vascular Radiology. Their advanced training will enable them to take on key roles in the management of radiological care, optimization of safety protocols, and assistance in high-complexity procedures. Additionally, they can focus their careers on research in innovative diagnostic imaging techniques.





“

You will advance your career in the field of Radiology by accessing new opportunities in assisting radiological procedures and ensuring patient safety”

Graduate Profile

Upon completing this university qualification, the Nursing professional will have comprehensive knowledge in managing radiological equipment, contrast administration, and assisting in interventional procedures. Furthermore, they will be prepared to apply updated radiological safety protocols and optimize the patient experience in diagnostic environments. Their specialized profile will make them a leader in the sector, capable of collaborating closely with radiologists and other specialists in clinical decision-making. As such, their evidence-based approach will allow them to innovate in daily practice and improve healthcare quality.

Acquire a highly specialized profile and become a reference in Radiological Nursing, improving healthcare quality with an innovative, evidence-based approach.

- ♦ **Multidisciplinary Collaboration in Radiological Procedures:** Competence to work alongside radiologists and other specialists in interpreting studies and making clinical decisions.
- ♦ **Optimizing Care in Radiation Oncology:** Advanced knowledge in assisting patients undergoing radiotherapy, promoting their well-being.
- ♦ **Evidence-Based Decision-Making:** Ability to apply the latest scientific advances in imaging techniques and interventional procedures.
- ♦ **Personalized Care in Interventional Radiology:** Development of strategies to effectively assist patients in image-guided procedures.





After completing this university program, you will be able to apply your knowledge and skills in the following positions:

- 1. Clinical Radiology Nurse Specialist:** A professional responsible for the comprehensive management of patients in diagnostic imaging procedures, ensuring their safety and well-being.
- 2. Nursing Coordinator in Diagnostic Imaging Units:** Responsible for the organization and supervision of nursing teams in services such as Computed Tomography, Magnetic Resonance Imaging, and Nuclear Medicine
- 3. Specialist in Interventional Vascular Radiology:** In charge of assisting in minimally invasive image-guided procedures, optimizing treatment precision and safety.
- 4. Radiation Oncology Nurse:** A professional dedicated to the care of patients undergoing radiotherapy, ensuring proper management of side effects and optimizing treatment.
- 5. Radiological Safety and Protection Consultant:** A specialist in implementing protocols to minimize exposure to ionizing radiation and improve safety in clinical settings.
- 6. Nuclear Medicine Nurse:** A professional with advanced competencies in handling radiopharmaceuticals and monitoring patients in isotopic studies.
- 7. Quality Supervisor in Diagnostic Imaging Services:** Responsible for ensuring compliance with regulations and quality standards in radiological procedures.
- 8. Consultant in Innovation and Technology in Clinical Radiology:** An expert in incorporating new technologies into diagnostic imaging, promoting improvements in healthcare efficiency.

06

Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

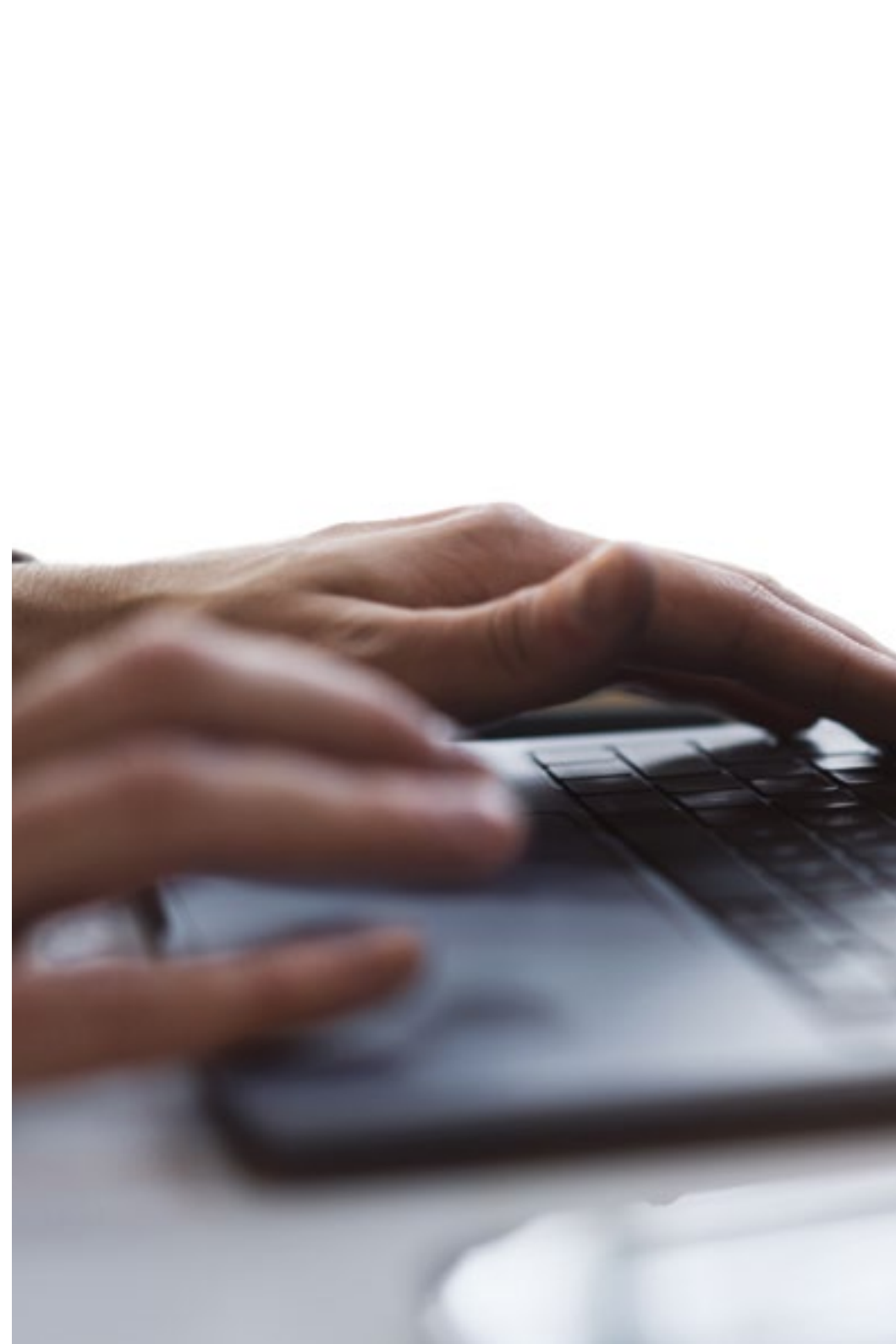
The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist. The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

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

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

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

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

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

“

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

Case Studies and Case Method

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

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

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



Relearning Methodology

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

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

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

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



A 100% online Virtual Campus with the best teaching resources

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

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

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

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



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

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

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

The university methodology top-rated by its students

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

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

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

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



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



Study Material

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

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



Practicing Skills and Abilities

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



Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

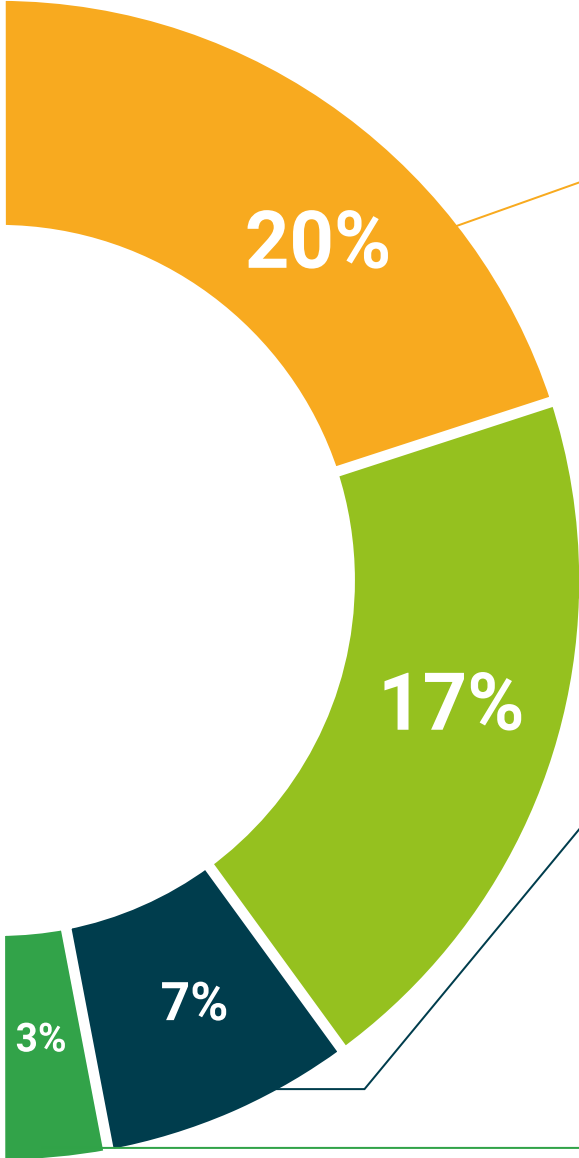
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





Case Studies

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



Testing & Retesting

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



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.
Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.



Quick Action Guides

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



07

Teaching Staff

The faculty of this Master's Degree in Radiological Nursing is composed of professionals with extensive experience in radiological nursing and diagnostic imaging. Their background ranges from assisting in Radiology and Nuclear Medicine units to conducting research in advanced medical imaging techniques. They have contributed to the development of radiological safety protocols and the optimization of procedures in computed tomography, magnetic resonance imaging, and radiation oncology. Thanks to their practical approach and constant updating, graduates will acquire knowledge based on scientific evidence and the most effective strategies to improve diagnostic quality and patient care.



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Specialize with experts in Radiological Nursing and receive an updated knowledge base grounded in scientific evidence and the latest advances”

Management



Ms. García Argüelles, Noelia

- ♦ Area Supervisor of Diagnostic Imaging and Treatment at the Asturias University Central Hospital.
- ♦ Professor in the Department of Medicine at the University of Oviedo.
- ♦ Professor at numerous conferences and congresses, including the Congress of the Society of Radiological Nursing.
- ♦ University Diploma in Nursing
- ♦ Master's Degree in Prevention Management in the Company
- ♦ Master's Degree in Urgency, Emergencies and Catastrophes.
- ♦ Member of the panel of auditors authorized by the Quality Assessment Unit of the Health Service of the Principality of Asturias.
- ♦ Certificate of Pedagogical Aptitude for Secondary Education Teachers.
- ♦ Radioactive Facilities Operator License in Nuclear Medicine by the Nuclear Safety Council.



Ms. Viciana Fernández, Carolina

- Nurse in the Radiodiagnosis and Nuclear Medicine
- University Diploma in Nursing
- Master's Degree in Pediatric Nursing
- University Specialist in Emergency and Catastrophe Nursing
- University Specialist in Nursing in the Surgical Area
- Nuclear Medicine Radioactive Installations Operator License by the Nuclear Safety Council.

Teachers

Mr. Castaño Pérez, Jesús

- ♦ Nurse in the Interventional Vascular Radiology Service at the Asturias University Central Hospital.
- ♦ Tutor of MIR Residents in the Specialty of Family and Community Medicine.
- ♦ Honorary Collaborator at the University of Oviedo, attached to the Department of Medicine.
- ♦ University Diploma in Nursing.
- ♦ Specialist Technician in Radiodiagnosis
- ♦ Postgraduate Diploma in Surgical Fields in Nursing
- ♦ Specialist in Family and Community Nursing
- ♦ Nuclear Safety Council Radioactive Facilities Operator's License.

Ms. Rodríguez Manzano, María Ángeles

- ♦ Supervisor of the Radiation Oncology Service at the Central University Hospital of Asturias.
- ♦ Teaching collaborator in AGORASTUR, training in theoretical and practical workshops for auxiliary nursing care technicians.
- ♦ University Diploma in Nursing
- ♦ Postgraduate Diploma in Hemotherapy.
- ♦ Postgraduate Diploma in Intensive Care Nursing
- ♦ Postgraduate Diploma in Dialysis
- ♦ Specialist in Family and Community Nursing
- ♦ Radioactive Facilities Operator License in Radiotherapy. Nuclear Safety Council
- ♦ Teaching collaborator in AGORASTUR, training in theoretical and practical workshops for auxiliary nursing care technicians.



**Ms. Busta Díaz, Mónica**

- ◆ Supervisor of the Nuclear Medicine Service at the Central University Hospital of Asturias.
- ◆ University Diploma in Nursing
- ◆ Bachelor's Degree in History
- ◆ Postgraduate Diploma in Intensive Care Unit Nursing
- ◆ Postgraduate Diploma in in Dialysis Nursing
- ◆ Postgraduate Diploma in Surgical Fields in Nursing
- ◆ Postgraduate Diploma in Hemotherapy.
- ◆ Nuclear Medicine Radioactive Installations Operator's License. Nuclear Safety Council
- ◆ Member of: Scientific Committee during the XX Congress of the Spanish Society of Radiological Nursing 2022.

Ms. Álvarez Noriega, Paula

- ◆ Supervisor of the Radiodiagnostics Service at the Central University Hospital of Asturias.
- ◆ Honorary Collaborator attached to the Department of Medicine of the University of Oviedo and the Adolfo Posada Institute.
- ◆ University Diploma in Nursing
- ◆ Master's Degree in Prevention Management in the Company
- ◆ Master's Degree in Support Treatment and Palliative Care in Oncology Patients
- ◆ Postgraduate Diploma from in Hemotherapy Nursing
- ◆ Nuclear Medicine Radioactive Installations Operator License by the Nuclear Safety Council.

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Certificate

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





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

This private qualification will allow you to obtain **Master's Degree in Radiological 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** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

TECH is a member of the **British Institute of Radiology (BIR)**, a global leader in the field of radiology.

This membership highlights its commitment to academic excellence and access to cutting-edge scientific content in the field of radiology.

Accreditation/Membership

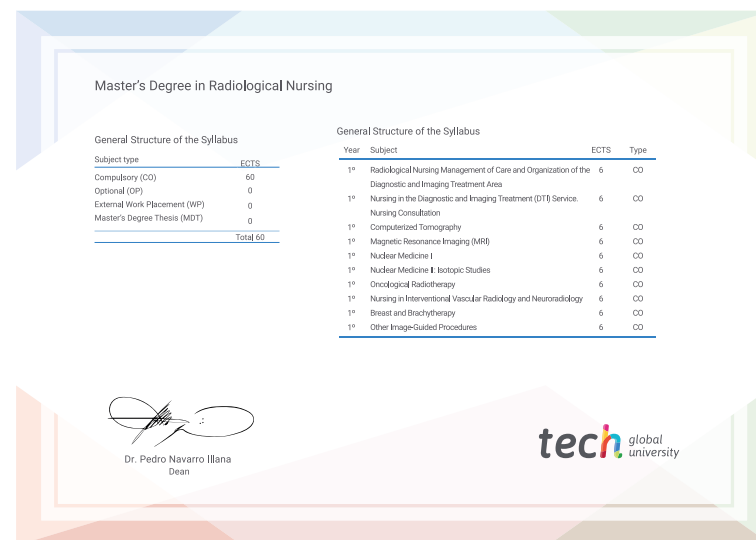


Title: **Master's Degree in Radiological Nursing**

Modality: **Online**

Duration: **12 months**.

Accreditation: **60 ECTS**



*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.

future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development language
virtual classroom



Master's Degree Radiological Nursing

- » Modality: Online
- » Duration: 12 months.
- » Certificate: TECH Global University
- » Accreditation: 60 ECTS
- » Schedule: at your own pace
- » Exams: online

Master's Degree Radiological Nursing

Accreditation/Membership

