



Postgraduate Diploma

Digestive and Genitourinary Tracts Clinical Ultrasound for Nursing

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

Website: www.techtitute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-digestive-genitourinary-tracts-clinical-ultrasound-nursing

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tech 06 | Introduction

Ultrasound is a safe, fast, reliable, innocuous and non-invasive test, well tolerated by patients, relatively low cost, and which has evolved into new, smaller and more accessible devices.

Now, they have become a popular and valuable tool in guiding diagnostic and therapeutic interventions. They have also helped to increase the potential of Clinical Ultrasound, achieving a notable increase in its applications.

The use of clinical ultrasound of the Digestive and Genitourinary Tracts in daily medical practice has been increasing due to the high percentage of patients suffering from some or other pathology in this area. Therefore, it is essential for nursing professionals in to update their knowledge on the use of ultrasound to improve the quality of their healthcare services.

Primary care is undoubtedly one of the areas where Clinical Ultrasound is most widely used. Nursing professionals can benefit from Clinical Ultrasound to favorably influence diagnosing and treating different pathologies, improving patient safety, reducing waiting times and possible errors.

With this Postgraduate Diploma, students have the the opportunity to take a program that brings together the most advanced and in depth knowledge in the field, where a group of highly regarded professors with extensive international experience provides you with the most complete and up to date information on the latest advances and techniques in the use of ultrasound as an adjunct to physical examinations.

It endorses the latest advances in ultrasound with a robust and didactic teaching program, which positions it as a product of the highest scientific rigor at international level, aimed at health professionals. In addition, the program is based on a multidisciplinary approach to its subjects, which allows training and professional development in different areas.

The Postgraduate Diploma in Digestive and Genitourinary Tracts Clinical Ultrasound for Nursing contains the most complete and up to date scientific program on the market. The most important features include:

- Numerous clinical cases presented by ultrasound experts
- The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional
- New diagnostic-therapeutic developments on evaluation, diagnosis, and intervention in problems or disorders that can be addressed with ultrasound
- It contains practical exercises where the self evaluation process can be carried out to improve learning
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- Special emphasis on evidence-based medicine and research methodologies in ultrasound processes
- Content that is accessible from any fixed or portable device with an Internet connection
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments



Technological advances have led to improved ultrasound scanners, which are becoming more useful in a variety of new situations"



Our programs have the best teaching methodology and the latest didactic tools, which will allow you to study from home without sacrificing the possibilities offered by on site classes"

The teaching staff is made up of prestigious and renowned professionals who have extensive experience in healthcare, teaching, and research in various countries, contributing their professional expertise to this Postgraduate Diploma.

The methodological design of this Postgraduate Diploma developed by a multidisciplinary team of experts in e-learning integrates the latest advances in educational technology to create numerous multimedia tools that allow professionals to resolve real situations in their daily practice. These will enable you to advance by both acquiring knowledge and developing new skills in your future professional work

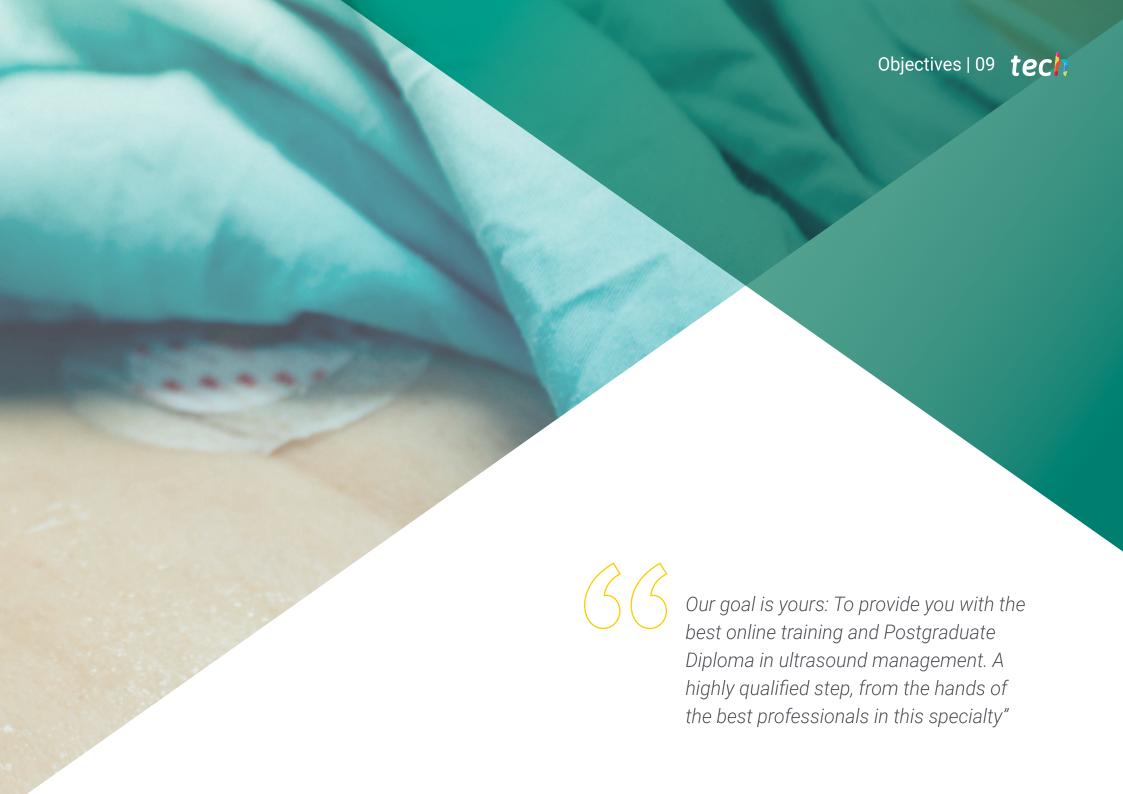
The contents generated for this Postgraduate Diploma, as well as the videos, selfexams, clinical cases, and modular exams, have been thoroughly reviewed, updated, and integrated by the professors and the team of experts that make up the course working group, in order to gradually and educationally facilitate a learning process that allows for the objectives of the teaching program to be achieved.

You will follow a robust and didactic teaching program, which positions itself as a product of the highest scientific rigor at the international level.

This prestigious program has been designed following the fundamentals of the e-learning methodology, allowing you to assimilate the content more easily and efficiently.







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General Objectives

- Acquire the necessary knowledge in the use of ultrasound, in order to manage the routine situations of their practical use in healthcare
- Apply the skills acquired while performing the duties of an ultrasound specialist
- Use the latest clinical developments in the day to day work of a Nursing professional



Make the most of the opportunity and take the step to get up to date on the latest developments in Primary Care Clinical Ultrasound for Nursing"





Module 1. Ultrasound Imaging

- Optimize ultrasound imaging through in depth knowledge of the physical principles of ultrasound, its controls and operation
- Understand basic and advanced ultrasound procedures, both diagnostic and therapeutic
- Practice all ultrasound modes in the safest way for the patient
- Know the indications and limitations of Clinical Ultrasound, and its application in the most common clinical situations
- Predict the results of invasive diagnostic procedures non-invasively by using ultrasound, with the possibility of replacing them

Module 2. Clinical Ultrasound of the Digestive Tract and Major Vessels

- Analyze whether digestive and great vessel problems can be identified from a single ultrasound picture
- Perform ultrasound for appendicitis, peritonitis and due medical procedure
- Promptly act when a digestive problem requires an emergency diagnosis
- Identify the main anomalies involving the digestive system and great vessels
- Perform ultrasound procedures on pregnant women
- Identify pregnancy stages in the womb and possible abnormalities

Module 3. Clinical Genitourinary Ultrasound

- Identify the lower area within the ultrasound process and identify its possible genitourinary problems
- Diagnose by means of ultrasound the problems affecting the lower area of patients
- Perform ultrasound procedures as a prevention protocol for urinary diseases
- Identify through diagnostic imaging possible abnormalities affecting the genitourinary tract





International Guest Director

Dr. Lauren Ann J. Selame is a recognized professional in the field of Medicine, specializing in Clinical Ultrasound. Her expertise focuses on the application of ultrasound in emergency medical, diagnostic imaging, simulation and public health. With a deep interest in procedural competence and in the development of advanced techniques to detect various disorders, she has contributed significantly to the use of Anatomical Ultrasound to improve response times and accuracy in emergency treatments.

Throughout his career, he has played key roles in prestigious institutions. At Brigham Women's Hospital, recognized among the best hospitals in the world by Newsweek magazine, she has been Director of Ultrasound Education in Emergency Medicine, in addition to serving as an emergency physician. Her experience also includes her time at Massachusetts General Hospital as an Emergency Ultrasound Assistant, and at Thomas Jefferson Hospital, where she was a resident in Emergency Medicine, after training at the Sidney Kimmel School of Medicine of Thomas Jefferson University.

At the international level, she is noted for her contributions, especially in Emergency Medicine. She has worked in some of the most prestigious healthcare centers in the United States, which has allowed her to hone her skills and bring significant advances to the medical community. Her work has earned her a reputation for her expertise in diagnostic ultrasound, and she is a reference in the use of this technology in emergencies.

As a researcher associated with university institutions, she has written **numerous** scientific **articles** on its emphasis, addressing both its application in critical situations and its advances in medical diagnosis. Her publications are consulted by professionals worldwide, consolidating her role as one of the most influential voices in the field of **clinical ultrasound**.



Dr. Selame, Lauren Ann J.

- Director of Ultrasound in Emergency Medicine Brigham Women's Hospital, Boston, United States
- Emergency Medicine Physician Specialist at Brigham Women's Hospital
- Emergency Ultrasound Physician Specialist at Massachusetts General
- Hospital, Massachusetts
- Resident Physician in Emergency Medicine at Thomas Jefferson University Hospital
- Research Assistant at the Perelman School of Medicine, University of Pennsylvania
- M.D., Thomas Jefferson University
- Medical Degree, Sidney Kimmel School of Medicine at the Thomas Jefferson University



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

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Management



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- Graduate in Clinical Ultrasound and Training of Trainers, University of Montpelier-Nîmes, France
- Lecturer at the Associació Mediterrània of General Medicine
- Teacher at the Spanish School of Ultrasound of the Spanish Society of General and Family Physicians (SEMG)
- Honorary Member of the Canary Society of Ultrasound (SOCANECO) and Professor of its Annual Symposium
- Lecturer on the Master's Degree in Clinical Ultrasound for Emergencies and Critical Care, CEU Cardenal Herrera University



Dr. Pérez Morales, Luis Miguel

- Family physician at the Primary Care Center of Arucas (Gran Canaria, Canary Islands)
- Diploma in Ultrasound in Primary Care University Rovira i Virgili Catalan Institute of Health
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Scientific Committee

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- Tutor at the Family and Community Medicine Teaching Unit, Burgos
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Professors

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Module 1. Ultrasound Imaging

- 1.1. Physical Principles
 - 1.1.1. Sounds and Ultrasound
 - 1.1.2. The Nature of Sound
 - 1.1.3. Interaction of Sound with Matter
 - 1.1.4. The Concept of Ultrasound
 - 1.1.5. Ultrasound Safety
- 1.2. Ultrasound Sequence
 - 1.2.1. Ultrasound Emission
 - 1.2.2. Tissue Interaction
 - 1.2.3. Echo Formation
 - 1.2.4. Ultrasound Reception
 - 1.2.5. Ultrasound Image Generation
- 1.3. Ultrasound Modes
 - 1.3.1. Modes A and M
 - 1.3.2. B Mode
 - 1.3.3. Doppler Modes (Color, Angio and Spectral)
 - 1.3.4. Combined Modes
- 1.4. Ultrasound Scanners
 - 1.4.1. Common Components
 - 1.4.2. Classification
 - 1.4.3. Transducers
- 1.5. Ultrasound Maps and Echonavigation
 - 1.5.1. Spatial Layout
 - 1.5.2. Ultrasound Maps
 - 1.5.3. Transducer Movements
 - 1.5.4. Practical Advice
- 1.6. Trends in Ultrasound
 - 1.6.1. 3D/4D Ultrasound
 - 1.6.2. Sonoelastography
 - 1.6.3. Echopotentiation
 - 1.6.4. Other Modes and Techniques





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Module 2. Clinical Ultrasound of the Digestive Tract and Major Vessels

- 2.1. Hepatic Ultrasound
 - 2.1.1. Anatomy
 - 2.1.2. Liquid Focal Lesions
 - 2.1.3. Solid Focal Lesions
 - 2.1.4. Diffuse Liver Disease
 - 2.1.5. Chronic Liver Disease
- 2.2. Ultrasound of Gallbladder and Bile Ducts
 - 2.2.1. Anatomy
 - 2.2.2. Cholelithiasis and Biliary Sludge
 - 2.2.3. Vesicular Polyps
 - 2.2.4. Cholecystitis
 - 2.2.5. Bile Duct Dilatation
 - 2.2.6. Bile Duct Malformations
- 2.3. Pancreatic Ultrasound
 - 2.3.1. Anatomy
 - 2.3.2. Acute Pancreatitis
 - 2.3.3. Chronic Pancreatitis
- 2.4. Ultrasound of the Major Vessels
 - 2.4.1. Abdominal Aortic Disease
 - 2.4.2. Vena Cava Pathology
 - 2.4.3. Pathology of Celiac Trunk, Hepatic Artery, and Splenic Artery.
 - 2.4.4. Aortomesenteric Clamp Pathology
- 2.5. Ultrasound of the Spleen and Retroperitoneum
 - 2.5.1. Spleen Anatomy
 - 2.5.2. Splenic Focal Lesions
 - 2.5.3. Study of Splenomegaly
 - 2.5.4. Adrenal Gland Anatomy
 - 2.5.5. Adrenal Pathology
 - 2.5.6. Retroperitoneal Lesions
- 2.6. The Digestive Tract
 - 2.6.1. Ultrasound Examination of the Stomach
 - 2.6.2. Ultrasound Examination of the Small Intestine
 - 2.6.3. Ultrasound Examination of the Colon

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Module 3. Clinical Genitourinary Ultrasound

- 3.1. Kidneys and Urinary Tract
 - 3.1.1. Anatomy Recap
 - 3.1.2. Structural Alterations
 - 3.1.3. Hydronephrosis. Urinary Tract Dilation
 - 3.1.4. Kidney Stones, Cysts, and Tumors
 - 3.1.5. Renal Insufficiency
- 3.2. Urinary Bladder
 - 3.2.1. Anatomy Recap
 - 3.2.2. Ultrasound Characteristics
 - 3.2.3. Benign Bladder Pathology
 - 3.2.4. Malignant Bladder Pathology
- 3.3. Prostate and Seminal Vesicles
 - 3.3.1. Anatomy Recap
 - 3.3.2. Ultrasound Characteristics
 - 3.3.3. Benign Prostatic Pathology
 - 3.3.4. Malignant Prostatic Pathology
 - 3.3.5. Benign Seminal Pathology
 - 3.3.6. Malignant Seminal Pathology
- 3.4. The Scrotum
 - 3.4.1. Anatomy Recap
 - 3.4.2. Ultrasound Characteristics
 - 3.4.3. Benign Scrotal Pathology
 - 3.4.4. Malignant Scrotal Pathology
- 3.5. The Uterus
 - 3.5.1. Anatomy Recap
 - 3.5.2. Ultrasound Characteristics
 - 3.5.3. Benign Uterine Pathology
 - 3.5.4. Malignant Uterine Pathology
- 3.6. The Ovaries
 - 3.6.1. Anatomy Recap
 - 3.6.2. Ultrasound Characteristics of the Ovaries
 - 3.6.3. Benign Ovarian Pathology
 - 3.6.4. Malignant Ovarian Pathology





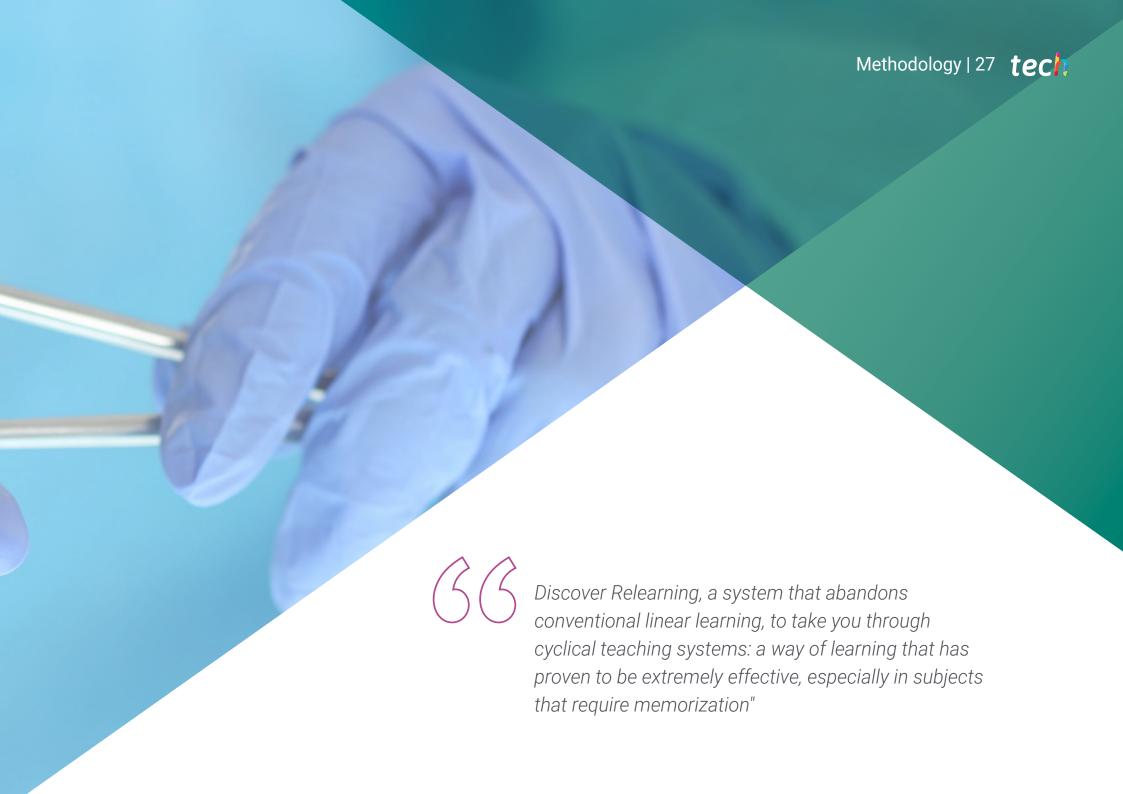


An impressive teaching staff, made up of specialized professionals from different areas of expertise, will be your professors during the program: A unique opportunity not to be missed"



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.

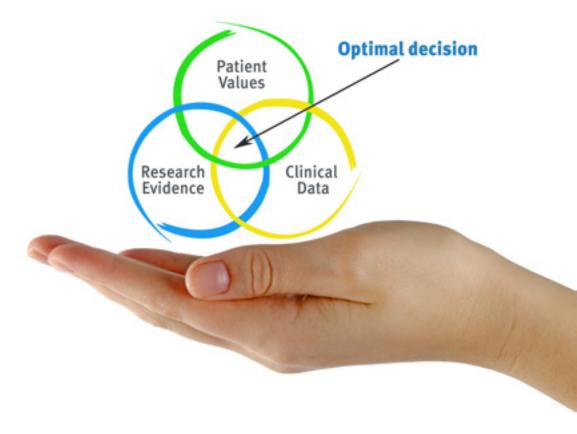




At TECH Nursing School we use the Case Method

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:

- 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

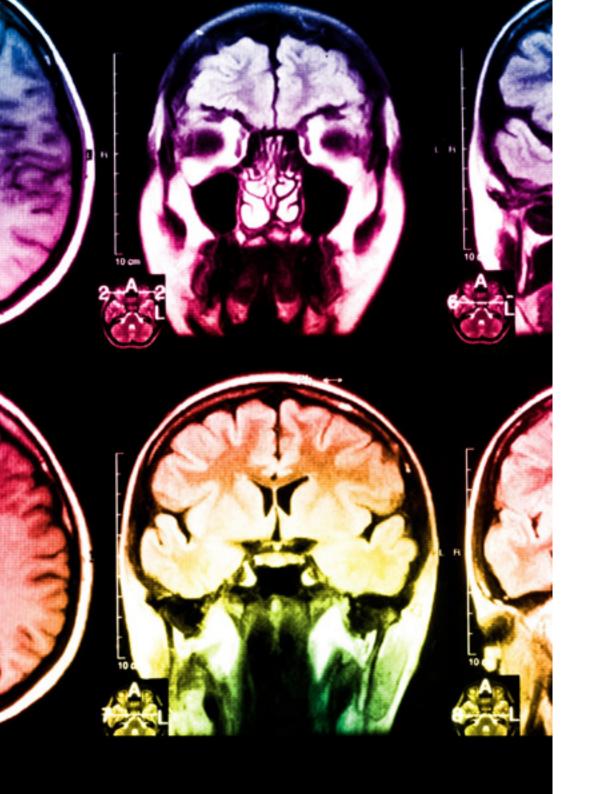
At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

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.





Methodology | 31 tech

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

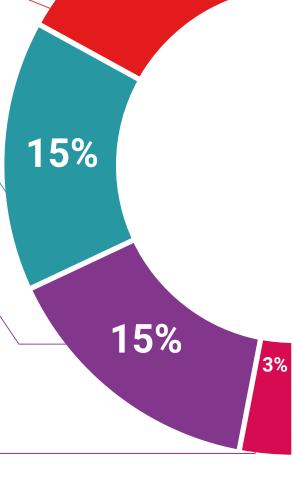
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you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



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

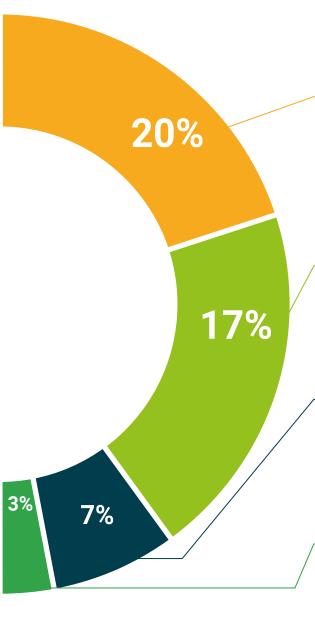
There is scientific evidence suggesting that observing third-party experts can be useful.

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.









This Postgraduate Diploma in Digestive and Genitourinary Tracts Clinical Ultrasound for 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 **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the **Postgraduate Diploma**, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Digestive and Genitourinary Tracts Clinical Ultrasound for Nursing

Modality: online

Duration: 6 months



For having passed and accredited the following program

POSTGRADUATE DIPLOMA

in

Digestive and Genitourinary Tracts Clinical Ultrasound for Nursing

This is a qualification awarded by this University, equivalent to 450 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.

ine 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 count

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future

health confidence people

education information tutors

guarantee accreditation teaching
institutions technology learning



Postgraduate Diploma Digestive and Genitourinary Tracts Clinical Ultrasound for Nursing

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

