

Postgraduate Diploma

Clinical Ultrasound of the Digestive and Genitourinary Tracts





Postgraduate Diploma Clinical Ultrasound of the Digestive and Genitourinary Tracts

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

Website: www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-clinical-ultrasound-digestive-genitourinary-tracts

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01

Introduction

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 a pathology of this kind. Therefore, it is essential for physicians to update their knowledge on the use of ultrasound to improve the quality of their healthcare services.

With this Postgraduate Diploma in Ultrasound of the Digestive and Genitourinary Tracts, students will master the latest techniques used with ultrasonographic devices to apply them in their daily medical practice.





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Upgrade your ultrasound knowledge with the world's largest online university"

Ultrasound has been associated with many of the advances in medical care over the last 40 years. This is an ultrasound scanning technique of the body, which can detect any abnormality that requires medical intervention.

Digestive system specialists frequently request this test, since it can detect tumors and cysts in the abdominal organs, and it can be used as a guiding tool in case a puncture or biopsy must be performed as it offers the greatest possible precision. On the other hand, there are clinical ultrasound scans of the genitourinary tract

Thanks to technological advances, they are now smaller and cheaper, making it easier to incorporate them into general practice. Therefore, it is essential that physicians are trained in this highly demanded specialty, which facilitates timely diagnosis and improves the quality of health care.

Despite the many benefits of its use in medical consultations, there are no university programs at this level of specialization that contain the training itinerary required to perform ultrasound and ultrasound-guided procedures in the field of Primary Care.

With this Postgraduate Diploma, students have 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 them with the most complete and up-to-date information on the latest ultrasound advances and techniques as a complement to physical examination.

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

The **Specialist Diploma in Clinical Ultrasound of the Digestive and Genitourinary Tract** 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 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



You will have distinguished experts in the field who will guide and advise you throughout the learning process”

“ *You will have a robust and didactic teaching program, which positions it as a product of the highest scientific rigor at international level*”

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, developed by a multidisciplinary team of *e-learning experts*, integrates the latest advances in educational technology in order to create numerous multimedia tools that allow professionals to solve real-life 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, self-exams, 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.

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

As it is 100% online, you will be able to update your knowledge on the advances in ultrasound in ultrasound diagnostics, in a practical way and adapted to your needs.



02 Objectives

The main objective of this Postgraduate Diploma is to provide the most up-to-date and innovative scientific knowledge in this diagnostic area, which will allow students to develop the skills that will turn their daily clinical practice into a benchmark of the best standards based on current scientific evidence, in a critical, innovative, multidisciplinary and integrative sense.



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Our goal is yours: to provide you with the best online education and specialization in ultrasound management. A highly qualified step, from the hands of the best professionals in this specialty"



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 medical professional.





Specific Objectives

- ♦ Optimize ultrasound imaging through in-depth knowledge of the physical principles of ultrasound and the controls and operation of ultrasound scanners
- ♦ Master the basic and advanced procedures of Ultrasound, both at diagnostic and therapeutic level.
- ♦ Determine the indications and limitations of 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.
- ♦ Guide invasive therapeutic procedures to minimize their risks
- ♦ Understand how to extend the concept of ultrasound to healthcare, research, and academic environments

03

Course Management

The program's teaching staff includes leading specialists in clinical ultrasound and other related areas, who bring their years of work experience to this training. Additionally, other recognized specialists participate in its design and preparation, which means that the program is developed in an interdisciplinary manner.





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You will learn the latest Ultrasound advances and Techniques, from distinguished professionals in the sector”

Management



Dr. Fumadó Queral, Josep

- ♦ Family physician at Els Muntells Primary Care Center (Amposta, Tarragona).
- ♦ Graduate in Clinical Ultrasound and Training of Trainers, University of Montpellier-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
- ♦ Expert in Thoracic Ultrasound University of Barcelona
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- ♦ Head of the Master's Degree in Clinical Ultrasound in Emergency and Critical Care, CEU Cardenal Herrera University
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- ♦ Teacher in the Specialist Degree in Thoracic Ultrasound at the University of Barcelona

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- ♦ Family Physician and Head of the Ultrasound Unit at the Briviesca Health Center (Burgos).
- ♦ Tutor at the Family and Community Medicine Teaching Unit, Burgos
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- ♦ Member of the Spanish Society of Ultrasound (SEECO) and the Spanish Association

of Prenatal Diagnosis (AEDP)

Dr. Jiménez Díaz, Fernando

- ♦ Specialist in Sports Medicine
- ♦ Professor in the Faculty of Sports Sciences at the University of Castilla La Mancha, Toledo
- ♦ Director of the International Chair of Musculoskeletal Ultrasound of the Catholic University of Murcia
- ♦ Teacher on the Master's Degree in Clinical Imaging in Emergency and Critical Care, CEU Cardenal Herrera University

Dr. Sánchez Sánchez, José Carlos

- ♦ Radiodiagnosis Specialist
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- ♦ Teacher on the Specialist Degree in Clinical Ultrasound for Family Physicians at the University of Barcelona

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- ♦ Specialist in the Intensive Care and Major Burns Unit Getafe University Hospital. Getafe, Madrid

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- ◆ Family Physician Canalejas Health Center Las Palmas de Gran Canaria, Canary Islands

Professor. Dr. Santos Sánchez, José Ángel

- ◆ Specialist in the Radiology Department. Salamanca University Hospital. Salamanca

Dr. Wagüemert Pérez, Aurelio

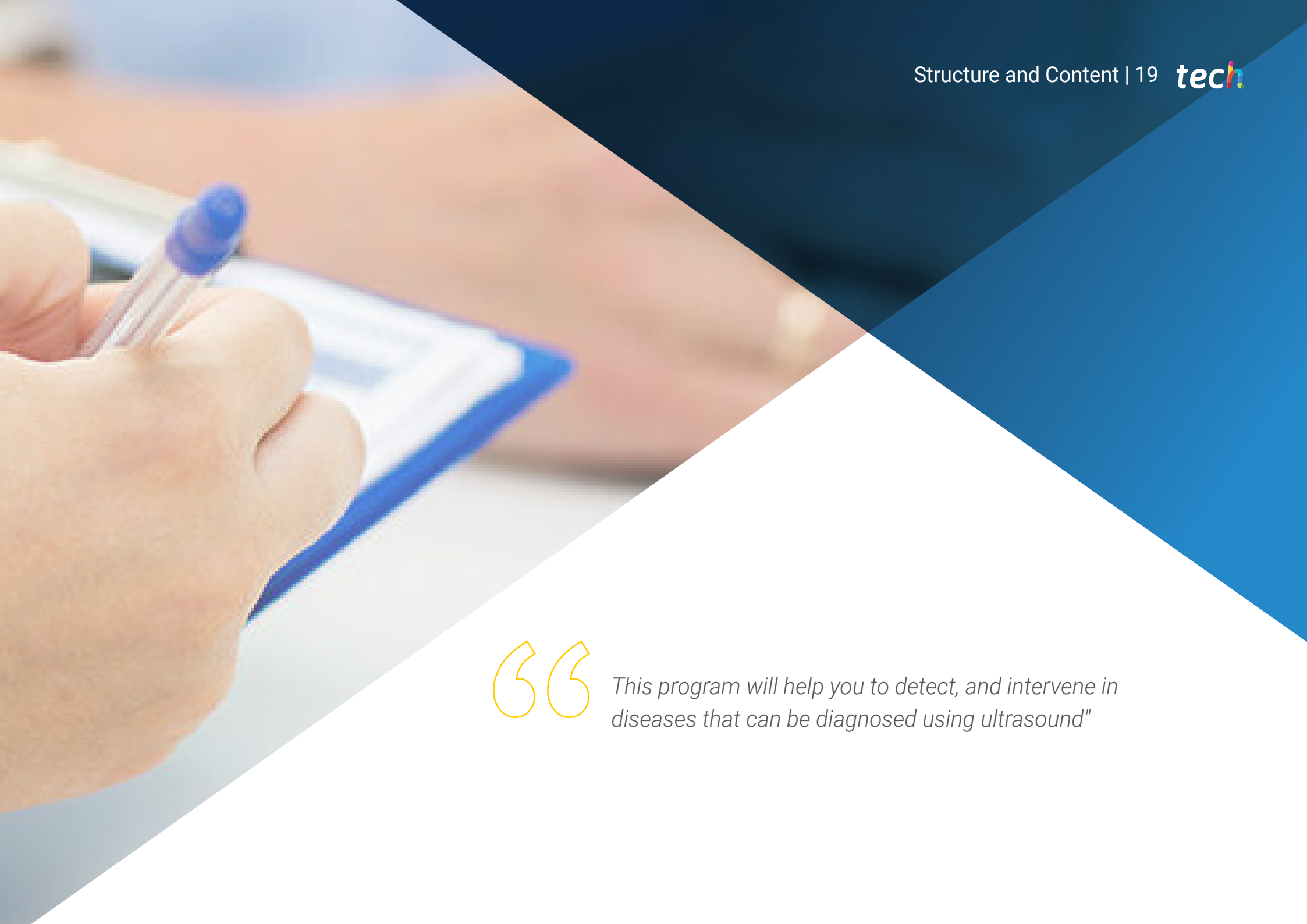
- ◆ Specialist in Pulmonology, San Juan de Dios Hospital Santa Cruz de Tenerife, Canary Islands

04

Structure and Content

The structure of the contents has been designed by a team of professionals from leading hospitals, who have taken into account the need to update the content that will be taught, as well as the use of quality teaching through new educational technologies.





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This program will help you to detect, and intervene in diseases that can be diagnosed using ultrasound"

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. Mode B
 - 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. Echopotential
 - 1.6.4. Other Modes and Techniques

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. Aorto-Mesenteric 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

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

05

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.



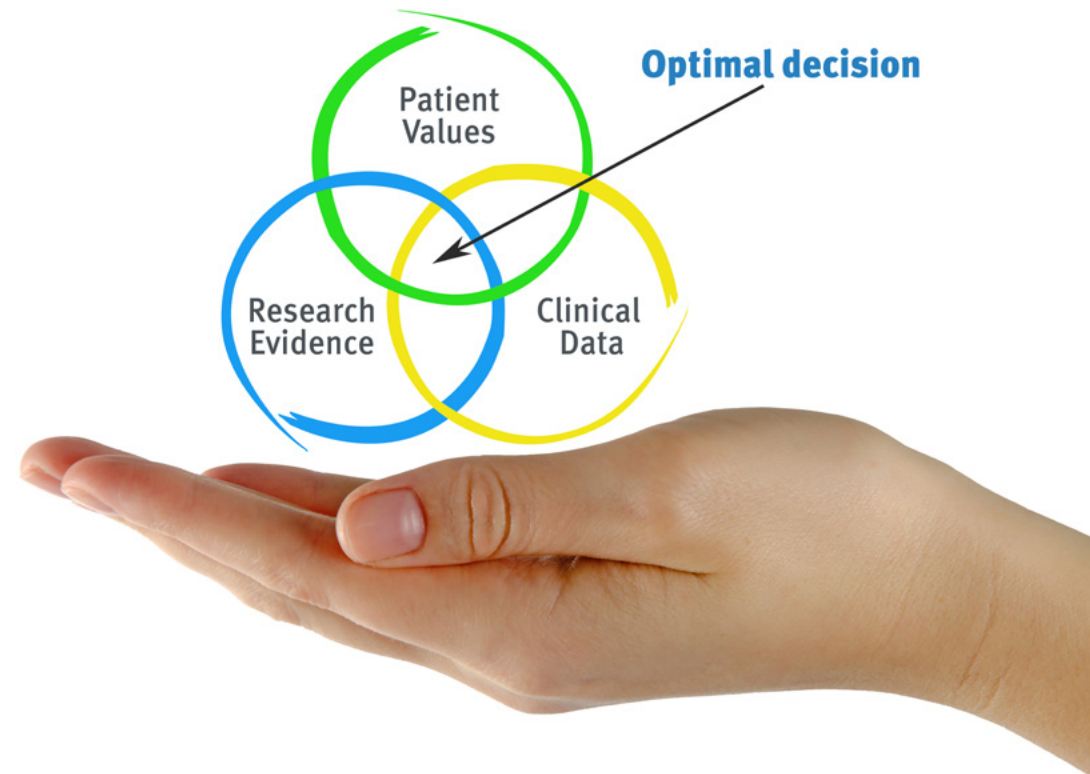
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Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

At TECH we use the Case Method

What should a professional do in a given situation? 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. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning 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, trying to recreate the real conditions in the physician's professional practice.

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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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate 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.



Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

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



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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. 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 highly 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.



Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and 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 the videos as many times as you like.



Interactive Summaries

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

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



Additional Reading

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





Expert-Led Case Studies and Case Analysis

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



Testing & Retesting

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



Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as 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.



06

Certificate

The Postgraduate Diploma in Clinical Ultrasound of the Digestive and Genitourinary Tracts guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 a **Postgraduate Diploma in Clinical Ultrasound of the Digestive and Genitourinary Tracts** 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.

Title: **Postgraduate Diploma in Clinical Ultrasound of the Digestive and Genitourinary Tracts**

Modality: **online**

Duration: **6 months**

Credits: **18 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.

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



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Clinical Ultrasound
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- » Modality: online
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Postgraduate Diploma

Clinical Ultrasound of the Digestive and Genitourinary Tracts