Hybrid Professional Master's Degree

Clinical Ultrasound for Primary Care

tech technological university

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Hybrid Professional Master's Degree

Clinical Ultrasound for Primary Care

Modality: **Hybrid (Online + Clinical Internship)**
Duration: **12 months**
Certificate: **TECH Technological University**
Teaching Hours: **1,620 h.**
Website: **www.techtitute.com/us/medicine/hybrid-professional-master-degree/v**

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01

Introduction

In recent years many diagnostic and medical monitoring techniques have undergone changes and transformations, adapting to the current health situation. This way, ultrasound is one of the most important tools used in Primary Care, as it is used in many internal examinations in a non-invasive way. In addition, ultrasound has recently incorporated innovations in Artificial Intelligence that have greatly increased its accuracy. And with this program the professional will have the opportunity to be up-to-date, incorporating into their daily practice the new applications of this procedure, as well as mastering its new technological functionalities. Therefore, this degree has two stages: one online and one on-site, guaranteeing the acquisition of advanced knowledge that will then be put into practice in a clinical center of recognized prestige.

Incorporate into your professional practice, thanks to this program, the latest developments and applications of Clinical Ultrasound for Primary Care"

The healthcare field has undergone major transformations recently, driven by the pandemic situation. Therefore, numerous protocols, procedures and techniques have evolved, providing the physician with new ways of diagnosing and monitoring different pathologies. Clinical Ultrasound is one of the most important of these, and its importance in Primary Care continues to grow.

For this reason, it is necessary for physicians to keep up to date, so that they can integrate into their daily work all the applications that have arisen in this area, while exploring the technological advances that can make the detection of diseases more accurate. In this way, this Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care is presented as a great option to achieve this objective of updating, since it brings the professional closer to the latest advances in this method.

For this purpose, the physician will have a theoretical-practical learning process separated into two stages. During the first stage, which takes place in a 100% online format, they will be able to access the latest scientific evidence in this area, accompanied by a highly renowned teaching staff, and enjoy numerous multimedia resources such as videos, interactive summaries and master classes.

In the second phase, the professional will carry out an on-site and practical internship of 3 weeks in which they will be able to perform various activities using Clinical Ultrasound. This internship will take place in a prestigious center where they will be in contact with real patients and where they will receive guidance from specialists in ultrasound in Primary Care, and will follow a schedule of 8 continuous hours from Monday to Friday throughout the stipulated period.

This **Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care** contains the most complete and up-to-date scientific program on the market. The most important features of this course include:

- More than 100 clinical cases presented by medical professionals who are experts in Clinical Ultrasound applied to Primary Care
- 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
- Assessment and monitoring of patients using Clinical Ultrasound as a method of monitoring and diagnosis
- Presentation of practical workshops on diagnostic techniques using ultrasound
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- All this will be complemented by 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

This program will allow you to access the latest advances in ultrasound in Primary Care in a practical and dynamic way"

The Hybrid Professional Master's Degree is the best option for acquiring the most advanced knowledge in Clinical Ultrasound, as it allows you to put it into practice during your internship"

You will have the opportunity to carry out a 3-week practical internship in a prestigious clinical center.

The healthcare field has changed enormously in recent years and this program allows you to get up-to-date in a comfortable and fast way.

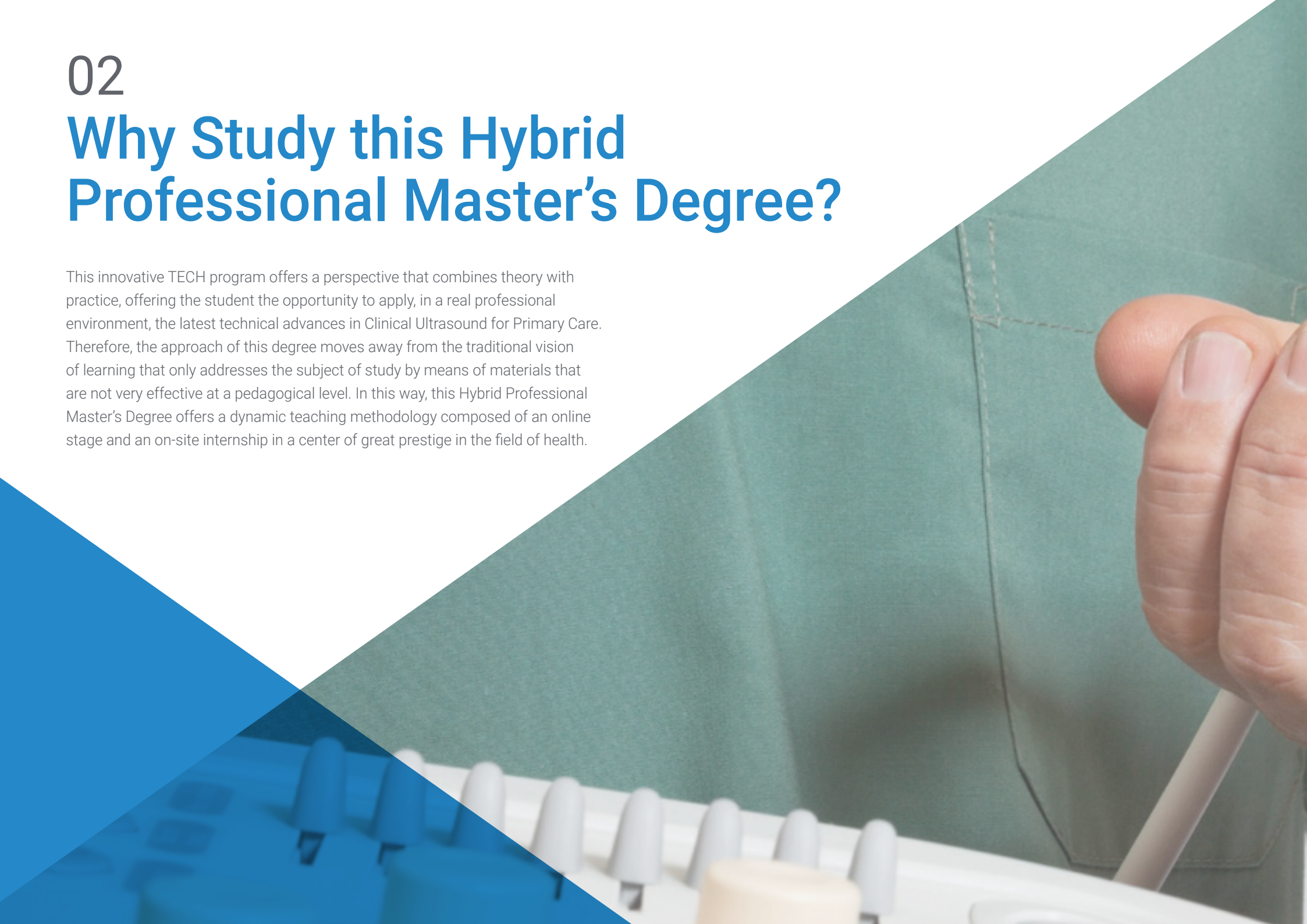
This Hybrid Professional Master's Degree program is aimed at updating medical professionals who develop their functions in Primary Care. The contents are based on the latest scientific evidence, and oriented in a educational way to integrate theoretical knowledge in the medical practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision-making in patient management.

Thanks to the multimedia content, developed with the latest educational technology, medical professionals will benefit from situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to train in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

02

Why Study this Hybrid Professional Master's Degree?

This innovative TECH program offers a perspective that combines theory with practice, offering the student the opportunity to apply, in a real professional environment, the latest technical advances in Clinical Ultrasound for Primary Care. Therefore, the approach of this degree moves away from the traditional vision of learning that only addresses the subject of study by means of materials that are not very effective at a pedagogical level. In this way, this Hybrid Professional Master's Degree offers a dynamic teaching methodology composed of an online stage and an on-site internship in a center of great prestige in the field of health.



TECH is the only university that offers you the possibility of entering into real clinical environments and maximum demand to delve, with the help of the best specialists, into the latest advances in Assisted Reproduction"

1. Updating from the latest technology available

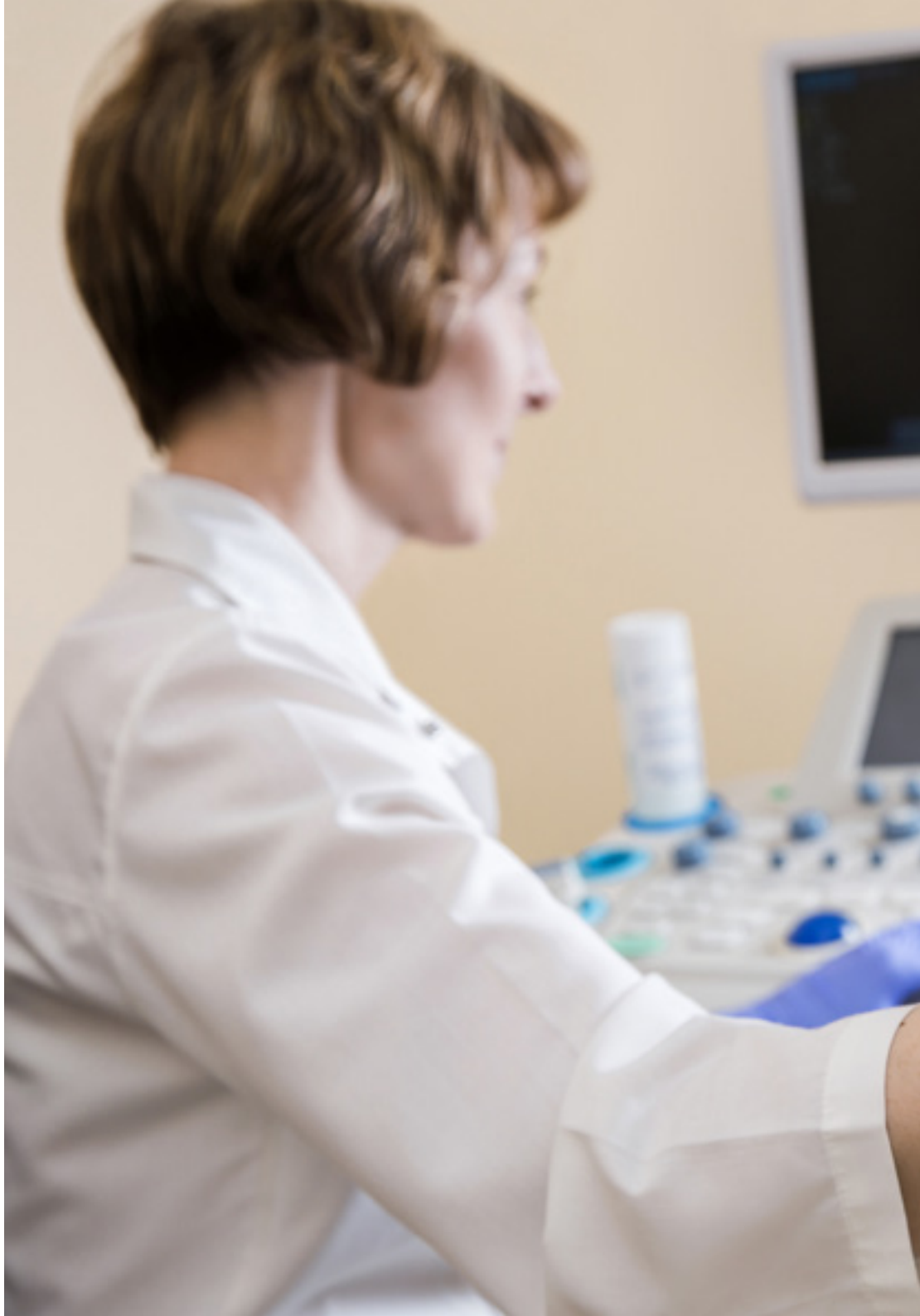
TECH always offers its students learning based on the latest technologies. Therefore, in these practices, the student will have access to state-of-the-art equipment, with which they will be able to be up-to-date in the most recent ultrasound techniques applied in the area of Primary Care.

2. Gaining In-Depth Knowledge from the Experience of Top Specialists

TECH's aim is to allow professionals to develop and update their knowledge in the company of other great experts in Clinical Ultrasound. Therefore, it provides the perfect space to do so, since the practices contained in this Hybrid Professional Master's Degree are carried out with the guidance of professionals from the health center in which they are performed. In addition, the student will be guided by a specifically designated tutor. All this so that they can be immediately up-to-date in the most advanced techniques of ultrasound diagnostic imaging.

3. Entering First-Class Clinical Environments

The centers available to carry out the internship have been carefully selected by TECH. For this reason, the physician is guaranteed access to a professional and clinical environment of high quality and prestige in Primary Care. This way, throughout the 3 weeks that the internship lasts, they will be able to see how the demanding and renowned team of the center works, therefore, acquiring the latest theses and scientific postulates for their own daily work.



4. Combining the Best Theory with State-of-the-Art Practice

The academic field offers numerous study programs that do not respond to the daily needs of the physician, as they require extensive teaching schedules that interfere with their personal and professional life. However, TECH knows that practice has a great value in clinical environments, and therefore offers students the opportunity to combine the most advanced theory in the use of Clinical Ultrasound, with a fully participatory internship where updating will be a simple task.

5. Expanding the Boundaries of Knowledge

TECH designs its programs taking into account the needs and ambitions of the student, who especially values the possibility of developing and progressing in international environments. Therefore, the internship environment available in this Hybrid Professional Master's Degree program has a reputation that goes beyond borders, as it allows the professional to catch up with specialists practicing in first-class hospital centers.

You will have full practical immersion at the center of your choice"

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Objectives

The main objective of this Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care is to bring the professional closer to the latest developments in this method of diagnostic imaging, which has undergone major changes in recent years. Therefore, in order to achieve this objective, it will provide the most advanced knowledge, offering, in addition, the opportunity to put it into practice in a 3-week internship in a prestigious clinical center.

This program will allow you to achieve the objective of updating your knowledge immediately, with the best teaching methodology in the educational market"

General Objective

- On one hand, the general objectives of this program aim to provide the physician with the necessary knowledge in the use of ultrasound for the management of common diagnostic practice situations and, on the other hand, to apply the skills acquired in the performance of the functions of a specialist in ultrasound. In this way, they will have integrated the latest developments in this health technique into their daily work

The main objective of this program is to bring the physician closer to the latest developments in clinical ultrasound, for which it was designed an educational itinerary of an eminently practical nature"

Specific Objectives

Module 1. Ultrasound imaging

- Optimize ultrasound imaging through in-depth knowledge of the physical principles of ultrasound, its controls and operation
- Practice all ultrasound modalities in the safest way for patients
- Master the basic and advanced procedures of Ultrasound, both at diagnostic and therapeutic level

Module 2. Clinical Ultrasound of the Head and Neck

- Know the indications and limitations of clinical ultrasound, and its application in the most frequent clinical situations

Module 3. Thoracic Ultrasound Scan

- Delve into the use of ultrasound of the chest wall, mediastinum and diaphragm

Module 4. Clinical Ultrasound of the Digestive Tract and Major Vessels

- Perform effectively gallbladder and biliary ducts ultrasound
- Perform pancreatic ultrasound accurately

Module 5. Clinical Genitourinary Ultrasound

- Navigate ultrasonographically the urinary bladder
- Examine by clinical ultrasound the prostate and seminal vesicles

Module 6. Clinical Musculoskeletal Ultrasound

- Approach the different examination technique in ultrasound study of the shoulder, elbow, wrist and hand, hip, thigh, knee and leg and ankle

Module 7. Clinical Vascular Ultrasound

- Fundamentals of normal ultrasound of the venous system

Module 8. Clinical Ultrasound in Emergencies

- Know the different ultrasound procedures in emergencies

Module 9. Ultrasound-Guided Procedures

- Predict the results of invasive diagnostic procedures non-invasively by using ultrasound, with the possibility of replacing them
- Guiding invasive therapeutic procedures to minimize their risks
- Excel in spatial orientation or "econavigation"

Module 10. Other Uses of Clinical Ultrasound

- Understand how to extend the concept of Clinical Ultrasound to healthcare, research, and academic environments

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Skills

After completing this Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care, the professional will have incorporated into their daily practice numerous skills related to this method of diagnostic imaging. Therefore, they will have learned about the new applications of this technique and all its specificities in the field of Primary Care, which has some notable differences with respect to other hospital areas.

You will be able to incorporate into your work the latest developments in ultrasound, delving into its particular features with respect to Primary Care"

General Skills

- Apply the contents learned in resolving the main health problemsin the field of Clinical Ultrasound
- Develop learning to learn as one of the most important skills for any professional nowadays, who is required to constantly specialize and improve their professional skills due to the dizzying and fast-paced process of scientific knowledge production
- Increase diagnostic abilities through the use of ultrasound for their patients' healthcare
- Develop skills for self-improvement, in addition to being able to provide training and professional improvement activities due to the high level of scientific and professional preparation acquired with this program

You will combine theory and professional practice through a demanding and rewarding educational approach"

Specific Skills

- Use ultrasound imaging with sufficient ability to integrate common diagnostic processes in primary care
- Operate ultrasound scanners and their controls with ease
- Understand basic and advanced ultrasound procedures, both diagnostic and therapeutic
- Master all ultrasound procedures in the safest way for the patient
- Determine the indications and limitations of clinical ultrasound and its application in the most common clinical situations
- Replace the results of invasive diagnostic procedures non-invasively by using ultrasound
- Guiding invasive therapeutic procedures to minimize their risks
- Extend the concept of Clinical Ultrasound to healthcare, research, and academic environments

05

Course Management

In order to guarantee that the whole learning process is totally effective, TECH has been in charge of selecting and gathering a renowned teaching staff in the area of Primary Care, specialized in the diagnosis and follow-up of different pathologies through ultrasound. Therefore, the physician who takes this program will have the security of being in the best hands, being up-to-date with the accompaniment of great active health professionals.

The best teaching staff is now at your fingertips to update you in the use of Clinical Ultrasound for Primary Care"

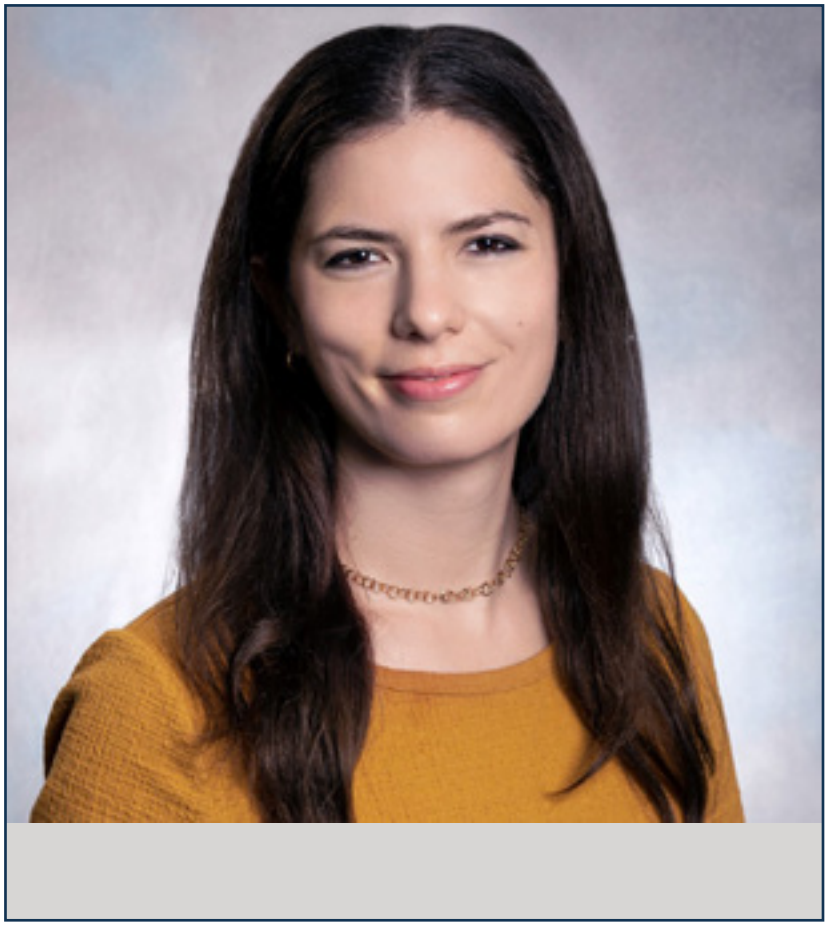
International Guest Director

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"

Management

Dr. Fumadó Queral, Josep

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

Dr. Pérez Morales, Luis Miguel

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

Professors

Dr. Álvarez Fernández, Jesús Andrés

- Medical Head at the Juaneda Miramar Hospital
- Specialist in Intensive Care Medicine and Burn Patient Management at the University Hospital of Getafe
- Associate Researcher of the Neurochemistry and Neuroimaging Area at La Laguna University

Dr. Herrera Carcedo, Carmelo

- Head of the Ultrasound Unit at the Briviesca Health Center
- Physician at San Juan de Dios Hospital
- Family Physician of the Ultrasound Unit at the Briviesca Health Center
- Tutor at the Family and Community Medicine Teaching Unit in Burgos
- Teacher at the Spanish School of Ultrasound of the Spanish Society of General and Family Physicians (SEMG)
- Member of the Spanish Society of Ultrasound (SEECO) and the Spanish Association of Prenatal Diagnosis (AEDP)

Dr. Jiménez Díaz, Fernando

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

Dr. Sánchez Sánchez, José Carlos

- Director of the Working Group on Ultrasound of the Spanish Society of General and Family Physicians
- Specialist in Radiodiagnostics at Poniente El Ejido Hospital
- Master's Degree Update on Diagnostic and Therapeutic Techniques in Radiology by the Cardenal Herrera University
- Postgraduate Diploma in Technique and Instrumentation, Radiology in Emergencies and Interventional Neuro Radiology by the Francisco de Vitoria University
- Postgraduate Diploma in Cardiothoracic Radiology and Vascular and Interventional Radiology, Francisco de Vitoria University
- Expert in Imaging Techniques in Breast Pathology and Breast Radiology by the University of Barcelona

Dr. Arancibia Zemelman, Germán

- Musculoskeletal Teleradiologist (MRI) at San José Hospital in Santiago de Chile
- Staff Radiologist at Indisa Clinic in Santiago de Chile
- Staff Radiologist at Meds Sports Medicine Clinic in Santiago de Chile
- Staff Radiologist at Hospital del Trabajador in Santiago de Chile
- General Area Physician and Director of the Puerto Aysén Hospital, Chilean Patagonia
- Specialization in Imaging at the Clinical Hospital of the University of Chile
- Training in Musculoskeletal Radiology at Henry Ford Hospital, Detroit, Michigan, USA
- Member of: Radiological Society of North America, Argentine Society of Ultrasound and Ultrasonography

Dr. Barceló Galíndez, Juan Pablo
- Medical Director at Bridgestone Hispania, S.A., Bilbao
- Ultrasound Department at Mutualia Ercilla Clinic
- Specialist Physician in Occupational Medicine

Dr. Cabrera González, Antonio José
- General Physician at the Medical Center of Arucas in Las Palmas de Gran Canaria
- General Physician at the Health Center of Tamaraceite in Las Palmas de Gran Canaria
- Expert in Medical Services of Recognition in Consultation and Radiodiagnostics

Dr. Corcoll Reixach, Josep
- Head Coordinator of Clinical Ultrasound for the Medical Direction of the Primary Care Management of Mallorca
- Former General Director of Planning and Financing of the Ministry of Health of the Balearic Islands
- Family Doctor at the Tramuntana Health Center
- Master's Degree in Health Management and Administration from the National School of Health, Carlos III Institute of Health
- Postgraduate Certificate in Pulmonary Ultrasound in Disease by COVID-19
- Member of the Spanish Society of Family and Community Medicine

Dr. De Varona Frolov, Serguei
- Medical Specialist in Angiology and Vascular Surgery of the Canary Institute of Advanced Medicine
- Angiologist at the General University Hospital of Gran Canaria Dr. Negrin
- Master's Degree in Endovascular Techniques by Boston Scientific PL

Dr. Donaire Hoyas, Daniel
- Specialist in Orthopedic Surgery and Traumatology at Hospital Virgen de las Nieves, El Ejido, Spain
- Specialist in Orthopedic Surgery and Traumatology at Hospital de Poniente, El Ejido
- Orthopedic Physician at the Orthopedic Surgery and Traumatology Institute of Almeria
- Training in Periprosthetic Hip and Knee Infection at the Endoklinic Hospital, Hamburg
- Training in Orthopedics and Traumatology at the Trauma Unit of the John Radcliff Hospital affiliated to the University of Oxford

Dr. Fabián Fermoso, Antonio
- Software Engineer at GE Healthcare
- Operating Room Unit Product Specialist for Prim S.A
- Medical, Endoscopy and Traumatology Business Unit Engineer for Skyter
- Master's Degree in Business Administration from ThePower Business School

Dr. Gálvez Gómez, Francisco Javier

- Head of Marketing for the Ultrasound Division of SIEMENS Healthcare for Spain and Southern Europe
- General Ultrasound Imaging Application Specialist for SIEMENS Healthcare in Madrid
- Head of GI Modality and Point of Care Ultrasound at GE Healthcare Spain
- Manager of the Imaging Department for Dissa- BK Distributor
  Researcher for Naturin Gmbh Analytical Laboratory

Dr. Argüeso García, Mónica

- Physician in the Intensive Care Medicine Department of the Gran Canaria Maternal and Insular Hospital Complex
- Internal Medicine Specialist in Hospiten Clínica Roca

Dr. López Rodríguez, Lucía

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

Dr. Herrero Hernández, Raquel

- Specialist in Intensive Care Medicine
- Attending Physician in the Intensive Care Medicine Department, Getafe University Hospital
- Author of numerous scientific publications
- Doctorate in Medicine from the Autonomous University Madrid

Dr. Igeño Cano, José Carlos

- Head of the Intensive Care and Emergency Medicine Department of the San Juan de Dios Hospital of Cordoba
- Head of the Patient Welfare Area in the HUCI Project, Humanizing Intensive Care
- Coordinator of the Planning and Organization and Management Working Group of the Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units (SEMICYUC)
- Medical Director of the Resuscitation and Post-Surgical Care Unit of the IDC Salud Hospital Virgen de Guadalupe
- Attending Physician of ICU in the Health Department of Castilla, La Mancha
- Attending Physician of the Medicine and Neurotrauma Unit of the Hospital Nuestra Señora de la Candelaria
- Head of Critical Patient Transport Service in Ambulances Juan Manuel SL
- Master's Degree in Clinical Management, Medical and Health Care Management at CEU Cardenal Herrera University
- Member: Pan-American and Iberian Federation of Critical Care Medicine and Intensive Care, Spanish Society of Intensive Care Medicine, Critical Care and Coronary Units

Dr. León Ledesma, Raquel

- Physician of the General and Digestive System Surgery Department at Getafe University Hospital
- Physician of the Obstetrics and Gynecology Department at the Getafe University Hospital

Dr. Martín del Rosario, Francisco Manuel

- Specialist of the Rehabilitation Service at the Hospital Complex Insular Materno Infantil de Gran Canaria
- Physician at the Upper Limb and Hand Pathology Unit of the Hospital Complex Insular Materno Infantil of Gran Canaria
- Private medical assistant in León y Castillo Polyclinic
- Private medical assistant at EMSAIS Polyclinic
- Consultant Rehabilitation Physician of Aeromédica Canaria

Dr. Moreno Valdés, Javier

- Business Manager of the Ultrasound Division of Canon Medical Systems for Spain
- Advisor to the Residents Working Group of the Spanish Society of Medical Radiology
- Master's Degree in Business Administration from EAE Business School

Dr. Núñez Reiz, Antonio

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

Dr. Santos Sánchez, José Ángel

- Medical Specialist at the University Hospital of Salamanca
- Specialist in Traumatology and Orthopedic Surgery at the Provincial Health Complex of Plasencia
- Master's Degree in Direction and Management of Health Department by the European Institute of Health and Social Welfare
- Master's Degree in ICT Resources in the Teaching and Learning Process by the University of Salamanca
- Member of the Advanced Medical Visualization Group of the University of Salamanca

Dr. Segura Blázquez, José María

- Family Physician at the Canary Institute of Advanced Medicine Family Physician at Centro de Salud de Canalejas in Las Palmas de Gran Canaria
- Family Physician at Tres Ramblas Medical Center in Las Palmas de Gran Canaria
- Master's Degree in Public Health and Epidemiology at La Palmas University of Gran Canaria
- Member of: Spanish Society of Primary Care Physicians, Canary Society of Ultrasonography, Canary Islands Society of Ultrasound

Dr. Wagüemert Pérez, Aurelio

- Interventional Pneumologist at the San Juan de Dios University Hospital
- Interventional Pneumologist at Cardivant Medical Center
- Interventional Pulmonologist at Clinica Tu Consulta
- Interventional Pulmonologist at the Canary Islands University Hospital

Dr. López Cuenca, Sonia

- Specialist in Family Medicine and Intensive Care at Rey Juan Carlos University Hospital
- Intensivist at the Getafe University Hospital
- Researcher of the Madrid Health Service
- Intensivist at Los Madroños Hospital
- Out-of-hospital Emergency Physician in SUMMA

Dr. Ortigosa Solórzano, Esperanza

- Specialist of the Pain Unit of the Anesthesia Service at Getafe University Hospital
- Head Editor of the Spanish Multidisciplinary Journal of Pain
- Head Editor of the Arydol Journal, a quadrimester publication of the Spanish Association of Regional Anesthesia and Chronic Pain
- Member of: Spanish Multidisciplinary Pain Society, Spanish Association of Regional Anesthesia and Chronic Pain, European Society of Regional Anesthesia and Pain Therapy

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Educational Plan

The syllabus of this Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care has been designed by leading experts, who have been responsible for producing the most up-to-date content in this area. Therefore, the online phase of this program is composed of 10 specialized modules through which the professional will be able to delve into issues such as Clinical Ultrasound of the head and neck, ultrasound-guided procedures or Clinical Ultrasound in emergencies.

Boost your professional career with a holistic education that allows you to advance both theoretically and practically"

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. Echopotentiation
- 1.6.4. Other Modes and Techniques

Module 2. Clinical Ultrasound of the Head and Neck

2.1. Anatomy Recap
- 2.1.1. Cranium and Face
- 2.1.2. Tubular Structures
- 2.1.3. Glandular Structures
- 2.1.4. Vascular Structures

2.2. Ocular Ultrasound
- 2.2.1. Ultrasound Anatomy of the Eye
- 2.2.2. Ocular Ultrasound Technique
- 2.2.3. Indications and Contraindications of Ocular Ultrasonography
- 2.2.4. Ultrasound Report

2.3. Ultrasound of Salivary Glands
- 2.3.1. Regional Sonoanatomy
- 2.3.2. Technical Aspects
- 2.3.3. Most Common Tumor and Non-Tumor Pathologies

2.4. Thyroid Ultrasound
- 2.4.1. Ultrasound Technique
- 2.4.2. Indications
- 2.4.3. Normal and Pathological Thyroid
- 2.4.4. Diffuse Goiter

2.5. Ultrasound Examination of Adenopathies
- 2.5.1. Reactive Lymph Nodes
- 2.5.2. Non-Specific Inflammatory Diseases
- 2.5.3. Specific Lymphadenitis (Tuberculosis)
- 2.5.4. Primary Lymph Node Diseases (Sarcoidosis, Hodgkin's Lymphoma, Non-Hodgkin's Lymphoma)
- 2.5.5. Lymph Node Metastases

2.6. Ultrasound of the Supra-Aortic Trunks
- 2.6.1. Sonoanatomy
- 2.6.2. Scanning Protocol
- 2.6.3. Extracranial Carotid Pathology
- 2.6.4. Vertebral Pathology and Subclavian Artery Steal Syndrome

Module 3. Thoracic Ultrasound

3.1. Thoracic Ultrasound Fundamentals
- 3.1.1. Anatomy Recap
- 3.1.2. Echoes and Artifacts in the Thorax
- 3.1.3. Technical Requirements
- 3.1.4. Exploration Systematics

3.2. Ultrasound of the Chest Wall, Mediastinum, and Diaphragm
- 3.2.1. Soft Tissues
- 3.2.2. Thoracic Cage
- 3.2.3. Mediastinum
- 3.2.4. Diaphragm

3.3. Pleural Ultrasound
- 3.3.1. Normal Pleura
- 3.3.2. Pleural Effusion
- 3.3.3. Pneumothorax
- 3.3.4. Solid Pleural Pathology

3.4. Pulmonary Ultrasound
- 3.4.1. Pneumonia and Atelectasis
- 3.4.2. Pulmonary Neoplasms
- 3.4.3. Diffuse Lung Disease
- 3.4.4. Pulmonary Infarction

3.5. Cardiac Ultrasound and Basic Hemodynamics
- 3.5.1. Normal Cardiac Sonoanatomy and Hemodynamics
- 3.5.2. Examination Technique
- 3.5.3. Structural Alterations
- 3.5.4. Hemodynamic Alterations

3.6. Trends in Thoracic Ultrasound
- 3.6.1. Pulmonary Sonoelastography
- 3.6.2. 3D/4D Thoracic Ultrasound
- 3.6.3. Other Modes and Techniques

Module 4. Clinical Ultrasound of the Digestive Tract and Major Vessels

4.1. Hepatic Ultrasound
- 4.1.1. Anatomy
- 4.1.2. Liquid Focal Lesions
- 4.1.3. Solid Focal Lesions
- 4.1.4. Diffuse Liver Disease
- 4.1.5. Chronic Liver Disease

4.2. Ultrasound of Gallbladder and Bile Ducts
- 4.2.1. Anatomy
- 4.2.2. Cholelithiasis and Biliary Sludge
- 4.2.3. Vesicular Polyps
- 4.2.4. Cholecystitis
- 4.2.5. Bile Duct Dilatation
- 4.2.6. Bile Duct Malformations

4.3. Pancreatic Ultrasound
- 4.3.1. Anatomy
- 4.3.2. Acute Pancreatitis
- 4.3.3. Chronic Pancreatitis

4.4. Ultrasound of the Major Vessels
- 4.4.1. Abdominal Aortic Disease
- 4.4.2. Vena Cava Pathology
- 4.4.3. Pathology of Celiac Trunk, Hepatic Artery, and Splenic Artery
- 4.4.4. Aorto-Mesenteric Clamp Pathology

4.5. Ultrasound of the Spleen and Retroperitoneum
- 4.5.1. Spleen Anatomy
- 4.5.2. Splenic Focal Lesions
- 4.5.3. Study of Splenomegaly
- 4.5.4. Adrenal Gland Anatomy
- 4.5.5. Adrenal Pathology
- 4.5.6. Retroperitoneal Lesions

4.6. The Digestive Tract
- 4.6.1. Ultrasound Examination of the Stomach
- 4.6.2. Ultrasound Examination of the Small Intestine
- 4.6.3. Ultrasound Examination of the Colon

Module 5. Clinical Genitourinary Ultrasound

5.1. Kidneys and Urinary Tract
- 5.1.1. Anatomy Recap
- 5.1.2. Structural Alterations
- 5.1.3. Hydronephrosis. Urinary Tract Dilation
- 5.1.4. Kidney Stones, Cysts, and Tumors
- 5.1.5. Renal Insufficiency

5.2. Urinary Bladder
- 5.2.1. Anatomy Recap
- 5.2.2. Ultrasound Characteristics
- 5.2.3. Benign Bladder Pathology
- 5.2.4. Malignant Bladder Pathology

5.3. Prostate and Seminal Vesicles
- 5.3.1. Anatomy Recap
- 5.3.2. Ultrasound Characteristics
- 5.3.3. Benign Prostatic Pathology
- 5.3.4. Malignant Prostatic Pathology
- 5.3.5. Benign Seminal Pathology
- 5.3.6. Malignant Seminal Pathology

5.4. The Scrotum
- 5.4.1. Anatomy Recap
- 5.4.2. Ultrasound Characteristics
- 5.4.3. Benign Scrotal Pathology
- 5.4.4. Malignant Scrotal Pathology

5.5. The Uterus
- 5.5.1. Anatomy Recap
- 5.5.2. Ultrasound Characteristics
- 5.5.3. Benign Uterine Pathology
- 5.5.4. Malignant Uterine Pathology

5.6. The Ovaries
- 5.6.1. Anatomy Recap
- 5.6.2. Ultrasound Characteristics of the Ovaries
- 5.6.3. Benign Ovarian Pathology
- 5.6.4. Malignant Ovarian Pathology

Module 6. Musculoskeletal Clinical Ultrasound

6.1. Anatomy Recap
- 6.1.1. Anatomy of the Shoulder
- 6.1.2. Anatomy of the Elbow
- 6.1.3. Anatomy of the Wrist and Hand
- 6.1.4. Anatomy of the Hip and Thigh
- 6.1.5. Anatomy of the Knee
- 6.1.6. Anatomy of the Ankle, Foot, and Leg

6.2. Technical Requirements
- 6.2.1. Introduction
- 6.2.2. Musculoskeletal Ultrasound Equipment
- 6.2.3. Ultrasound Imaging Methods
- 6.2.4. Validation, Reliability, and Standardization
- 6.2.5. Ultrasound-Guided Procedures

6.3. Examination Technique
- 6.3.1. Basic Concepts in Ultrasound
- 6.3.2. Rules for Correct Examination
- 6.3.3. Examination Technique in Ultrasound Study of the Shoulder
- 6.3.4. Examination Technique in Ultrasound Study of the Elbow
- 6.3.5. Examination Technique in Ultrasound Study of the Wrist and Hand
- 6.3.6. Examination Technique in Ultrasound Study of the Hip
- 6.3.7. Examination Technique in Ultrasound Study of the Thigh
- 6.3.8. Examination Technique in Ultrasound Study of the Knee
- 6.3.9. Examination Technique in Ultrasound Study of the Leg and Ankle

6.4. Sonoanatomy of the Musculoskeletal System: I. Upper Extremities
- 6.4.1. Introduction
- 6.4.2. Shoulder Ultrasound Anatomy
- 6.4.3. Elbow Ultrasound Anatomy
- 6.4.4. Wrist and Hand Ultrasound Anatomy

6.5. Sonoanatomy of the Musculoskeletal System: II. Lower Extremities
- 6.5.1. Introduction
- 6.5.2. Hip Ultrasound Anatomy
- 6.5.3. Thigh Ultrasound Anatomy
- 6.5.4. Knee Ultrasound Anatomy
- 6.5.5. Ultrasound Anatomy

6.6. Ultrasound in the Most Frequent Acute Injuries of the Musculoskeletal System
- 6.6.1. Introduction
- 6.6.2. Muscle Injuries
- 6.6.3. Tendon Injuries
- 6.6.4. Ligament Injuries
- 6.6.5. Subcutaneous Tissue Injuries
- 6.6.6. Bone Injuries and Joint Injuries
- 6.6.7. Peripheral Nerve Injuries

Module 7. Clinical Vascular Ultrasound

7.1. Vascular Ultrasound
- 7.1.1. Description and Applications
- 7.1.2. Technical Requirements
- 7.1.3. Procedure
- 7.1.4. Interpretation of Results. - Risks and Benefits
- 7.1.5. Limitations

7.2. Doppler
- 7.2.1. Fundamentals
- 7.2.2. Applications
- 7.2.3. Types of Echo-Doppler
- 7.2.4. Color Doppler
- 7.2.5. Power Doppler
- 7.2.6. Dynamic Doppler

7.3. Normal Ultrasound of the Venous System
- 7.3.1. Anatomy Recap: Venous System of the Upper Extremities
- 7.3.2. Anatomy Recap: Venous System of the Lower Extremities
- 7.3.3. Normal Physiology
- 7.3.4. Regions of Interest
- 7.3.5. Functional Tests
- 7.3.6. Report. Vocabulary

7.4. Upper Extremity Chronic Venous Disease
- 7.4.1. Definition
- 7.4.2. CEAP Classification
- 7.4.3. Morphological Criteria
- 7.4.4. Examination Technique
- 7.4.5. Diagnostic Manoeuvres
- 7.4.6. Type of Report

7.5. Acute/Subacute Vascular Thrombosis of the Upper Extremities
- 7.5.1. Anatomy Recap
- 7.5.2. Manifestations of Vascular Thrombosis of the Upper Extremities
- 7.5.3. Ultrasound Characteristics
- 7.5.4. Examination Technique
- 7.5.5. Diagnostic Manoeuvres
- 7.5.6. Technical Limitations

7.6. Acute/Subacute Vascular Thrombosis of the Lower Extremities
- 7.6.1. Description
- 7.6.2. Manifestations of Vascular Thrombosis of the Lower Extremities
- 7.6.3. Ultrasound Characteristics
- 7.6.4. Examination Technique
- 7.6.5. Differential Diagnosis
- 7.6.6. Vascular Report

Module 8. Clinical Ultrasound in Emergencies

8.1. Ultrasound in Respiratory Failure
- 8.1.1. Spontaneous Pneumothorax
- 8.1.2. Bronchospasm
- 8.1.3. Pneumonia
- 8.1.4. Pleural Effusion
- 8.1.5. Heart Failure

8.2. Ultrasound in Shock and Cardiac Arrest
- 8.2.1. Hypovolemic Shock
- 8.2.2. Obstructive Shock
- 8.2.3. Cardiogenic Shock
- 8.2.4. Distributive Shock
- 8.2.5. Cardiac Arrest

8.3. Ultrasound in Polytrauma: Eco-FAST
- 8.3.1. Pericardial Effusion
- 8.3.2. Hemothorax and Pneumothorax
- 8.3.3. Hepatorenal or Perihepatic Effusion
- 8.3.4. Splenorenal or Perisplenic Effusion
- 8.3.5. Perivesical Effusion
- 8.3.6. Post-Traumatic Aortic Dissection
- 8.3.7. Musculoskeletal Injuries

8.4. Genitourinary Emergencies
- 8.4.1. Obstructive Uropathy
- 8.4.2. Uterine Emergencies
- 8.4.3. Ovarian Emergencies
- 8.4.4. Bladder Emergencies
- 8.4.5. Prostatic Emergencies
- 8.4.6. Scrotal Emergencies

8.5. Acute Abdomen
- 8.5.1. Cholecystitis
- 8.5.2. Pancreatitis
- 8.5.3. Mesenteric Ischemia
- 8.5.4. Appendicitis
- 8.5.5. Perforation of the Hollow Viscus

8.6. Ultrasound in Sepsis
- 8.6.1. Hemodynamic Diagnosis
- 8.6.2. Source Detection
- 8.6.3. Handling of Liquids

Module 9. Ultrasound-Guided Procedures

9.1. Ultrasound-Guided FNA
- 9.1.1. Indications/Contraindications
- 9.1.2. Material
- 9.1.3. Informed Consent
- 9.1.4. Procedure
- 9.1.5. Results
- 9.1.6. Complications
- 9.1.7. Quality Control

9.2. Ultrasound-Guided Percutaneous Biopsy
- 9.2.1. Informed Consent
- 9.2.2. Biopsy Materials (Types of Biopsy Needles)
- 9.2.3. Procedure
- 9.2.4. Complications
- 9.2.5. Care
- 9.2.6. Quality Control

9.3. Drainage of Abscesses and Fluid Collections
- 9.3.1. Indications and Contraindications
- 9.3.2. Informed Consent
- 9.3.3. Requirements and Materials
- 9.3.4. Technique and Approach Route: Direct Puncture (Trocar) vs. Step to Step (Seldinger)
- 9.3.5. Catheter Management and Patient Care
- 9.3.6. Side Effects and Complications
- 9.3.7. Quality Control

9.4. Ultrasound-Guided Thoracentesis, Pericardiocentesis, and Paracentesis
- 9.4.1. Indications and Advantages over the Anatomical Reference Technique
- 9.4.2. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 9.4.3. Ultrasound Specifications and Pericardial Drainage Technique
- 9.4.4. Ultrasound Specifications and Thoracic Drainage Technique
- 9.4.5. Ultrasound Specifications and Abdominal Drainage Technique
- 9.4.6. Common Problems, Complications, and Practical Advice

9.5. Ultrasound-Guided Vascular Cannulation
- 9.5.1. Indications and Advantages over the Anatomical Reference Technique
- 9.5.2. Current Evidence on Ultrasound-Guided Vascular Cannulation
- 9.5.3. Basic Aspects: Ultrasound Specifications and Ultrasound Anatomy
- 9.5.4. Ultrasound-Guided Central Venous Cannulation Technique
- 9.5.5. Single Peripheral Catheter and Peripherally Inserted Central Catheter (PICC) Cannulation Technique
- 9.5.6. Arterial Cannulation Technique

9.6. Ultrasound-Guided Infiltration and Chronic Pain Treatment
- 9.6.1. Infiltrations and Pain
- 9.6.2. Large Joints: Intra-articular and Myotendinous
- 9.6.3. Small Joints: Intra-articular and Myotendinous
- 9.6.4. Spinal Column

Module 10. Other Uses of Clinical Ultrasound

10.1. Radial Breast Ultrasound
- 10.1.1. Anatomy Recap
- 10.1.2. Technical Requirements
- 10.1.3. Ultrasound Slices
- 10.1.4. Ultrasound Characteristics. - Breast Pathology
- 10.1.5. Breast Elastography

10.2. Dermatological Ultrasound
- 10.2.1. Echoanatomy of the Skin and Appendages
- 10.2.2. Ultrasound of Skin Tumors
- 10.2.3. Ultrasound of Inflammatory Skin Diseases
- 10.2.4. Ultrasound in Dermoesthetics and its Complications

10.3. Ultrasound in Diabetes
- 10.3.1. Aortic/Carotid Atheromatosis in Diabetics
- 10.3.2. Parenchymal Echogenicity in Diabetic Patients
- 10.3.3. Biliary Lithiasis in Diabetic Patients
- 10.3.4. Neurogenic Bladder in Diabetic Patients
- 10.3.5. Cardiomyopathy in Diabetic Patients

10.4. Ultrasound Report
- 10.4.1. Ultrasound Note
- 10.4.2. Ultrasound Derivation
- 10.4.3. Ultrasound Report in PC

10.5. Ultrasound Safety during the COVID-19 Pandemic

A unique, key, and decisive educational experience to boost your professional development"

07

Clinical Internship

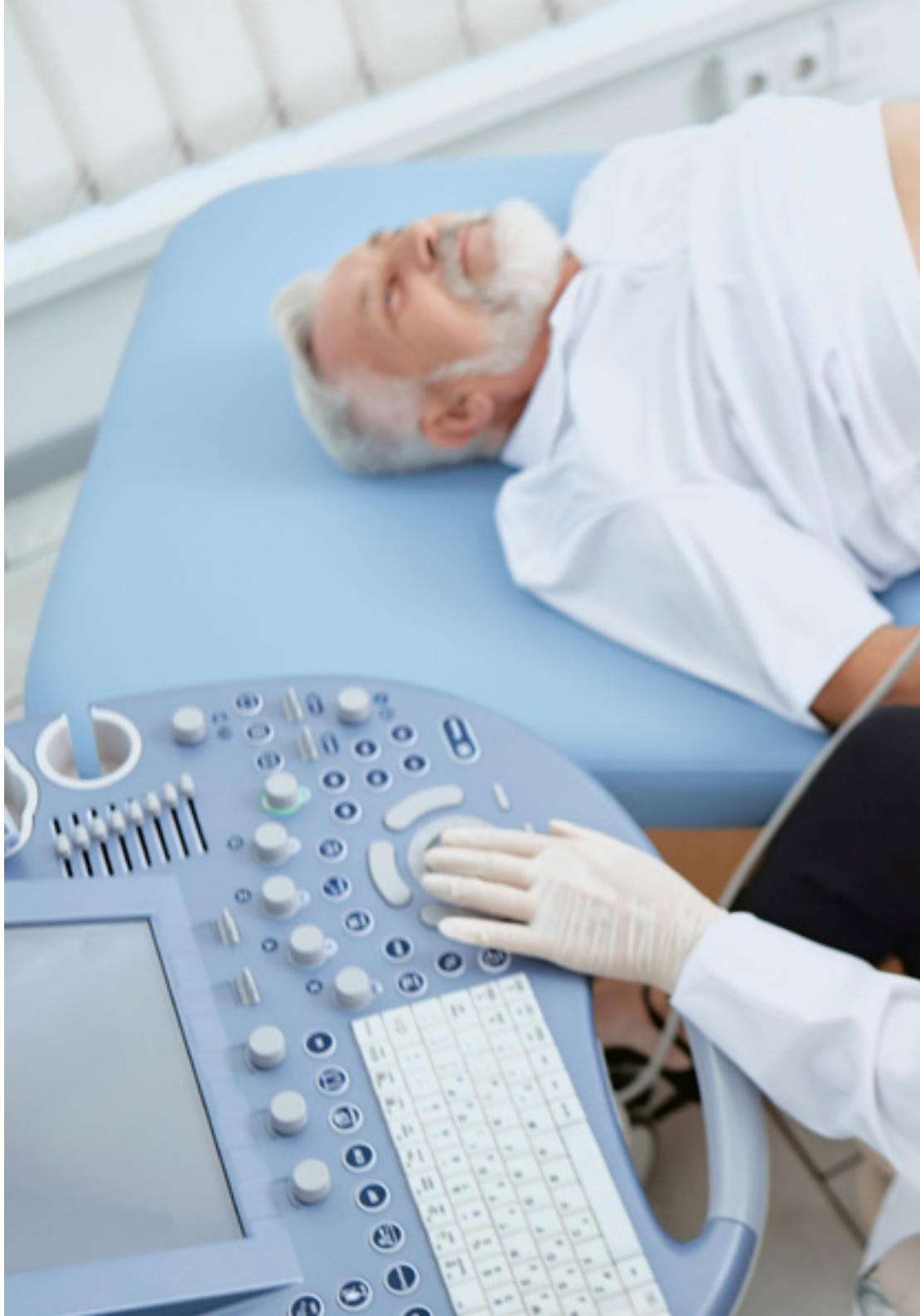
After completing the online period of the program, the physician will have the opportunity to perform a clinical internship in a prestigious center. During the internship, the professional will be able to carry out a series of ultrasound activities, having access to real patients and with the accompaniment of specialists from the clinic. Therefore, this internship is carried out over 3 weeks, from Monday to Friday, for 8 consecutive hours each day.

Do your internship in a prestigious center, carrying out numerous activities that will allow you to update your knowledge in a dynamic and fast way"

This phase of the program consists of a practical clinical internship in a prestigious center, where the physician will be able to update their knowledge for 3 weeks, from Monday to Friday, with 8 consecutive hours of practical learning with an assistant specialist. This internship will allow the professional to have access to real patients who require an ultrasound, always accompanied by a team of renowned professionals in the area of Primary Care.

The student will actively participate by performing activities and procedures related to each area of competence (learning to learn and learning to do), with the support and guidance of the teachers and other classmates, facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of medicine (learning to be and learning to relate to others).

The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:



Module	Practical Activity
Ultrasound Techniques and Ultrasound-Guided Procedures	Use the different modes (Modes A and M, Mode B, Color Doppler modes, and combined modes) in ultrasound examinations
	Apply ultrasound in the performance of percutaneous biopsies
	Collaborate in the ultrasound-guided procedures of Thoracentesis, Pericardiocentesis and Paracentesis
	Manage ultrasound to examine the drainage of abscesses and fluid collections
	Perform radial ultrasound of the breast, as well as in dermatological ultrasound and in patients with diabetes
	Make the ultrasound report
Exploration by Clinical Ultrasound of the Musculoskeletal and Head, Neck and Thorax	Explore, by ultrasound, the salivary glands, thyroid and supra-aortic trunks
	Explore, by ultrasound, the chest wall, mediastinum and diaphragm
	Assess, using ultrasound, different pathologies and pulmonary conditions such as pneumonia, atelectasis, pulmonary neoplasms and pulmonary infarction
	Ultrasound examination of the shoulder, elbow, wrist and hand, hip, thigh, knee, leg and ankle
Exploration by Clinical Ultrasound of the Vascular and Digestive System	Ultrasound exploration of the hepatic, pancreatic, gallbladder and biliary ducts
	Perform ultrasound assessment of the great vessels, spleen and retroperitoneum, as well as the gastrointestinal tract
	Use ultrasonography as a method of detection and assessment of vascular pathologies
Clinical Ultrasound Examination of the Genitourinary System	Perform the examination of kidneys, urinary tract, urinary bladder, as well as the prostate and seminal vesicles using Clinical Ultrasound
	Apply clinical ultrasound as a method of examination of the scrotum
	Perform assessment of the uterus and ovaries using ultrasound
Clinical Ultrasound in Emergencies	Participate in the ultrasound examination in cases of respiratory failure (spontaneous pneumothorax, bronchospasm, pneumonia, pleural effusion and heart failure)
	Perform ultrasound examination in shock and cardiac arrest, specifically in cases of hypovolemic shock, obstructive shock, cardiogenic shock, distributive shock and cardiac arrest
	Assess ultrasound in polytrauma, Eco-FAST: Pericardial effusion, Hemothorax and Pneumothorax, Hepatorenal or Perihepatic effusion, Splenorenal or Peri-splenic effusion, Perivesical effusion, Post-traumatic aortic dissection and musculoskeletal injuries

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.

General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

08

Where Can I Do the Clinical Internship?

TECH has selected prestigious clinical centers where the professional will be able to develop their practices. Therefore, the physician will have access to state-of-the-art technology in these centers, while being able to treat real patients who require an ultrasound. In addition, a specialist from the clinic will accompany them throughout the 3 weeks of their internship, guaranteeing that they will be able to catch up effectively.

The most prestigious clinical centers are waiting for you to provide you with the update you are looking for in the use of Clinical Ultrasound in the Primary Care area"

The student will be able to complete the internship of this Hybrid Professional Master's Degree at the following centers:

Hospital HM Modelo

Country: Spain
City: La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

Hospital Maternidad HM Belén

Country: Spain
City: La Coruña

Address: R. Filantropía, 3, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update in Assisted Reproduction
- Hospitals and Health Services Management

Hospital HM Regla

Country: Spain
City: León

Address: Calle Cardenal Landázuri, 2, 24003, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update on Psychiatric Treatment in Minor Patients

Hospital HM San Francisco

Country: Spain
City: León

Address: C. Marqueses de San Isidro, 11, 24004, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Update in Anesthesiology and Resuscitation
- Trauma Nursing

Hospital HM Rosaleda

Country: Spain
City: La Coruña

Address: Rúa de Santiago León de Caracas, 1, 15701, Santiago de Compostela, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Hair Transplantation
- Orthodontics and Dentofacial Orthopedics

Hospital HM Nou Delfos

Country: Spain
City: Barcelona

Address: Avinguda de Vallcarca, 151, 08023 Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Aesthetic Medicine
- Clinical Nutrition in Medicine

Policlínico HM Gabinete Velázquez

Country: Spain
City: Madrid

Address: C. de Jorge Juan, 19, 1° 28001, 28001, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Clinical Nutrition in Medicine
- Aesthetic Plastic Surgery

Policlínico HM Moraleja

Country: Spain
City: Madrid

Address: P.º de Alcobendas, 10, 28109, Alcobendas, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Rehabilitation Medicine in Acquired Brain Injury Management

Policlínico HM Distrito Telefónica

Country: Spain
City: Madrid

Address: Ronda de la Comunicación, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Optical Technologies and Clinical Optometry
- General and Digestive System Surgery

Hospital HM Puerta del Sur

Country: Spain
City: Madrid

Address: Av. Carlos V, 70, 28938, Móstoles, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Palliative Care
- Clinical Ophthalmology

Hospital HM Torrelodones

Country: Spain
City: Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

Hospital HM Sanchinarro

Country: Spain
City: Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Anaesthesiology and Resuscitation
- Palliative Care

Hospital HM Madrid

Country: Spain
City: Madrid

Address: Pl. del Conde del Valle de Súchil, 16, 28015, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Palliative Care
- Anaesthesiology and Resuscitation

Hospital HM Vallés

Country: Spain
City: Madrid

Address: Calle Santiago, 14, 28801, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Gynecologic Oncology
- Clinical Ophthalmology

Policlínico HM Las Tablas

Country: Spain
City: Madrid

Address: C. de la Sierra de Atapuerca, 5, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Trauma Nursing
- Diagnosis in Physiotherapy

Policlínico HM Sanchinarro

Country: Spain
City: Madrid

Address: Av. de Manoteras, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Gynecological Care for Midwives
- Nursing in the Digestive Tract Department

Hospital HM Montepríncipe

Country: Spain
City: Madrid

Address: Av. de Montepríncipe, 25, 28660, Boadilla del Monte, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Palliative Care
- Aesthetic Medicine

Hospital HM Nuevo Belén

Country: Spain
City: Madrid

Address: Calle José Silva, 7, 28043, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- General and Digestive System Surgery
- Clinical Nutrition in Medicine

Policlínico HM Imi Toledo

Country: Spain
City: Toledo

Address: Av. de Irlanda, 21, 45005, Toledo

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

Related internship programs:
- Electrotherapy in Rehabilitation Medicine
- Hair Transplantation

Affidea Medicentro Leganés

Country: Spain
City: Madrid

Address: Av. de la Mancha, 23-25, 28912 Leganés, Madrid

Clinic specialized in General Medicine, Surgery, Diagnostic Imaging and Pediatrics

Related internship programs:
- Clinical Ultrasound for Primary Care

Centre d'Atenció Primària Sant Cugat

Country
Spain

City
Barcelona

Address: Carrer de la Mina, 2, 08173 Sant Cugat del Vallès, Barcelona

Primary Care Centers

Related internship programs:
- Primary Care Clinical Ultrasound for Nursing

Enroll now and advance in your field of work with a comprehensive program that will allow you to put into practice everything you have learned"

09

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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

At TECH 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.

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:

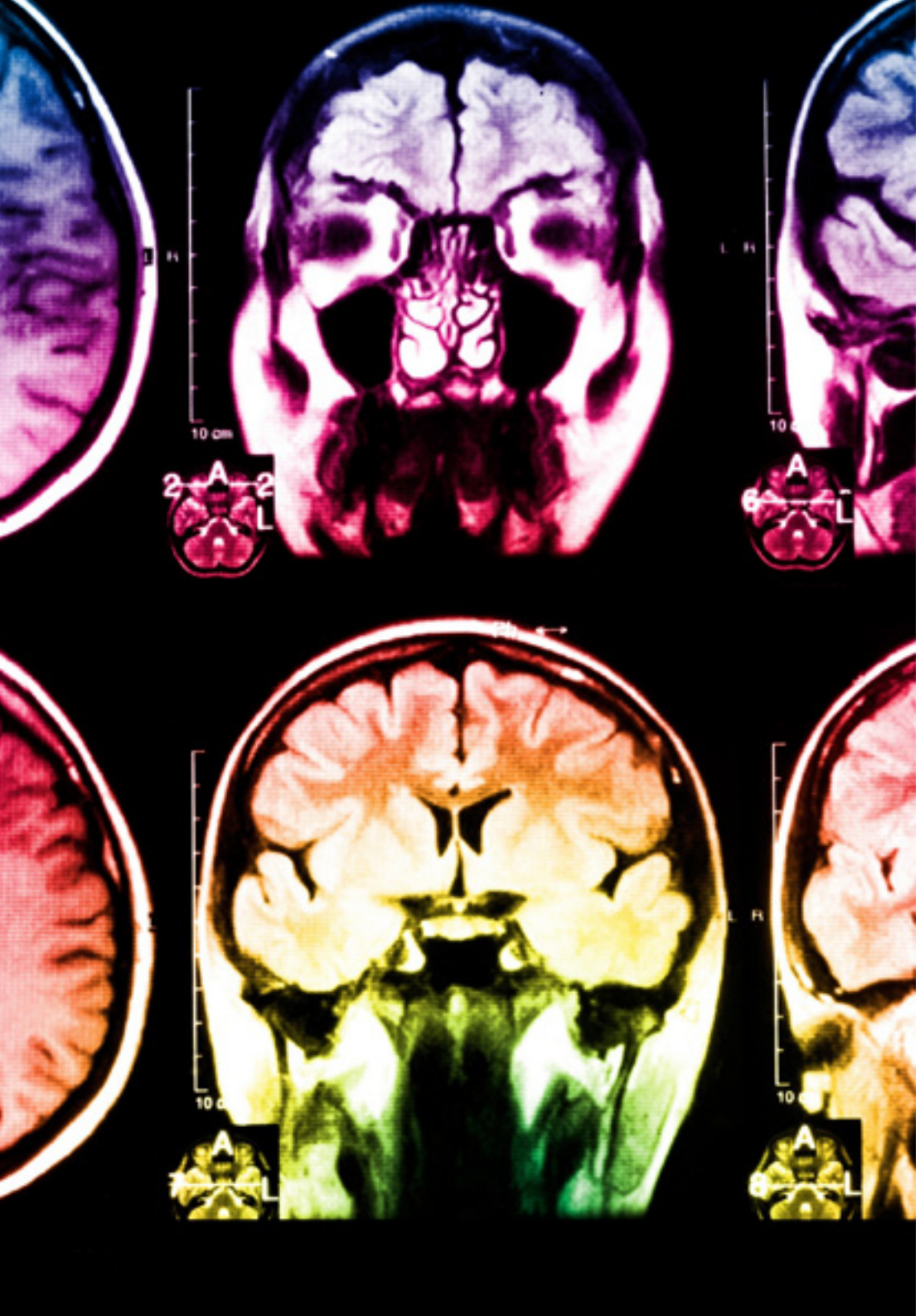
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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

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 the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

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.

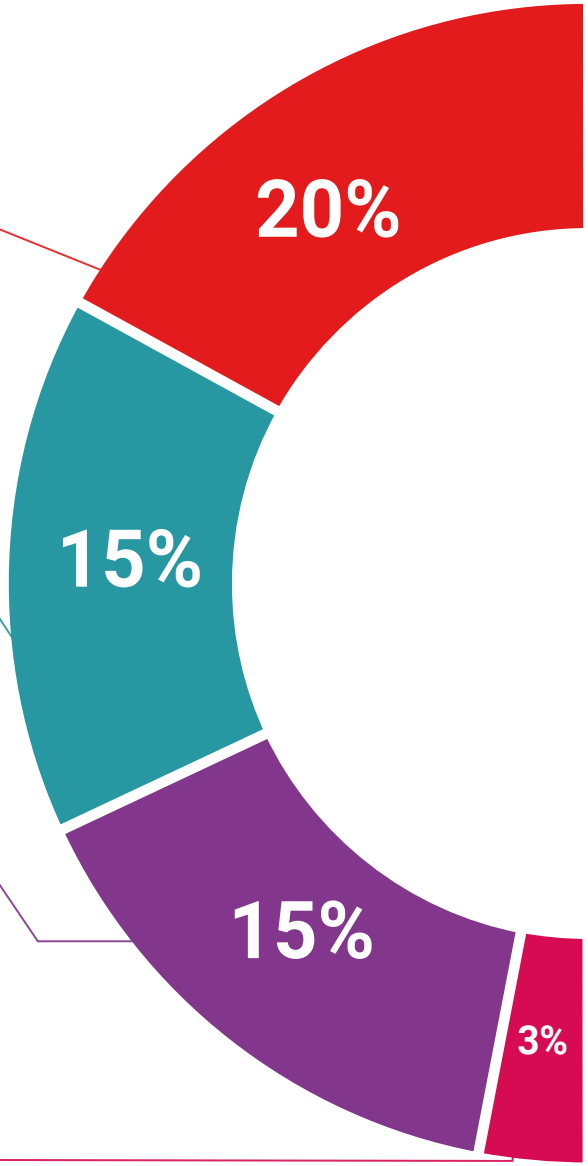
Interactive Summaries

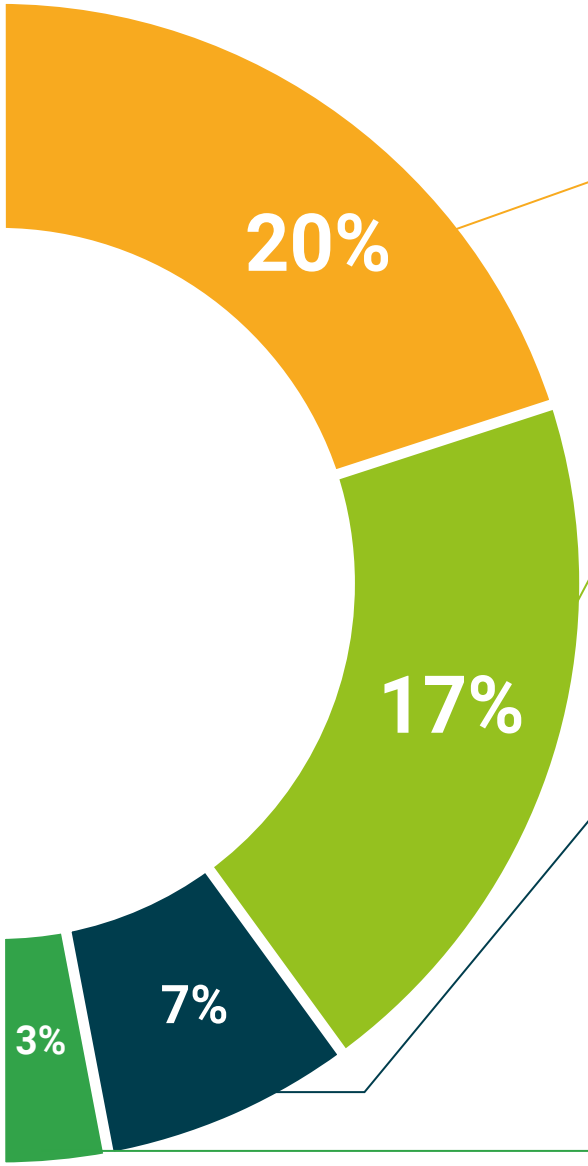
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

10

Certificate

The Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma issued by TECH Technological University.

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

This **Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care** contains the most complete and up-to-date program in the professional and academic landscape.

After the student has passed the evaluations, they will receive their corresponding TECH Hybrid Professional Master's Degree Diploma issued by TECH Technological University via tracked delivery.

In addition to the diploma, students will be able to obtain an academic transcript, as well as a certificate outlining the contents program. In order to do so, students , should contact their academic advisor, who will provide them with all the necessary information.

Program: **Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care**

Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 h.**

tech technological university

Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having successfully passed and accredited the following program

HYBRID PROFESSIONAL MASTER'S DEGREE

in

Clinical Ultrasound for Primary Care

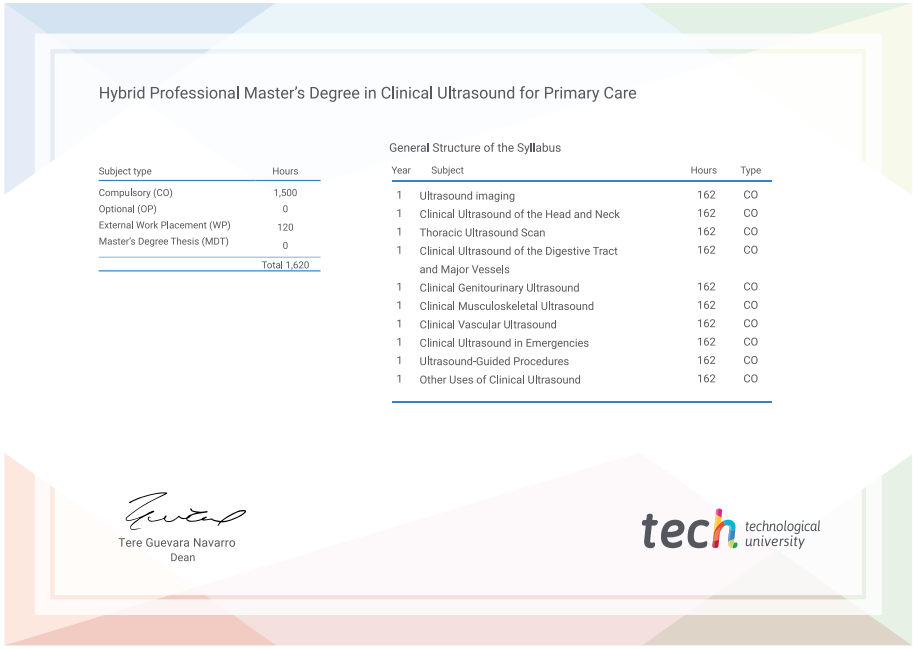
This is a qualification awarded by this University, with a duration of 1,620 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

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



Hybrid Professional Master's Degree in Clinical Ultrasound for Primary Care

Subject type	Hours
Compulsory (CO)	1,500
Optional (OP)	0
External Work Placement (WP)	120
Master's Degree Thesis (MDT)	0
	Total 1,620

General Structure of the Syllabus

Year	Subject	Hours	Type
1	Ultrasound imaging	162	CO
1	Clinical Ultrasound of the Head and Neck	162	CO
1	Thoracic Ultrasound Scan	162	CO
1	Clinical Ultrasound of the Digestive Tract and Major Vessels	162	CO
1	Clinical Genitourinary Ultrasound	162	CO
1	Clinical Musculoskeletal Ultrasound	162	CO
1	Clinical Vascular Ultrasound	162	CO
1	Clinical Ultrasound in Emergencies	162	CO
1	Ultrasound-Guided Procedures	162	CO
1	Other Uses of Clinical Ultrasound	162	CO

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Dean

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

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Hybrid Professional Master's Degree

Clinical Ultrasound for Primary Care

Modality: **Hybrid (Online + Clinical Internship)**
Duration: **12 months**
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Hybrid Professional Master's Degree

Clinical Ultrasound for Primary Care

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