

Professional Master's Degree

Obstetric and Gynecological Ultrasound





Professional Master's Degree Obstetric and Gynecological Ultrasound

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

Website: www.techtute.com/us/medicine/professional-master-degree/master-obstetric-gynecological-ultrasound

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01

Introduction

Ultrasound plays an essential role throughout the gestation period. Being decisive when it comes to detecting anomalies in the development of the fetus and diagnosing and preventing a multitude of diseases, it is logical that advances in this area occur continuously. These advances occur both in the technological field and in that of the specialists' own experience, favoring a field of action where updating is essential. This is exactly how this program was born, in which the main novelties of both the very bases of Ultrasound and the more specific aspects are compiled. In addition, its 100% online format makes it a flexible academic option, adapted to the needs of the specialist.



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Get up to date on the most relevant fields of Obstetric and Gynecological Ultrasound, including extensive writings on multiple gestation, fetal echocardiography and ovarian pathology”

The advance in the field of Obstetric and Gynecological Ultrasound is unstoppable. The software of the ultrasound equipment is increasingly advanced, allowing communication both between doctors and with the patient himself much more fluid. In addition, the reports provided are more detailed and draw on data collected from around the world, digitizing the workflow and boosting both the specialists' own efficiency and their ability to anticipate pathologies and adverse situations.

Therefore, in order to take advantage of these developments and stay up-to-date in the Obstetric and Gynecological area, it is essential to keep up to date with the most urgent ultrasound news. In this context, this program is created, with which specialists will be able to delve into the wide variety of existing gynecological pathologies, as well as obstetric problems and malformations that may appear during pregnancy.

In this way, an exhaustive tour is offered that covers the ultrasound scans of the first, second and third trimester, as well as the pathology of the endometrium, myometrium, cervix, endometriosis, pain and more areas of great scientific interest. All this sponsored by an exceptional faculty, made up of experts with extensive clinical experience who provide a necessary practical vision to all the content developed.

In the Virtual Campus, the specialist will find a detailed multimedia library, full of detailed videos, interactive summaries, complementary readings and more resources that will make the academic experience much more complete. Without fixed schedules or face-to-face classes, there is total freedom to adapt the study load as appropriate, since all the content can be downloaded from any device with an Internet connection.

This **Professional Master's Degree in Obstetric and Gynecological Ultrasound** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The examination of case studies presented by experts in Obstetrics and Gynecology
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions for 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



It delves into the use of Ultrasound in gynecological emergencies, ultrasound studies of greater rigor in pediatrics and the main ultrasound markers of the first, second and third trimester"

“

Get updated in fetal neurosonography and echocardiography, examining septal defects, sulcation anomalies and cystic pathology and ischemic”

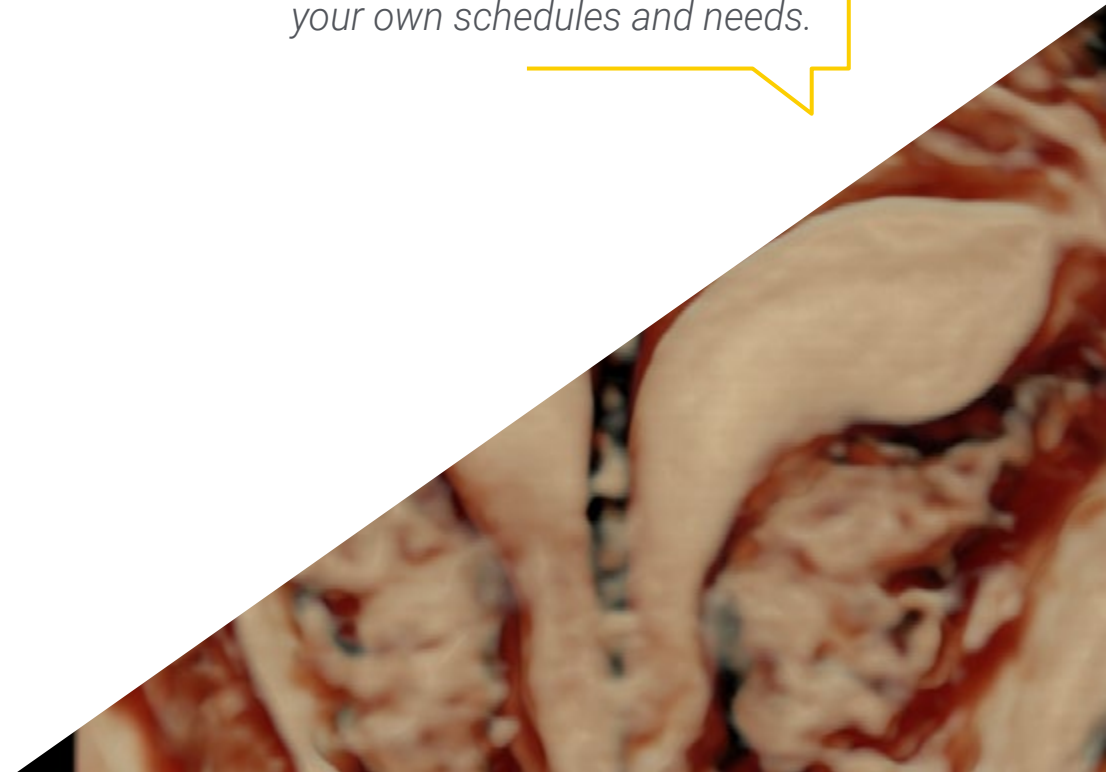
The program's teaching staff includes professionals from sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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

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

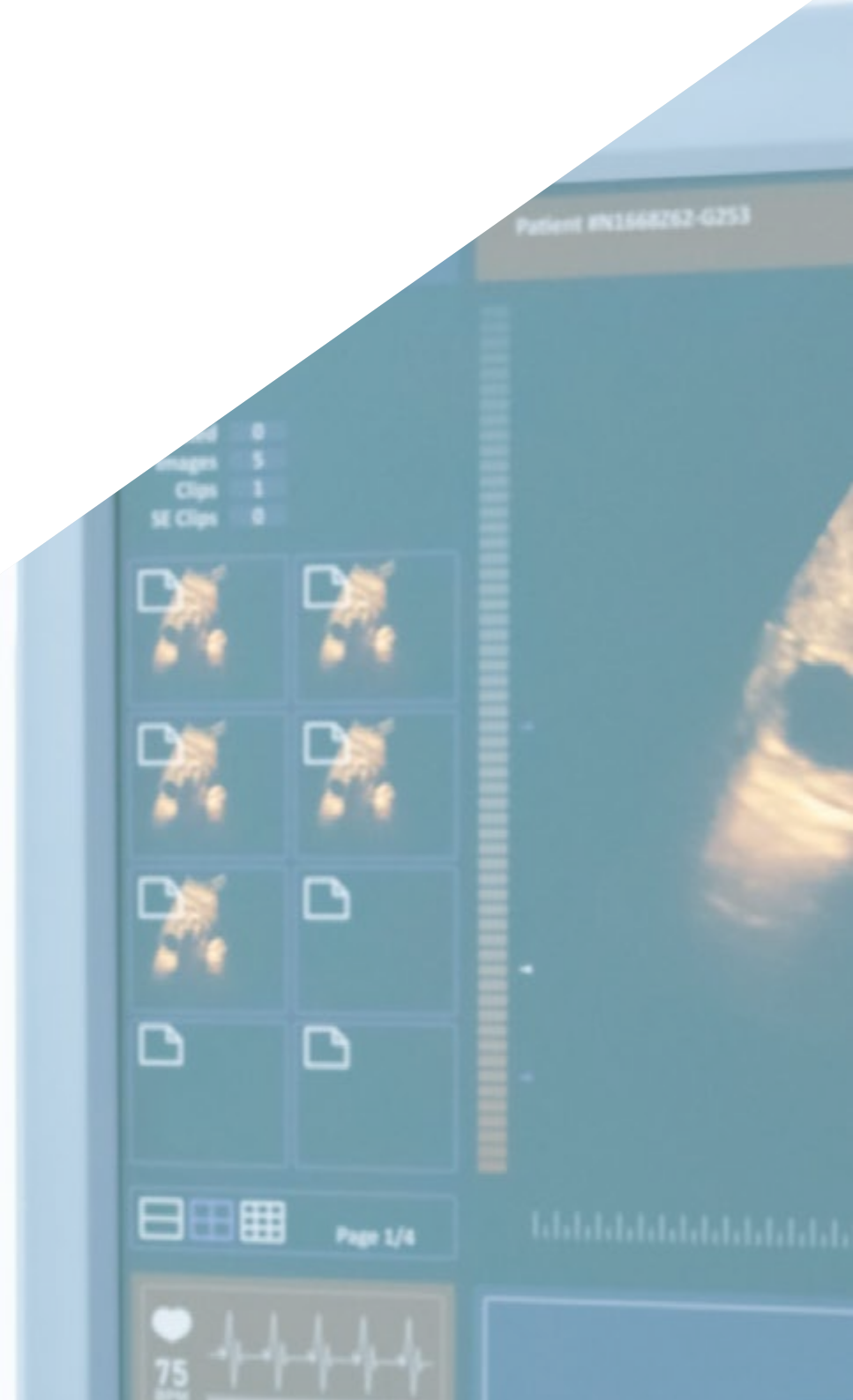
Lean on current clinical and ultrasound analysis, based on scientific postulates and the most recent advances in Obstetrics and Gynecology.

You will be able to access the Virtual Campus 24 hours a day, having the freedom to adapt the class load to your own schedules and needs.



02 Objectives

The syllabus prepared by the advanced teaching staff of this Professional Master's Degree pursues the objective of promoting the capacities of the specialist through the most advanced knowledge. In this way, and through topics written in a clear and direct way, the graduate will obtain a practical vision of the most important innovations in Obstetric and Gynecological Ultrasound. Thus, you will be able to incorporate the most effective techniques and work methodology in this area even before finishing the degree.





“

You will be able to incorporate into your workflow the most important advances in Ultrasound and clinical analysis of the obstetric pathologies with the highest incidence today”



General Objectives

- ◆ To know in depth the normal gynecological and obstetric ultrasound study, as well as the most used techniques
- ◆ In-depth knowledge of malformations diagnosable in the first trimester of pregnancy and ultrasound markers, as well as invasive techniques and screening for aneuploidy and preeclampsia and the usefulness of fetal DNA in maternal blood
- ◆ Study the diagnosable pathology in the third trimester, as well as intrauterine growth restriction and fetal hemodynamics, correctly applying the maternal-fetal Doppler
- ◆ Learn the most important concepts about fetal neurosonography and echocardiography, as well as the most relevant pathologies
- ◆ Study multiple gestation (monochorial and dichorionic) and its complications more frequent



The meticulousness with which the entire syllabus has been prepared, as well as the extensive amount of multimedia resources, will exceed even your highest expectations”





Specific Objectives

Module 1. Ultrasound. Normal study in Gynecology

- ◆ Thorough knowledge of normal anatomy in Gynecology
- ◆ Learn the basic principles of ultrasound, the operation of the ultrasound machine and its different applications
- ◆ Learn to use the Doppler correctly and know its technical aspects
- ◆ Know in depth the applications of 3D and 4D Ultrasound in Gynecology and Obstetrics, as well as the management of offline volumes
- ◆ In-depth knowledge of the main lines of research in Gynecological ultrasound

Module 2. Pathology of the endometrium, myometrium and cervix

- ◆ Know and differentiate benign and malignant endometrial pathology
- ◆ Study the usefulness of Gynecological Ultrasound after an abortion
- ◆ Study and differentiate benign and malignant myometrial pathology
- ◆ Know the diagnosis of La adenomyosis
- ◆ To study the most prevalent pathology of the cervix diagnosable by Ultrasound
- ◆ Learn the most prevalent pathology of the vagina diagnosable by Ultrasound
- ◆ Know in depth the basic aspects of the gynecological ultrasound study in pediatric age

Module 3. Ovarian pathology, endometriosis and pain

- ◆ Know and differentiate benign and malignant endometrial pathology
- ◆ Study tubal pathology diagnosable by ultrasound
- ◆ To know in depth the pelvic congestion syndrome and the utility of Ultrasound for its diagnosis
- ◆ Learn the usefulness of Ultrasound for the diagnosis of ovarian endometriosis and extraovarian
- ◆ Know in depth the role of Ultrasound in the monitoring and treatment of chronic pelvic pain
- ◆ Study the main uses of Interventional Ultrasound

Module 4. Reproduction and pelvic floor

- ◆ Know in depth the usefulness of Ultrasound in the diagnosis of infertility
- ◆ Study the main uterine malformations and their ultrasound diagnosis
- ◆ Understand the applications of 3D Ultrasound in assisted reproduction and its treatment
- ◆ Know the anatomy of the pelvic floor and its assessment by ultrasound
- ◆ Study the ultrasound diagnosis of the main pathologies of the pelvic floor, mainly genital prolapse and urinary incontinence

Module 5. First Trimester Ultrasound

- ◆ Know what the normal ultrasound study of the first trimester ultrasound is like
- ◆ To study the ultrasound of uncertain location and its management, as well as the utility of the ultrasound study in the management of early pregnancy
- ◆ Know the main ultrasound markers of the first trimester, both of aneuploidy and of other pathologies
- ◆ Learn the main diagnosable malformations in the first trimester
- ◆ In-depth knowledge of aneuploidy screening and first trimester preeclampsia screening
- ◆ Understand the use of fetal DNA in maternal blood, as well as the basic principles of genetics in Obstetrics

Module 6. Second Trimester Ultrasound

- ◆ Know in depth the study protocol of the second trimester Ultrasound, its basic cuts and normality
- ◆ Study the spectrum of placenta accreta and the keys for an accurate ultrasound diagnosis
- ◆ Know the cervical assessment by Ultrasound of the risk of preterm birth in second quarter
- ◆ Learn to identify the ultrasound markers of second trimester aneuploidy
- ◆ Know the main diagnosable malformations in the second trimester by devices and systems
- ◆ To study the main ultrasound characteristics of fetal hydrops and its management

Module 7. Third Trimester Ultrasound

- ◆ Know the study protocol of the third trimester Ultrasound, its basic cuts and normality
- ◆ To study the most frequent malformations diagnosable in the third trimester
- ◆ Know how to correctly estimate fetal growth and the management of the Doppler in the third trimester for a correct diagnosis of growth defects (PEG and CIR)
- ◆ Understanding the fetal hypoxic cascade and fetal hemodynamics
- ◆ Study the usefulness and main applications of intrapartum ultrasound
- ◆ Know the main alterations of amniotic fluid and its management

Module 8. Multiple Gestation

- ◆ Study the embryology of multiple gestations to correctly understand its classification and ultrasound diagnosis
- ◆ To know in depth the diagnosis and ultrasound monitoring of dichorionic and monochorionic twin gestation
- ◆ Learn to correctly diagnose the main disorders of monochorionic pregnancy (TAPS, TRAP and TFF)
- ◆ Understand how to diagnose and monitor growth retardation in monochorionic and dichorionic twin gestation
- ◆ To study the screening for preeclampsia and preterm labor in twin gestation
- ◆ Study the consequences of the death of a twin and how to manage this condition



Module 9. Fetal Echocardiography

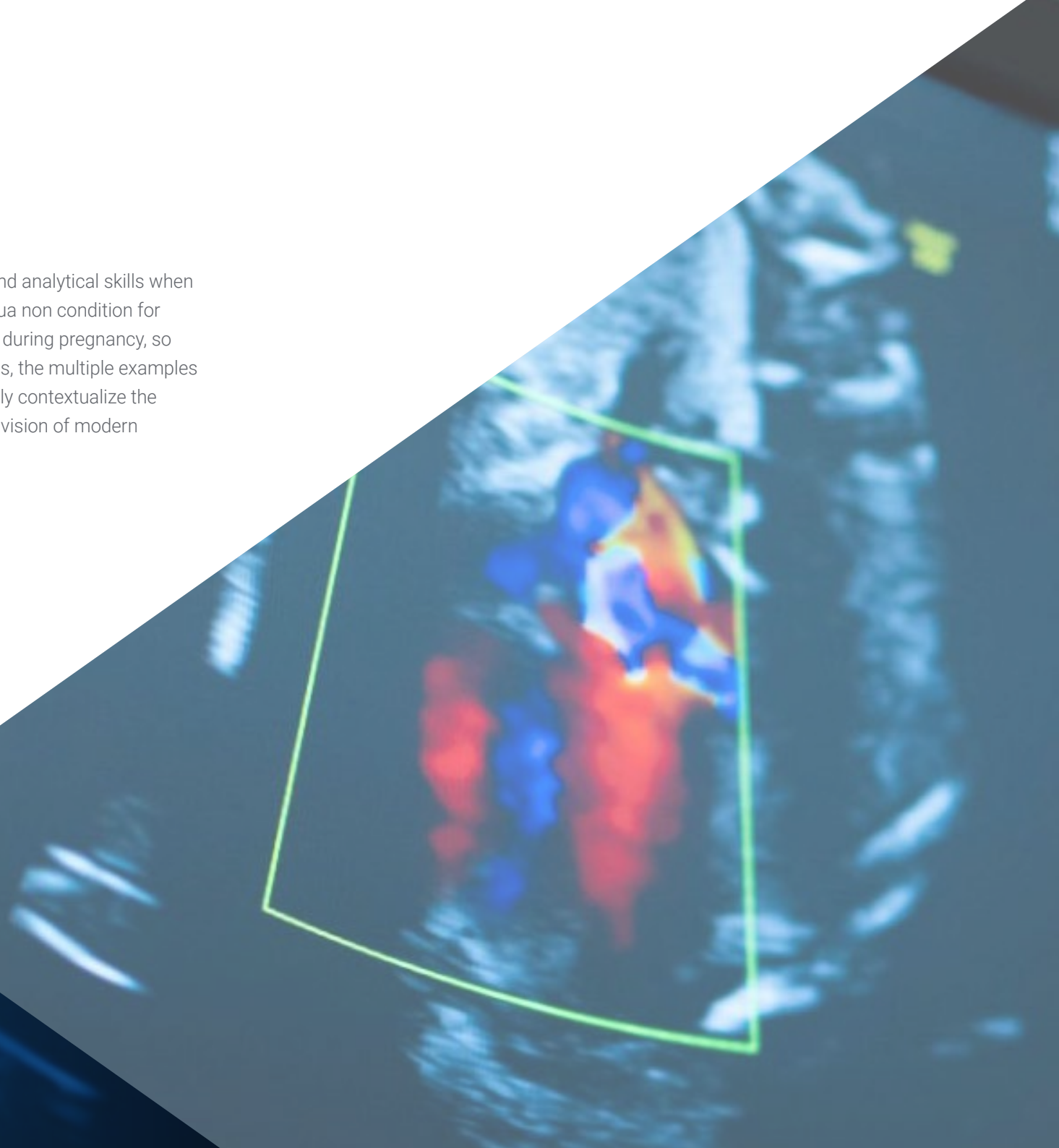
- ◆ Learn about the normal morphological and functional echocardiographic study and its main ultrasound sections
- ◆ Know exhaustively the alterations of the right and left heart, its diagnosis and prognosis
- ◆ Learn the main conotruncal anomalies, their diagnosis and prognosis
- ◆ Know in depth the main anomalies of venous return, their diagnosis and prognosis
- ◆ Study the main cardiac position and Situs anomalies, their diagnosis and implications

Module 10. Fetal neurosonography

- ◆ Learn about the normal neurosonographic study and its main ultrasound cuts
- ◆ Study the diagnosis of ventriculomegaly, its diagnosis and prognosis
- ◆ To know in depth the anomalies of the midline in the central nervous system, its diagnosis and prognosis
- ◆ Learn the main anomalies of the posterior fossa, their diagnosis and prognosis
- ◆ Know the main cystic pathologies of the central nervous system, their diagnosis and prognosis
- ◆ Study the main hemorrhagic or ischemic pathologies of the central nervous system, their diagnosis and prognosis
- ◆ Learn which are the main tumors of the central nervous system and their correct ultrasound diagnosis
- ◆ Learn the main applications of fetal Magnetic Resonance in the study of the central nervous system

03 Skills

Strengthening, developing and perfecting both diagnostic and analytical skills when handling ultrasound equipment is essential. This is a sine qua non condition for early detection of malformations or possible complications during pregnancy, so the program is focused on higher-level clinical practice. Thus, the multiple examples and cases analyzed throughout the entire agenda adequately contextualize the developments studied, providing a theoretical and practical vision of modern Obstetric and Gynecological Ultrasound.



“

Continue improving your skills in an area that does not stop at technological and technical advances, taking into account the most recent scientific postulates”

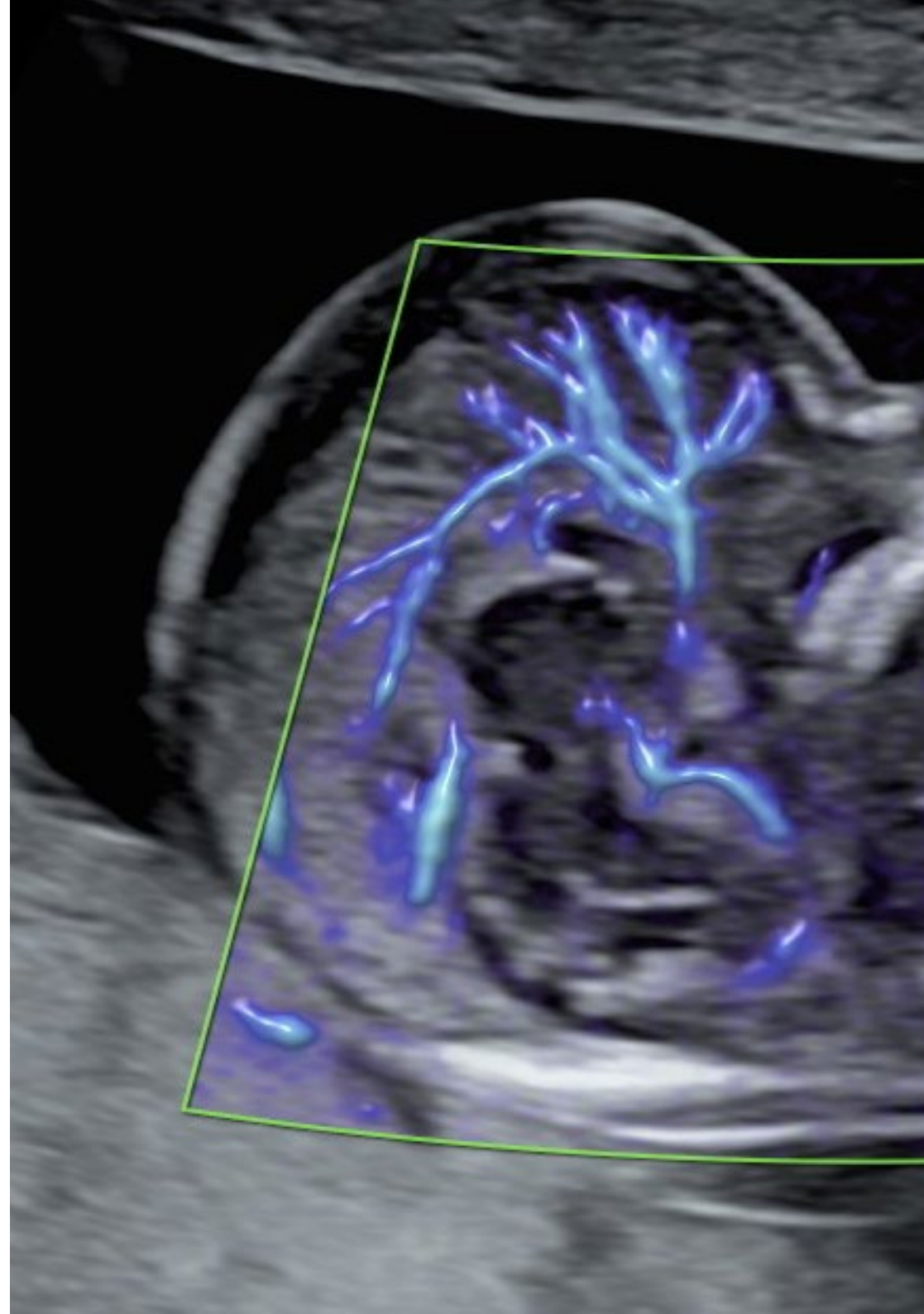


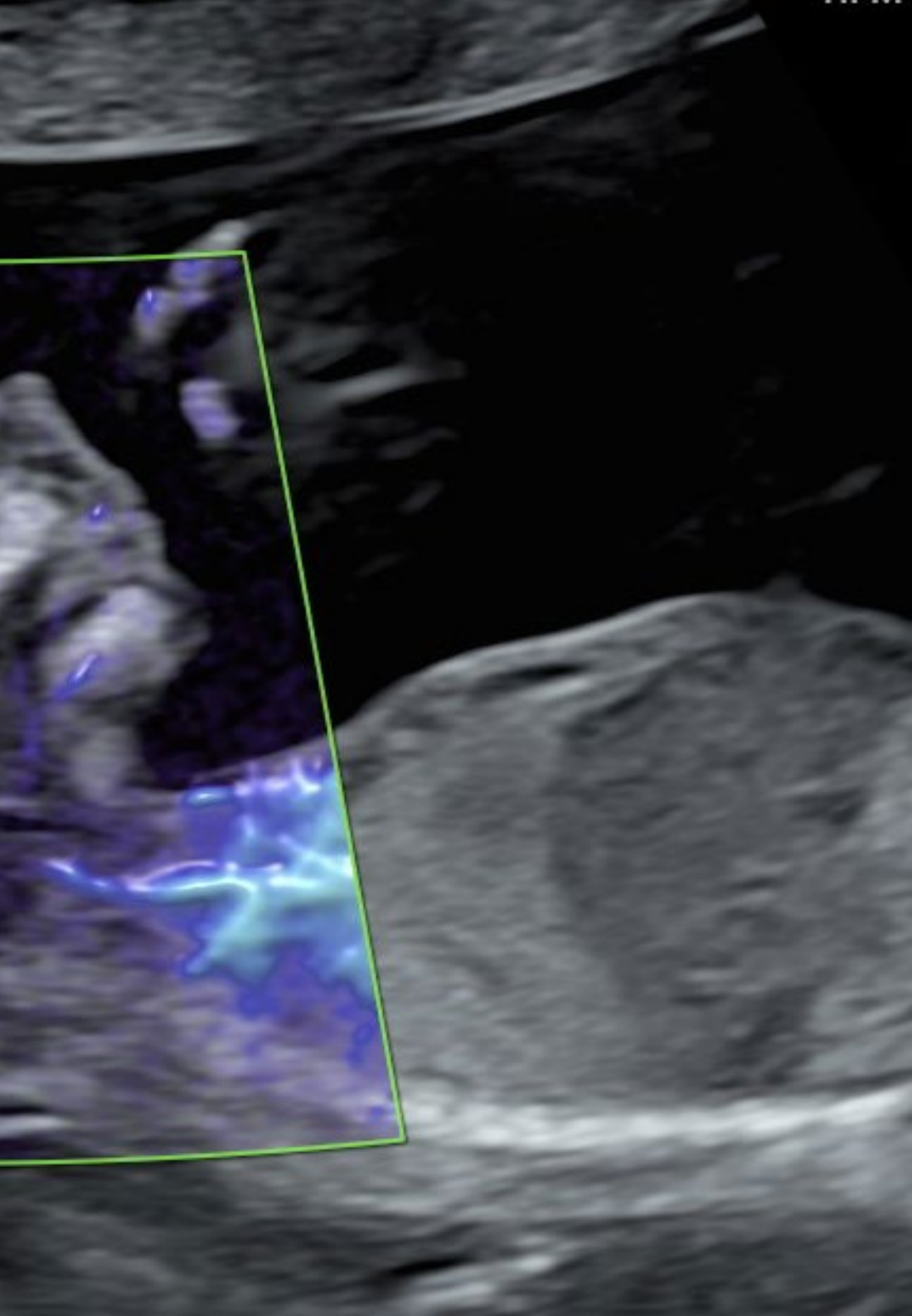
General Skills

- ◆ Master second trimester ultrasound and diagnosable malformations, as well as their etiology and prognosis
- ◆ Address the main pathologies of the endometrium, myometrium, cervix and ovary
- ◆ Apply Ultrasound in assisted reproduction and pelvic floor pathology, using 3D Ultrasound
- ◆ Effectively manage intrapartum ultrasound, mastering ultrasound in gynecological emergency

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Benefit from the knowledge of renowned experts with extensive experience in the obstetric and gynecological field”





Specific Skills

- ◆ Manage complementary techniques such as sonohysterography and sonovaginography
- ◆ Master the ultrasound study of fibroids and their therapeutic approach
- ◆ Make use of Ultrasound for the study of extension in cancer patients
- ◆ Know the main uses of Ultrasound in the post-surgical follow-up of pelvic floor surgery, including the study of meshes
- ◆ Apply the main invasive techniques in Obstetrics, covering their procedure and indications
- ◆ Advanced treatment of the main pathologies of the umbilical cord and placenta
- ◆ Diagnose and manage fetal macrosomia
- ◆ Handle in depth the main techniques for fetal reduction in dichorionic gestation
- ◆ Diagnose and manage the prognosis of different septal defects
- ◆ Make use of Ultrasound to diagnose the most important neuronal migration disorders

04

Course Management

To guarantee decisive quality in the area of Obstetric and Gynecological Ultrasound, TECH has developed this degree together with an extensive team of specialists with extensive experience in this field. Thus, with experts in fetal echocardiography, pelvic floor ultrasound, prenatal diagnosis and maternal-fetal medicine, the specialist will obtain a multidisciplinary and distinctive vision of an increasingly relevant field in Obstetrics and Gynecology.



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You will have direct contact with the teachers themselves to solve all your doubts and concerns, obtaining a personalized tutoring to your own needs”

Management



Dr. García-Manau, Pablo

- ◆ Obstetrician and Gynecologist at Hospital Quirón in Barcelona
- ◆ Associate physician of the Gynecology and Obstetrics Service of the Hospital Universitari de la Santa Creu i Sant Pau
- ◆ Maternal-Fetal Medicine Specialist
- ◆ Specialist in Obstetric Ultrasound and Fetal Echocardiography
- ◆ Member of the Catalan Society of Obstetrics and Gynecology (SCOG) and from the Spanish Society of Gynecology and Obstetrics (SEGO)

Professors

Dr. Carmona, Anna

- ◆ Specialist in the Pelvic Floor, Transgender Medicine and Medicine units of adolescence at the Mútua Terrassa Hospital
- ◆ Degree in Medicine and Surgery from the Autonomous University of Barcelona
- ◆ Master in Statistics applied to Medical Sciences from the Autonomous University of Barcelona
- ◆ Expert in the Treatment of Fibroids with High Intensity Ultrasound, HIFU (Chongqing Haifu)
- ◆ Expert in Pelvic Floor Ultrasound by the MútuaTerrassa Assistance

Dr. Pons, Nuria

- ◆ Specialist in the Unit of fibroids and benign pathology of the Hospital Mútua Terrassa
- ◆ Master in Sexology from the University of Barcelona
- ◆ Expert in the treatment of fibroids with high-intensity ultrasound, HIFU (Chongqing Haifu)
- ◆ Member of the ESGE Non-Surgical Ablative Therapy of Benignuterine Disease Working Group

Dr. Oteros, Beatriz

- ◆ Specialist in the Gynecology and Obstetrics Service of the Mútua Terrassa Hospital
- ◆ Specialist in the Unit of fibroids and benign pathology of the Hospital Mútua Terrassa
- ◆ Expert in Pelvic Floor Ultrasound by the MútuaTerrassa Assistance

Dr. Escribano, Gemma

- ◆ Specialist in the Benign Pathology and Obstetrics Unit of the Mútua Terrassa Hospital
- ◆ Coordinator of the ASSIR (Sexual and Reproductive Health Care) of the Mútua Terrassa Hospital
- ◆ Master in Minimally Invasive Surgery in Gynecology from Technological University TECH

Dr. Porta, Oriol

- ◆ President of the Catalan Society of Obstetrics and Gynecology
- ◆ Doctor of Medicine and Surgery from the Autonomous University of Barcelona
- ◆ Practical stay in Pelvic Floor and Chronic Pelvic Pain at the National Hospital for Neurology and Neurosurgery in London
- ◆ Senior Management Program in Healthcare Institutions, Business Administration and Management from IESE Business School and the University of Navarra
- ◆ Member of the Spanish Society of Gynecology and Obstetrics (SEGO), International Pelvic Pain Society (IPPS)

Dr. Aquise, Adriana

- ◆ Specialist in the Gynecology and Obstetrics Service of the Hospital of Torrejón Hospital
- ◆ Specialist in Obstetrics and Gynecology at Vall d'Hebron Hospital
- ◆ Clinical tutor of Practice from the Degree in Medicine at the University Francisco of Vitoria
- ◆ Doctor of Medicine, University of Seville
- ◆ Fellow in Fetal Medicine at King's College Hospital
- ◆ Specialist in Fetal Medicine and Obstetric Ultrasound by the Fetal Medicine Foundation
- ◆ Member of the Spanish Society of Gynecology and Obstetrics (SEGO), Ultrasound Section of SEGO (SESEGO)

Dr. Mendoza, Manel

- ◆ Head of the Placental Insufficiency Unit of the Obstetrics Service of the Vall d'Hebron University Hospital
- ◆ Specialist in the Obstetrics Service of the Vall d'Hebron University Hospital
- ◆ PhD from the Autonomous University of Barcelona
- ◆ Maternal-Fetal Medicine Specialist
- ◆ Vocal President of the Maternal-Fetal Medicine Section of the Catalan Society of Obstetrics and Gynecology (SCOG)
- ◆ Member of the Spanish Society of Gynecology and Obstetrics(SEGO)

Dr. Arévalo, Silvia

- ◆ Head of Section of the Obstetrics Service of the Hospital Vall d'Hebron
- ◆ Specialist in Prenatal Diagnosis, Fetal Medicine and Fetal Echocardiography
- ◆ Member of the Catalan Society of Obstetrics and Gynecology (SCOG) Catalan Society Spanish Society of Gynecology and Obstetrics (SEGO)

Dr. Bonacina, Erika

- ◆ Head of the Placental Insufficiency Unit of the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Obstetrician and Gynecologist at Hospital Quirón in Barcelona
- ◆ Maternal-Fetal Medicine Specialist

Dr. Maiz, Nerea

- ◆ Research coordinator of the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Specialist in the Fetal Medicine Unit of the Vall d'Hebron Hospital
- ◆ Specialist in Prenatal Diagnosis and Fetal Medicine
- ◆ Associate Professor at the University of Vic
- ◆ Doctor of Medicine from the University of Barcelona
- ◆ Graduate in Medicine and Surgery from Universidad de Navarra
- ◆ Master's Degree in Research Methodology in Health Sciences from Autonomous Universitat of Barcelona
- ◆ Member of the Spanish Society of Gynecology and Obstetrics(SEGO)

Dr. Rodó, Carlota

- ◆ Assistant physician in the Obstetrics Department of the Vall d'Hebron Hospital
- ◆ Specialist in Prenatal Diagnosis, Fetal Medicine and Fetal neurosonography
- ◆ PhD from the Autonomous University of Barcelona
- ◆ Member of the Spanish Association of Prenatal Diagnosis (AEDP) and of the Ultrasound Section of the Catalan Society of Obstetrics and Gynecology (SCOG)
- ◆ Member of the Spanish Society of Gynecology and Obstetrics(SEGO)

Dr. Prada, Elena

- ◆ Specialist in Human Reproduction at CIRH
- ◆ Specialist in Human Reproduction at the Mutua de Terrassa University Hospital
- ◆ Master in Human Nutrition from the University of Barcelona
- ◆ IVI Master in Human Reproduction
- ◆ University Expert in Clinical Genetics and Genomics
- ◆ Member of: the Spanish Fertility Society (SEF), European Society of Human

Dr. Cassadó, Jordi

- ◆ Assistance Coordinator Obstetrics and Gynecology Service of the Mútua Terrassa Hospital
- ◆ Vice President of the Pelvic Floor Section of the Spanish Society of Obstetrics and Gynecology (SEGO)
- ◆ Associate Professor of Obstetrics and Gynecology at the University of Barcelona
- ◆ Professor at the International School of Gynecological Endoscopy (EIDEG)
- ◆ Doctor of Medicine and Surgery from the Autonomous University of Barcelona
- ◆ Specialist in Gynecology and Obstetrics

Dr. López-Quesada, Eva

- ◆ Coordinator of Obstetrics and Gynecology Service of the Mútua Terrassa Hospital
- ◆ PhD Autonomous University of Barcelona
- ◆ Specialist in Prenatal Diagnosis and Maternal-Fetal Medicine
- ◆ Postgraduate in Fetal Medicine and Clinical Genetics and Genomics
- ◆ Member of the Clinical Commission for Quality Control of First Trimester Ultrasound in Catalonia, Catalan Society of Obstetrics and Gynecology (SCOG)

Dr. Codina, Laura

- ◆ Specialist in the Obstetrics and Gynecology Service of the Mútua Terrassa Hospital
- ◆ Specialist in Prenatal Diagnosis and Maternal-Fetal Medicine
- ◆ Member of the Catalan Society of Obstetrics and Gynecology (SCOG) Catalan Society Spanish Society of Gynecology and Obstetrics (SEGO)

Dr. Cabello, Eloy

- ◆ Specialist in the Obstetrics and Gynecology Service of the Mútua Terrassa Hospital
- ◆ Specialist in Prenatal Diagnosis and Maternal-Fetal Medicine
- ◆ Member of the Catalan Society of Obstetrics and Gynecology (SCOG) Catalan Society Spanish Society of Gynecology and Obstetrics (SEGO)

Dr. Vilà Casas, Joan

- ◆ Head of the Obstetric Ultrasound Unit of the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Specialist in the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Obstetric Ultrasound Specialist

Dr. Ferrer, Queralt

- ◆ Specialist in the Pediatric Cardiologist Service of the Vall d'Hebron Hospital
- ◆ Specialist in Pediatric and Fetal Cardiology at Quirón-Dexeu Hospital
- ◆ Specialist in Pediatrics and Pediatric Cardiology
- ◆ Member of the Fetal Cardiology Working Group of the European Society of Pediatric Cardiology, Fetal Cardiology Working Group of the Spanish Society of Pediatric Cardiology (SECPCC)

Dr. Giralt, Gemma

- ◆ Specialist in the Pediatric Cardiologist Service of the Vall d'Hebron Hospital
- ◆ Specialist in Pediatrics and Pediatric Cardiology
- ◆ Member of the Imaging Section of the Spanish Society of Pediatric Cardiology (SECPCC)
- ◆ Member of the Spanish Society of Cardiology (SEC and Spanish Society of Pediatric Cardiology (SECPCC)



Dr. Fidalgo Conde, Ana María

- ◆ Specialist in the Gynecology and Obstetrics Service of HU of Torrejón Hospital
- ◆ Clinical tutor of Practice from the Degree from Medicine at the University Francisco of Vitoria
- ◆ Degree in Medicine from the University of Alcalá, Spain.
- ◆ Specialist in Maternal-Fetal Medicine and Obstetric Ultrasound
- ◆ Fellow in Fetal Medicine at King's College Hospital
- ◆ Member of the Spanish Society of Gynecology and Obstetrics (SEGO), Ultrasound Section of SEGO (SESEGO)

Dr. Higuera, Teresa

- ◆ Head of the Obstetric Ultrasound Unit of the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Specialist in the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Doctor from the University of Zaragoza
- ◆ Practical stay in Fetal Medicine at King's College Hospital
- ◆ Associate Professor at University Autonomous of Barcelona
- ◆ Member of the Spanish Society of Gynecology and Obstetrics (SEGO)

Dr. Maroto, Anna

- ◆ Head of Section of Obstetrics of the Gynecology and Obstetrics Service of the Hospital Josep
- ◆ Maternal-Fetal Medicine Specialist
- ◆ Associate Professor at University of Girona.
- ◆ Vocal President of the Maternal-Fetal Medicine Section of the Catalan Society d' i. ginecologia (SCOG)
- ◆ PhD Autonomous University of Barcelona

Dr. Martínez, Clara

- ◆ Specialist in the Gynecology and Obstetrics Service of the Josep Hospital
- ◆ In Prenatal Diagnosis
- ◆ Member of the Spanish Group of Safety.

Dr. Sánchez, María Ángeles

- ◆ Head of the Prenatal Diagnosis. Unit of the Obstetrics Service of the Vall d'Hebron Hospital
- ◆ Specialist in the Obstetrics Service of the Vall d'Hebron University Hospital
- ◆ Specialist in Prenatal Diagnosis and Fetal Medicine
- ◆ Doctor of Medicine from the University of Barcelona
- ◆ Member of the Catalan Society of Obstetrics and Gynecology (SCOG) Catalan Society Spanish Society of Gynecology and Obstetrics (SEGO)

Dr. Urquiza, Xavier

- ◆ Specialist in the Obstetrics and Gynecology Service of the Mútua Terrassa Hospital
- ◆ Maternal-Fetal Medicine Specialist
- ◆ Doctorate from the University of Barcelona
- ◆ Member of the Catalan Society of Obstetrics and Gynecology (SCOG) Catalan Society Spanish Society of Gynecology and Obstetrics (SEGO)

05

Structure and Content

Making use of the Relearning pedagogical methodology, the Professional Master's Degree in Obstetric and Gynecological Ultrasound provides a progressive, natural and effective academic experience for the specialist. This is achieved by reiterating the key concepts in the area throughout the degree, saving, in turn, a considerable investment in study hours that can be invested in the numerous complementary readings that delve into each topic covered.



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Download all the contents of the Virtual Campus and gain access to a vital reference guide in Obstetric and Gynecological Ultrasound, which is useful even after finishing the program”

Module 1. Ultrasound. Normal study in Gynecology

- 1.1. Normal Anatomy in Gynecology
 - 1.1.1. Normal Anatomy in Gynecology
 - 1.1.2. Normal Gynecological Ultrasound Anatomy: Structures and Anatomical References to take into Account
 - 1.1.3. Ultrasound Technique: Systematic Examination
 - 1.1.4. Language and Description of Normality and Pathology in the Ultrasound Technique
- 1.2. Physical Principles of Ultrasound. Technical Aspects
 - 1.2.1. Basic Principles on the Physics of Ultrasound
 - 1.2.2. Creation of the Image from Ultrasound
 - 1.2.3. Ultrasound Image Features
 - 1.2.4. Optimization of Gynecological Ultrasound
 - 1.2.5. Recognition and Correction of Artifacts
- 1.3. Types of Ultrasound Probes in Gynecological Ultrasound
 - 1.3.1. Transducer Types
 - 1.3.2. Advantages and Disadvantages of Different probe and Approaches
- 1.4. Technical Principles on the Doppler. Technical Aspects
 - 1.4.1. Physical Principles of Doppler
 - 1.4.2. Main Indications of the Doppler in the Gynecological Ultrasound Examination
 - 1.4.3. Doppler Technique Optimization
- 1.5. Technical Principles on 3D/4D Ultrasound. Technical and Uses Aspects
 - 1.5.1. Basic Principles on 3-4D Ultrasound
 - 1.5.2. Application of the 3-4D Technique in Gynecology
 - 1.5.3. Systematics of the Technique by Structures: Volume Acquisition
 - 1.5.4. Navigation, Reconstruction and Rendering of the Ultrasound Volume
 - 1.5.5. Reconstruction Optimization: Default Modes
 - 1.5.6. Principles of Multiplanar Reconstruction or TUI
- 1.6. Use of Ultrasound in Gynecological and Obstetric Emergencies
 - 1.6.1. Application of Ultrasound in Gynecological Obstetric Emergencies
 - 1.6.2. Systematic of the Ultrasound Technique in Gynecological Emergency
 - 1.6.3. Ultrasound into the Differential Diagnosis Acute Abdomen
 - 1.6.4. Ultrasound in the Differential Diagnosis of Metrorrhagia
 - 1.6.5. Ultrasound Report in Urgent Gynecological Pathology
 - 1.6.6. Limitations of Ultrasound: Complementary Techniques to Request
- 1.7. Offline Volume Management
 - 1.7.1. Presentation of Different Software
 - 1.7.2. Volume Storage
 - 1.7.3. Volume Recovery in Offline Software
 - 1.7.4. Navigation and Optimization of the Two-dimensional Plane
 - 1.7.5. Navigation in the 2D plane: In time and Space
 - 1.7.6. Three dimensional Reconstruction
 - 1.7.7. Three-dimensional Image Optimization
- 1.8. Complementary Techniques: Sonohysterography/Hysterosonosalingography
 - 1.8.1. Basic Examinations Principles
 - 1.8.2. Systematics of the Technique
 - 1.8.3. Hysterosonography: Technique, Image Interpretation and Report Preparation
 - 1.8.4. Hysterosonosalingography: Technique, Image Interpretation and Report Preparation
- 1.9. Current Lines of Research of Gynecological ultrasound
 - 1.9.1. State of Artificial Intelligence Applied to Gynecological Ultrasound
 - 1.9.2. The Current and Future Role of Ultrasound in the Assessment of the Gynecological Oncological Patient
 - 1.9.3. Elastography in Gynecology
 - 1.9.4. Ultrasound in the Diagnosis and Management of Severe Genital Atrophy and Genitourinary Syndrome

Module 2. Pathology of the endometrium, myometrium and cervix

- 2.1. Ultrasound in Benign Endometrial Pathology
 - 2.1.1. Endometrial Ultrasound Normality: Qualitative and Quantitative Assessment
 - 2.1.2. Ultrasound, Endometrium and Variation with the Menstrual Cycle
 - 2.1.3. Three-dimensional Technique in Endometrial Assessment
 - 2.1.4. Description and Terminology According to IETA Group
 - 2.1.5. Ultrasonography in the Evaluation of Endometrial Hyperplasia
 - 2.1.6. Ultrasonography in the Evaluation of Endometrial Hyperplasia
- 2.2. Ultrasound from Malign Endometrial Pathology
 - 2.2.1. Introduction: Endometrial Cancer
 - 2.2.2. Ultrasound Features of Endometrial Cancer
 - 2.2.3. Systematic Local Evaluation of Endometrial Cancer
 - 2.2.4. Systematic Assessment of Extraendometrial Disease
 - 2.2.5. Systematic to Recurrence Evaluation of Endometrial Cancer
- 2.3. Gynecological ultrasound after abortion: Retention of conception remains / Sd. Asherman
 - 2.3.1. Endometrial Ultrasound Normality after Complete Abortion
 - 2.3.2. Endometrial Ultrasound Normality After Complete Abortion.2.
 - 2.3.3. Ultrasound in the Assessment and Monitoring of Uterine Synechiae
- 2.4. Ultrasound in the Diagnostic Study of Fibroids
 - 2.4.1. Definition and General Aspects of Miomas
 - 2.4.2. Types of Fibroids: Classifications and Implications
 - 2.4.3. Description and Ultrasound Classification
 - 2.4.4. Myomas Degeneracy Types
 - 2.4.5. Ultrasound Features: Doppler Technique and Three-dimensional Reconstruction
 - 2.4.6. Ultrasound Monitoring of the Patient with Uterine Myomatosis
 - 2.4.7. Differential Diagnosis, Limitations of the Technique and Complementary Examinations
- 2.5. Ultrasound in the Therapeutic Approach of Fibroids
 - 2.5.1. Ultrasound in the Treatment of Fibroids with Radiofrequency
 - 2.5.2. Ultrasound in the Treatment of Fibroids with High Frequency Ultrasound(HIFU)
- 2.6. Ultrasonography in the Evaluation of Endometrial Hyperplasia
 - 2.6.1. Overview of Malignant Tumors of the Myometrium
 - 2.6.2. Ultrasound Differential Diagnosis of Uterine Sarcomas
 - 2.6.3. Limitation of Ultrasound in the Diagnosis of Uterine Sarcomas: Complementary Tests
- 2.7. Adenomyosis
 - 2.7.1. Basics of Adenomyosis
 - 2.7.2. Sonographic Features of Normal Myometrium
 - 2.7.3. Ultrasound Characteristics of Adenomyosis through the MUSA System.
 - 2.7.4. Report of the Ultrasound Description of the Findings in the Clinical Report
 - 2.7.5. Correlation of Pathological Anatomy with Ultrasound Assessment of the Myometrial-endometrial Junction
 - 2.7.6. Limitations of Ultrasound and Complementary Tests in the Diagnosis and Follow-up of Adenomyosis
- 2.8. Ultrasound Study in the Assessment of the Cervix
 - 2.8.1. Ultrasound Anatomy of the Normal Cervix
 - 2.8.2. Ultrasound Characteristics and Description of Cervical Tumors
 - 2.8.3. Role of Ultrasound in the Initial Staging of Cervical Cancer
 - 2.8.4. Role of Ultrasound in the Disease of Cervical Cancer
 - 2.8.5. Ultrasound in the Follow-up of the Patient with Cervical Cancer: Assessment of Treatment and Assessment of Recurrences
- 2.9. Ultrasound Study in the Assessment of the Vagina and Vulva
 - 2.9.1. Current Evidence for Ultrasound Assessment of the Vagina and Vulva
 - 2.9.2. Ultrasound Applications
 - 2.9.3. Findings and Technique Systematics
- 2.10. Ultrasound Study in Pediatric Age
 - 2.10.1. Introduction to the Most Frequent Pediatric Pathology
 - 2.10.2. Normal Ultrasound in the Pediatric and Adolescent Patient
 - 2.10.3. Recommended Approaches: Advantages and Disadvantages
 - 2.10.4. Ultrasound of Precocious Puberty
 - 2.10.5. Ultrasound Findings in Intersex
 - 2.10.6. Hematocolpos Secondary to Imperforate Hymen

Module 3. Ovarian pathology, endometriosis and pain

- 3.1. Ultrasound in the Assessment of Benign Ovarian Pathology
 - 3.1.1. Normal Sonographic Anatomy of the Ovary
 - 3.1.2. Generalities and Classifications of Benign Ovarian Pathologies
 - 3.1.3. Systematic Assessment and Ultrasound Description of Adnexal Pathology: Benign Ultrasound Criteria
 - 3.1.4. Types of Tumors and Sonographic Characteristics
 - 3.1.5. Ovarian Torsion: Ultrasonographic Findings
- 3.2. Ultrasound in the Assessment of Malign Ovarian Pathology
 - 3.2.1. Introduction and Overview of Malignant Ovarian Lesions
 - 3.2.2. Classification and Ultrasound System According to IOTA
 - 3.2.3. Types of Tumors and Sonographic Characteristics
 - 3.2.4. Ultrasound in Regional and Distant Staging of Ovarian Neoplasms
 - 3.2.5. Limitations of Ultrasound and Complementary Tests
 - 3.2.6. Ultrasound during Follow-up and Recurrence of Patients with a History of Ovarian Neoplasia
 - 3.2.7. Borderline Tumors and Ecography
- 3.3. Ultrasound Study to the Tubal Pathology
 - 3.3.1. Ultrasound of Normal Tubes
 - 3.3.2. Ultrasound Findings in Patients with Hydrosalpinx
 - 3.3.3. Ultrasound Findings in Patients with Pelvic Inflammatory Disease
 - 3.3.4. Malignant Tubular Diseases
- 3.4. Ultrasound in the Evaluation of Pelvic Congestion Syndrome
 - 3.4.1. Definition, Diagnosis and Therapeutic Approach
 - 3.4.2. Findings Ultrasound in the Evaluation of Pelvic Congestion Syndrome
 - 3.4.3. Complementary Imaging Tests
- 3.5. Ultrasound in the Diagnosis of Ovarian Endometriosis
 - 3.5.1. Definition, Impact and Diagnosis
 - 3.5.2. Systematic of the Ultrasound Technique
 - 3.5.3. Ultrasound Findings in Patients with Ovarian Endometriosis
 - 3.5.4. Differential Diagnosis and Complementary Tests

- 3.6. Ultrasound in the Diagnosis of Ovarian Endometriosis
 - 3.6.1. Definition, Impact and Diagnosis
 - 3.6.2. Systematic of the Ultrasound Technique
 - 3.6.3. Ultrasound Assessment of the Pelvis by Structures and Compartments
 - 3.6.4. Assessment of Extrapelvic Implants: Umbilical, Trocar or Cesarean Scar Implants
 - 3.6.5. Complementary Imaging Tests
- 3.7. Ultrasound in the Patient with Chronic Pain in Gynecology
 - 3.7.1. General Introduction
 - 3.7.2. Ultrasound Findings in Gynecological Patients with Chronic Pain
 - 3.7.3. Ultrasound in the Local Treatment of Gynecological Patients with Chronic Pain
- 3.8. Ultrasound in Breast Pathology
 - 3.8.1. Ultrasound Breast Anatomy
 - 3.8.2. Probes and Technique Systematics
 - 3.8.3. Ultrasound in the Assessment of Benign Breast Disease
 - 3.8.4. Ultrasound in the Assessment of Malignant Breast Disease
- 3.9. Interventional Ultrasonography
 - 3.9.1. Definition
 - 3.9.2. Application of the Interventional Ultrasonography in Gynecology
 - 3.9.3. Paracentesis Technique
 - 3.9.4. Breast The Abscess Drainage Technique
 - 3.9.5. Endometrioma Alcoholization Technique
 - 3.9.6. Breast Abscess Drainage Technique

Module 4. Reproduction and pelvic floor

- 4.1. Ultrasound in the Diagnosis of Infertility
 - 4.1.1. Follicle Count
 - 4.1.2. Screening for Tubal Pathology
 - 4.1.3. Screening for Endometrial Pathology
- 4.2. Uterine Malformations
 - 4.2.1. Classification of Uterine Malformations
 - 4.2.2. Differential Diagnosis
 - 4.2.3. T-shaped Uterus

- 4.3. 3D Ultrasound in Playback
 - 4.3.1. Introduction
 - 4.3.2. 3D Ultrasound of the Ovary
 - 4.3.3. 3D Ultrasound of the Uterus
- 4.4. Ultrasound in the Treatment of Reproduction
 - 4.4.1. Ultrasound in Controlled Ovarian Stimulation for IVF
 - 4.4.2. Ultrasound for Embryo Transfer
 - 4.4.3. Ultrasound in Scheduled Intercourse
 - 4.4.4. Ultrasound in Artificial Insemination
- 4.5. Ultrasound Anatomy of the Pelvic Floor
 - 4.5.1. Normal Sonographic Anatomy of the Pelvic floor
 - 4.5.2. Probes and Approach Routes: Pros and Cons of Each of Them
 - 4.5.3. Ultrasound Techniques How to Get the Two-dimensional Reference Plane?
 - 4.5.4. Dynamic Ultrasound: Rest, Retention and Valsalva in the Different Structures of the Pelvic Floor
 - 4.5.5. Improvement of the Technique: to the Conquest of an Excellent Image Avoiding Artifacts
 - 4.5.6. Three-Dimensional Acquisition Technique of the Urogenital Hiatus for the Assessment of the Levator Muscle
 - 4.5.7. Volume Storage and Offline Management
- 4.6. The Role of Ultrasound in the Assessment of Genital Prolapse
 - 4.6.1. Normal Position of the Pelvic Organs: Normal Two-dimensional Ultrasound Plane
 - 4.6.2. Valuation of the Previous Compartment: Technique and Considerations
 - 4.6.3. Valuation of the Medium Compartment: Technique and Considerations
 - 4.6.4. Valuation of the Posterior Compartment: Technique and Considerations
 - 4.6.5. Ultrasound Findings and Therapeutic Repercussion
- 4.7. The Role of Ultrasound in the Assessment Urinary Incontinence
 - 4.7.1. Ultrasound Recognition of the Anatomical Structures Involved in Continence
 - 4.7.2. Postvoid Residue Assessment and Implications
 - 4.7.3. Postvoid Residue Assessment and Implications
 - 4.7.4. Stress Urinary Incontinence Ultrasound in the Diagnosis
 - 4.7.5. Emergencies Urinary Incontinence Ultrasound in the Diagnosis

- 4.8. The Role of Ultrasound in the Assessment of Obstetric Trauma
 - 4.8.1. Transperineal Ultrasound Technique in Anal Sphincter Assessment
 - 4.8.2. Intravaginal Ultrasound Technique in Anal Sphincter Assessment
- 4.9. Usefulness of Ultrasound in the Post-surgical Control of Pelvic Floor Surgery
 - 4.9.1. Ultrasound Characteristics of Mesh in Pelvic Floor Surgeries
 - 4.9.2. Ultrasound in Post-surgical Follow-up of Incontinence Mesh
 - 4.9.3. Ultrasound in Post-surgical Follow-up of Prolapses Mesh

Module 5. First Trimester Ultrasound

- 5.1. First Trimester Ultrasound Study Protocol. Normality
 - 5.1.1. Gestational Age and Dating
 - 5.1.2. Anatomic Exploration
 - 5.1.3. Measurement of Aneuploidy Markers
 - 5.1.4. Placenta, Uterus and Adnexa
- 5.2. Uncertain Location Pregnancy
 - 5.2.1. Differential Diagnosis
 - 5.2.2. Blood Biochemistry
 - 5.2.3. Action Protocol
- 5.3. Early Pregnancy (Trophoblastic Disease, Amnion, Vesicles, etc.)
 - 5.3.1. Gestational Sac
 - 5.3.2. Yolk Sac
 - 5.3.3. Amniotic and Chorionic Cavity
 - 5.3.4. Embryo
 - 5.3.5. Embryonic Development
 - 5.3.6. Early Pathology
 - 5.3.7. Findings of Poor Pregnancy Prognosis
- 5.4. Ultrasound Markers of First Trimester Chromosomopathy
 - 5.4.1. Introduction
 - 5.4.2. Nuchal Translucency
 - 5.4.3. Nuchal Translucency
 - 5.4.4. Venous Lead
 - 5.4.5. Tricuspid Regurgitation

- 5.5. Other First Trimester Ultrasound Markers (Angles, Intracranial Translucency, Uterine, etc.)
 - 5.5.1. Intracranial Translucency
 - 5.5.2. Frontomaxillary Angle
 - 5.5.3. Retronasal Triangle
 - 5.5.4. Uterine Arteries
- 5.6. Diagnosable Morphological Pathology in the First Trimester
 - 5.6.1. Cranial and Central Nervous System Pathology
 - 5.6.2. Face
 - 5.6.3. Skeletal System
 - 5.6.4. Thorax and Neck
 - 5.6.5. Heart
 - 5.6.6. Abdomen
 - 5.6.7. Urinary System
- 5.7. First Trimester Aneuploidy Screening
 - 5.7.1. History of Aneuploidy Screening
 - 5.7.2. Blood Biochemistry
 - 5.7.3. Sonographic Markers
 - 5.7.4. Study Protocol
- 5.8. Fetal DNA in Maternal Blood (Also in Twins)
 - 5.8.1. Fetal DNA History
 - 5.8.2. Methods of Analysis
 - 5.8.3. Practical Aspects
 - 5.8.4. Fetal Fraction and No Result
 - 5.8.5. Fetal DNA in Twins
 - 5.8.6. Chromosome Microdeletions
 - 5.8.7. Interpretation of Results and Protocols
- 5.9. First Trimester Preeclampsia. Screening
 - 5.9.1. History of Preeclampsia. Screening
 - 5.9.2. Screening Types
 - 5.9.3. Screening Components
 - 5.9.4. Available Calculators
 - 5.9.5. Prevention Cut-off Points
 - 5.9.6. Follow-up at High Risk of Preeclampsia

- 5.10. Invasive Techniques
 - 5.10.1. Amniocentesis
 - 5.10.2. Chorion Biopsy
 - 5.10.3. Multiple Gestation
- 5.11. Basic Genetics in Obstetrics
 - 5.11.1. Genetic Concepts
 - 5.11.2. Mendelian Genetics
 - 5.11.3. Non Mendelian Genetics
 - 5.11.4. Prenatal Genetic Tests

Module 6. Second Trimester Ultrasound

- 6.1. Second Trimester Ultrasound Study Protocol. Normality
 - 6.1.1. Gestational Age and Dating in the Second Trimester
 - 6.1.2. Cranium Central Nervous System
 - 6.1.3. Limbs and Spine
 - 6.1.4. Thorax and Heart
 - 6.1.5. Abdomen
 - 6.1.6. Genitourinary System
- 6.2. Evaluation of the Placenta and Umbilical Cord
 - 6.2.1. Abnormalities of Placental Shape, Location and Insertion
 - 6.2.2. Placental Tumors
 - 6.2.3. Vascular Abnormalities and Bruising
 - 6.2.4. Cord Anomalies
- 6.3. Placenta Accreta Spectrum
 - 6.3.1. Classification
 - 6.3.2. Ultrasound Diagnosis
 - 6.3.3. Magnetic Resonance
 - 6.3.4. Management
- 6.4. Cervical Assessment. Risk of Premature Delivery
 - 6.4.1. Measurement Techniques
 - 6.4.2. Risk of Premature Delivery
 - 6.4.3. Recommendations Offered by Different Scientific Societies

- 6.5. Ultrasound Markers of Second Trimester Chromosomopathy
 - 6.5.1. History of Second Quarter Scores
 - 6.5.2. Likelihood Ratio
 - 6.5.3. Sonographic Markers
 - 6.5.4. Management
- 6.6. Malformations of the Abdomen and Abdominal Wall
 - 6.6.1. Umbilical Hernia
 - 6.6.2. Omphalocele
 - 6.6.3. Gastrosquisis
 - 6.6.4. Extrofia Vesical
 - 6.6.5. Other Anomalies of the Abdominal Wall
 - 6.6.6. Abdominal Cysts
 - 6.6.7. Gastrointestinal Pathologies.
- 6.7. Malformations of the Face, Neck and Thorax
 - 6.7.1. Face Anomalies
 - 6.7.2. Malformations of the Neck
 - 6.7.3. Thoracic Malformations
- 6.8. Column Anomalies
 - 6.8.1. Hemivertebra
 - 6.8.2. Neural Tube Defects
 - 6.8.3. Sacrococcygeal Teratomas
 - 6.8.4. Caudal Regression Sequence
- 6.9. Limb Malformation
 - 6.9.1. Skeletal Dysplasias
 - 6.9.2. Congenital Clubfoot
 - 6.9.3. Reductional Alterations
 - 6.9.4. Arthrogryposis

- 6.10. Genitourinary Malformations
 - 6.10.1. Renal Anesia
 - 6.10.2. Obstructive Pathology
 - 6.10.3. Renal Ectopias
 - 6.10.4. Multicystic and Polycystic Kidney
 - 6.10.5. Other Kidney Abnormalities
 - 6.10.6. Adrenal Abnormalities
 - 6.10.7. Bladder Abnormalities
 - 6.10.8. Genital Abnormalities
- 6.11. Fetal Hydrops
 - 6.11.1. Definition
 - 6.11.2. Sonographic Abnormalities
 - 6.11.3. Etiology
 - 6.11.4. Management
 - 6.11.5. Prognosis
 - 6.11.6. Associated Complications
 - 6.11.7. Recurrence

Module 7. Third Trimester Ultrasound

- 7.1. Third Trimester Ultrasound Study Protocol. Normality
 - 7.1.1. Gestational Age and Dating in the Third Trimester
 - 7.1.2. Third Trimester Ultrasound Goals
 - 7.1.3. Systematic of the Ultrasound
- 7.2. Malformative Pathology Diagnosis in the Third Trimester
 - 7.2.1. Introduction
 - 7.2.2. Most Frequent Malformations
- 7.3. Fetal Growth Estimation
 - 7.3.1. Definitions
 - 7.3.2. Fetal Weight Estimation. Bio-Meters
 - 7.3.3. Normality Curves and Percentiles

- 7.4. Doppler Study in the Third Trimester Ultrasound
 - 7.4.1. Umbilical Artery
 - 7.4.2. Middle Brain Artery
 - 7.4.3. Venous Lead
 - 7.4.4. Uterine Arteries
 - 7.4.5. Others
- 7.5. Growth Disorders (PEG and CIR)
 - 7.5.1. Introduction
 - 7.5.2. Fetus Small for Gestational Age
 - 7.5.3. Intrauterine Growth Retardation
- 7.6. Hemodynamics and Fetal Impairment in Intrauterine Growth Retardation
 - 7.6.1. Fetal Hemodynamics
 - 7.6.2. Biophysical Profile
 - 7.6.3. Internal Fetal Monitoring
- 7.7. Fetal Macrosomia
 - 7.7.1. Introduction
 - 7.7.2. Risk Factors
 - 7.7.3. Diagnosis
 - 7.7.4. Complications
 - 7.7.5. Management
- 7.8. Intrapartum Ultrasound
 - 7.8.1. Technique
 - 7.8.2. Creativity Evaluation
 - 7.8.3. Attitude Assessment of the Head
 - 7.8.4. Indications
- 7.9. Abnormalities of amniotic fluid
 - 7.9.1. Introduction
 - 7.9.2. Oligoamnios
 - 7.9.3. Polyhydramnios
 - 7.9.4. Management

Module 8. Multiple Gestation

- 8.1. Introduction and Embryology
 - 8.1.1. Introduction
 - 8.1.2. Embryology
 - 8.1.3. Classification
- 8.2. Ultrasound Diagnosis Aneuploidy Screening in Multiple Gestations
 - 8.2.1. Introduction
 - 8.2.2. Ultrasound Diagnosis
 - 8.2.3. Date
 - 8.2.4. First Trimester Aneuploidy Screening
- 8.3. Dichorionic Twin Gestation
 - 8.3.1. Introduction
 - 8.3.2. Follow-up of Normal Evolutionary Dichorionic Pregnancy
 - 8.3.3. Finalization-up of Normal Evolutionary Dichorionic Pregnancy
- 8.4. Normal Monochorionic Twin Gestation
 - 8.4.1. Introduction
 - 8.4.2. Follow-up of Normal Evolutionary Dichorionic Pregnancy
 - 8.4.3. Finalization-up of Normal Evolutionary Dichorionic Pregnancy
- 8.5. Complicated monochorionic pregnancy (TAPS, TRAP, TFF)
 - 8.5.1. TAOS
 - 8.5.2. TRAP
 - 8.5.3. TFF
 - 8.5.4. Discordant Structural Malformation
- 8.6. Growth Retardation in Twin Gestation (Monochorial and Dichorionic)
 - 8.6.1. Introduction
 - 8.6.2. Growth Retardation in Twin Gestation (Monochorial and Dichorionic)
 - 8.6.3. Growth Retardation in Twin Gestation (Monochorial)
- 8.7. Prevention and Screening of Preeclampsia
 - 8.7.1. Introduction
 - 8.7.2. First Trimester Preeclampsia. Screening
 - 8.7.3. Prevention of Preeclampsia in Twin Pregnancy

- 8.8. Screening for Preterm Birth in Twin Gestation
 - 8.8.1. Introduction
 - 8.8.2. Cervical Assessment and Evidence
 - 8.8.3. Prevention of Prematurity
- 8.9. Fetal Reduction in Twin Gestation
 - 8.9.1. Fetal Reduction in Monochorionic Gestation
 - 8.9.2. Risks of Fetal Reduction
- 8.10. Fetal Death in Twin Gestation
 - 8.10.1. Introduction
 - 8.10.2. Fetal Death in Bichorionic Gestation
 - 8.10.3. Fetal Death in Monochorionic Gestation

Module 9. Fetal Echocardiography

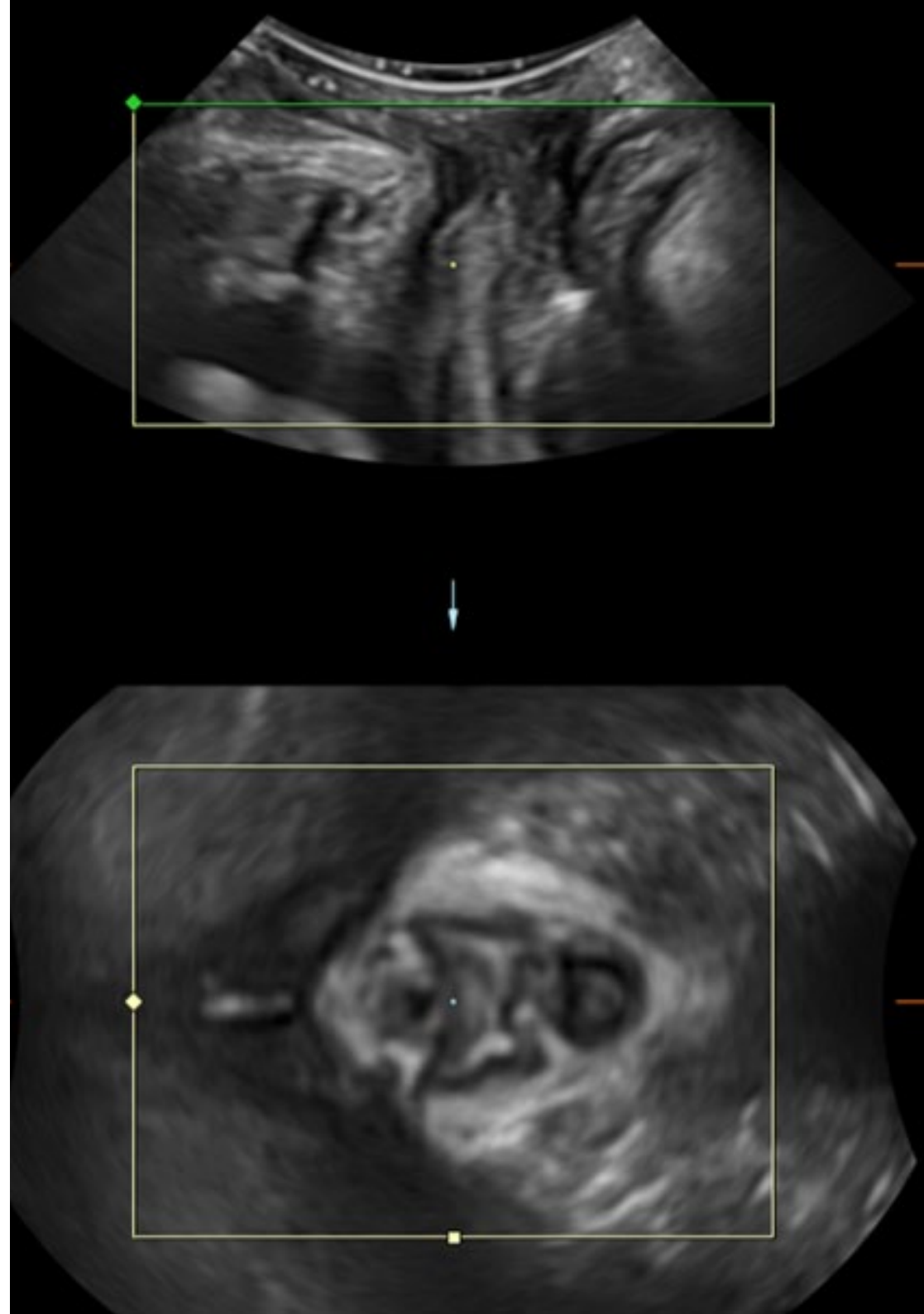
- 9.1. Echocardiography Normal Fetus
 - 9.1.1. Indications for Fetal Echocardiograph
 - 9.1.2. Technique for Fetal La Echocardiograph
 - 9.1.3. Measurement of cardiac structures. Z-score
- 9.2. Cardiac Functional Study. Normality
 - 9.2.1. Heart Dysfunction Pathophysiology
 - 9.2.2. Functional Echocardiography Technique
 - 9.2.3. Advanced Techniques.
- 9.3. Septal Defects
 - 9.3.1. Atrioventricular atrial Septal Defect
 - 9.3.2. Interventricular Septal Defect
 - 9.3.3. Auriventricular Septal Defects
 - 9.3.4. Double Inlet Single Ventricle
- 9.4. Defects The Right Heart
 - 9.4.1. Tricuspid Pathology
 - 9.4.2. Pulmonary Stenosis
 - 9.4.3. Complete Septal Pulmonary Atresia

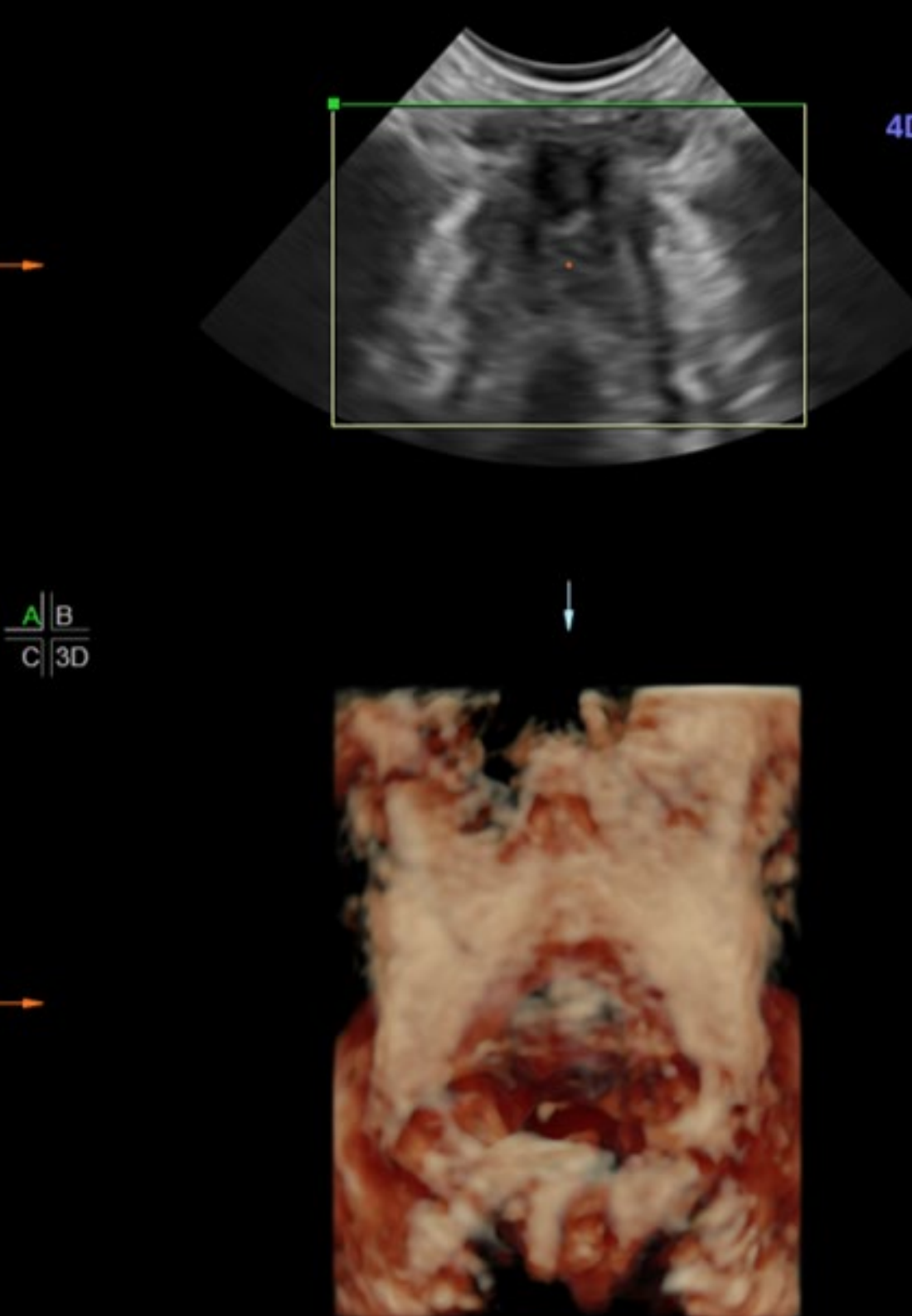
- 9.5. Defects The Left Heart
 - 9.5.1. Mitral pathology
 - 9.5.2. Aortic Stenosis
 - 9.5.3. Aortic Coarctation
 - 9.5.4. Interrupted Aortic Arch
- 9.6. Conotruncal Abnormalities
 - 9.6.1. Tetralogy of Fallot
 - 9.6.2. Main Artery Transposition
 - 9.6.3. Double Outlet Right Ventricle
 - 9.6.4. Truncus Arteriosus
- 9.7. Venous Return Anomalies
 - 9.7.1. Upper Vena Cava Filter Abnormalities
 - 9.7.2. Inferior Vena Cava Filter Abnormalities
 - 9.7.3. Persistent Right Umbilical Vein
 - 9.7.4. Ductus Venosus Agenesis
- 9.8. Cardiac Position and Situs Abnormalities
 - 9.8.1. Situs Anomalies
 - 9.8.2. Heterotaxy Syndromes
- 9.9. Cardiac Rhythm Abnormalities
 - 9.9.1. Irregular Rhythms
 - 9.9.2. Bradycardia
 - 9.9.3. Tachycardia

Module 10. Fetal neurosonography

- 10.1. Fetal Neurosonography Normality
 - 10.1.1. Indications for Fetal Neurosonography
 - 10.1.2. Fetal Neurosonography Technique
 - 10.1.3. Measurement of Brain Structures
- 10.2. Head Circumference and Skull Changes
 - 10.2.1. Microcephaly
 - 10.2.2. Macrocephaly
 - 10.2.3. Encephalocele
 - 10.2.4. Other Alterations

- 10.3. Ventriculomegalia
 - 10.3.1. Ultrasound Diagnosis
 - 10.3.2. Etiology
 - 10.3.3. Associated Anomalies and Study
 - 10.3.4. Prognosis
 - 10.3.5. Recurrence
- 10.4. Midline Disorders
 - 10.4.1. Abnormalities of the Corpus Callosum
 - 10.4.2. Absence of Cavum Septum Pellucidum
 - 10.4.3. Holoprosencephaly
- 10.5. Posterior Fossa Structure Abnormalities
 - 10.5.1. Dandy Walker Malformation
 - 10.5.2. Megacisterna Magna
 - 10.5.3. Blake Cyst
 - 10.5.4. Vermis Hypoplasia
 - 10.5.5. Other Anomalies
- 10.6. Cystic Central Nervous System Pathology
 - 10.6.1. Choroid Plexus Cyst
 - 10.6.2. Connatal Cyst
 - 10.6.3. Arachnoid Cyst
 - 10.6.4. Other Alterations
- 10.7. Schemic Central Nervous System Pathology
 - 10.7.1. Porencephaly
 - 10.7.2. Schisencephaly
 - 10.7.3. Other Ischemic and Hemorrhagic Lesions





- 10.8. Central Nervous System Tumors and Vascular Abnormalities
 - 10.8.1. Teratomas
 - 10.8.2. Tuberous Sclerosis
 - 10.8.3. Galen Vein Aneurysm
 - 10.8.4. Venous Sinus Thrombosis Dural
- 10.9. Sulcation Abnormalities
 - 10.9.1. Introduction
 - 10.9.2. Lisencephalia
 - 10.9.3. Hemimegalencephalia
- 10.10. Magnetic Resonance in the Study of the Central Nervous System
 - 10.10.1. Introduction
 - 10.10.2. Indications
 - 10.10.3. Appropriate Gestational Age for Fetal MRI
 - 10.10.4. Usefulness of Fetal RM in the Study of the Nervous system

“*The complementary readings will allow you to delve into those topics that interest you the most, devoting your time efficiently and productively to the ultrasound areas of greatest importance to you*”

06

Methodology

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

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





“

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

At TECH 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.



07 Certificate

The Professional Master's Degree in Obstetric and Gynecology Ultrasound guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Global University.



“

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

This program will allow you to obtain your **Professional Master's Degree diploma in Obstetric and Gynecology Ultrasound** 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.

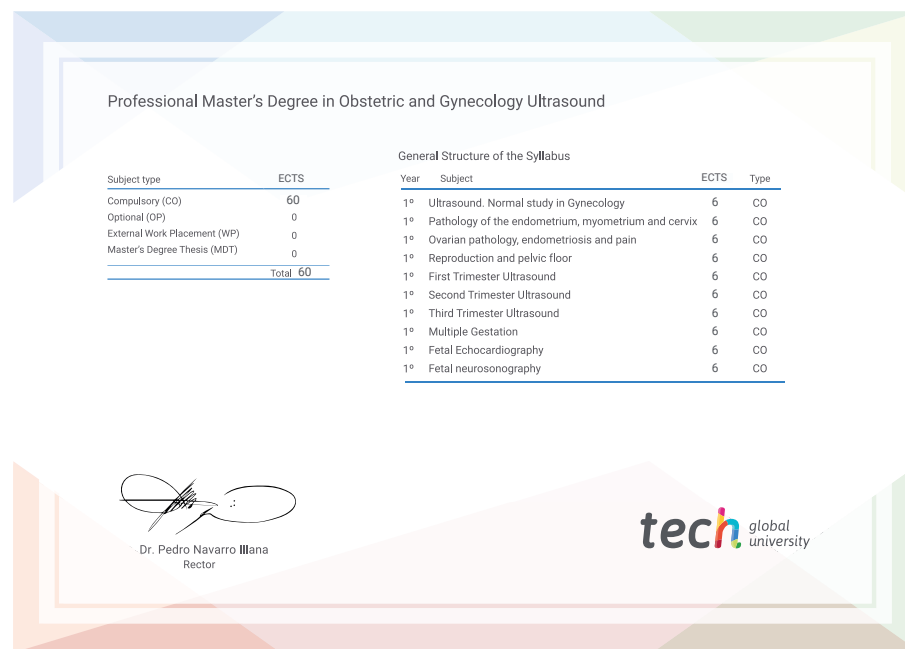
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Professional Master's Degree ma in Obstetric and Gynecology Ultrasound**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**



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



Professional Master's Degree

Obstetric and Gynecological
Ultrasound

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

Professional Master's Degree

Obstetric and Gynecological Ultrasound