Professional Master's Degree

Minimally Invasive Gynecologic Surgery

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Professional Master's Degree
Minimally Invasive Gynecologic Surgery

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

Website: www.techtitute.com/us/medicine/professional-master-degree/master-minimally-invasive-gynecologic-surgery

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01

Introduction

There is moderately short and insufficient education in minimally invasive surgery, including laparoscopy, hysteroscopy and pelvic floor surgery, in the field of gynecology during specialized medical learning, due to the lack of time to go into it in depth. Because of this, many specialized medical professionals and those who are currently preparing themselves are demanding more education in this area. This, together with the difficulty of learning and technical complexity of this field, make it essential to constantly renew knowledge, since the current evolution of instruments and minimally invasive techniques has experienced an exponential growth in the last 5 years, which is difficult to adapt to without the appropriate continuing education.

This program will give you a sense of confidence when taking decisions and providing care, which will help you grow both personally and professionally"

The increasing complexity of the procedures that are performed laparoscopically has reached a point where practically 95% of gynecological operations can be performed by minimally invasive surgery, so keeping up to date with the latest techniques is vital for proper patient care. In addition to all this, instruments and new tools are constantly being developed and must be known for greater surgical efficiency and best clinical results.

The program aims to provide an update with the use of the latest educational technology, to contribute with quality and safety to medical decision-making, diagnosis, treatment and prognosis of the patient with gynecological pathology, which can be carried out by minimally invasive surgery.

In addition, the teaching staff includes recognized international experts in Minimally Invasive Gynecologic Surgery techniques. Accumulating numerous merits and outstanding advances in techniques such as Uterine Transposition, the specialist will be able to access a series of illustrative *Masterclasses* that reinforce the practical knowledge reviewed throughout the syllabus.

Therefore, this university program has been designed to provide instruction equivalent to 1,500 hours of study, in which all theoretical and practical knowledge is presented through high-quality multimedia content, analysis of clinical cases prepared by experts, masterclasses and video techniques that allow the exchange of knowledge and experience. All this through a 100% online methodology, which allows you to make your life compatible at the same time as you learn.

This **Professional Master's Degree in Minimally Invasive Gynecologic Surgery** contains the most complete and up-to-date scientific program on the market. The most important features include:

- More than 75 clinical cases presented by experts in Minimally Invasive Gynecologic Surgery
- Its graphic, schematic and practical contents, with which they are conceived, gather scientific and assistance information on those disciplines that are essential for professional practice
- Diagnostic/therapeutic developments in assessment, diagnosis and intervention in Minimally Invasive Gynecologic Surgery
- Contains practical exercises, where the process of self-assessment can be carried out to improve learning
- Iconography of clinical and diagnostic imaging tests
- An algorithm-based interactive learning system for decision-making in the clinical situations presented throughout the course
- With special emphasis on evidence-based medicine and research methodologies in Minimally Invasive Gynecologic Surgery
- All of 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

Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"

This Professional Master's Degree is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Minimally Invasive Gynecologic Surgery, you will obtain a certificate issued by TECH Global University"

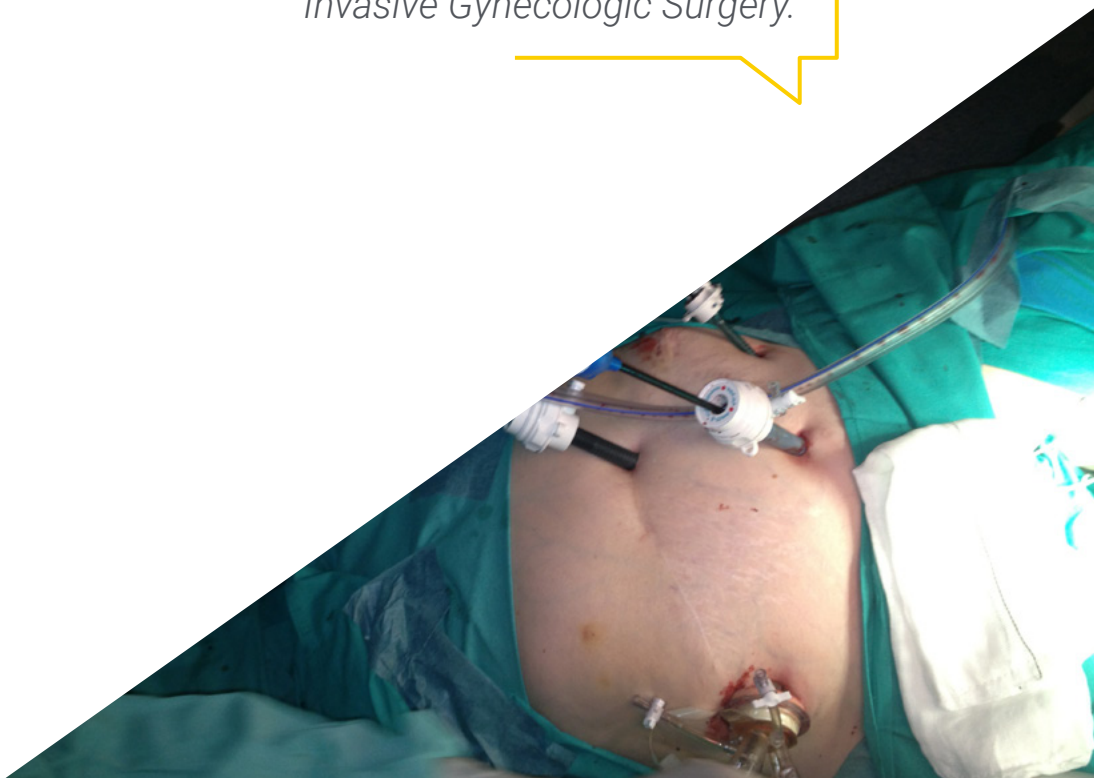
This Professional Master's Degree offers education in simulated environments, which provides an immersive learning experience designed to prepare for real-life situations.

You will have access to exhaustive and detailed Masterclasses on the most relevant laparoscopic and robotic techniques currently used in Minimally Invasive Gynecologic Surgery.

The teaching staff includes professionals from the field of Minimally Invasive Gynecologic Surgery, who bring their experience to this program, as well as renowned specialists from leading scientific societies.

Thanks to its multimedia content, developed with the latest educational technology, it will allow the professional a situated and contextual learning, that is to say, a simulated environment that will provide an immersive learning, programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby, the physicians must try to solve the different professional practice situations that arise throughout the program. For this purpose, physicians will be assisted by an innovative, interactive video system created by renowned and experienced experts in the field of Minimally Invasive Gynecologic Surgery with extensive teaching experience.



02

Objectives

The program in Minimally Invasive Gynecologic Surgery is aimed at enhancing the work of physicians devoted to the treatment of gynecological surgical pathology.

Through this Professional Master's Degree, you will be able to update your knowledge of the procedures in Minimally Invasive Gynecologic Surgery, and improve patient prognosis by reducing sequelae and complications"

General Objectives

- Get to know all the instruments available to perform endoscopic and hysteroscopic surgery
- Know how to prepare endoscopic operating rooms
- Learn about general aspects such as ergonomics in the laparoscopic and electrosurgical operating rooms to be used in gynecological procedures
- Apply different appropriate techniques in each specific clinical case
- Gain detailed knowledge of female pelvic and abdominal anatomy
- Know how to create a training model (pelvi-trainer) to perform laparoscopic suturing and other exercises, which will lead to the acquisition of dissection and cutting skills
- Learn hysteroscopic techniques and their application in uterine pathology
- Establish a series of alternatives to manage benign ovarian pathology
- Know how to treat benign uterus pathology
- Learn techniques to resolve pelvic floor problems using laparoscopy
- Apply minimally invasive mesh placement
- Learn the to endoscopically manage endometriosis
- Learn different advanced techniques in gynecologic oncology for minimally invasive treatments
- Provide tools to resolve complications in gynecologic endoscopy
- Know financial aspects related to the use of endoscopic techniques
- Learn about new technologies in endoscopy, such as robotic surgery, single-port and mini-laparoscopy
- Understand how laparoscopy improves fertility

Specific Objectives

Module 1. Minimally Invasive Surgery

- Delve into the history of laparoscopy
- Gain a deeper understanding of how to prepare the endoscopic operating room
- Know the correct postural factors and ergonomics
- Approach the management of patients pre- and post-operatively
- Know the details of conventional laparoscopic operating rooms
- Determine the anesthetic and recovery details of patients
- Learn *Fast-Track* postoperative management and the ERAS protocol
- Describe the main features irrigation and suction systems

Module 2. Instrumentation, Materials and Electrosurgery

- Manage the preparation of the surgical site before each operation
- Establish skin cleansing and asepsis
- Learn how to position patients on the operating table
- Learn the peculiarities of integrated operating rooms
- Increase knowledge of anesthetic aspects related to endoscopy
- Learn the different applications of bipolar and monopolar energy in instrumentation
- Acquire information about electrosurgery for its use in clinical practice
- Select morcellation instruments and apply them safely
- Describe the main features of specimen extraction bags
- Determine the types and use of tissue sealants

Module 3. General Training in Minimally Invasive Surgery

- Identify dissection and cutting instruments for laparoscopy and the use of each piece of equipment
- Select the correct optics for each specific patient
- Differentiate between entry trocars used in surgeries
- Perform pelvitrainer simulation exercises
- Learn how to assemble a homemade pelvitrainer
- Explain the use of learning pyramids
- Identify the types of laparoscopic simulators
- Acquire up-to-date knowledge of animal simulation procedures
- Bring new advances to cadaver simulation procedures
- Apply simulated organ models
- Acquire up-to-date knowledge of simple laparoscopic suturing procedures

Module 4. Laparoscopic Suture Training

- Explore all the material for laparoscopic suturing, including suture holders, suture threads, needles and other instruments
- Give a detailed description of all the accessory material for gynecological laparoscopy
- Distinguish the types of recorders available for surgery
- Acquire up-to-date knowledge of the orientation of laparoscopic vision systems
- Identify the types of insufflators and how they work
- Identify general surgical instruments

Module 5. Female Surgical Anatomy

- Review the anatomy of the abdominal wall
- Review the anatomy of the pelvic and abdominal visceral system, including the upper abdomen
- Refresh understanding of pelvic vascular system anatomy and review the para-aortic vascular system and the vena cava
- Identify the different parts of the lymphatic system and their detailed laparoscopic management
- Learn about the functional anatomy of the female pelvic floor
- Determine vulvo-vaginal area exploration and its relation to pelvic floor pathology
- Study sympathetic and parasympathetic nerve anatomy of the female pelvis

Module 6. Hysteroscopic Surgery

- Prepare the material for diagnostic and surgical hysteroscopy
- Update the new technological advances in hysteroscopy, such as morcellators, lasers and endometrial ablation systems
- Describe the tools to perform hysteroscopy in the office
- Acquire up-to-date knowledge of the literature on advances in hysteroscopy
- Explain advanced techniques, such as malformation treatment or hysteroscopic myomectomy
- Improve success rate in consultation
- Acquire up-to-date knowledge of the indications for office or surgical hysteroscopy
- Learn the latest developments in hysteroscopic surgery
- Acquire skills to resolve hysteroscopic complications, typical of the technique, such as perforations or vasovagal syndrome
- Identify the different techniques used in uterine morcellation and myoma morcellation laparoscopically in a watertight manner to avoid the possibility of dissemination in case of uterine sarcoma
- Select the different endoscopy applications within the different modalities of complexity in hysterectomy
- Acquire up-to-date knowledge of the use of laparoscopy in uterine malformations and their resolution
- Incorporate the advances of the laparoscopic neovagina technique
- Incorporate theoretical knowledge related to vaginal vault dehiscence
- Identify the different types of uterine mobilizers
- Acquire up-to-date knowledge of the evaluation procedures for pelvic floor defects
- Acquire up-to-date knowledge of procedures to manage ectopic pregnancy using laparoscopy
- Acquire up-to-date knowledge of procedures to manage ovarian torsion using laparoscopy
- Acquire up-to-date knowledge of the procedures to manage pelvic infections using laparoscopy
- Establish the strategy to adequately access the abdominal cavity
- Describe the process of taking an exploratory biopsy and abdominal cytology using laparoscopy
- Acquire up-to-date knowledge of the laparoscopic management of ovarian remnant syndrome
- Update the procedures to manage uterine fibroids
- Establish the strategy to reduce bleeding in laparoscopic myomectomy

Module 7. Exploratory Laparoscopy and Benign Adnexal Pathology

- Define the specific technique in suturing and intracorporeal and extracorporeal knotting
- Adapt the avascular spaces for endoscopic surgery
- Acquire fluency in the resolution of simple pathologies, such as polyps and endometrial hyperplasia

Module 8. Benign Uterine Pathology and Dysgenesis

- Acquire up-to-date knowledge of management procedures for benign ovarian and tubal pathology, including cystectomy and adnexectomy
- Update procedures to manage large complex tumors

Module 9. Pelvic Floor Pathology and Transvaginal Mesh Use

- Determine vulvo-vaginal area exploration and its relation to pelvic floor pathology
- Review the functional anatomy of the female pelvic floor
- Review the sympathetic and parasympathetic nervous anatomy of the female pelvis
- Identify abdomino-pelvic vascular abnormalities
- Select the different types of laparoscopic and transvaginal meshes for the resolution of such abnormalities
- Incorporate advances in the application of cystoscopy after reparative techniques
- Review the scientific evidence on the use of endoscopy in pelvic floor pathology
- Gain a detailed understanding of the use of laparoscopic sacrocolpopexy
- Foresee complications and their management in pelvic floor pathology
- Explain the procedures for laparoscopic repair of paravaginal defects
- Explain the placement procedure for different meshes to resolve urinary incontinence

Module 10. Laparoscopy in Endometriosis

- Conduct detailed analyses of patients with possible endometriosis
- Incorporate advances in the application of imaging techniques and tumor markers to diagnose endometriosis
- Describe the classifications of endometriosis by different authors
- Explain the therapeutic possibilities of endometriosis in each specific case
- Acquire up-to-date knowledge of the procedures to manage endometriosis in the recto vaginal and ovarian septum
- Acquire up-to-date knowledge of the procedures to manate patients with endometriosis involving the lateral compartment
- Acquire up-to-date knowledge of the management procedures for the recommended medical treatment of endometriosis
- Acquire up-to-date knowledge of treatment in cases of intestinal endometriosis
- Acquire up-to-date knowledge of laparoscopic management procedures for endometriosis of urinary origin
- Describe the main characteristics of extra pelvic endometriosis, such as in the abdominal wall, in the lungs and other organs
- Get to know the reproductive effects of endometriosis treatment

Module 11. Endoscopic Surgery in Gynecologic Oncology

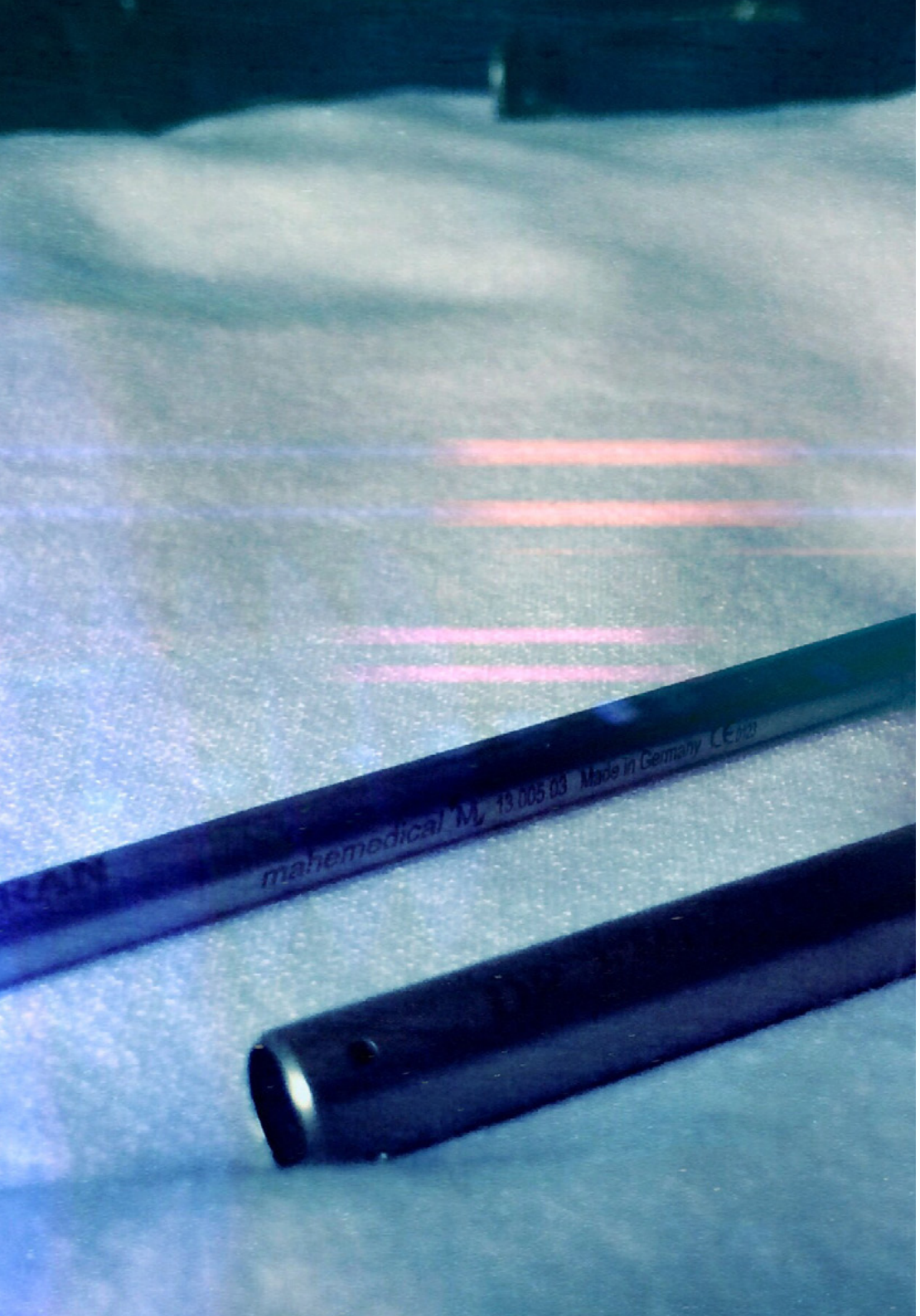
- Acquire up-to-date knowledge of exploratory laparoscopy for gynecologic cancer
- Foresee the possible oncologic complications due to the specific endoscopic technique used
- Describe the main characteristics of port of entry metastases
- Know the effect of mobilizers and pneumoperitoneum in gynecological cancer
- Acquire up-to-date knowledge of the lymphadenectomy procedures in the gynecological context
- Acquire up-to-date knowledge of the procedures involved in the specific technique of systematic transperitoneal and extraperitoneal para-aortic lymphadenectomy
- Select which type of laparoscopy should be used for inguinal lymphadenectomy
- Acquire up-to-date knowledge of the applications of endoscopy in ovarian, cervical and endometrial cancer
- Acquire up-to-date knowledge of the procedures involved in specific techniques, such as laparoscopic trachelectomy and parametrectomy in the context of cervical cancer
- Update on sentinel lymph node application procedures in endoscopy and gynecology
- Identify the different types of tracers and fluorescence
- Explain the technique for pelvic exenteration using laparoscopy
- Update the procedures of minimally invasive surgery to recurrences of different gynecologic cancers
- Update the procedures for laparoscopic management of borderline ovarian tumors
- Acquire up-to-date knowledge of the procedures involved in laparoscopic management of lymph node recurrences in genital cancer

Module 12. Complications in Minimally Invasive Surgery

- Acquire up-to-date knowledge of the procedures to manage vascular lesions using endoscopy
- Acquire up-to-date knowledge of the procedures to manage intestinal lesions using endoscopy
- Acquire up-to-date knowledge of the procedures used to manage urological lesions using endoscopy
- Identify the main characteristics of abdominal wall injuries and complications
- Explain how to manage complications in radical hysterectomy
- Select the use of hemostatic agents in endoscopy
- Foresee the complications derived from pelvic floor meshes
- Foresee the complications that occur intraoperatively, as well as those that go unnoticed during surgery
- Determine nervous and other complications, such as pulmonary thromboembolism (PTE), infections, etc.

Module 13. Laparoscopy and its Impact on Fertility

- Describe the peculiarities of endoscopy and its use in pregnant patients
- Update the procedures used in tubal recanalization techniques
- Identify the different uses of endoscopy in relation to the fertility of patients
- Acquire up-to-date knowledge of the literature on the effects of endoscopy on fertility



Module 14. Ultra-Minimally Invasive Surgery

- Explain the main characteristics of adhesions and how to prvent them
- Describe laparoscopic tubal chromopertubation
- Incorporate the advances in the 3 mm laparoscopic technique
- Select specific instruments for mini-laparoscopy
- Acquire up-to-date knowledge of the specific technique for 3 mm ports
- Incorporate the novel aspects of single-port laparoscopy
- Describe the main characteristics of the instrumentation specific single-port
- Acquire up-to-date knowledge of the technique for *single-glove laparoscopy*
- Acquire up-to-date knowledge of the specific technique for *single-ports*
- Describe the advantages of each of the ultra mini-invasive techniques
- Foresee technical problems derived from using these methods in interventions

Module 15. Robotic Surgery in Gynecology

- Incorporate new options, such as surgery without entry trocars, into practice
- List the advantages and disadvantages of Robotic Surgery in Gynecology
- Acquire up-to-date knowledge of the different types of robotic systems for surgery, such as the Da Vinci, Zeus or Amadeus
- Identify how to apply this type of surgery in Gynecology
- Describe the procedures for the specific instrumentation used in Robotic Surgery
- Assess the financial aspects of Robotic Surgery
- Foresee the complications typical of Robotic Surgery
- Identify how to apply single-port in Gynecologic Robotic Surgery
- Acquire up-to-date knowledge of on new robotic advances

03

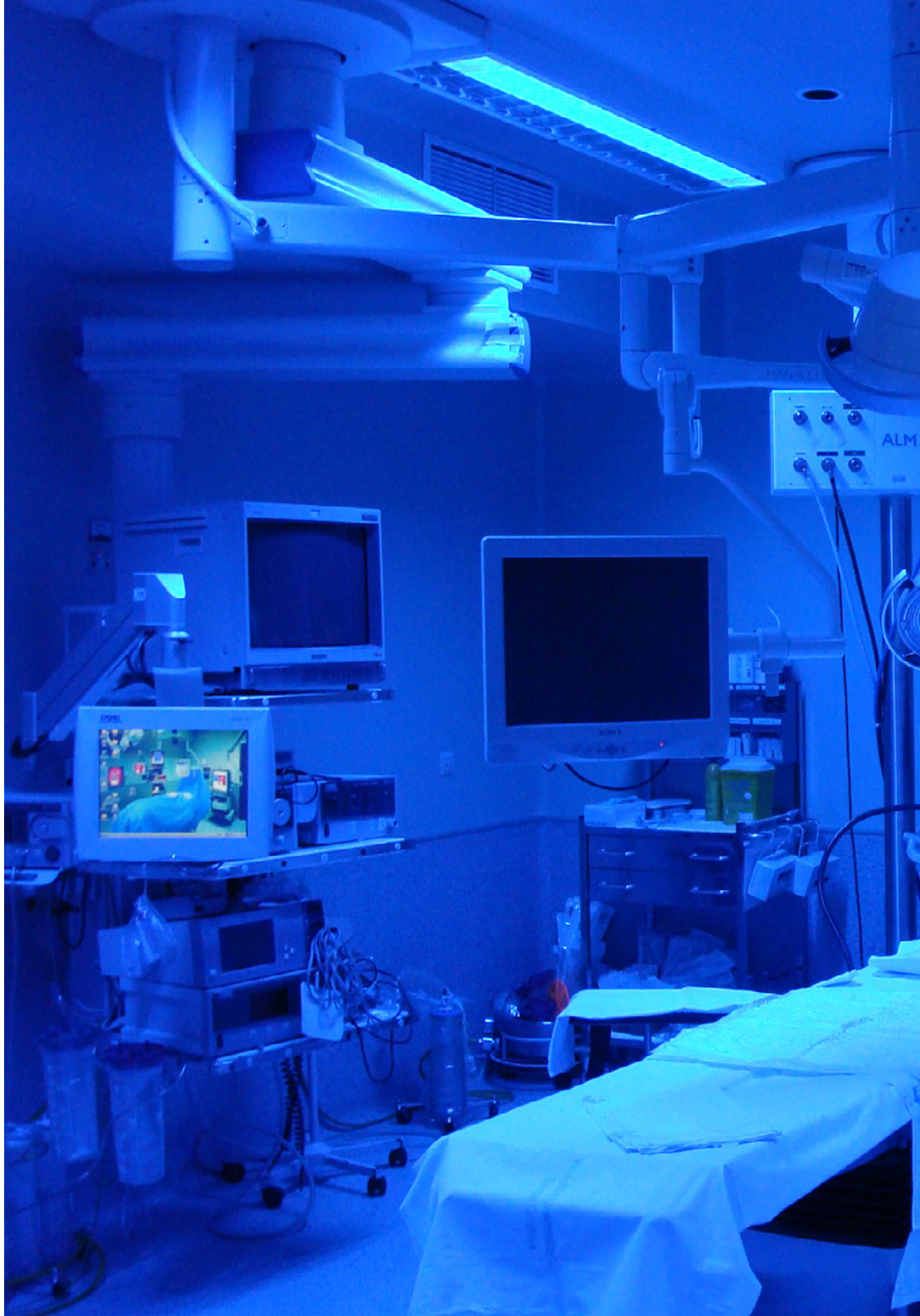
Skills

After passing the assessments of the Professional Master's Degree in Minimally Invasive Gynecologic Surgery, students will have acquired the professional skills required to offer quality treatment based on the most recent scientific evidence.

With this program, you will be able to master the new procedures in Minimally Invasive Gynecologic Surgery"

General Skills

- Possess knowledge and understanding that provides a basis or opportunity to develop and/or apply original ideas, often in a research context
- Apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study
- Integrate knowledge and face the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments
- Be able to communicate conclusions -and the ultimate knowledge and rationale behind them- to specialized and non-specialized audiences in a clear and unambiguous way
- Acquire the learning skills that will enable them to continue studying in a manner that will be largely self-directed or autonomous



Specific Skills

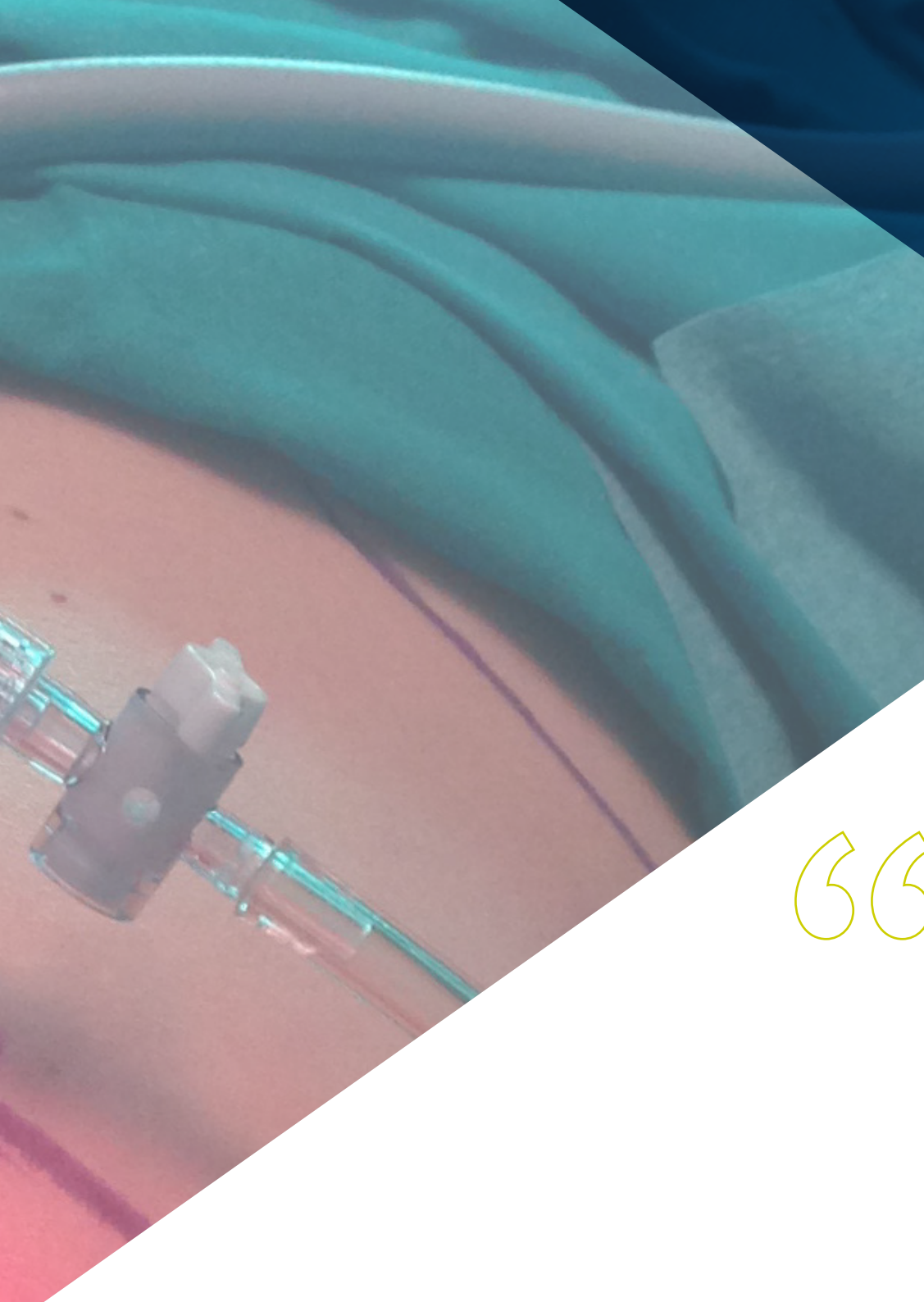
- Know the general application of laparoscopy in gynecological surgery, both for benign and malignant processes
- Establish the basis of electrosurgery to apply it in the field of endoscopy
- Determine learning needs and carry out specialized programs using all the resources available for the study of endoscopy
- Perform adequate training in endoscopic suturing
- Develop an exhaustive knowledge of the visceral and accessory anatomy of the female pelvis and abdomen to apply it in the operating room
- Diagnose and treat benign uterus and appendage pathology involving the female genital tract with minimum invasion
- Identify and classify the different types of endometriosis to treat them with minimally invasive surgery
- Determine the epidemiology and main characteristics of pelvic floor processes in women and how to treat them with or without meshes
- Establish the diagnostic and treatment procedures for different types of cancer affecting women based on the latest advances in gynecologic oncology
- Describe the endoscopic surgical procedures related to different types of cancers affecting women
- Adequately manage gynecologic tumor recurrences
- Identify endoscopic surgery complications and their intraoperative and postoperative management
- Establish medical practice, according to the latest scientific evidence, in the correct use of new mini-invasive technologies
- Point out the main advantages of robotic surgery systems and their application in gynecological surgery

Make the most of this opportunity and take the step to get up to date on the latest developments in Minimally Invasive Gynecologic Surgery"

04

Course Management

Including renowned international directors, all the content of this program is focused on the most current clinical practice. In this way, the specialist will have access to a privileged teaching content, enriched with a multitude of real examples and practical cases analyzed. In this way, the most outstanding advances in Minimally Invasive Gynecologic Surgery can be incorporated into daily practice, endorsed by recognized experts with extensive recognition and accumulated clinical merits



Get up to date in the most important techniques of Minimally Invasive Gynecologic Surgery, relying on the experience of leading specialists in the area"

International Guest Director

As one of the pioneer surgeons in Brazil by introducing advanced techniques of**Laparoscopic Oncologic Surgery**in Paraná, Dr. Reitan Ribeiro is one of the most prolific experts in this specialty. So much so that he has even received recognition as **an honorary citizen** of the city of Curitiba, highlighting his work in the creation and development of the technique of **Uterine Transposition.**

The IJGC, International Journal of Gynecologic Cancer, has also recognized the outstanding work of Dr. Reitan Ribeiro. His publications on **Uterine Robotic Transposition in Cervical Cancer,** Uterine Transposition after Radical Trachelectomy and directed research in the technique of Uterine Transposition for patients with gynecological cancers who want to preserve fertility are highlighted. He has received the **national award for medical innovation** for his research in the field of Uterine Transposition, highlighting these advances in the preservation of the patient's fertility.

His professional career is not without success, as he holds numerous positions of responsibility in the prestigious Erasto Gaertner Hospital. **He** directs the research program in **Gynecologic Oncology of this center, being also director of the Fellowship program in this specialty, in addition to coordinating the training program in Robotic Surgery focused on Gynecologic Oncology**.

At the academic level, he has completed internships at numerous prestigious centers, including Memorial Sloan Kettering Cancer Center, McGuill University and the National Cancer Institute of Brazil. He balances his clinical responsibilities with consulting work for leading medical and pharmaceutical companies, mainly Johnson & Johnson and Merck Sharp & Dohme.

Dr. Ribeiro, Reitan

- Director of Research, Department of Gynecologic Oncology, Erasto Gaertner Hospital, Curitiba, Brazil
- Director of the Fellowship Program in Gynecologic Oncology, Erasto Gaertner Hospital
- Director of the Robotic Surgery Training Program, Department of Gynecologic Oncology, Erasto Gaertner Hospital
- Senior Surgeon in the Department of Gynecologic Oncology, Erastus Gaertner Hospital
- Director of the Resident Oncologist Program, Erasto Gaertner Hospital
- Consultant at Johnson & Johnson and Merck Sharp & Dohme
- Degree in Medicine at the Federal University of Health Sciences of Porto Alegre
- Fellowship in Gynecologic Oncologic Surgery, Memorial Sloan Kettering Cancer Center
- Fellowship in Minimally Invasive Surgery, McGuill University
- Internships at Governador Celso Ramos Hospital, National Cancer Institute of Brazil and Erasto Gaertner Hospital
- Certification in Oncologic Surgery by the Oncologic Surgery Society of Brazil

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

05

Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities, aware of the relevance of current education in order to be able to intervene in gynecological pathology, using Minimally Invasive Surgery, and committed to quality teaching through new educational technologies.

This Professional Master's Degree in Minimally Invasive Gynecologic Surgery contains the most complete and up-to-date scientific program on the market"

Module 1. Minimally Invasive Surgery

1.1. General Introduction
1.2. History of Laparoscopy
1.3. Introduction to Hysteroscopic Surgery
1.4. Ergonomics in Laparoscopy
1.5. Asepsis and Antisepsis
  1.5.1. Hand Washing
  1.5.2. Preparing Instrumentation: Sterilization
  1.5.3. Preparing the Surgical Field
    1.5.3.1. Skin Cleansing
    1.5.3.2. Proper Cloth Placement
1.6. Laparoscopic Operating Room
  1.6.1. Conventional Operating Rooms
  1.6.2. Integrated Operating Rooms
  1.6.3. Future Perspectives
1.7. Preoperative Preparation for Laparoscopy
  1.7.1. Physical Preparation for Patients
  1.7.2. Preoperative Medication and Bowel Preparation
  1.7.3. Patient Position on the Operating Table
1.8. Fast-Track/ ERAS Program
1.9. Anesthetic Considerations in Endoscopic Surgery
  1.9.1. General Aspects
  1.9.2. Circulatory System Involvement
  1.9.3. Respiratory System Involvement
  1.9.4. Spinal Catheter Placement and Other Blockages
  1.9.5. Postoperative Recovery

Module 2. Instrumentation, Materials and Electrosurgery

2.1. Laparoscopy Tower and General Supplies
2.2. Specific Vision Systems
  2.2.1. Full HD High Definition Systems
  2.2.2. 3D Vision Systems
  2.2.3. 4K Vision Systems

2.3. Endoscopy
  2.3.1. Rigid Endoscopy
  2.3.2. Flexible and Angle Adjustable Endoscopes
  2.3.3. Small Bore Endoscopes
2.4. Insufflation Systems
  2.4.1. General Functioning
  2.4.2. Smoke Extraction Systems
2.5. Image Recording Modules
2.6. Access Instrumentation
  2.6.1. Veress Needle
  2.6.2. First Access Trocars
  2.6.3. Accessory Trocars
2.7. Grasping Instruments
  2.7.1. Types of Instruments
  2.7.2. Most Appropriate Uses for Each
2.8. Cutting Instruments
2.9. Electrosurgery
  2.9.1. Electrosurgery in Medicine
  2.9.2. Monopolar Energy
  2.9.3. Bipolar Energy
  2.9.4. Electrical Isolation of Instruments
  2.9.5. Precautions to Avoid Accidents
2.10. Endoscopic Tissue Sealants
2.11. Bags and Specimen Extraction
2.12. EndoGIA and General Surgery Instrumentation
2.13. Morcellators and Containment Systems
2.14. Other Instruments: Aspiration, Suction, Retractors, Organ Suspension Systems, Port Closure Systems, Tie Rods, etc

Module 3. General Training in Minimally Invasive Surgery

3.1. Introduction and Learning Pyramid
3.2. Different Types of Options for Learning Endoscopy
  3.2.1. Conducting Training Courses and Programs
  3.2.2. Laparoscopic Simulators
    3.2.2.1. Physical Simulations
    3.2.2.2. Virtual Simulators
  3.2.3. Animal Models in Gynecologic Endoscopy
  3.2.4. Human Models for Simulation
3.3. How to Build a Homemade Pelvitrainer
3.4. Different Types of Practical Pelvitrainer Exercises
3.5. Organ Bank and Artificial Phantoms

Module 4. Laparoscopic Suture Training

4.1. Introduction and Suture Use in Endoscopy
4.2. Types of Needles
4.3. Types of Sutures Used
  4.3.1. Conventional Sutures
  4.3.2. Vascular Suture
  4.3.3. Bearded Suture
  4.3.4. Automatic Suture Systems
4.4. Specific Instrumentation
  4.4.1. Types of Needle Holders
  4.4.2. Low Knots
  4.4.3. LapraTy Applicator
  4.4.4. Others
4.5. Technical Aspects
  4.5.1. Introducing the Needle into the Cavity
  4.5.2. Needle Placement in Holder
  4.5.3. Types of Sutures
  4.5.4. Intracorporeal Knotting
  4.5.5. Extracorporeal Knotting
  4.5.6. Single-Port Knotting
  4.5.7. Sutures and Special Types of Knots (Vascular, Intestinal)
  4.5.6. Suture Removal

Module 5. Female Surgical Anatomy

5.1. Parametrial Surgical Anatomy
5.2. Musculo-Fascial Anatomy of the Female Pelvis
5.3. Pelvic Visceral System. Ureters. Abdomino-Pelvic Vascular System
  5.3.1. Uterus and Ovaries
  5.3.2. Recto and Sigma
  5.3.3. Bladder and Ureters

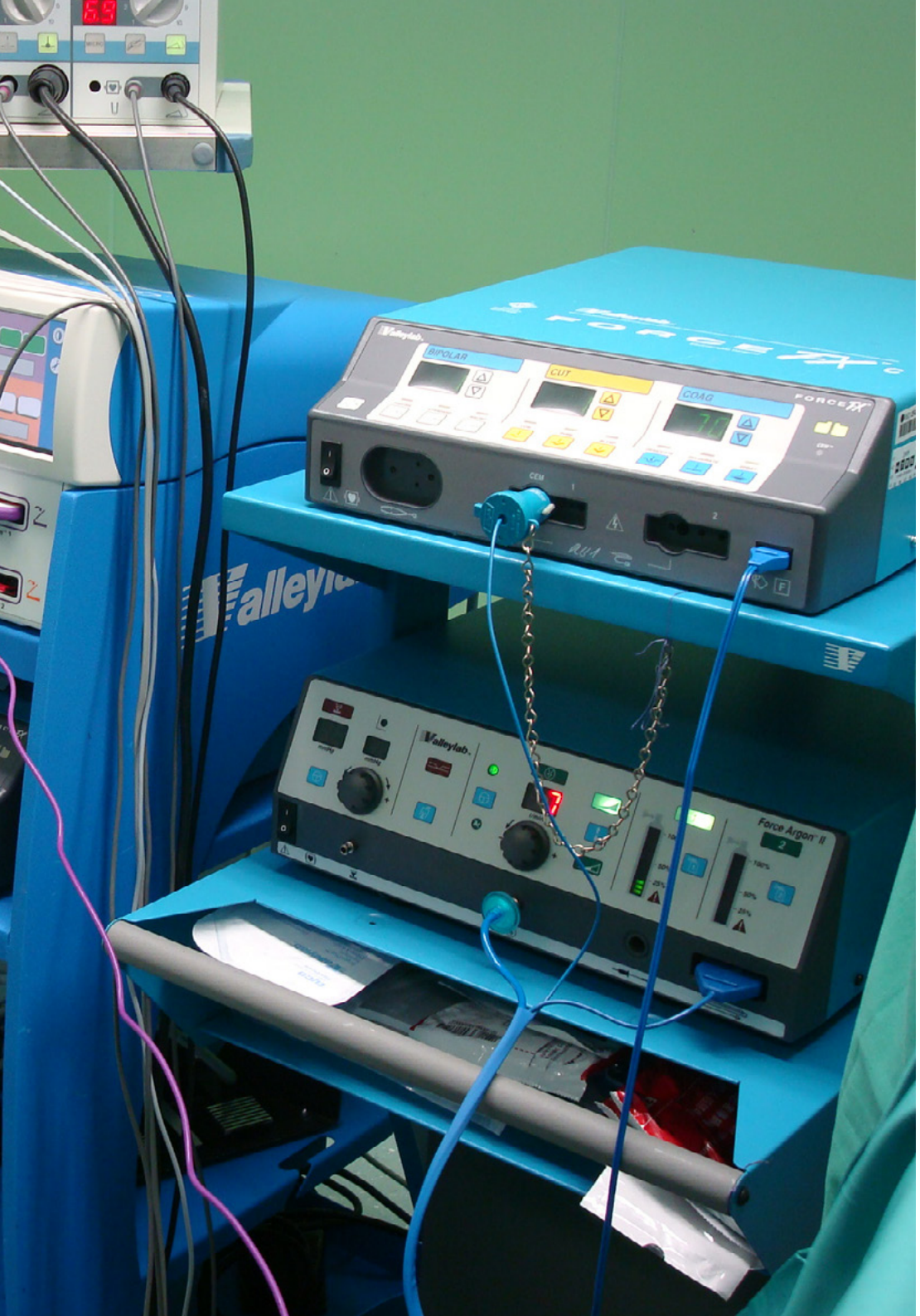
5.4. Abdominal and Pelvic Nervous System
5.5. Dissection and Limits of Avascular Spaces
5.6. Vascular Abnormalities in the Pelvic Area. Corona Mortis
  5.6.1. Abnormalities in the Pelvic Area
  5.6.2. Corona Mortis
  5.6.3. Abdominal and Aortic Area Abnormalities
  5.6.4. Use of Preoperative Imaging Techniques

Module 6. Hysteroscopic Surgery

6.1. Introduction to Hysteroscopic Surgery
6.2. Organization of an Outpatient Hysteroscopy Consultation
6.3. Hysteroscopy Equipment and Instruments in Consultation
  6.3.1. Peculiarities of the Hysteroscopy Tower
  6.3.2. Types of Diagnostic Hysteroscopes
  6.3.3. Types of Instruments
6.4. Hysteroscopy in Consultation
  6.4.1. Indications for In-Consultation Hysteroscopy
  6.4.2. In-Consultation Hysteroscopy Technique
  6.4.3. How to Increase Success Rate
6.5. Surgical Hysteroscopy
  6.5.1. Surgical Hysteroscopies Indications
  6.5.2. Peculiarities of the Procedure in the Operating Room
6.6. Systematic Endometrial Exploration and Biopsy
6.7. Hysteroscopic Polypectomy
6.8. Foreign Body Removal (IUD, Essures)
6.9. Hysteroscopic Myomectomy
  6.9.1. Limits to In-Consultation Interventions
  6.9.2. Types of Hysteroscopic Morcellators
  6.9.3. Suitable Techniques
6.10. Resection of Septum and Intracavitary Malformations
6.11. Intratubal Devices
6.12. Endometrial Ablation
  6.12.1. Resectoscope Use
  6.12.2. Novasure and Other Devices
6.13. Complications and Post-Procedural Management in Hysteroscopy
  6.13.1. Uterine or Cervical Perforation
  6.13.2. Infections
  6.13.3. Vasovagal Syndrome
  6.13.4. Bleeding
  6.13.5. Postoperative Pain
  6.13.6. Hyperosmolar Syndrome
  6.13.7. Others
6.14. New Developments in Hysteroscopy
  6.14.1. Using Monopolar Energy vs. Bipolar Energy
  6.14.2. Use of Laser in Hysteroscopy
  6.14.3. Other Developments

Module 7. Exploratory Laparoscopy and Benign Adnexal Pathology

7.1. General Considerations in the Operating Room
7.2. Use of Veress vs. Hasson's Trocar
7.3. Placement of Accessory Trocars
  7.3.1. Choosing the Right Trocar
  7.3.2. How to Avoid Complications
  7.3.3. Use of Direct Vision Trocars
7.4. Performing the Pneumoperitoneum
7.5. Systematic Exploration of the Cavity: Biopsies and Cytology
7.6. Simple Adnexectomy and Salpingectomy
7.7. Ovarian Cystectomy of Simple Cysts
7.8. Management of Complex Non-Endometriotic Cysts
  7.8.1. Ovarian Teratomas
  7.8.2. Large Cysts
  7.8.3. Adnexal Torsion
  7.8.4. Ectopic Pregnancy
  7.8.5. Pelvic Abscess and Inflammatory Disease
7.9. Remaining Ovary Syndrome



Module 8. Benign Uterine Pathology and Dysgenesis

8.1. Laparoscopic Myomectomy
- 8.1.1. Medical Treatment of Myomas
- 8.1.2. Surgical Treatment. Indications
- 8.1.3. Prevention of Bleeding
  - 8.1.3.1. Injection of Vasoconstrictors
  - 8.1.3.2. Temporary Clipping of Uterine Arteries
- 8.1.4. Basic Surgical Techniques
  - 8.1.4.1. Choosing the Incision
  - 8.1.4.2. Myomatous Dissection and Removal
  - 8.1.4.3. Bed Suture
  - 8.1.4.4. Morcellation of the Part
    - 8.1.4.4.1. Risk of Uterine Sarcoma
    - 8.1.4.4.2. Sealed Morcellation Systems
- 8.1.5. Fertility after Myomectomy
  - 8.1.5.1. Obstetric Outcomes and Recommendations
  - 8.1.5.2. Non-Stick Systems

8.2. Laparoscopic Hysterectomy
- 8.2.1. Use of Uterine Mobilizers
  - 8.2.1.1. Types of Mobilizers
  - 8.2.1.2. Fitting the Mobilizers
  - 8.2.1.3. Advantages of Mobilizers
  - 8.2.3.4. Automatic Uterine Mobilization Systems
- 8.2.2. Basic Simple Hysterectomy Technique
- 8.2.3. Technique in Complex Situations
- 8.2.4. Vaginal Vault Suture and Dehiscence

8.3. Genital Malformation Syndromes
- 8.3.1. Classification of Malformation Syndromes
- 8.3.2. Laparoscopic Resolution of Malformation Syndromes
- 8.3.3. Laparoscopic Neovagina

Module 9. Pelvic Floor Pathology and Transvaginal Mesh Use

9.1. Pathophysiology of Genital Prolapse
9.2. Etiopathogenesis of Chronic Pelvic Pain
9.3. Global Assessment of the Patient and the Approach Route
9.4. Prosthetic Materials and Mesh Types
  9.4.1. Types of Material
  9.4.2. Meshes for Genital Prolapses
  9.4.3. Urinary Incontinence Meshes
9.5. Laparoscopic Sacrocolpopexy
  9.5.1. Choosing the Right Mesh
  9.5.2. Surgical Technique
    9.5.2.1. When to Preserve the Uterus
  9.5.3. Technique Complications
  9.5.4. A Learning Curve
9.6. Treatment of Urinary Incontinence
  9.6.1. Pre-Operative Study
  9.6.2. Endoscopic Treatment of Incontinence
  9.6.3. Vaginal Treatment of Incontinence
  9.6.4. Placement of Mini-Slings
  9.6.5. Placement of TVT - TOT
  9.6.6. Other Procedures
9.7. Endoscopic Repair of Paravaginal Defects
9.8. Role of Cystoscopy in Gynecologic Surgery

Module 10. Laparoscopy in Endometriosis

10.1. Laparoscopy in the Treatment of Endometriosis
10.2. General Diagnosis of Endometriosis
  10.2.1. Clinical Examination
  10.2.2. Imaging Techniques
  10.2.3. The Role of Tumor Markers
10.3. Endometriosis Classification
  10.3.1. Classification Systems by Authors
  10.3. 2. Clinical Utility of Classifications
10.4. Medical Treatment of Endometriosis
  10.4.1. Non-Hormonal Treatment
  10.4.2. Hormonal Treatment
    10.4.2.1. Contraceptives
    10.4.2.2. Progestogens
    10.4.2.3. Danazol
    10.4.2.4. Gestrinone
    10.4.2.5. Others
10.5. Treatment of Ovarian and Peritoneal Endometriosis
  10.5.1. Types of Peritoneal Disease
  10.5.2. Adhesion Formation and Release
  10.5.3. Ovarian Endometriosis
10.6. Management of Deep Endometriosis
  10.6.1. General Concepts
  10.6.2. Endometriosis Rectum Vaginal Septum
  10.6.3. Lateral and Sciatic Compartment
  10.6.4. Intestinal Endometriosis
  10.6.5. Endometriosis in the Urinary Tract
10.7. Extrapelvic Endometriosis
10.8. Reproductive Effects of Laparoscopy and Endometriosis
10.9. New Developments in Endometriosis and Laparoscopy

Module 11. Endoscopic Surgery in Gynecologic Oncology

11.1. Oncologic Laparoscopy
  11.1.1. Effect of Pneumoperitoneum and Dissemination
  11.1.2. Port-Site Metastasis
  11.1.3. Uterine Manipulator and Dissemination
11.2. Tumor Dissemination Routes
  11.2.1. Peritoneal Dissemination
  11.2.2. Lymphatic dissemination:
  11.2.3. Hematogenous Dissemination

11.3. Nodal Selective Study
- 11.3.1. Sentinel Lymph Node in Ovarian Cancer
- 11.3.2. Sentinel Lymph Node in Cervical Cancer
- 11.3.3. Sentinel Lymph Node in Endometrial Cancer
- 11.3.4. Types of Tracers
- 11.3.5. Sentinel Lymph Node Detection and Dissection Technique

11.4. Laparoscopy and Ovarian Cancer
- 11.4.1. Exploratory Laparoscopy in Ovarian Cancer
  - 11.4.1.1. Suspicious Adnexal Masses
  - 11.4.1.2. Advanced Ovarian Cancer. Laparoscopic Scores
- 11.4.2. Borderline Tumor Management
  - 11.4.2.1. Laparoscopic Staging
  - 11.4.2.2. Surgical Re-Staging
- 11.4.3. Staging Procedures
  - 11.4.3.1. Abdominal Peritonectomy
  - 11.4.3.1. Pelvic Lymphadenectomy
  - 11.4.3.2. Para-Aortic Lymphadenectomy
  - 11.4.3.2.1. Extraperitoneal
  - 11.4.3.2.1. Transperitoneal
  - 11.4.3.3. Laparoscopic Omentectomy
  - 11.4.3.4. Other Procedures
- 11.4.4. Laparoscopy in Ovarian Cancer Recurrences
- 11.4.5. Laparoscopy in Interval Surgery

11.5. Laparoscopy in Cervical Cancer
- 11.5.1. Laparoscopy Indications
- 11.5.2. Laparoscopic Radical Hysterectomy
  - 11.5.2.1. Radical Hysterectomy Classification
  - 11.5.2.2. Nerve Preservation
  - 11.5.2.3. Radicality Modulation
  - 11.5.2.4. Detailed Surgical Technique
- 11.5.3. Special Characteristics of Radical Trachelectomy
  - 11.5.3.1. Indications
  - 11.5.3.2. Uterine Artery Preservation
  - 11.5.3.3. Cervical Cerclage
  - 11.5.3.4. Ovarian Oophoropexy
- 11.5.4. Laparoscopic Parametrectomy
- 11.5.5. Laparoscopic Treatment of Recurrences
  - 11.5.5.1. Single Recurrences
  - 11.5.5.2. Laparoscopic Exenteration

11.6. Laparoscopy in Endometrial Cancer
- 11.6.1. Laparoscopy and Staging in Endometrial Cancer
- 11.6.2. Laparoscopic Lymph Nodal Debulking
- 11.6.2. Other Particularities

11.7. Laparoscopic Inguinal Lymphadenectomy

Module 12. Complications in Minimally Invasive Surgery

12.1. Access and Abdominal Wall Complications
- 12.1.1. Arterial Wall Injury
- 12.1.2. Vascular Lesions upon Entry
- 12.1.3. Intestinal Lesions upon Entry
- 12.1.4. Port-of-Entry Herniation
- 12.1.5. Infections
- 12.1.6. Others

12.2. Intraoperative Vascular Complications
- 12.2.1. Prevalence and Etiology
- 12.2.2. Resolution
- 12.2.3. Postoperative Aftercare

12.3. Intraoperative Intestinal Complications
- 12.3.1. Prevalence and Etiology
- 12.3.2. Resolution
- 12.3.3. Postoperative Aftercare

12.4. Urologic Complications
- 12.4.1. Prevalence and Etiology
- 12.4.2. Resolution
- 12.4.3. Postoperative Monitoring

12.5. Nerve Complications
12.6. Inadvertent Complications
12.7. Complications Specific to Radical Hysterectomy
12.8. Complications Arising from the Meshes
12.9. Other Complications: Lymphoceles, Infections, Pulmonary Thromboembolism (PTE), etc

Module 13. Laparoscopy and its Impact on Fertility

13.1. Utility of Laparoscopy in Reproduction
13.2. Restoration of Fertility
- 13.2.1. Removing Essure Devices Using Laparoscopy
- 13.2.2. Tubal Recanalization

13.3. Adhesive Syndrome and Laparoscopy
13.4. Chromopertubation Use
13.5. Laparoscopic Surgery and Pregnancy

Module 14. Ultra-Minimally Invasive Surgery

14.1. Introduction to Ultra Minimally Invasive Surgery
14.2. Single-Port Surgery
- 14.2.1. Evidence in Gynecology for Its Use
- 14.2.2. Specific Instruments
- 14.2.3. Surgical Technique by Procedures
- 14.2.4. *Single-Glove*

14.3. Mini-Laparoscopic Surgery
- 14.3.1. Evidence in Gynecology for Its Use
- 14.3.2. Specific Instruments
- 14.3.3. Surgical Technique by Procedures

14.4. Surgery without Ports of Entry
- 14.3.1. Evidence in Gynecology for Its Use
- 14.3.2. Specific Instruments
- 14.3.3. Surgical Technique by Procedures

14.5. Other Ultra-Mini-Invasion Breakthroughs
14.6. Comparison between the Different Techniques

Module 15. Robotic Surgery in Gynecology

15.1. Introduction and Advantages of Robotic Surgery
15.2. Different Types of Robotic Systems
- 15.2.1. Da Vinci System
- 15.2.2. Zeus System
- 15.2.3. Amadeus-Titan System
- 15.2.4. Others

15.3. Instrumentation in Robotic Surgery
15.4. Docking and Setting Surgical Robots
15.5. Comparison between the Robotic Pathway and Other Pathways
15.5. Financial Factors and Robotic Efficiency
15.6. Complications in Robotic Surgery
15.7. Single-Port in Robotics
15.8. New Developments in Robotics

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

06

Methodology

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

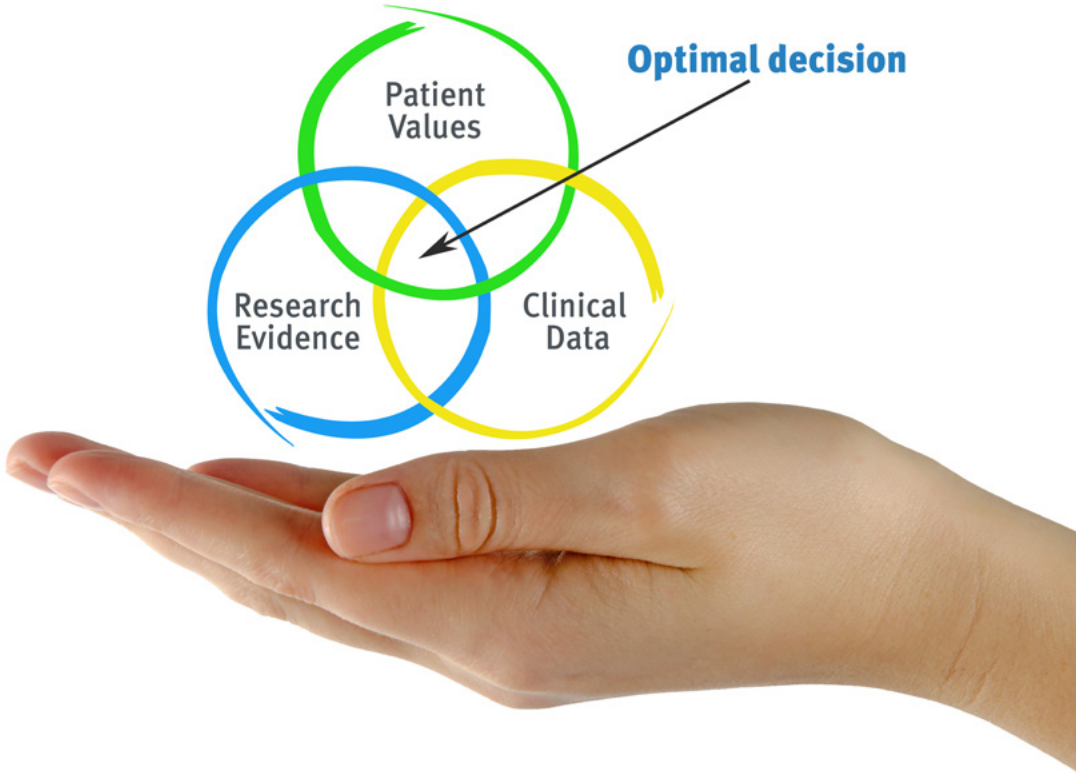
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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:

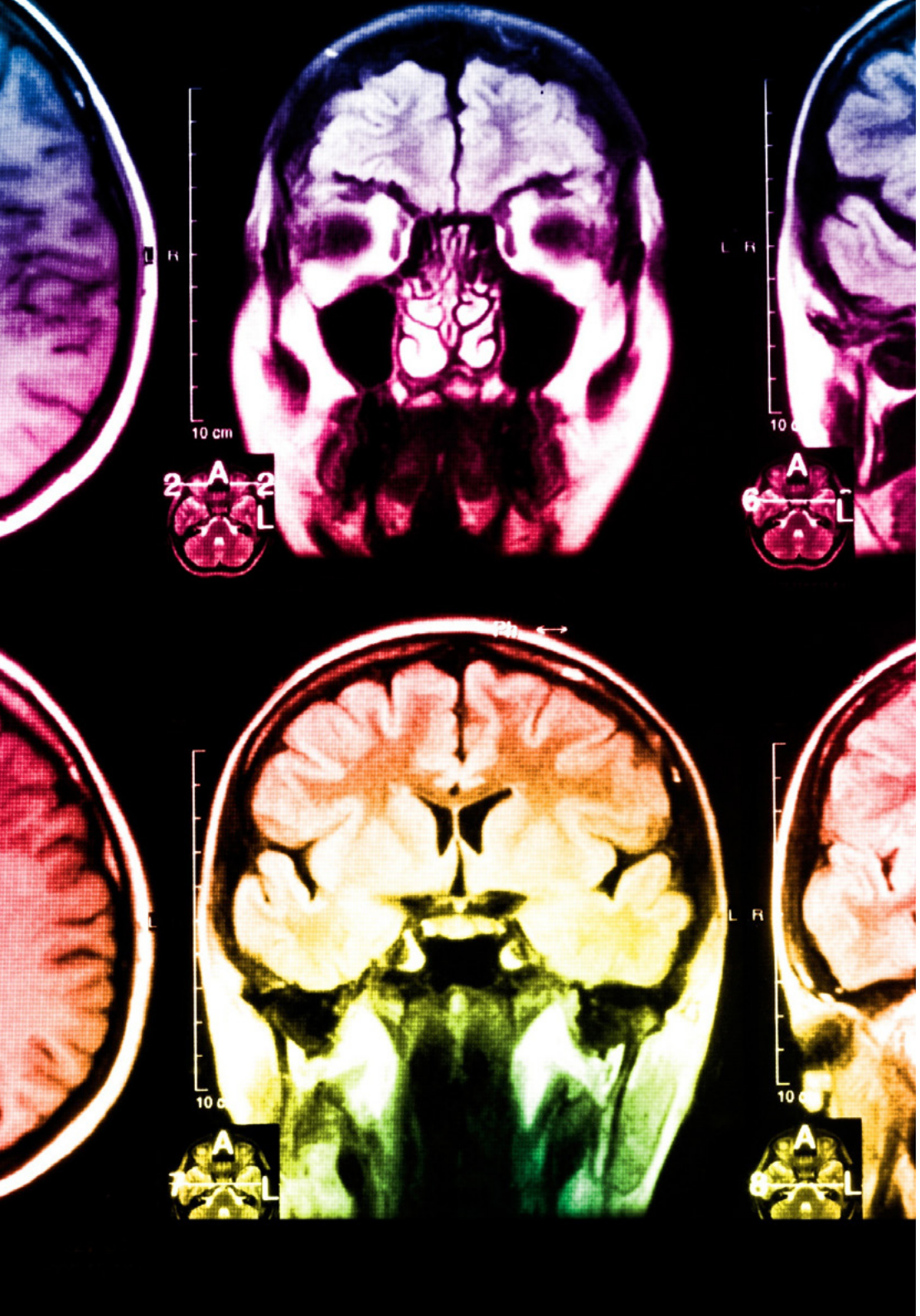
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better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

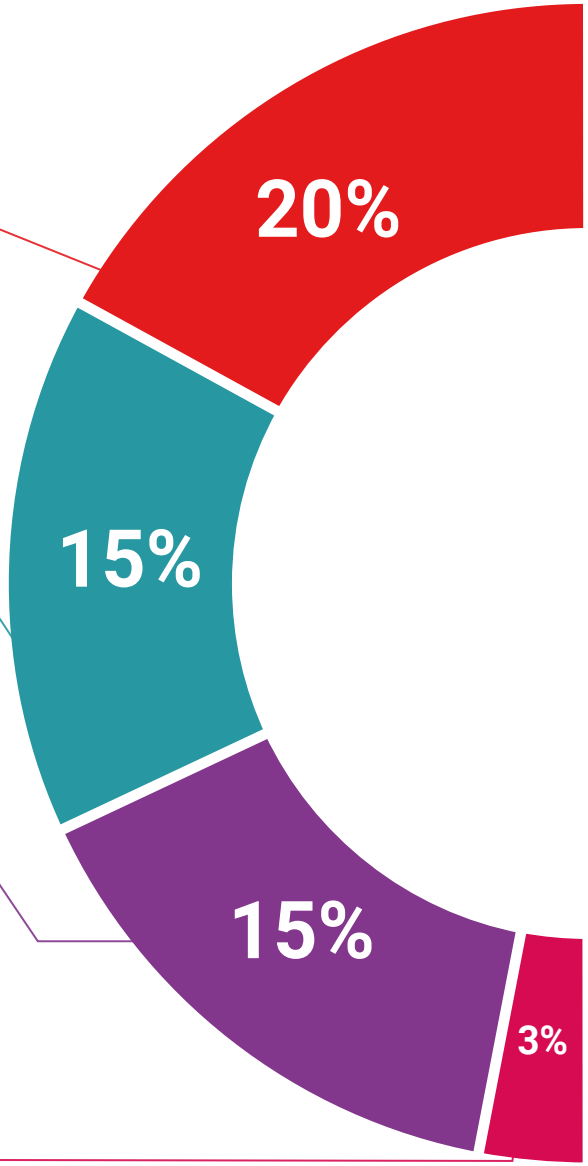
Interactive Summaries

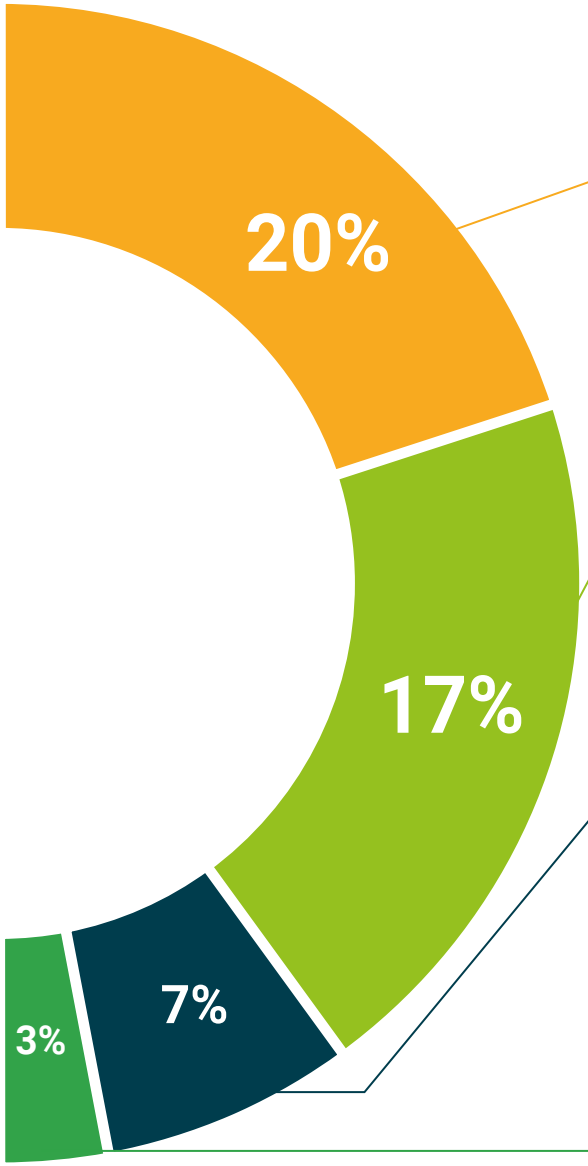
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Minimally Invasive Gynecologic Surgery guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree diploma issued by TECH Global University.

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

This private qualification will allow you to obtain a **Professional Master's Degree diploma in Minimally Invasive Gynecologic Surgery** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra (***official bulletin***). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

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

Title: **Professional Master's Degree in Minimally Invasive Gynecologic Surgery**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Professional Master's Degree in Minimally Invasive Gynecologic Surgery

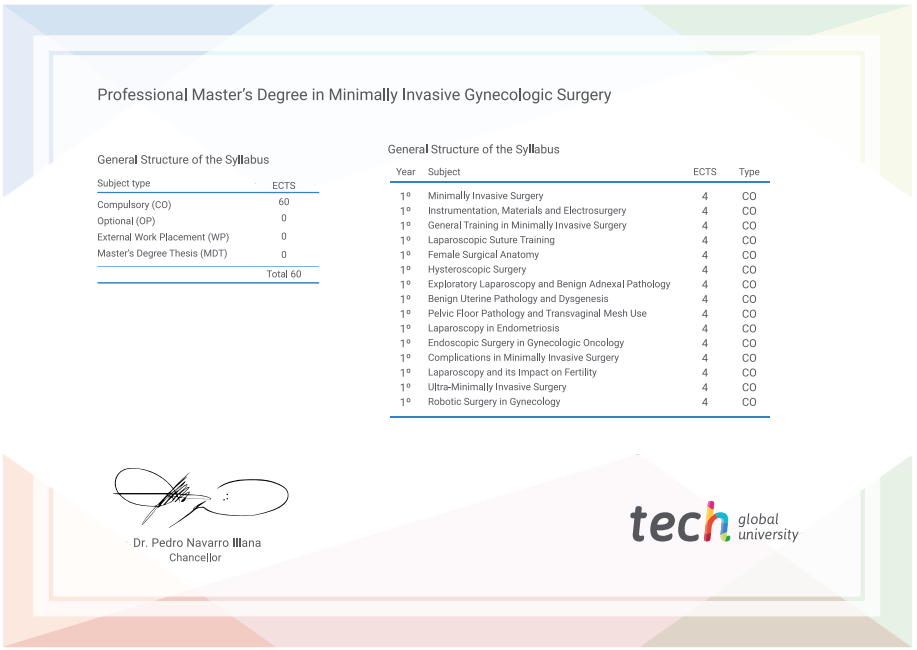
This is a private qualification of 1,800 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
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


Professional Master's Degree in Minimally Invasive Gynecologic Surgery

General Structure of the Syllabus

Subject type	ECTS
Compulsory (CO)	60
Optional (OP)	0
External Work Placement (WP)	0
Master's Degree Thesis (MDT)	0
	Total 60

General Structure of the Syllabus

Year	Subject	ECTS	Type
1º	Minimally Invasive Surgery	4	CO
1º	Instrumentation, Materials and Electrosurgery	4	CO
1º	General Training in Minimally Invasive Surgery	4	CO
1º	Laparoscopic Suture Training	4	CO
1º	Female Surgical Anatomy	4	CO
1º	Hysteroscopic Surgery	4	CO
1º	Exploratory Laparoscopy and Benign Adnexal Pathology	4	CO
1º	Benign Uterine Pathology and Dysgenesis	4	CO
1º	Pelvic Floor Pathology and Transvaginal Mesh Use	4	CO
1º	Laparoscopy in Endometriosis	4	CO
1º	Endoscopic Surgery in Gynecologic Oncology	4	CO
1º	Complications in Minimally Invasive Surgery	4	CO
1º	Laparoscopy and its Impact on Fertility	4	CO
1º	Ultra-Minimally Invasive Surgery	4	CO
1º	Robotic Surgery in Gynecology	4	CO

Dr. Pedro Navarro Illana
Chancellor

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*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.

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Professional Master's Degree

Minimally Invasive Gynecologic Surgery

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

Professional Master's Degree

Minimally Invasive Gynecologic Surgery

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