

Hybrid Professional Master's Degree Update in Assisted Reproduction



Hybrid Professional Master's Degree Update in Assisted Reproduction

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

Duration: **12 months**

Certificate: **TECH Technological University**

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

Website: www.techtute.com/pk/medicine/hybrid-professional-master-degree/hybrid-professional-master-degree-update-assisted-reproduction

Index

01

Introduction

p. 4

02

Why Study this Hybrid
Professional Master's Degree?

p. 8

03

Objectives

p. 12

04

Skills

p. 18

05

Course Management

p. 22

06

Educational Plan

p. 32

07

Clinical Internship

p. 38

08

Where Can I Do the Clinical
Internship?

p. 44

09

Methodology

p. 48

10

Certificate

p. 56

01

Introduction

Assisted Reproduction is a fairly frequent practice in Western countries due to the high rate of infertility that exists in them. Despite the fact that the biological characteristics of both parents must be specific in order to carry out an effective insemination, the truth is that great advances have been made in this field, increasing the efficiency of the treatments and the safety for the mother and the embryo, as well as decreasing the adverse causes of hormone therapy. Therefore, given the increasing demand for this service and in order for specialists to offer a practice based on the latest scientific developments, TECH has developed a comprehensive program that combines the most cutting-edge theory with a clinical internship in a clinical center of the highest level. This way they will be able to update in a dynamic and guaranteed way their knowledge in Embryology and Gynecology in just 12 months of a unique multidisciplinary experience.



“

The best program in the current academic market to update your knowledge and bring you up-to-date with the most effective techniques and strategies in the context of Assisted Reproduction”

The advance of Biology in a consensual manner with Medicine has made it possible to multiply considerably the success rate of Assisted Reproduction treatments. According to a study carried out by a renowned organization in this sector, "the pregnancy rate achieved through this technique is around 50-60%", taking into account, of course, the characteristics of the parents and/or the donors of the two sex cells in the event that their use is necessary. Thanks to this, millions of people around the world have been able to become parents through treatments that are increasingly safer for the health of the mother and the embryo, and in which the side effects of hormonal therapies have been reduced in aggressiveness.

However, they still have a long way to go. For this reason, hundreds of investigations are carried out every year in order to determine therapeutic guidelines and increasingly specialized techniques that help fulfill the dream of thousands of people to bring life into the world. Based on this, and in order to serve as a guide for professionals in this field in a comprehensive update of their knowledge, TECH has developed this complete Hybrid Professional Master's Degree in Update in Assisted Reproduction, a program that combines practice and theory in an unparalleled academic experience of 12 months duration. The graduate will not only be able to delve into the latest developments in andrology and fertilization through 1,500 hours of the best theoretical and additional content, but will also have the opportunity to attend a 3-week stay in a leading clinic on the international scene.

In this way, they will become part of a great team versed in Embryology and Gynecology and will actively participate in the management of various clinical cases throughout the 120 hours of clinical internship to which they will have access. Therefore, not only will they be able to get up-to-date with the most effective and innovative diagnostic and therapeutic guidelines from the best professionals, but they will also have the opportunity to improve their skills in a guaranteed way. In addition, they will master the most technical stimulation tools and will implement in their practice the reproductive processes that have had the best results to date, raising the quality of their service to the highest possible level.

This **Hybrid Professional Master's Degree in Update in Assisted Reproduction** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of more than 100 clinical cases presented by medical professionals, experts in Reproduction and university professors with extensive experience in the management of the infertile patient
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Assessment and monitoring of the infertile patient, the latest international recommendations for assisted reproduction maneuvers, previous care in patients with reproductive disorders, etc
- ♦ Practical clinical guides on approaching different pathologies
- ♦ Special emphasis on test-based medicine and research methodologies in Assisted Reproductive Medicine
- ♦ 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
- ♦ Furthermore, you will be able to carry out a clinical internship in one of the best hospitals



During the 120 hours of internship you will be part of a team of the highest level that will ensure that all the objectives for which this qualification was developed are met"

“

If among your concerns is to be up-to-date on the best techniques for semen washing in patients with HIV or Hepatitis, this program will provide you with what you need to update your practice”

This Master's program, which has a professionalizing nature and a hybrid learning modality, is aimed at updating medical professionals who perform their functions in Reproduction units, and who require a high level of qualification. The contents are based on the latest scientific evidence, and oriented in a educational way to integrate theoretical knowledge in the clinical practice, and the theoretical-practical elements will facilitate the updating of knowledge and allow decision-making in the management of the infertile patient.

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

You will have access to a complete list of the most effective ovarian reserve studies in the current clinical scenario, as well as their characteristics and uses depending on the patients.

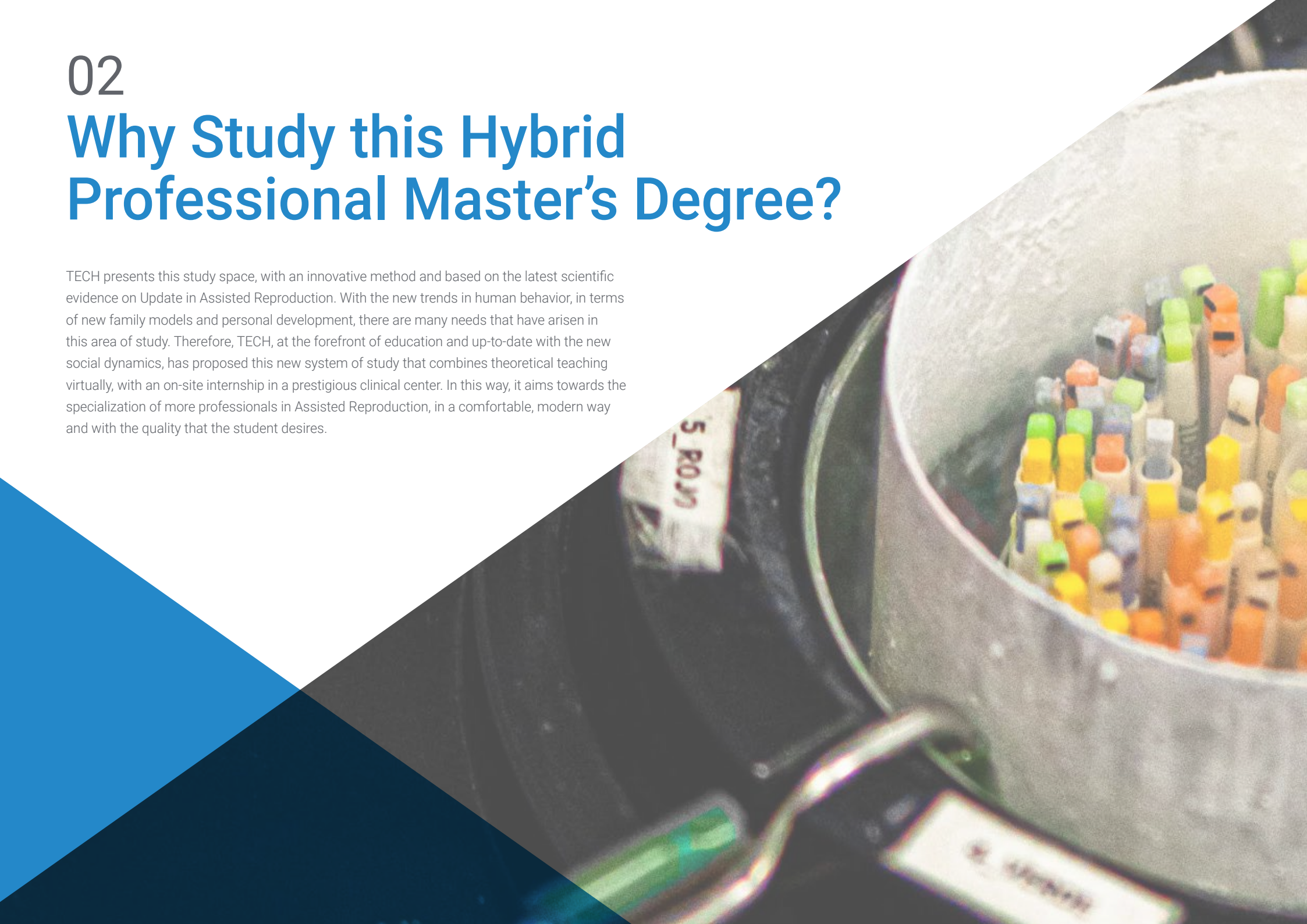
You will be up-to-date on the latest recognized factors affecting sperm quality, in order to guide your patients in the prevention of infertility.



02

Why Study this Hybrid Professional Master's Degree?

TECH presents this study space, with an innovative method and based on the latest scientific evidence on Update in Assisted Reproduction. With the new trends in human behavior, in terms of new family models and personal development, there are many needs that have arisen in this area of study. Therefore, TECH, at the forefront of education and up-to-date with the new social dynamics, has proposed this new system of study that combines theoretical teaching virtually, with an on-site internship in a prestigious clinical center. In this way, it aims towards the specialization of more professionals in Assisted Reproduction, in a comfortable, modern way and with the quality that the student desires.





“

Enjoy a revolutionary learning method where you will evolve with the help of the best specialists in Assisted Reproduction”

1. Updating from the latest technology available

In order to provide a high academic level education, TECH has the most advanced resources in its teaching process. From the virtual platform students will enjoy free connection 24 hours a day, from any device, which will allow them to schedule their education according to their availability. In addition, in the practical stage they will choose the national or international reference hospital center with the most complete equipment to get up-to-date with the latest methods of Assisted Reproduction.

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

TECH joins the most experienced professionals in Assisted Reproduction, who have participated in the design of this program. In addition, they will have a tutor for each teaching stage, both academic and clinical internship. They will transmit all their knowledge about the subject of study and will be able to visualize the most up-to-date techniques and procedures in real cases.

3. Entering First-Class Clinical Environments

In order to bring the student closer to real and first-class clinical environments, TECH carefully selects all the centers available for the Clinical Internship stage. In this way, the specialist will have access to a clinical environment equipped with the most advanced technology for the application of Assisted Reproduction. In this way, the student will acquire the skills and competencies needed in the subject of study and will improve their professional background.





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

There is no other program like this one. TECH, always innovating in the teaching process, has designed this space where the professional will not only have the best study material for their reviews and notes, but will be able to see in situ real cases of Update in Assisted Reproduction. A perfect combination to achieve the desired knowledge in just 12 months.

5. Expanding the Boundaries of Knowledge

Thanks to the digitalization of education, TECH is at the forefront of high-level academic programs. In its constant search for innovation and educational quality, TECH selects expert teachers and national and international professional centers. In this way, TECH is able to design a unique proposal of excellence for professional training without borders.



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

03 Objectives

Assisted Reproduction is advancing by leaps and bounds. Therefore, medical specialists versed in this area must be constantly updating their knowledge in order to be able to offer their patients the most cutting-edge and effective clinical care known to date. Based on this, TECH has developed this complete program with the aim of making available to the graduate the most cutting-edge and accurate information related to pregnancy and fertilization through the most innovative techniques of the current gynecological and embryonic environment.



“

If your objectives include mastering the latest stimulation protocols for reproductive treatments, TECH is your center and this Hybrid Professional Master's Degree is the perfect program to achieve it”



General Objective

- This Hybrid Professional Master's Degree in Update in Assisted Reproduction has been developed with the aim of allowing specialists to update their concepts in anatomy, physiology, embryology and genetics, which will help them to carry out a state-of-the-art diagnostic and therapeutic practice. Thanks to this, they will be able to know in detail the latest developments related to the initial assessment of the infertile couple, as well as to get up-to-date with the study criteria for referral to the Reproduction units. In addition, it will allow them to improve their skills in basic clinical examination, as well as in the request and interpretation of the results of the complementary tests that are prescribed in this type of cases



A program designed to satisfy even the most ambitious academic needs of its graduates through the best theoretical, practical and additional content"





Specific Objectives

Module 1. Introduction. Anatomy. Physiology. Cellular Cycle

- ♦ Study the developments and advances throughout the history of Reproductive Medicine
- ♦ Examine the aspects related to female and male anatomy, in addition to those related to gametogenesis and oocyte fertilization by the spermatozoon
- ♦ Delve into the anatomy and embryology related to embryonic genesis and embryo implantation

Module 2. Gamete Interaction Fertilization Embryonic Development

- ♦ Differentiate the different reproductive techniques: ovulation stimulation, artificial insemination and In Vitro Fertilization with or without sperm microinjection
- ♦ Detail the indication of the different reproductive techniques
- ♦ Understand the possibility of using reproductive techniques with donor gametes
- ♦ Know the different adjuvant treatments that could be used in patients diagnosed with low ovarian reserve
- ♦ Manage the different types of ovulation induction according to the patient's profile
- ♦ Know the usual artificial insemination and vitro fertilization cycles

Module 3. Study of the Female Factor The Role of Surgery in Reproduction

- ♦ Study the possible relationship with tubal factor sterility and infertility
- ♦ Deepen in the histological, immunological and microbiological endometrial changes and in the current techniques for their evaluation
- ♦ Basic study of ovarian reserve
- ♦ Distinguish the factors that can affect female reproductive capacity at the level of decreased ovarian reserve
- ♦ Understand tubal patency assessment techniques

Module 4. Andrology Laboratory

- ♦ Deepening the basic study at the male level
- ♦ Interpret normal values of a semen analysis
- ♦ Know the factors that may affect male reproductive capacity in terms of sperm quality, motility, morphology, aneuploidy or sperm DNA fragmentation
- ♦ Deepen the current specific studies for male factor, as well as advanced techniques
- ♦ Develop the indications for testicular biopsy and its procedure

Module 5. Reproductive Treatments Medication. Stimulation Protocols

- ♦ Manage the different drugs used in ovulation stimulation
- ♦ Know the different stimulation protocols according to the patient's characteristics
- ♦ Develop IVF/ICSI techniques (micromanipulation) from the beginning: SUZI, PZD, ROSI, ELSI, IMSI, PICSI, assisted hatching
- ♦ Explore culture media composition and requirements as a function of embryonic developmental stage
- ♦ Study embryo development and specific classification of embryo quality according to stages
- ♦ Delve into time-lapse technology and the different kinetic events affecting embryo division
- ♦ Study the automatic algorithms presented by each time-lapse technology and relate them to the reproductive results
- ♦ Develop additional techniques in the laboratory that allow a possible improvement in embryo implantation (collapse, hatching)

Module 6. Micromanipulation Techniques

- ♦ Understand the need to establish general and specific quality indicators for each laboratory in order to maintain the best conditions in the laboratory
- ♦ Study the impact of fibroids on fertility
- ♦ Analyze the possible surgical indications in patients with fibroids and infertility
- ♦ Delve deeper into the impact of uterine malformations on fertility
- ♦ Analyze the possible surgical indications in patients with surgical malformations and infertility Metroplasties Septoplasties
- ♦ Understand the role of tubal surgery in improving natural fertility
- ♦ Develop the surgical option of uterine transplantation, its indications and technique

Module 7. Gamete and Embryo Cryopreservation

- ♦ Study the Indications of the "Freeze All"
- ♦ Know and manage the possible complications derived from assisted reproduction treatments
- ♦ Analyze the drugs used for the endometrial preparation of substituted embryo cryotransfer cycles
- ♦ Update the different luteal phase support protocols
- ♦ Develop gamete handling in the laboratory
- ♦ Know the embryo biopsy techniques according to the stage of embryo division
- ♦ Know the embryo biopsy techniques according to the technology used and the existing means in each laboratory
- ♦ Analyze the indications for fertility preservation in the male
- ♦ Study the techniques used in sperm cryopreservation and their efficiency
- ♦ Deepen the indications for fertility preservation in women
- ♦ Know the techniques used in oocyte cryopreservation and their efficiency
- ♦ Know the techniques used in ovarian tissue cryopreservation and their efficiency

Module 8. Fertility Preservation

- ♦ Study the European standards to establish the minimum criteria required in Reproduction Units (ISO/UNE)
- ♦ Study in depth the definitions and indications for the study of the couple with repeated miscarriages or implantation failures
- ♦ Develop the level of evidence for each of the requested tests
- ♦ Gain knowledge the different treatment options
- ♦ Study the impact of endometriosis on fertility
- ♦ Analyze the possible surgical indications in patients with endometriosis and infertility
- ♦ Know the impact of adenomyosis on fertility
- ♦ Develop possible surgical indications in patients with adenomyosis and infertility
- ♦ Understand the impact of the hydrosalpinx on fertility and its surgical indication prior to In Vitro Fertilization

Module 9. Genetics in Reproduction

- ♦ Study the basic concepts of genetics
- ♦ Develop the basic concepts of reproductive genetics
- ♦ Analyze the concept of "epigenetics" and its influence on reproduction
- ♦ Know the different genetic diagnostic techniques, existing platforms and application of each of them according to the diagnostic objective
- ♦ Analyze the indications in reproductive medicine for diagnosis and screening of aneuploidy
- ♦ Interpret the results of genetic studies
- ♦ Understand the need for genetic counseling
- ♦ Knowledge of embryo biopsy techniques
- ♦ Study the results of the preimplantation genetic diagnosis and aneuploidy screening program

Module 10. Legislation. Quality Research and Future Techniques

- ♦ Develop new techniques in genetic diagnosis (non-invasive tests, mitochondrial transfer) and their possible future applications



A program designed to satisfy even the most ambitious academic needs of its graduates through the best theoretical, practical and additional content"

04 Skills

TECH designs each of its programs taking into account not only the factor related to the updating of the knowledge of its graduates, but so that they can, during the course of the academic experience, improve their skills through an in-depth study of the most innovative and effective theory and practice of the current medical environment. Therefore, in just 12 months they are able to expand their skills catalog by implementing the mastery of the most innovative clinical tools, as well as the use of diagnostic and treatment techniques that are having the best results currently.





“

You will be able to improve your clinical skills from a theoretical and practical point of view through the intensive study of the female favor in Assisted Reproduction and its therapeutic developments”



General Skills

- ◆ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of 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
- ◆ Know how to communicate their conclusions (the knowledge and ultimate reasons that support 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

- ◆ Acquire up-to-date concepts in anatomy, physiology, embryology and genetics, which will help to understand reproductive diagnostics and treatments
- ◆ Know in detail all the aspects related to the initial assessment of the infertile couple, study criteria and referral to reproduction units
- ◆ Basic clinical examination, request and interpretation of the results of complementary tests
- ◆ Perform an adequate assessment and clinical orientation of the couple. Request for specific tests based on the above findings
- ◆ Have an exhaustive knowledge of the different types of medical treatment, indications and their choice according to the profile of the patient and their partner
- ◆ Know the indications of surgical techniques that could improve the reproductive results of our patients alterations in uterine morphology, congenital or acquired Endometriosis, Tubal Surgery
- ◆ Know the techniques used in the Andrology, IVF and Cryobiology laboratories, diagnostic techniques and sperm selection techniques Oocyte evaluation. Embryonic Development
- ◆ Describe the types of genetic embryonic studies that are available, know their possible indications and be able to interpret the results
- ◆ Know the current legal situation of the treatments for assisted reproduction in our country
- ◆ Know the main scientific and patient societies in the field of Reproductive Medicine

05

Course Management

For the conformation of the teaching staff of this Hybrid Professional Master's Degree, TECH has taken into consideration not only the academic and professional background of the candidates, but also their human quality based on the letters of recommendation prepared by the companies and clinical centers of which they have been part throughout their careers. In this way, it has been possible to form a teaching team of the highest level, committed to the profession and to the growth of specialists who seek in this type of programs an effective and guaranteed up-to-date for innovative and effective clinical practice.



“

A team versed in Medicine and Biology will be in charge of guiding you through this academic experience in which they have invested hundreds of hours to offer you the most up-to-date information”

Management



Dr. Iniesta Pérez, Silvia

- ♦ Coordinator of the Reproduction Unit, La Paz University Hospital
- ♦ Medical Specialist in Gynecology and Obstetrics at the Ruber International Hospital
- ♦ Acting Occupational Physician at the Infanta Sofia University Hospital
- ♦ Gynecology and Obstetrics Specialist at the Santa Cristina University Hospital
- ♦ Physician on Service Commission at the La Paz University Hospital
- ♦ Professor in University and Postgraduate Studies oriented to Medicine
- ♦ Principal Researcher of 5 Multicentric Studies
- ♦ Author of more than 30 articles published in scientific journals
- ♦ Speaker in more than 30 scientific courses
- ♦ Master's Degree in Genomics and Medical Genetics at the University of Granada
- ♦ Master's Degree in Minimally Invasive Surgery in Gynecology, CEU Cardenal Herrera University



Dr. Franco Iriarte, Yosu

- Director of the Reproduction Laboratory at the Ruber International Hospital
- Director of the Reproduction Laboratory at the Virgen del Pilar Health Center
- Director of the Basque Fertility Institute
- Member of the Fertility Preservation Interest Group of the Spanish Fertility Society (SEF)
- Doctor in Molecular Biology, University of Navarra
- Master's Degree in Genetic Counseling from Rey Juan Carlos University
- Degree in Biology from the University of Navarra

Professors

Ms. Sotos Borrás, Florencia

- ♦ Senior Embryologist in the Assisted Reproduction Laboratory, Ruber International Hospital
- ♦ Supervisor of the Radioimmunoassay Laboratory of the Madrid Institute of Integral Gynecology (IMGI)
- ♦ Degree in Biological Sciences from the Autonomous University of Madrid
- ♦ Specialist in Biochemistry and Molecular Biology, Autonomous University of Madrid
- ♦ Radioactive Facilities Supervisor Training at Infocittec

Ms. Villa Milla, Amelia

- ♦ Senior Embryologist, Ruber International Hospital
- ♦ Research Assistant at Ruber International Hospital
- ♦ Graduate in Biological Sciences

Dr. Silva Zaragüeta, Patricia

- ♦ Specialty in Reproductive Medicine at La Paz University Hospital
- ♦ Researcher in the area of Reproduction, Gynecology and Obstetrics
- ♦ Developer of the Essure in vitro fertilization treatment
- ♦ PhD in Medicine and Surgery from the Autonomous University of Madrid

Ms. Carmen Cañadas, María

- ♦ Coordinator of the Genetics Department at Ginefiv
- ♦ Embryologist at Ginefiv
- ♦ PhD in Gynecology and Obstetrics from the Autonomous University of Madrid
- ♦ Degree in Biology from the Autonomous University of Madrid
- ♦ Expert in Clinical Genetics, University of Alcalá
- ♦ Senior Clinical Embryologist by ESHRE

Dr. Carrillo de Albornoz Riaza, Elena

- ♦ Head of the Assisted Reproduction Unit at Ruber International Hospital
- ♦ Gynecologist of the Gynecology and Obstetrics Service at the Ruber International Hospital
- ♦ Gynecologist of the Women's Unit at the Ruber International Hospital
- ♦ Co-coordinator of the Reproduction Unit at the Ruber International Hospital
- ♦ Medical Specialist of the Obstetrics and Gynecology Service at Del Aire University Hospital
- ♦ Professor in university studies and medical training programs
- ♦ Author and co-author of more than 10 publications in national and international scientific journals
- ♦ Speaker at more than 50 congresses and scientific meetings, especially focused on Assisted Reproduction

Ms. Fernández Díaz, María

- ♦ Senior Embryologist and Researcher in the field of Assisted Reproduction
- ♦ Co-director and head of the Assisted Reproduction Laboratory at Clínica Ergo
- ♦ Senior Embryologist at IVF4 Institute of Human Reproduction
- ♦ Participant in more than 10 research projects related to Assisted Reproduction and Cancer
- ♦ Official Master's Degree in Biology and Reproductive Technology from the University of Oviedo
- ♦ Degree in Biochemistry from the University of Oviedo
- ♦ Degree in Chemistry from the University of Oviedo

Dr. Gayo Lana, Abel

- ♦ Biologist Expert in Embryology
- ♦ Co-founder of the ERGO Clinic
- ♦ Director of the IVF4 Embryology Laboratory
- ♦ Embryologist of the Reproductive Unit at the Central University Hospital of Asturias
- ♦ Professor in postgraduate studies for Biology
- ♦ Member of the Board of Directors of the Association for the Study of Reproductive Biology (ASEBIR)
- ♦ Doctor in Biology from the University of Oviedo
- ♦ Master's Degree in Human Reproduction by the Spanish Fertility Society (SEF)

Dr. Vegas Carrillo de Albornoz, Ana

- ♦ Medical Specialist in Obstetrics and Gynecology, Ruber International Hospital
- ♦ Assistant Physician in the Obstetrics and Gynecology on-call team at the Ruber International Hospital
- ♦ Doctor in Medical and Surgical Sciences, Complutense University of Madrid
- ♦ Degree in Medicine from the Faculty of Medicine at the Complutense University of Madrid Specialist in Gynecology and Obstetrics at HM Hospitals
- ♦ Master's Degree in Human Reproduction from the Complutense University of Madrid and the Spanish Fertility Society
- ♦ Member of the Spanish Society of Gynecology and Obstetrics (SEGO) and Spanish Fertility Society (SEF)

Dr. Sole Inarejos, Miquel

- ♦ Head of the Cryopreservation Laboratory at HU Dexeus
- ♦ Senior Embryologist of the In Vitro Fertilization Laboratory at the Dexeus University Hospital
- ♦ Professor of the Master's Degree in Reproductive Biology
- ♦ Doctor in Cell Biology from the Universitat Autònoma de Barcelona
- ♦ Degree in Biology and Biochemistry
- ♦ Member of the Spanish Fertility Society (SEF)
- ♦ Member of the European Society for Human Reproduction and Embryology (ESHRE)

Ms. Gay Fernández-Vegue, Rosina

- ♦ Embryologist at the Assisted Reproduction Institute of the Ruber International Hospital
- ♦ Biologist in the Genetics and In Vitro Fertilization Laboratory at the 2200 Clinic
- ♦ Biologist at the Genetics, In Vitro Fertilization and Clinical Analysis Laboratories of the Madrid Institute of Integral Gynecology SL
- ♦ Degree in Biological Sciences with specialization in Biochemistry from the Complutense University of Madrid

Dr. Fernández Pascual, Esaú

- ♦ Specialist in Urology at La Paz University Hospital
- ♦ Assistant Doctor in Urology at the Lyx Institute of Urology
- ♦ Author of several articles published in scientific journals
- ♦ Member of: AEU, SUM and EAU

Dr. Messeguer, Marcos

- ♦ Senior Embryologist and Research Scientist
- ♦ IVI Team Scientific Supervisor
- ♦ Senior Embryologist at IVIRMA. Valence
- ♦ Head of the Biomarkers, Genomic Medicine, Statistics and Massive Data Analysis in Assisted Human Reproduction Research Group
- ♦ Professor in postgraduate studies in Biology
- ♦ Author of more than 175 scientific articles
- ♦ Speaker in more than 700 national and international congresses
- ♦ Doctor in Reproductive Biology from the University of Valencia
- ♦ Degree in Biological Sciences from the University of Valencia
- ♦ Master's Degree in Research Methods: Design and Statistics from the Autonomous University of Barcelona
- ♦ Winner on 3 occasions of the Spanish Fertility Society Research Award and on 5 occasions of the Spanish Embryology Society Research Award

Dr. Armijo Suarez, Onica

- ♦ Specialist in Gynecology and Obstetrics at La Paz University Hospital
- ♦ Physician in the Assisted Reproduction Section of the La Paz University Hospital
- ♦ Professor in undergraduate and postgraduate university studies related to Medicine
- ♦ Author and co-author of numerous articles published in scientific journals
- ♦ Co-author of two books oriented to reproduction
- ♦ Doctor of Medicine

Mr. Alcaide Raya, Antonio

- ♦ Senior Embryologist expert in Assisted Reproduction
- ♦ Technical Director and co-founder of ASSACELL Biologists
- ♦ Partner, senior embryologist and cofounder of ReproFiv
- ♦ Senior Embryologist in charge of the Andrology and Embryology Laboratory at FIV Center
- ♦ Teaching and Training member of the board of directors of the Association for the Study of Reproductive Biology
- ♦ Degree in Biology from the Complutense University of Madrid
- ♦ Master's Degree in Developmental Biology and Embryology from the University of Valencia
- ♦ Expert in Medical Genetics from the University of Alcalá

Dr. Costa Borges, Nuno Luis

- ♦ Embryologist and Embryology oriented researcher
- ♦ Chief Scientific Officer and co-founder of *Embryotools*
- ♦ Clinical Embryologist at IVI Barcelona Clinic
- ♦ Author of numerous scientific publications related to Embryology
- ♦ Speaker at Embryology Conferences and scientific meetings
- ♦ Graduate in Biochemistry from the University of Coimbra
- ♦ Doctor in Cellular Biology from the Autonomous University of Barcelona

Dr. Duarte Perez, Manuel

- ♦ Gynecologist at La Paz University Hospital
- ♦ Gynecologist at the Torrejón University Hospital
- ♦ Master's Degree in Human Reproduction from the University of Valencia - IVI
- ♦ Master's Degree in Gynecologic Endoscopic Surgery by the University of Valencia - IVI

Mr. Bescós Villa, Gonzalo

- ♦ Biologist Expert in Genetics
- ♦ Collaborator at the Biological Research Center of the Spanish National Research Council
- ♦ Interuniversity Master's Degree in Genetics and Cell Biology by the Complutense University of Madrid, Autonomous University of Madrid and University of Alcalá
- ♦ Curricular Internship with María Blasco's Group at the Spanish National Cancer Research Center
- ♦ Extracurricular Internship at the Genetics Department of the Ruber International Hospital

Dr. Horcajadas, José Antonio

- ♦ Biologist Specialized in Human Reproductive Genetics
- ♦ Founder of Homu Invest
- ♦ Founder of Fullgenomics
- ♦ Scientific Director and Founder of SINAÉ
- ♦ Scientific Director at Overture Life
- ♦ Laboratory Director at IVI Foundation
- ♦ Researcher at Aragón I+D
- ♦ Teacher in university studies
- ♦ Author of more than 10 books and more than 10 scientific publications
- ♦ Degree in Molecular Biology and Biochemistry from the Autonomous University of Madrid
- ♦ Doctor in Biological Sciences, Autonomous University of Madrid

Dr. Eguizabal Argaiz, Cristina

- ♦ Principal Researcher at the Basque Center of Transfusion and Human Tissues
- ♦ Coordinator of the Cell Therapy, Stem Cells and Tissues Research Group at Biocruces Bizkaia
- ♦ Author and co-author of numerous scientific publications
- ♦ Degree in Biology from the University of Navarra
- ♦ Doctor in Cell Biology from the University of the Basque Country
- ♦ Member of the Ethics Committee of the ESHRE and of the National Network of Advanced Therapies RICORS TERAV of the ISCIII

Dr. Vendrell Montón, F. Xavier

- ♦ Head of the Reproductive Genetics Unit in Genomic Systems
- ♦ Principal Researcher in projects oriented to Assisted Reproduction and Genetics
- ♦ Author of more than 40 international papers related to Assisted Reproduction and Genetics
- ♦ Professor at the university level related to Biology
- ♦ Regular speaker at scientific congresses
- ♦ Doctor in Biological Sciences from the University of Valencia
- ♦ Member of ASEBIR, SEF, AEGH, ESHRE and PDGIS

Dr. Sánchez Hernández, María José

- ♦ Obstetrics and Gynecology Specialist at the La Paz University Hospital
- ♦ Specialty in Reproductive Medicine at La Paz University Hospital
- ♦ Researcher in the area of Reproduction, Gynecology and Obstetrics
- ♦ Developer of the Essure in vitro fertilization treatment
- ♦ PhD in Medicine and Surgery from the Autonomous University of Madrid

Dr. Sáez de la Mata, David

- ♦ Medical Specialist in Gynecology and Obstetrics at the Infanta Sofia University Hospital
- ♦ Gynecologist Specialist in Reproductive Medicine at Ginemed
- ♦ Gynecologist Specialist in Reproductive Medicine in Sanitas
- ♦ Collaborating teacher in university studies in Medicine
- ♦ Master's Degree in Contraception and Sexual and Reproductive Health by the Spanish Society of Contraception
- ♦ Expert in Uterine Pathology, Menopause and Reproduction by the Institute of Continuing Education of the University of Barcelona
- ♦ Expert in Gynecological Exploration and Breast and Vulvar Pathology by the Institute of Continuing Education of the University of Barcelona
- ♦ Expert in Childbirth, Puerperium and Lactation by the Institute of Continuing Education of the University of Barcelona

Ms. Cuevas Saiz, Irene

- ♦ Director of the Embryology Laboratory at the General Hospital of Valencia
- ♦ President of the Embryology Interest Group
- ♦ Professor of postgraduate studies in Assisted Human Reproduction
- ♦ Coordinator of the SEF Registry Committee
- ♦ Degree in Biology from the University of Valencia
- ♦ Spanish representative in EIM
- ♦ Official Master's Degree in Biotechnology of Assisted Human Reproduction
- ♦ Master's Degree in Human Reproduction

Dr. Escribá Pérez, María José

- ♦ Senior Embryologist and Human Reproduction Researcher
- ♦ Senior Embryologist at IVI Valencia
- ♦ Emerging researcher in the Biomarkers, Genomic Medicine, Statistics and Massive Data Analysis in Assisted Human Reproduction group
- ♦ Professor in postgraduate courses
- ♦ Doctor in Biology from the Polytechnic University of Valencia

Dr. Gracia Segovia, Myriam

- ♦ Specialist in Gynecology and Obstetrics Expert in Gynecologic Surgery
- ♦ Assistant Physician in Gynecology and Obstetrics at the San Carlos Clinical Hospital
- ♦ Consultant in Obstetrics and Gynecology at Quirónsalud
- ♦ Master's Degree in Gynecologic Endoscopy at the Autonomous University of Madrid
- ♦ Author of several scientific publications
- ♦ Speaker at various scientific congresses

Dr. Hurtado de Mendoza, María Victoria

- ♦ Senior Embryologist Expert in Assisted Human Reproduction
- ♦ Specialist in Biology at the Puerta del Mar University Hospital
- ♦ Clinical Embryologist at Centro Hispalense de Reproducción Asistida (CEHISPR)
- ♦ Senior Clinical Embryologist at Masvida Reproducción
- ♦ Senior Clinical Embryologist at the Assisted Reproduction Unit of the Quirónsalud Sagrado Corazón Hospital Seville
- ♦ Professor in postgraduate university studies
- ♦ Author and co-author of book chapters and scientific articles
- ♦ Ph.D. in Biological Sciences

Dr. Fernández Prada, Sara

- ♦ Gynecologist Expert in Assisted Reproduction
- ♦ Assistant Physician in Gynecology and Obstetrics at the La Paz University Hospital
- ♦ Gynecologist Specialist in Assisted Reproduction in Love Fertility Clinic
- ♦ Assisted Reproduction Specialist Gynecologist at Minifiv Fertility and Assisted Reproduction Clinic and Assisted Reproduction
- ♦ Speaker at various national and international scientific congresses
- ♦ Master's Degree in Human Reproduction from Rey Juan Carlos University
- ♦ Member of the Spanish Society of Gynecology and Obstetrics (SEGO) and Spanish Fertility Society (SEF)

Dr. Álvarez Álvarez, Pilar

- ♦ Specialist of Gynecology and Obstetrics at the Infanta Sofia University Hospital
- ♦ Gynecology and Obstetrics Specialist at Santa Cristina University Hospital in Madrid
- ♦ Author and co-author of several articles published in scientific journals
- ♦ Doctor in Medicine and Surgery, Autonomous University of Madrid

Dr. Martín Cameán, María

- ♦ Specialized Physician in Gynecology and Obstetrics
- ♦ Specialized Physician in Gynecology and Obstetrics
- ♦ Gynecologist at the La Paz University Hospital
- ♦ Gynecologist at the Assisted Reproduction Hospital Unit of the Ginemed Hospital Vithas Madrid Pardo de Aravaca
- ♦ Author and co-author of several scientific publications

Dr. Cabezuelo Sánchez, Vega María

- ♦ Gynecologist and Obstetrician Expert in Assisted Reproduction
- ♦ Gynecologist and Obstetrician at Ruber International Hospital
- ♦ Researcher in Human Reproduction at the Ruber International Hospital
- ♦ Collaborator in several publications and scientific communications
- ♦ Member of Spanish Society of Fertility and Spanish Society of Gynecology and Obstetrics



The teaching team will be at your disposal to answer any questions you may have during the program through online consultations that you can make through the Virtual Campus"

06

Educational Plan

For the design of the syllabus of this Hybrid Professional Master's Degree, TECH has made use of the knowledge of the teaching team, which, being specialists in Embryology and Assisted Reproduction, knows in detail the sector and, therefore, they are up to date with the latest scientific developments that have been carried out lately. Moreover, they have been in charge of developing the additional material included, thanks to which the graduate will be able to contextualize the information of the syllabus and delve in a personalized way in each of its sections in a 100% online way and based on their own requirements.



“

The development of the content of this program has been carried out based on the Relearning methodology, so you can get up-to-date without investing extra hours in memorizing”

Module 1. Introduction. Anatomy. Physiology. Cellular Cycle

- 1.1. Introduction. Concepts. Assisted Reproduction. Epidemiology Reproductive Problems
 - 1.1.1. Concepts of Reproductive Medicine
 - 1.1.2. Epidemiology
- 1.2. Female Anatomy and Physiology
 - 1.2.1. Ovogenesis
 - 1.2.2. Ovarian Cycle Follicular Recruitment Waves
- 1.3. Male Anatomy and Physiology
 - 1.3.1. Spermatogenesis
- 1.4. Gametogenesis Meiotic Cycle
- 1.5. Ovogenesis Ovogenesis-Folliculogenesis Relationship
- 1.6. Oocyte Quality Markers
- 1.7. Factors Affecting Oocyte Quality
- 1.8. Spermatogenesis and Sperm Production
- 1.9. Semen Quality Markers
- 1.10. Factors which Affect Seminal Quality

Module 2. Gamete Interaction Fertilization Embryonic Development

- 2.1. Interaction of Gametes in the Female Tract
- 2.2. Acrosomal Reaction and Hyperactivation
- 2.3. Sperm-Oocyte Interaction
- 2.4. Sperm-oocyte Fusion Oocyte Activation
- 2.5. Embryonic Development
- 2.6. Main Features in Pre-implantational Development
- 2.7. Implantation. Embryo-Endometrium Interaction
- 2.8. Pathology of Fertilization and Embryo Classification
- 2.9. Embryo Culture In Vitro Embryo Culture Systems Culture Media, Environmental Conditions and Supplements. One Step and Sequential Cultures Renewal of Culture Media and Needs of the Embryo
- 2.10. In Vitro Embryonic Development Evaluation: Morphology and Morphokinetics Classical Embryonic Morphology Time-lapse Systems Embryonic Morphokinetics Embryonic Classification



Module 3. Study of the Female Factor Role of Surgery in Reproduction

- 3.1. Reproductive Study Indications: Basic Study of Both Partners
- 3.2. Ovarian Reserve Study
- 3.3. Tubal Permeability Assessment Techniques
- 3.4. Endometrial Assessment
- 3.5. SOP Ovary Drilling
- 3.6. Endometriosis and Adenomyosis
- 3.7. Uterine Myomas and Fertility
- 3.8. Hydrosalpinx Tubal Surgery in Tubal Reconstruction Techniques and Fertility Restoration
- 3.9. Uterine Alterations Metroplasties Septoplasties
- 3.10. Repeated Miscarriages Implantation Failure

Module 4. Andrology Laboratory

- 4.1. Basic Analysis of Semen WHO 2010 Criteria
- 4.2. Sperm Mobility and Morphometry Analysis Using Automated Systems (CASA/CASMA)
- 4.3. Analysis of Sperm DNA: TUNEL, SCD, COMET, SCSA Relationship with Fertility
- 4.4. Oxidative Damage Assessment Determination of Antioxidants, Free Radicals and Evaluation of Lipid Peroxidation
- 4.5. Sperm Functionality by Molecular Markers: Apoptosis (AnnexinV, Caspases, Membrane Permeability), Ubiquitination, Protein Phosphorylation
- 4.6. Epigenetic Alterations in Spermatozoa
- 4.7. Selection and Control of Semen Donors
- 4.8. Managing a Sperm Bank
- 4.9. Cleaning the Sperm in Patients with HIV or Hepatitis
- 4.10. Preparation of Semen in Artificial Insemination



Module 5. Reproductive Treatments Medication. Stimulation Protocols

- 5.1. Evolution of Reproductive Treatments Throughout History
- 5.2. Drugs Involved in Ovarian Stimulation Ovulation Induction
- 5.3. Artificial Insemination Techniques Results
- 5.4. Fertilization In Vitro Ovarian Stimulation Protocols in High, Normal and Low Responders Luteal Phase Stimulation
- 5.5. Adjuvant Treatments Used in Low Ovarian Reserve
- 5.6. Fertilization In Vitro Cycle Tracking Ovarian Puncture Embryo Transfer
- 5.7. Embryo Cryotransfer Endometrial Preparation in Substituted Cycles
- 5.8. Egg Donation Embryoreception Surrogacy
- 5.9. Complications in Assisted Reproduction Treatments
- 5.10. Multiple Pregnancy Reduction Policy

Module 6. Micromanipulation Techniques

- 6.1. IVF-ICSI
- 6.2. Use of Polarized Light Microscopy in Oocytes
- 6.3. Embryo Biopsy Types of Biopsy Corpuscle, Blastomere, Trophoectoderm
- 6.4. Collapse, Hatching, Aspiration of Fragments
- 6.5. Improve the Embryo Quality Transfer of Nucleus and Cytoplasm
- 6.6. Cloning in Mammals Background. Basic Principles of Cloning Applications in Medicine
- 6.7. Problems with Cloning Epigenesis Reprogramming
- 6.8. Genetic Modification CRISPR
- 6.9. Improve the Cytoplasmic Quality of the Oocyte
- 6.10. In Vitro Gamete Production

Module 7. Gamete and Embryo Cryopreservation

- 7.1. Cryobiology Cryobiological Principles and Cryoprotective Agents Cryopreservation Systems Factors Affecting the Freezing Process Additives and Application of Cryobiology
- 7.2. The Sperm Cell Structure and Functionality Physicochemical Processes that Induce Freezing in the Spermatozoon Factors Determining Sperm Fertilization and Viability after Thawing
- 7.3. Cryopreservation of Semen Features. Regulations
- 7.4. The Oocyte Characteristics and Conditioning Factors in Cryopreservation Importance and Method of Selection Ethical and Legal Aspects.
- 7.5. Cryopreservation in Human Embryos Importance and Method of Selection Ethical and Legal Aspects.
- 7.6. Cryopreservation of Ovarian Tissue Laboratory Technique
- 7.7. Cryopreservation of Testicular Tissue Laboratory Technique
- 7.8. Factors Affecting Performance in a Cryopreservation Program
- 7.9. How to Manage and Organize a Biobank and its Safety?
- 7.10. Ethical and Legal Aspects of Cell and Tissue Cryopreservation

Module 8. Fertility Preservation

- 8.1. Fertility Preservation Cancer Epidemiology Age and Reproduction
- 8.2. Fertility Preservation for Non-Medical Reasons
- 8.3. Fertility Preservation for Oncologic Reasons
- 8.4. Fertility Preservation for Non-Oncologic Medical Reasons
- 8.5. Oocyte Vitrification Technique and Results
- 8.6. Ovarian Cortex Cryopreservation
- 8.7. Cryopreservation of Semen
- 8.8. Vitro Maturation of Oocytes
- 8.9. Other Methods of Fertility Preservation: Conservation Surgery in Gynecologic Cancer Ovarian Transposition
- 8.10. Treatment with GnRH Analogues Prior to Gonadotoxic Treatments



Module 9. Genetics in Reproduction

- 9.1. Important Concepts in the Genetics of Reproduction
- 9.2. Epigenetics. Influence on Reproduction
- 9.3. Genetic Diagnostic Techniques
- 9.4. Genetic Anomalies Related to Male and Female Sterility
- 9.5. Indications for Genetic Studies in Assisted Reproduction
- 9.6. Screening for Recessive Diseases Genetic Matching
- 9.7. Pre-implantational Genetic Diagnosis in Monogenic Diseases
- 9.8. Pre-implantational Genetic Screening in Assisted Reproduction Techniques
- 9.9. Mosaicisms
- 9.10. Genetic Counseling and Advice

Module 10. Legislation. Quality Research and Future Techniques

- 10.1. Importance of Traceability in the Laboratory Electronic Traceability Systems
- 10.2. Research in Assisted Reproduction
- 10.3. Future of Reproduction Automation
- 10.4. Non-Invasive Preimplantational Genetic Diagnosis
- 10.5. Artificial Intelligence
- 10.6. Ovarian Rejuvenation

“ You will work intensively on updating your knowledge of fertility preservation through 1,500 hours of the best multidisciplinary content”

07

Clinical Internship

The strong point of this program is, without a doubt, the practical period it offers once the 1,500 hours of theoretical qualification have been completed. The graduate will have the opportunity to spend a period of time in a clinical center of international reference for the effectiveness and success of its Assisted Reproduction treatments. Thanks to this, they will be able to update their knowledge in this field in a guaranteed way, working side by side with the best experts in Gynecology and Embryology.





“

You will have access to state-of-the-art clinical technology, based on the latest advances in Assisted Reproduction”

The internship period of this Hybrid Professional Master's Degree in Update in Assisted Reproduction will take place in a prestigious center within the sector, known not only for its trajectory, but also for the effectiveness of its treatments. Therefore, the graduate will have access to 3 weeks of stay, distributed from Monday to Friday in 8-hour shifts and in which they will be supervised at all times by an attending specialist. In this way, they will not only be able to mimic the working environment, but will also get to know in detail the place where their profession is developed in the current medical context.

This will allow them to treat patients with various pathologies related to the reproductive field: fertility, inseminations, transplants, pathologies related to the sexual organs, etc. The experience is designed for students to actively participate in the diagnosis and clinical management of all cases, being advised by a team of experts in the sector thanks to whom they will be able to get up-to-date with the most effective and innovative therapeutic guidelines that are being used in the current medical environment.

In addition, they will have access to the most innovative, complex and technical clinical technology, based on the latest scientific advances in the sector. Therefore, during the 3 weeks of internship they will have the opportunity to improve their management skills, expanding their abilities and elevating their professional talents to the top. It is, therefore, a unique academic opportunity to get up-to-date through the leading practice in a prestigious clinic on the international scene.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of knowledge (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice of Medicine (learning to be and learning to relate).



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

Module	Practical Activity
Assisted Reproduction Techniques	Perform surgical hysteroscopy in those pathological cases of greater difficulty
	Assess the clinical situation of patients undergoing treatment with corticosteroids, androgens or heparin to address certain pathologies
	Apply ovulation-stimulating drugs to improve the number of eggs obtained in each cycle
	Increase the number of sperm obtained in azoospermic patients using the TESE or micro-TESE technique
	Use the current techniques of oocyte vitrification and embryo cryotransfer that have allowed the expansion of fertility preservation programs
Technology Applied to Assisted Reproduction	Test the use of Artificial Intelligence in Assisted Reproduction units
	Examine the application of Regenerative Medicine to overcome situations of early ovarian failure and refractory endometrium
	Manage the technology applied to the automation of analytical processes and intervention techniques
	Make use of modern electronic traceability systems
	Improve genetic matching with the support of state-of-the-art software and databases
Fertility, Gamete and Embryo Preservation	Assess the practical application of advances in reproductive epigenetics, as well as studies in female and male infertility
	Make use of advanced technological equipment for cryopreservation of both semen and ovarian cortex
	Participate in conservative surgery and ovarian transposition in cases of gynecologic oncology
	Address the organization and clinical management of a biobank, as well as the safety factors to be taken into account

Module	Practical Activity
Prevention of Reproductive Dysfunction and Fertility Problems	Approach, from the perspective of the Assisted Reproduction Unit, pathologies such as endometriosis, anovulations or tubal obstructions
	Delve into the use of sperm microinjection to solve pathologies such as oligozoospermia, asthenozoospermia and teratozoospermia
	Design treatments for patients who are overweight or addicted to tobacco and alcohol
	Determine Artificial Insemination or In Vitro Fertilization strategies according to the patient's needs
	Personalize fertility treatments according to the most advanced diagnostic tests and therapeutics
Male and Female Fertility Tests	Assess the novelties and biomarkers in Gynecologic Vaginal Ultrasonography
	Draw a basal hormone profile based on the latest in Hormonal Analyses
	Assess semen quality based on the most rigorous Seminogram
	Discriminate the most valuable spermatozoa by REM sperm capacitation test
	Update on practical procedures in both male and female serology tests

Civil Liability Insurance

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

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

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



General Conditions for Practical Training

The general terms and conditions of the internship program agreement shall be as follows:

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

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

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

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

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

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

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

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

08

Where Can I Do the Clinical Internship?

For the selection of the centers in which the clinical internships are carried out, TECH submits each candidate to an exhaustive analysis, in which it studies its trajectory, the quality of its service and its level of innovation in terms of the tools used. In this way, it is possible to offer top level internships, in which the specialist can be up-to-date in a guaranteed way through the use of the most advanced medical technology, as well as through the use of the most effective and innovative diagnostic and therapeutic strategies.





“

A unique opportunity to be part of the hospital of the future during 3 weeks of clinical internship with a team of specialists in Assisted Reproduction of the highest level”



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



Medicine

Vida Fertility Institute

Country	City
Spain	Madrid

Address: Calle Palermo, 15, 28043, Madrid

Fertility clinic and therapeutic strategy

Related internship programs:

- Assisted Reproductive Nursing
- Update on Assisted Reproduction



Medicine

Vida Fertility Institute

Country	City
Spain	Alicante

Address: Calle Velázquez, 2, 03560, Campello, Alicante

Center specialized in fertility solutions and diagnostic and therapeutic treatments

Related internship programs:

- Assisted Reproductive Nursing
- Update on Assisted Reproduction



Medicine

Instituto Murciano de Fertilidad (IMFER)

Country	City
Spain	Murcia

Address: Avenida de los Pinos, 5, 30009, Murcia

Specialized fertility center offering Assisted Reproduction techniques and procedures

Related internship programs:

- Update on Assisted Reproduction



Medicine

Clínica Tambre

Country	City
Spain	Madrid

Address: Calle Tambre 8, 28002, Madrid

Clinical center for reproductive assistance, Gynecology and Obstetrics

Related internship programs:

- Assisted Reproductive Nursing



Medicine

Hospital Maternidad HM Belén

Country	City
Spain	La Coruña

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

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

Related internship programs:

- Update on Assisted Reproduction
- Hospitals and Health Services Management



Medicine

Hospital HM Montepíncipe

Country	City
Spain	Madrid

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

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

Related internship programs:

- Palliative Care
- Aesthetic Medicine



Medicine

Hospital HM Puerta del Sur

Country	City
Spain	Madrid

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

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

Related internship programs:

- Palliative Care
- Clinical Ophthalmology



Medicine

Hospital HM Vallés

Country	City
Spain	Madrid

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

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

Related internship programs:

- Gynecologic Oncology
- Clinical Ophthalmology



Medicine

HM Fertility Center - Centro Especializado de Reproducción Asistida

Country	City
Spain	Madrid

Address: Calle Velázquez 25, 1ª planta , 28001, Madrid

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

Related internship programs:

- Assisted Reproductive Nursing
- Update on Assisted Reproduction



Medicine

Policlínico HM Sanchinarro

Country	City
Spain	Madrid

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

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

Related internship programs:

- Gynecological Care for Midwives
- Nursing in the Digestive Tract Department



Medicine

Next Fertility

Country	City
Spain	Valence

Address: Avenida Burjassot, 1, 46009, Valencia

Assisted Reproduction Clinic

Related internship programs:

- Assisted Reproductive Nursing



Medicine

Next Fertility Sevilla

Country	City
Spain	Seville

Address: Av. del Reino Unido, 1, 41012 Sevilla

Assisted Reproduction Clinic

Related internship programs:

- Nursing in the Assisted Reproduction Service
- Update on Assisted Reproduction



Medicine

Amnios in Vitro Project

Country	City
Spain	Madrid

Address: Calle Boix y Morer, 5, 28003, Madrid

Amnios in Vitro Project, clinic specializing in Assisted Reproduction

Related internship programs:

- Assisted Reproductive Nursing
- Update on Assisted Reproduction



Medicine

Next Fertility Murcia

Country	City
Spain	Murcia

Address: Av. Europa, 11, 30007 Murcia

Next Fertility is an Assisted Reproduction Clinic

Related internship programs:

- Assisted Reproductive Nursing
- Update on Assisted Reproduction

09

Methodology

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

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





“

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

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gervas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

“

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



Relearning Methodology

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

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

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



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

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Surgical Techniques and Procedures on Video

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



Interactive Summaries

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

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



Additional Reading

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





Expert-Led Case Studies and Case Analysis

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



Testing & Retesting

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



Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



10 Certificate

This Hybrid Professional Master's Degree in Update in Assisted Reproduction guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma issued by TECH Technological University.



“

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

This **Hybrid Professional Master's Degree in Update in Assisted Reproduction** contains the most complete and up-to-date program on the professional and educational field.

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

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

Title: **Hybrid Professional Master's Degree in Update in Assisted Reproduction**

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

Duration: **12 months**

Certificate: **TECH Technological University**

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



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



Hybrid Professional Master's Degree Update in Assisted Reproduction

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

Duration: **12 months**

Certificate: **TECH Technological University**

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

Hybrid Professional Master's Degree

Update in Assisted Reproduction