

# Postgraduate Diploma Assisted Reproduction Treatment Techniques



## Postgraduate Diploma Assisted Reproduction Treatment Techniques

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-assisted-reproduction-treatment-techniques](http://www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-assisted-reproduction-treatment-techniques)

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# 01

# Introduction

Intervening in Assisted Reproduction puts into action numerous and varied fields of work. Professionals must be qualified to use the latest diagnostic and approach techniques in all of them, in order to acquire the ability to act efficiently in the various situations that arise in this field. This program offers you all the necessary knowledge to update your skills in a comprehensive, reliable and efficient way through a development focused on practice.



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*A comprehensive, efficient and highly educational Postgraduate Diploma that will allow you to advance your medical skills in a highly relevant field"*

Acquiring knowledge of anatomy, physiology and embryology is essential to serve as a basis and introduce this Postgraduate Diploma. All the concepts developed in this module will have their implication in the rest of the topics developed in the other modules of the syllabus. Oogenesis and spermatogenesis are the beginning of the reproductive process. From this point on, the fertilization of the egg by the sperm will depend to a great extent on the anatomical integrity of the male and female reproductive system, so its study also helps to understand possible reproductive dysfunctions. The correct fertilization of the oocyte by the sperm will be assessed once two pronuclei appear, which are provided from each of the reproductive cells. The study of embryology, cell division, the stages of embryonic development, are also key elements in the understanding of the whole reproductive process.

Throughout the program, the different protocols used in reproductive treatments will be described, and depending on the results obtained, the profiles of high, normal and low responder patients will be described. In addition, given that one of the main limitations of the treatments is obtaining a low number of oocytes, adjuvant treatments are described that have been used in patients with low ovarian reserve to try to recruit a greater number of follicles during stimulation and obtain a greater number of mature oocytes.

In this context of the necessity of specialized professionals in the sector, this program was created. TECH, together with a team of leading experts in Assisted Reproduction, has designed this program with the aim of preparing professionals through the most effective methodology, providing the convenience of its 100% online format. In this way, it is up to the students to determine their study hours, the place of study and the time they want to invest, without having to give up their personal and professional obligations.

This **Postgraduate Diploma in Assisted Reproduction Treatment Techniques** contains the most complete and up-to-date scientific program on the market. Its most notable features are:

- ♦ The development of practical cases presented by Assisted Reproduction experts.
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice.
- ♦ Practical exercises where self-assessment can be used to improve learning.
- ♦ Its special emphasis on innovative methodologies
- ♦ 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



*A study created for professionals who require a qualification that optimizes their efforts, creating a relationship of optimal quality and efficiency, with the most comprehensive and up-to-date knowledge"*

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*With a methodological design based on proven teaching techniques, this Postgraduate Diploma will take you through different teaching approaches to allow you to learn in a dynamic and effective way”*

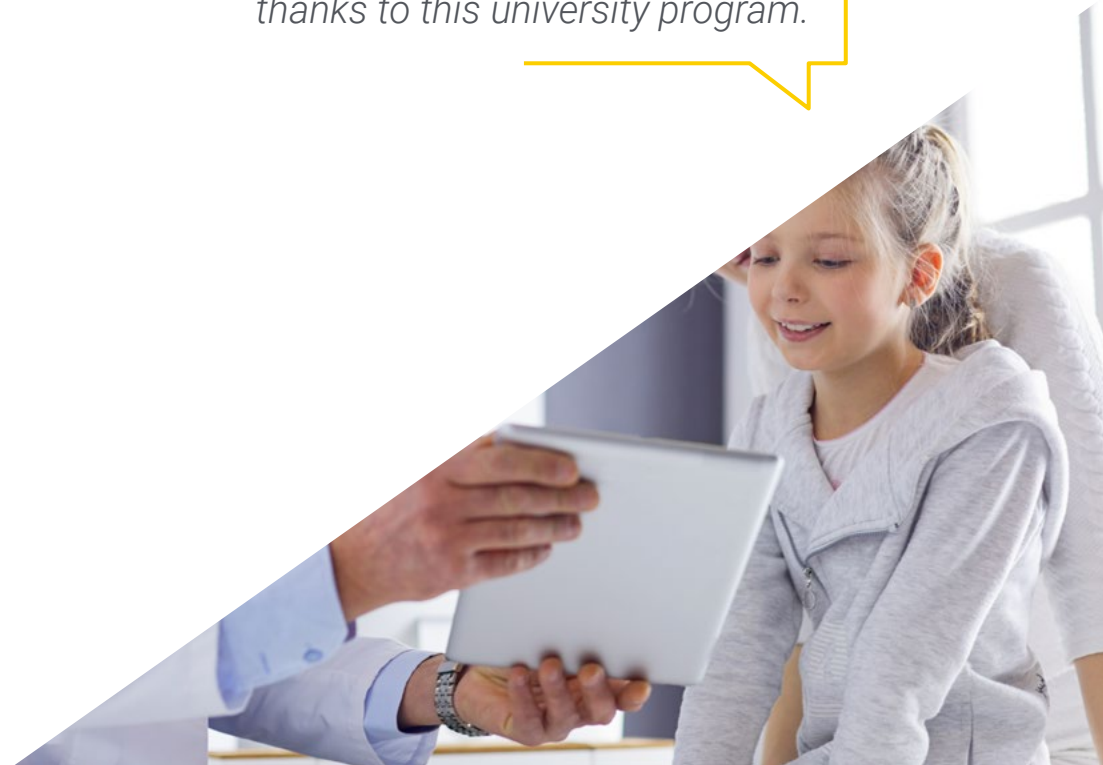
The program's teaching staff includes professionals from sector who contribute their work experience to this program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn 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.

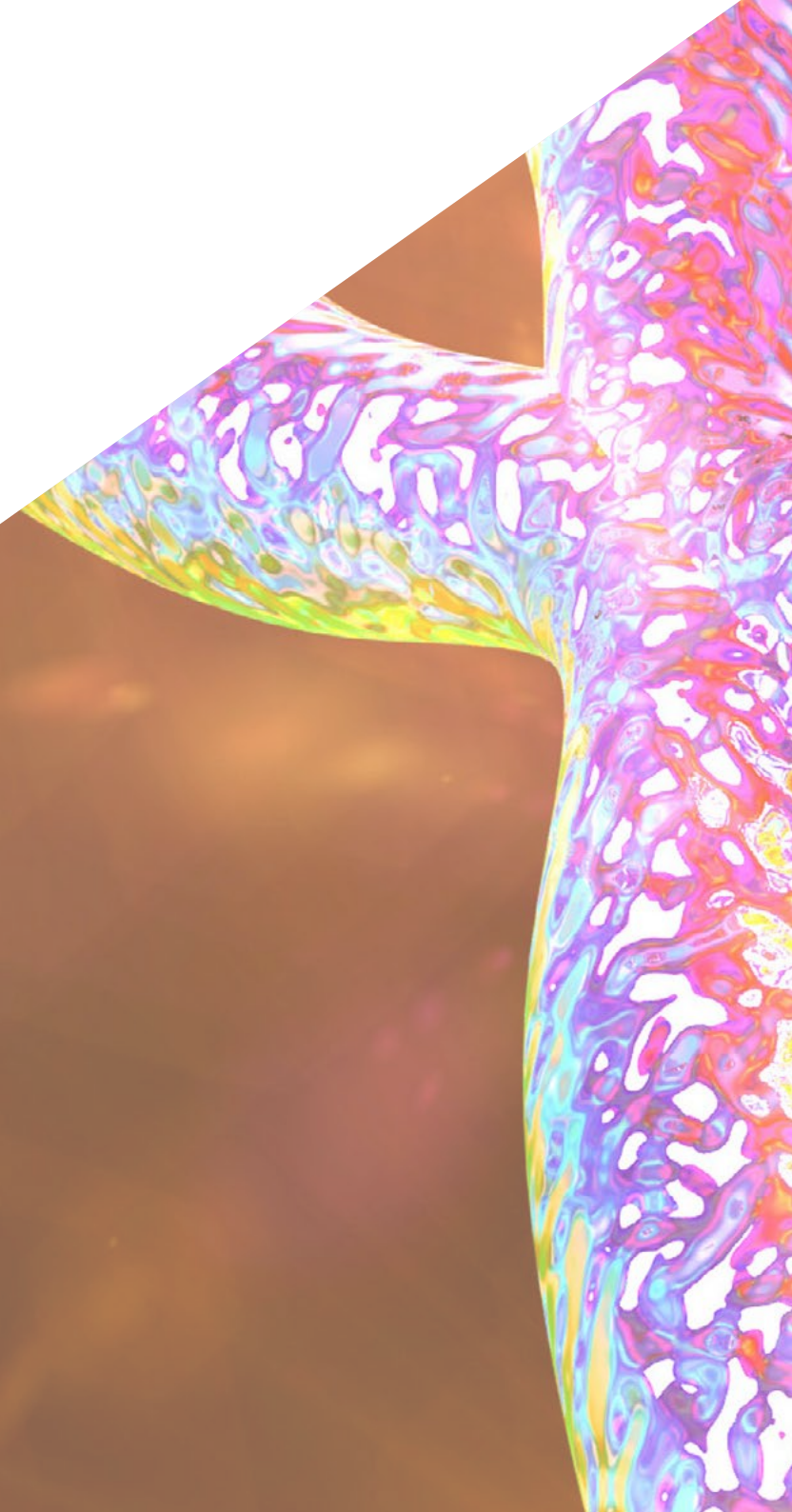
*Our innovative telepractice concept will give you the opportunity to learn through an immersive experience, which will provide you with a faster integration and a much more realistic view of the contents: learning from an expert.*

*Don't wait any longer and update yourself in Assisted Reproduction Treatment Techniques thanks to this university program.*

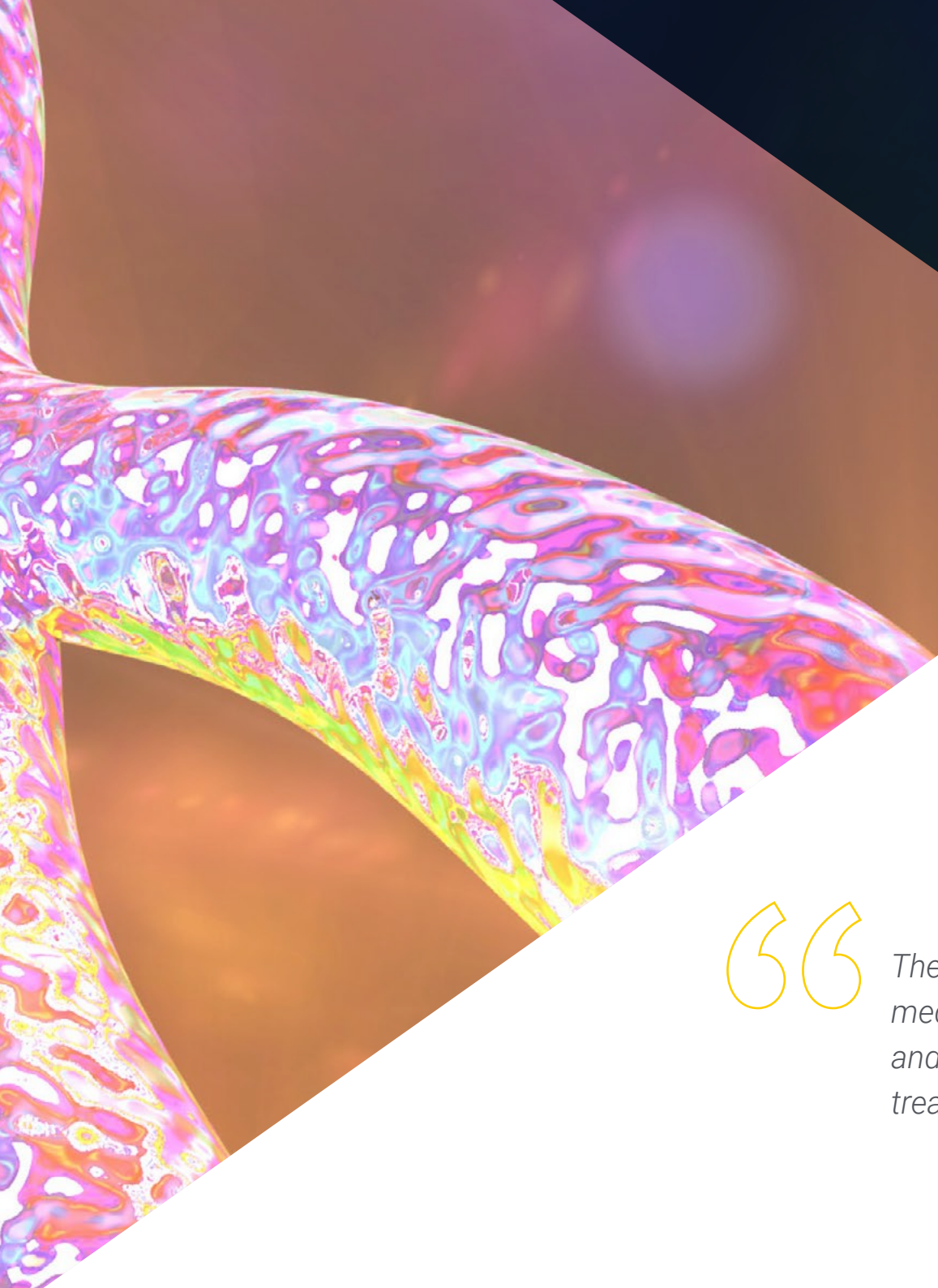


# 02 Objectives

This main objective of this Postgraduate Diploma is to bring the students' knowledge up to date in all areas surrounding decision-making during the evaluation of the patient and their partner. This includes the diagnosis, prognosis and the subsequent treatments. A structured approach in all areas related to assisted reproduction, that will allow you to take the leap in your professional career with the expertise of the best online university in the world.







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*The ultimate objective of this program is to provide medical professionals with the most up-to-date theoretical and practical knowledge of the latest techniques and treatments in Assisted Reproduction"*



## General Objectives

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- ♦ Acquire up-to-date concepts in anatomy, physiology, embryology and genetics, which will help to understand reproductive diagnostics and treatments
- ♦ Understand in detail the aspects related to the initial assessment of a sterile couple. Study criteria and referral to Reproduction Units. Basic clinical examination, request and interpretation of the results of complementary tests
- ♦ Perform an appropriate assessment and clinical orientation of the couple. Indication of 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 and 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 Assisted Reproduction treatments in the country
- ♦ Know the main scientific and patient societies in the field of Reproductive Medicine





## Specific Objectives

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### 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. Study of the Female Factor 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

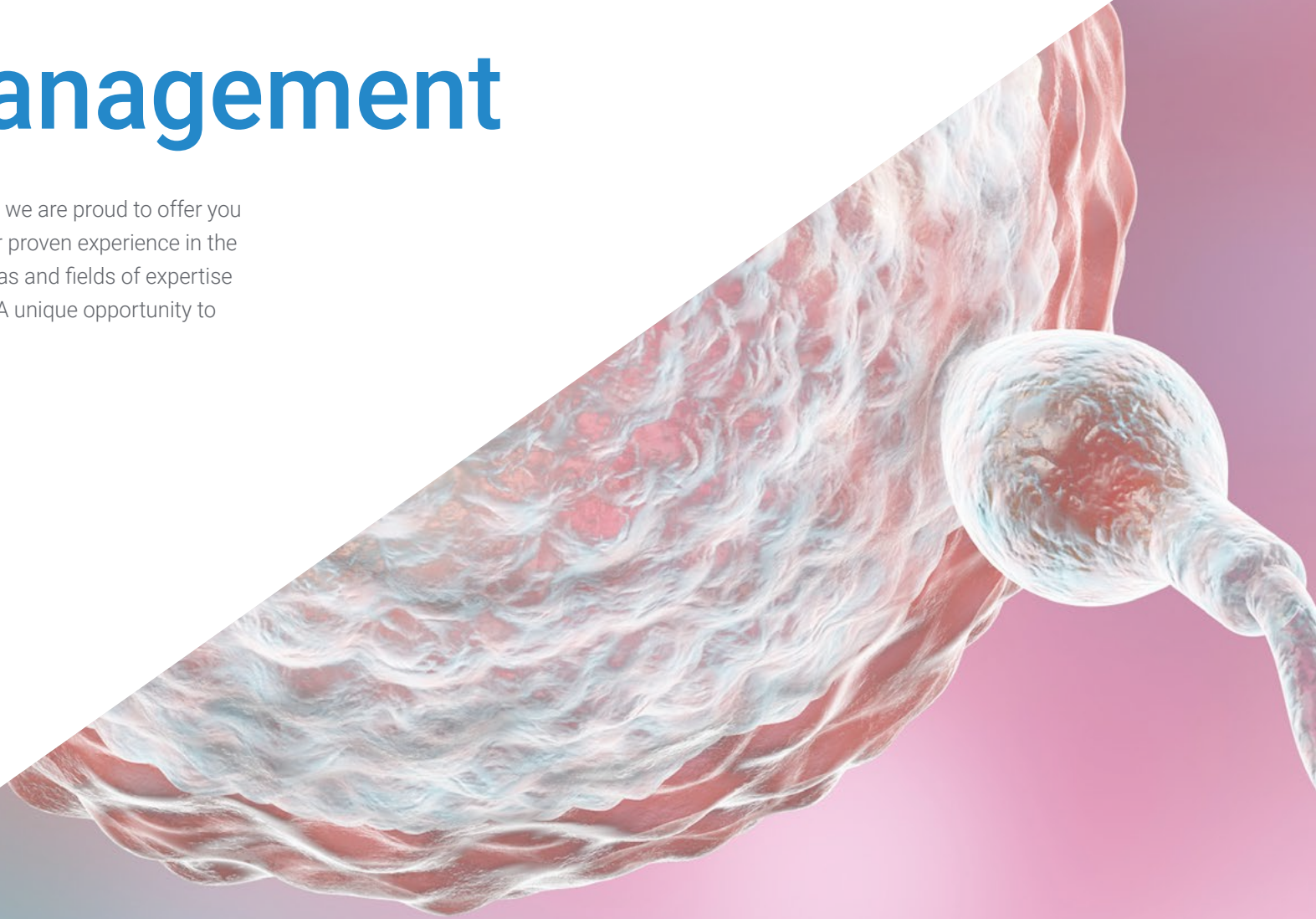
### Module 3. Reproductive Treatments Medication. Stimulation Protocols

- ♦ 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
- ♦ Deepen in 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)

03

# Course Management

Within the concept of total quality of our program, we are proud to offer you teaching staff of the highest level, chosen for their proven experience in the educational field. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





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*An impressive teaching staff, made up of professionals from different fields of expertise, will be your teachers during your education: a unique opportunity not to be missed”*

## Management



### Dr. Iniesta Pérez, Silvia

- ♦ Coordinator the Reproduction Unit of Hospital Universitario
- ♦ Degree in Medicine and Surgery from the University of Alcalá, Madrid
- ♦ Specialist in Obstetrics and Gynecology, via MIR. Santa Cristina University Hospital, Madrid
- ♦ Doctorate Courses at the Autonomous University of Madrid
- ♦ Research Sufficiency in the Department of Obstetrics and Gynecology, Universidad Autónoma de Madrid, Qualification: Outstanding.
- ♦ Doctoral Thesis, Obstetrics and Gynecology Department, Autonomous University of Madrid Outstanding- Cum Laude
- ♦ Levels I, II, III and IV obstetric-gynecological ultrasound (SESEGO accreditation)
- ♦ Master in Human Reproduction IVI
- ♦ Master's Degree in Genomics and Medical Genetics 2nd edition, Granada University
- ♦ Online Master's Degree in Minimally Invasive Surgery in Gynecology. CEU Cardenal Herrera University
- ♦ Masterclass Patient-Centered Clinical Management. Deusto Business School, Madrid
- ♦ Area Specialist Doctor at the Santa Cristina University Hospital, Madrid
- ♦ Interim Labor Doctor, Hospital Infanta Sofía, Madrid
- ♦ Physician on Secondment at the Hospital Universitario La Paz



### Dr. Franco Iriarte, Yosu

- ♦ Laboratory and scientific director, International Ruber Hospital
- ♦ Head of the Assisted Reproduction Laboratory of the Virgen del Pilar Health Centre in San Sebastián
- ♦ Head of the Assisted Reproduction Laboratory of Policlínica Guipúzcoa, including the laboratory of Clínica del Pilar
- ♦ Collaboration with the Assisted Reproduction Center, Navarro Medical Center
- ♦ Senior Embryologist at Cornell University Hospitals of New York and RMA of New Jersey
- ♦ Creation of the company Donostia Basque Institute of Fertility located in Onkologikoa. Managing Director.
- ♦ Managing Director of the Donostia Basque Institute of Fertility.
- ♦ Graduate in Biology, University of Navarra (Fundamental and Health Specialty)
- ♦ CAP Qualification (Certificate of Pedagogical Competency)
- ♦ PhD in Science from the University of Navarra. Thesis Title: "Genetic risk factors for venous thrombosis"
- ♦ University Specialist in Assisted Reproduction: Psychological and Legal Aspects from the Complutense University of Madrid.
- ♦ Discussion Table Moderator of the North Forum Reproduction Units on embryonic and oocyte morphological criteria and embryo freezing.
- ♦ University Diploma in Nursing. UPV-EHU "Donostia School of Nursing" Donostia- San Sebastián
- ♦ Master's Degree in "Genetic Counseling". San Pablo University CEU in Madrid

## Professors

### Dr. Álvarez Álvarez, Pilar

- ♦ Gynecology and Obstetrics Area Specialist at Infanta Sofia University Hospital
- ♦ PhD in Gynecology and Obstetrics from the Autonomous University of Madrid
- ♦ Professor of Health Sciences at the European University of Madrid
- ♦ Master's Degree in Human Reproduction from Rey Juan Carlos University

### Dr. Fernández Pascual, Esaú

- ♦ Member of the Spanish Association of Urology
- ♦ Andrology and Sexual Medicine at the La Paz University Hospital
- ♦ Degree in Medicine from the Autonomous University Madrid.
- ♦ Co-Editor-in-Chief of the International Journal of Andrology

### Mr. Bescós Villa, Gonzalo

- ♦ Biologist at the Autonomous University of Madrid
- ♦ Master's Degree in Genetics and Cell Biology, Interuniversity: Complutense University of Madrid, Autonomous University of Madrid and University of Alcalá de Henares.
- ♦ Final thesis in luisa maria botella's group, Center for Biological Research of the Higher Council for Scientific Research.
- ♦ Internship in Maria Blasco's group, National Oncology Research Center, Spain.
- ♦ Extracurricular internship in the genetics department of the Ruber International Hospital

### Ms. Villa Milla, Amelia

- ♦ Senior Embryologist in the Assisted Human Reproduction Laboratory at Hospital Ruber Internacional, Madrid.
- ♦ Degree in Biological Sciences and Specialist in Biochemistry and Molecular Biology. Autonomous University of Madrid
- ♦ Biologist Specialist in Clinical Analysis in the Area of Genetics. Official Biologists College

### Dr. Silva Zaragüeta, Patricia

- ♦ Specialist in Obstetrics and Gynecology at La Paz University Hospital
- ♦ PhD in Medicine and Surgery from the Autonomous University of Madrid.
- ♦ Dedicated to reproductive medicine since 2012 at Hospital Universitario La Paz.

### Dr. Carrillo de Albornoz Riaza, Elena

- ♦ Medical Director of the Reproduction Unit, Ruber International Hospital
- ♦ Gynecologist of the Gynecology and Obstetrics Service of Dr. Jiménez Ruiz's team at Ruber International Hospital
- ♦ Specialist in the Obstetrics and Gynecology Service, Del Aire University Hospital
- ♦ Honorary collaborator of the Department of Obstetrics and Gynecology, Faculty of Medicine, Complutense University of Madrid
- ♦ Degree in Medicine and Surgery from the Faculty of Medicine at the Complutense University of Madrid
- ♦ Specialist in Gynecology and Obstetrics issued by the Ministry of Education and Science
- ♦ Doctorate, Autonomous University of Madrid

### Dr. Vegas Carrillo de Albornoz, Ana

- ♦ Medical Specialist in Obstetrics and Gynecology, Ruber International Hospital
- ♦ Assistant Physician in the Obstetrics and Gynecology Shift Team, Hospital Ruber International
- ♦ Medicine Graduate from the Faculty of Medicine of the Complutense University of Madrid.
- ♦ PhD in Medical and Surgical Sciences, Universidad Complutense de Madrid.
- ♦ Master's Degree in Human Reproduction, Complutense University of Madrid





**Dr. Armijo Suarez, Onica**

- ♦ Assistant Specialist in Gynecology and Obstetrics at La Paz Hospital Human Reproduction Unit
- ♦ Professor of the Faculty of Medicine of the UAM

**Dr. Fernández Prada, Sara**

- ♦ Human Reproduction Section, La Paz University Hospital, Madrid, Spain
- ♦ Doctor specialized in Obstetrics and Gynecology
- ♦ Master's Degree in Assisted Reproduction from Rey Juan Carlos University

**Dr. Martín Camean, María**

- ♦ Gynecologist at the Reproduction Unit of La Paz University Hospital
- ♦ Master's Degree in Human Reproduction from Rey Juan Carlos University
- ♦ Master in Gynecologic Oncology by CEU Cardenal Herrera University
- ♦ University Expert in Ovarian Cancer by CEU Cardenal Herrera University

**Dr. Cabezuelo Sánchez, Vega María**

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

# 04

# Structure and Content

The contents of this Postgraduate Diploma have been developed by the different experts on this program, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field. Knowledge that will enable students to respond in an efficient way to each and every one of the needs in this area of medicine.





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*A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"*

### 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. Study of the Female Factor Role of Surgery in Reproduction

- 2.1. Reproductive Study Indications: Basic Study of Both Partners
- 2.2. Ovarian Reserve Study
- 2.3. Tubal Permeability Assessment Techniques
- 2.4. Endometrial Assessment
- 2.5. SOP Ovary Drilling
- 2.6. Endometriosis and Adenomyosis
- 2.7. Uterine Myomas and Fertility
- 2.8. Hydrosalpinx Tubal Surgery in Tubal Reconstruction Techniques and Fertility Restoration
- 2.9. Uterine Alterations Metroplasties Septoplasties
- 2.10. Repeated Miscarriages Implantation Failure





### Module 3. Reproductive Treatments Medication. Stimulation Protocols

- 3.1. Evolution of Reproductive Treatments Throughout History
- 3.2. Drugs Involved in Ovarian Stimulation Ovulation Induction
- 3.3. Artificial Insemination Techniques Results
- 3.4. In Vitro Fertilization Ovarian Stimulation Protocols in High, Normal and Low Responders. Luteal Phase Stimulation
- 3.5. Adjuvant Treatments Used in Low Ovarian Reserve
- 3.6. In Vitro Fertilization Cycle Tracking Ovarian Puncture Embryo Transfer
- 3.7. Embryo Cryotransfer: Endometrial Preparation in Substituted Cycles
- 3.8. Egg Donation Embryoreception Surrogacy
- 3.9. Complications in Assisted Reproduction Treatments
- 3.10. Multiple Pregnancy Reduction Policy

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

# 05 Methodology

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

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



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

## At TECH, we use the Case Method

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

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



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



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

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

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



## Relearning Methodology

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

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

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



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

With this methodology, more than 250,000 physicians have been prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational 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 adapted in 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 assess and re-assess students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

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



#### Quick Action Guides

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



06

# Certificate

The Postgraduate Diploma in Assisted Reproduction Treatment Techniques guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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

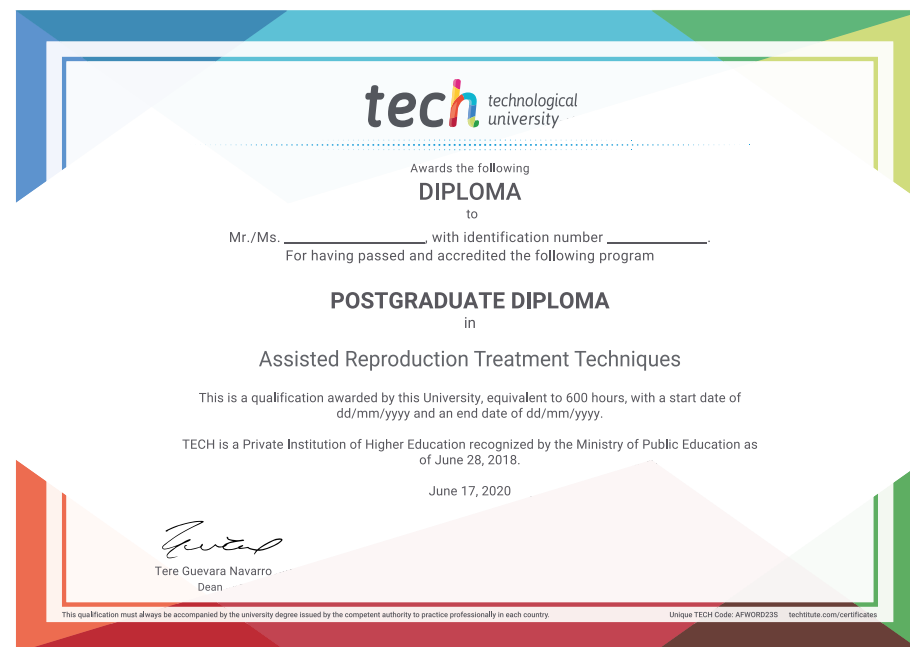
This **Postgraduate Diploma in Assisted Reproduction Treatment Techniques** contains the most complete and up-to-date scientific on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Assisted Reproduction Treatment Techniques**

Official N° of Hours: **600 h.**



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



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



**Postgraduate Diploma**  
Assisted Reproduction  
Treatment Techniques

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma Assisted Reproduction Treatment Techniques