

Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing





### Postgraduate Certificate

Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing

» Modality: online

» Duration: 12 weeks

» Certificate: TECH Global University

» Credits: 12 ECTS

» Schedule: at your own pace

» Exams: online

Website: www.techtitute.com/us/nursing/postgraduate-certificate/anatomy-physiology-genetics-immunology-assisted-reproductive-nursing

# Index

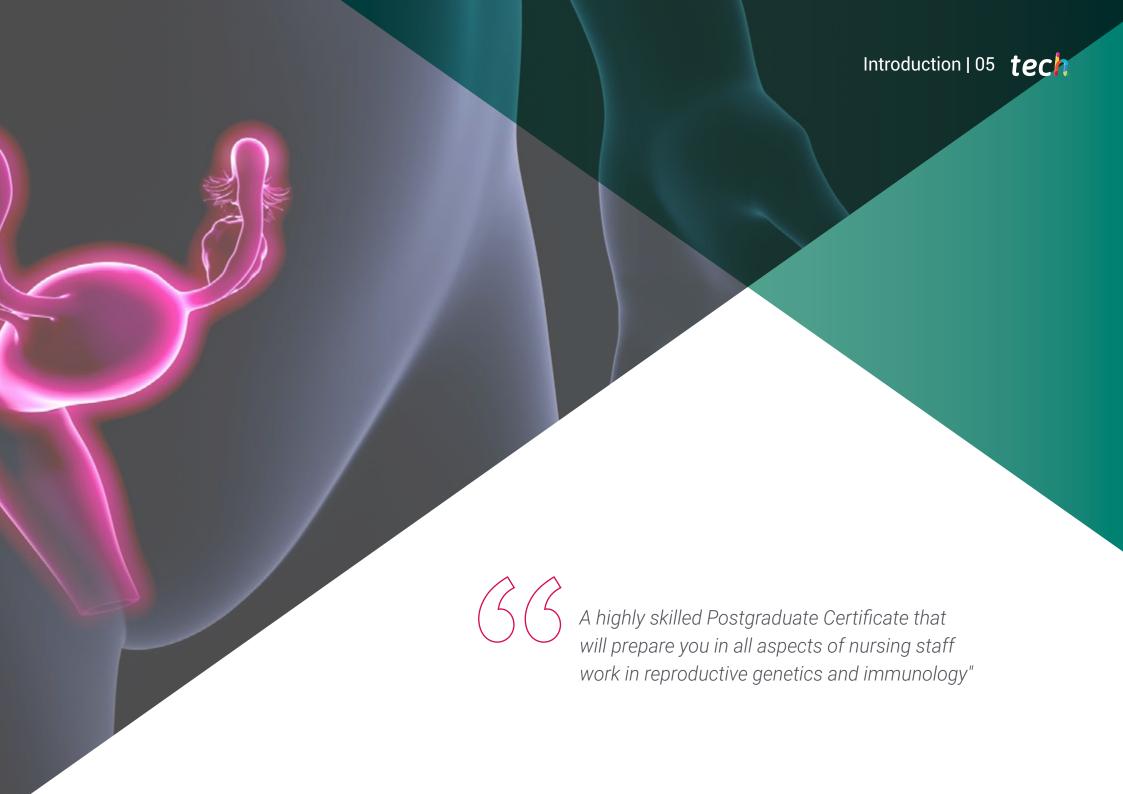
 $\begin{array}{c|c} \textbf{O1} & \textbf{O2} \\ \hline \textbf{Introduction} & \textbf{Objectives} \\ \hline \textbf{O3} & \textbf{O4} & \textbf{O5} \\ \hline \textbf{Course Management} & \textbf{Structure and Content} & \textbf{Methodology} \\ \hline \textbf{\textit{p. 12}} & \textbf{\textit{p. 12}} & \textbf{\textit{p. 16}} \\ \hline \end{array}$ 

06 Certificate

p. 30

# 01 Introduction

The study of male infertility in Assisted Reproduction Units sets in motion the care activity in many fields: from the psychological, which will be applied in dealing with the patient from his initial arrival at the clinic, to the more practical in the protocols and techniques that are developed. The nursing professional in this context requires a very complete education in order to be able to competently work in any Assisted Reproduction Unit. This program will cover the key aspects of human reproduction, with a special focus on the field of genetics and immunology in relation to reproductive disorders. This educational program is necessary to compete among the best in today's job market.



### tech 06 | Introduction

This Postgraduate Certificate will prepare the student in the key aspects of human reproduction, anatomy and physiology of the reproductive organs as the key to basic knowledge in this field. The importance of neuroendocrinology in reproduction will also be highlighted, since it is hormones that guide the menstrual cycle and gametogenesis. Both ovogenesis and spermatogenesis are essential for human reproduction, the processes of meiosis being the key to the development of our species. The relationship of hormones to the creation of oocytes and sperm is essential to understanding reproductive biology.

In this topic we will also discuss the menstrual cycle, fertilization and embryonic development, and the effect of age on the reproductive system, which is very important in the era of assisted reproduction in which we live.

In the second part of this Postgraduate Certificate, the relationship between genetics and immunology and assisted reproduction will be addressed. The basic techniques for the diagnosis of genetic diseases such as Down Syndrome or Klinefelter Syndrome will be reviewed. The importance of karyotyping in assisted reproduction consultation and the most complex and novel techniques, such as CGH arrays, used in preimplantation genetic diagnosis will also be discussed.

Without forgetting that preimplantation genetic diagnosis is one of the pillars in assisted reproduction treatments and the genetic studies recommended for donors and carrier Matching tests. The second block of the Postgraduate Certificate will review the key concepts of immunology, will discuss the immune system of women and the cell populations that compose it to understand the problems that can occur when there are autoimmune or alloimmune factors that compromise fertility, and the main treatments. Finally, two specific cases will be discussed, endometriosis and Chlamydia trachomatis infection, which are closely related to inflammation and the immune system.

This Postgraduate Certificate in Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing contains the most complete and up-to-date scientific program on the market. The most important features include:

- The latest technology in online teaching software
- A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- Practical cases presented by practising experts
- State-of-the-art interactive video systems
- Teaching supported by telepractice
- Continuous updating and recycling systems
- Autonomous learning: full compatibility with other occupations
- Practical exercises for self-evaluation and learning verification
- Support groups and educational synergies: questions to the expert, debate and knowledge forums
- Communication with the teacher and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection
- Complementary documentation banks permanently available, even after the Postgraduate Certificate



With this Postgraduate Certificate you will be able to balance a high-intensity program with your personal and professional life, achieving your goals in a simple and real way"

### Introduction | 07 tech



Acquire the necessary skills in Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing, with the solvency of a high-level professional"

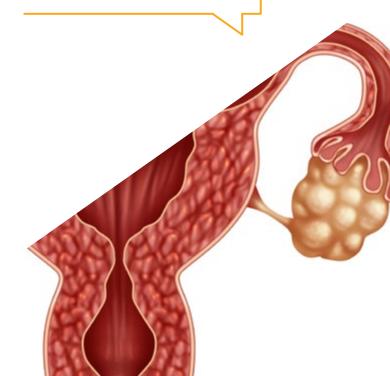
Our teaching staff is made up of professionals from different fields related to this specialty. In this way, TECH ensures that it delivers the targeted capacitive update it intends. A multidisciplinary staff, made up of educated and experienced professionals in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at the service of the Postgraduate Certificate the practical knowledge derived from their own experience: one of the differential qualities of this program.

This mastery of the subject matter is complemented by the effectiveness of the methodological design of this Postgraduate Certificate in Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing. Developed by a multidisciplinary team of experts, it integrates the latest advances in educational technology. In this way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your education.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, TECH will use telepractice: with the help of an innovative interactive video system and Learning from an Expert, the student will be able to acquire the knowledge as if they were facing the scenario they are learning at that moment. A concept that will allow students to integrate and memorize what they have learnt in a more realistic and permanent way.

The learning of this program is developed through the most advanced didactic means in online teaching to guarantee that your effort will have the best possible results.

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".







### tech 10 | Objectives

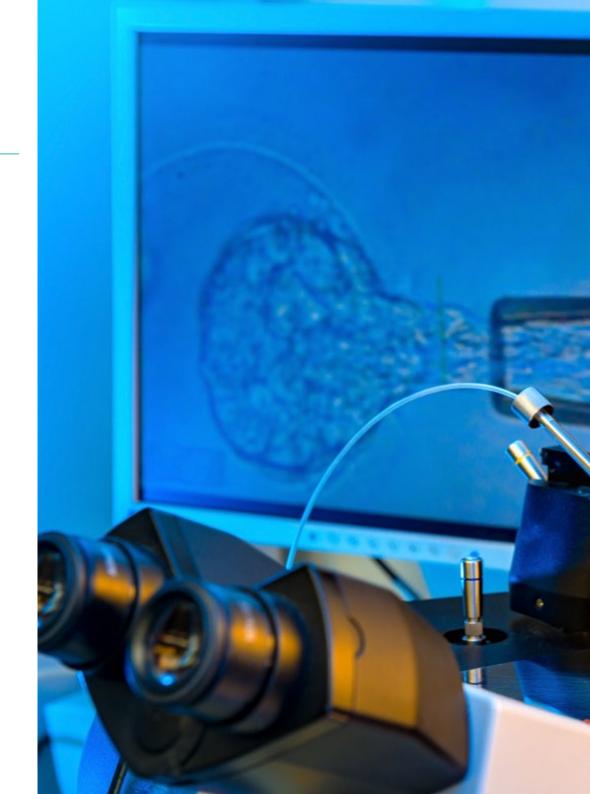


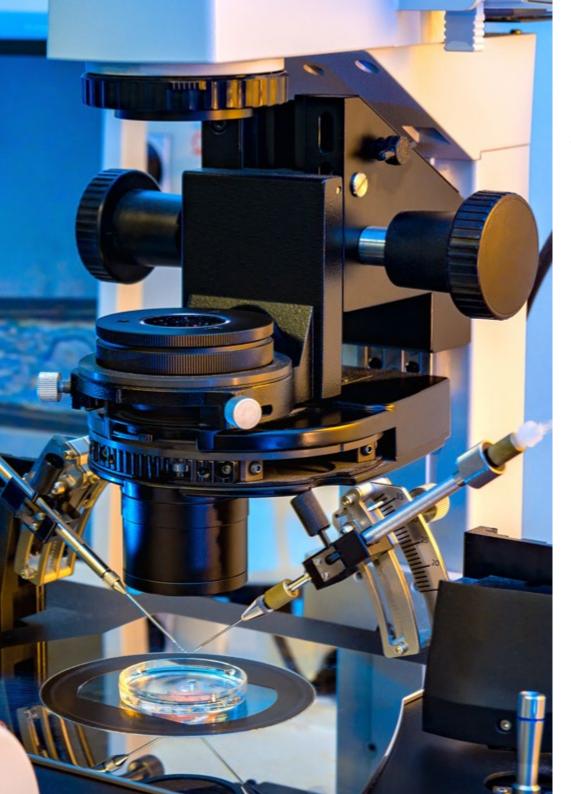
### **General objectives**

- Broaden specific knowledge of each of the fields of work in assisted reproduction
- Enable students to be interdependent and problem solvers
- Facilitate good performance of nursing professionals in order to provide the best care throughout the process



A boost to your professional that will give you the competitiveness of the best prepared professionals in the labor market"





### Objectives | 11 tech



### **Specific objectives**

- Know what the initial study of the male consists of in consultation as, well as the complementary explorations or genetic studies that may be requested
- Understand the importance of good semen handling practices
- Be able to perform a complete seminogram of the male
- Be able to process samples for assisted reproduction techniques
- Understand what sperm freezing consists of and be able to perform it without complications
- Be able to perform semen washings for HIV, Hepatitis B and Hepatitis C seropositive males, as well as to understand the importance of semen washings and good management, and to know when to recommend them in consultation
- Know the basics of semen donation, both at the consultation and laboratory level
- Learn about three of the most widely used sperm selection techniques currently
  in use, magnetically labeled cell sorting (MACS), intracytoplasmic injection
  of morphologically selected spermatozoa (IMSI) and selection based on hyaluronic
  acid binding, and therefore know when to recommend them in consultation
- Know the basics of antioxidant therapy and how to discern which antioxidants have proven efficacy and which do not





### tech 14 | Course Management

#### Management



#### Ms. Agra Bao, Vanesa

- Operating room supervisor at EVA FERTILITY-DORSIA
- · Degree in Nursing University of La Coruña
- Postgraduate Diploma in Legal Nursing. UNED
- · Official Master's Degree in Occupational Risk Prevention. USP-CEU
- · Master's Degree in Physical Activity and Health. Miguel de Cervantes University
- Instructor of Basic Life Support and DESA. SEMICYUC
- · Postgraduate Diploma in Surgical Anesthesiology for Nursing. CEU Cardenal Herrera University
- · Biosafety and Occupational Risk Prevention in Microbiology Laboratories. SEM
- The male in Assisted Reproduction EVA FERTILITY CLINICS
- · Biosafety Laboratories and Research Animal Facilities with Biocontainment Level 3. SEGLA
- · Nursing action in traumatic emergencies, poisoning and other urgent situations. DAE



#### Ms. Boyano Rodríguez, Beatriz

- Embryologist at Clínicas EVA, Madrid
- · Postgraduate Diploma in Clinical Genetics, Universidad de Alcalá de Henares, Madrid
- · Master's Degree in Assisted Human Reproduction Biotechnology, IVI and University of Valencia
- · Postgraduate in Medical Genetics, University of Valencia, Spain
- Degree in Biology, Universidad de Salamanca
- Member of the Association for the Study of Reproductive Biology
- Member of the Spanish Association of Human Genetics

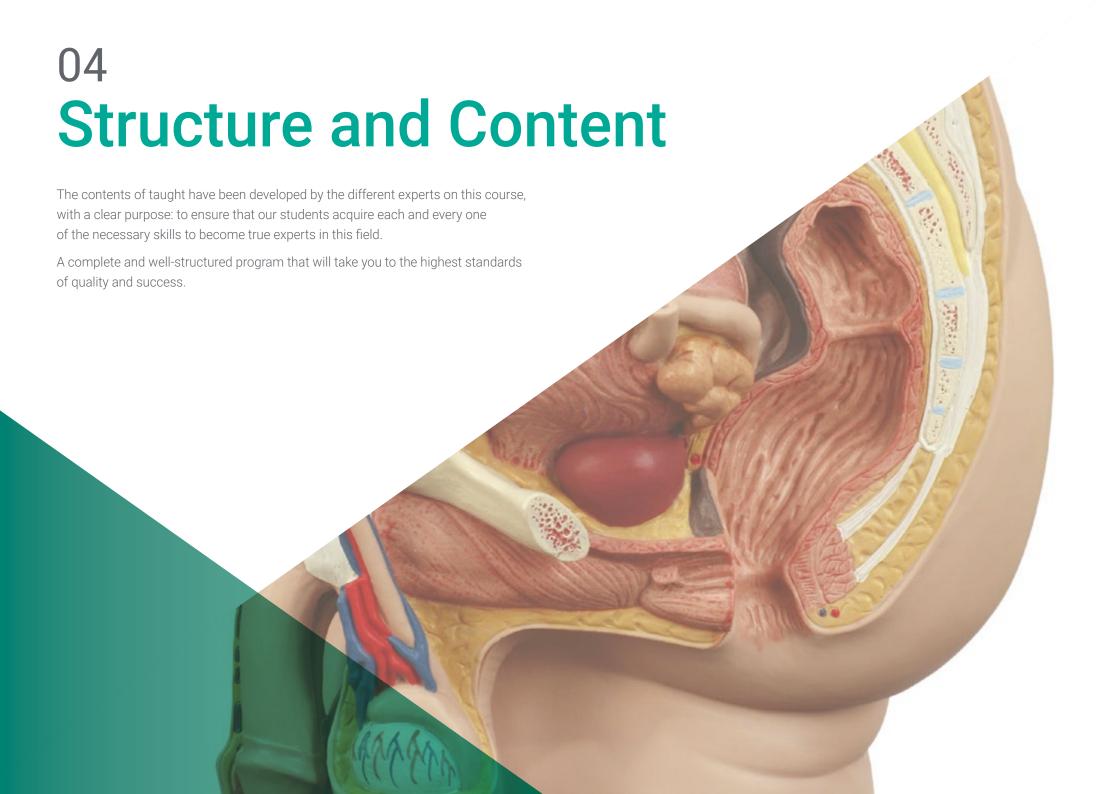


### Course Management | 15 tech

#### **Professors**

#### Ms. Martín, Alba

- Embryologist at Clínicas EVA, Madrid
- Degree in Biology from the Complutense University of Madrid, specializing in NEUROBIOLOGY and BIOSANITARY
- Master's Degree in Mammalian Reproductive Biology and Technology at the University of Murcia, Spain
- Postgraduate and professional development program with modular structure in Health Law and Biomedicine Universidad Nacional de Educación a Distancia (National University of Distance Education)
- Online Postgraduate Certificate entitled "Epigenetic Control of Gene Expression" given by the University of Melbourne





### tech 18 | Structure and Content

#### Module 1. Anatomy and Physiology of Reproduction

- 1.1. Anatomy of the Female Reproductive Organs
  - 1.1.1. Introduction
  - 1.1.2. External Female Genitalia
    - 1.1.2.1. Vulva
    - 1.1.2.2. Mons Pubis
    - 1.1.2.3. Labia Majora
    - 1.1.2.4. Labia Minora
    - 1.1.2.5. Vaginal Vestibule
    - 1.1.2.6. Clitoris
    - 1.1.2.7. Vestibular Bulbs
  - 1.1.3. Internal Female Genitalia
    - 1.1.3.1. Vagina
    - 1.1.3.2. Uterus
    - 1.1.3.3. Fallopian Tube
    - 1.1.3.4. Ovaries
- 1.2. Endocrinology of the Female Reproductive System
  - 1.2.1. Introduction
  - 1.2.2. The Hypothalamus
    - 1.2.2.1. GnRH
  - 1.2.3. Pituitary Gland
    - 1.2.3.1. FSH and LH
  - 124 Steroid Hormones
    - 1.2.4.1. Introduction
    - 1.2.4.2. Synthesis
    - 1.2.4.3. Mechanism of Action
    - 1.2.4.4. Estrogens
    - 1.2.4.5. Androgens
    - 1.2.4.6. Progestogens
  - 1.2.5. External Modulation: Endorphins and Melatonin
  - 1.2.6. GnRH Pulses: Brain-Ovarian Relationship
  - 1.2.7. GnRH Agonists and Antagonists

- 1.3. Menstrual Cycle
  - 1.3.1. Menstrual Cycle
  - 1.3.2. Biochemical Indicators of the Menstrual Cycle
    - 1.3.2.1. Hormones in Basal State
    - 1.3.2.2. Ovulation
    - 1.3.2.3. Evaluation of Ovarian Reserve. Antimüllerian Hormone
  - 1.3.3. Ultrasound Indicators of the Menstrual Cycle
    - 1.3.3.1. Follicle Count
    - 1.3.3.2. Endometrial Ultrasound
  - 1.3.4. End of the Reproductive Age
    - 1.3.4.1. Pre-menopause
    - 1.3.4.2. Menopause
    - 1.3.4.3. Post-menopause
- 1.4. Ovogenesis (Folliculogenesis and Ovulation)
  - 1.4.1. Meiosis. From the Oogonia to the MII Oocyte
  - 1.4.2. Types of Follicles and their Relation to Ovogenesis. Follicular Dynamics
  - 1.4.3. Ovarian Recruitment and Ovulation
  - 1.4.4. Oocyte MII: Markers of Oocyte Quality
  - 1.4.5. In Vitro Oocyte Maturation
- .5. Anatomy of the Male Reproductive Organs
  - 1.5.1. External Male Genitalia
    - 1.5.1.1. Testicles
    - 1.5.1.2. Penis
    - 1.5.1.3. Epididymis
    - 1.5.1.4. Vas Deferens
  - 1.5.2. Internal Male Genitalia
    - 1.5.2.1. Seminal Vesicles
    - 1.5.2.2. Ejaculatory Duct
    - 1.5.2.3. Prostate
    - 1.5.2.4. Urethra
    - 1.5.2.5. Bulbourethral Glands

### Structure and Content | 19 tech

1.6.	Endo	crinology	of the Ma	ale Rep	roductive	System
------	------	-----------	-----------	---------	-----------	--------

- 1.6.1. Testicular Function Regulation
- 1.6.2. Androgen Biosynthesis
- 1.6.3. Inhibins and Activins
- 1.6.4. Prolactin
- 1.6.5. Prostaglandins
- 1.6.6. Estrogens
- 1.6.7. Other Factors

#### 1.7. Spermatogenesis

- 1.7.1. Meiosis
- 1.7.2. Differences between Ovogenesis and Spermatogenesis
- 1.7.3. The Seminiferous Tubule
  - 1.7.3.1. Hormones Involved
  - 1.7.3.2. Cell Types
- 1.7.4. The Blood-Tissue Barrier
- 1.7.5 Endocrine and Paracrine Control

#### 1.8. Fertilization

- 1.8.1. Gamete Transport
- 1.8.2. Gametic Maturation
- 1.8.3. Gamete Interaction

#### 1.9. Embryonic Development

- 1.9.1. Zygote Formation
- 1.9.2. First Divisions
- 1.9.3. Blastocyst Formation and Implantation
- 1.9.4. Gastrulation: Mesoderm and Mesoderm Formation
  - 1.9.4.1. Notochord Formation
  - 1.9.4.2. Establishment of Body Axes
  - 1.9.4.3. Setting Cellular Destinations
  - 1.9.4.4. Trophoblast Growth
- 1.9.5. Embryonic Period or Organogenesis Period
  - 1.9.5.1. Ectoderm
  - 1.9.5.2. Mesoderm
  - 1.9.5.3. Endoderm

- 1.10. Effect of Age on the Male and Female Reproductive System
  - 1.10.1. Female Reproductive System
  - 1.10.2. Male Reproductive system

#### Module 2. Genetics and Immunology of Reproduction

- 2.1. Basic Cytogenetics: the Importance of Karyotyping
  - 2.1.1. DNA and its Structure
    - 2.1.1.1. Genes
    - 2.1.1.2. Chromosomes
  - 2.1.2. The Karyotype
  - 2.1.3. Uses of Karyotyping: Prenatal Diagnosis
    - 2.1.3.1. Amniocentesis
    - 2.1.3.2. Chorionic Villus Biopsy
    - 2.1.3.3. Abortion Analysis
    - 2.1.3.4. Meiosis Studies
- 2.2. The New Era of Diagnostics: Molecular Cytogenetics and Massive Sequencing
  - 2.2.1. FISH
  - 2.2.2. CGH arrays
  - 2.2.3. Massive Sequencing
- 2.3. Origin and Etiology of Chromosomal Abnormalities
  - 2.3.1. Introduction
  - 2.3.2. Classification According to Origin
    - 2.3.2.1. Numeric
    - 2.3.2.2. Structural
    - 2.3.2.3. Mosaicism
  - 2.3.3. Classification According to Etiology
    - 2.3.3.1. Autosomal
    - 2.3.3.2. Sexual
    - 2.3.3.3. Polyploidy and Haploidy

## tech 20 | Structure and Content

2.4.	4. Genetic Disorders in the Infertile Couple		2.6.	Babies with Three Genetic Progenitors, Nuclear Transfer in Mitochondrial Diseases		
	2.4.1.	Genetic Disorders in Women		2.6.1.	Mitochondrial DNA	
		2.4.1.1. Hypothalamic Origin		2.6.2.	Mitochondrial Diseases	
		2.4.1.2. Pituitary Origin		2.6.3.	Donor Cytoplasmic Transfer	
		2.4.1.3. Ovarian Origin		Epigenetics		
		2.4.1.3.1. Chromosomal Alterations		2.7.1.	General Concepts	
		2.4.1.3.1.1. Total X Chromosome: Turner Syndrome		2.7.2.	Epigenetic Modifications	
		2.4.1.3.1.2. Partial Deletion of the X Chromosome		2.7.3.	Genetic Imprinting	
		2.4.1.3.1.3. X Chromosome Translocations and Autosomes		Genetic Studies in Donors		
		2.4.1.3.1.4. Others		2.8.1.	Recommendations	
		2.4.1.4. Monogenic Alterations		2.8.2.	Carrier Matching	
		2.4.1.4.1. Fragile X		2.8.3.	Carrier Panels	
		2.4.1.5. Hereditary Thrombophilias	2.9.	The Im	munological Factor in Assisted Reproduction	
	2.4.2.	Genetic Disorders in Men		2.9.1.	General Aspects	
		2.4.2.1. Numerical Disorders: Klineffelter's Syndrome		2.9.2.	The Immune System in Women in Constant Change	
		2.4.2.2. Robertsonian Translocations		2.9.3.	Immune Cell Population in the Female Reproductive System	
		2.4.2.3. CFTR Mutation			2.9.3.1. Regulation of T-Lymphocyte Populations	
		2.4.2.4. Y Chromosome Microdeletions			2.9.3.2. Cytokines	
2.5. Pre-Im		mplantation Genetic Diagnosis (PGT): Pre-Implantation Genetic Testing)			2.9.3.3. Female Hormones	
	2.5.1.	Introduction		2.9.4.	Infertility of Autoimmune Origin	
	2.5.2.	Embryo Biopsy			2.9.4.1. Antiphospholipid Syndrome	
	2.5.3.	Indications			2.9.4.2. Anti-Thyroid Antibodies	
	2.5.4.	2.5.4. Genetic Diagnosis for Monogenic Diseases (PGT-M)			2.9.4.3. Anti-Nuclear Antibodies	
		2.5.4.1. Carrier Studies			2.9.4.4. Anti-Ovarian and Anti-FSH Antibodies	
2.5	2.5.5.	Genetic Diagnosis for Structural Abnormalities			2.9.4.5. Anti-Sperm Antibodies	
		2.5.5.1. Numerical (Aneuploidies; PGT-A)		2.9.5.	Alloimmune Infertility, the Contribution of the Fetus	
2.5		2.5.5.2. Structural (PGT-SR)			2.9.5.1. The Embryo as Antigen	
	2.5.6.	5. Combined Genetic Diagnosis			2.9.5.2. Implantation Failure of Euploid Embryos	
	2.5.7.	2.5.7. Limitations			2.9.5.2.1. NK Cells	
	2.5.8.	Mosaic Embryos as a Special Case			2.9.5.2.2. T-Helpers	
	2.5.9.	Non-Invasive Pre-Implantational Genetic Diagnosis			2.9.5.2.3. Autoantibodies	



### Structure and Content | 21 tech

2.9.6. The Role of Sperm and Spermatozoa

2.9.6.1. T-Lymphocyte Regulation

2.9.6.2. Seminal Fluid and Dendritic Cells

2.9.6.3. Clinical Relevance

2.10. Immunotherapy and Special Situations

2.10.1. Introduction

2.10.2. Aspirin and Heparin

2.10.3. Corticosteroids

2.10.4. Antibiotic Therapy

2.10.5. Colony Growth Factors

2.10.6. Intravenous Fat Emulsions

2.10.7. Intravenous Immunoglobulins

2.10.8. Adalimumab

2.10.9. Peripheral Mononuclear Cells

2.10.10. Seminal Plasma

2.10.11. Antibody-Free Semen Preparations

2.10.12. Tacrolimus

2.10.13. Risks and Benefits

2.10.14. Conclusions

2.10.15. Special Situations: Endometriosis

2.10.16. Special Situations - Chlamydia Trachomatis Infection

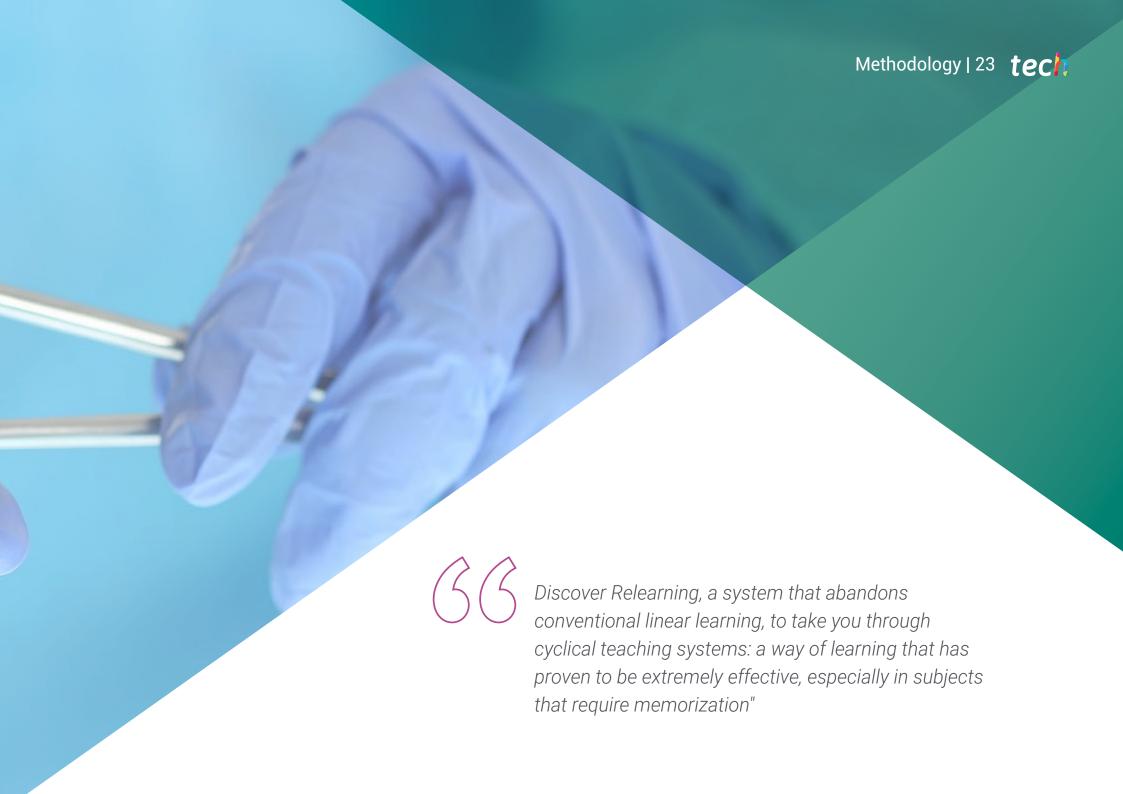


A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life"



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.

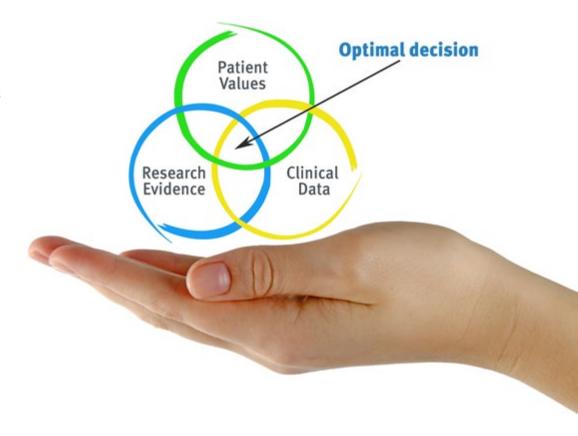


### tech 24 | Methodology

#### At TECH Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing 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:

- Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
- 2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
- 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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.

The nurse will learn through real cases and by solving complex situations in simulated learning environments.

These simulations are developed using state-of-the-art software to facilitate immersive learning.



### Methodology | 27 tech

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 we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. 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 really 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.



#### **Nursing Techniques and Procedures on Video**

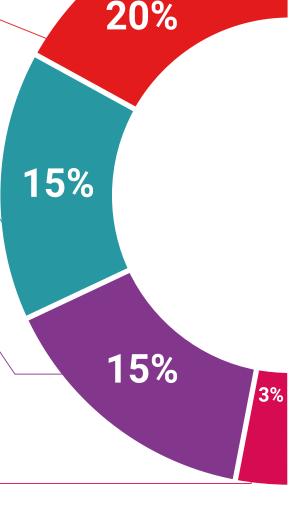
We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you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



#### **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.



### **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 suggesting that observing third-party experts can be useful.

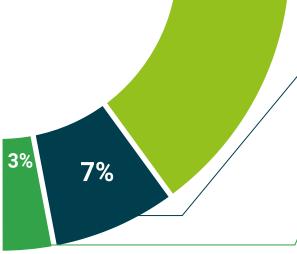
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### **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.





20%

17%







This program will allow you to obtain your **Postgraduate Certificate in Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing** endorsed by **TECH Global University**, the world's largest online university.

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

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

Title: Postgraduate Certificate in Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing

Modality: online

Duration: 12 weeks

Accreditation: 12 ECTS



This is a program of 360 hours of duration equivalent to 12 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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

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



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



## **Postgraduate Certificate**

Anatomy, Physiology, Genetics and Immunology in Assisted Reproductive Nursing

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

