

Postgraduate Certificate Embryo Transfer in Females





Postgraduate Certificate Embryo Transfer in Females

- » Modality: Online
- » Duration: 8 weeks
- » Certificate: TECH Global University
- » Accreditation: 12 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/veterinary-medicine/postgraduate-certificate/embryo-transfer-females

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01

Introduction

Artificial insemination in females has undergone a process of evolution in the application methods; we have to know perfectly their reproductive physiology to be able to apply effective artificial insemination methods.

Specialize in Embryo Transfer in Females with this high-level program, taught by experts with extensive experience in the field.



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*This training is the best option
you can find to specialize in
Embryo Transfer in Females and
make more accurate diagnoses"*

From the earliest data on animal reproduction in Egyptian hieroglyphs, through the ancient veterinarians to the present day, man has always been interested in the study of animal reproduction to increase populations and obtain better yields.

Animal reproduction has evolved exponentially in recent decades and its current development means that technologies implemented a few years ago are now obsolete. Technique, science and human genius combine and bring, as a consequence, results identical to natural reproduction.

The objective of this program focuses on the mastery and control of all physiological, pathological and biotechnological aspects that affect the reproductive organ function of domestic animals. The species studied in this Postgraduate Certificate are: bovids, equids, swine, sheep, goats and canids; selection made based on the importance and development of assisted reproduction at present.

This Postgraduate Certificate is designed to deepen current knowledge in the specialization of various Embryo Transfer techniques in Females.

The specialization will be based on theoretical and scientific aspects, combining them with the practical and applicative professionalism of each topic in the current work environment. Continuing education after completing undergraduate studies can sometimes be difficult to balance with work and family responsibilities. With this Postgraduate Certificate, TECH Global University offers the opportunity to continue learning and specializing online, supported by a wealth of audiovisual practical content that will allow you to advance reproductive techniques in your professional field.

Additionally, a renowned International Guest Director will deliver a detailed Masterclass.

This **Postgraduate Postgraduate Certificate in Embryo Transfer in Females** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- ♦ The development of case studies presented by experts in Embryo Transfer in Females
- ♦ 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
- ♦ The latest developments in Embryo Transfer in Females
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative methodologies in in Embryo Transfer in Females
- ♦ 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 prestigious International Guest Director will offer an exclusive Masterclass to address the latest innovations in Embryo Transfer in Females"

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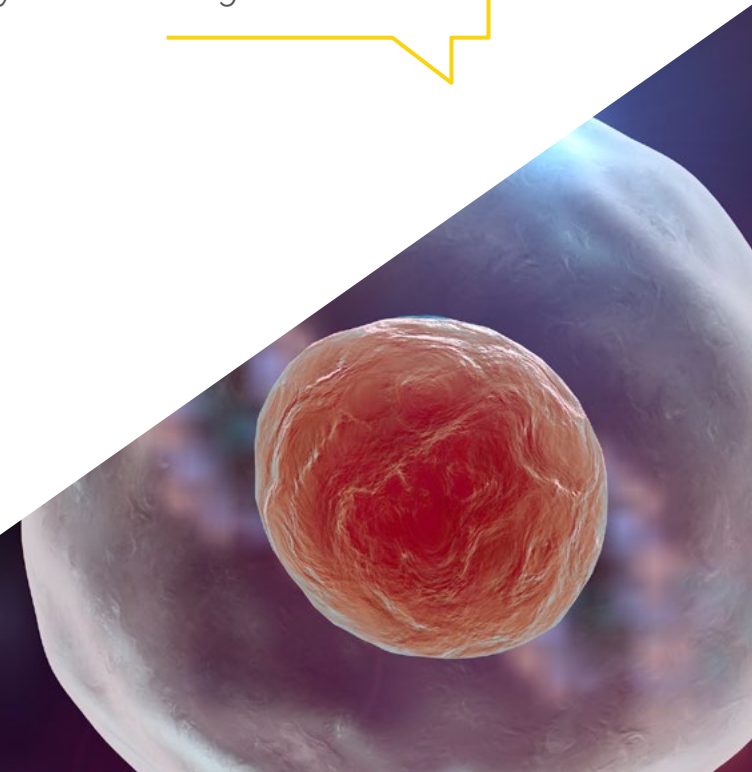
This Postgraduate Certificate is the best investment you can make when selecting an upgrade program to refresh your knowledge in Embryo Transfer in Females”

The multimedia content, developed with the latest educational technology, will provide professionals with situated and contextual learning, i.e., a simulated environment that will provide immersive training, designed for training oneself 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, the professional will have the help of an innovative interactive video system made by recognized experts in Embryo Transfer in Females and with great experience in the field.

This training comes with the best didactic material, providing you with a contextual approach that will facilitate your learning

This 100% online program will allow you to combine your studies with your professional work while increasing your knowledge in this field



02 Objectives

The program in Embryo Transfer in Females is oriented to facilitate the performance of the veterinary professional with the latest advances and most innovative treatments in the sector





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*This is the best option to learn
about the latest advances in Embryo
Transfer in Females”*



General Objectives

- Examine the methods and programs of artificial insemination in different species of domestic mammals
- Identify the importance of embryo transfer as a methodology for the creation of germplasm banks and genetic improvement
- Examine the development of Oocyte Pick-Up (OPU), In Vitro Fertilization (IVF), and Intracytoplasmic Sperm Injection (ICSI) as practical techniques in embryo implantation and genetic improvement programs
- Analyze the physiology of reproduction in females
- Establish the specific differences between the estrous cycle and the sexual cycle in different female mammals
- Define the pathologies that affect reproductive programs in females



A pathway for training and professional growth that will propel you toward greater competitiveness in the labor market."





Specific Objectives

Module 1. Female Reproduction

- ♦ Demonstrate the onset of sexual activity in females and the functioning of the hypothalamic-pituitary-gonadal axis
- ♦ Develop the scientific mechanisms of follicular surges in the sexual cycle

Identify hormonal factors for growth and regulation of oocyte maturation

- ♦ Examine and establish the importance of the corpus luteum as an endocrine organ in female reproduction
- ♦ Substantiate the importance of the uterus and its physiology in the development of gestation
- ♦ Evaluate postpartum reproductive activity of females
- ♦ Compile methods of diagnosis and treatment of reproductive pathologies in females

Module 2. Reproductive Biotechnologies in Females

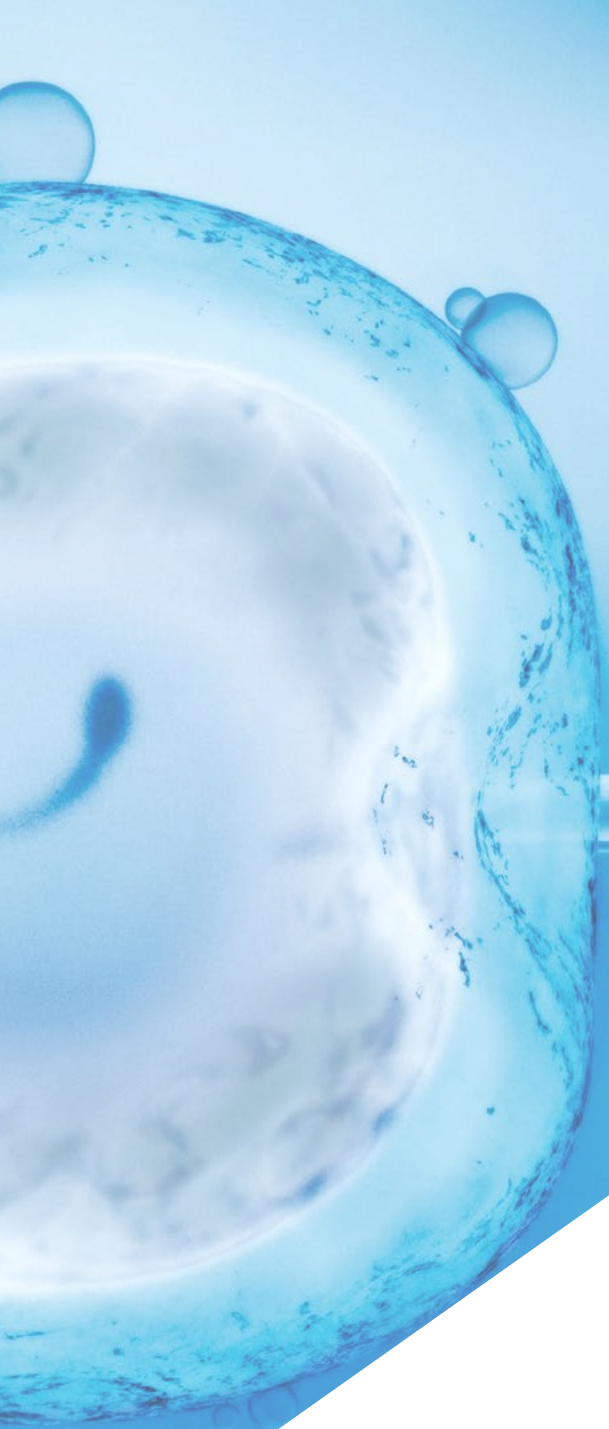
- ♦ Analyze synchronization protocols for fixed-time artificial insemination (FTAI)
- ♦ Substantiate the effects of hormones in the FTAI programs
- ♦ Evaluate the issues involved in an embryo transfer program
- ♦ Present superovulation and synchronization protocols in embryo donors
- ♦ Establish systems for handling and valuation of embryos at commercial level
- ♦ Compile the different methods of embryo and oocyte preservation
- ♦ Develop OPU programs as an alternative methodology to embryo transfer
- ♦ Analyze the assessment criteria for embryo implantation in recipients

03

Course Management

The program's teaching staff includes leading experts in Embryo Transfer in Females who contribute their vast work experience to this training program. They are world-renowned doctors from different countries with proven theoretical and practical professional experience





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Our teaching team, experts in Embryo Transfer in Females, will help you achieve success in your profession"

International Guest Director

Considered as a true reference in animal care, Dr. Pouya Dini is a prestigious **Veterinarian** highly specialized in the field of **Mammalian Reproduction Technology**. In this sense, he has a **comprehensive approach** based on the personalization of health to offer a first class clinical assistance to different species.

During his extensive professional career, he has been part of renowned veterinary organizations such as the UC Davis Veterinary Hospital located in the United States. As such, his work has focused on providing **excellent clinical care** to a variety of species: from common pets such as dogs to exotic animals including birds. Thanks to this, he has been able to efficiently treat different pathologies ranging from **Respiratory Infections** or **Gastrointestinal Diseases** to **Cardiovascular Diseases**. In this way, it has optimized the quality of life of a variety of fauna. In tune with this, it has developed innovative **preventive care protocols**, boosting the overall long-term welfare of the animals.

In his commitment to excellence, he regularly updates his knowledge to stay at the forefront of the latest advances in **Veterinary Medicine**. This has allowed him to develop advanced technical skills to incorporate emerging technological tools such as **Diagnostic Imaging Systems**, **Telemedicine** and even sophisticated **Artificial Intelligence** techniques into his daily practice. As a result, he has been able to design and implement more precise and less invasive therapies to significantly optimize outcomes for conditions such as Musculoskeletal Injuries.

He has also balanced this facet with his role as a **Clinical Researcher**. In fact, he has an extensive scientific production on subjects such as **Gene Expression** in the equine placenta, **Reproductive Biotechnology** or the impact of *cumulus* cells in the *in vitro* maturation process to predict fertilization in horses.



Dr. Dini, Pouya

- Director of Assisted Reproductive Technology at UC Davis Veterinary Hospital, United States
- Specialist in Reproductive Biotechnology.
- Clinical Researcher at Gluck Equine Research Center, United States
- Expert in Equine Placenta
- Author of multiple scientific articles on Mammalian Reproductive Technologies
- Doctor of Philosophy with specialization in Equine Health, Ghent University
- Doctorate in Veterinary Medicine from Islamic Azad University
- Clinical internship at Gluck Equine Research Center
- Award for "Doctoral Thesis of the Year" by Ghent University
- Member of: European College of Animal Reproduction and American College of Theriogenology

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

Management



Dr. Gomez Peinado, Antonio

- Veterinary Director of the Spanish Institute of Genetics and Animal Reproduction (IGREA)
- Coordinator of Obstetrics and Reproduction at the Faculty of Veterinary Medicine, Alfonso X el Sabio University
- Doctor in Veterinary Medicine from the Alfonso X el Sabio University
- Degree in Veterinary Medicine



Dr. Gómez Rodríguez, Elisa

- Head of the Laboratory at the Spanish Institute of Genetics and Animal Reproduction (IEGRA)
- Faculty Member in Veterinary Medicine at Alfonso X el Sabio University
- Degree in Veterinary Medicine from the Complutense University of Madrid

Professors

Dr. Pinto González, Agustín

- ◆ Expert Veterinarian in Animal Reproduction
- ◆ Veterinarian of the Spanish Institute of Animal Genetics and Reproduction (IEGRA)
- ◆ Sani Lidia's Veterinarian
- ◆ University Specialization in Animal Reproduction at IEGRA
- ◆ University Diploma in Artificial Insemination of Cattle at IEGRA

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*Update your knowledge
through the Embryo Transfer
in Females program"*

04

Structure and Content

The structure of the contents has been designed by the best professionals in the field of Embryo Transfer in Females, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied and diagnosed, and with extensive knowledge of new technologies applied to veterinary medicine.



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This Postgraduate Certificate in Embryo Transfer in Females contains the most complete and up-to-date scientific program on the market”

Module 1. Female Reproduction

- 1.1. Reproductive Physiology in Females
 - 1.1.1. Onset of Sexual Activity in Females
 - 1.1.2. Hypothalamic-Pituitary-Gonadal Axis
 - 1.1.3. Hormone Control Feedback System
 - 1.1.4. Intervention of Photoperiod in Female Reproductive Physiology
- 1.2. Estrous Cycle and Sexual Cycle Follicular Waves
 - 1.2.1. Estrous Cycle and Sexual Cycle in the Cow
 - 1.2.2. Estrous Cycle and Sexual Cycle in the Mare
 - 1.2.3. Estrous Cycle and Sexual Cycle in Sows
 - 1.2.4. Estrous Cycle and Sexual Cycle in the Goat
 - 1.2.5. Estrous Cycle and Sexual Cycle in Sheep
 - 1.2.6. Estrous Cycle and Sexual Cycle in Female Dogs
- 1.3. Oocyte Maturation and Ovulation
 - 1.3.1. Nuclear Maturation of the Oocyte
 - 1.3.2. Cytoplasmic Maturation of the Oocyte
 - 1.3.3. Hormones and Growth Factors in the Regulation of Oocyte Maturation
 - 1.3.4. Phenomenology of Ovulation
 - 1.3.5. Ovulation Disorders
- 1.4. Corpus Luteum Histology and Pathophysiology
 - 1.4.1. Luteal Cells Histology of the Corpus Luteum
 - 1.4.2. Morphological and Functional Evolution of the Corpus Luteum
 - 1.4.3. Luteolysis
 - 1.4.4. Pathophysiology of the Corpus Luteum
- 1.5. The Uterus and Preparation for Pregnancy
 - 1.5.1. The Uterus as an Organ of Gestation Reception
 - 1.5.2. Histological and Physiological Study of the Uterus
 - 1.5.3. Changes Produced in the Uterus from the Beginning of Gestation to Its Termination
 - 1.5.4. Uterine Pathophysiology
- 1.6. Beginning of Postpartum Reproductive Activity
 - 1.6.1. Physiological Conditions Occurring after Childbirth
 - 1.6.2. Recovery of Hypothalamic-Pituitary Activity
 - 1.6.3. Structural Changes of the Gonads in the Postpartum Period
 - 1.6.4. Etiological and Therapeutic Study of Postpartum Anestrus
 - 1.6.5. Fertility-Related Postpartum Incidences
- 1.7. Oocyte Biology and Pathology
 - 1.7.1. Oocyte Morphology
 - 1.7.2. Impact of Nutrition on Oocyte Quality
 - 1.7.3. Alterations in Oocyte Gene Expression
- 1.8. Reproductive Pathologies in Females
 - 1.8.1. Extrinsic Factors Affecting Reproduction in Females
 - 1.8.2. Congenital and Fetal Disorders
 - 1.8.3. Infectious Infertility
 - 1.8.4. Physical and Chromosomal Abnormalities
 - 1.8.5. Hormonal Disorders
- 1.9. Chromosomal Behavior and Achromatic Spindle Formation in Mammalian Oocytes
 - 1.9.1. Introduction
 - 1.9.2. Formation of Achromatic Spindle in Metaphase I and Metaphase II
 - 1.9.3. Chromosome Dynamics and Segregation During Metaphase I and Metaphase II
- 1.10. Follicle and Oocyte Metabolism in Vivo and In Vitro
 - 1.10.1. Relationships between Follicular Cells and the Oocyte
 - 1.10.2. Metabolism of Primordial Follicles and Oocytes
 - 1.10.3. Metabolism of Growing Follicles and Oocytes
 - 1.10.4. Metabolism During the Perioviulatory Period

Module 2. Reproductive Biotechnologies in Females

- 2.1. Artificial Insemination in Ruminant Females
 - 2.1.1. Evolution of Artificial Insemination Methodologies in Females
 - 2.1.2. Heat Detection Methods
 - 2.1.3. Artificial Insemination in Cows
 - 2.1.4. Artificial Insemination in Sheep
 - 2.1.5. Artificial Insemination in Goats
- 2.2. Artificial Insemination in Mare, Sows and Female Dogs
 - 2.2.1. Artificial Insemination in Mares
 - 2.2.2. Artificial Insemination in Sows
 - 2.2.3. Artificial Insemination in Female Dogs
- 2.3. Fixed-Time Artificial Insemination Programs (FTAI)
 - 2.3.1. Functions, Advantages and Disadvantages of FTAI
 - 2.3.2. FTAI Methods
 - 2.3.3. Prostaglandin in Estrus Synchronization
 - 2.3.4. Ovsynch, Cosynch y Presynch
 - 2.3.5. Double-Ovsynch, G6G, Ovsynch-PMSG, and Resynchronization
 - 2.3.6. Effect of Estrogens for Synchronization
 - 2.3.7. Study of Progesterone in Synchronization Programs
- 2.4. Embryo Transfer Donor and Recipient Selection and Management
 - 2.4.1. Importance of Embryo Transfer in Different Species of Domestic Mammals
 - 2.4.2. Reproductive Interest Criteria for Donor Selection
 - 2.4.3. Criteria for the Selection of Recipients
 - 2.4.4. Preparation and Handling of Donors and Recipients
- 2.5. Embryo Transfer Superovulation and Embryo Collection Techniques
 - 2.5.1. Superovulatory Treatments in Different Species of Domestic Mammals
 - 2.5.2. Artificial Insemination During the Development of a E.T
 - 2.5.3. Preparation of the Donor for E.T
 - 2.5.4. Embryo Recovery Techniques in Different Species of Domestic Mammals
- 2.6. Handling and Commercial Evaluation of Embryos
 - 2.6.1. Isolation of Embryos
 - 2.6.2. Embryo Search and Handling Means Used
 - 2.6.3. Embryo Classification
 - 2.6.4. Embryo Washing
 - 2.6.5. Straw Preparation for Transfer or Transport
 - 2.6.6. Physicochemical Conditions for Embryo Maintenance
 - 2.6.7. Basic Equipment and Materials Used
- 2.7. Follicular Puncture (OPU)
 - 2.7.1. Principles of the Technique
 - 2.7.2. Preparation of OPU Females for OPU: Stimulation or Non-stimulation
 - 2.7.3. Methodology of the OPU Technique
- 2.8. In Vitro Fertilization and Intracytoplasmic Sperm Injection
 - 2.8.1. Procurement and Selection of COCS
 - 2.8.2. In Vitro Maturation (IVM)
 - 2.8.3. Conventional in Vitro Fertilization (IVF)
 - 2.8.4. Intracytoplasmic Sperm Injection (ICSI)
 - 2.8.5. In Vitro Culture (IVC)
- 2.9. Embryo Implantation in Recipients
 - 2.9.1. Receiver Synchronization Protocols
 - 2.9.2. Recipient Assessment Criteria Following Synchronization Protocols
 - 2.9.3. Embryo Implantation Technique and Equipment Required
- 2.10. Oocyte and Embryo Cryopreservation
 - 2.10.1. Introduction
 - 2.10.2. Embryo and Oocyte Preservation Methods
 - 2.10.3. Cryopreservation Techniques
 - 2.10.4. Comparison of Embryos Produced In Vitro and In Vivo Embryo Assessment for Freezing and Techniques of Choice

05 Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

“

TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

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.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

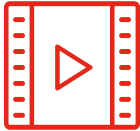
The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

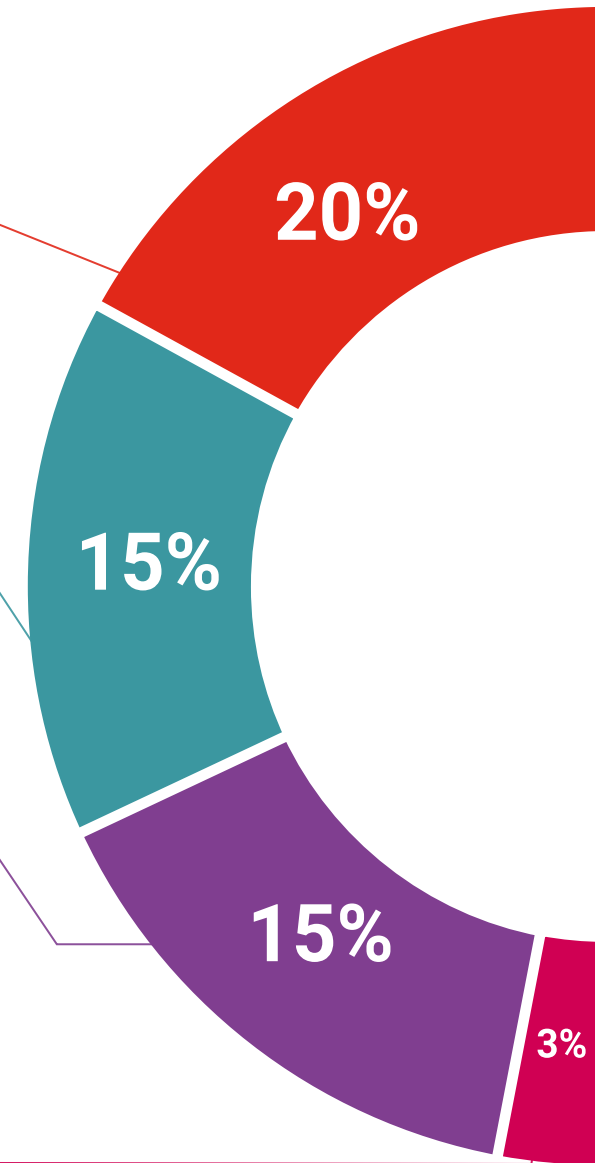
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

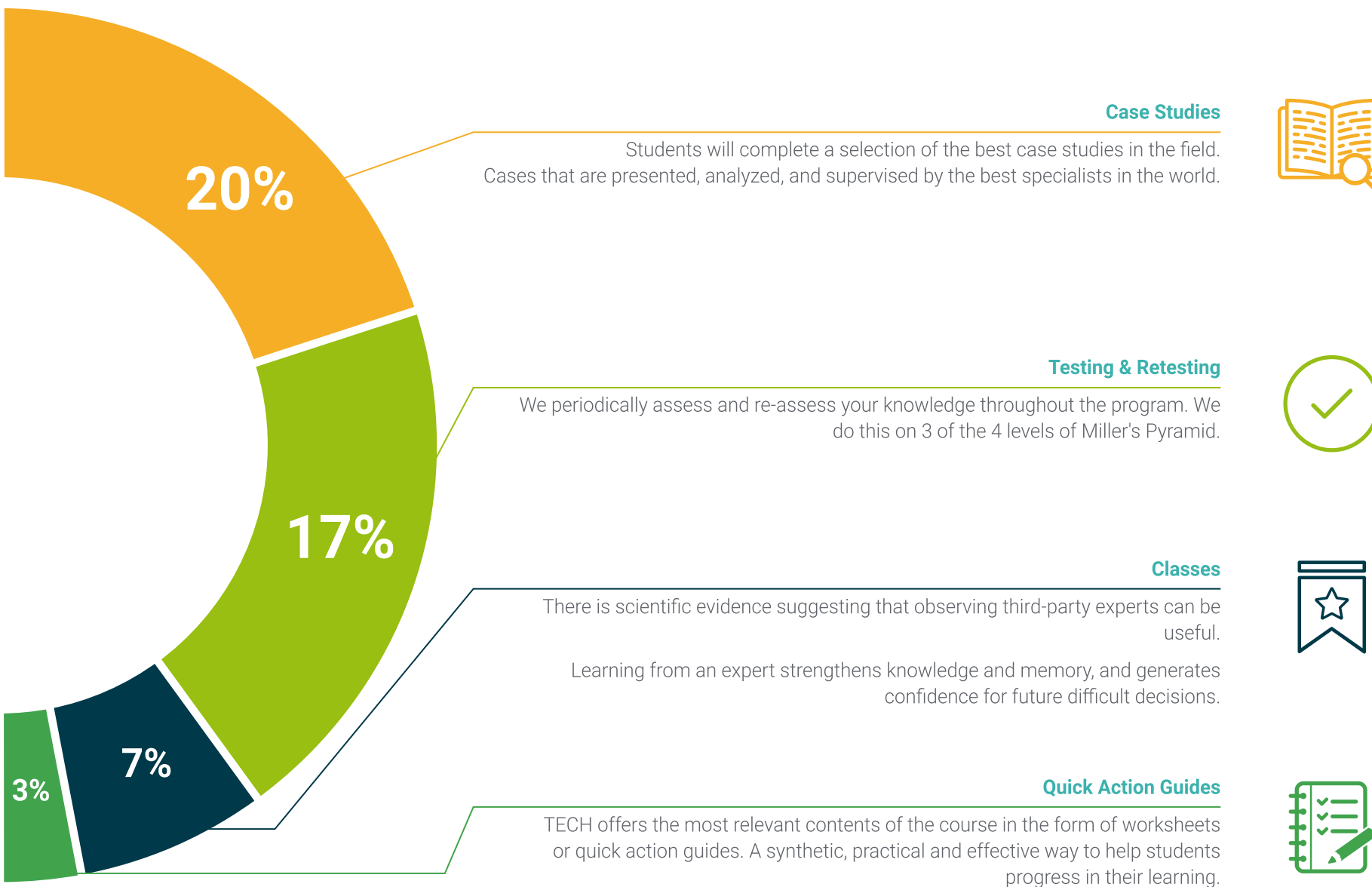
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will





06 Certificate

The Postgraduate Certificate in Embryo Transfer in Females guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Postgraduate Certificate issued by TECH Global University.



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

This private qualification will allow you to obtain a diploma for the **Postgraduate Certificate in Embryo Transfer in Females** 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 private qualification from **TECH Global University** is a European continuing education and professional development program that guarantees the acquisition of competencies in its area of expertise, providing significant curricular value to the student who successfully completes the program.

Title: **Postgraduate Certificate in Embryo Transfer in Females**

Modality: **online**

Duration: **8 weeks**

Accreditation: **12 ECTS**





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Postgraduate Certificate

Embryo Transfer in Females