

# Postgraduate Diploma

Scientific and Neuroscientific Evidence  
on Natural Childbirth for Midwives





## Postgraduate Diploma Scientific and Neuroscientific Evidence on Natural Childbirth for Midwives

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-scientific-neuroscientific-evidence-natural-childbirth-midwives](http://www.techtute.com/us/nursing/postgraduate-diploma/postgraduate-diploma-scientific-neuroscientific-evidence-natural-childbirth-midwives)

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# 01

# Introduction

Woman-centered care and the humanization of childbirth are two key themes that have become fundamental elements in the field of scientific research. Evidence from these studies suggests that this procedure has numerous benefits for both mother and baby, including a reduced likelihood of unnecessary medical interventions, faster recovery after childbirth, greater maternal satisfaction and improved bonding between mother and baby. Therefore, it is essential that midwives are constantly up to date on this topic and this is precisely what this program offers, which is developed 100% online, a benefit that will allow them to have greater control over their time.







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*In a constantly advancing field, keeping up to date is an essential task for professionals. Enroll in this Postgraduate Diploma and get up to date immediately"*

TECH has identified the most current factors involved in the neuroscientific study of Natural Childbirth and has brought them together in this incredible Postgraduate Diploma that is focused on providing education in a didactic way, in which its participants acquire an update on the theoretical concepts related to this clinical procedure.

In this way, students will receive a wide range of advanced knowledge about the latest scientific advances in the biological changes that occur during the process of Natural Childbirth, as well as the reactions that the newborn has. In addition, it will delve into the new protocols to be followed at the time of assisting this type of procedure and the most modern implements that must be available in this situation.

This will be achieved through a Syllabus that has been developed by the best experts in this field and who are also part of the faculty responsible for this program. In this way, you will learn about the new research that has been carried out on the brain changes that occur during pregnancy and childbirth. In addition, medical interventions during this process and their effects will be discussed in depth.

Thanks to the *Relearning* method, students will have the opportunity to complete the study plan 100% online, without time constraints and from the comfort of their homes. In this way, they will be able to access at any time of the day to multimedia resources that clearly explain all the topics of the program. In addition, students will be able to hone their problem-solving skills by examining case studies that simulate real-life situations.

This **Postgraduate Diploma in Scientific and Neuroscientific Evidence on Natural Childbirth for Midwives** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of case studies presented by experts in Scientific and Neuroscientific Evidence on Natural Childbirth for Midwives
- ♦ The graphic, schematic and practical contents with which it is conceived scientific and practical information on those 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



*Update your knowledge with this Postgraduate Diploma in a practical way and according to your personal and professional needs"*

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*This Postgraduate Diploma contains the most complete and up-to-date educational program on the market in the field of Natural Childbirth"*

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

Its 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 professionals must try to solve the different professional practice situations that arise throughout the program. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*This program will allow you to analyze simulated cases, which will provide an immersive and didactic learning experience.*

*Learn at your own pace and without the need to travel to a study center.*



# 02 Objectives

The main objective for which this program was developed is that it can be a skill-building tool for midwives who wish to update their knowledge in the study of the scientific evidence that demonstrates the various biological reactions that occur during Natural Childbirth. In addition, it is intended to provide the participants with a broad knowledge of the new technologies that have been implemented in recent years during the assistance of this procedure.





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*You will update your knowledge of the hormonal responses that occur during postpartum and motherhood, thanks to an in-depth look at these aspects"*



## General Objectives

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- ♦ Acquire fundamental knowledge about the physiology of Natural Childbirth, ancestral cultural practices and the emotional needs of women during childbirth, as well as the implications of medical interventions
- ♦ Acquire essential skills and knowledge in the care of pregnant women and their fetuses, including the promotion of healthy pregnancies and the identification of possible complications
- ♦ Acquire fundamental knowledge and skills in the diagnosis, management and prevention of emergencies in childbirth, with a focus on interprofessional collaboration and advocacy for patients' rights
- ♦ Acquire fundamental knowledge and skills in the assessment, diagnosis, and management of neonatal emergencies, with a focus on early recognition of problems and application of appropriate interventions
- ♦ Focus on fundamental knowledge about the neuroscience of pregnancy, Maternity and perinatal care, as well as the scientific evidence related to Natural Childbirth and evidence-based care practices
- ♦ Acquire fundamental knowledge about home labor and birth, including team management and organization, preparation and accompaniment during pregnancy, labor and puerperium, and identification and management of special situations and home obstetric emergencies
- ♦ Acquire fundamental knowledge about Natural Childbirth units, such as birthing homes and hospital units, and develop skills to assess, plan and manage these environments, ensuring a high level of care and satisfaction for women and their families
- ♦ Acquire fundamental knowledge and practical skills in newborn care, as well as the ability to provide comprehensive and safe care at this critical stage of life and how to collaborate with other healthcare professionals and families to ensure the well-being of the newborn
- ♦ Acquire knowledge of the physical and emotional needs of the mother in the perinatal period



## Specific Objectives

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### Module 1. Natural Childbirth

- ♦ Analyze the science and evolution of Natural Childbirth, and how current medical practices compare to historical and global statistics
- ♦ Examine the physiology of normal childbirth in the human species, including the hormonal cocktail, postures, and female sexuality
- ♦ Analyze childbirth practices in ancestral cultures and their relevance today
- ♦ Identify and address the emotional needs of women during childbirth and how professionals can support them
- ♦ Take an in-depth analysis of the role of Oxytocin in Natural Childbirth and the differences between endogenous and exogenous Oxytocin
- ♦ Examine current pandemics related to childbirth and their impact on the health of women and newborns
- ♦ Delve into the needs of the newborn during and after childbirth, including gut and epidermal flora, the umbilical cord, and placental blood
- ♦ Analyze interventionism in childbirth and how it affects the environment and safety in childbirth, as well as the importance of respecting the nature of the process



### Module 2. Scientific and Neuroscientific Evidence

- ♦ Analyze brain plasticity during maternity and the importance of animal and human research in this field
- ♦ Examine brain changes in rodents and humans during pregnancy and postpartum and the involvement of hormones in Motherhood
- ♦ Examine the Neurobiology of Breastfeeding and how empathy and altruism influence baby care
- ♦ Trace neuroscientific research to psychoeducational interventions and emotional and cognitive support for expectant mothers and fathers
- ♦ Analyze the scientific evidence on Natural Childbirth and evidence-based care practices
- ♦ Examine the use of non-invasive technology and analgesia and anesthesia in Natural Childbirth
- ♦ Identify the benefits and risks of Natural Childbirth and tailor care according to the setting, including both the hospital and at home

### Module 3. Delivery Preparation

- ♦ Convey to the pregnant woman the ability to understand the changes in the maternal body and fetal development
- ♦ Examine in depth the different techniques in the stages of labor and delivery
- ♦ Delve into prenatal exercises and physical preparation
- ♦ Identify nutrition needs during pregnancy
- ♦ In-depth discussion of preferences in the development of the labor and delivery plan
- ♦ Delve into emotional preparation for childbirth
- ♦ Delve into the integration of the family in education and preparation for childbirth







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*This field is constantly evolving, so it is essential that professionals in it are constantly educated on the latest developments”*

03

# Course Management

With the aim of providing quality education and guaranteeing its students first class access to the latest content in this field, TECH has carefully selected the teaching staff for this program. As such, participating midwives will learn from the best professionals active in this field, who will share with them a complete update on the Scientific and Neuroscientific Evidence that supports the Childbirth procedure, as well as the biological processes that occur during childbirth.





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*Make the most of the opportunity to learn from the best professionals in this incredible area and expand your outlook into new dynamics within the field of Natural Childbirth”*

## Management



### **Dr. Santos Leal, Emilio**

- Medical Director of the International Medical Technology Center
- Specialist Doctor at Fundación Alcorcón University Hospital
- Medical specialist at Consorcio University General Hospital of Valencia
- Medical specialist at Pius Hospital de Valls
- Medical specialist at Clínica Perpetuo Socorro
- Specialty in Gynecology and Obstetrics by Hospital Clínico San Carlos
- Degree in Medicine and Surgery from the University of Cantabria





04

# Structure and Content

The contents that form part of the academic itinerary of this program have been performed by the best experts in this field. In this way, students will be able to study in depth the scientific evidence that demonstrates the neuronal reactions that occur during the process of Natural Childbirth. In addition, this syllabus also has multimedia resources that explain in detail the evidence related to this clinical procedure and the essential elements about the actions to be taken before the mother gives birth.



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*Get up to date on the latest scientific analysis on Natural Childbirth and expand your knowledge in this field"*

## Module 1. Natural Childbirth

- 1.1. Natural Childbirth
  - 1.1.1. Science versus Dogma
  - 1.1.2. Evolution as a Species
  - 1.1.3. Statistics in the World: Oxytocin, Analgesia, Episiotomies, Caesarean Sections
  - 1.1.4. Improving Statistics
- 1.2. Normal Childbirth in the Human Species
  - 1.2.1. Hormone Cocktail in Normal Childbirth
  - 1.2.2. Positions in Normal Childbirth
  - 1.2.3. Female Sexuality
  - 1.2.4. Physiology of Sexual Intercourse
- 1.3. Childbirth in Ancestral Cultures
  - 1.3.1. Childbirth among the Taínos, Guanajatabeyes, and Siboneyes
  - 1.3.2. Childbirth before the Sumerians
  - 1.3.3. Orgasmic Childbirth
  - 1.3.4. Michel Odent
- 1.4. Emotional Needs of Laboring Women
  - 1.4.1. Empowerment
  - 1.4.2. Privacy
  - 1.4.3. Delivery
  - 1.4.4. Majesty
- 1.5. Needs of the Professional Attending Laboring Women
  - 1.5.1. Secrecy
  - 1.5.2. Professional Attitude Towards Pain
  - 1.5.3. Respect for the Majesty of the Moment
  - 1.5.4. Privilege
- 1.6. The Reasons for Emotional Needs
  - 1.6.1. Comfort
  - 1.6.2. Privacy
  - 1.6.3. Connection with the most Primal
  - 1.6.4. Connection with the most Spiritual
- 1.7. Oxytocin
  - 1.7.1. The Hemato-Placental Barrier
  - 1.7.2. The Blood-Brain Barrier
  - 1.7.3. Endogenous Oxytocin
  - 1.7.4. Exogenous Oxytocin
- 1.8. Current Pandemics
  - 1.8.1. The Cesarean Pandemic
  - 1.8.2. The Immunological Disorders Pandemic
  - 1.8.3. The Autism Pandemic
  - 1.8.4. The Hyperactivity and Attention Deficit Pandemic
- 1.9. Newborn Needs
  - 1.9.1. Intestinal Flora
  - 1.9.2. Skin Flora
  - 1.9.3. The Umbilical Cord
  - 1.9.4. Placental Blood
- 1.10. Interventionism
  - 1.10.1. Amending Nature
  - 1.10.2. Intervening Calls for Intervention
  - 1.10.3. The Chain of Interventionism
  - 1.10.4. Environment and Safety in Childbirth



## Module 2. Scientific and Neuroscientific Evidence

- 2.1. Neuroscience of Pregnancy and Motherhood
  - 2.1.1. Brain Plasticity During the Transition to Motherhood
  - 2.1.2. Comparison of Studies in Animals and Humans
  - 2.1.3. Evolution and Biological Mechanisms of Maternal Care
  - 2.1.4. Hormones and Their Role in Motherhood
- 2.2. Animal Models in Maternity Research
  - 2.2.1. Brain Changes in Animals During Pregnancy and Offspring Care
  - 2.2.2. Hormones and Regulation of Maternal Behavior in Animals
  - 2.2.3. Applications of Animal Findings to Human Research
- 2.3. Brain Changes in Human During Pregnancy and Postpartum
  - 2.3.1. Brain Reorganization During Pregnancy
  - 2.3.2. Limbic System and Mother-Child Connection
  - 2.3.3. Social Cognition, Empathy, and Maternal Adaptations
- 2.4. Clinical Implications and Practical Applications
  - 2.4.1. Impact of Breastfeeding and Care on Caregiver's Brain
  - 2.4.2. Neurobiology of Breastfeeding
  - 2.4.3. Clinical Approach to Behavioral Changes in Motherhood
- 2.5. Oxytocin and Its Role in Bonding
  - 2.5.1. Oxytocin in Humans
  - 2.5.2. Oxytocin in Babies
  - 2.5.3. Oxytocin in Maternal Care
- 2.6. Scientific Evidence in Pregnancy Monitoring
  - 2.6.1. Nutrition in Pregnancy
  - 2.6.2. Diabetes Screening
  - 2.6.3. Weight Gain
  - 2.6.4. Initial Immunization

- 2.7. Evidence-Based Delivery Care Practices
  - 2.7.1. Labor Monitoring
  - 2.7.2. Non-Invasive Technology
  - 2.7.3. Analgesia and Anesthesia
- 2.8. Evidence-Based Intervention I
  - 2.8.1. Large Babies
  - 2.8.2. Prolonged Pregnancy
  - 2.8.3. Rupture of Membranes
- 2.9. Evidence-Based Intervention II
  - 2.9.1. Oxytocin IV
  - 2.9.2. Fetal Distress
  - 2.9.3. Labor Induction
- 2.10. Evidence-Based Intervention III
  - 2.10.1. Cord Cutting
  - 2.10.2. Delivery

## Module 3. Delivery Preparation

- 3.1. Pregnancy Anatomy and Physiology
  - 3.1.1. Changes in the Maternal Body
  - 3.1.2. Fetal Development
  - 3.1.3. Hormonal Process
  - 3.1.4. Preparation for Labor
- 3.2. Stages of Labor
  - 3.2.1. First Stage: Dilatation
  - 3.2.2. Second Stage: Expulsion
  - 3.2.3. Third Stage: Delivery
  - 3.2.4. Fourth Stage: Recovery

- 3.3. Relaxation and Breathing Techniques
  - 3.3.1. Deep and Controlled Breathing
  - 3.3.2. Visualization Techniques
  - 3.3.3. Massages and Muscle Relaxation Techniques
  - 3.3.4. Mindfulness and Meditation
- 3.4. Prenatal Exercises and Physical Preparation
  - 3.4.1. Muscle Strengthening
  - 3.4.2. Flexibility and Mobility
  - 3.4.3. Specific Exercises for Childbirth
  - 3.4.4. General Physical Activity Recommendations
- 3.5. Nutrition during pregnancy
  - 3.5.1. Specific Nutritional Needs
  - 3.5.2. Recommended and Not Recommended Foods
  - 3.5.3. Weight Control
  - 3.5.4. Vitamin and Mineral Supplements
- 3.6. Birth Plan Development
  - 3.6.1. Personal Preferences
  - 3.6.2. Pain Relief Methods
  - 3.6.3. Birth Positions
  - 3.6.4. Contingency Plans
- 3.7. Interdisciplinary Collaboration in Childbirth Care
  - 3.7.1. Role of Each Professional in Childbirth Care
  - 3.7.2. Development of Clinical Skills in Childbirth Care
  - 3.7.3. Childbirth Care in Interdisciplinary Teams
  - 3.7.4. Leadership Skills in Obstetric Care



- 3.8. Emotional Preparation for Childbirth
  - 3.8.1. Managing Fear and Anxiety
  - 3.8.2. Emotional Support from the Partner and Family
  - 3.8.3. Coping Techniques
  - 3.8.4. Emotional Connection with the Baby
- 3.9. Childbirth Preparation for High-Risk Patients
  - 3.9.1. Identification and Management of Risk Factors
  - 3.9.2. Medical Planning and Follow-Up
  - 3.9.3. Specific Interventions and Care
  - 3.9.4. Emotional Support and Additional Resources
- 3.10. Family Involvement in Childbirth Education and Preparation
  - 3.10.1. Family Involvement in Childbirth Education and Preparation
  - 3.10.2. Prenatal Classes and Joint Educational Activities
  - 3.10.3. Preparation for Emotional and Practical Support
  - 3.10.4. Adaptation and Family Roles in the Postpartum

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*Take advantage of the learning approach that this program offers and study all the contents in a didactic way”*

# 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.





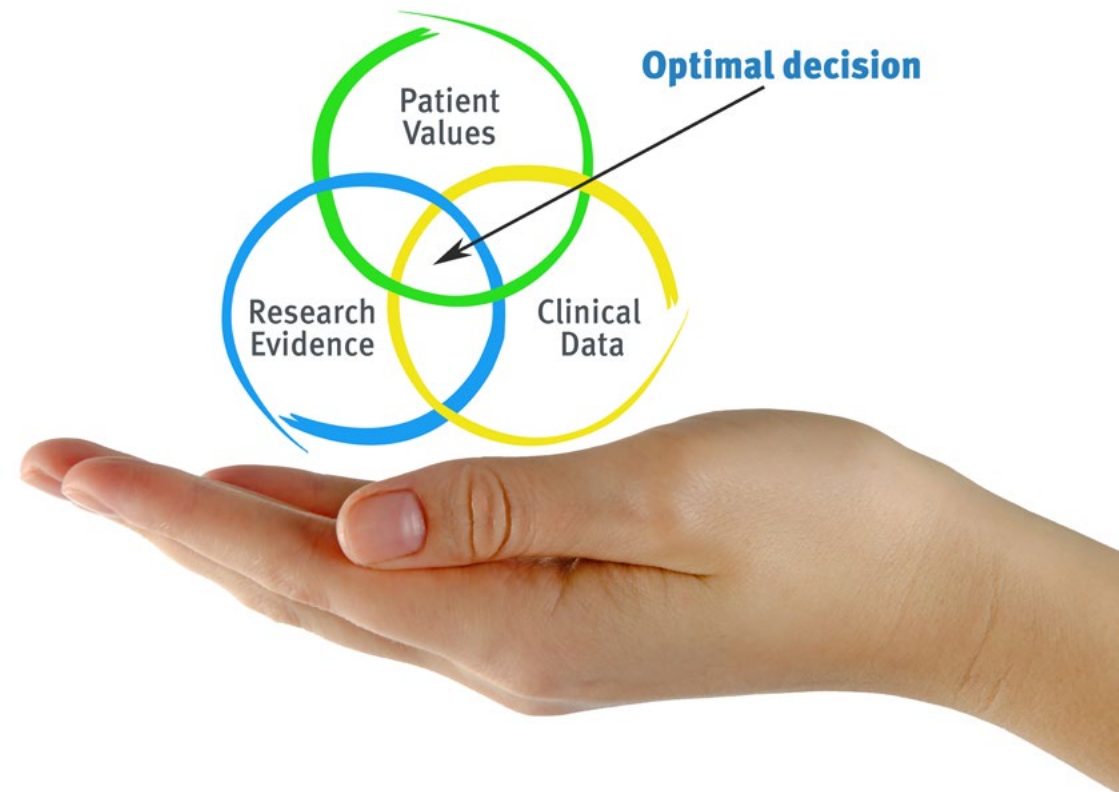
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH 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.

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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. 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.*



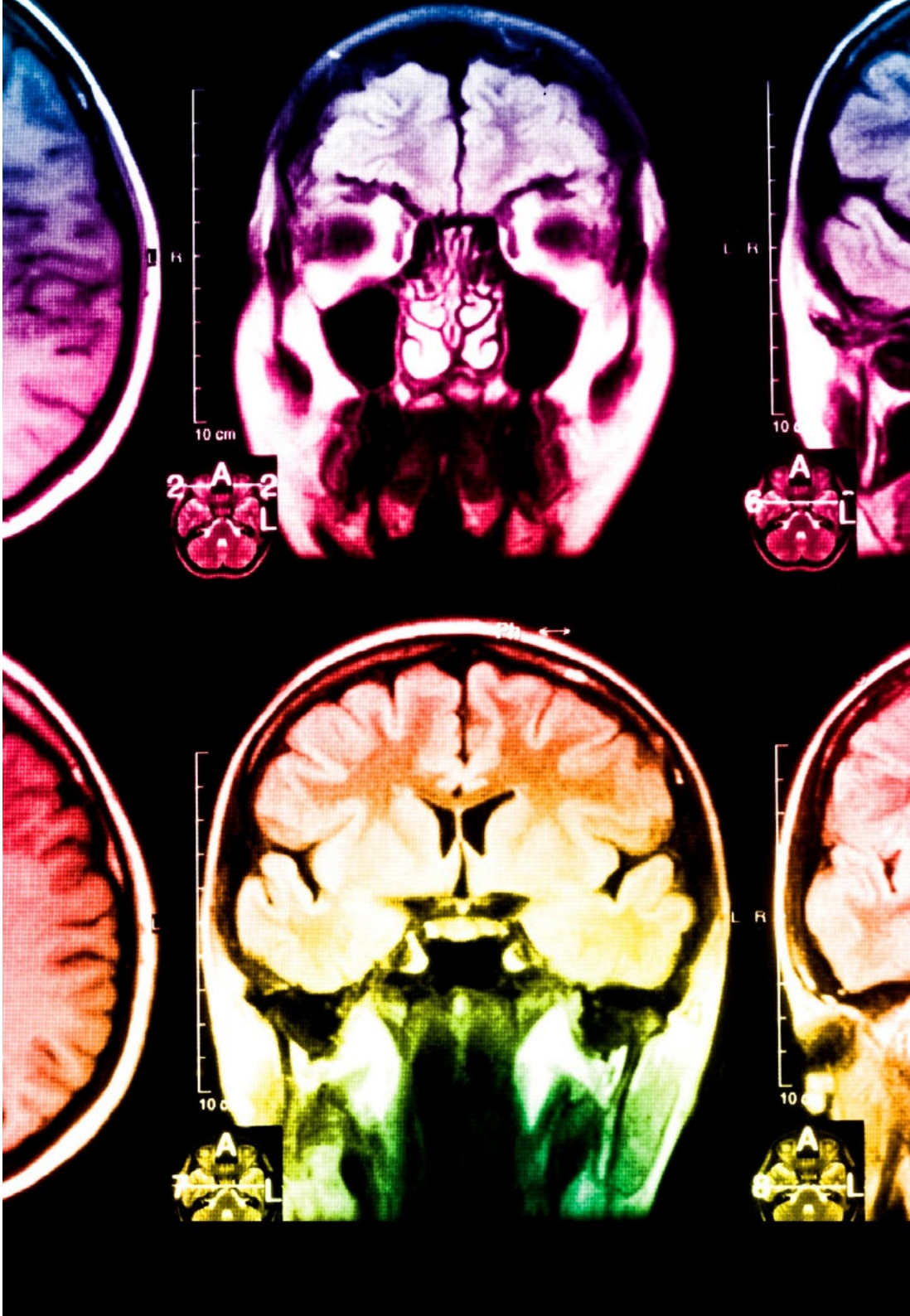
At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialties 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.

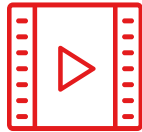
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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

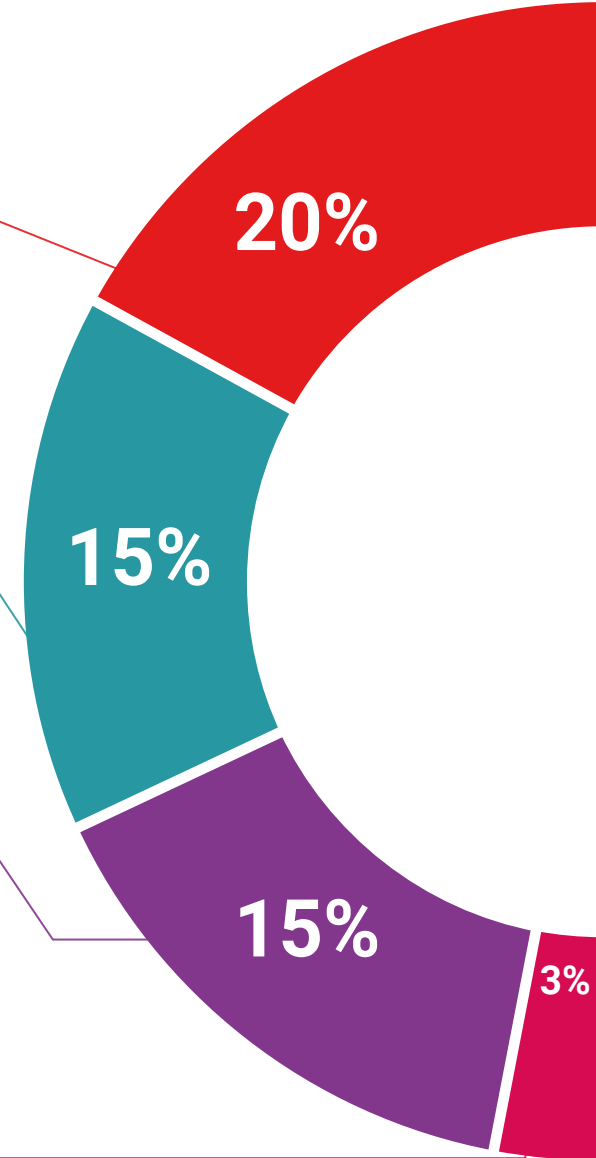
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

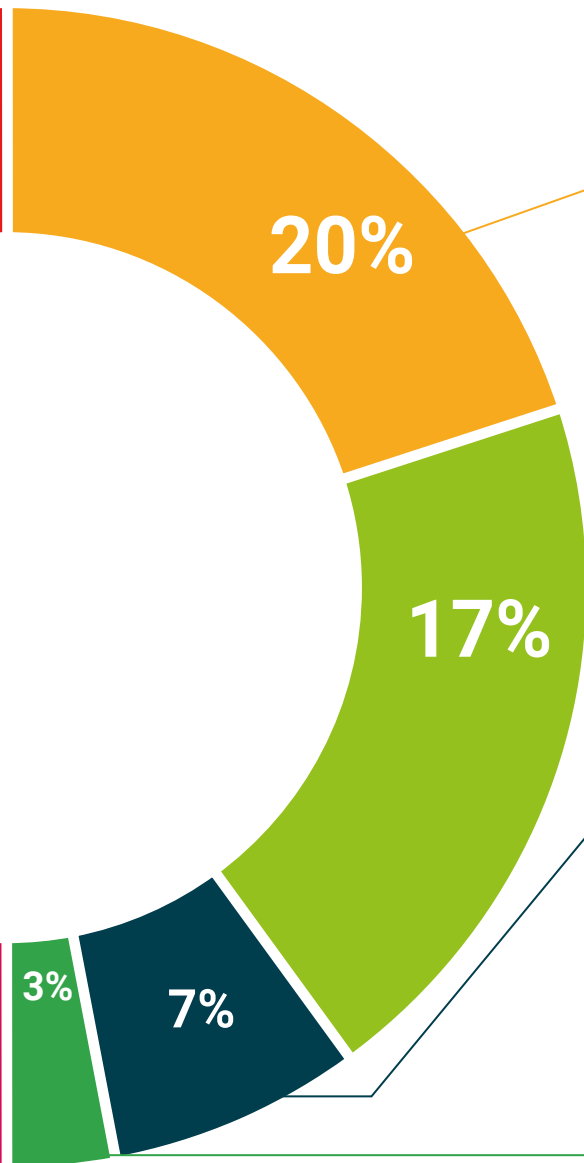
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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.





#### 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 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.





06

# Certificate

The Postgraduate Diploma in Scientific and Neuroscientific Evidence on Natural Childbirth for Midwives guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma 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 **Postgraduate Diploma in Scientific and Neuroscientific Evidence on Natural Childbirth for Midwives** endorsed by **TECH Global University**, the world's largest online university.

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

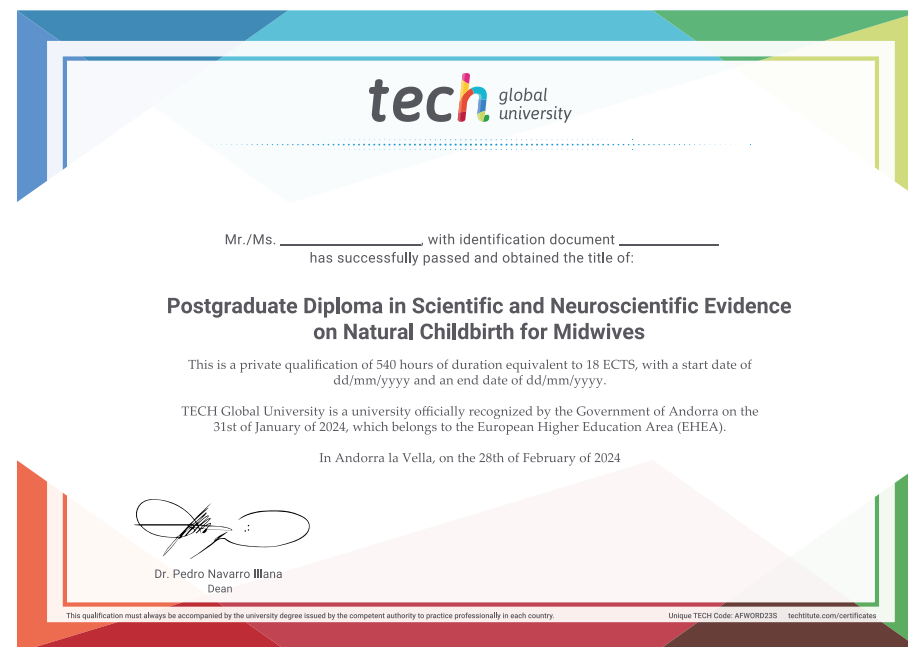
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Scientific and Neuroscientific Evidence on Natural Childbirth for Midwives**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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



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