

# Postgraduate Certificate

## Physical Exercise and Pregnancy

Endorsed by the NBA





## Postgraduate Certificate

### Physical Exercise and Pregnancy

Course Modality: Online

Duration: 6 weeks

Certificate: TECH Technological University

Official N° of hours: 150 h.

Website: [www.techtute.com/sports-science/postgraduate-certificate/physical-exercise-pregnancy](http://www.techtute.com/sports-science/postgraduate-certificate/physical-exercise-pregnancy)

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# 01

# Introduction

Personal trainers who work with pregnant women need to have advanced knowledge in the field to be able to adapt the exercises to the needs of each one, avoiding that a wrongly performed effort can cause damage to their condition. In this case, TECH has designed this specific update on pregnancy to learn about the peculiarities of this stage of life of some women and train professionals in this sector, managing to give a boost to their career.





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*Pregnant women need to exercise during this period, which will have significant benefits for both them and their babies”*

Sports professionals who wish to develop their work in the design of personalized exercise programs for pregnant women will find in this program the most complete update on the market to specialize in this innovative field.

To this end, the program covers the different morphophysiological adaptations that are observed in women during this stage and places special emphasis on their impact on physical exercise plans. In this case, it is especially important for the personal trainer to consider postural modifications and care, as well as motor control adjustments as the pregnancy progresses.

In addition, it is important to take into consideration possible pathologies, care and contraindications during this process, and the responses and adaptations to physical exercise, to avoid any possible contraindications with your situation. Finally, students will also have the opportunity to learn about the prescription of the physical exercise program, dividing it into the three characteristic trimesters and a no less important proposal for the postpartum period.

In this way, in this program special emphasis will be placed on the planning and programming of training adjusted to the particularities of these people in order to generate perceptible changes in their health, as well as to create healthy life habits that they will be able to maintain for the rest of their lives.

To train you in this field, at TECH we have designed this program, which has contents of the highest teaching and educational quality, which aims to turn our students into successful professionals, following the highest quality standards in teaching at international level. In addition, as it is an online Postgraduate Certificate, the student is not constrained by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life as they wish.

This **Postgraduate Certificate in Physical Exercise and Pregnancy** contains the most complete and up to date scientific program on the market. The most important features include:

- ◆ The development of numerous case studies presented by specialists in personal training
- ◆ The graphic, schematic and eminently practical contents of the course are designed to provide all the essential information required for professional practice
- ◆ Exercises where the self assessment process can be carried out to improve learning
- ◆ Algorithm-based interactive learning system for decision-making
- ◆ Special emphasis on innovative methodologies in personal training
- ◆ 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



*Immerse yourself in the study of this high level program and improve your skills as a personal trainer"*

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*This Postgraduate Certificate is the best investment you can make when choosing a refresher program for two reasons: in addition to updating your knowledge as a personal trainer you will obtain a diploma from the main online university in Spanish: TECH”*

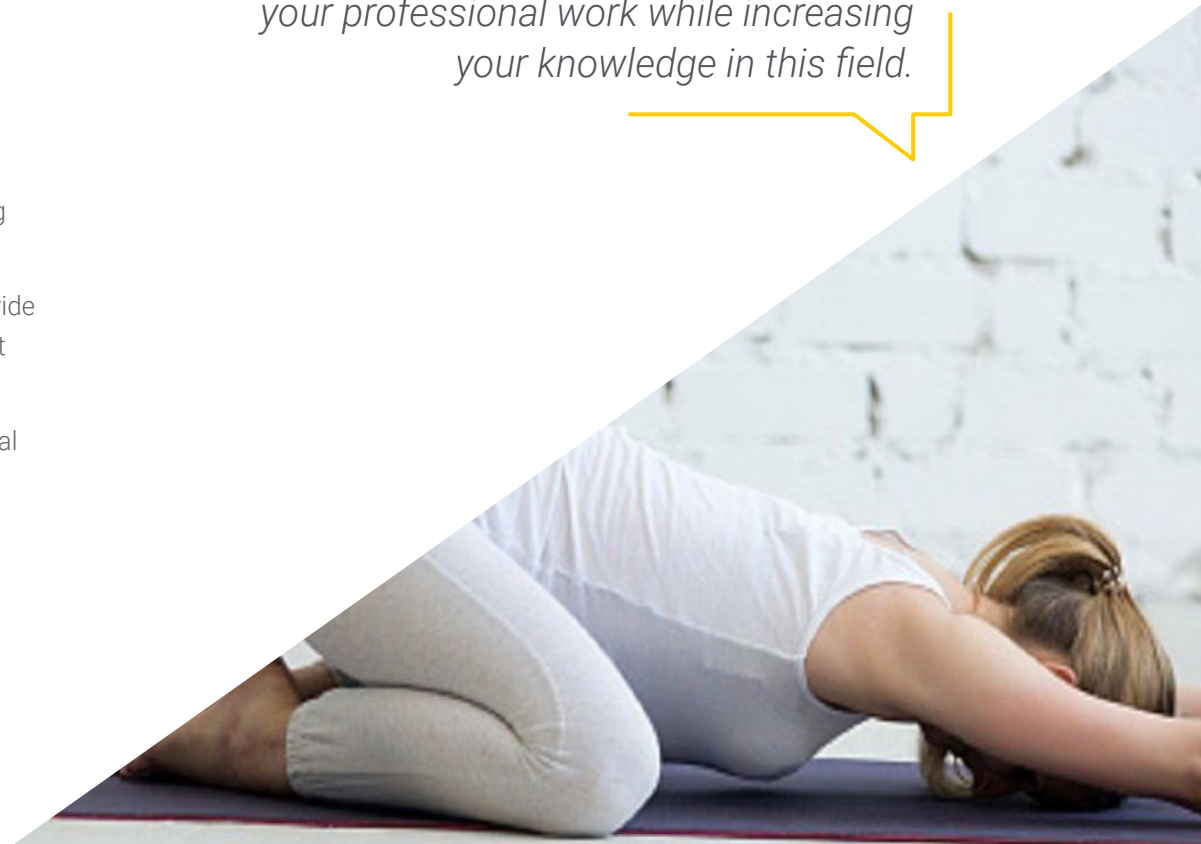
The teaching staff includes professionals from the field of sports science, who bring their experience to this program, as well as renowned specialists from leading societies and prestigious universities.

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 training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system developed by recognized experts in the design of exercise programs for for Pregnant and with great experience.

*This program offers training in simulated environments, which provides an immersive learning experience designed to train for real life situations.*

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



02

# Objectives

The main objective of this program is the development of theoretical and practical learning, so that the sports science professional can master in a practical and rigorous way the application of therapeutic personal training.





A close-up photograph of a pregnant woman's belly. A handheld device with a glowing orange sensor is being used to scan the skin. The background is blurred, suggesting an indoor setting. The image is partially obscured by a dark blue diagonal overlay in the top right corner.

“

*Our goal is to achieve academic excellence  
and help you achieve professional success.  
Don't hesitate any longer and join us”*



## General Objectives

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- ◆ Understand the different training variables and their application in pregnant women, so that they are beneficial to their daily lives
- ◆ Offer a broad vision of pregnancy and its most relevant characteristics
- ◆ Know the existing contraindications in the pregnant women to avoid possible counterproductive effects of physical exercise





## Specific Objectives

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- ◆ Manage the morphofunctional changes of the pregnancy process
- ◆ In depth understanding of the biopsychosocial aspects of pregnancy
- ◆ Be able to plan and program training in an individualized way for a pregnant woman



*The sports field requires trained professionals, and we give you the keys to position yourself among the professional elite"*

03

# Course Management

Our teaching team, experts in Personal Training, has a wide prestige in the profession and are professionals with years of teaching experience that have joined together to help you give a boost to your profession. To this end, they have developed this Postgraduate Certificate with the latest developments in the field that will allow you to train and increase your skills in this sector.





“

*Learn from the best professionals and become a successful professional yourself”*

## Management



### Mr. Rubina, Dardo

- ◆ Coordinator of the performance stage at Escuela Deportiva Moratalaz, Club de Fútbol
- ◆ Physical trainer of cadet, youth and first teams in the Moratalaz Sports School
- ◆ CEO of Test and Training
- ◆ Personal trainer for athletes of all ages, high performance athletes, soccer players, etc. with more than 18 years of experience
- ◆ D. candidate in Sports Performance at the University of Castilla la Mancha
- ◆ Master's Degree in High Performance Sports, Spanish Olympic Committee, Autonomous University of Madrid
- ◆ Master coach by IFBB
- ◆ Strength Training Applied to Physical and Sports Performance Course by ACSM
- ◆ Specialist in Physiological Assessment and Interpretation of Physical Fitness by Biokinetics
- ◆ Level 2 soccer coach by the Royal Spanish Federation
- ◆ Expert in sports scouting and load quantification by the University of Melilla (specialization in soccer)
- ◆ Diploma in Advanced Research Studies from the University of Castilla La Mancha
- ◆ Expert in Advanced Bodybuilding by IFBB
- ◆ Expert in Advanced Nutrition from IFBB
- ◆ Postgraduate degree in Pharmacologynutrition and sports supplementation from the University of Barcelona



## Professors

### Mr. Render, Juan Manuel

- ◆ Professor of Physical Education at the Metropolitan University for Education and Work
- ◆ Professor in the Bachelor's Degree in High Performance Sports at the National University of Lomas de Zamora
- ◆ Degree in physical education with orientation in physiology of physical work at the National University General San Martín
- ◆ Degree in Kinesiology and Physiatry at the University Institute H.A. Foundation Bacele
- ◆ Master's Degree in Physical Education at the National University of Lomas de Zamora

### Mr. Vallodoro, Eric

- ◆ Full Professor at the Lomas Model Higher Institute
- ◆ Coordinator of the Biomechanics and Exercise Physiology Laboratory of the Lomas Model Higher Institute
- ◆ Degree in High Performance Sports at the National University of Lomas de Zamora
- ◆ Graduated as a Physical Education Teacher at Lomas Model Higher Institute

**Ms. Ávila, María Belén**

- ◆ Sports Psychologist at Club Atlético Vélez Sarsfield
- ◆ Specialist in the service of Nutrition and Diabetes in several centers such as the Hospital de Clínicas José de San Martín
- ◆ Specialist in the Integral Therapeutic Program for the treatment of Overweight and Obesity
- ◆ Degree in Psychology from the University of Salamanca
- ◆ Degree in High Performance Sports at the National University of Lomas de Zamora
- ◆ Specialization in Sport Psychology by APDA

**Mr. Crespo, Guillermo Javier**

- ◆ Coordinator of the Club Body gym
- ◆ Coordinator of the gym and training center Asociación Calabresa
- ◆ Assistant coach in the detection and development program for youth weightlifting at the Calabrian Association and San Carlos Gymnasium
- ◆ Degree in Nutrition from the HA Barceló University Institute of Health Sciences







**Mr. Masabeu, Emilio José**

- ◆ Professor at the Motor Learning Seminar of the National University of Villa María
- ◆ Professor of Motor Neurodevelopment at the National University of La Matanza
- ◆ Lecturer of the seminar on Physical Activity and Obesity at Favaloro University
- ◆ Head of practical work at the Kinephylactic Department of the University of Buenos Aires
- ◆ Graduated in Kinesiology at the University of Buenos Aires

**Mr. Supital Alejandro, Raúl**

- ◆ Professor of Physical Activity and Health at the Catholic University of Salta
- ◆ Professor of Physical Education and Sports at the National University of Rio Negro
- ◆ Professor of Functional Anatomy and Biomechanics at the National University of Villa María
- ◆ Head of the Department of Biological Sciences, ISEF 1 Romero Brest
- ◆ Degree in Kinesiology and Physiatry from the University of Buenos Aires

# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in daily practice, aware of the relevance of the current relevance of quality training in the field of personal training; and committed to quality teaching through new educational technologies.



“

*We have the most complete and up to date scientific program on the market. We want to provide you with the best specialization"*

## Module 1. Physical Exercise and Pregnancy

- 1.1. Morphofunctional Changes in Women During Pregnancy
  - 1.1.1. Body Mass Modification
  - 1.1.2. Modification of the Center of Gravity and Relevant Postural Adaptations
  - 1.1.3. Cardiorespiratory Adaptations
  - 1.1.4. Hematological Adaptations
  - 1.1.5. Adaptations of the Locomotor System
  - 1.1.6. Gastrointestinal and Renal Modifications
- 1.2. Pathophysiology Associated with Pregnancy
  - 1.2.1. Gestational *Diabetes Mellitus*
  - 1.2.2. Supine Hypotensive Syndrome
  - 1.2.3. Anaemia
  - 1.2.4. Low Back Pain
  - 1.2.5. Diastasis Recti
  - 1.2.6. Varicose Veins
  - 1.2.7. Pelvic Floor Dysfunction
  - 1.2.8. Nervous Compression Syndrome
- 1.3. Kinefilaxia and Benefits of Physical Exercise in Pregnant Women
  - 1.3.1. Care to Be Taken During Activities of Daily Living
  - 1.3.2. Preventive Physical Work
  - 1.3.3. Biological and Psychosocial Benefits of Physical Exercise
- 1.4. Risks and Contraindications in the Performance of Physical Exercise in Pregnant Women
  - 1.4.1. Absolute Contraindications to Physical Exercise
  - 1.4.2. Relative Contraindications to Physical Exercise
  - 1.4.3. Precautions to Be Taken Throughout the Pregnancy Period
- 1.5. Nutrition in Pregnant Women
  - 1.5.1. Body Mass Weight Gain with Pregnancy
  - 1.5.2. Energy Requirements Throughout Pregnancy
  - 1.5.3. Nutritional Recommendations for Physical Exercise





- 1.6. Training Planning for Pregnant Women
  - 1.6.1. First Quarter Planning
  - 1.6.2. Second Quarter Planning
  - 1.6.3. Third Quarter Planning
- 1.7. Musculoskeletal Training Programming
  - 1.7.1. Motor Control
  - 1.7.2. Stretching and Muscle Relaxation
  - 1.7.3. Muscle Fitness Work
- 1.8. Programming of Resistance Training
  - 1.8.1. Modality of Low-impact Physical Work
  - 1.8.2. Weekly Workload
- 1.9. Postural and Preparatory Labor for Childbirth
  - 1.9.1. Pelvic Floor Exercises
  - 1.9.2. Postural Exercises
- 1.10. Return to Physical Activity after Childbirth
  - 1.10.1. Medical Discharge and Recovery Period
  - 1.10.2. Care for the Beginning of Physical Activity
  - 1.10.3. Conclusions and Closing of Module 9



*A unique, key, and decisive 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.





“

*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"*

### Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world"*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*





## A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## 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.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



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.

With this methodology, we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



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



#### Study Material

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

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



#### 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.



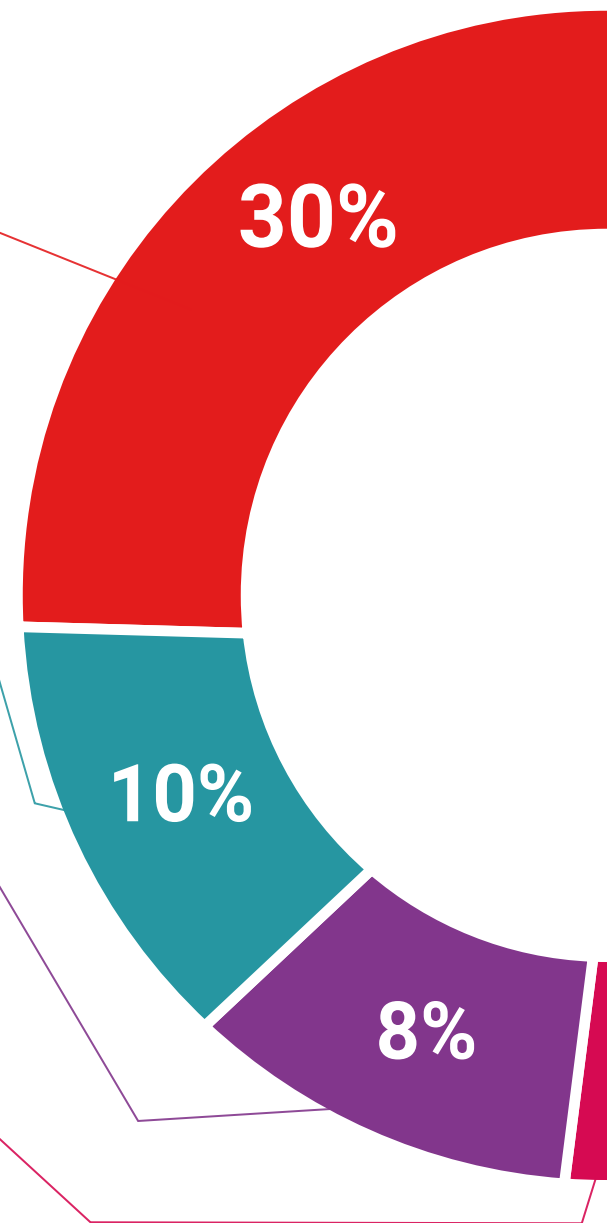
#### Practising Skills and Abilities

They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### 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.





#### Case Studies

Students will complete a selection of the best case studies chosen specifically for this situation. Cases that are presented, analyzed, and supervised by the best specialists in the world.



#### 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".



#### 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.



06

# Certificate

The **Postgraduate Certificate in Physical Exercise and Pregnancy** guarantees students, in addition to the most rigorous and up to date education, access to a Postgraduate Certificate issued by **TECH Technological University**.





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

This **Postgraduate Certificate in Physical Exercise and Pregnancy** contains the most complete and up to date scientific program on the market.

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

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

**Title: Postgraduate Certificate in Physical Exercise and Pregnancy**

**Official N° of hours: 150 h.**

**Endorsed by the NBA**



\*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.



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



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Certificate: TECH Technological University

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# Postgraduate Certificate

## Physical Exercise and Pregnancy

Endorsed by the NBA



**tech** technological  
university