

# Postgraduate Certificate Nutrition in the Type 1 Diabetic Athlete

Endorsed by the NBA





## Postgraduate Certificate Nutrition in the Type 1 Diabetic Athlete

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

Website: [www.techtute.com/us/sports-science/postgraduate-certificate/nutrition-type-1-diabetic-athlete](http://www.techtute.com/us/sports-science/postgraduate-certificate/nutrition-type-1-diabetic-athlete)

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# 01

# Introduction

With this high-level training the student will be able to acquire the necessary knowledge to establish a nutritional plan for people with diabetes who want to take care of their health and athletes of different modalities based on current scientific evidence.





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

During sports practice, different problems arise that have their origin or solution in nutrition and/or sports supplementation. This Postgraduate Certificate will teach the different strategies to solve and anticipate problems that may arise during a competition or a training session. In addition, the student will learn how to solve any doubts that may arise when dealing with an athlete, as well as how to teach them in the best possible way the basic aspects of Sports Nutrition.

This Postgraduate Certificate addresses the physiological and biochemical aspects necessary to understand how diabetes affects both daily life and exercise, and the possible problems that can occur.

As it is an online Postgraduate Certificate, the student is not conditioned 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.

This **Postgraduate Certificate in Nutrition in the Type 1 Diabetic Athlete** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ◆ 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.
- ◆ An algorithm-based interactive learning system, designed for decision making for patients with nutritional challenges.
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work.
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Immerse yourself in the study of this complete Postgraduate Certificate and improve your skills in nutritional counseling for athletes”*

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*This Postgraduate Certificate is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Sports Nutrition, you will obtain a certificate from the leading online university in spanish: TECH”*

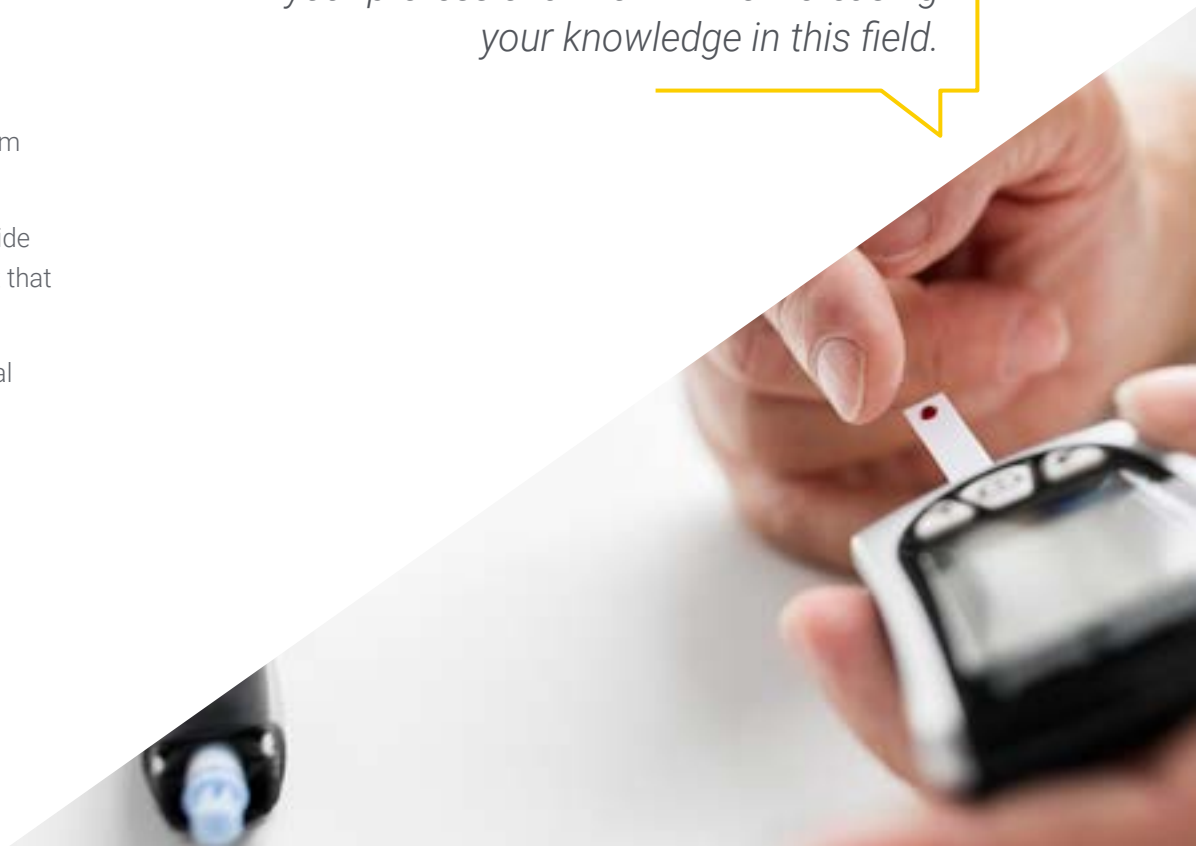
Its teaching staff includes professionals belonging to the field of nutrition, who contribute their work experience to this training, as well as renowned specialists from reference societies and prestigious universities.

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. The professional will be assisted by an innovative interactive video system created by renowned and experienced experts in sports nutrition.

*The Postgraduate Certificate allows training in simulated environments, which provide immersive learning programmed to train for real situations.*

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



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the sports science professional can master in a practical and rigorous way the study of Sports Nutrition in Special Populations.





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*This refresher program will provide you with a sense of confidence in your daily work, which will help you grow both personally and professionally”*



## General Objectives

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- ◆ Handle advanced knowledge on nutritional planning in professional and non-professional athletes for the healthy performance of physical exercise.
- ◆ Manage advanced knowledge on nutritional planning in professional athletes of various fields in order to achieve maximum sports performance.
- ◆ Learn advanced knowledge about nutritional planning in professional athletes from team sports to achieve the highest sports performance
- ◆ Manage and consolidate the initiative and entrepreneurial spirit needed to launch projects related to nutrition in physical activity and sport.
- ◆ Know how to incorporate the different scientific advances into one' s own professional field.
- ◆ Ability to work in a multidisciplinary environment
- ◆ Advanced understanding of the context in which their area of expertise is being developed.
- ◆ Manage advanced skills in the detection of possible signs of nutritional changes associated with sports activities.
- ◆ Manage the necessary skills through the teaching-learning process that will allow them to continue training and learning in the field of Sports Nutrition, both through the contacts established with teachers and professionals of this training, as well as in an autonomous way.
- ◆ Specialize in the structure of muscle tissue and its implication in sport.
- ◆ Know the energetic and nutritional needs of athletes in different pathophysiological situations.
- ◆ Specialize in the energetic and nutritional needs of athletes in the different situations specific to age and gender.
- ◆ Become a specialist in the dietary strategies for the prevention and treatment of injured athletes.
- ◆ Specialize in the energy and nutritional needs of children athletes.
- ◆ Specialize in the energetic and nutritional needs of Paralympic athletes.





## Specific Objectives

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- ◆ Establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ◆ Delve in the understanding of how the different insulins or medications used by diabetics work.
- ◆ Assess the nutritional requirements for people with diabetes both in their daily life and in exercise, to improve their health.
- ◆ Delve in the knowledge necessary to plan nutrition for athletes of different disciplines with diabetes, in order to improve their health and performance.
- ◆ Establish the current state of evidence on Performance Enhancing Drugs in diabetics.



*Make the most of this opportunity and take the step to get up to date on the latest developments in Nutrition in the Type 1 Diabetic Athlete”*

03

# Course Management

Our teachers, made up of experts in Sports Nutrition, are well known in the profession and are professionals with years of teaching experience who have come together to help you boost your career. To this end, they have developed this Postgraduate Certificate with recent updates on the subject that will allow you to train and increase your skills in this sector.





“

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

## International Guest Director

Jamie Meeks has proven throughout her career her dedication to Sports Nutrition. After graduating from Louisiana State University with a degree in Sports Nutrition, he quickly rose to prominence. Her talent and commitment were recognized when she received the prestigious Young Dietitian of the Year award from the Louisiana Dietetic Association, an achievement that marked the beginning of a successful career.

After completing her bachelor's degree, Jamie Meeks continued her education at the University of Arkansas, where she completed her internship in Dietetics. She then went on to obtain a Master's Degree in Kinesiology with a specialization in Exercise Physiology from Louisiana State University. Her passion for helping athletes reach their full potential and her tireless commitment to excellence make her a leading figure in the sports and nutrition community.

Her deep knowledge in this area led her to become the first Director of Sports Nutrition in the history of Louisiana State University's athletic department. There, she developed innovative programs to meet the dietary needs of athletes and educate them on the importance of proper nutrition for optimal performance.

Subsequently, she has held the position of Director of Sports Nutrition for the NFL's New Orleans Saints. In this role, she is dedicated to ensuring that professional players receive the best nutritional care possible, working closely with coaches, trainers, physical trainers and medical staff to optimize individual performance and health.

As such, Jamie Meeks is considered a true leader in her field, being an active member of several professional associations and participating in the advancement of Sports Nutrition on a national level. In this regard, she is also a member of the Academy of Nutrition and Dietetics and the Association of Collegiate and Professional Sports Dietitians.



## Ms. Meeks, Jamie

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- Director of Sports Nutrition for the New Orleans Saints of the NFL, Louisiana, United States
  - Coordinator of Sports Nutrition at Louisiana State University
  - Registered Dietitian by the Academy of Nutrition and Dietetics
  - Certified Specialist in Sports Dietetics
  - Master's Degree in Kinesiology with a specialization in Exercise Physiology from Louisiana State University
  - Graduate in Dietetics from Louisiana State University
- Member of:
- Louisiana Dietetic Association
  - Association of Collegiate and Professional Sports Dietitians
  - Cardiovascular and Wellness Sports Nutrition Dietetic Practice Group

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

## Management



### Dr. Marhuenda Hernández, Javier

- ♦ Full Member of the Spanish Academy of Human Nutrition and Dietetics. Professor and researcher at UCAM.
- ♦ Ph.D. in Nutrition.
- ♦ Master's Degree in Clinical Nutrition.
- ♦ Graduate in Nutrition.





# 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 current relevance of Sports Nutrition education; and committed to quality teaching through new educational technologies.





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*Learn the most suitable diets for each type of athlete and you will be able to give more personalized advice”*

## Module 1. The Type 1 Diabetic Athlete

- 1.1. Knowing about Diabetes and its Pathology
  - 1.1.1. The Incidence of Diabetes
  - 1.1.2. Pathophysiology of Diabetes
  - 1.1.3. The Consequences of Diabetes
- 1.2. Exercise Physiology in People with Diabetes
  - 1.2.1. Maximal, Submaximal Exercise and Muscle Metabolism during Exercise
  - 1.2.2. Differences in the Metabolic Level during Exercise in People with Diabetes
- 1.3. Exercise in People with Type 1 Diabetes
  - 1.3.1. Exercise in People with Type 1 Diabetes
  - 1.3.2. Exercise Duration and Carbohydrate Intake
- 1.4. Exercise in People with Type 2 Diabetes. Blood Sugar Control
  - 1.4.1. Risks of Physical Activity in People with Type 2 Diabetes
  - 1.4.2. Benefits of Exercise in People with Type 2 Diabetes
- 1.5. Exercise in Children and Adolescents with Diabetes
  - 1.5.1. Metabolic Effects of Exercise
  - 1.5.2. Precautions during Exercise
- 1.6. Insulin Therapy and Exercise
  - 1.6.1. Insulin Infusion Pump
  - 1.6.2. Types of Insulins
- 1.7. Nutritional Strategies during Sport and Exercise in Type 1 Diabetes
  - 1.7.1. From Theory to Practice
  - 1.7.2. Carbohydrate Intake Before, During and After Physical Exercise
  - 1.7.3. Hydration Before, During and After Physical Exercise
- 1.8. Nutritional Planning in Endurance Sports
  - 1.8.1. Marathon
  - 1.8.2. Cycling
- 1.9. Nutritional Planning in Team Sports
  - 1.9.1. Soccer
  - 1.9.2. Rugby
- 1.10. Sports Supplements and Diabetes
  - 1.10.1. Potentially Beneficial Supplements for Athletes with Diabetes





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

# 05 Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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

## At TECH we use the Case Method

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

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



*Our University is the first in the world to combine Harvard Business School case studies with a 100%-online learning system based on repetition.*





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

### **A learning method that is different and innovative.**

This Sports Science program at TECH Global University is an intensive program that prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH you will use Harvard case studies, with which we have a strategic agreement that allows us to offer you material from the best university in the world.



*We are the only online university that offers Harvard materials as teaching materials on its courses"*

The case method is the most widely used learning system by 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.

In a given situation, what would you do? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, you will be presented with multiple real cases. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

## Re-Learning Methodology

Our University is the first in the world to combine Harvard University case studies with a 100%-online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance Harvard case studies with the best 100% online teaching method: Re-learning.

*In 2019 we obtained the best learning results of all Spanish-language 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 Re-learning.

Our University is the only one in Spanish-speaking countries licensed to incorporate 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 Spanish online university indicators.



In our program, learning is not a linear process, but rather a spiral (we 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.

*Re-learning 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 to success.*

Based on the latest evidence in neuroscience, not only do we know how to organize information, ideas, images, memories, but we also know that the place and context where we have learned something is crucial for us to be able to remember it and store it in the hippocampus, and 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.



In this program you will have access to the best educational material, prepared with you 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.

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.



### 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 our future difficult decisions.



### Practising Skills and Abilities

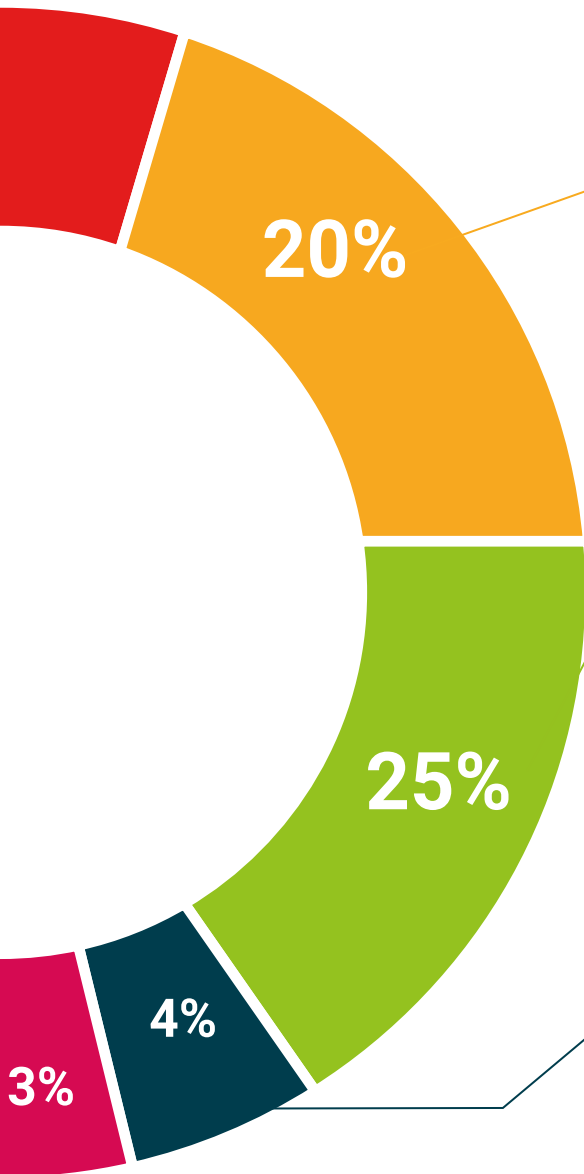
You will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.



### Additional Reading

Recent articles, consensus documents, international guides. In our virtual library you will have access to everything you need to complete your training.





#### Case Studies

You will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management specialists in Latin America.



#### 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 unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



06

# Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with the support and monitoring of a modern and specialized university, which will propel you to another professional level.



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*Add to your CV a Postgraduate Certificate in Nutrition in the Type 1 Diabetic Athlete and become a highly competitive professional”*

This program will allow you to obtain your **Postgraduate Certificate in Nutrition in the Type 1 Diabetic Athlete** 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 Nutrition in the Type 1 Diabetic Athlete**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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.





## Postgraduate Certificate

Nutrition in the Type 1  
Diabetic Athlete

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- » Schedule: at your own pace
- » Exams: online

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