

# Postgraduate Certificate

## Sports Nutrition in the Type 1 Diabetic





## Postgraduate Certificate Sports Nutrition in the Type 1 Diabetic

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

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

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# 01

# Introduction

The International Diabetes Federation reports, in a new report, a considerable increase in the number of diabetic individuals involved in high-performance sports. This growing demographic faces unique challenges that require meticulous nutrition and medication management. For example, these athletes need to maintain a stable blood glucose level to avoid complications such as hyperglycemia. Likewise, these individuals must adjust their insulin doses frequently based on their activity level. Given this reality, pharmacists have the task of providing evidence-based recommendations on Nutritional Supplements, which is why they require a deep understanding of the pathophysiology of Diabetes. For this reason, TECH is launching an online program focused on this subject.





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*Thanks to this 100% online program, you will recommend nutritional programs for athletes with Type 1 Diabetes to optimize their athletic performance and overall well-being”*

The global prevalence of Type 1 Diabetes continues to increase, and with it, the number of individuals participating in sporting activities at different levels. While physical exercise is a mainstay in the management of this condition, it also presents unique challenges that require highly specialized strategies to ensure both the safety and optimal performance of diabetic athletes. In this context, pharmacists play an important role in providing nutritional and medication management advice to these individuals. For this reason, specialists need to update their knowledge frequently and have access to the latest scientific postulates in order to provide top quality recommendations.

In order to facilitate this update, TECH implements an innovative program in Sports Nutrition in People with Type 1 Diabetes. The academic itinerary will deepen essential issues ranging from the physiology of exercise in people with this disease or the metabolic effects to the precautions that athletes should take when practicing sports. The syllabus will also address the relevance of consuming carbohydrates before, during and after exercise in order to have optimal energy. In addition, the program will offer graduates the latest innovations in Sports Supplementation potentially beneficial for diabetic athletes. It should be noted that the program will include the participation of a prestigious International Guest Director, who will help pharmacists to enhance their skills.

Thanks to the fact that this program is taught in an online mode, experts will have the opportunity to update their knowledge without having to travel to an academic center. In addition, pharmacists will have at their disposal a wide variety of didactic resources in multimedia supports such as specialized readings. It should be noted that the university program is based on the Relearning teaching system, of which TECH is a pioneer. This ensures a natural and progressive assimilation of the key concepts of the syllabus.

This **Postgraduate Certificate in Sports Nutrition in the Type 1 Diabetic** 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 Nutrition and Dietetics
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out 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



*A renowned International Guest Director will offer a rigorous Masterclass to address the latest trends in Sports Nutrition in diabetic users"*

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*You will delve into Nutritional Planning for diabetic athletes who practice endurance sports and provide them with comprehensive advice”*

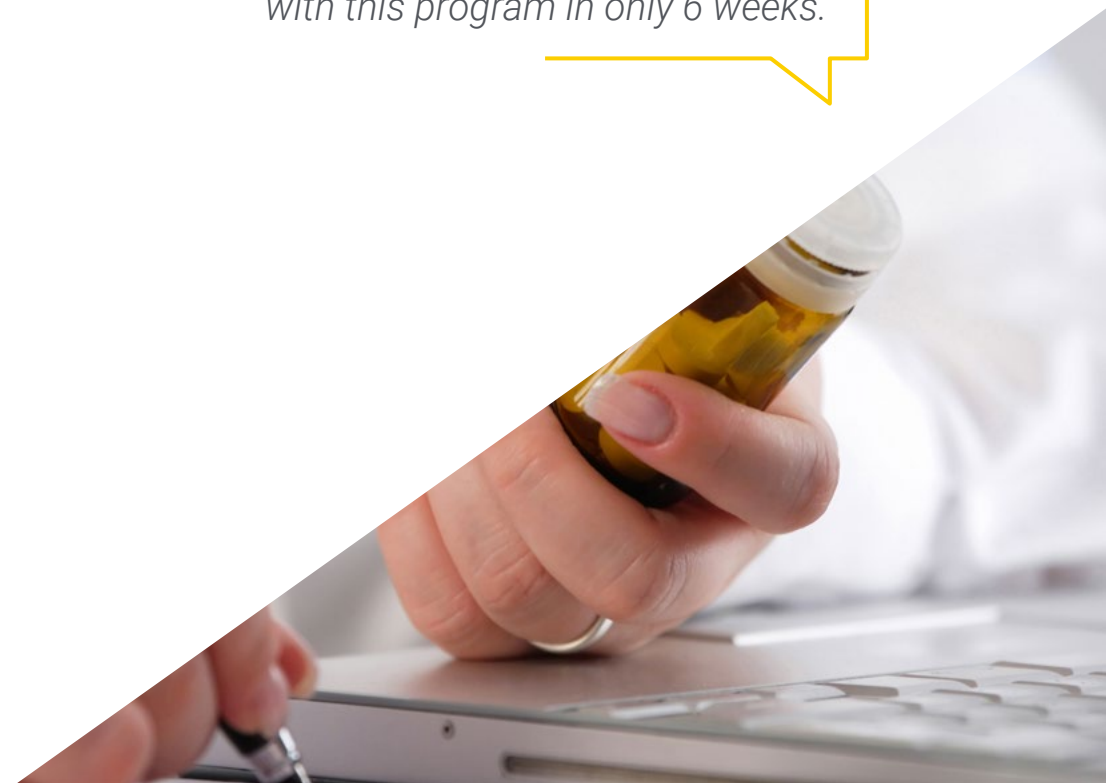
The program's teaching staff includes professionals from the sector who contribute their work experience to this specializing program, as well as renowned specialists from leading societies and prestigious universities.

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 education programmed to learn 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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Through TECH's disruptive Relearning method, you will consolidate the essential concepts of the syllabus in a fast, natural and precise way.*

*Are you looking for a deeper understanding of the most beneficial Dietary Supplements for diabetic athletes? Achieve it with this program in only 6 weeks.*



# 02

## Objectives

Through this university program, pharmacists will have a solid understanding of the pathophysiology of Type 1 Diabetes, as well as its impact on physical exercise. Similarly, graduates will evaluate the dietary status of their patients and provide them with personalized nutritional advice to optimize both their athletic performance and overall health. In turn, professionals will incorporate the most effective strategies to prevent sports-related complications (such as hypoglycemia) into their regular practice.





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*You will acquire advanced skills to recommend the most optimal Nutritional Supplements for athletes with Type 1 Diabetes, keeping in mind factors such as exercise intensity or type of sport”*



## 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, entrepreneurial spirit to implement projects related to nutrition in physical activity and sport
- ♦ Know how to incorporate the different scientific advances into one's own professional field
- ♦ Develop the ability to work in a multidisciplinary environment





## Specific Objectives

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- ◆ Establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ◆ Develop an in-depth understanding of how the different insulins or medications used by diabetics
- ◆ Assess the nutritional requirements for people with diabetes both in their daily life and in exercise, to improve their health
- ◆ Delve into the necessary knowledge to be able 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



*This university program will provide you with the most innovative multimedia resources, such as case studies or interactive summaries, so that you can enjoy dynamic learning”*

03

# Course Management

TECH's priority is to make available to everyone the most pragmatic and complete university programs in the academic panorama. To achieve this, it carries out a meticulous selection process to constitute its teaching staff. On this occasion, the present program has the participation of several references in Nutrition and Dietetics. These specialists have an extensive professional background in this field, where they have helped diabetic athletes to significantly optimize both their health and sports performance. This way, pharmacists will enjoy an experience that will optimize the efficiency of their work and open new professional doors.



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*The diversity of talents of the faculty, highly specialized in Sports Nutrition, will generate an enriching learning environment. You will learn with the best!”*

## International Guest Director

Jamie Meeks has demonstrated throughout her career her dedication to Sports Nutrition. After graduating from Louisiana State University with a degree in Sports Nutrition, she 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 undergraduate degree, Jamie Meeks continued her education at the University of Arkansas, where she completed her internship in Dietetics. She then went on to earn 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 Chartered and Professional Sports Dietitians.



## Ms. Meeks, Jamie

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

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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

- ♦ Professional soccer clubs Nutritionist
- ♦ Head of Sports Nutrition. Club Albacete Balompie SAD
- ♦ Head of Sports Nutrition. Catholic University of Murcia, UCAM Murcia Football Club
- ♦ Scientific Advisor. Nutrium
- ♦ Nutritional Advisor. Impulse Center
- ♦ Teacher and Coordinator of Postgraduate Studies
- ♦ PhD in Nutrition and Food Safety. San Antonio Murcia Catholic University
- ♦ Degree in Human Nutrition and Dietetics. San Antonio Murcia Catholic University
- ♦ Master's Degree in Clinical Nutrition. San Antonio Murcia Catholic University
- ♦ Academic Academia Española de Nutrición y Dietética (AEND)

## Professors

### Dr. Arcusa Saura, Raúl

- ♦ Nutritionist. Sport Club Castellón
- ♦ Nutritionist in several semi-professional clubs in Castellón
- ♦ Researcher. San Antonio Murcia Catholic University
- ♦ Undergraduate and Graduate Faculty
- ♦ Graduate in Human Nutrition and Dietetics
- ♦ Master's Degree in Nutrition in Physical Activity and Sport





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*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

## Structure and Content

With this university program, pharmacists will understand how Type 1 Diabetes impacts physical exercise and aspects such as carbohydrate, fat or protein metabolism. The curriculum will delve into the pathophysiology of this disease, as well as its impact on physical exercise. In tune with this, the syllabus will analyze the main risks faced by diabetic athletes, such as hypoglycemia. The program will also address in depth the functioning of the Insulin Infusion Pump. In this way, graduates will recommend the most innovative Dietary Supplements to maintain stable blood glucose levels.



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*You will be able to advise on the most effective Nutritional Supplements to optimize sports performance without compromising glycemic control”*

## 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





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*Thanks to this university program you will be aware of recent trends in Sports Nutrition for athletes with Type 1 Diabetes. Enroll now!”*

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 we use the Case Method

What should a professional do in a given situation? Throughout the program, students will be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly and more sustainably over time.

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



According to Dr. Gervas, 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, attempting to recreate the actual conditions in a pharmacist's professional 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. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their 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.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

*Pharmacists 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, more than 115,000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years.

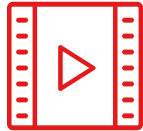
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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 created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.



### Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

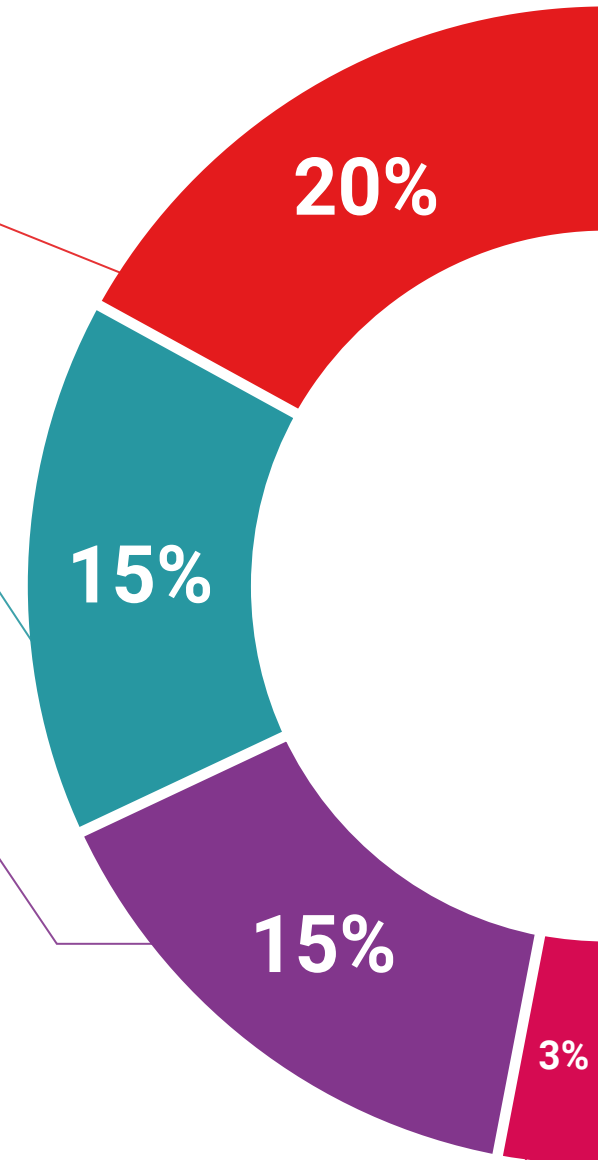
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

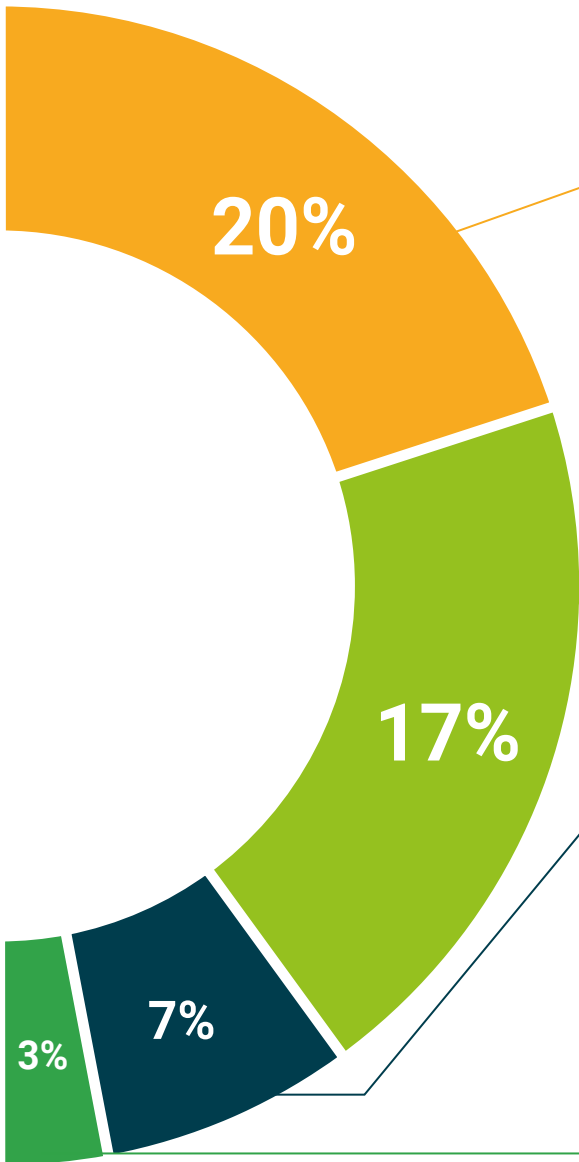
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



### 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, we will present you with real case developments in which the expert will guide you through 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 on the usefulness of learning by observing experts. The system known as 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 Certificate in Sports Nutrition in the Type 1 Diabetic guarantees students, in addition to the most rigorous and up-to-date education, access to a 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 **Postgraduate Certificate in Sports Nutrition in the Type 1 Diabetic** 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 Certificate in Sports Nutrition in the Type 1 Diabetic**

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.



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



## Postgraduate Certificate Sports Nutrition in the Type 1 Diabetic

- » Modality: online
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- » Schedule: at your own pace
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Postgraduate Certificate

Sports Nutrition in the Type 1 Diabetic

