

# Postgraduate Diploma

Sports Nutrition in Diabetes,  
Vegetarianism and Veganism





## Postgraduate Diploma Sports Nutrition in Diabetes, Vegetarianism and Veganism

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

Website: [www.techtute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-sports-nutrition-diabetes-vegetarianism-veganism](http://www.techtute.com/us/pharmacy/postgraduate-diploma/postgraduate-diploma-sports-nutrition-diabetes-vegetarianism-veganism)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 18*

05

Methodology

---

*p. 24*

06

Certificate

---

*p. 32*

# 01

# Introduction

The World Health Organization warns in a recent report that diabetes is a chronic disease that affects more than 400 million people. A considerable part of this population is regularly involved in sports activities, which brings with it a number of challenges in terms of nutritional planning and glycemic control. In this context, pharmacists play a key role in providing nutritional counseling and advice to prevent common complications such as hypoglycemia. Therefore, these specialists have the responsibility to keep abreast of advances in the field of Sports Nutrition in order to recommend the most effective supplements to their customers. In view of this, TECH is launching an innovative online program focused on this subject.



“

*Thanks to this program, supported by Relearning, you will design balanced diets that meet the nutritional needs of athletes with Diabetes with vegan or vegetarian eating patterns”*

Sports Nutrition has become a fundamental aspect of Diabetes management and optimal glycemic control. As more athletes seek to adopt healthier lifestyles, Vegetarianism and Veganism emerge as the most popular dietary choices. However, for diabetic athletes these eating styles pose significant challenges that must be addressed with precision to ensure an optimal balance between health and athletic performance. Given these circumstances, pharmacists are more than authoritative voices to provide them with dietary recommendations to ensure adequate blood glucose levels and address potential nutritional deficiencies.

In this scenario, TECH implements an innovative program in Sports Nutrition in Diabetes, Vegetarianism and Veganism for Pharmacists. The academic itinerary will examine the nutritional demands of a variety of specific populations, such as women or children athletes. In addition, the curriculum will delve into the most common nutritional deficiencies among vegan athletes (such as lack of Vitamin B12, protein, calcium or iron). In line with this, the syllabus will offer the most sophisticated supplementation techniques to accelerate muscle recovery (among which Creatine stands out). Didactic materials will also analyze the physiology of exercise in diabetic users, addressing factors such as the metabolic effects of sports practice or insulin therapy. In addition, the program will include the participation of a renowned International Guest Director, who will help pharmacists to plan balanced diets that meet the nutritional needs of diabetic athletes.

On the other hand, the methodology of this program reinforces its innovative character. TECH provides pharmacists with a 100% online educational environment, thus adapting to the needs of busy professionals who want to advance their careers. It also relies on the Relearning methodology, based on the repetition of key concepts to fix knowledge and facilitate learning. Therefore, only thing they will precisely is a device with Internet access to access the Virtual Campus.

This **Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism** 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 prestigious International Guest Director will give a rigorous Masterclass to delve into aspects such as nutritional planning in team sports”*

“

*Looking to delve deeper into how vegan diets can affect glycemic control? With this program you will gain access to the most sophisticated strategies to adjust nutrient intake and optimize Diabetes management”*

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, the student will be assisted by an innovative interactive video system created by renowned and experienced experts

*Incorporate the most innovative Nutritional Supplementation into your practice thanks to the digital university in the world according to Forbes.*

*TECH's 100% online methodology will allow you to choose the time and place to study, without hindering your professional work. You will plan your own schedule!*



# 02

# Objectives

Upon completion of this program, pharmacists will excel in their solid knowledge of the different types of Diabetes, as well as master the principles of Sports Nutrition (including vegetarian and vegan diets). At the same time, professionals will develop competencies to plan balanced diets that meet the dietary needs of athletes at different stages with Diabetes. In this way, graduates will provide optimal nutritional advice taking into account the specific requirements, sports objectives and dietary preferences of their clients.





“

*You will acquire advanced skills to offer personalized nutritional advice to athletes with Diabetes who choose to follow vegetarian or vegan diets, taking into account their specific needs”*



## General Objectives

---

- ♦ 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
- ♦ 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 ways and learning in the field of sports nutrition, both through the contacts established with professors and professionals in the program, as well as on their own





## Specific Objectives

---

### Module 1. Different Stages or Specific Population Groups

- ◆ Explain the specific physiological characteristics to be taken into account in the nutritional approach of different groups
- ◆ Understand in depth the external and internal factors that influence the nutritional approach to these groups

### Module 2. Vegetarianism and Veganism

- ◆ Differentiate between the different types of vegetarian athletes
- ◆ Gain an in-depth understanding of the main mistakes made
- ◆ Treat the notable nutritional deficiencies of sportsmen and sportswomen
- ◆ Manage skills to provide the athlete with the best tools when combining foods

### Module 3. The Type 1 Diabetic Athlete

- ◆ Establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ◆ Deepen 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
- ◆ Establish the current state of evidence on Performance Enhancing Drugs in diabetics

03

# Course Management

For the design and delivery of this program, TECH has enlisted the services of distinguished experts in the field of Nutrition and Dietetics. These professionals, who make up the teaching staff, have a long career where they have helped many people to improve both their health and athletic performance. Thanks to this, these specialists have created top-quality teaching materials that meet the requirements of today's labor market. Undoubtedly, this is an endorsement for graduates, who will enjoy an immersive experience that will considerably raise their employment horizons.





“

*A highly trained program, created by experts in Sports Nutrition, that will place you at the forefront of competitiveness in the pharmaceutical industry”*

## 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

---

- 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



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



### **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. Martínez Noguera, Francisco Javier

- ◆ Sports nutritionist at CIARD-UCAM
- ◆ Sports nutritionist at Jorge Lledó Physiotherapy Clinic
- ◆ Research assistant at CIARD-UCAM
- ◆ Sports nutritionist at UCAM Murcia Football Club
- ◆ Nutritionist at SANO Center
- ◆ Sports nutritionist at UCAM Murcia Basketball Club
- ◆ PhD in Sports Science from the Catholic University San Antonio de Murcia
- ◆ Graduate in Human Nutrition and Dietetics from the Catholic University San Antonio of Murcia
- ◆ Master's Degree in Nutrition and Food Safety from the Catholic University San Antonio of Murcia

### Dr. Ramírez Munuera, Marta

- ◆ Sports Nutritionist expert in strength sports
- ◆ Nutritionist. M10 Health and Fitness. Health and Sports Center
- ◆ Nutritionist. Mario Ortiz Nutrition
- ◆ Courses and workshops on Sports Nutrition Trainer
- ◆ Speaker at conferences and seminars on Sports Nutrition.
- ◆ Degree in Human Nutrition and Dietetics. San Antonio Murcia Catholic University
- ◆ Master in Nutrition in Physical Activity and Sport. San Antonio Murcia Catholic University

### 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



*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

Thanks to this program, pharmacists will have a solid knowledge to recommend food products or supplements to diabetic athletes who maintain vegetarian or vegan diets. The curriculum will analyze the nutritional needs of specific populations, including pregnant athletes and senior athletes. Likewise, the syllabus will delve into the importance for these users to have an optimal energy balance that includes proteins and Vitamin B12. The program will also provide graduates with the most effective dietary strategies for individuals with Diabetes. Therefore, pharmacists will provide nutrient counseling to manage possible deficiencies or health imbalances.





“

*You will provide highly individualized nutritional counseling to diabetic athletes who follow vegetarian or vegan diets with their athletic performance and health goals in mind”*

## Module 1. Different Stages or Specific Population Groups

- 1.1. Nutrition in the Female Athlete
  - 1.1.1. Limiting Factors
  - 1.1.2. Requirements
- 1.2. Menstrual Cycle
  - 1.2.1. The Luteal Phase
  - 1.2.2. The Follicular Phase
- 1.3. Triad
  - 1.3.1. Amenorrhea
  - 1.3.2. Osteoporosis
- 1.4. Nutrition in the Pregnant Female Athlete
  - 1.4.1. Energy Requirements
  - 1.4.2. Micronutrients
- 1.5. The Effects of Physical Exercise on the Child Athlete
  - 1.5.1. Strength Training
  - 1.5.2. Endurance Training
- 1.6. Nutritional Education in the Child Athlete
  - 1.6.1. Sugar
  - 1.6.2. Eating Disorders
- 1.7. Nutritional Requirements in the Child Athlete
  - 1.7.1. Carbohydrates
  - 1.7.2. Proteins
- 1.8. Changes Associated with Aging
  - 1.8.1. % Body Fat
  - 1.8.2. Muscle Mass
- 1.9. Main Problems in Older Athletes
  - 1.9.1. Joints
  - 1.9.2. Cardiovascular Health
- 1.10. Interesting Supplements for Older Athletes
  - 1.10.1. Whey Protein
  - 1.10.2. Creatine



## Module 2. Vegetarianism and Veganism

- 2.1. Vegetarianism and Veganism in the History of Sport
  - 2.1.1. The Beginnings of Veganism in Sport
  - 2.1.2. Vegetarian Athletes Today
- 2.2. Different Types of Vegetarian Food
  - 2.2.1. The Vegan Athlete
  - 2.2.2. The Vegetarian Athlete
- 2.3. Common Errors in the Vegan Athlete
  - 2.3.1. Energy Balance
  - 2.3.2. Protein Consumption
- 2.4. Vitamin B12
  - 2.4.1. B12 Supplementation
  - 2.4.2. Bioavailability of Spirulina Algae
- 2.5. Protein Sources in the Vegan/Vegetarian Diet
  - 2.5.1. Protein Quality
  - 2.5.2. Environmental Sustainability
- 2.6. Other Key Nutrients in Vegans
  - 2.6.1. Conversion of ALA to EPA/DHA
  - 2.6.2. Fe, Ca, Vit-D and Zn
- 2.7. Biochemical Assessment/Nutritional Deficiencies
  - 2.7.1. Anemia
  - 2.7.2. Sarcopenia
- 2.8. Vegan vs. Omnivorous Food
  - 2.8.1. Evolutionary Food
  - 2.8.2. Current Food
- 2.9. Ergogenic Aids
  - 2.9.1. Creatine
  - 2.9.2. Vegetable Protein
- 2.10. Factors that Decrease Nutrient Absorption
  - 2.10.1. High Fiber Intake
  - 2.10.2. Oxalates



### Module 3. The Type 1 Diabetic Athlete

- 3.1. Knowing about Diabetes and its Pathology
  - 3.1.1. Incidence of Diabetes
  - 3.1.2. Diabetes Pathophysiology
  - 3.1.3. Consequences of Diabetes
- 3.2. Exercise Physiology in People with Diabetes
  - 3.2.1. Maximal, Submaximal Exercise and Muscle Metabolism during Exercise
  - 3.2.2. Differences at the Metabolic Level during Exercise in People with Diabetes
- 3.3. Exercise in People with Type 1 Diabetes
  - 3.3.1. Exercise in People with Type 1 Diabetes
  - 3.3.2. Exercise Duration and Carbohydrate Intake
- 3.4. Exercise in People with Type 2 Diabetes Blood Sugar Control
  - 3.4.1. Risks of Physical Activity in People with Type 2 Diabetes
  - 3.4.2. Benefits of Exercise in People with Type 2 Diabetes
- 3.5. Exercise in Children and Adolescents with Diabetes
  - 3.5.1. Metabolic Effects of Exercise
  - 3.5.2. Precautions during Exercise
- 3.6. Insulin Therapy and Exercise
  - 3.6.1. Insulin Infusion Pump
  - 3.6.2. Types of Insulins
- 3.7. Nutritional Strategies during Sport and Exercise in Type 1 Diabetes
  - 3.7.1. From Theory to Practice
  - 3.7.2. Carbohydrate Intake Before, During and After Physical Exercise
  - 3.7.3. Hydration Before, During and After Physical Exercise
- 3.8. Nutritional Planning in Endurance Sports
  - 3.8.1. Marathon
  - 3.8.2. Cycling
- 3.9. Nutritional Planning in Team Sports
  - 3.9.1. Soccer
  - 3.9.2. Rugby
- 3.10. Sports Supplements and Diabetes
  - 3.10.1. Potentially Beneficial Supplements for Athletes with Diabetes





“

*An intensive curriculum that will make you a highly specialized Pharmacist in Diabetes Sports Nutrition, Vegetarianism and Veganism. 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.







*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.

“

*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

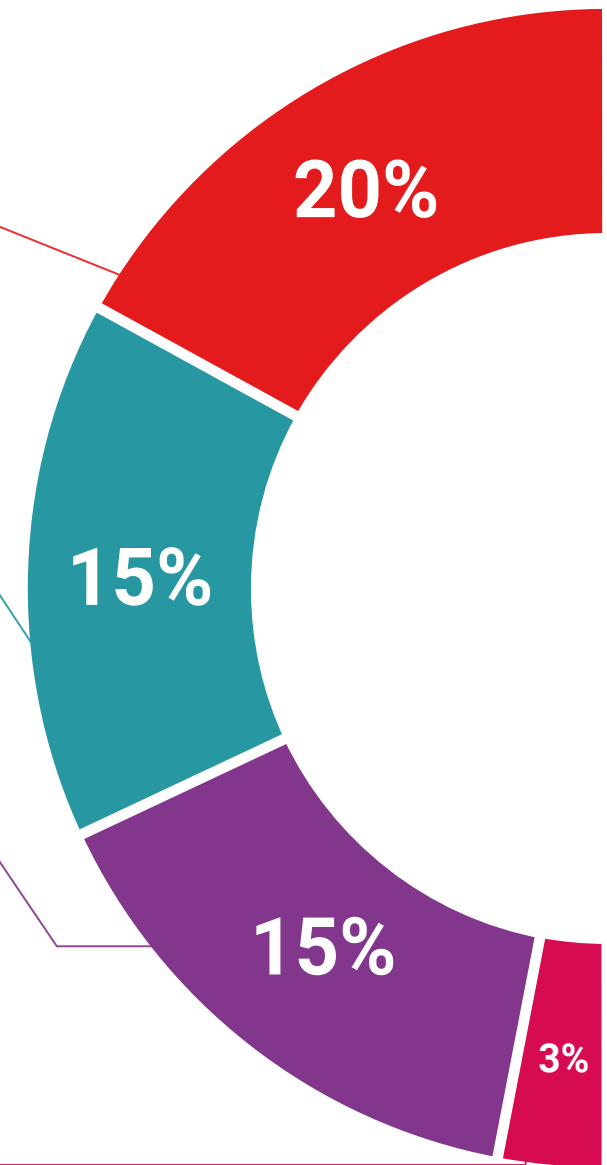
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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 Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.







“

*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 Nutrition in Diabetes, Vegetarianism and Veganism** 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.

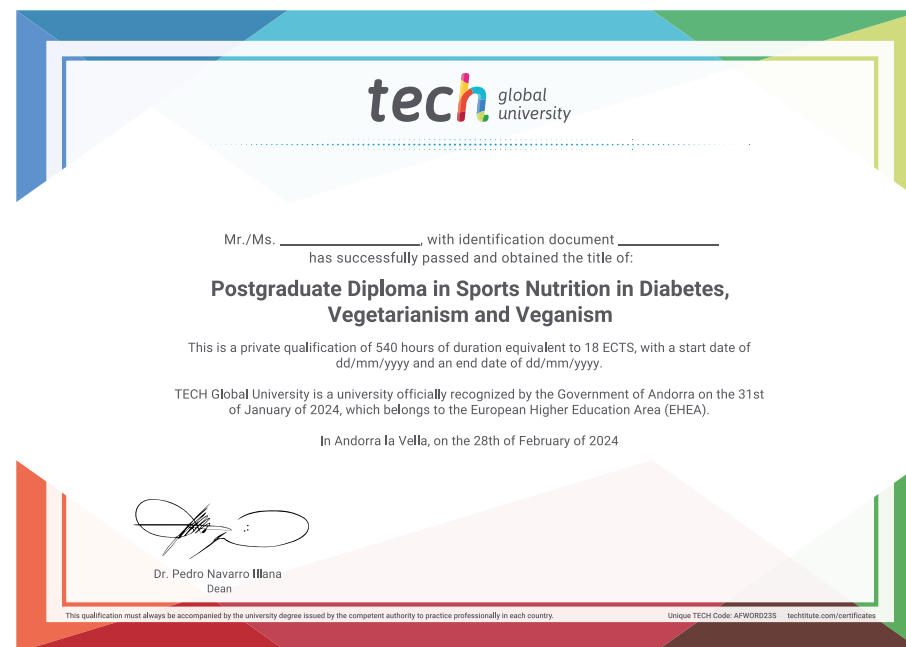
This **TECH Global University private qualification**, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism**

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.

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

**tech** global  
university

personalized service innovation

knowledge present  
Sports Nutrition in Diabetes,  
Vegetarianism and Veganism

online training

development language

virtual classroom

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

# Postgraduate Diploma

Sports Nutrition in Diabetes,  
Vegetarianism and Veganism

