

# Postgraduate Diploma

## Sports Nutrition in Diabetes, Vegetarianism and Veganism

Endorsed by the NBA



**tech** global  
university





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

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

Website: [www.techtute.com/us/sports-science/postgraduate-diploma/postgraduate-diploma-sports-nutrition-diabetes-vegetarianism-veganism](http://www.techtute.com/us/sports-science/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. 16*

05

Methodology

---

*p. 22*

06

Certificate

---

*p. 30*

# 01

# Introduction

During sports practice, different problems arise that have their origin or solution in nutrition and/or sports supplementation. Athletes with special situations can often be neglected due to the lack of knowledge of the professional who attends them, so this Postgraduate Diploma trains students to be able to act as reference professionals in Sports Nutrition focused on athletes in special situations.





“

*Immerse yourself in this comprehensive Postgraduate Diploma and improve your skills in nutritional counseling for athletes”*



Although a priori age and sex do not seem to be determining factors to be taken into account, it has been seen that within each population there are certain situations and particularities, whether at a metabolic or behavioral level, that should be studied specifically, as they may differ between young athletes, older athletes and female athletes, so that when working with any of these groups within sport it is necessary to know them in depth.

More and more athletes are opting for a diet that excludes foods of animal origin, whether for religious, ethical, environmental, etc. reasons. It has been seen that no food in itself is essential in the diet, because we can obtain the different nutrients in different food sources. However, due to the increased requirements of the athlete population, and the risk involved in excluding any food group in obtaining nutrients, nutritional support is necessary in this type of population by a dietitian-nutritionist who is able to provide the athlete with the best options and food combinations.

It is essential for the nutritionist to have advanced knowledge in nutritional counseling for athletes who suffer from diabetes or who follow a strictly vegetarian or vegan diet, conditions that imply specific modifications in nutrition and health.

The Postgraduate Diploma has multimedia content that helps to acquire the knowledge taught, developed with the latest educational technology. At the same time, it will allow the student a contextual and situated learning, within a simulated environment that provides training focused on solving real problems.

As it is an online Postgraduate Diploma, 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 Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism** contains the most complete and updated scientific program on the market.

The most important features of the program include:

- ♦ The graphic, schematic, and eminently practical contents with which they are created contain information that is indispensable for professional practice.
- ♦ It contains exercises where the self-assessment process can be carried out to improve learning.
- ♦ Algorithm-based interactive learning system for decision-making for patients with feeding problems.
- ♦ 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.



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

“

*This Postgraduate Diploma may be 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 in Diabetes, Vegetarianism and Veganism, you will obtain a Postgraduate Diploma qualification from TECH Global University"*

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.

The design of this program focuses on Problem-Based Learning, by means of which the professional will have to try to solve the different situations of Professional Practice, which will be posed throughout the Postgraduate Diploma. The professional will be assisted by an innovative interactive video system created by renowned and experienced experts in sports nutrition.

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

*This 100% online Postgraduate Diploma 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.







“

*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

---

- ♦ Manage 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 different disciplines to achieve maximum sports performance.
- ♦ Manage advanced knowledge on nutritional planning in professional athletes of team disciplines to achieve maximum sports performance.
- ♦ Manage and consolidate the initiative and entrepreneurial spirit to implement projects related to nutrition in physical activity and sport.
- ♦ Know how to incorporate the different scientific advances to one's own professional field.
- ♦ Ability to work in a multidisciplinary environment.
- ♦ Advanced understanding of the context in which the area of their specialty is developed.
- ♦ Manage advanced skills to detect possible signs of nutritional alteration associated with sports practice.
- ♦ 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 energy and nutritional needs of athletes in different pathophysiological situations.
- ♦ Specialize in the energy and nutritional needs of athletes in different age and gender specific situations.
- ♦ Specialize in dietary strategies for the prevention and treatment of the injured athlete.
- ♦ Specialize in the energy and nutritional needs of children athletes.
- ♦ Specialize in the energy and nutritional needs of Paralympic athletes.



## Specific Objectives

---

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

- ♦ Explain particular 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.
- ♦ Know in depth 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.
- ♦ Delve into how the different insulins or medications used by diabetics work.
- ♦ Assess the nutritional requirements for people with diabetes in their daily life and 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 ergogenic aids in diabetics.





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 Diploma with recent updates 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



### 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.

## Management

### Arcusa, Raúl

- ♦ Graduate in Human Nutrition and Dietetics
- ♦ Master's Degree in Nutrition in Physical Activity and Sport.
- ♦ Anthropometrist ISAK level 1.
- ♦ Currently a Doctoral student in the Department of Pharmacy of the UCAM, researching Nutrition and Oxidative Stress, in addition to his work as a Nutritionist in the Youth Team of C.D. Castellón.
- ♦ Experience in different soccer teams in the Valencian community, as well as extensive experience in consultation in face-to-face clinic.

### Ramírez, Marta

- ♦ Graduate in Human Nutrition and Dietetics
- ♦ Master's Degree in Nutrition in Physical Activity and Sport.
- ♦ Anthropometrist ISAK level 1.
- ♦ Extensive professional experience, both in the Clinical and Sports field, where she works with athletes in Triathlon, Athletics, Bodybuilding, CrossFit, Powerlifting, among others, specializing in strength sports.
- ♦ Experience as a instructor and speaker giving seminars, courses, workshops and conferences on Sports Nutrition for Dietitians-Nutritionists, Students of Health Sciences and general population, in addition to a continual training in nutrition and sport in international congresses, courses and conferences.







# 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.





“

*This Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism contains the most complete and up-to-date scientific program on the market”*



## 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 the Older Athlete
  - 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 Vegan 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. Anaemia
  - 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. The Incidence of Diabetes
  - 3.1.2. Pathophysiology of Diabetes
  - 3.1.3. The 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 in 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

“

*This will provide key training to advance your career”*



# 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.

“

*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.*



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

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.



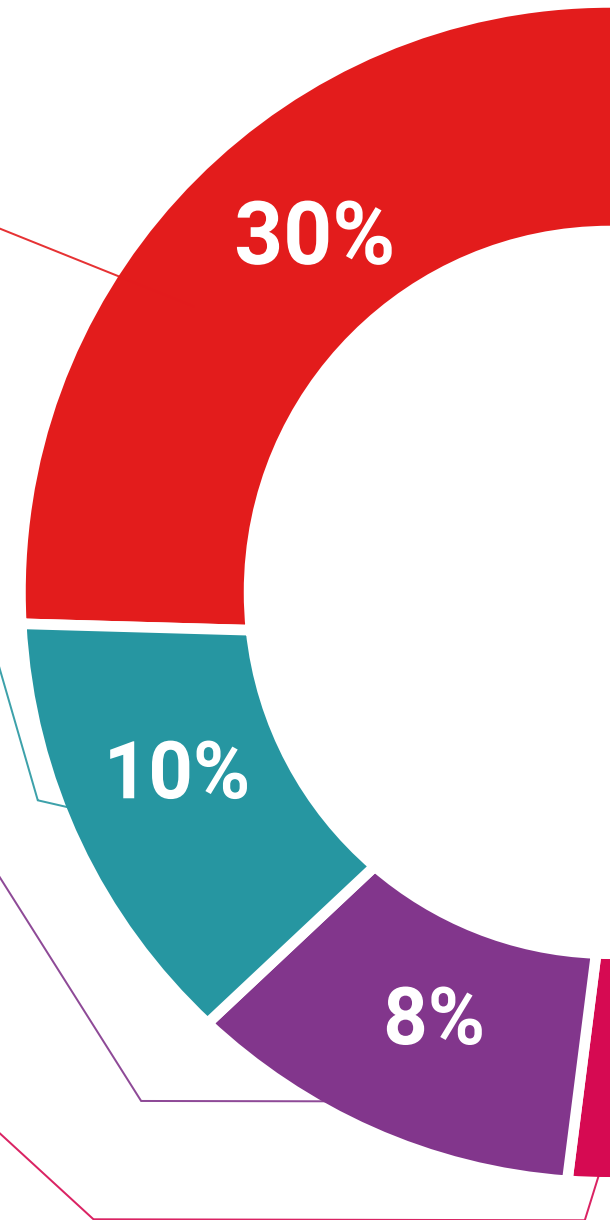
#### Practising Skills and Abilities

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.

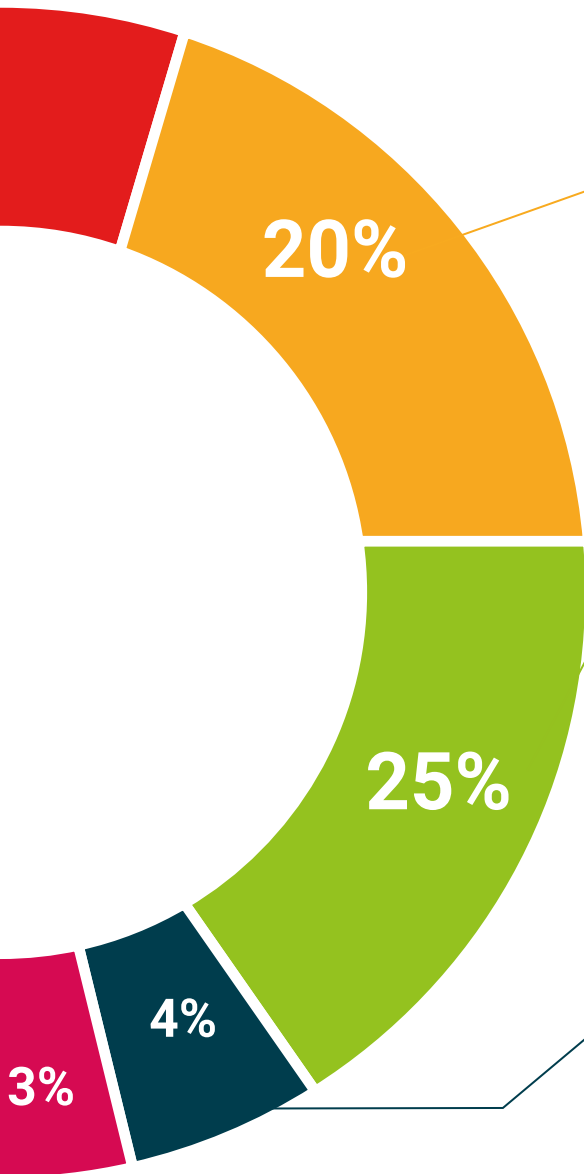


#### Additional Reading

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

The **Postgraduate Diploma in Sports Nutrition in Diabetes, Vegetarianism and Veganism** guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Diploma qualification issued by **TECH Global University**.





“

*Successfully complete this training and receive your university degree without travel or laborious paperwork”*



This program will allow you to obtain your **Postgraduate Diploma in Sports 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.

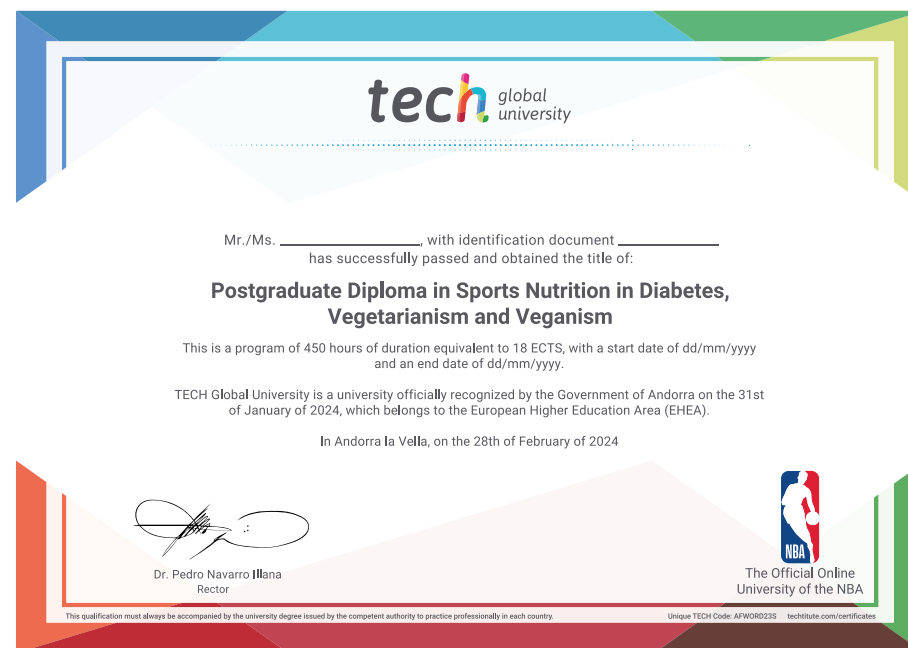
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate 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.

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



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

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

# Postgraduate Diploma

## Sports Nutrition in Diabetes, Vegetarianism and Veganism

Endorsed by the NBA

