

# Hybrid Professional Master's Degree

## Sports Nutrition





## Hybrid Professional Master's Degree

### Sports Nutrition

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h

Website: [www.techtute.com/us/physiotherapy/hybrid-professional-master-degree/hybrid-professional-master-degree-sports-nutrition](http://www.techtute.com/us/physiotherapy/hybrid-professional-master-degree/hybrid-professional-master-degree-sports-nutrition)

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# 01

# Introduction

Injuries are frequent in sports activities, and the recovery phase is of vital importance for the patient who wishes to return to their optimal level of competition. In this scenario, the professional physiotherapist who knows the physiological processes and the organism's adaptations to the athlete's nutrition is a determining factor for patients. Faced with this reality, this program is born, consisting of a theoretical phase 100% online and a practical stay in a center of reference in food care and guidance. Furthermore, in this Certificate graduates can count on a specialized and referential teaching team in the sports world, which will guide them at all times in the achievement of their goals.







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*A Hybrid Professional Master's Degree with which you can be aware of all the news about the use of probiotics and prebiotics in Sports Nutrition"*

Proteins, creatine, leucine or omega 3 are essential in the recovery of certain injuries suffered by an athlete due to their sports practice. However, in addition to supplementation, scientific studies support the planning of balanced diets adapted to each sporting discipline in order to improve the athlete's performance.

The professional physiotherapist, who is part of clubs or companies dedicated to athletes' care, attention and nutritional monitoring, cannot be oblivious to constant advances in nutrition and food, given the high competitiveness that exists in the sports world. For this reason, TECH has designed this Hybrid Professional Master's Degree in Sports Nutrition, which responds to the needs of specialists who demand current information and direct application in their daily practice.

Therefore, this program offers a theoretical phase taught exclusively online, in which students can delve into the latest trends in nutrition, nutritional assessment of the athlete, adaptation of diet according to their injury and discipline, as well as the different psychological problems that are related to food. To this end, it has innovative multimedia resources that can be accessed at any time of the day from an electronic device with an Internet connection.

In addition, this period of knowledge updating is complemented with a practical stay in a reference center, where students will be accompanied by other professionals in the world of Sports Nutrition, who will guide and tutor them at all times.

This program, therefore, is an excellent opportunity for specialists who seek to be updated in this field through a quality, flexible, university Certificate that is at the academic forefront.

This **Hybrid Professional Master's Degree in Sports Nutrition** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of more than 100 clinical cases presented by nutrition professionals with expertise in the nutritional care of high-level athletes
- ♦ Its graphic, schematic and eminently practical contents, with which they are conceived, gather scientific and assistance information on those medical disciplines that are essential for the professional practice
- ♦ Comprehensive plans for systematized action to address health sector issues
- ♦ Presentation of practical workshops on Clinical Nutrition
- ♦ Algorithm-based interactive learning system for decision-making in the situations that are presented to the student
- ♦ Practical clinical guides on approaching different pathologies
- ♦ Special emphasis on trends in nutrition and new pathologies
- ♦ All of this will be complemented by 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
- ♦ In addition, you will be able to perform a clinical internship in one of the best centers in sports care



*You will be aware of how to correctly use ergogenic aids in injured athletes"*

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*You will have at your disposal a library of multimedia resources that you can easily access from your computer with an Internet connection”*

In this Professional Master's Degree proposal, of a professionalizing nature and blended learning modality, the program is intended to update nursing professionals who develop their functions in high performance centers, clinical or hospital centers, and who require a high level of qualification. The content is based on the latest scientific evidence and is organized in a didactic way to integrate theoretical knowledge into nursing practice. The theoretical-practical elements allow professionals to update their knowledge and help them to make the right decisions in patient care.

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 an immersive education program to learn in real situations. This program's design is based on Problem Based Learning, by means of which the student must try to solve different professional practice situations that will be presented throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*The specialized teaching team of this Hybrid Professional Master's Degree provides you with case studies, which you will be able to apply in real situations.*

*In this program you will be able to learn more about the recent news on organic and transgenic foods included in athletes diets.*



# 02

## Why Study this Hybrid Professional Master's Degree?

The advances driven by scientific studies that address nutrition have led to significant progress in this area, where physiotherapy professionals contribute greatly with their knowledge in the recovery of patients. In the field of Sports Nutrition, especially, it is as relevant to know the theoretical concepts as it is to integrate them in practice for injury approach. For this reason, TECH has created this Certificate, which provides the most recent developments in probiotics, prebiotics or nutrigenetics, in a theoretical framework that is completed with a practical stay in a prestigious center. In this way, graduates will obtain a broad vision of the current scene of Sports Nutrition, being guided by the best experts in this area.





Why Study this Hybrid Professional | 09  
Master's Degree?



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*Enter into real clinical environments through a University Certificate that provides you with a complete and current vision in Sports Nutrition”*

### 1. Updating from the latest technology available

In the field of high competition, new technologies have revolutionized athletes' training, but at the same time have brought greater precision in nutritional programs and dietary analysis. For this reason, and with the main purpose of bringing professionals closer to the latest advances in this field, TECH has designed this Certificate, where graduates will update their knowledge with an advanced syllabus during a 3-week stay with an excellent team of professionals in this field. This will bring the most innovative technology and methods in Sports Nutrition.

### 2. Gaining In-Depth Knowledge from the Experience of Top Specialists

In this process, professionals will not be alone, since they will have a specialized teaching team to guide them through the entire academic process, first with the syllabus of this Certificate, and then with guidance of a specialist from the center where the practical phase will be carried out. This way you will be able to apply concepts in a real scenario, with sports patients who require the most advanced nutritional treatments.

### 3. Entering First-Class Clinical Environments

This institution maintains a philosophy based on offering the highest quality in all its Certificates. For this reason, it makes a rigorous selection of both professionals who teach it, as well as the centers where professionals will perform a practical stay. This way, graduates are guaranteed access to a first class environment and an advanced update of their knowledge in Sports Nutrition.







#### 4. Combining the Best Theory with State-of-the-Art Practice

TECH bursts onto the academic scene with a Certificate that perfectly combines a 100% online theoretical framework, which can be accessed with flexibility, with a practical stay in a prestigious center. In this way, professionals who enter this program will be able to combine their daily activities with first-class education. Furthermore, during this period, graduates will not be alone, since they will have an excellent team of teachers and professionals who are part of the entity where they will perform the practical phase. All this, moreover, over 12 months.

#### 5. Expanding the Boundaries of Knowledge

TECH offers with this Certificate a broad and comprehensive look at Sports Nutrition. A renewed knowledge, with methods and procedures that professionals will be able to integrate in their own practice, thanks to the tutoring received by specialized professionals who have been part of clinical centers and sports entities of the highest level. A unique opportunity that only this academic institution can offer you.

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*You will have a total practical immersion in the center of your choice”*

# 03 Objectives

Thanks to the multimedia didactic resources, professionals who enter this University Certificate will be able to acquire updated knowledge on Sports Nutrition that they are looking for in a much more attractive way. In addition, the practical stay will facilitate direct application of all the theoretical information received in the course of this online program. In this process you will not be alone, as the TECH teaching team will guide you at all times to successfully achieve your goals.





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*You will get from the hand of real experts in Sports Nutrition to achieve the updated knowledge you are looking for in this field"*



## General Objective

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- The Hybrid Professional Master's Degree in Sports Nutrition offers specialists an opportunity to update their knowledge with the help of health professionals with extensive experience in the world of sports. Therefore, during the development of this Certificate, students will be able to identify the main novelties in nutrigenomics and nutrigenetics, be updated in techniques and products of basic and advanced nutritional support or know the current regulations in anti-doping



*Get an insight into nutritional balance and its relevance to athletes undergoing rehabilitation"*





## Specific Objectives

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### **Module 1. New Developments in Food**

- ♦ Analyze the different methods for assessing nutritional status
- ♦ Interpret and integrate anthropometric, clinical, biochemical, hematological, immunological, and pharmacological data in the patient's nutritional assessment and dietary-nutritional treatment

### **Module 2. Current Trends in Nutrition**

- ♦ Early detection and evaluation of quantitative and qualitative deviations from the nutritional balance due to excess or deficiency
- ♦ Describe the composition and utilities of new foods

### **Module 3. Assessment of Nutritional Status and Diet. Practical Application**

- ♦ Explain the different techniques and products of basic and advanced nutritional support related to the nutrition of the patient
- ♦ Explain the correct use of ergogenic aids

### **Module 4. Sports Nutrition**

- ♦ To explain current anti-doping regulations
- ♦ To identify psychological disorders related to the practice of sports and nutrition

### **Module 5. Muscle and Metabolic Physiology Associated with Exercise**

- ♦ To know in-depth the structure of skeletal muscle
- ♦ To understand in-depth the functioning of skeletal muscle
- ♦ To deepen in the most important adaptations that occur in athletes
- ♦ To delve into the mechanisms of energy production based on the type of exercise performed
- ♦ To deepen the integration of the different energy systems that make up muscle energy metabolism

### Module 6. Vegetarianism and Veganism

- ♦ To differentiate between the different types of vegetarian athletes
- ♦ To know in-depth the main mistakes made
- ♦ To address the significant nutritional deficiencies of sportsmen and sportswomen
- ♦ To manage skills to provide the athlete with the best tools to combine foods

### Module 7. Different Stages or Specific Population Groups

- ♦ To explain particular physiological characteristics to be taken into account in the nutritional approach of different groups
- ♦ To understand in depth the external and internal factors that influence the nutritional approach to these groups

### Module 8. Nutrition for Functional Recovery and Rehabilitation

- ♦ To approach the concept of integral nutrition as a key element in the process of readaptation and functional recovery
- ♦ To distinguish the different structures and properties of both macronutrients and micronutrients
- ♦ To prioritize the importance of both water intake and hydration in the recovery process
- ♦ To analyze the different types of phytochemicals and their essential role in improving the state of health and regeneration of the organism







**Module 9. Nutrition, Health and Disease Prevention: Current Issue and Recommendations for the General Population**

- ♦ To analyze patient's eating habits, as well as their problems and motivation
- ♦ To update nutritional recommendations based on scientific evidence for their application in clinical practice
- ♦ To train for the design of nutritional education and patient care strategies

**Module 10. Assessment of Nutritional Status and Calculation of Personalized Nutritional Plans, Recommendations and Monitoring**

- ♦ To adequately assess the clinical case, interpretation of causes and risks
- ♦ To calculate customized nutritional plans taking into account all individual variables
- ♦ To plan nutritional plans and models for a complete and practical recommendation

# 04 Skills

This Certificate enhances competencies and skills of the students who take it. This is possible, in large part, thanks to the clinical case studies presented by the professionals who teach this Certificate. This way, in a much more practical way, students will be able to approach situations and methods, which they will be able to integrate later in their daily professional performance. All of this with the objective of facilitating the updating of knowledge in a transcendental area of nutrition for sportsmen and women.



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*A program that will bring you closer to the latest techniques and methods used in the planning of diets according to the characteristics of each patient”*



## General Skills

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- Apply new trends in Sports Nutrition with their Patients
- Apply the new trends in nutrition depending on the adult's pathologies
- Investigate the nutritional problems of your patients

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*This Certificate will enhance your skills in nutritional planning for high-level athletes"*







## Specific Skills

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- ◆ Assess patients' nutritional status
- ◆ Identify patients' nutritional problems and apply the most appropriate treatments and diets in each case
- ◆ Know food compositions, identify their utilities and add them to the diets of patients who need them
- ◆ Know the anti-doping rules
- ◆ Seek help for patients with psychological disorders related to nutrition and the practice of sports
- ◆ Be up to date on food safety and be aware of potential food hazards
- ◆ Identify the benefits of the Mediterranean diet
- ◆ Identify athletes' energy needs and provide them with appropriate diets

05

# Course Management

A highly qualified and renowned management and teaching staff will be in charge of teaching this Hybrid Certificate, to which students will have access 24 hours a day, from any electronic device. This way, thanks to the knowledge and extensive professional experience of the faculty, students will obtain the latest and most recent information on Sports Nutrition.



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*You will have at your disposal a renowned teaching team, which will bring you closer to the latest developments in nutrigenetics and nutrigenomics applied to athletes"*

## International Guest Director

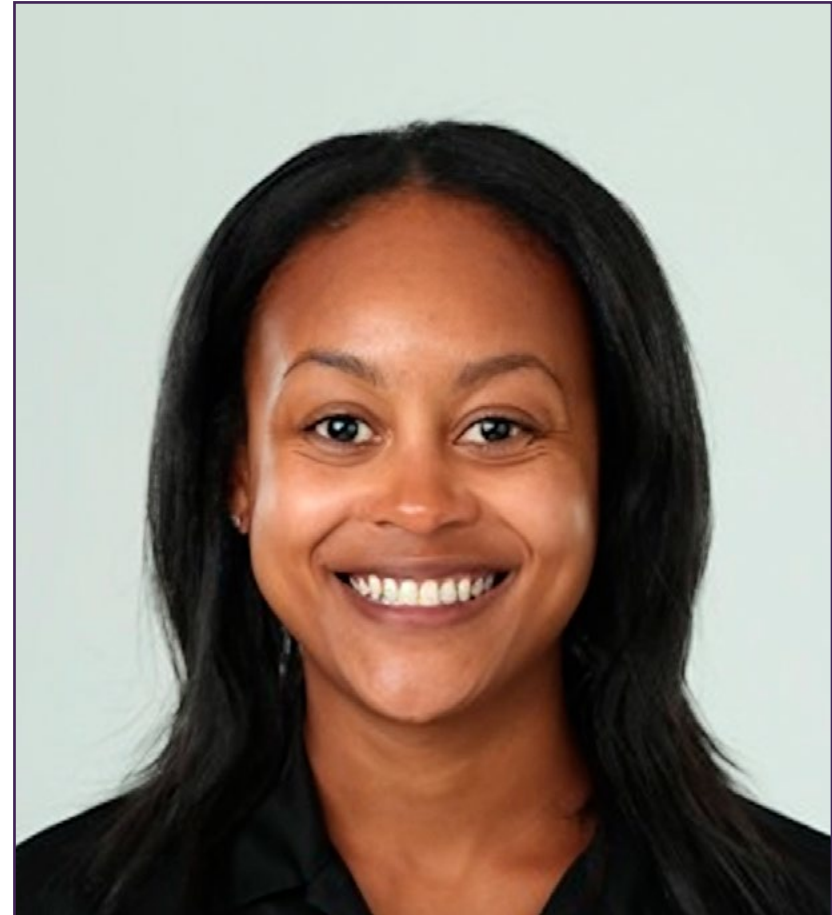
Shelby Johnson has a distinguished career as a Sports Nutritionist, specializing in college sports in the United States. In fact, her experience and specific knowledge in this area have been key in her goal of contributing to the best performance of high performance athletes.

As Director of Sports Nutrition at Duke University, she has provided nutritional and health assistance to student athletes. In addition, she has served on the nutritionist staff at the University of Missouri and on the University of Florida soccer, lacrosse and women's basketball teams.

Likewise, her commitment to offer young athletes the best nutritional advice during their training and competitions has led her to perform a remarkable work in this professional field. In this way, in order to guarantee the best attention to athletes, she has been in charge of performing body composition analysis and building personalized plans, according to each person's objective. She has also guided athletes on the most appropriate diets for their physical efforts, in order to contribute to their full performance and avoid health problems.

During her professional career, Shelby Johnson has worked in sports nutrition, and her ability to adapt to different disciplines has allowed her to broaden her areas of expertise and offer much more precise attention.

As such, thanks to its training and experience, it has created a Food Sensitivity Policy for Sports Health, seeking to highlight the relevance of proper nutrition for health. Therefore, her goal has always been to disseminate any information that helps athletes to become aware of the best nutrients, vitamins and foods to achieve their goals.





## Dña. Johnson, Shelby

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- Director of Sports Nutrition at Duke University, Durham, U.S.A.
- Nutrition Consultant
- Nutritionist for the soccer, lacrosse and women's basketball teams at the University of Florida.
- Specialist in Sports Nutrition
- Master's Degree in Applied Physiology and Kinesiology from the University of Florida.
- Bachelor's Degree in Dietetics from Lipscomb University

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

## Management



### Dr. Pérez de Ayala, Enrique

- ♦ Head of the Sports Medicine Department at La Policlínica Gipuzkoa
- ♦ Degree in Medicine from the Autonomous University of Barcelona
- ♦ Master's Degree in Personal Injury Valuation
- ♦ Expert in Biology and Sports Medicine from the University Pierre et Marie Curie
- ♦ Former head of the Sports Medicine Department of the Real Sociedad de Fútbol
- ♦ Member of: Spanish Association of Football Team Doctors, Spanish Federation of Sports Medicine, Spanish Society of Aerospace Medicine

## Professors

### Ms. Aldalur Mancisidor, Ane

- ♦ Dietitian specializing in Plant-Based Nutrition
- ♦ Degree in Nursing
- ♦ Higher Technical Degree in Dietetics and Nutrition by Cebanc
- ♦ Expert in Eating Disorders and Sports Nutrition
- ♦ Member of the Dietetic Cabinet and the Basque Health Service

### Ms. Urbeltz, Uxue

- ♦ BPX Instructor, Patronato de Deportes de San Sebastian
- ♦ Dietician in Policlínica Gipuzkoa
- ♦ Diploma in Dietetics and Nutrition
- ♦ Degree in Engineering Innovation in Food Processes and Products from the Public University of Navarra
- ♦ Online Postgraduate Course in Microbiota by Regenera
- ♦ Certificate in ISAK Anthropometry Level 1 by The International Society for the Advancement of Kinanthropometry (ISAK)



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*A specialized teaching team will be in charge of answering any questions you may have about the syllabus of this University Certificate"*

# 06

## Educational Plan

In addition, the Relearning System, based on the repetition of content, health personnel will be able to advance, in a much more natural and progressive way, through the syllabus of this program. With this, you will be able to update your knowledge of Sports Nutrition more easily, even reducing the hours of study. In addition, video summaries of each topic, detailed videos, outlines, specialized readings or case studies will complement the information and make this Hybrid Professional Master's Degree's syllabus much more attractive.







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*The multimedia pills will lead you to get the latest information on Sports Nutrition in a much more dynamic and engaging way”*

### Module 1. New Developments in Food

- 1.1. Molecular Foundations of Nutrition
- 1.2. Update on Food Composition
- 1.3. Food Composition Tables and Nutritional Databases
- 1.4. Phytochemicals and Non-Nutritive Compounds
- 1.5. New Food
  - 1.5.1. Functional Nutrients and Bioactive Compounds
  - 1.5.2. Probiotics, Prebiotics, and Synbiotics
  - 1.5.3. Quality and Design
- 1.6. Organic food
- 1.7. Transgenic Foods
- 1.8. Water as a Nutrient
- 1.9. Food Safety
  - 1.9.1. Physical Hazards
  - 1.9.2. Chemical Hazards
  - 1.9.3. Microbiological Hazards
- 1.10. New labelling and consumer information BORRAR
- 1.11. Phytotherapy Applied to Nutritional Pathologies

### Module 2. Current Trends in Nutrition

- 2.1. Nutrigenetics
- 2.2. Nutrigenomics
  - 2.2.1. Fundamentals
  - 2.2.2. Methods
- 2.3. Immunonutrition
  - 2.3.1. Nutrition-Immunity Interactions
  - 2.3.2. Antioxidants and Immune Function
- 2.4. Physiological Regulation of Feeding, Appetite and Satiety
- 2.5. Psychology and Nutrition
- 2.6. Nutrition and Sleep
- 2.7. Update on Nutritional Objectives and Recommended Intakes
- 2.8. New Evidence on the Mediterranean Diet





### Module 3. Assessment of Nutritional Status and Diet. Practical Application

- 3.1. Bioenergy and Nutrition
  - 3.1.1. Energy Needs
  - 3.1.2. Methods of Assessing Energy Expenditure
- 3.2. Assessment of Nutritional Status
  - 3.2.1. Body Composition Analysis
  - 3.2.2. Clinical Diagnosis. Symptoms and Signs
  - 3.2.3. Biochemical, Hematological and Immunological Methods
- 3.3. Intake Assessment
  - 3.3.1. Methods for Analyzing Food and Nutrient Intake
  - 3.3.2. Direct and Indirect Methods
- 3.4. Update on Nutritional Requirements and Recommended Intakes
- 3.5. Nutrition in a Healthy Adult. Objectives and Guidelines. Mediterranean Diet
- 3.6. Nutrition in Menopause
- 3.7. Nutrition in the Elderly

### Module 4. Sports Nutrition

- 4.1. Physiology of Exercise
- 4.2. Physiological Adaptation to Different Types of Exercise
- 4.3. Metabolic Adaptation to Exercise. Regulation and Control
- 4.4. Assessing Athletes' Energy Needs and Nutritional Status
- 4.5. Assessing Athletes' Physical Ability
- 4.6. Nutrition in the Different Phases of Sports Practice
  - 4.6.1. Pre-Competition
  - 4.6.2. During
  - 4.6.3. Post-Competition
- 4.7. Hydration
  - 4.7.1. Regulation and Needs
  - 4.7.2. Types of Beverages
- 4.8. Dietary Planning Adapted to Different Sports
- 4.9. Ergogenic Aids and Current Anti-Doping Regulations
  - 4.9.1. AMA and AEPSAD Recommendations
- 4.10. Nutrition in Sports Injury Recovery

- 4.11. Psychological Disorders Related to Practising Sport
  - 4.11.1. Eating Disorders: Bigorexia, Orthorexia, Anorexia
  - 4.11.2. Fatigue Caused by Overtraining
  - 4.11.3. The Female Athlete Triad
- 4.12. The Role of the Coach in Sports Performance

### Module 5. Muscle and Metabolic Physiology Associated with Exercise

- 5.1. Cardiovascular Adaptations Related to Exercise
  - 5.1.1. Increased Systolic Volume
  - 5.1.2. Decreased Heart Rate
- 5.2. Ventilatory Adaptations Related to Exercise
  - 5.2.1. Changes in the Ventilatory Volume
  - 5.2.2. Changes in Oxygen Consumption
- 5.3. Hormonal Adaptations Related to Exercise
  - 5.3.1. Cortisol
  - 5.3.2. Testosterone
- 5.4. Muscle Structure and Types of Muscle Fibers
  - 5.4.1. Muscle Fiber
  - 5.4.2. Type I Muscle Fiber
  - 5.4.3. Type II Muscle Fibers
- 5.5. The Concept of Lactic Threshold
- 5.6. ATP and Phosphagen Metabolism
  - 5.6.1. Metabolic Pathways for ATP Resynthesis during Exercise
  - 5.6.2. Phosphagen Metabolism
- 5.7. Carbohydrate Metabolism
  - 5.7.1. Carbohydrate Mobilization during Exercise
  - 5.7.2. Types of Glycolysis
- 5.8. Lipid Metabolism
  - 5.8.1. Lipolysis
  - 5.8.2. Fat Oxidation during Exercise
  - 5.8.3. Ketone Bodies

- 5.9. Protein Metabolism
  - 5.9.1. Ammonium Metabolism
  - 5.9.2. Amino Acid Oxidation
- 5.10. Mixed Bioenergetics of Muscle Fibers
  - 5.10.1. Energy Sources and their Relation to Exercise
  - 5.10.2. Factors Determining the Use of One or Another Energy Source during Exercise

### Module 6. Vegetarianism and Veganism

- 6.1. Vegetarianism and Veganism in the History of Sport
  - 6.1.1. The Beginnings of Veganism in Sport
  - 6.1.2. Vegetarian Athletes Today
- 6.2. Different Types of Vegetarian Food
  - 6.2.1. The Vegan Athlete
  - 6.2.2. The Vegetarian Athlete
- 6.3. Common Errors in the Vegan Athlete
  - 6.3.1. Energy Balance
  - 6.3.2. Protein Consumption
- 6.4. Vitamin B12
  - 6.4.1. B12 Supplementation
  - 6.4.2. Bioavailability of Spirulina Algae
- 6.5. Protein Sources in the Vegan/Vegetarian Diet
  - 6.5.1. Protein Quality
  - 6.5.2. Environmental Sustainability
- 6.6. Other Key Nutrients in Vegans
  - 6.6.1. Conversion of ALA to EPA/DHA
  - 6.6.2. Fe, Ca, Vit-D and Zn
- 6.7. Biochemical Evaluation/Nutritional Shortcomings
  - 6.7.1. Anaemia
  - 6.7.2. Sarcopenia



- 6.8. Vegan vs. Omnivorous Food
  - 6.8.1. Evolutionary Food
  - 6.8.2. Current Food
- 6.9. Ergogenic Aids
  - 6.9.1. Creatine
  - 6.9.2. Vegetable Protein
- 6.10. Factors that Decrease Nutrient Absorption
  - 6.10.1. High Fiber Intake
  - 6.10.2. Oxalates

### Module 7. Different Stages or Specific Population Groups

- 7.1. Nutrition in the Female Athlete
  - 7.1.1. Limiting Factors
  - 7.1.2. Requirements
- 7.2. Menstrual Cycle
  - 7.2.1. Luteal Phase
  - 7.2.2. Follicular Phase
- 7.3. Triad
  - 7.3.1. Amenorrhea
  - 7.3.2. Osteoporosis
- 7.4. Nutrition in the Pregnant Female Athlete
  - 7.4.1. Energy Requirements
  - 7.4.2. Micronutrients
- 7.5. The Effects of Physical Exercise on the Child Athlete
  - 7.5.1. Strength Training
  - 7.5.2. Endurance Training
- 7.6. Nutritional Education in the Child Athlete
  - 7.6.1. Sugar
  - 7.6.2. Eating Disorders
- 7.7. Nutritional Requirements in the Child Athlete
  - 7.7.1. Carbohydrates
  - 7.7.2. Proteins

- 7.8. Changes Associated with Aging
  - 7.8.1. % Body Fat
  - 7.8.2. Muscle Mass
- 7.9. Main Problems in the Older Athlete
  - 7.9.1. Joints
  - 7.9.2. Cardiovascular Health
- 7.10. Interesting Supplements for Older Athletes
  - 7.10.1. Whey Protein
  - 7.10.2. Creatine

### Module 8. Nutrition for Functional Recovery and Rehabilitation

- 8.1. Integral Nutrition as a Key Element in Injury Prevention and Recovery
- 8.2. Carbohydrates
- 8.3. Proteins
- 8.4. Fats
  - 8.4.1. Saturation
  - 8.4.2. Unsaturated
    - 8.4.2.1. Monounsaturated
    - 8.4.2.2. Polyunsaturated
- 8.5. Vitamins
  - 8.5.1. Water soluble
  - 8.5.2. Fat soluble
- 8.6. Minerals
  - 8.6.1. Macrominerals
  - 8.6.2. Microminerals
- 8.7. Fibre
- 8.8. Water
- 8.9. Phytochemicals
  - 8.9.1. Phenols
  - 8.9.2. Tioles
  - 8.9.3. Terpenes
- 8.10. Food Supplements for Prevention and Functional Recovery

## Module 9. Food, Health and Disease Prevention: Current Issues and Recommendations for the General Population

- 9.1. Feeding Habits in the Current Population and Health Risks
- 9.2. Mediterranean and Sustainable Diet
  - 9.2.1. Recommended Dietary Pattern
- 9.3. Comparison of Dietary Patterns or "Diets"
- 9.4. Nutrition in Vegetarians
- 9.5. Childhood and Adolescence
  - 9.5.1. Nutrition, Growth and Development
- 9.6. Adults
  - 9.6.1. Nutrition for the Improvement of Quality of Life
  - 9.6.2. Prevention
  - 9.6.3. Treatment of disease
- 9.7. Pregnancy and Lactation Recommendations
- 9.8. Recommendations in Menopause
- 9.9. Advanced Age
  - 9.9.1. Nutrition in Aging
  - 9.9.2. Changes in Body Composition
  - 9.9.3. Abnormalities
  - 9.9.4. Malnutrition
- 9.10. Nutrition in Athletes

## Module 10. Assessment of Nutritional Status and Calculation of Personalized Nutritional Plans, Recommendations and Monitoring

- 10.1. Medical History and Background
  - 10.1.1. Individual Variables Affecting Nutritional Plan Response
- 10.2. Anthropometry and Body Composition
- 10.3. Assessment of Eating Habits
  - 10.3.1. Nutritional Assessment of Food Consumption
- 10.4. Interdisciplinary Team and Therapeutic Circuits
- 10.5. Calculation of Energy Intake





- 10.6. Calculation of Recommended Macro- and Micronutrient Intakes
- 10.7. Quantity and Frequency of Food Consumption Recommendations
  - 10.7.1. Dietary Patterns
  - 10.7.2. Planning
  - 10.7.3. Distribution of Daily Feedings
- 10.8. Diet Planning Models
  - 10.8.1. Weekly Menus
  - 10.8.2. Daily Intake
  - 10.8.3. Methodology by Food Exchanges
- 10.9. Hospital Nutrition
  - 10.9.1. Dietary Models
  - 10.9.2. Decision Algorithms
- 10.10. Educational
  - 10.10.1. Psychological Aspects
  - 10.10.2. Maintenance of Feeding Habits
  - 10.10.3. Discharge Recommendations

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*This Hybrid Professional Master's Degree will bring you closer to the advances that have been made in recent years in immunonutrition"*

07

# Clinical Internship

One of the attractions of this Hybrid Professional Master's Degree is the realization of a practical internship, which takes students to be with professionals in the field of nutrition. During this period, graduates will be able to apply the most updated information they have received throughout the 100% online theoretical phase and thus complete this university Certificate.







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*You will be able to get the most out of this Certificate thanks to the practical stay of 3 weeks in a reference center in Sports Nutrition”*

The Internship Program's Internship Program for physiotherapists consists of a 3-week stay in a leading center in nutritional services for athletes. This way, from Monday to Friday, students will be able to apply the knowledge they have acquired during the theoretical phase.

At this stage, graduates will not be alone, as highly qualified personnel will guide them at all times, so that they can obtain the most relevant information on the care and advice that each athlete should take on nutrition according to their physical characteristics, the discipline they are developing and the moment of competition in which they are in. In addition, a member of the TECH teaching team will supervise that students receive the competencies and skills they need to achieve their objectives.

In this proposal, the activities are intended to improve the methods used for analysis of new foods, their evaluation according to the needs of each patient, guidelines indicated for the planning of a diet and the importance of the athlete's psychological factors.

The practical part will be performed with the student's active participation performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other classmates that facilitate teamwork and multidisciplinary integration as transversal competencies for clinical nursing practice (learning to be and learning to relate).



Procedures described below will be basis of practical part of the program, and their implementation will be subject to the center's own availability and workload, with proposed activities being the following:

Module	Practical Activity
<b>New feeding methods in Sports Nutrition</b>	Assess the recommendation of new foods, according to their composition, to improve the athlete's performance
	Adapting the athlete's diet with organic foods as a method of injury prevention
	Indicate the consumption of transgenic foods in athletes
	Inform athletes of the benefits and disadvantages of consuming certain foods based on their nutrition composition
<b>Application of new trends in Sports Nutrition</b>	Applying nutrigenetic principles to improve athlete performance
	Use nutrigenomic techniques to prevent the onset of diseases related to poor nutrition
	Indicate the diet to strengthen the athlete's immune system through nutrition
	Food guidelines to obtain the physiological regulation of the athlete
	Analyze the emotional relationship of the athlete with their food intake
<b>Assessment of the nutritional status and diet of the athlete</b>	Indicate a diet that favors sleep regulation
	Participate in the analysis of bioenergetics and nutrition
	Check the nutritional status of the patient at different age stages
	Assessing the patient's daily intake and making any necessary dietary adjustments
<b>Sports Nutrition</b>	Evaluating nutrition in the healthy adult and in women with menopause
	Verify physiological and metabolic adaptation to different types of exercise
	Participate in the assessment of the athlete's energy needs and nutritional status of the athlete
	Accompany the specialist in the evaluation of the athlete's physical capacity
	Apply analysis of nutrition and hydration in the different phases of sports practice
Collaborate in the dietary planning adapted to the sports modalities and in the recovery of injuries	



## Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

**1. TUTOR:** During the Hybrid Professional Master's Degree, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the students does not show up on the start date of the Hybrid Professional Master's Degree, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Hybrid Professional Master's Degree will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** the Hybrid Professional Master's Degree shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Hybrid Professional Master's Degree. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. DOES NOT INCLUDE:** The Hybrid Professional Master's Degree will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

# 08

## Where Can I Do the Clinical Internship?

The professional who takes this Hybrid Professional Master's Degree will be able to do a practical internship in a company in the Sports Nutrition sector, which has been carefully selected by TECH. With this, this academic institution seeks that students receive the highest quality education and that it responds to their objectives of updating their knowledge in this field. Furthermore, during this practical stay, students will live a much closer experience with real patients, which will allow them to apply all the information received in the theoretical phase of this program.





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*In 3 weeks you will be able to apply all the updated knowledge you have received in the theoretical phase of this Hybrid Professional Master's Degree"*





The student will be able to take the practical part of this Hybrid Professional Master's Degree in the following centers:



Physiotherapy

### Prosystem Nutrición

Country	City
Spain	Madrid

Address: C. Fresno, 23, 28522 Rivas-Vaciamadrid, Madrid

Clinic focused on physical activity and nutritional planning

**Related internship programs:**

- Sports Nutrition
- Rehabilitation Nutrition for Nursing



Physiotherapy

### Policlínico HM Moraleja

Country	City
Spain	Madrid

Address: P.º de Alcobendas, 10, 28109, Alcobendas, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Rehabilitation Medicine in Acquired Brain Injury Management



Physiotherapy

### Policlínico HM Matogrande

Country	City
Spain	La Coruña

Address: R. Enrique Mariñas Romero, 32G, 2º, 15009, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Sports Physiotherapy
- Neurodegenerative Diseases



Physiotherapy

### Sabier Fisiomedic

Country	City
Spain	Madrid


Address: C. María Zambrano, 3, Local 8-9, 28522 Rivas-Vaciamadrid, Madrid

Specialized center in Physiotherapy, Osteopathy, Aesthetic Medicine, Podiatry, Biomechanics, Facial and Body Aesthetics.

**Related internship programs:**

- Physiotherapy Diagnosis
- Sports Physiotherapy





Physiotherapy

### Nutriperformance

Country	City
Mexico	Mexico City

Address: Av. Toluca 585-Local 6, Olivar de los Padres, Álvaro Obregón, 01780 Ciudad de México, CDMX

Team of specialist nutritionists with extensive experience in a wide range of sports fields

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**Related internship programs:**

- Sports Nutrition for Physiotherapists
- Sports Nutrition



*Take advantage of this opportunity to surround yourself with expert professionals and learn from their work methodology"*



09

# 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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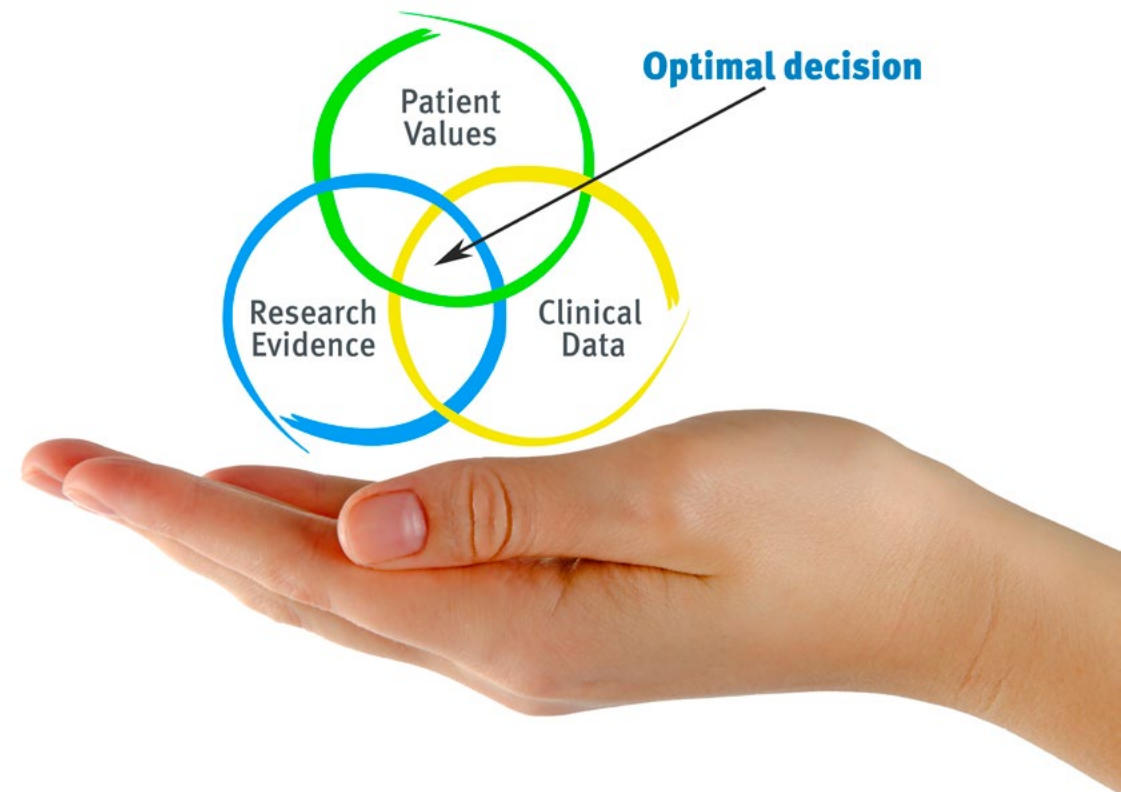
*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*



## At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Physiotherapists/kinesiologists learn better, faster, 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. Gérvas, 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, trying to recreate the real conditions of professional physiotherapy 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. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist 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.

This 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, a real revolution with respect to the mere study and analysis of cases.



*The physiotherapist/kinesiologist 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 we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

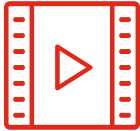
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our 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 produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

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



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

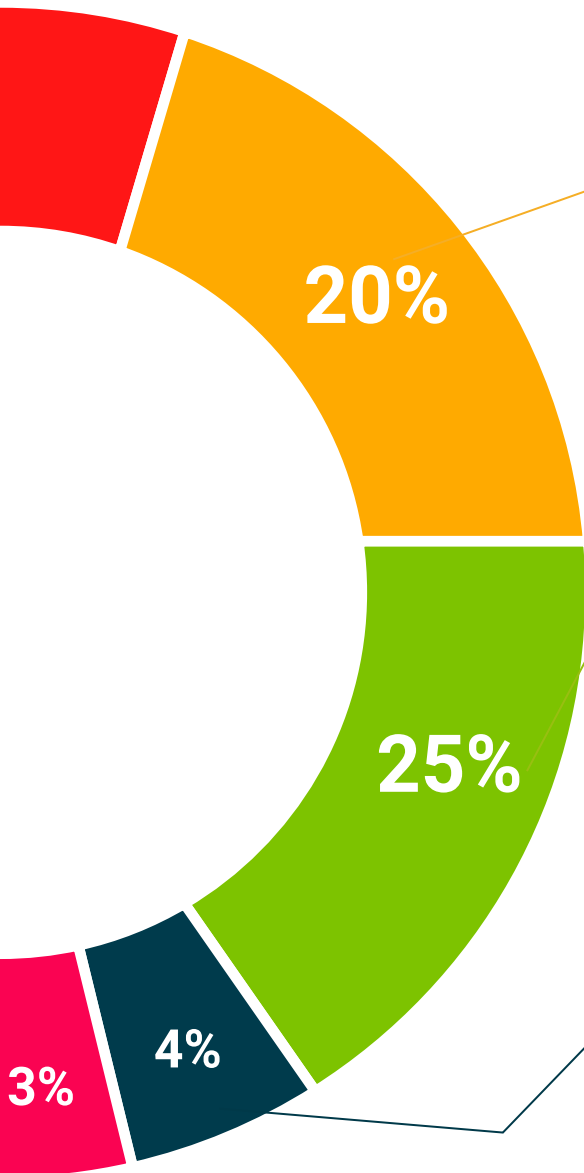
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Case Studies

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



#### Interactive Summaries

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

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



# 10 Certificate

The Hybrid Professional Master's Degree in Sports Nutrition guarantees, in addition to the most rigorous and updated education, access to a certificate of Hybrid Professional Master's Degree issued by TECH Technological University.





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

This **Hybrid Professional Master's Degree Sports Nutrition** contains the most complete and up-to-date program on the professional and scientific field.

After the student has passed the assessments, they will receive their corresponding Hybrid Professional Master's Degree diploma issued by TECH Technological University via tracked delivery\*.

In addition to the diploma, students will be able to obtain an academic transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their academic advisor, who will provide them with all the necessary information.

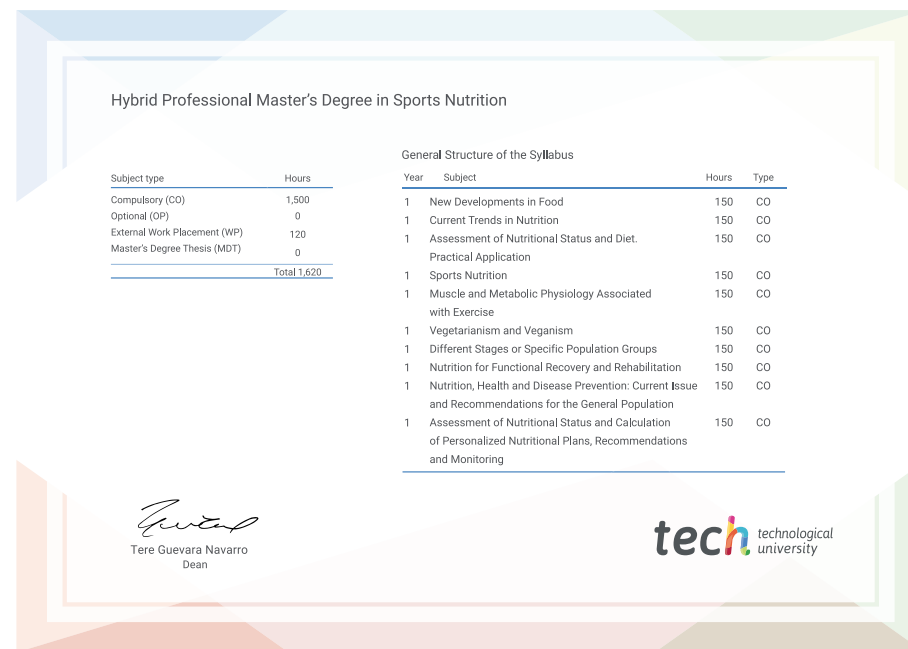
Title: **Hybrid Professional Master's Degree Sports Nutrition**

Modality: **Hybrid (Online + Clinical Internship)**

Duration: **12 months**

Certificate: **TECH Technological University**

Teaching Hours: **1,620 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.



## Hybrid Professional Master's Degree Sports Nutrition

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Technological University

Teaching Hours: 1,620 h

# Hybrid Professional Master's Degree

## Sports Nutrition

