## Hybrid Professional Master's Degree Sports Nutrition

Endorsed by the NBA







## 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.techtitute.com/pk/nutrition/hybrid-professional-master-degree/hybrid-professional-master-degree-sports-nutrition

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# 01 Introduction

Consume a diet appropriate to the needs of training and physical condition, becomes especially important when it comes to professional athletes or people who perform intensive exercise. In this context, the figure of the physician is fundamental, since they must be able to guide the individual and advise them on nutritional matters so that they can efficiently reach their goals and maintain an optimal state of health. It is therefore of vital importance that specialists in the area of nutrition dominate the subject of Sports Nutrition in order to provide an adequate diagnosis and treatment to their patients. With this Hybrid Professional program, the health professional will be able to experience the theoretical studies 100% online, in a practical stay of 3 weeks in a prestigious center, attending cases alongside medical experts.

This Hybrid Professional Master's Degree provides you with the ease and quality you need to update your professional career: 100% online studies combined with a 3-week practical day at one of the most recognized centers in the health area"

## tech 06 | Introduction

It is becoming more and more common for people to introduce sports activities into their daily lives. Physical activity increases the need for energy and some nutrients, so it is important to consume a balanced diet based on a wide variety of foods, with the correct selection criteria. To achieve this, it is necessary to seek the advice of specialists who are up-to-date on the latest trends in Sports Nutrition. They must know how to evaluate a nutrigenetic or immunonutrition analysis, understand everything about the Physiological Regulation of nutrition and also stand out for implementing aspects of psychology in their diagnoses.

A dietary planning adapted to the sports modalities is necessary not only so that the patient can consume a balanced diet, but also because by combining the correct nutrition according to the type of exercise, the athlete will be able to raise his performance level and achieve better results. This program offers the possibility to deepen and update knowledge in Sports Nutrition, with the most comprehensive and detailed content selected by experts in the field. It focuses on the most important and innovative aspects of nutrition in sports practice, offering the health professional a complete and up-to-date study opportunity. With a 100% online program through a modern Virtual Campus and the Relearning methodology implemented by TECH, which has made more and more professionals choose it as their best option for updating their knowledge.

This is especially due to the exclusive Internship Program of this course, to be carried out once all the topics of the theoretical program have been passed. It will consist of 8 hours of experiential sessions from Monday to Friday and for 3 weeks in a center of recognized prestige that will open its doors so that the professionals can apply everything they have learned, guided by a tutor and supported by a multidisciplinary team.

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 practice cases presented by experts in the Sciences Field of Health
- The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- Comprehensive systematized action plans for the health sector problems
- Presentation of practical workshops on Clinical Nutrition
- An algorithm-based interactive learning system for decision-making in the situations students are posited
- Practical clinical guides on approaching different pathologies
- Special emphasis on trends in nutrition and new pathologies
- All 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.
- Furthermore, you will be able to carry out a clinical internship in one of the best hospital centers

An upgrade experience with exclusive and cuttingedge design to boost your professional development"

## Introduction | 07 tech

TECH puts at your disposal a program designed by professionals and experts in the area of Sports Nutrition in the country"

In this proposal for a Master's Degree, of a professional nature and hybrid mode, the program is aimed at updating health professionals who wish to expand their knowledge in the field of Sports Nutrition and for this purpose requires a high level of qualification. The contents are based on the latest evidence on the subject, and oriented in an educational way to integrate theoretical knowledge into practice, and the theoretical-practical elements will facilitate knowledge update and decision-making in uncertain environments.

Thanks to multimedia content developed with the latest educational technology, they will allow the Healthcare professionals a situated and contextual learning, i.e., a simulated environment that will provide immersive learning programmed to prepare professionals for real situations. This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise during the course. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts. Prepare yourself for the new challenges that Nutrition implies in an area as important and diverse as Sports, so that your patients feel stronger, safer and happier.

You will be able to adapt the study process without disrupting your current responsibilities, having a 100% online system and a correct planning of the final internship of only 3 weeks.

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

The great results obtained from the specialized application of specific diets for sports practice have encouraged the inclusion of this strategy in the daily life of many athletes. This has also motivated research in this area, resulting in increasingly specific guidelines and strategies based on the patient's needs. Based on this, TECH has launched a complete program that combines theory and practice in an unparalleled experience that will undoubtedly help the specialists to elevate their professional careers to the top of the industry.

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

A balanced diet is essential for good health, especially if it involves an athlete. That's why, in this program, you will find the keys to design unparalleled nutritional plans"

## tech 10 | Why Study this Hybrid Professional Master's Degree?

#### 1. Updating from the Latest Technology Available

The name itself indicates that TECH is an educational center whose activity is based on the use of the most innovative tools that have been developed to date. For this reason, it also requires that the clinical centers in which the internships take place have the most sophisticated and cutting-edge equipment, providing the graduates with the opportunity to have access to it and to perfect their skills in its use.

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

From the first moment, the graduate will have the support of the best professionals, both in the theoretical section and during the practical stay. In this way, you will be able to update your practice in a guaranteed way, using your experience to carry out an exhaustive update based on the experience of authentic experts in the area of Sports Nursing.

#### 3. Entering First-Class Clinical Environments

The tutor assigned to the graduate will ensure that all the requirements for which this educational experience was designed are met. Among them, that of participating actively and protagonist in the management of cases that arise in the consultation during the stay. In this way, the students will be able to put their knowledge into practice, working

actively to update it through the application of the strategies they consider appropriate in each context.





## Why Study this Hybrid Professional | 11 **tech** Master's Degree?

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

Programs such as this Hybrid Professional Master's Degree are ideal, since they combine the latest theory with on-site practice, giving the graduates the opportunity to update their practice in a comprehensive and exhaustive manner. For this reason, TECH places special emphasis on its launch, in order to make available to graduates all the resources that allow them to get up-to-date in a guaranteed way.

#### 5. Expanding the Boundaries of Knowledge

The course and the overcoming of all the requirements that make up this Hybrid Professional Master's Degree will provide the graduates with a plus of inherent quality, which will be materialized in the possibility of performing their activity in any part of the world. The clinical center where the internship will take place is part of an international network of clinics that work together to advance clinical care in all areas, developing generic guidelines for action worldwide.

4 You will have full practical immersion at the center of your choice"

# 03 **Objectives**

The main objective of this Hybrid Professional Master's Degree in Sports Nutrition is the development of the theoretical-practical update in the health professionals, so that they can achieve a practical and rigorous mastery of the study of Sports Nutrition. In addition, it deploys a series of specific objectives where the deepening of each of the aspects that comprise the content of this program is evidenced, which, after the update, will be developed in practice, giving a pragmatic character to the learning process.

Seeing efficient results in your patients is fundamental for every healthcare professional. So updating is imperative to achieve that goal"

## tech 14 | Objectives



## **General Objective**

• This Hybrid Professional Master's Degree in Sports Nutrition has among its general objectives update the knowledge of the nutritionist in the new trends in Human Nutrition, both in health and in pathological situations through evidence-based medicine. In the same way, it intends promote work strategies based on the practical knowledge of the new trends in Nutrition and its application to adult pathologies, where nutrition plays a fundamental role in treatment. Therefore, the stay in the hospital will be essential to put into practice all that has been learned

This program will allow you to deepen in the management of patients with Budd-Chiari Syndrome or portal venous thrombosis"





## Specific Objectives

#### 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 nutritional assessment of the patient and in their dietarynutritional 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

## tech 16 | Objectives

#### Module 4. Sports Nutrition

• Identify psychological disorders related to the practice of sport and nutrition

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

- Gain an in-depth understanding of the structure of skeletal muscle
- Understand in depth the functioning of skeletal muscle
- Delve into the understanding of the most important changes that occur in athletes
- Delve into the mechanisms of energy production based on the type of exercise performed
- Delve into the integration of the different energy systems that make up the muscle energy metabolism

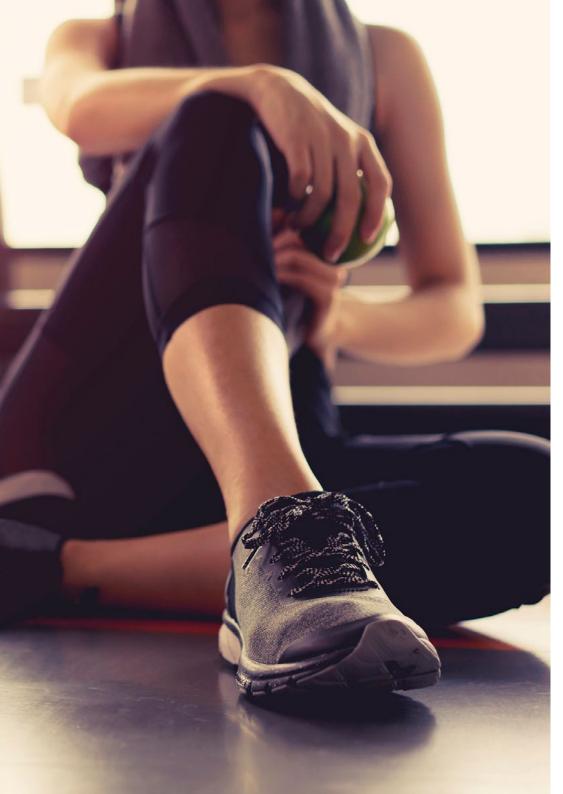
#### Module 6. Vegetarianism and Veganism

- 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 7. Different Stages or Specific Population Groups

- Explain the specific physiological characteristics to be taken into account in the nutritional approach of different groups
- Gain a deep understanding of the external and internal factors that influence the nutritional approach to these groups





## Objectives | 17 tech

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

- Approach the concept of integral nutrition as a key element in the rehabilitation and functional recovery process
- Distinguish the different structures and properties of both macronutrients and micronutrients
- Prioritize the importance of both water intake and hydration in the recovery process
- 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 Issues and Recommendations for the General Population

- Analyze patient's eating habits, as well as their problems and motivation
- Update nutritional recommendations based on scientific evidence for their application in clinical practice
- Prepare for the design of nutritional education strategies and patient care

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

- Adequate assessment of the clinical case, interpretation of causes and risks
- Personalized calculation of nutritional plans taking into account all individual variables
- Draw up nutritional plans and models in order to provide comprehensive and practical recommendations

# 04 **Skills**

After having passed the evaluations of the Hybrid Professional Master's Degree in Sports Nutrition, the health professional will have perfected the competencies required for efficient care and diagnosis of the patient who performs physical and sports activities. Once the theoretical and practical evaluations have been passed, the students will be able to perform autonomously in different situations related to the subject studied, as well as to provide innovative and effective solutions in their environment or work team.

After completing this Hybrid Professional Master's Degree, the physician will provide more efficient and innovative solutions for the well-being of the patient and will achieve greater professional recognition"

## tech 20 | Skills



**General Skills** 

- Apply new trends in Sport Nutrition
- Apply new trends in Nutrition according to adult pathologies
- Investigate the nutritional problems of your patients

In the progra keys to help psychologic

In the program, you will find the keys to help your patients with psychological disorders derived from the practice of sports and Nutrition, in an innovative and effective way"





## Skills | 21 tech

## Specific Skills

- 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
- Stay 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

This updating program consists of an advanced teaching faculty, made up of renowned doctors in the Spanish medical field, as well as health professionals in various fields who make up a multidisciplinary team. Which has been responsible for the methodical selection of all content and will accompany the student in the training process. The combination of its practical skills, with the latest - scientific theory makes the program of outstanding quality.

The most experienced health professionals, selected by TECH, are in charge of the direction of this Hybrid Professional Master's Degree"

## tech 20 | Course Management

### **International Guest Director**

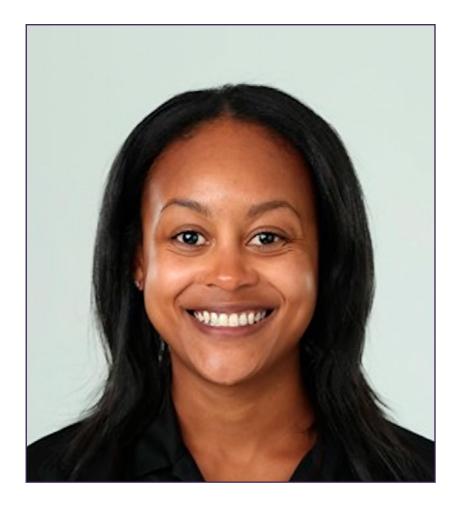
Shelby Johnson has a distinguished career as a Sports Nutritionist, specializing in college sports in the United States. In fact, her experience and specific knowledge in this area have been key in her goal of contributing to the best performance of high performance athletes.

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

- 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

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

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## tech 26 | Course Management

### **Guest Director**



### Dr. Pérez de Ayala, Enrique

- Head of the Sports Medicine Department at Gipuzkoa Polyclinic
- Degree in Medicine from the Autonomous University of Barcelona
- Master's Degree in Evaluation of Bodily Injury
- Expert in Biology and Sports Medicine from the Pierre et Marie Curie University
- Former Head of the Sports Medicine Section of the Real Sociedad de Fútbol
- Member of: Spanish Association of Football Team Doctors, Spanish Federation of Sports Medicine and Spanish Society of Aerospace Medicine.



## Course Management | 27 tech

### Professors

### Ms. Urbeltz, Uxue

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

### Ms. Aldalur Mancisidor, Ane

- Dietitian Specializing in Plant-Based Diets
- Degree in Nursing
- Higher Technical Degree in Dietetics and Nutrition by Cebanc
- Expert in Eating Disorders and Sports Nutrition
- Member of the Dietetics Office of the Basque Health Service

4 You will combine theory and professional practice through a demanding and rewarding educational approach"

## 06 Educational Plan

The syllabus has been designed under a thorough analysis of the expert professionals in charge of this program, meeting the strict specifications of TECH to adjust it to an online methodology based on *Realerning*, and combine it with a final journey of practice for 3 weeks in a clinical center of recognized trajectory. Establishing a syllabus divided into 4 well-detailed modules, which offer a broad perspective of Sports Nutrition.

The entire content included in this program can be downloaded to any device with an Internet connection, so you can consult it even after it has been completed in its entirety"

#### 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 Symbiotics
  - 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
- 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. The 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. After the 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
  - 4.9.1. AMA Recommendations
- 4.10. Nutrition in Sports Injury Recovery

## Educational Plan | 31 tech

- 4.11. Psychological Disorders Related to Practicing 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

## tech 32 | Educational Plan

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. Amenorrea
  - 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

## Educational Plan | 33 tech

## **Module 9.** Nutrition, 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 Recommendations10.7.1. Dietary Patterns
  - 10.7.2. Education
  - 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

# 07 Clinical Internship

After completing the online updating period, the program includes an Internship Program in a reference center in the health area with the necessary clinical equipment with a stay of 3 weeks in a day of 8 consecutive hours, guaranteeing the specialization sought by the professional and broadening their vision of the world of Sports Nursing. Highlighting the tutoring that you will receive throughout the course for the correct approval of it.

TECH gives you access not only to the best online update, but also to an internship in a prestigious center where you will be able to interact with renowned medical professionals"

## tech 36 | Clinical Internship

The student must take on the challenge of the Internship Program after passing the evaluations of the Hybrid Professional Master's Degree in Sports Nutrition. For this purpose, TECH has prestigious national and international centers that open their doors for future graduates to learn on. By making available multidisciplinary teams, as well as the technical and material resources necessary for the correct use of the experience.

This program consists of a 3-week on-site practical activity at the center chosen for this purpose. With 8-hour shifts from Monday to Friday, on a continuous basis, alongside a specialist who will serve as your tutor. This internship offers professionals the opportunity to deal with real situations, acquiring the necessary skills for their future performance as specialists in the area.

In this training proposal, completely practical in nature, the activities are aimed at developing and perfecting the skills necessary for the provision of primary care in areas and conditions that require a high level of qualification, and are oriented towards specific training for the exercise of the activity, in a safe environment and high professional performance.

The practical part will be carried out with the active participation of the student 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 fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for the practice in Clinical Nutrition (learning to be and learning to relate).



## Clinical Internship | 37 tech

The procedures described below will form the basis of the practical part of the internship, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:

Module	Practical Activity
Advances and trends in food	Conduct analysis of new food developments
	Develop analyses in nutrigenetics and nutrigenomics
	Delve into the assessment of immunonutrition
	Apply the physiological regulation of eating for appetite and satiety
	Manage the evaluation in Nutrition and circadian system
Assessment of nutritional status and diet	Delve into the analysis of Bioenergetics and Nutrition
	Work on the assessment of nutritional status
	Manage the assessment of ingestion
	Conduct a dietary assessment in the healthy adult
	Conduct a menopausal dietary assessment
	Achieve a detailed analysis of nutrition in the elderly
Nutrition in specialized sports practice	Carry out a correct physiological adaptation to different types of exercise
	Develop metabolic adaptation to exercise
	Perform a thorough assessment of the athlete's energy needs and nutritional status the athlete
	Develop the assessment of the athlete's physical capacity
	Put into practice the analysis of nutrition in the different phases of sports practice
	Practice in the assessment of hydration
	Delve into the dietary planning adapted to different sports
	Develop a detailed analysis of nutrition in the recovery of sports injuries
	Value the psychological disorders related to practicing sport



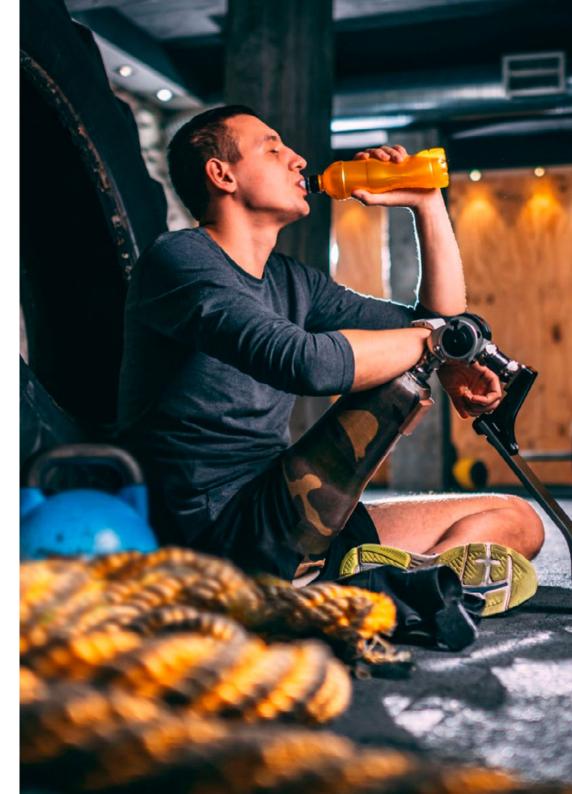
## tech 38 | Clinical Internship

### **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?

In order to provide an elite education for all, this Hybrid Professional Master's Degree provides access to a 3-week internship in a prestigious center. Thanks to TECH's exhaustive selection process to offer students the best qualification on the market. Complementing the theoretical study with an internship program in order to update and validate knowledge in real cases and with the help of expert professionals. A luxury opportunity that is only possible by studying at the world's largest digital university.

## Where Can I Do the Clinical Internship? | 41 tech

This program offers you the opportunity to apply what you have learned in prestigious national and international centers, with a 3-week stay"

## tech 42 | Where Can I Do the Clinical Internship?

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









## Where Can I Do the Clinical Internship? | 43 tech



#### Liga Sanluiseña de Fútbol

Country Argentina City San Luis

Address: Bolívar 935, D5700 GTS, San Luis

Association focused on nutritional planning, specifically for soccer practice

Related internship programs: -Sports Nutrition



#### Nutriperformance

Country Mexico City 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

> Related internship programs: -Sports Nutrition for Physiotherapists -Sports Nutrition

# 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.

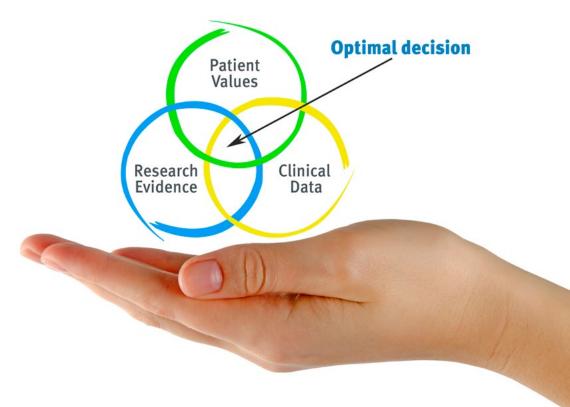
Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

## tech 46 | Methodology

#### At TECH we use the Case Method

In a given situation, what should a professional do? 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. Specialists learn better, faster, and more sustainably over time.

With TECH, nutritionists can 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 nutritional 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. Nutritionists who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.

2. Learning is solidly translated into practical skills that allow the nutritionist to better integrate knowledge into clinical practice.

3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.

 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.



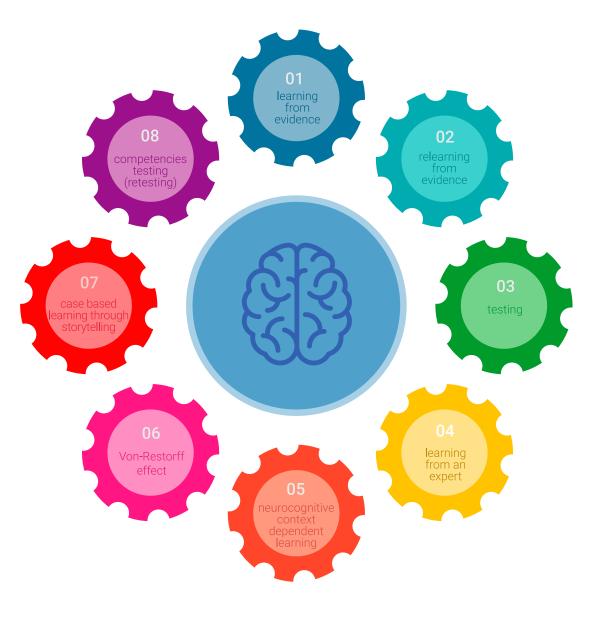
## tech 48 | Methodology

#### **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 nutritionist 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.



## Methodology | 49 tech

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 45,000 nutritionists have been trained with unprecedented success in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong 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 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 TECH's learning system is 8.01, according to the highest international standards.



## tech 50 | Methodology

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.

20%

15%

3%

15%

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.



#### **Nutrition Techniques and Procedures on Video**

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### **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".



#### 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.

## Methodology | 51 tech



#### **Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

20%

7%

3%

17%



#### **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 suggesting that observing third-party experts can be useful.

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.

# 10 **Certificate**

The Hybrid Professional Master's Degree in Sports Nutrition guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Professional Master's Degree diploma 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"

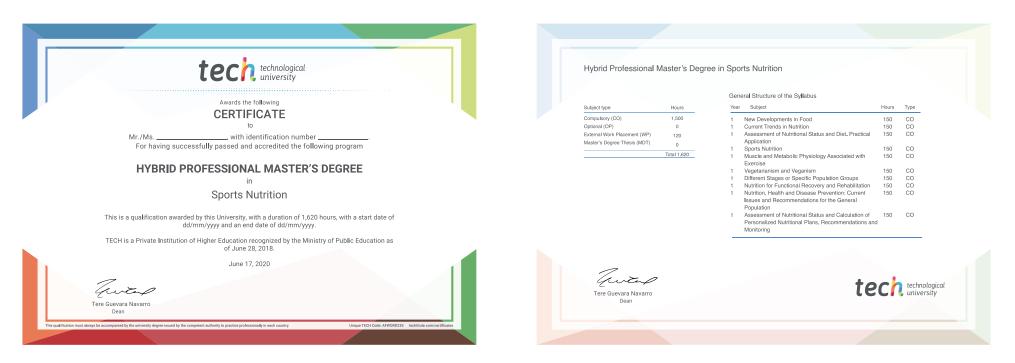
## tech 54 | Certificate

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

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

In addition to the Certificate, students will be able to obtain an educational transcript, as well as a certificate outlining the contents of the program. In order to do so, students should contact their educational advisor, who will provide them with all the necessary information. Title: Hybrid Professional Master's Degree in 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 certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

technological university 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

Endorsed by the NBA



