

Postgraduate Diploma

Nutrition in Physical Activity and Aquatic Sports

Endorsed by the NBA





Postgraduate Diploma Nutrition in Physical Activity and Aquatic Sports

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/sports-science/postgraduate-diploma/postgraduate-diploma-nutrition-physical-activity-aquatic-sports

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01

Introduction

Elite sports and amateur sports practice can take place in very different situations, conditioning both the physiological conditions and the nutritional objective during sports practice. This Postgraduate Diploma in Nutrition in Physical Activity and Aquatic Sports was created with the aim of training professionals of the highest level as specialists within a multidisciplinary group to maximize sports performance and proper recovery.



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Food and sport must go hand in hand, as it is essential that athletes follow a proper diet to help them improve their performance”

Aquatic Sports include a variety of sports disciplines (swimming, water polo, diving, synchronized swimming) with very different metabolic, strength and technical demands, although they all share the peculiarity that the movement takes place in water. Athletes competing in Aquatic Sports face the constant challenge of arduous training and competition schedules in difficult and changing environmental conditions. One point to consider is the huge range of water temperatures to which swimmers and other aquatic athletes are often exposed (16-31°C for open water swimming), coupled with altered aquatic thermoregulatory responses compared to land-based athletes, can challenge the health, safety and performance of these athletes.

On the other hand, the search for improved sports performance is a common goal in all sports. Based on this goal, we find a group of sports that stand out because this sporting improvement must be coordinated with the pursuit of a specific body weight (combat sports, weightlifting, powerlifting, bodybuilding modalities). Sports with weight categories seek to promote fairer and more interesting competitions since the confrontation takes place between opponents of the same physical build and ability. However, in these sports there is a marked tendency to gain an advantage by trying to get into a lower weight category than the natural training weight and, thus, compete with athletes of lower physical build and weight. In general, the athlete tries to reduce his body mass to the minimum possible.

Athletes sometimes perform quite aggressive protocols to reduce body weight and fall into a lower weight category. These practices are characterized by a strong restriction of food and fluid intake, leading to a state of glycogen depletion and hypohydration. In this context, a certain muscular catabolism (loss of muscle mass) could occur, which would compromise sports performance.

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

This **Postgraduate Diploma in Nutrition in Physical Activity and Aquatic Sports** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ The graphic, schematic, and eminently practical contents with which they are created contain information that is indispensable for professional practice.
- ♦ It contains exercises where the self-assessment process can be carried out to improve learning.
- ♦ Algorithm-based interactive learning system for decision-making for patients with feeding problems.
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



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

“ *This Postgraduate Diploma may be the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Nutrition in Physical Activity and Aquatic Sports, you will obtain a Postgraduate Diploma certificate from TECH Technological University*”

Its teaching staff includes professionals belonging to the field of nutrition, who contribute their work experience to this training, as well as renowned specialists from reference societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. The professional will be assisted by an innovative interactive video system created by renowned and experienced experts in sports nutrition.

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

This 100% online Postgraduate Diploma will allow you to combine your studies with your professional work while increasing your knowledge in this field.



02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the sports science professional can master in a practical and rigorous way the study of Sports Nutrition in Special Populations.





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This refresher program will provide you with a sense of confidence in your daily work, which will help you grow both personally and professionally”



General Objectives

- ♦ Manage advanced knowledge on nutritional planning in professional and non-professional athletes for the healthy performance of physical exercise.
- ♦ Manage advanced knowledge on nutritional planning in professional athletes of different disciplines to achieve maximum sports performance.
- ♦ Manage advanced knowledge on nutritional planning in professional athletes of team disciplines to achieve maximum sports performance.
- ♦ Manage and consolidate the initiative and entrepreneurial spirit to implement projects related to nutrition in physical activity and sport.
- ♦ Know how to incorporate the different scientific advances to one's own professional field.
- ♦ Ability to work in a multidisciplinary environment.
- ♦ Advanced understanding of the context in which the area of their specialty is developed.
- ♦ Manage advanced skills to detect possible signs of nutritional alteration associated with sports practice.
- ♦ Manage the necessary skills through the teaching-learning process that will allow them to continue training and learning in the field of Sports Nutrition, both through the contacts established with teachers and professionals of this training, as well as in an autonomous way.
- ♦ Specialize in the structure of muscle tissue and its implication in sport.
- ♦ Know the energy and nutritional needs of athletes in different pathophysiological situations.
- ♦ Specialize in the energy and nutritional needs of athletes in different age and gender specific situations.
- ♦ Specialize in dietary strategies for the prevention and treatment of the injured athlete.
- ♦ Specialize in the energy and nutritional needs of children athletes.
- ♦ Specialize in the energy and nutritional needs of Paralympic athletes.



Specific Objectives

- ◆ Delve into the most important characteristics of the main aquatic sports.
- ◆ Understand the demands and requirements involved in aquatic sports activities.
- ◆ Differentiate the nutritional needs among the different aquatic sports.
- ◆ Establish the different characteristics and needs within sports by weight category.
- ◆ Understand in depth the nutritional strategies in the preparation of the athlete for competition.
- ◆ Optimize the improvement of body composition through a nutritional approach.
- ◆ Explain particular physiological characteristics to be taken into account in the nutritional approach of different groups.
- ◆ Understand in depth the external and internal factors that influence the nutritional approach to these groups.

03

Course Management

Our teachers, made up of experts in Sports Nutrition, are well known in the profession and are professionals with years of teaching experience who have come together to help you boost your career. To this end, they have developed this Postgraduate Diploma with recent updates in the field that will allow you to train and increase your skills in this sector.





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Learn from the best professionals and become a successful professional yourself”

Management



Dr. Marhuenda Hernández, Javier

- ♦ Full Member of the Spanish Academy of Human Nutrition and Dietetics. Professor and researcher at UCAM
- ♦ Ph.D. in Nutrition
- ♦ Master's Degree in Clinical Nutrition
- ♦ Graduate in Nutrition



Professors

Ramírez, Marta

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

Montoya Castaño, Johana

- ◆ Nutritionist Dietician UdeA
- ◆ Master's Degree in Nutrition in Physical Activity and Sport from UCAM
- ◆ Sports Nutrition UB
- ◆ Member of the DBSS Network, G-SE Research and Research Associates of the Exercise and Sport Nutrition Laboratory of the Health and Kinesiology Department, Texas A&M University.

04

Structure and Content

The structure of the contents has been designed by a team of professionals knowledgeable about the implications of training in daily practice, aware of the current relevance of Sports Nutrition education; and committed to quality teaching through new educational technologies.





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This Postgraduate Diploma in Nutrition in Physical Activity and Aquatic Sports contains the most complete and up-to-date scientific program on the market”

Module 1. Aquatic Sports

- 1.1. History of Aquatic Sports
 - 1.1.1. Olympics and Major Tournaments.
 - 1.1.2. Aquatic Sports Today
- 1.2. Performance Limitations
 - 1.2.1. Aquatic Sports in the Water (Swimming, Water polo...)
 - 1.2.2. Aquatic Sports on the Water (Surfing, Sailing, Canoeing...)
- 1.3. Basic Characteristics of Aquatic Sports
 - 1.3.1. Aquatic Sports in the Water (Swimming, Water polo...)
 - 1.3.2. Aquatic Sports on the Water (Surfing, Sailing, Canoeing, etc.)
- 1.4. Aquatic Sports Physiology
 - 1.4.1. Energy Metabolism
 - 1.4.2. Athlete Biotype
- 1.5. Training
 - 1.5.1. Strength
 - 1.5.2. Resistance
- 1.6. Body Composition
 - 1.6.1. Swimming
 - 1.6.2. Water Polo
- 1.7. Pre-competition
 - 1.7.1. 3 Hours Before
 - 1.7.2. 1 Hour Before
- 1.8. Per Competition
 - 1.8.1. Carbohydrates
 - 1.8.2. Moisturization
- 1.9. Post-competition
 - 1.9.1. Moisturization
 - 1.9.2. Protein
- 1.10. Ergogenic Aids
 - 1.10.1. Creatine
 - 1.10.2. Caffeine



Module 2. Sports by Weight Category

- 2.1. Characteristics of the Main Sports by Weight Category
 - 2.1.1. Regulation
 - 2.1.2. Categories
- 2.2. Programming of the Season.
 - 2.2.1. Competitions
 - 2.2.2. Macrocycle
- 2.3. Body Composition
 - 2.3.1. Combat Sports
 - 2.3.2. Weightlifting
- 2.4. Stages of Muscle Mass Gain
 - 2.4.1. Body Fat Percentage
 - 2.4.2. Programming
- 2.5. Definition Stages
 - 2.5.1. Carbohydrates
 - 2.5.2. Protein.
- 2.6. Pre-competition
 - 2.6.1. Peak Week
 - 2.6.2. Before Weighing
- 2.7. Per Competition
 - 2.7.1. Practical Applications.
 - 2.7.2. Timing
- 2.8. Post-competition
 - 2.8.1. Moisturization.
 - 2.8.2. Protein.
- 2.9. Ergogenic Aids
 - 2.9.1. Creatine
 - 2.9.2. Whey Protein

Module 3. Different Stages or Specific Population Groups

- 3.1. Nutrition in the Female Athlete
 - 3.1.1. Limiting Factors
 - 3.1.2. Requirements.
- 3.2. Menstrual Cycle
 - 3.2.1. The Luteal Phase
 - 3.2.2. The Follicular Phase
- 3.3. Triad
 - 3.3.1. Amenorrhea
 - 3.3.2. Osteoporosis
- 3.4. Nutrition in the Pregnant Female Athlete
 - 3.4.1. Energy Requirements
 - 3.4.2. Micronutrients
- 3.5. Effects of Physical Exercise on the Child Athlete
 - 3.5.1. Strength Training
 - 3.5.2. Endurance Training
- 3.6. Nutritional Education in the Child Athlete
 - 3.6.1. Sugar
 - 3.6.2. Eating Disorders
- 3.7. Nutritional Requirements in the Child Athlete
 - 3.7.1. Carbohydrates
 - 3.7.2. Proteins.
- 3.8. Changes Associated with Aging
 - 3.8.1. Body Fat Percentage
 - 3.8.2. Muscle Mass
- 3.9. Main Problems in the Older Athlete
 - 3.9.1. Joints
 - 3.9.2. Cardiovascular Health
- 3.10. Interesting Supplements for Older Athletes
 - 3.10.1. Whey Protein
 - 3.10.2. Creatine

05 Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: **Re-learning**.

This teaching system is used in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





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

At TECH we use the Case Method

Our program offers you a revolutionary approach to developing your skills and knowledge. Our goal is to strengthen your skills in a changing, competitive, and highly demanding environment.

“

With TECH you can experience a way of learning that is shaking the foundations of traditional universities around the world”



Our University is the first in the world to combine Harvard Business School case studies with a 100%-online learning system based on repetition.



A learning method that is different and innovative.

This Sports Science program at TECH Technological University is an intensive program that prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting your personal and professional growth, the best way to strive for success, that is why at TECH you will use Harvard case studies, with which we have a strategic agreement that allows us to offer you material from the best university in the world.

“

We are the only online university that offers Harvard materials as teaching materials on its courses”

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

The case method is the most widely used learning system by the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

In a given situation, what would you do? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, you will be presented with multiple real cases. You will have to combine all your knowledge, and research, argue, and defend your ideas and decisions.

Re-Learning Methodology

Our University is the first in the world to combine Harvard University case studies with a 100%-online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance Harvard case studies with the best 100% online teaching method: Re-learning.

In 2019 we obtained the best learning results of all Spanish-language online universities in the world.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Re-learning.

Our University is the only one in Spanish-speaking countries licensed to incorporate this successful method. In 2019 we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best Spanish online university indicators.



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

With this methodology we have trained more than 650,000 university graduates with unprecedented success. In fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

Based on the latest evidence in neuroscience, not only do we know how to organize information, ideas, images, memories, but we also know that the place and context where we have learned something is crucial for us to be able to remember it and store it in the hippocampus, and retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



In this program you will have access to the best educational material, prepared with you in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Classes

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

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



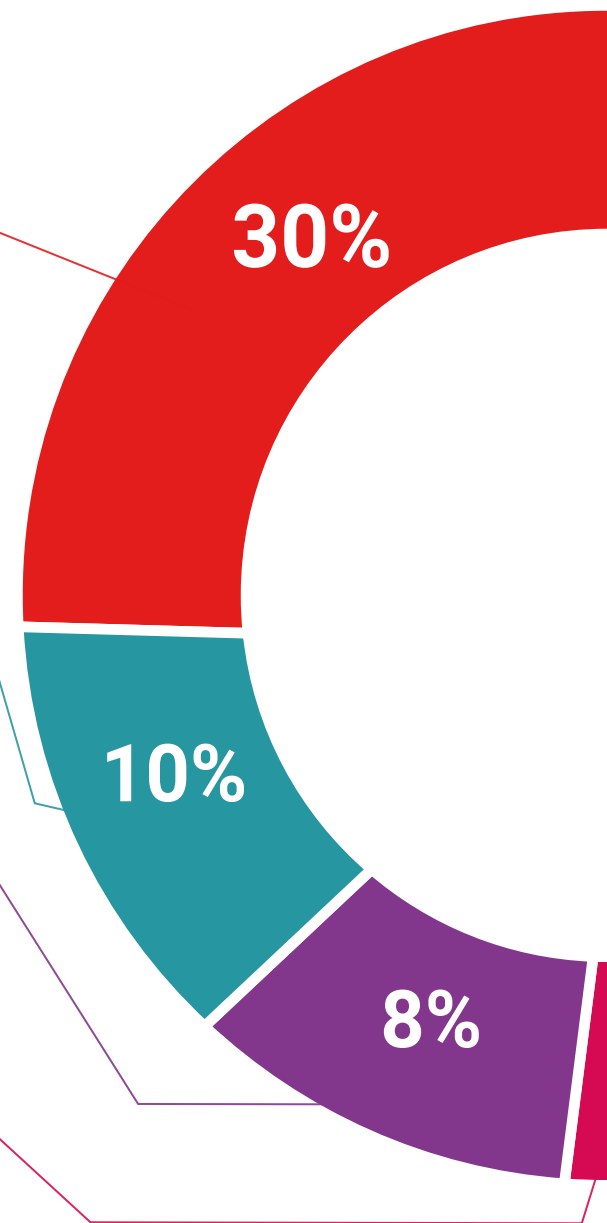
Practising Skills and Abilities

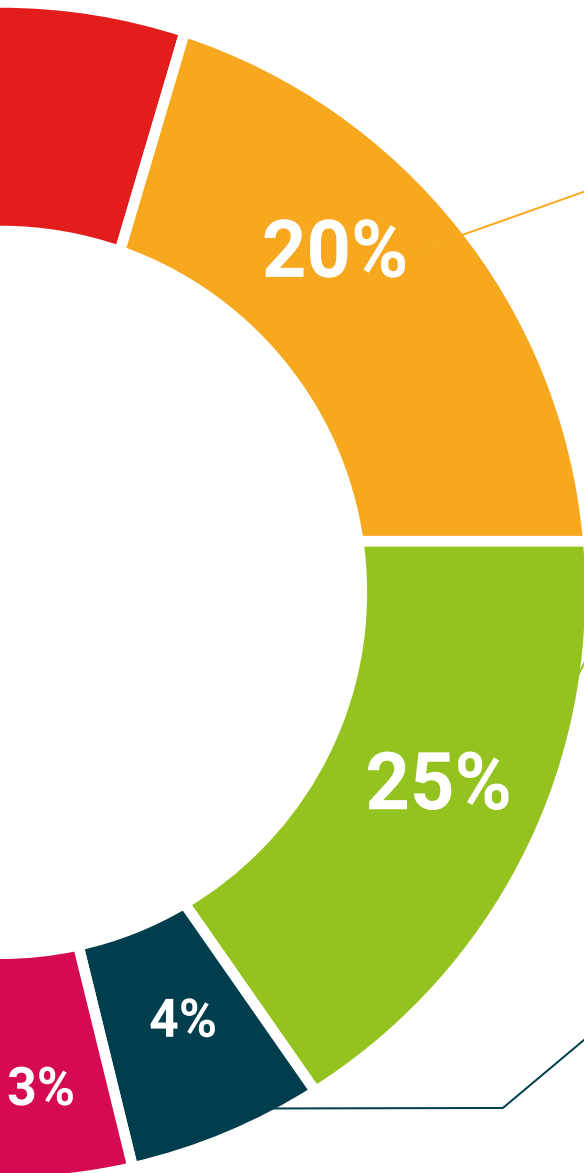
You will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization we live in.



Additional Reading

Recent articles, consensus documents, international guides. In our virtual library you will have access to everything you need to complete your training.





Case Studies

You will complete a selection of the best case studies in the field used at Harvard. Cases that are presented, analyzed, and supervised by the best senior management specialists in Latin America.



Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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



Testing & Re-testing

We periodically evaluate and re-evaluate your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



06 Certificate

The **Postgraduate Diploma in Nutrition in Physical Activity and Aquatic Sports** guarantees you, in addition to the most accurate and up-to-date training, access to a Postgraduate Diploma certificate issued by **TECH Technological University**.



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

This **Postgraduate Diploma in Nutrition in Physical Activity and Aquatic Sports** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** certificate issued by **TECH Technological University via tracked delivery**.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Nutrition in Physical Activity and Aquatic Sports**

ECTS: **18**

Official Number of Hours: **450**

Endorsed by the NBA



*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.

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



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tech technological
university

