

Hybrid Master's Degree

Sport Nutrition in Special Populations for Nursing



Hybrid Master's Degree

Sport Nutrition in Special Populations for Nursing

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

60 + 5 ECTS Credits

Acceso web: www.techtitute.com/us/nursing/hybrid-master-degree/hybrid-master-degree-sport-nutrition-special-populations-nursing

Index

01

Introduction

p. 4

02

Why Study this Hybrid
Master's Degree?

p. 8

03

Objectives

p. 12

04

Skills

p. 18

05

Course Management

p. 22

06

Educational Plan

p. 28

07

Clinical Internship

p. 36

08

Where Can I Do the Clinical
Internship?

p. 42

09

Methodology

p. 46

10

Program

p. 54

01

Introduction

The advancement of sports science has brought with it the implementation of protocols and technological resources to prevent different physical ailments in athletes. However, keeping up to date on the latest dietary plans and monitoring devices is a challenge for Nursing professionals. Therefore, this TECH degree offers an exceptional combination of theoretical and practical learning in Sports Nutrition in Special Populations for these health care personnel. The Hybrid Master's Degree consists of a 1,500-hour online study period on an interactive platform with multimedia resources. It is followed by a 3-week intensive face-to-face stay in a renowned hospital center to complete the practical training of the participants.





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*Upgrade your nursing skills with
TECH nursing skills to perform
energy expenditure monitoring
of athletes in special populations"*

Recently, the health sector has focused on providing the best nutritional advice to athletes from Special Populations, a category that includes child athletes, disabled athletes, among others. To this end, numerous studies have been carried out that analyze the impact of energy expenditure on the health of those who exercise professionally and how a personalized diet can benefit their competitive performance. However, nursing professionals often find it difficult to keep up to date in this field. The reasons for this are varied and include the lack of educational programs that address innovations in this area such as personalization of activities and training.

In this context, TECH sets itself apart in the pedagogical field and proposes an academic modality that satisfies the interests and objectives of these professionals. This Hybrid Master's Degree Postgraduate Certificate program supports the theoretical and practical approach from two well-framed stages. On the one hand, the nurse will have the opportunity to access key concepts from a 100% online and interactive platform. In it, the faculty of excellence of this degree program has provided different didactic materials and multimedia resources, such as videos and infographics, to broaden the student's competencies.

This is followed by the opportunity to complete an intensive and exhaustive internship in a state-of-the-art hospital institution. During 3 weeks, the nurse will have access to the most modern technologies in this field, will deepen in their use and the applications that can be developed from them. In addition, you will be able to treat real patients with various pathologies, having at all times the supervision and accompaniment of experts with extensive experience and international recognition.

This **Hybrid Master's Degree in Sport Nutrition in Special Populations for Nursing** 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 nursing professionals
- ♦ Its graphic, schematic and practical contents provide scientific and assistance information on those medical disciplines that are essential for professional practice
- ♦ Comprehensive systematized action plans for the main pathologies
- ♦ With a special emphasis on evidence-based medicine and research methodologies in Intensive Care Nursing
- ♦ 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
- ♦ Furthermore, you will be able to carry out a clinical internship in one of the best centers on the international scene



Thanks to TECH, you will master rotocols and procedures and procedures for the diagnosis of for the diagnosis of nutritional diseases in the disabled athlete"

“

This Hybrid Master's Degree will turn you into an expert nurse in the composition of food charts for Athletes of Special Populations”

In this proposed Hybrid Master's Degree, of a professional nature, the program is aimed at updating nursing professionals 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.

Thanks to its multimedia content elaborated with the latest educational technology, they will allow the Nursing professional a situated and contextual learning, that is, a simulated environment that will provide an immersive learning programmed to learn in real situations. This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

During the clinical practice of this Hybrid Master's Degree, you will have access to internationally prestigious clinical facilities.

Enroll now with TECH and you will get up to date on all the technological resources available to the Nursing staff in Sports Nutrition in Special Populations.



02

Why Study this Hybrid Master's Degree?

TECH has created a state-of-the-art Hybrid Master's Degree to update the knowledge of nurses involved in Sports Nutrition for Special Populations. The program includes a complete syllabus available on a 100% online platform and a practical, face-to-face and immersive stay in a prestigious hospital. Graduates will have the opportunity to apply the theoretical competencies acquired in a dynamic work environment and provide care to real patients. Upon completion of their studies, students will have all the necessary skills to stand out in the workplace with their updated profile.



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TECH gives you the opportunity to update your knowledge to great experts, in renowned health centers and through the excellent practical training of this degree”

1. Updating from the latest technology available

This Hybrid Master's Degree delves into the latest applications and procedures that nurses can perform with the latest tools in Sport Nutrition in Special Populations for Nursing. Upon completion of the different phases of study, the graduate will know how to manipulate and apply them correctly for the benefit of better assessment and follow-up results of children, disabled or chronically ill athletes.

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

Throughout this Hybrid Master's Degree, the nurse will be accompanied at all times by leading experts. During the theoretical phase, they will count on a teaching staff of excellence and then, in the practical stage, they will work directly with professionals in Sport Nutrition in Special Populations for Nursing, who develop the contents of this degree in first level hospital centers.

3. Entering First-Class Clinical Environments

TECH carefully selects all the centers that will be part of the practical stay integrated to this Hybrid Master's Degree. These instances will guarantee the professional access to a prestigious clinical environment within the field of Sport Nutrition in Special Populations for Nursing. Thus, they will be able to directly analyze the work dynamics of a demanding, rigorous and exhaustive medical area.





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

Few programs manage to combine theoretical and practical learning of its contents. However, TECH effectively achieves that nurses graduating from this Hybrid Master's Degree have dissimilar skills in the field of Sport Nutrition in Special Populations for Nursing. For this, it is of vital importance the practical and face-to-face stay integrated to the degree, where students will apply the contents studied online in a prestigious hospital institution for 3 weeks.

5. Expanding the Boundaries of Knowledge

For the professional practice of this Hybrid Master's Degree, TECH offers centers of international scope. In this way, the nurse will be able to expand their frontiers and catch up with the best professionals, from clinical centers located in different latitudes. A unique opportunity that only TECH, the largest online university in the world, could offer.

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*You will have full practical immersion
at the center of your choice”*

03 Objectives

This Hybrid Master's Degree will provide the nurse with an updated mastery of the most innovative methodologies and tools for the nutritional management of special populations of athletes. This program is superior to others of its kind in the market since the graduate will develop theoretical and practical competencies within the same learning model. Thus, they will immediately distinguish themselves in the labor market due to their ability to face different problems within this field.



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Through this Hybrid Master's Degree, you will update your nursing skills to monitor the nutritional and energetic needs of children and Paralympic athletes”



General Objective

- ♦ The Hybrid Master's Degree in Sport Nutrition in Special Populations for Nursing of TECH has as main objective updating the knowledge of professionals in the new trends in the nutrition of the athlete. Thus, it also seeks to promote strategic practical work based on the latest scientific evidence. Through this program, graduates will obtain a complete and up-to-date Hybrid Master's Degree that combines theory and practice in this specialty, providing them with the necessary advantages for their professional growth



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



Specific Objectives

Module 1. 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
- ♦ Explore the interaction between the different energy systems that make up the muscle energy metabolism

Module 2. Athlete assessment at different times of the season

- ♦ Perform Interpretation of biochemical factors to detect nutritional deficits or over training states
- ♦ Analyze the different types of body composition in order to optimize the appropriate weight and fat percentage for the sport being practiced
- ♦ Monitoring of the athlete throughout the season
- ♦ Plan the periods of the season according to their requirements

Module 3. Watersports

- ♦ Delve into the most important characteristics of the main water sports
- ♦ Understand the demands and requirements of sporting activity in an aquatic environment
- ♦ Distinguish between the nutritional needs of different watersports



Module 4. Extreme conditions

- ♦ Differentiate between the main performance limiting factors caused by climate
- ♦ Develop an acclimatization plan appropriate to the situation given
- ♦ Delve into the physiological adaptations due to altitude
- ♦ Establish the correct individual hydration guidelines according to the climate

Module 5. 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 most effective tools to combine foods

Module 6. The Type 1 Diabetic Athlete

- ♦ Establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ♦ Develop an in-depth understanding of how the different insulins or medications used by diabetics work
- ♦ Assess the nutritional requirements for people with diabetes both in their daily life and in exercise to improve their health
- ♦ Deepen the knowledge necessary to plan nutrition for athletes of different disciplines with diabetes, in order to improve their health and performance
- ♦ Establish the current state of evidence on Performance Enhancing Drugs in diabetics

Module 7. Para-Athletes

- ♦ Delve into the differences between the various categories of para-athletes and their physiological-metabolic limitations
- ♦ Determine the nutritional requirements of the different athletes in order to establish a specific nutritional plan
- ♦ Delve into the knowledge necessary to establish interactions between drug intake and nutrients in these athletes, in order to avoid nutrient deficits
- ♦ Understand the body composition of para-athletes in different sport categories
- ♦ Apply current scientific evidence on nutritional performance enhancing drugs

Module 8. Sports by Weight Category

- ♦ Establish the different characteristics and needs within the sports by weight category
- ♦ To gain in-depth knowledge on the nutritional strategies in the athlete's preparation in preparation for competition
- ♦ Optimize the improvement of body composition through nutritional approach

Module 9. 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



Module 10. The Injury Period

- ♦ Determine the different phases of the injury
- ♦ Help in the prevention of injuries
- ♦ Improve the prognosis of the injury
- ♦ Develop a nutritional strategy to meet the changing nutritional requirements during the injury period

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Through this program, you will be transformed into an updated nurse able to generate specific nutritional guidelines for the adequate nutrition of the nutrition for the healthy adult athlete”

04 Skills

Upon completion of this Hybrid Master's Degree, nurses will be equipped with a high level ability to apply therapeutic and follow-up methods to different nutritional pathologies. All thanks to this Hybrid Master's Degree composed of two academic phases that have an equivalent impact on the most updated theoretical and practical skills in this health area.



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Thanks to TECH, you will acquire all the Nursing competences necessary to detect possible signs of nutritional alteration in Special Populations of athletes”



General Skills

- Apply to their patients the new trends in Sports Nutrition in Special Groups for Nursing
- Implement new nutrition trends based on pathologies
- Investigate the nutritional problems of your patients

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After this degree, you will have the skills to identify excessive nutritional expenditure in athletes facing different pathophysiological situations”





Specific Skills

- ♦ Consolidate the initiative and entrepreneurial spirit to implement projects related to nutrition in physical activity and sport
- ♦ Manage advanced skills in the detection of possible signs of nutritional changes associated with sports activities
- ♦ Master the structure of muscle tissue and its implication in sport
- ♦ Know the energetic and nutritional needs of athletes in different pathophysiological situations
- ♦ Control the energy and nutritional needs of children athletes
- ♦ Monitor the energy and nutritional needs of paralympic athletes

05

Course Management

TECH has selected professors with extensive experience in Sport Nutrition in Special Populations for Nursing for their degree. Each of them has a distinguished trajectory in the handling of work equipment and advanced technical knowledge in the discipline. The professors have selected innovative procedures and offer excellent advice for the nurse to acquire new skills and provide child or Paralympic athletes with better assistance, according to their nutritional requirements. Thanks to the experience and knowledge of this faculty, graduates can be assured of receiving the most complete and up-to-date preparation in this area.



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*TECH has integrated a faculty of excellence,
composed of the best experts in Sports
Nutrition for Nursing”*

Diretor Internacional Convidado

Jamie Meeks has proven throughout her career her dedication to **Sports Nutrition**. After graduating from Louisiana State University with a degree in Sports Nutrition, he quickly rose to prominence. Her talent and commitment were recognized when she received the prestigious **Young Dietitian of the Year award** from the Louisiana Dietetic Association, an achievement that marked the beginning of a successful career.

After completing her bachelor's degree, Jamie Meeks continued her education at the University of Arkansas, where she completed her internship in **Dietetics**. She then went on to obtain a Master's Degree in Kinesiology with a specialization in **Exercise Physiology** from Louisiana State University. Her passion for helping athletes reach their full potential and her tireless commitment to excellence make her a leading figure in the sports and nutrition community.

Her deep knowledge in this area led her to become the first **Director of Sports Nutrition** in the history of Louisiana State University's athletic department. There, she developed innovative programs to meet the dietary needs of athletes and educate them on the importance of **proper nutrition for optimal performance**.

Subsequently, she has held the position of **Director of Sports Nutrition** for the NFL's **New Orleans Saints**. In this role, she is dedicated to ensuring that professional players receive the best nutritional care possible, working closely with coaches, trainers, physical trainers and medical staff to optimize individual performance and health.

As such, Jamie Meeks is considered a true leader in her field, being an active member of several professional associations and participating in the advancement of **Sports Nutrition** on a national level. In this regard, she is also a member of the **Academy of Nutrition and Dietetics** and the **Association of Collegiate and Professional Sports Dietitians**.



Ms. Meeks, Jamie

- Director of Sports Nutrition for the New Orleans Saints of the NFL, Louisiana, United States
- Coordinator of Sports Nutrition at Louisiana State University
- Registered Dietitian by the Academy of Nutrition and Dietetics
- Certified Specialist in Sports Dietetics
- Master's Degree in Kinesiology with a specialization in Exercise Physiology from Louisiana State University
- Graduate in Dietetics from Louisiana State University
- Member of:
 - Louisiana Dietetic Association
 - Association of Collegiate and Professional Sports Dietitians
 - Cardiovascular and Wellness Sports Nutrition Dietetic Practice Group



Graças à TECH, poderá aprender com os melhores profissionais do mundo”

Management



Dr. Marhuenda Hernández, Javier

- Professional soccer clubs Nutritionist
- Head of Sports Nutrition. Club Albacete Balompié SAD
- Head of Sports Nutrition. Catholic University of Murcia, UCAM Murcia Football Club
- Scientific Advisor. Nutrium
- Nutritional Advisor. Impulse Center
- Teacher and Coordinator of Postgraduate Studies
- PhD in Nutrition and Food Safety. San Antonio Murcia Catholic University
- Degree in Human Nutrition and Dietetics. San Antonio Murcia Catholic University
- Master's Degree in Clinical Nutrition. San Antonio Murcia Catholic University
- Academic Academia Española de Nutrición y Dietética (AEND)

Professors

Dr. Martínez Noguera, Francisco Javier

- Sports nutritionist at CIARD-UCAM
- Sports nutritionist at Clínica Fisioterapia Jorge Lledó
- Research assistant at CIARD-UCAM
- Sports nutritionist at UCAM Murcia Football Club
- Nutritionist at SANO Center
- Sports nutritionist at UCAM Murcia Basketball Club
- Professional Master's Degree in Sports Science from Universidad Católica San Antonio de Murcia
- Postgraduate Certificate in Human Nutrition and Dietetics at the Catholic University San Antonio of Murcia
- Professional Master's Degree in Nutrition and Food Safety at the Catholic University San Antonio of Murcia

Dr. Ramírez Munuera, Marta

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

Dr. Arcusa Saura, Raúl

- ♦ Nutritionist. Sport Club Castellón
- ♦ Nutritionist in several semi-professional clubs in Castellón
- ♦ Researcher. San Antonio Murcia Catholic University
- ♦ Undergraduate and Graduate Faculty
- ♦ Graduate in Human Nutrition and Dietetics
- ♦ Master's Degree in Nutrition in Physical Activity and Sport

Dr. Montoya Castaño, Johana

- ♦ Sports Nutritionist
- ♦ Nutritionist. Ministry of Sports of Colombia (Mindeportes)
- ♦ Scientific Advisor. Bionutrition, Medellín
- ♦ Undergraduate Sports Nutrition Teacher
- ♦ Nutritionist Dietitian. University of Antioquia
- ♦ Master in Nutrition in Physical Activity and Sport. San Antonio Murcia Catholic University

Dr. Mata, Fernando

- ♦ Sports Nutritionist
- ♦ Scientific Advisor of for Cádiz Club de Fútbol
- ♦ Scientific advisor to the Spanish boxing team
- ♦ Scientific advisor to the Uruguayan weightlifting federation
- ♦ General Manager of NutriScience Spain
- ♦ Coordinator of the Nutrition area of Beiman Clinics
- ♦ Coordinator of the SAMD Nutrition group
- ♦ PhD in Biomedicine
- ♦ Graduate in Dietetics and Nutrition
- ♦ Professional Master's Degree in Translational Biomedical Research from the University of Cordoba
- ♦ Professional Master's Degree in Physiology, University of Barcelona



The members of this faculty are up to date on all the innovations that the field of nursing is exploiting today to care for the health of disabled patients"

06

Educational Plan

The syllabus of this Hybrid Master's Degree has been designed based on the latest scientific evidence on nutritional status assessment tools and calculation of personalized dietary plans. Throughout its modules, the most current technological contributions to analyze muscle physiology and metabolic behavior in athletes are examined. To master these subjects, TECH provides nurses not only with conventional theoretical resources, but also with a wide range of multimedia products, such as info graphics and videos, which allow the development of competencies in a faster and more flexible way.



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Relearning and other didactic methods implemented by TECH will help you overcome the academic contents of this Hybrid Master's Degree in an immediate and effective manner”

Module 1. Muscular and Metabolic Physiology Related to Exercise

- 1.1. Cardiovascular Adaptations Related to Exercise
 - 1.1.1. Increased Systolic Volume
 - 1.1.2. Decreased Heart Rate
- 1.2. Ventilatory Adaptations Related to Exercise
 - 1.2.1. Changes in the Ventilatory Volume
 - 1.2.2. Changes in Oxygen Consumption
- 1.3. Hormonal Adaptations Related to Exercise
 - 1.3.1. Cortisol
 - 1.3.2. Testosterone
- 1.4. Muscle Structure and Types of Muscle Fibers
 - 1.4.1. Muscle Fiber
 - 1.4.2. Type I Muscle Fiber
 - 1.4.3. Type II Muscle Fibers
- 1.5. The Concept of Lactic Threshold
- 1.6. ATP and Phosphagen Metabolism
 - 1.6.1. Metabolic Pathways for ATP Resynthesis during Exercise
 - 1.6.2. Phosphagen Metabolism
- 1.7. Carbohydrate Metabolism
 - 1.7.1. Carbohydrate Mobilization during Exercise
 - 1.7.2. Types of Glycolysis
- 1.8. Lipid Metabolism
 - 1.8.1. Lipolysis
 - 1.8.2. Fat Oxidation during Exercise
 - 1.8.3. Ketone Bodies
- 1.9. Protein Metabolism
 - 1.9.1. Ammonium Metabolism
 - 1.9.2. Amino Acid Oxidation
- 1.10. Mixed Bioenergetics of Muscle Fibers
 - 1.10.1. Energy Sources and their Relation to Exercise
 - 1.10.2. Factors Determining the Use of One or Another Energy Source during Exercise

Module 2. Athlete Assessment at Different Times of the Season

- 2.1. Biochemical Evaluation
 - 2.1.1. Blood Count:
 - 2.1.2. Overtraining Markers
- 2.2. Anthropometric Assessment
 - 2.2.1. Body composition
 - 2.2.2. ISAK Profile
- 2.3. Preseason
 - 2.3.1. High Workload
 - 2.3.2. Assuring Caloric and Protein Intake
- 2.4. Competitive Season
 - 2.4.1. Sports Performance
 - 2.4.2. Recovery between Games
- 2.5. Transition Period
 - 2.5.1. Vacation Period
 - 2.5.2. Changes in Body Composition
- 2.6. Travel
 - 2.6.1. Tournaments during the Season
 - 2.6.2. Off-Season Tournaments (World Cups, European Cups and The Olympic Games)
- 2.7. Athlete Monitoring
 - 2.7.1. Basal Athlete Status
 - 2.7.2. Evolution during the Season
- 2.8. Sweat Rate Calculation
 - 2.8.1. Hydric Losses
 - 2.8.2. Calculation Protocol
- 2.9. Multidisciplinary Work
 - 2.9.1. The Role of the Nutritionist in the Athlete's Environment
 - 2.9.2. Communication with the Rest of the Areas
- 2.10. Doping
 - 2.10.1. WADA List
 - 2.10.2. Anti-doping Tests

Module 3. Watersports

- 3.1. History of Watersports
 - 3.1.1. Olympics and Major Tournaments
 - 3.1.2. Watersports Today
- 3.2. Performance Limitations
 - 3.2.1. Water Sports in the Water (Swimming, Water Polo...)
 - 3.2.2. Water Sports on the Water (Surfing, Sailing, Canoeing, Canoeing...)
- 3.3. The Basic Characteristics of Water Sports
 - 3.3.1. Water Sports in the Water (Swimming, Water Polo...)
 - 3.3.2. Water Sports on the Water (Surfing, Sailing, Canoeing, Canoeing...)
- 3.4. Physiology in Aquatic Sports
 - 3.4.1. Energy Metabolism
 - 3.4.2. Athlete Biotype
- 3.5. Education
 - 3.5.1. Strength
 - 3.5.2. Resistance
- 3.6. Body composition
 - 3.6.1. Swimming
 - 3.6.2. Water polo
- 3.7. Pre-competition
 - 3.7.1. 3 Hours Before
 - 3.7.2. 1 Hour Before
- 3.8. Pre-competition
 - 3.8.1. Carbohydrates
 - 3.8.2. Hydration
- 3.9. After the Competition
 - 3.9.1. Hydration
 - 3.9.2. Protein
- 3.10. Ergogenic Aids
 - 3.10.1. Creatine
 - 3.10.2. Caffeine

Module 4. Adverse Conditions

- 4.1. The History of Sport in Extreme Conditions
 - 4.1.1. Winter Competitions throughout History
 - 4.1.2. Competitions in Hot Environments Today
- 4.2. Performance Limitations in Hot Climates
 - 4.2.1. Dehydration
 - 4.2.2. Fatigue
- 4.3. Basic Characteristics in Hot Climates
 - 4.3.1. High Temperature and Humidity
 - 4.3.2. Acclimatization
- 4.4. Nutrition and Hydration in Hot Climates
 - 4.4.1. Hydration and Electrolytes
 - 4.4.2. Carbohydrates
- 4.5. Performance Limitations in Cold Climates
 - 4.5.1. Fatigue
 - 4.5.2. Bulky Clothing
- 4.6. Basic Characteristics in Cold Climates
 - 4.6.1. Extreme Cold
 - 4.6.2. Reduced VO2 Max
- 4.7. Nutrition and Hydration in Cold Climates
 - 4.7.1. Hydration
 - 4.7.2. Carbohydrates

Module 5. Vegetarianism and Veganism

- 5.1. Vegetarianism and Veganism in the History of Sport
 - 5.1.1. The Beginnings of Veganism in Sport
 - 5.1.2. Vegetarian Athletes Today
- 5.2. Different Types of Vegan Food
 - 5.2.1. The Vegan Athlete
 - 5.2.2. The Vegetarian Athlete
- 5.3. Common Errors in the Vegan Athlete
 - 5.3.1. Energy Balance
 - 5.3.2. Protein Consumption
- 5.4. Vitamin B12
 - 5.4.1. B12 Supplementation
 - 5.4.2. Bioavailability of Spirulina Algae
- 5.5. Protein Sources in the Vegan/Vegetarian Diet
 - 5.5.1. Protein Quality
 - 5.5.2. Environmental Sustainability
- 5.6. Other Key Nutrients in Vegans
 - 5.6.1. Conversion of ALA to EPA/DHA
 - 5.6.2. Fe, Ca, Vit-D and Zn
- 5.7. Biochemical Evaluation/Nutritional Shortcomings
 - 5.7.1. Anaemia
 - 5.7.2. Sarcopenia
- 5.8. Vegan vs. Omnivorous Food
 - 5.8.1. Evolutionary Food
 - 5.8.2. Current Food
- 5.9. Ergogenic Aids
 - 5.9.1. Creatine
 - 5.9.2. Vegetable Protein
- 5.10. Factors that Decrease Nutrient Absorption
 - 5.10.1. High Fiber Intake
 - 5.10.2. Oxalates



Module 6. The Type 1 Diabetic Athlete

- 6.1. Knowing about Diabetes and its Pathology
 - 6.1.1. The Incidence of Diabetes
 - 6.1.2. Pathophysiology of Diabetes
 - 6.1.3. The Consequences of Diabetes
- 6.2. Exercise Physiology in People with Diabetes
 - 6.2.1. Maximal, Submaximal Exercise and Muscle Metabolism during Exercise
 - 6.2.2. Differences in the Metabolic Level during Exercise in People with Diabetes
- 6.3. Exercise in People with Type 1 Diabetes
 - 6.3.1. Exercise in People with Type 1 Diabetes
 - 6.3.2. Exercise Duration and Carbohydrate Intake
- 6.4. Exercise in People with Type 2 Diabetes. Blood Sugar Control
 - 6.4.1. Risks of Physical Activity in People with Type 2 Diabetes
 - 6.4.2. Benefits of Exercise in People with Type 2 Diabetes
- 6.5. Exercise in Children and Adolescents with Diabetes
 - 6.5.1. Metabolic Effects of Exercise
 - 6.5.2. Precautions during Exercise
- 6.6. Insulin Therapy and Exercise
 - 6.6.1. Insulin Infusion Pump
 - 6.6.2. Types of Insulins
- 6.7. Nutritional Strategies during Sport and Exercise in Type 1 Diabetes
 - 6.7.1. From Theory to Practice
 - 6.7.2. Carbohydrate Intake Before, During and After Physical Exercise
 - 6.7.3. Hydration Before, During and After Physical Exercise
- 6.8. Nutritional Planning in Endurance Sports
 - 6.8.1. Marathon
 - 6.8.2. Cycling
- 6.9. Nutritional Planning in Team Sports
 - 6.9.1. Soccer
 - 6.9.2. Rugby
- 6.10. Sports Supplements and Diabetes
 - 6.10.1. Potentially Beneficial Supplements for Athletes with Diabetes

Module 7. Para-Athletes

- 7.1. Classification and Categories in Para-Athletes
 - 7.1.1. What is a Para Athlete?
 - 7.1.2. How are Para Athletes Classified?
- 7.2. Sports Science in Para Athletes
 - 7.2.1. Metabolism and Physiology
 - 7.2.2. Biomechanics
 - 7.2.3. Psychology
- 7.3. Energy Requirements and Hydration in Para-Athletes
 - 7.3.1. Optimal Energy Demands for Training
 - 7.3.2. Hydration Planning before, during and after Training and Competitions
- 7.4. Nutritional Problems in the Different Categories of Para Athletes According to Pathology or Anomaly
 - 7.4.1. Spinal Cord Injuries
 - 7.4.2. Cerebral Palsy and Acquired Brain Injuries
 - 7.4.3. Amputees
 - 7.4.4. Vision and Hearing Impairment
 - 7.4.5. Intellectual Impairments
- 7.5. Nutritional Planning in Parathletes With Spinal Cord Injury, Cerebral Palsy and Acquired Brain Injuries
 - 7.5.1. Nutritional Requirements (Macro and Micronutrients)
 - 7.5.2. Sweating and Fluid Replacement during Exercise
- 7.6. Nutritional Planning in Amputee Para Athletes
 - 7.6.1. Energy Requirements
 - 7.6.2. Macronutrients
 - 7.6.3. Thermoregulation and Hydration
 - 7.6.4. Nutritional Issues Related to Prosthetics
- 7.7. Planning and Nutritional Problems in Para Athletes with Vision-Hearing Impairment and Intellectual Impairment
 - 7.7.1. Sports Nutrition Problems With Vision Impairment: Retinitis Pigmentosa, Diabetic Retinopathy, Albinism, Stargardt's Disease and Hearing Pathologies
 - 7.7.2. Sports Nutrition Problems With Intellectual Deficiencies: Down Syndrome, Autism and Asperger's, Phenylketonuria

- 7.8. Body Composition in Para Athletes
 - 7.8.1. Measurement Techniques
 - 7.8.2. Factors Influencing the Reliability of Different Measurement Methods
- 7.9. Pharmacology and Nutrient Interactions
 - 7.9.1. Different Types of Drugs Taken by Para Athletes
 - 7.9.2. Micronutrient Deficiencies in Para Athletes
- 7.10. Ergogenic Aids
 - 7.10.1. Potentially Beneficial Supplements for Para Athletes
 - 7.10.2. Negative Health Consequences, Contamination and Doping Problems Due To the Intake of Ergogenic Aids

Module 8. Sports by Weight Category

- 8.1. Characteristics of the Main Sports by Weight Category
 - 8.1.1. Regulation
 - 8.1.2. Categories
- 8.2. Programming of the Season
 - 8.2.1. Competitions
 - 8.2.2. Macrocycle
- 8.3. Body composition
 - 8.3.1. Combat Sports
 - 8.3.2. Weightlifting
- 8.4. Stages of Muscle Mass Gain
 - 8.4.1. % Body Fat
 - 8.4.2. Programming
- 8.5. Definition Stages
 - 8.5.1. Carbohydrates
 - 8.5.2. Protein
- 8.6. Pre-competition
 - 8.6.1. Peak Weak
 - 8.6.2. Before Weighing
- 8.7. Pre-competition
 - 8.7.1. Practical Applications
 - 8.7.2. Timing

- 8.8. After the Competition
 - 8.8.1. Hydration
 - 8.8.2. Protein
- 8.9. Ergogenic Aids
 - 8.9.1. Creatine
 - 8.9.2. Whey Protein

Module 9. Different Stages or Specific Population Groups

- 9.1. Nutrition in the Female Athlete
 - 9.1.1. Limiting Factors
 - 9.1.2. Requirements
- 9.2. Menstrual Cycle
 - 9.2.1. Luteal Phase
 - 9.2.2. Follicular Phase
- 9.3. Triad
 - 9.3.1. Amenorrhea
 - 9.3.2. Osteoporosis
- 9.4. Nutrition in the Pregnant Female Athlete
 - 9.4.1. Energy Requirements
 - 9.4.2. Micronutrients
- 9.5. The Effects of Physical Exercise on the Child Athlete
 - 9.5.1. Strength Training
 - 9.5.2. Endurance Training
- 9.6. Nutritional Education in the Child Athlete
 - 9.6.1. Sugar
 - 9.6.2. Eating Disorders
- 9.7. Nutritional Requirements in the Child Athlete
 - 9.7.1. Carbohydrates
 - 9.7.2. Proteins
- 9.8. Changes Associated with Aging
 - 9.8.1. % Body Fat
 - 9.8.2. Muscle Mass

- 9.9. Main Problems in the Older Athlete
 - 9.9.1. Joints
 - 9.9.2. Cardiovascular Health
- 9.10. Interesting Supplements for Older Athletes
 - 9.10.1. Whey Protein
 - 9.10.2. Creatine

Module 10. The Injury Period

- 10.1. Introduction
- 10.2. Prevention of Injuries in Athletes
 - 10.2.1. Relative Energy Availability in Sport
 - 10.2.2. Oral Health and Injury Implications
 - 10.2.3. Fatigue, Nutrition and Injuries
 - 10.2.4. Sleep, Nutrition and Injuries
- 10.3. Phases of Injury
 - 10.3.1. Immobilization Phase. Inflammation and Changes Occurring during this Phase
 - 10.3.2. Return of Activity Phase
- 10.4. Energy Intake during the Period of Injury
- 10.5. Macronutrient Intake during the Period of Injury
 - 10.5.1. Carbohydrate Intake
 - 10.5.2. Fat Intake
 - 10.5.3. Protein Intake
- 10.6. Intake of Micronutrients of Special Interest during Injury
- 10.7. Sports Supplements with Evidence during the Period of Injury
 - 10.7.1. Creatine
 - 10.7.2. Omega 3
 - 10.7.3. Others
- 10.8. Tendon and Ligament Injuries
 - 10.8.1. Introduction to Tendon and Ligament Injuries. Tendon Structure
 - 10.8.2. Collagen, Gelatin and Vitamin C. Can they Help?
 - 10.8.3. Other Nutrients Involved in Collagen Synthesis
- 10.9. The Return to Competition
 - 10.9.1. Nutritional Considerations in the Return to Competition
- 10.10. Interesting Case Studies in Scientific Injury Literature

07

Clinical Internship

At the end of the theoretical and online learning period of this Hybrid Master's Degree, TECH has contemplated the realization of an on-site internship for nurses. From this intensive stay, they will have access to renowned hospital centers and will provide direct assistance to real cases for 3 rigorous weeks.



“

During the second stage of this Hybrid Master's Degree, you will develop the nursing monitoring of specific nutritional requirements for athletes with Diabetes. in a prestigious hospital”

The practical phase of this educational program consists of 120 hours of preparation in a referral medical facility. The nurse will complete 8-hour days, from Monday to Friday, under the supervision of an assistant tutor, who will assign specific responsibilities and tasks for the approach of real cases with complex nutritional pathologies.

The graduate will have the opportunity to interact with other professionals of the institution and share experiences and skills. In addition, they will have access to modern and high-end equipment to perform physiological examinations and effective calculations of nutritional requirements. Upon completion of this stage of face-to-face training, you will be up to date in a theoretical and practical manner on the main novelties in your field of interest and be ready to apply them in your daily work practice.

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 professors and other fellow trainees who facilitate teamwork and multidisciplinary integration as transversal competencies for nursing care practice (learning to be and learning to relate).

The procedures described below will form the basis of the practical part of the training, 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
New Developments in Food and nutrition	Perform Food Composition Tables and Nutritional Databases
	Test transgenic foods to contemporary dietary approaches
	Assess the implications of phytochemicals and non-nutritive compounds in the daily diet of the athlete
Methodologies of the nutritional consultation	Evaluating physiological adaptation to different types of physical exercises
	Periodically examine the basis of physiological regulation of nutrition, appetite and satiety
	Explore nutritional requirements in situations of metabolic stress
Assessment of nutritional and dietary status	Calculating energy expenditure by specific assessment methods
	Preventing eating disorders such as Vigorexia, Orthorexia, Anorexia through the necessary psychological assistance
	Detect gastrointestinal problems by means of energy drinks and gels made with hydrogel technology
	Examine the protein intake through the absorption of micronutrients such as vitamin D
Nutrition for the diabetic athlete and the para-athlete	Assess the different insulins or medications used by diabetics and determine how their use is best suited to the physical exercise being performed by the sick athlete
	Monitor the nutritional requirements for people with diabetes both in daily life and during exercise in their daily life and exercise to improve their health
	Adequately measure the interactions between drug intake in these athletes and nutrients to avoid deficits



These clinical internships will broaden your professional horizons under the expert guidance of an associate tutor"

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 achieving this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchase 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 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. MENTORING:** During the Hybrid 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 center's responsibility and the professional will be informed 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 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 Hybrid Master's Degree will receive a certificate accrediting their stay at the center.
- 5. EMPLOYMENT RELATIONSHIP:** Hybrid 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 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. The Hybrid 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 practical stay of this Hybrid Master's Degree is distinguished by giving nurses access to prestigious health institutions. There they will be able to apply theoretical knowledge in the care of athletes of special populations with different nutritional requirements. During 3 weeks, the professional will acquire a deeper mastery of the contents studied and their correct execution, incorporating the most outstanding advances in this area.



“

Enroll in this Hybrid Master's Degree and update your practical competences according to the latest scientific evidence on Sports Nutrition for the Nursing field”

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



Nurses

Hospital HM Regla

Country City
Spain León

Address: Calle Cardenal Landázuri, 2,
24003, León

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

Related internship programs:

- Update on Psychiatric Treatment in Minor Patients



Nurses

Hospital HM Nou Delfos

Country City
Spain Barcelona

Address: Avinguda de Vallcarca, 151,
08023 Barcelona

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

Related internship programs:

- Aesthetic Medicine
- Clinical Nutrition in Medicine



Nurses

Hospital HM Nuevo Belén

Country City
Spain Madrid

Address: Calle José Silva, 7, 28043, Madrid

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

Related internship programs:

- General and Digestive System Surgery
- Clinical Nutrition in Medicine



Nurses

Policlínico HM Distrito Telefónica

Country City
Spain Madrid

Address: Ronda de la Comunicación,
28050, Madrid

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

Related internship programs:

- Optical Technologies and Clinical Optometry
- General and Digestive System Surgery



Nurses

Policlínico HM Gabinete Velázquez

Country City
Spain Madrid

Address: C. de Jorge Juan, 19, 1º 28001,
28001, Madrid

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

Related internship programs:

- Clinical Nutrition in Medicine
- Aesthetic Plastic Surgery



Nurses

Policlínico HM Las Tablas

Country City
Spain Madrid

Address: C. de la Sierra de Atapuerca, 5,
28050, Madrid

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

Related internship programs:

- Trauma Nursing
- Diagnosis in Physiotherapy



Nurses

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



Nurses

Policlínico HM Sanchinarro

Country City
Spain Madrid

Address: Av. de Manoteras, 10,
28050, Madrid

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

Related internship programs:

- Gynecological Care for Midwives
- Nursing in the Digestive Tract Department

“

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

05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

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



“

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

At TECH Nursing School 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. Nurses learn better, faster, and more sustainably over time.

With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing 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. Nurses 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 nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.

The nurse 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 have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical 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.

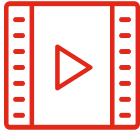
Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is really 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.



Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. 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 them as many times as you want.



Interactive Summaries

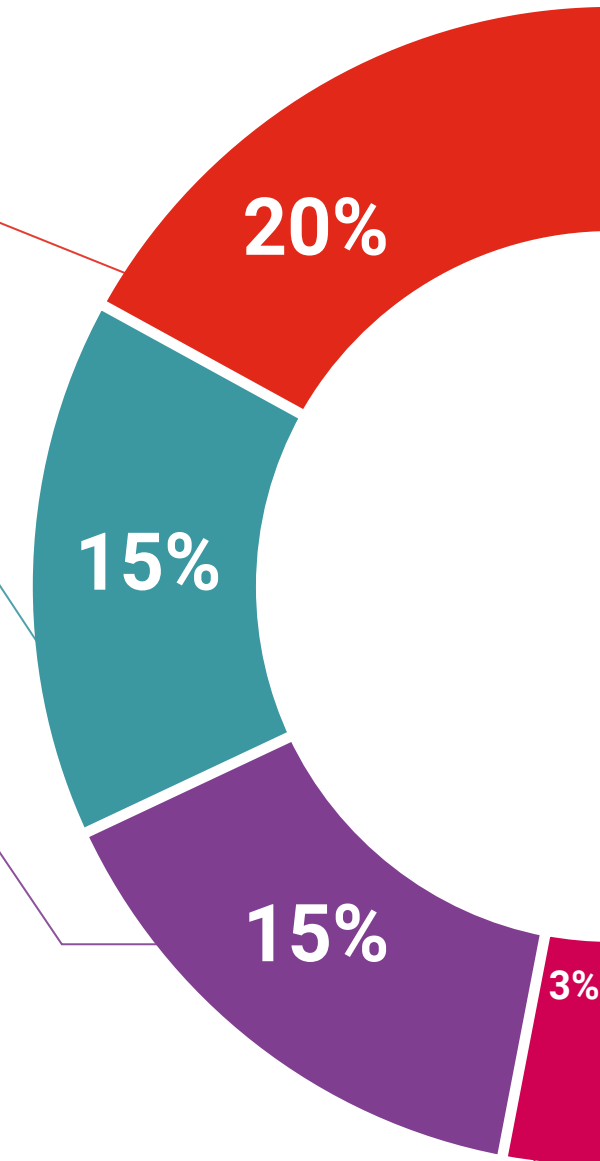
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

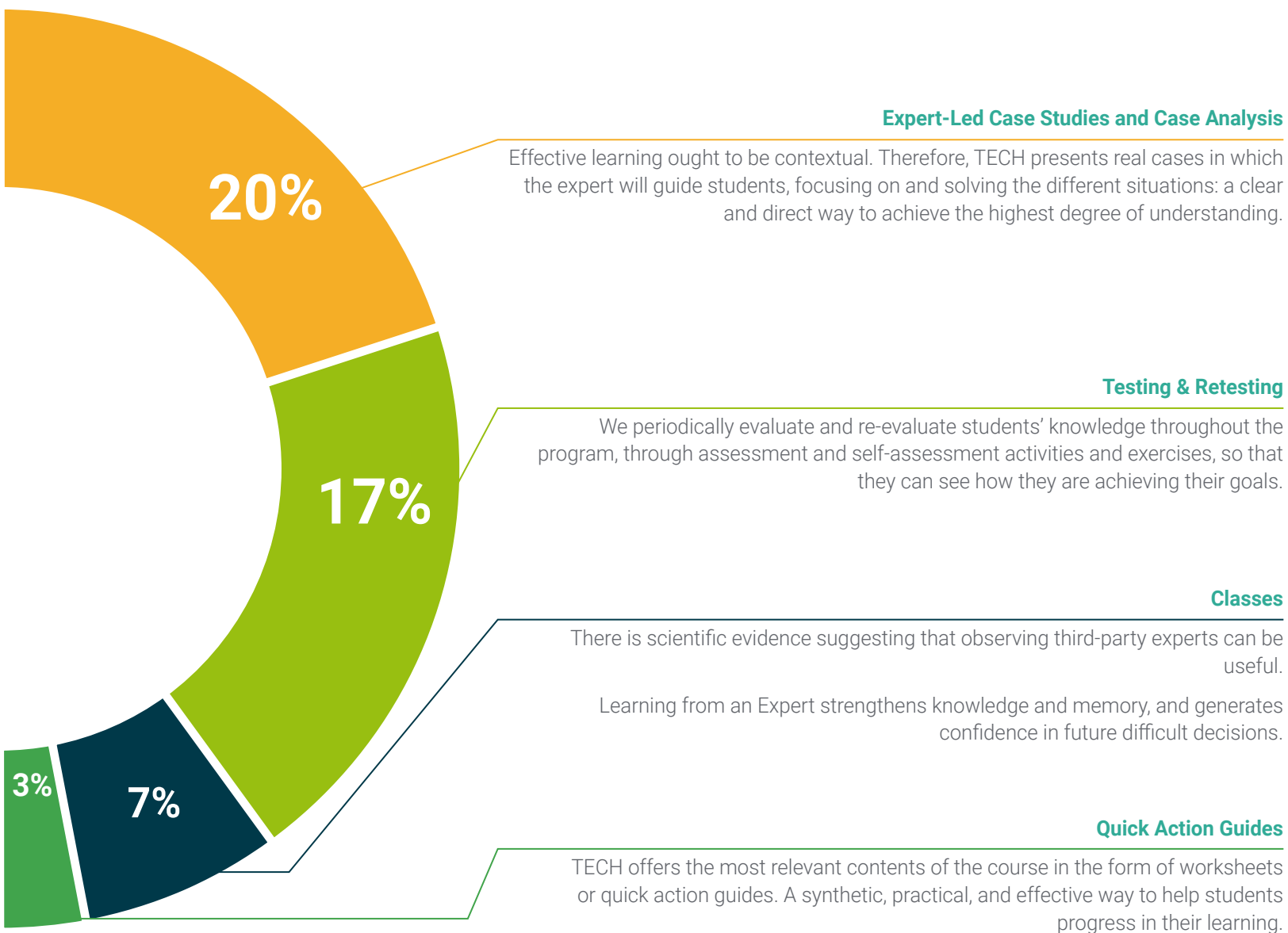
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.





10 Certificate

The Hybrid Master's Degree in Sport Nutrition in Special Populations for Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to a Hybrid Master's Degree diploma issued by TECH Global University.



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

This program will allow you to obtain your **Hybrid Master's Degree diploma in Sport Nutrition in Special Populations for Nursing** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

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

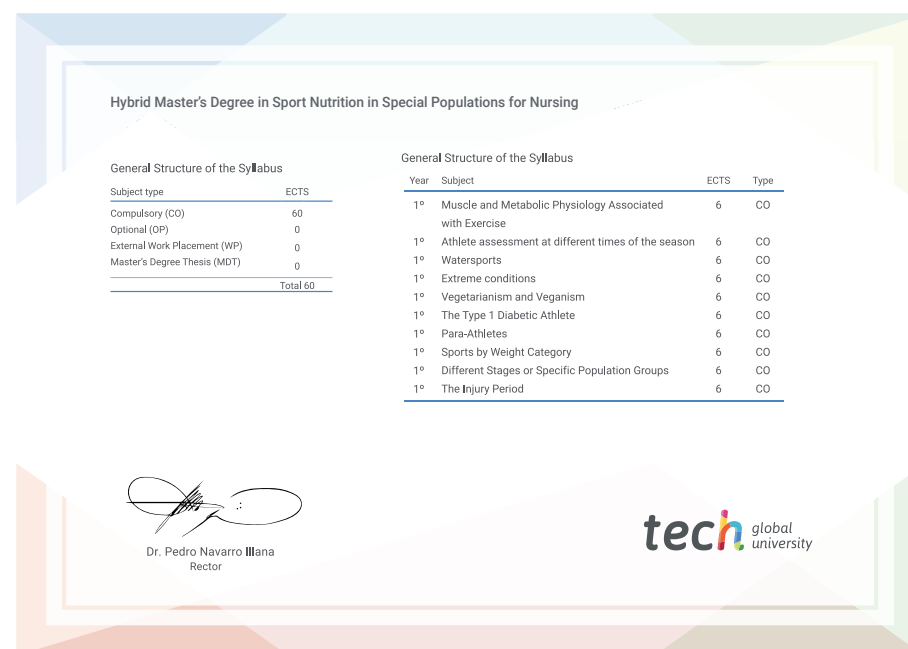
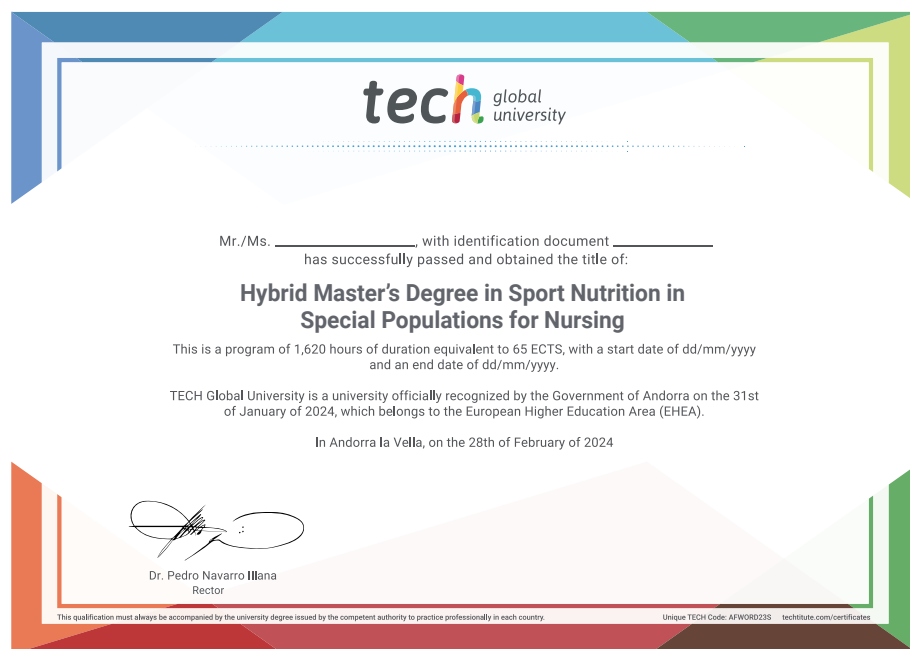
Title: **Hybrid Master's Degree in Sport Nutrition in Special Populations for Nursing**

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

Duration: **12 months**

Certificate: **TECH Global University**

Recognition: **60 + 5 ECTS Credits**





Hybrid Master's Degree
Sport Nutrition in Special
Populations for Nursing

Modality: Hybrid (Online + Clinical Internship)

Duration: 12 months

Certificate: TECH Global University

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Hybrid Master's Degree

Sport Nutrition in Special Populations for Nursing