

Postgraduate Certificate

Sports Nutrition in People with Type 1 Diabetes

Endorsed by the NBA



tech global
university





Postgraduate Certificate Sports Nutrition in People with Type 1 Diabetes

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/physiotherapy/postgraduate-certificate/sports-nutrition-people-type-1-diabetes

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01

Introduction

Type 1 Diabetes is a chronic disease that affects millions of people worldwide. For people with this condition, blood glucose management is critical to prevent complications and maintain a healthy lifestyle. In this regard, physical exercise for these individuals poses unique challenges in terms of glycemic control. Given this, Sports Nutrition is a key tool to help them optimize their athletic performance and effectively manage their disease. Physiotherapy professionals therefore need to have a comprehensive understanding of the relationship between nutrition and glycemic control. To facilitate this understanding, TECH is launching a pioneering 100% online program on this subject.



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With this Postgraduate Certificate, based on Relearning, you will develop advanced skills to design personalized nutrition plans that optimize the sports performance of users with Type 1 Diabetes”

The International Diabetes Federation predicts in a recent report that this disease will affect approximately 643 million people over the next few years. At the same time, the organization points out that the interaction between food intake, physical activity and glycemic response is essential for metabolic control in these patients. In this context, physiotherapists need to incorporate into their range of clinical procedures the most effective nutritional strategies and exercise programs for people with Type 1 Diabetes who participate in sports activities to optimize their performance and health.

Aware of this, TECH is launching a cutting-edge program in Sports Nutrition in People with Type 1 Diabetes. Its main objective is for specialists to understand the biological and metabolic bases of this disease. To this end, the academic itinerary will delve into the physiology of exercise in people with this pathology and the precautions they should take during the activity. Likewise, the didactic materials will provide graduates with the most efficient nutritional techniques to maintain blood glucose levels and avoid episodes of hyperglycemia. In this sense, the program will emphasize the intake of carbohydrates before, during and after physical exercise. In addition, the program will feature the participation of a renowned International Guest Director, who will give a master class that will delve into issues such as the most beneficial supplements that are most beneficial for athletes with Diabetes.

Regarding the methodology of this university program, it is taught in a convenient 100% online format, therefore adapting to the schedules of physiotherapists. It is also based on the innovative Relearning teaching system, of which TECH is a pioneer. This method consists of the reiteration of key concepts, ensuring that students consolidate their knowledge progressively. All this with the support of a teaching staff of international prestige, which will support you throughout the program.

This **Postgraduate Certificate in Sports Nutrition in People with Type 1 Diabetes** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Sports Nutrition in Specific Populations
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ 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



A prestigious International Guest Director will offer a comprehensive Masterclass to bring you closer to the latest advances in sports supplementation for people with Diabetes”

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You will delve into the use of the Insulin Infusion Pump to help your clients optimize their glycemic control and safety during exercise”

The program's teaching staff includes professionals from the industry who contribute their work experience to this program, as well as renowned specialists from leading 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 education 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 during the course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

You will provide effective dietary recommendations based on the latest scientific evidence on carbohydrates, proteins and fats.

TECH's 100% online methodology will allow you to update your knowledge without interrupting your professional work.



02 Objectives

Through this program, physical therapists will understand the basics of Type 1 Diabetes and its impact on metabolism during physical exercise. At the same time, graduates will be able to examine the nutritional status and energy needs of these individuals.

In this way, professionals will develop advanced skills to design individualized nutritional plans that take into account personal preferences, sports intensity and glycemic control goals. In addition, specialists will perform monitoring procedures to check blood glucose levels and response to food intake.





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You will develop advanced skills to assess the nutritional status and energy needs of athletes with Type 1 Diabetes”



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 various fields in order to achieve maximum sports performance
- ♦ Learn advanced knowledge about nutritional planning in professional athletes from team sports to achieve the highest sports performance
- ♦ Manage and consolidate the initiative, entrepreneurial spirit to implement projects related to nutrition in physical activity and sport
- ♦ Know how to incorporate the different scientific advances into one's own professional field
- ♦ Acquire skills to work in a multidisciplinary environment
- ♦ Gain an advanced understanding of the context in which the area of their specialty is developed
- ♦ Manage advanced skills in the detection of possible signs of nutritional changes associated with sports activities
- ♦ Manage the necessary skills through the teaching-learning process that will allow them to continue specializing and learning in the field of Nutrition in sports, both through the contacts established with teachers and professionals of the Master's Degree as well as independently
- ♦ Specialize in the structure of muscle tissue and its role in sports
- ♦ Gain knowledge about the energetic 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 energetic and nutritional needs of child athletes



Specific Objectives

- ♦ Establish the physiological and biochemical mechanism of diabetes both at rest and during exercise
- ♦ Delve into how the different insulins or medications that diabetics use work
- ♦ Assess the nutritional requirements for people with diabetes both in their daily life and in exercise, to improve their health
- ♦ Delve into the necessary knowledge to be able to plan the nutrition of athletes with diabetes in order to improve their health and performance

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You will learn valuable lessons through real cases and practical exercises in simulated learning environments”



03

Course Management

For both the design and development of this Postgraduate Certificate, TECH has brought together prestigious specialists in the field of Sports Nutrition. These professionals, who make up the teaching staff, have extensive work experience in improving sports performance and nutritional well-being of numerous athletes. Thanks to their solid knowledge in this field, they have designed high quality academic materials adapted to the current needs of the labor market. Undoubtedly, this is an endorsement for graduates, who will enjoy an academic experience that will allow them to make a qualitative leap in their professional careers.



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The diversity of talents of the teaching staff will provide a dynamic and rewarding learning environment. Specialize with the best!"

International Guest Director

Jamie Meeks has demonstrated throughout her career her dedication to Sports Nutrition. After graduating from Louisiana State University with a degree in Sports Nutrition, she 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 undergraduate degree, Jamie Meeks continued her education at the University of Arkansas, where she completed her internship in Dietetics. She then went on to earn 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 Chartered and Professional Sports Dietitians.



Ms. Meeks, Jamie

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

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

Management



Dr. Marhuenda Hernández, Javier

- ♦ Professional soccer clubs Nutritionist
- ♦ Head of Sports Nutrition. Club Albacete Balompie 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 Jorge Lledó Physiotherapy Clinic
- ◆ Research assistant at CIARD-UCAM
- ◆ Sports nutritionist at UCAM Murcia Football Club
- ◆ Nutritionist at SANO Center
- ◆ Sports nutritionist at UCAM Murcia Basketball Club
- ◆ PhD in Sports Science from the Catholic University San Antonio de Murcia
- ◆ Graduate in Human Nutrition and Dietetics from the Catholic University San Antonio of Murcia
- ◆ Master's Degree in Nutrition and Food Safety from the Catholic University San Antonio of Murcia

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Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice”

04

Structure and Content

Through this university program, physical therapists will have a broad understanding of how Type 1 Diabetes affects glucose metabolism and the body's response to physical exercise, as well as its nutritional implications. The itinerary will examine this disease in detail, addressing aspects such as its pathophysiology and consequences. Likewise, the syllabus will delve into the impact of Insulin Therapy on physical activity and will analyze the precautions that should be taken into account during sports practice. The program will provide graduates with the most appropriate nutritional strategies for these individuals, emphasizing hydration and carbohydrate intake.



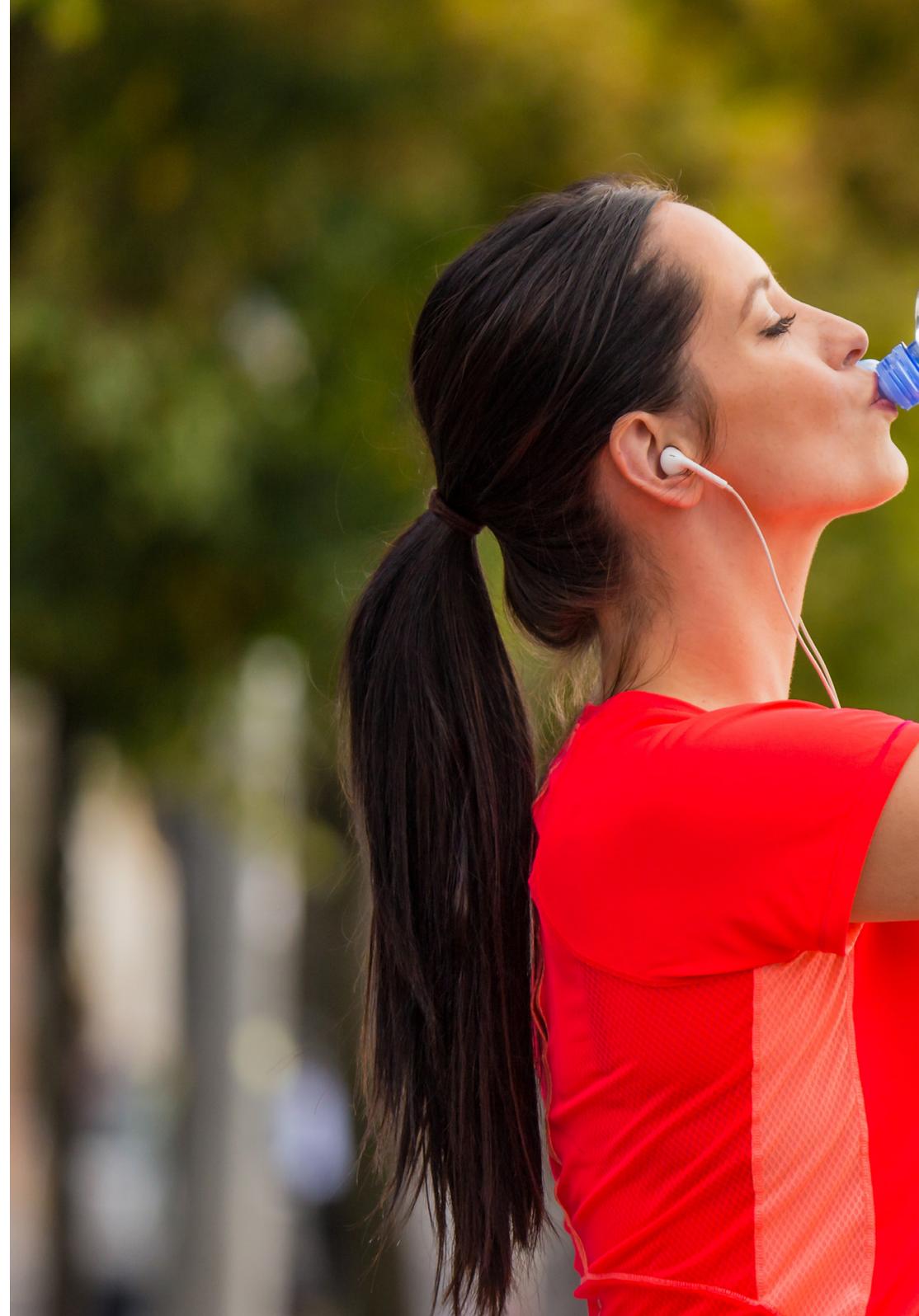


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You will adjust food intake according to the intensity of physical exercise performed by individuals with Type 1 Diabetes and contribute to maintaining optimal blood glucose levels”

Module 1. The Type 1 Diabetic Athlete

- 1.1. Knowing about Diabetes and its Pathology
 - 1.1.1. Incidence of Diabetes
 - 1.1.2. Diabetes Pathophysiology
 - 1.1.3. Consequences of Diabetes
- 1.2. Exercise Physiology in People with Diabetes
 - 1.2.1. Maximal, Submaximal Exercise and Muscle Metabolism during Exercise
 - 1.2.2. Differences at the Metabolic Level during Exercise in People with Diabetes
- 1.3. Exercise in People with Type 1 Diabetes
 - 1.3.1. Exercise in People with Type 1 Diabetes
 - 1.3.2. Hypoglycemia, Hyperglycemia and Adjustment of Nutritional Treatment
- 1.4. Exercise in People with Type 2 Diabetes Blood Sugar Control
 - 1.4.1. Risks of Physical Activity in People with Type 2 Diabetes
 - 1.4.2. Benefits of Exercise in People with Type 2 Diabetes
- 1.5. Exercise in Children and Adolescents with Diabetes
 - 1.5.1. Metabolic Effects of Exercise
 - 1.5.2. Precautions during Exercise
- 1.6. Insulin Therapy and Exercise
 - 1.6.1. Insulin Infusion Pump
 - 1.6.2. Types of Insulins
- 1.7. Nutritional Strategies during Sport and Exercise in Type 1 Diabetes
 - 1.7.1. From Theory to Practice
 - 1.7.2. Carbohydrate Intake Before, During and After Physical Exercise
 - 1.7.3. Hydration Before, During and After Physical Exercise
- 1.8. Nutritional Planning in Endurance Sports
 - 1.8.1. Marathon
 - 1.8.2. Cycling
- 1.9. Nutritional Planning in Team Sports
 - 1.9.1. Soccer
 - 1.9.2. Rugby
- 1.10. Sports Supplements and Diabetes
 - 1.10.1. Potentially Beneficial Supplements for Athletes with Diabetes





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The interactive summaries of each topic will allow you to consolidate in a more dynamic way the concepts of Exercise Physiology in people with Diabetes. Enroll now!”

05

Study Methodology

TECH is the world's first university to combine the case study methodology with Relearning, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



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TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”

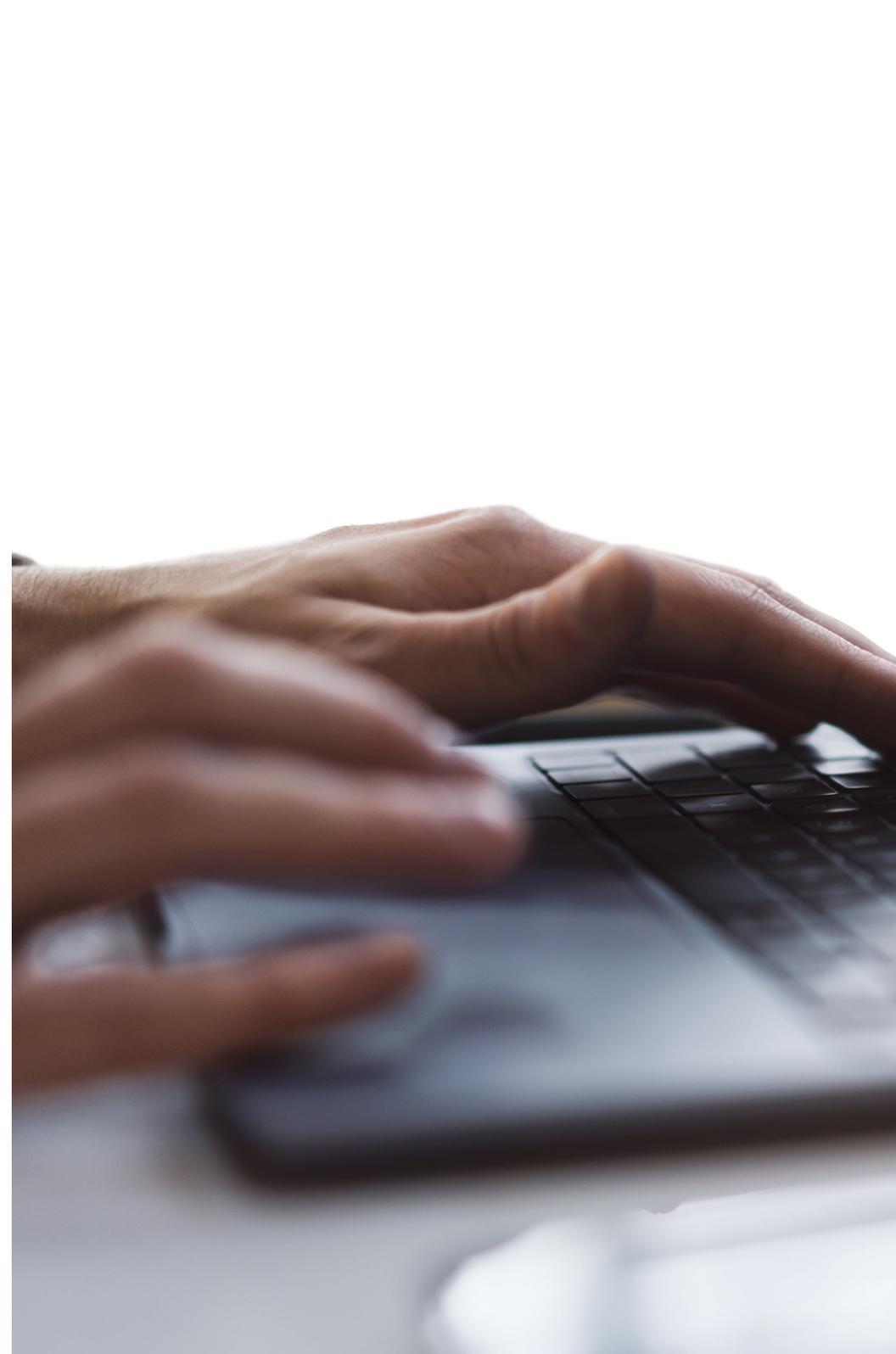
The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist. The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

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*At TECH you will NOT have live classes
(which you might not be able to attend)”*



The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

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TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”

Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”

The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the quality of teaching, quality of materials, course structure and objectives is excellent. Not surprisingly, the institution became the best rated university by its students on the Trustpilot review platform, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



As such, the best educational materials, thoroughly prepared, will be available in this program:



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.



Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



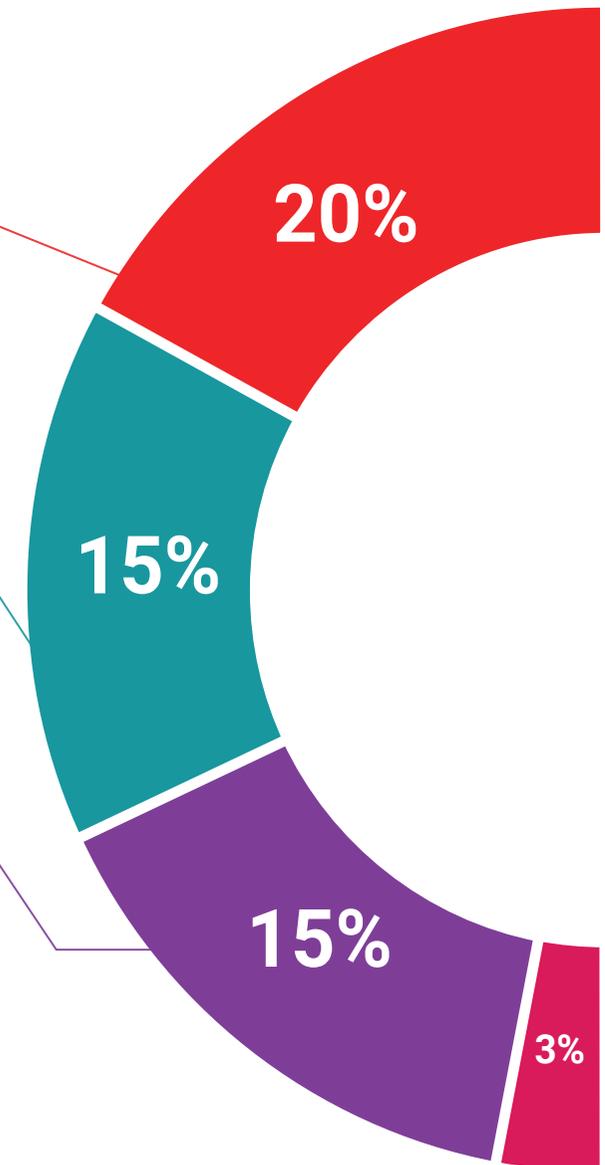
Interactive Summaries

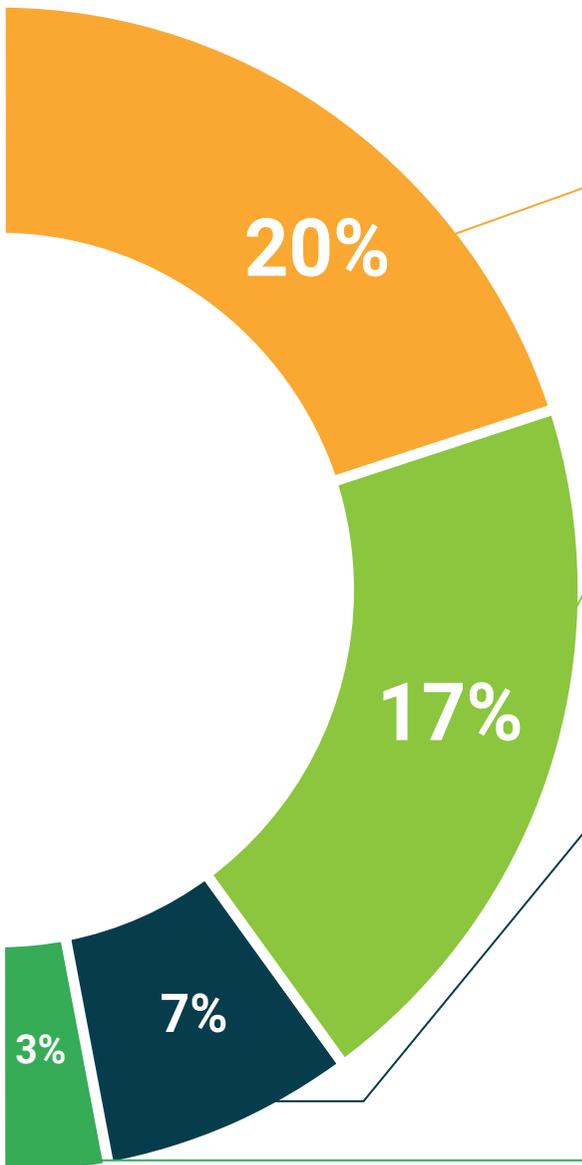
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



Testing & Retesting

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



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 for 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.



06

Certificate

The Postgraduate Certificate in Sports Nutrition in People with Type 1 Diabetes guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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 a **Postgraduate Certificate in Sports Nutrition in People with Type 1 Diabetes** endorsed by **TECH Global University**, the largest digital university in the world.

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

Title: **Postgraduate Certificate in Sports Nutrition in People with Type 1 Diabetes**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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

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



Postgraduate Certificate Sports Nutrition in People with Type 1 Diabetes

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