

# Professional Master's Degree Sports Nursing

Endorsed by the NBA



**tech** technological  
university



## Professional Master's Degree

### Sports Nursing

Course Modality: Online

Duration: 12 months

Certificate: TECH Technological University

Official N° of hours: 1,500 h.

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

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# 01

# Introduction

Sport has undeniably taken on a leading role in the daily lives of many people, even more so since the COVID-19 global pandemic which has only served to increase interest in sports and healthy habits by a significant amount. This development has had an effect on those who work in the field of Sports Nursing, as the continuous advances being made in high-performance environments can be immediately transferred to their daily practice. The care which patients are demanding these days is more and more detailed and specific, so sports nurses must continually strive in order to perfect their techniques and knowledge. This TECH program takes a deep dive into the most important scientific theories and the latest developments in the field of sports nursing, so that nurses can get a comprehensive and integral update in the areas of greatest interest to their career. All this with a multidisciplinary approach which will be carried out 100% online, giving students the necessary freedom to combine this program with even the most demanding professional and personal schedules.



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*You will incorporate the most advanced sports methodology and techniques into your daily practice, presented by a teaching staff of exceptional professionalism”*

There has been a gradual increase in healthier sporting habits, as well as greater demands in high-performance sports, making the role played by sports nurses even more crucial to any institution or team. Their work in assisting and preventing common sports injuries, as well as their ability to coordinate sporting events of various kinds, positions them favorably in a professional sense providing them with good prospects for the future.

Nurses cannot limit their expertise to a specific area of sports care, but, in contrast, they must continually expand their knowledge and update themselves in order to meet the most demanding requirements in the High Performance Sports sector. This program includes modules that cover the nutritional, psychological and pathological aspects of the athlete from an innovative and modern perspective and based on the most up-to-date scientific theories and studies.

This is combined with an eminently practical vision of the theory covered, with a thorough review of real cases that demonstrate the advantage of possessing up-to-date knowledge of highly demanding sports environments. This contextualization will provide a great boost to nurses' whose aim is to update their knowledge, as it allows them to progress more effectively through the topics covered.

In order to make this program as flexible and adaptable to any pace of life, TECH has created a completely online format for the entire program. For this reason, we have eliminated both face-to-face classes and fixed schedules, in order to give nurses the freedom to choose how to manage their studies alongside their daily commitments.

This **Professional Master's Degree in Sports Nursing** contains the most complete and up-to-date scientific program on the market. Its most notable features include:

- ◆ The development of case studies presented by experts in nursing focused on the world of sports
- ◆ The graphic, schematic, and practical contents with which they are created, provide practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ 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



*Get up to date on the latest developments in sports nutrition, with an energy expenditure assessment updated to meet the highest sporting standards”*

“

*Access rich learning material containing a multitude of detailed videos, high quality multimedia content alongside complementary readings to further your knowledge of the topics that interest you the most”*

TECH's teaching staff includes professionals from the sector who contribute their work experience to this training 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 training 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 academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You will not have to sacrifice any aspect of your personal or professional life to take on this degree, thanks to the fact that it is a 100% online master's degree.*

*Learn about the most advanced modes of sample collection and the methodology used in anti-doping controls.*




02

# Objectives

The role played by sports nurses has become especially relevant to high-performance sports institutions or elite-level professional sports teams, the objective of this degree is to provide the best tools, knowledge and scientific theories relating to the practice of Sports Nursing at the highest level. To this end, the teaching team has emphasized those areas of greatest relevance, especially those related to psychology, nutrition, pathology and health fundamentals in high-performance sports.







76 BPM

EKG



BRAIN  
ACTIVITY

61 %

“

*Thanks to TECH's pedagogical methodology, you will incorporate the most up-to-date techniques and approaches into your daily practice almost immediately”*



## General objectives

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- ♦ Review the main fundamentals in sports nutrition and anatomo-physiology of physical activity
- ♦ Study the current legislation regarding sports activities and nursing
- ♦ Gain up-to-date knowledge of the approach to the main sports pathologies
- ♦ Delve into sports psychology and assessment of the athlete at different times of the season
- ♦ Deepen understanding in the use and study of biomechanics in high performance sports environments
- ♦ Develop the concept of sports nutrition in High Performance Sports contexts



*The quality and exhaustive nature of the contents will easily exceed your expectations, due to the thoroughness with which the teaching team has created the syllabus”*





## Specific objectives

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### Module 1. Anatomy-Physiological Fundamentals of Physical Activity

- ◆ Perform an in-depth study of exercise physiology and energy systems
- ◆ Know the main cardiovascular, respiratory, endocrine, digestive and musculoskeletal adaptations to physical sports activity
- ◆ Study the role of nursing intervention in assessing the physical and sporting condition of the player
- ◆ Deepen awareness of the importance of controlling fatigue and overtraining in sports

### Module 2. Sports Nutrition

- ◆ Develop the role of the nurse in the assessment of energy expenditure and sports nutrition
- ◆ Learn about the most recent advances in studies on carbohydrates, fats, proteins and physical exercise
- ◆ Study the role of the nurse in doping and drug testing
- ◆ Expand on the importance of nutrition in the recovery of sports injuries

### Module 3. Nursing, Health and Sports

- ◆ Deepen understanding of the current legislation on the main sport activity
- ◆ Differentiate the legal framework and role of the nurse in high intensity sports
- ◆ Have a comprehensive knowledge of sports law covering athletes and nurses
- ◆ Deepen understanding of the management of a Sports Nursing device from a legal framework

### Module 4. Prescription and Promotion of Sports Physical Activity

- ◆ Delve into the benefits and risks of physical activity in sports
- ◆ Develop nursing intervention in fitness testing in a physical exercise program
- ◆ Know the nurse's role in cardiovascular, endurance, strength, mobility, flexibility and speed training
- ◆ Deepen understanding of sporting physical activities in special population

### Module 5. Sports Pathology

- ◆ Expand on advances made in the classification of sports injuries and predisposing factors to them
- ◆ Evaluate the role of the nurse in the injured athlete, with the main advances in life support techniques, immobilization and wound treatment
- ◆ Delve into the pertinent diagnostic tests in physical sports injuries and the intervention of the nurse in them
- ◆ Update knowledge regarding the main common sports injuries and pathologies

### Module 6. Health Problems in Sports

- ◆ Study nurse intervention in issues such as diabetes, obesity and asthma in exercise
- ◆ Develop knowledge of postural hygiene and medical-surgical pathology in sports
- ◆ Know the nursing intervention in dermatological, ophthalmological and ENT pathologies in sports
- ◆ Deepen awareness of the incidence of heart disease and arterial hypertension in physical activity and sports

### Module 7. Sports Psychology

- ◆ Address the psychological foundations of physical exercise and sports
- ◆ Delve into the neurological basis of movement
- ◆ Analyze the psychopathology of physical exercise and sport
- ◆ Develop nurse intervention in training and competition

### Module 8. Biomechanics Applied to High-Performance Sports

- ◆ Study the basic biomechanics of sports exercise
- ◆ Differentiate movements in one dimension and one plane, as well as kinematics of rotations
- ◆ Delve into the dynamics of rotations
- ◆ Analyze biomechanics applied to High Performance Sports in practical cases



#### **Module 9. Evaluation of the Athlete at Different Times of the Season**

- ◆ Distinguish the nurse's intervention in competitive season and transition periods
- ◆ Delve into the importance of athlete monitoring
- ◆ Analyze the multidisciplinary work of nurses in high competition environments
- ◆ Study the different assessments applicable by the nurse

#### **Module 10. Nutrition Applied to High-Performance Sports**

- ◆ Examine energy metabolism within the athlete's physical effort
- ◆ Expand methods for assessing nutritional status and energy expenditure
- ◆ Delve into nutrition in strength, endurance and team sports
- ◆ Highlight the role of the sports nurse in injuries and eating disorders

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*The quality and exhaustive nature of the contents will easily exceed your expectations due to the thoroughness with which the teaching team has created the syllabus”*

# 03 Skills

Sports nursing at the highest level should not be limited to mere basic health care, but should delve into those issues that are most important to athletes, such as the psychopathology of sport itself or the biomechanics of high-performance sports. In this program, students will cover a multidisciplinary update in the most in-demand areas for top institutions and elite-level teams, allowing a multidisciplinary intervention and coordination.





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*You will delve into the qualities and capabilities needed in sports nursing at the highest level, with a clear focus on the most prestigious sports institutions”*



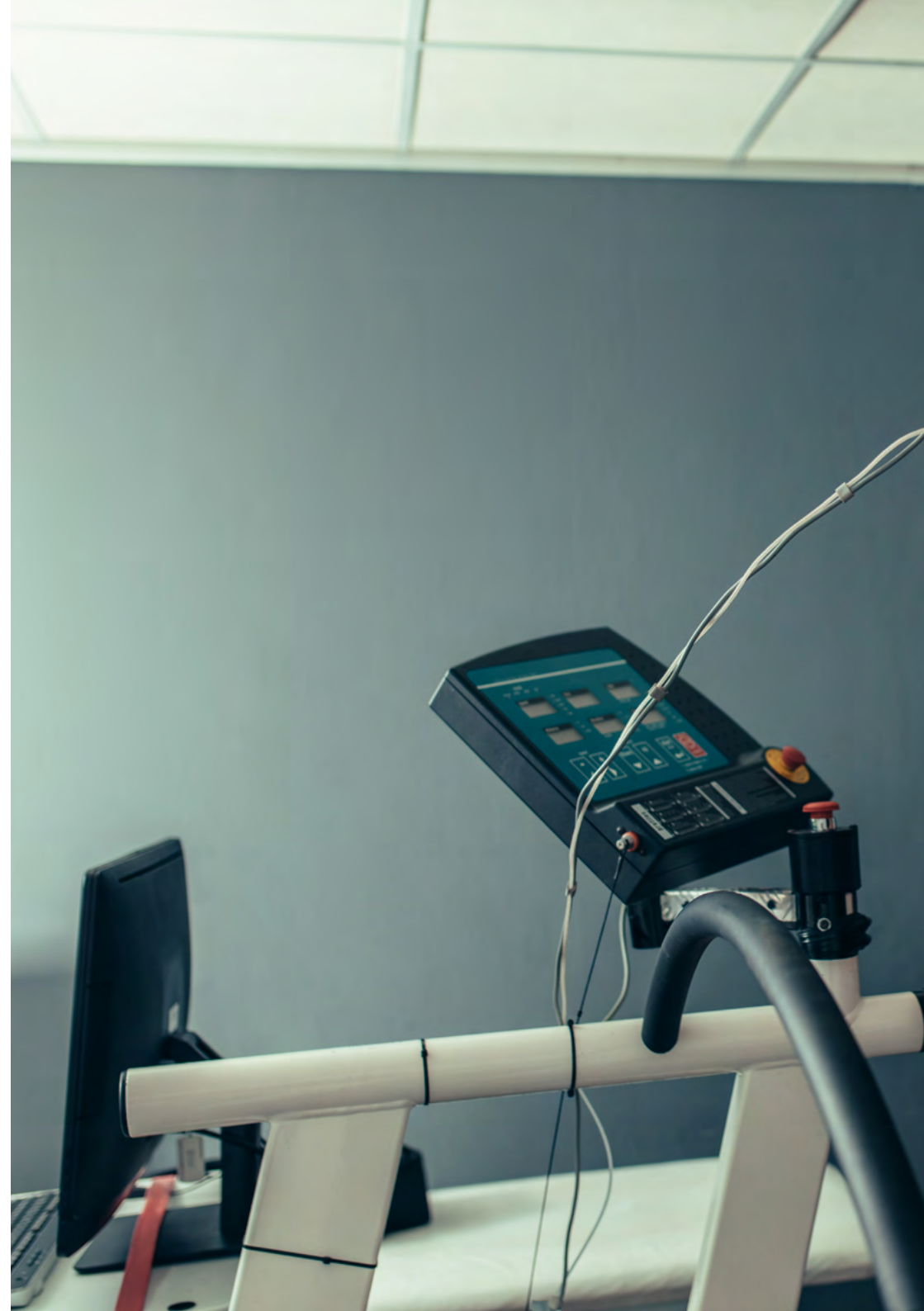
## General skills

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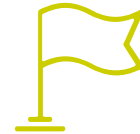
- ♦ Develop nutrition plans based on the principles of High-Performance Sports
- ♦ Prevent, assist and treat sports injuries of different nature
- ♦ Design healthy physical exercise tables customized to the athlete's needs
- ♦ Correctly assess the physical and athletic condition of a person in high performance environments
- ♦ Address psychological, nutritional and physical pathologies related to sports activities



*You will have access to a unique combination of sports theory and practice, offered by a teaching team with extensive experience in sports nursing"*







## Specific skills

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- ◆ Perform an exhaustive biochemical and anthropometric assessment of the athlete
- ◆ Conduct ergometry, spirometry and somatometry tests in high performance athletes
- ◆ Participate in doping control processes with appropriate sample collection methodology
- ◆ Plan nursing intervention in training sessions covering all spectrums of physical activity
- ◆ Intervene in the most frequent sports pathologies and injuries in high performance contexts
- ◆ Addressing the combination of sports and physical exercise with the most common health problems
- ◆ Develop psychological intervention models adapted to sports nursing
- ◆ Analyze the role of biomechanics in the whole process of sport exercise
- ◆ Respond to various eating disorders that can occur in regular and high-performance sports practice

# 04

# Structure and Content

In order to offer nurses the most effective update to their skill set, this program follows the Relearning pedagogical methodology. This means that key terms and concepts are repeated throughout the syllabus, resulting in a much more natural and progressive didactic process whilst enabling students to save themselves a great deal of time. They are supported by a library of high-quality complementary content, which has been personally selected by the teaching staff, including detailed videos and real case studies that provide greater context to the topics covered.





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*You will be able to download the entire contents and even use them as a quality source of reference material after completing your degree”*

### Module 1. Anatomic-Physiological Fundamentals of Physical Activity

- 1.1. Concepts and History of Physical Activity and Sports Medicine and Nursing
- 1.2. Functional Anatomy and Biomechanics Applied to Physical Activity and Sports
- 1.3. Physiology of Exercise Energy Systems
- 1.4. Cardiovascular Adaptations to Physical Activity and Sports
- 1.5. Respiratory Adaptations to Physical Activity and Sports
- 1.6. Adaptations of the Musculoskeletal System to Physical Activity and Sports
- 1.7. Endocrine, Renal and Digestive Adaptations to Physical Activity and Sports
- 1.8. Evaluating Athletes' Physical Ability Ergometry, Spirometry and Somatometry Nursing Interventions
- 1.9. Physical Activity in Environmental Stress Altitude and Depth
- 1.10. Thermoregulation During Physical Activity Nursing Interventions
- 1.11. Fatigue and Overtraining

### Module 2. Sports Nutrition

- 2.1. Assessment of Energy Expenditure Anthropometry and Body Composition Nursing Interventions
- 2.2. Carbohydrates and Physical Exercise
- 2.3. Fats and Physical Exercise
- 2.4. Protein and Physical Exercise
- 2.5. Vitamin and Mineral Supplements in Physical Exercise
- 2.6. Nutrition Before, During and After Exercise Nursing Interventions
- 2.7. Fluid and Electrolyte Replacement after Physical Activity and Sports. Nursing Interventions
- 2.8. Doping and Ergogenic Aids. Anti-Doping Control: Sample Collection Methodology. Nursing Interventions
- 2.9. Eating Disorders and Physical Activity and Sports. Nursing Interventions
- 2.10. Nutrition in Sports Injury Recovery



### Module 3. Nursing, Health and Sports

- 3.1. Cycling
- 3.2. Team Sports
- 3.3. Racquet Sports
- 3.4. Swimming and Athletics
- 3.5. Ski
- 3.6. Combat Sports
- 3.7. Rowing and Canoeing
- 3.8. Health Effects of Exercise
- 3.9. Physical Activity and Physical Exercise for Health Improvement
- 3.10. Classification and Selection Criteria for Exercises and Movements

### Module 4. Prescription and Promotion of Sports Physical Activity

- 4.1. Planning and Principles of Training
- 4.2. Benefits and Risks of Physical Activity and Sports
- 4.3. Fitness Testing for Inclusion in a Physical Exercise Program Nursing Interventions
- 4.4. Cardiovascular Training Nursing Interventions
- 4.5. Endurance Training Nursing Interventions
- 4.6. Strength Training Nursing Interventions
- 4.7. Mobility, Flexibility and Coordination Training. Nursing Interventions
- 4.8. Physical Activity and Sports in Special Populations. Nursing Interventions
- 4.9. Flexibility Training
- 4.10. Speed and Agility Training

### Module 5. Sports Pathology

- 5.1. Epidemiology of Pathology in Physical Activity and Sports
- 5.2. Sports Injury Concept and Classification
- 5.3. Predisposing Factors to Sports Injuries
- 5.4. Prevention of Sports Injury Nursing Interventions
- 5.5. Initial Evaluation of the Injured User Nursing Interventions
- 5.6. Nursing Interventions for the Injured Athlete. Life Support, Mobilization, Immobilization, Manual and Wound Management Techniques

- 5.7. Diagnostic Tests in Physical Sports Injuries X-Rays, Ultrasound, MRI
- 5.8. Recovery of Physical Sports Injuries. Nursing Interventions
- 5.9. Shoulder Injuries in Sports
- 5.10. Upper Arm Injuries
- 5.11. Elbow Injuries in Sports
- 5.12. Forearm, Wrist and Hand Injuries in Sports
- 5.13. Head and Facial Injuries in Sports
- 5.14. Throat, Chest and Abdominal Injuries in Sports
- 5.15. Back/Spine Injuries in Sport

### Module 6. Health Problems in Sports

- 6.1. Arterial Hypertension, Hyperlipidemia and Exercise
- 6.2. Diabetes and Exercise
- 6.3. Obesity, Weight Control and Exercise
- 6.4. Cardiopathies and Exercise Cardiovascular Rehabilitation
- 6.5. Asthma, Physical Exercise and Sport
- 6.6. OCFA and Physical Exercise Rehabilitation in Respiratory Patients
- 6.7. Exercise in Hematologic and Infectious Disorders
- 6.8. Osteoarthritis, Osteoporosis in Relation to Exercise and Sports
- 6.9. Lower Back Pain and Exercise Postural hygiene Nursing Interventions
- 6.10. Dermatologic, Ophthalmologic and ENT Pathologies in Sport
- 6.11. Nursing Interventions in Medical-Surgical Pathology in Sport
- 6.12. Hygiene and Personal Hygiene in Sports Nursing Interventions

### Module 7. Sports Psychology

- 7.1. Fundamentals of Physical Exercise and Sports Psychology
- 7.2. Psychology of Athletes, Coaches and Technical Staff Nursing Interventions
- 7.3. Motivation of the Physical Exercise Practitioner Nursing Interventions
- 7.4. Psychology and Sports Injuries
- 7.5. Psychopathology of Physical Exercise and Sport Nursing Interventions
- 7.6. Basic Neurological Principles
- 7.7. Neurological Principles of Movement
- 7.8. Motor Skills and Learning
- 7.9. Models of Psychological Criteria Intervention
- 7.10. From Demand to Intervention Intervention in Training and Competition

### Module 8. Biomechanics Applied to High-Performance Sports

- 8.1. Introduction to Biomechanics
- 8.2. Movement in One Dimension
- 8.3. Movement in a Plane
- 8.4. Kinematics of Rotations
- 8.5. Dynamics
- 8.6. Dynamics of Rotations
- 8.7. Static-Mechanical Balance
- 8.8. Biomechanical Analysis
- 8.9. Video Analysis
- 8.10. Case Studies





### Module 9. Evaluation of the Athlete at Different Times of the Season

- 9.1. Biochemical Evaluation
- 9.2. Anthropometric Assessment
- 9.3. Preseason
- 9.4. Competitive Season
- 9.5. Transition Period
- 9.6. Travel
- 9.7. Athlete Monitoring
- 9.8. Sweat Rate Calculation
- 9.9. Multidisciplinary Work
- 9.10. Doping

### Module 10. Nutrition Applied to High-Performance Sports

- 10.1. Energy Metabolism of Physical Effort
- 10.2. Assessing Nutritional Status and Body Composition
- 10.3. Assessing Energy Expenditure
- 10.4. Bodybuilding Nutrition and Body Recomposition
- 10.5. Nutrition in Strength-Based Sports
- 10.6. Nutrition in Team Sports
- 10.7. Nutrition in Endurance-Based Sports
- 10.8. Nutritional Ergogenic Aids
- 10.9. Eating Disorders and Sports Injuries
- 10.10. Advances and Research in Sports Nutrition

# 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.







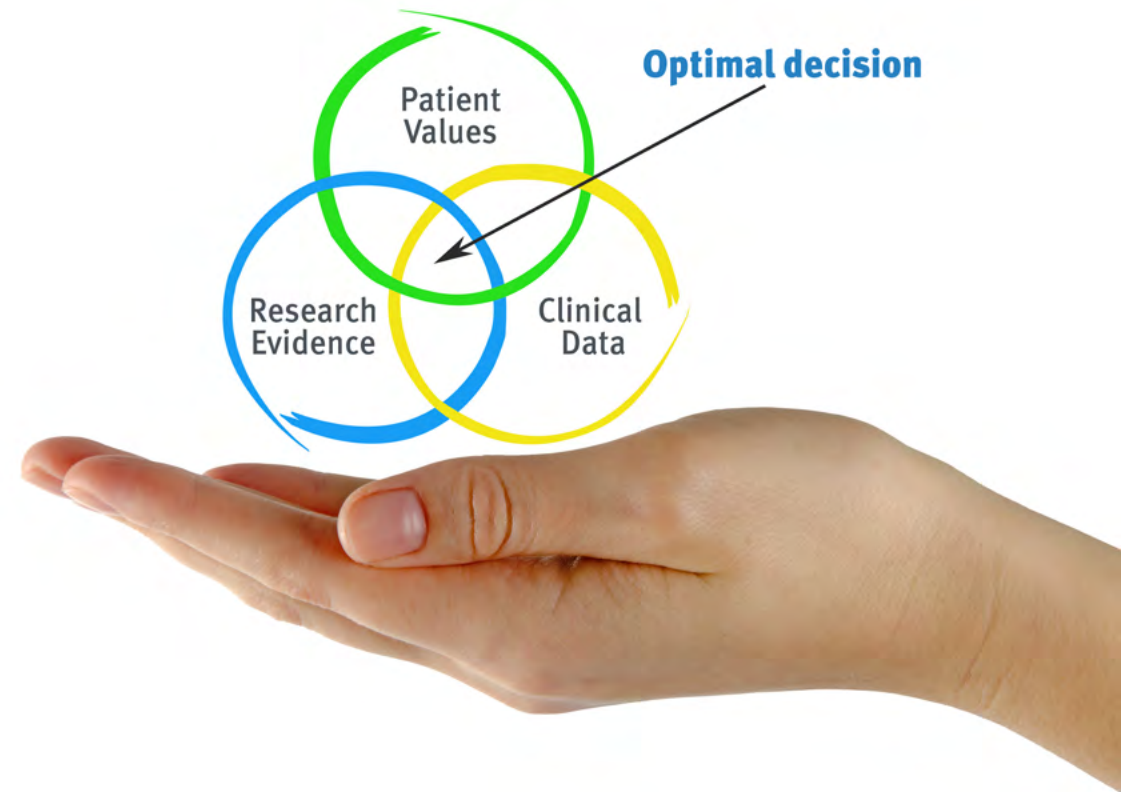
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH 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.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

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

1. 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 relearn). 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 adapted in 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

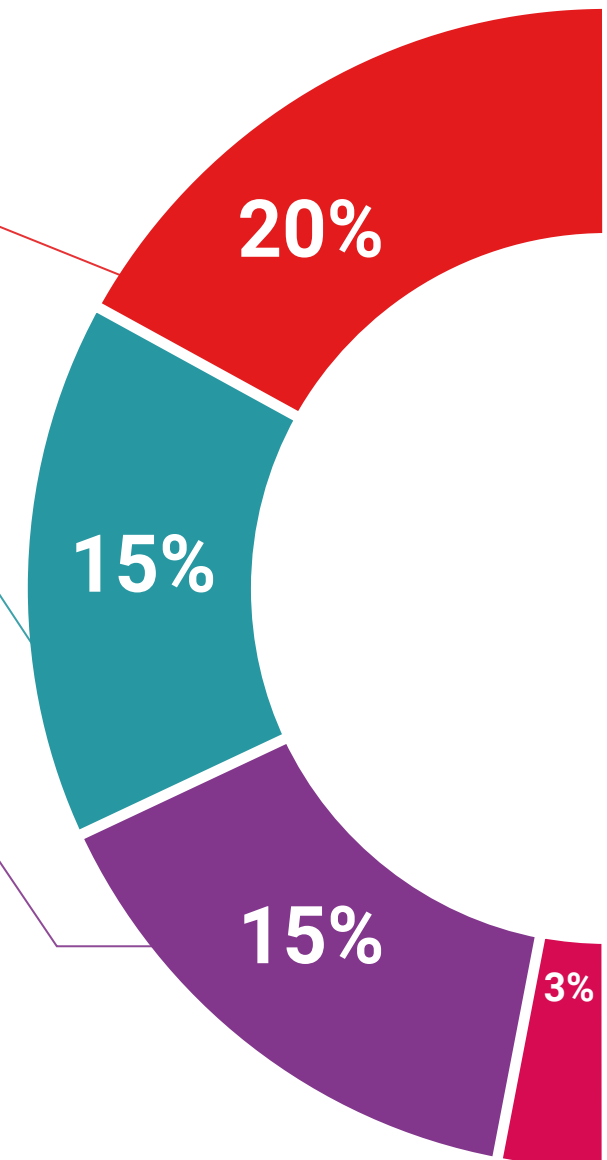
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

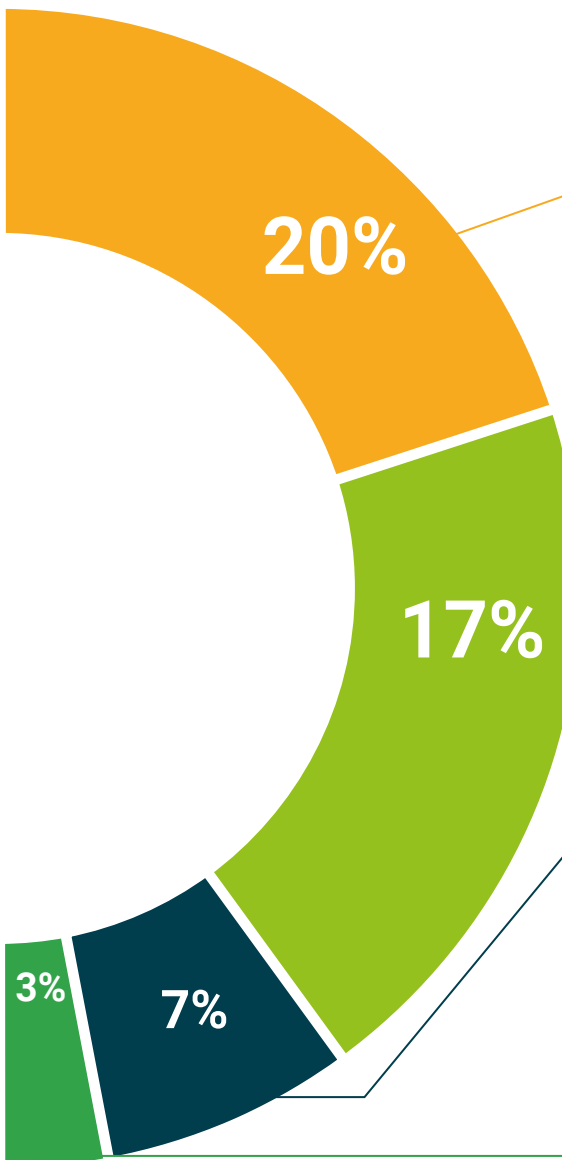
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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.





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

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



#### Testing & Retesting

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



#### Classes

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

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



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06

# Certificate

The Professional Master's Degree in Sports Nursing guarantees you, in addition to the most rigorous and updated training, access to a Professional Master's Degree issued by TECH Technological University.







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*Successfully complete this program  
and receive your university degree  
without travel or laborious paperwork”*

This **Professional Master's Degree in Sports Nursing** 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 **Professional Master's Degree** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Professional Master's Degree in Sports Nursing**

Official N° of hours: **1,500 h.**

**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 quality

online training

development languages

virtual classroom

**tech** technological  
university

**Professional Master's  
Degree**

Sports Nursing

Course Modality: Online

Duration: 12 months

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