

# Postgraduate Certificate

## Structure of the Locomotor System





## Postgraduate Certificate Structure of the Locomotor System

- » 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/structure-locomotor-system](http://www.techtute.com/us/physiotherapy/postgraduate-certificate/structure-locomotor-system)

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# 01

# Introduction

Designing yoga sessions adapted to individual needs, reducing the risk of injury and maximizing therapeutic benefits, is only possible with a thorough understanding of the anatomy and biomechanics of the Locomotor System. In this way, the physiotherapist will be able to correct and adjust practitioners' positions, ensuring proper alignment and minimizing the risk of stress on joints, muscles and connective tissues. For this, it is essential that professionals have a solid qualification that allows them to know the structures in depth, as well as the application of different techniques to customize treatments. For this purpose, TECH has designed a program with the most advanced content in the Structure of the Locomotor System taught completely online to guarantee the graduate the greatest flexibility in learning.





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*Expand your knowledge about the structures of the locomotor system from the perspective of Therapeutic Yoga through a unique, effective and innovative didactic experience. Only with TECH”*

Millions of people have embraced the practice of yoga because of its many benefits. This includes significant improvement in physical capacity, muscle function, posture and mobility. In addition, Yoga has been shown to be suitable for treating various conditions of the Locomotor System.

Therefore, Therapeutic Yoga has become an ideal tool for patients with various locomotor pathologies. Likewise, it is essential to know it in depth in order to complement conventional physiotherapeutic treatments. In this line, TECH has created a 6-week academic proposal to update graduates in the Structure of the Locomotor System.

This Postgraduate Certificate allows you to delve into the anatomy, the relationship between the skeletal and muscular system and the prevention of cartilage, tendon and ligament injuries, and their relationship with the practice of Therapeutic Yoga. This with a quality methodology supported by innovative multimedia materials and specialized readings provided by a team of experts in the field.

In this way, this academic proposal has been designed to meet the real needs of physiotherapeutic professionals, who are looking for continuous updating through a flexible and comfortable program. Therefore, to access this Postgraduate Certificate only requires a digital device with Internet connection with which you can view the syllabus of the program at any time of the day. An ideal option to reconcile with the most demanding daily activities.

In addition, as an outstanding part of this high-level academic offer, the prestigious teaching staff that makes up this program is joined by a renowned international guest director. With this, the graduate will have access to a masterclass taught by her in audiovisual format, where she will share the most outstanding aspects of the specialization.

This **Postgraduate Certificate in Structure of the Locomotor System** contains the most complete and up-to-date scientific program on the market. The most important features of the include:

- ♦ Case studies presented by Yoga experts
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ 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 comprehensive and condensed academic program in just 6 weeks where you will delve into the most common tendon injuries and their prevention"*

“

*A rigorous academic program that will allow you to explore in detail the most beneficial Yoga positions and movements for the musculoskeletal system”*

The program's teaching staff includes professionals from the field who contribute their work experience to this educational 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 academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*You can download the latest teaching materials on the Structure of the Locomotor System for Physiotherapists, Enroll Now!*

*Clear up any doubts related to the components of the musculoskeletal system and the different approaches to implement Therapeutic Yoga.*



# 02 Objectives

The objective of this program is to provide an update on the Structure of the Locomotor System to physiotherapists, focusing on the anatomy of the muscular, skeletal and articular systems, as well as the prevention of injuries and their approach from Therapeutic Yoga. A program designed to update professionals and with guaranteed effectiveness, as it is made up of a new syllabus based on the latest studies and quality teaching materials.





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*Achieve your professional goals through the most complete, cutting-edge and effective academic program with this completely online program”*



## General Objectives

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- ♦ Incorporate knowledge and specific skills in the area of the Locomotor System for the correct development and application of treatment techniques
- ♦ Delve into the most appropriate treatments according to the characteristics of the person and their injuries
- ♦ Delve into the studies on biomechanics and the application of treatment for the Locomotor System
- ♦ Delve into the neurophysiological bases of musculoskeletal structures





### Specific Objectives

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- ◆ Delve into the anatomy and physiology of the skeletal, muscular and articular systems of the human body
- ◆ Identify the different structures and functions of the locomotor system and how they interrelate with one another
- ◆ Explore the different postures and movements of the human body, and understand how they affect the structure of the locomotor system
- ◆ Delve into common injuries of the musculoskeletal system and how to prevent them



*Explore the different postures and movements of the human body, and understand how they affect the structure of the Locomotor System with this comprehensive TECH program"*

03

# Course Management

This university program has brought together a highly experienced teaching staff in the field of Therapeutic Yoga. In this way, students who take this program will have access to a syllabus prepared by experts who will provide the most current information on injury prevention and the impact of this physical activity on the Locomotor System. In addition, thanks to the friendliness of the teaching staff, you will be able to resolve any doubts you may have about any of the topics covered by this course.





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*Delve into the anatomy and physiology of the nervous system and its relationship with the practice of therapeutic yoga from renowned experts in this field”*

## International Guest Director

As the Director of Teachers and Head of Instructor Education at the Integral Yoga Institute in New York, Dianne Galliano is positioned as one of the most important figures in the field internationally. Her academic focus has been mainly therapeutic yoga, with more than 6,000 documented hours of teaching and continuing education.

In this way, her work has been to tutor, develop protocols and teaching criteria and provide continuing education to the instructors of the Integral Yoga Institute. She combines this work with her role as a therapist and instructor at other institutions such as The 14TH Street Y, Integral Yoga Institute Wellness Spa or the Educational Alliance: Center for Balanced Living.

Her work also extends to creating and directing yoga programs, developing exercises and assessing the challenges that may arise. She has worked throughout her career with many different profiles of people, including older and middle-aged men and women, prenatal and postnatal individuals, young adults and even war veterans with a range of physical and mental health issues.

For each of them she performs a careful and customized work, having treated people with osteoporosis, recovering from heart surgery or post-breast cancer, vertigo, back pain, Irritable Bowel Syndrome and obesity. She has several certifications, most notably the E-RYT 500 from Yoga Alliance, Basic Life Support (BLS) from American Health Training and Certified Exercise Instructor from the Somatic Movement Center.



## Ms. Galliano, Dianne

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- Director of Teachers at Integral Yoga Institute - New York, USA
- Therapeutic Yoga Instructor at The 14TH Street Y
- Yoga Therapist at Integral Yoga Institute Wellness Spa - New York
- Therapeutic Instructor at Educational Alliance: Center for Balanced Living
- Degree in Primary Education from the State University of New York
- Master's Degree in Therapeutic Yoga from the University of Maryland

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

## Management



### **Ms. Escalona García, Zoraida**

- ♦ Vice president of the Spanish Association of Therapeutic Yoga.
- ♦ Founder of the Air Core method (classes that combine TRX and Functional Training with Yoga).
- ♦ Trainer in Yoga Therapy
- ♦ Degree in Biological Sciences from the Autonomous University of Madrid.
- ♦ Course in Teacher of: Ashtanga Yoga Progressive, FisiomYoga, Myofascial Yoga, Yoga and Cancer
- ♦ Course in Floor Pilates Instructor
- ♦ Course in Phytotherapy and Nutrition
- ♦ Meditation Teacher Cours



# 04

## Structure and Content

The syllabus that makes up this program focuses on the fundamental aspects of elementary anatomy and physiology of the human body. In this way, students will begin an in-depth instruction in anatomical posture and body axes and planes. Thanks to the most cutting-edge teaching materials in today's academic landscape and in a 100% online format, the student will be able to minimize study hours and consolidate the concepts discussed to remain at the forefront of the industry.



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*You will have access to the best multimedia resources and will be able to download them at any time, even after completing the program”*

## Module 1. Structure of the Locomotor System

- 1.1. Anatomical Position, Axes and Planes
  - 1.1.1. Basic anatomy and physiology of the human body
  - 1.1.2. Anatomic position
  - 1.1.3. Body axes
  - 1.1.4. Anatomical planes
- 1.2. Bone
  - 1.2.1. Bone anatomy of the human body
  - 1.2.2. Bone structure and function
  - 1.2.3. Different types of bones and their relationship to posture and movement
  - 1.2.4. The relationship between the skeletal system and the muscular system
- 1.3. Joints
  - 1.3.1. Anatomy and physiology of the joints of the human body
  - 1.3.2. Different Types of Joints
  - 1.3.3. The role of joints in posture and movement
  - 1.3.4. The most common joint injuries and how to prevent them
- 1.4. Cartilage
  - 1.4.1. Anatomy and physiology of the cartilage of the human body
  - 1.4.2. Different types of cartilage and their function in the body
  - 1.4.3. The role of cartilage in joints and mobility
  - 1.4.4. The most common cartilage injuries and their prevention
- 1.5. Tendons and Ligaments
  - 1.5.1. Anatomy and physiology of tendons and ligaments of the human body
  - 1.5.2. Different types of tendons and ligaments and their function in the body
  - 1.5.3. The role of tendons and ligaments in posture and movement.
  - 1.5.4. Most common tendon and ligament injuries and how to prevent them
- 1.6. Skeletal Muscle
  - 1.6.1. Anatomy and physiology of the musculoskeletal system of the human body
  - 1.6.2. The relationship between muscles and bones in posture and movement
  - 1.6.3. The role of fascia in the musculoskeletal system and its relationship to the practice of therapeutic yoga
  - 1.6.4. The most common muscle injuries and how to prevent them





- 1.7. Development of the Musculoskeletal System
  - 1.7.1. Embryonic and fetal development of the musculoskeletal system
  - 1.7.2. Growth and development of the musculoskeletal system in childhood and adolescence.
  - 1.7.3. Musculoskeletal changes associated with aging
  - 1.7.4. Development and adaptation of the musculoskeletal system to physical activity and training
- 1.8. Components of the Musculoskeletal System
  - 1.8.1. Anatomy and physiology of skeletal muscles and their relationship to the practice of therapeutic yoga.
  - 1.8.2. The role of bones in the musculoskeletal system and their relationship to posture and movement.
  - 1.8.3. The function of the joints in the musculoskeletal system and how to take care of them during the practice of therapeutic yoga
  - 1.8.4. The role of fascia and other connective tissues in the musculoskeletal system and their relationship to the practice of therapeutic yoga
- 1.9. Nervous Control of Skeletal Muscles
  - 1.9.1. Anatomy and physiology of the nervous system and its relationship to the practice of therapeutic yoga
  - 1.9.2. The role of the nervous system in muscle contraction and movement control
  - 1.9.3. The relationship between the nervous system and the musculoskeletal system in posture and movement during the practice of therapeutic yoga
  - 1.9.4. The importance of neuromuscular control for injury prevention and performance enhancement during the practice of therapeutic yoga
- 1.10. Muscle Contraction
  - 1.10.1. Anatomy and physiology of muscle contraction and its relationship to the practice of therapeutic yoga
  - 1.10.2. The different types of muscle contraction and their application during the practice of therapeutic yoga
  - 1.10.3. The role of neuromuscular activation in muscle contraction and its relationship to the practice of therapeutic yoga
  - 1.10.4. The importance of stretching and muscle strengthening in injury prevention and performance enhancement during the practice of therapeutic yoga

# 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

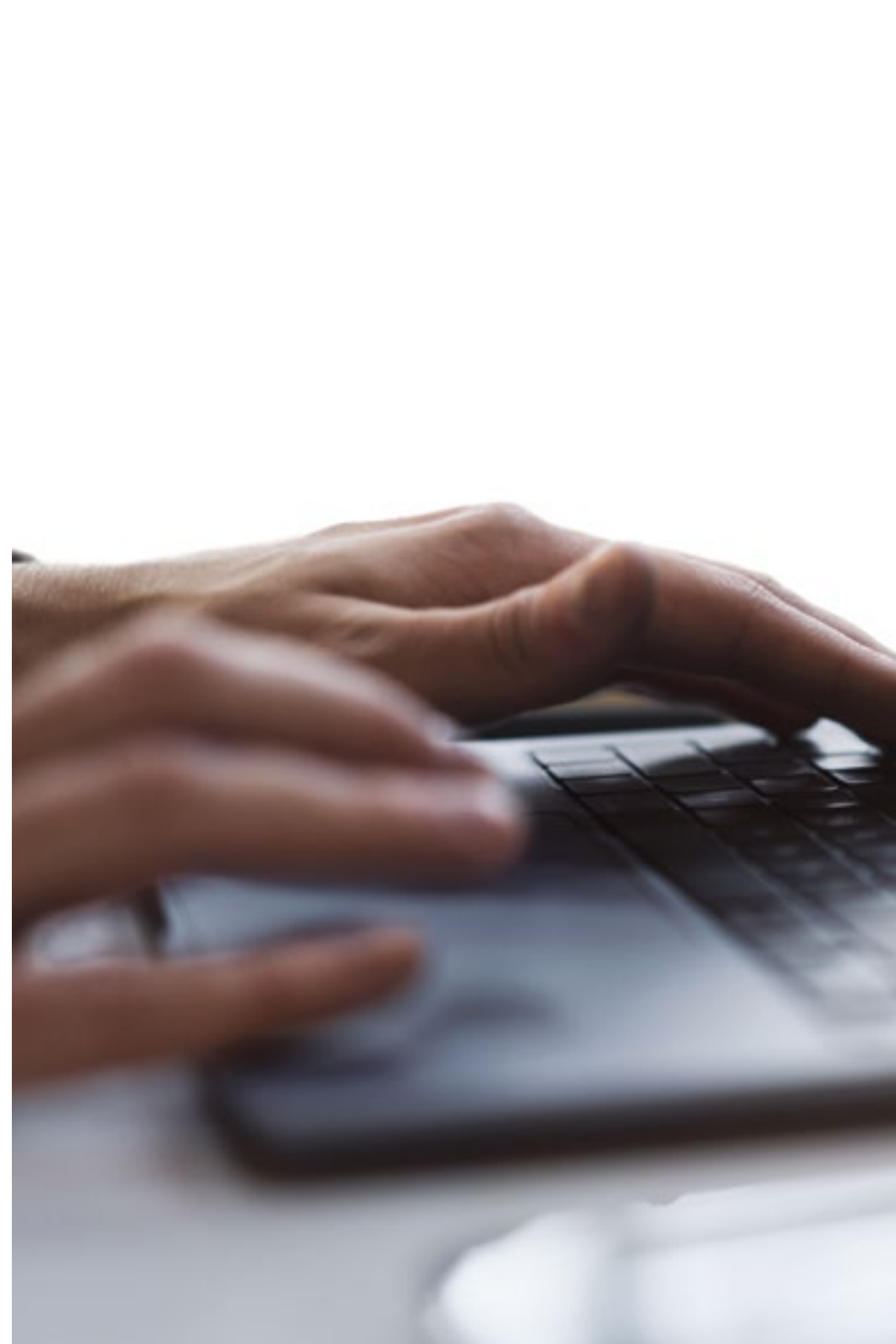
In TECH's study methodology, the student is the main protagonist.

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.

“*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.

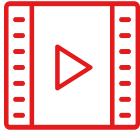
The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

*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

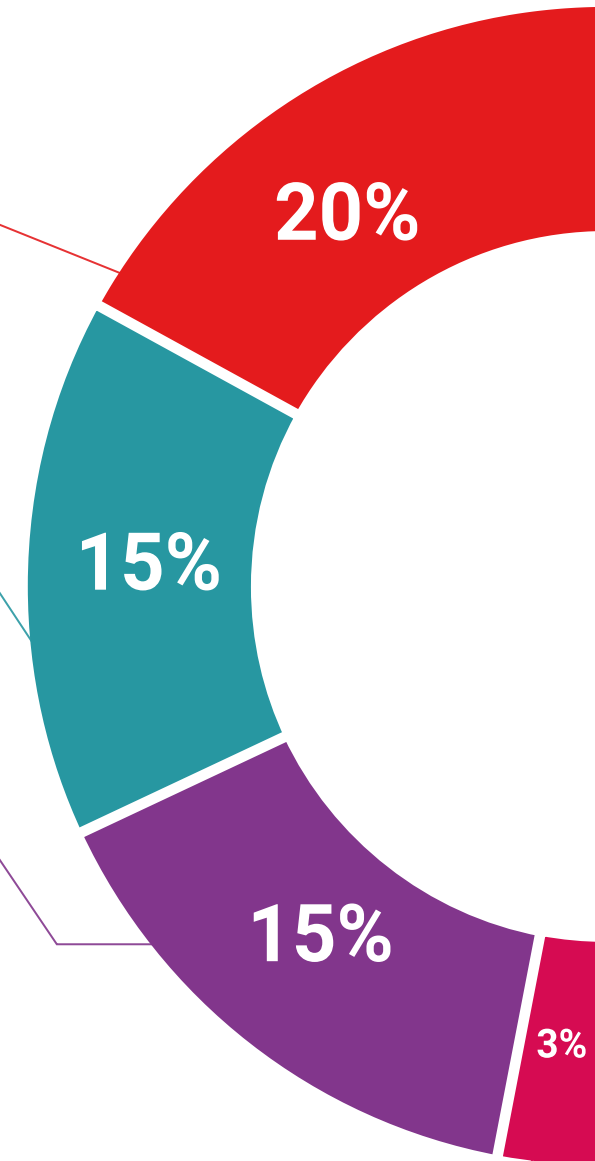
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

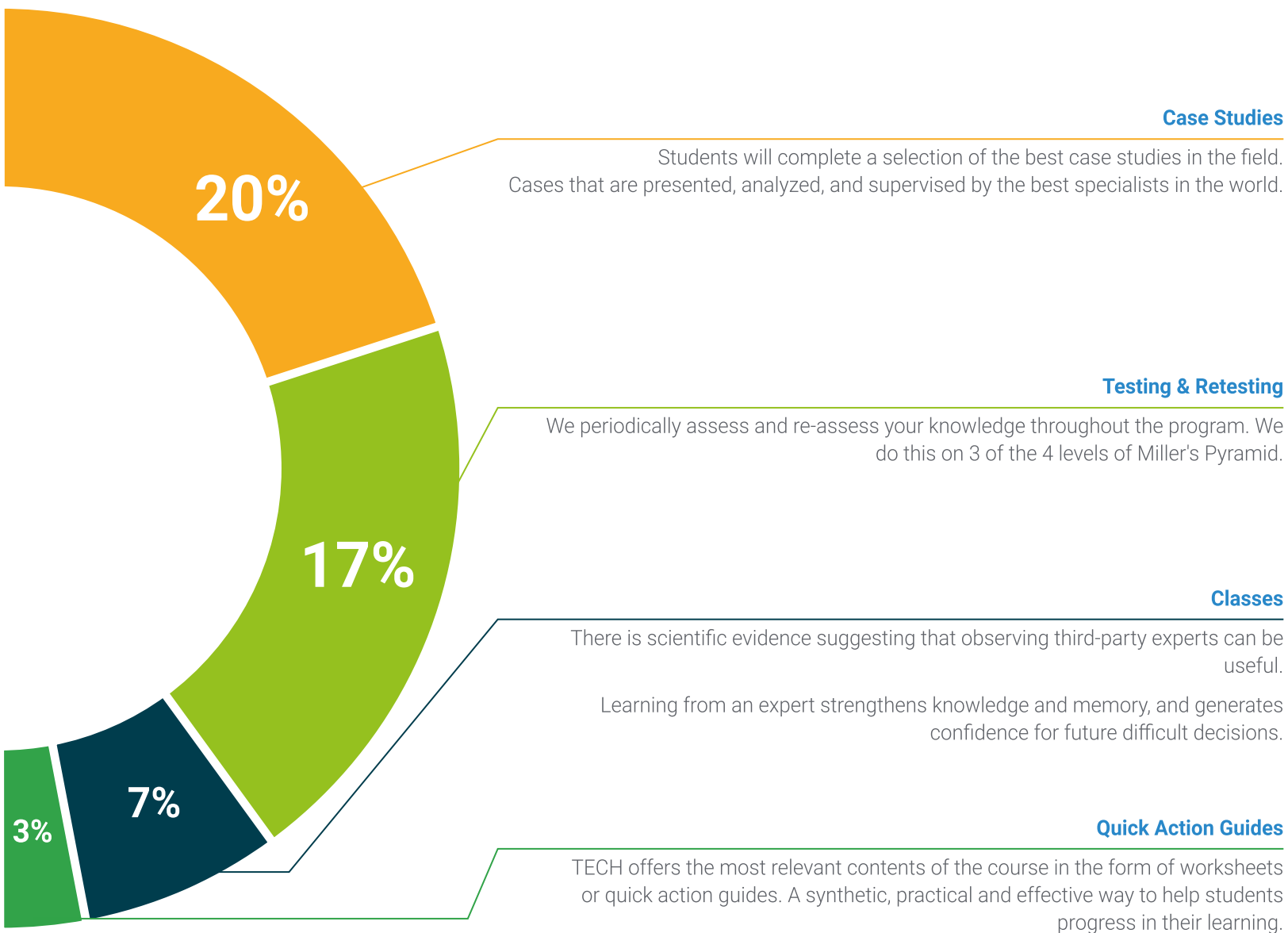
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

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





# 06 Certificate

The Postgraduate Certificate in Structure of the Locomotor System guarantees students, in addition to the most rigorous and up-to-date scientific, access to a Postgraduate Certificate 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 private qualification will allow you to obtain a **Postgraduate Certificate in Structure of the Locomotor System** 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** 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 Structure of the Locomotor System**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





## Postgraduate Certificate Structure of the Locomotor System

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# Postgraduate Certificate

## Structure of the Locomotor System

