

# Postgraduate Certificate Principles of Neuroanatomy





## Postgraduate Certificate Principles of Neuroanatomy

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/principles-neuroanatomy](http://www.techtute.com/us/medicine/postgraduate-certificate/principles-neuroanatomy)

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# 01

# Introduction

The relevance of neuroanatomy in the medical field is such that, thanks to it, important progress has been made in the study of the nervous system, both from the macroscopic point of view, as well as at the level of tissues, cells, and neuronal connections. Being a specialty in continuous transformation, medical professionals require constant updating to keep them up to date in this area. In light of this situation, this 100% online program was made, which will allow professionals to achieve the renewal of knowledge that they are looking for, comfortably, connecting to the program from and when they want.



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*Thanks to this Postgraduate Certificate  
you will be able to know in detail the  
essential foundations of Neuroanatomy”*

Solid knowledge in neuroanatomy has a positive influence when it comes to achieving optimal results in diagnosis and in the application of truly effective treatments in patients with neurological pathologies. The latest information in this field is therefore essential for medical professionals who wish to be aware of the latest advances in this specialty. That is why this Postgraduate Certificate was created, in which students, thanks to a teaching team with extensive experience, will achieve the renewal of their knowledge in the field of neuroanatomy.

Professionals are facing a program that is taught exclusively online, which will allow them to reconcile their work and/or personal responsibilities with quality teaching. This program will be enriched through a syllabus with a theoretical-practical focus on the conformation of the central nervous system (CNS) and neurons, the different types of synapses and neurotransmitters. Besides, it will delve into neuroendocrinology and neuroimmunology, with special emphasis on the characteristics of the CNS at different stages: from childhood to adolescence and until old age.

The simulations of clinical cases provided by the specialized teaching staff will be of great help to the professional, since through them they will be able to approach to a reality that can be useful in your daily practice. An excellent opportunity for professionals who want to update their knowledge with content that is characterized by using the latest technology in education. You will have summaries, detailed videos, interactive diagrams or specialized readings available from the very start. Having the entire study plan from the beginning will facilitate the distribution of the study load, always according to the needs of the students themselves. A program according to current educational times and that is at the forefront.

This **Postgraduate Certificate in Principles of Neuroanatomy** 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 Psychology and Immunology
- ♦ 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 for 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



*An educational option that allows you to be aware of scientific studies that delve into the neuron and its characteristics"*

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*Increase your knowledge about the conformation of the nervous system in a more agile way with the application of the Relearning system of TECH Global University”*

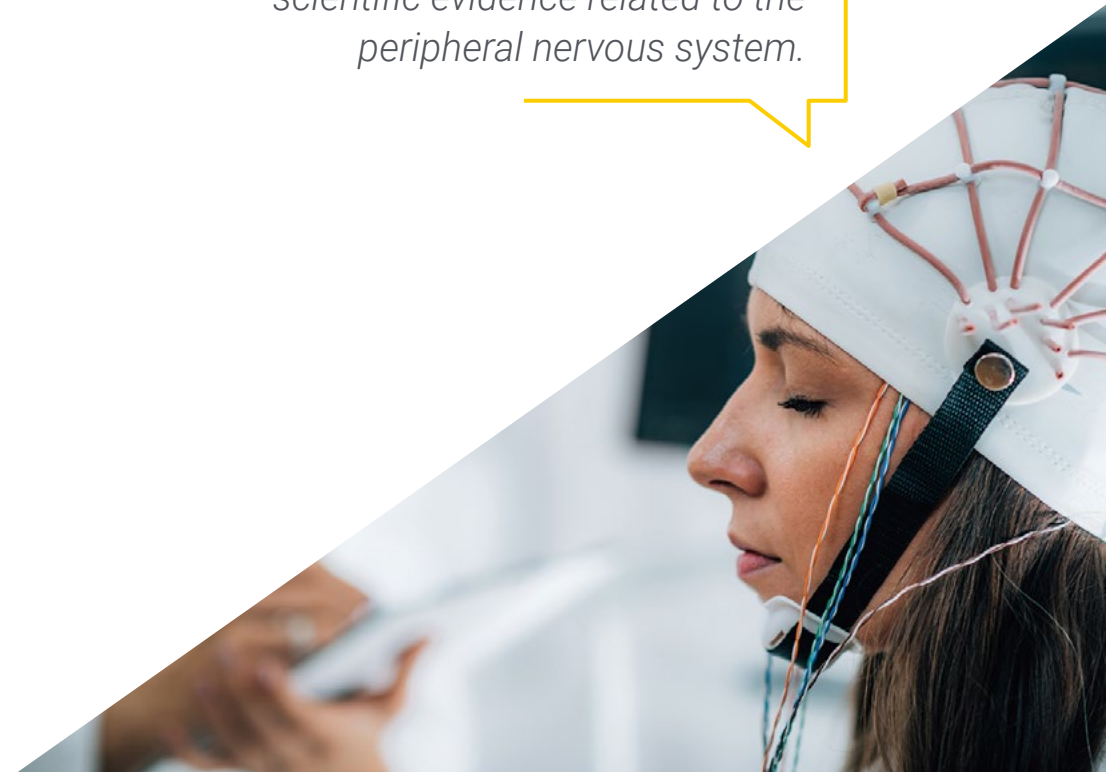
The program's teaching staff includes professionals from the sector who contribute their work experience, to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its 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 an immersive education designed 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, students will be assisted by an innovative interactive video system developed by renowned experts.

*Download the agenda and view its content whenever you want. You are facing a flexible program that adapts to you.*

*A Postgraduate Certificate that will go in depth into the latest scientific evidence related to the peripheral nervous system.*



# 02 Objectives

The main goal of this Postgraduate Certificate is to ensure that the medical professional achieves the recycling of knowledge in the field of neuroanatomy. A renovation that you will be able to achieve thanks to the innovative multimedia content, which will allow you to delve into the evolutionary process of the nervous system, its training, as well as the basic fundamentals that constitute this discipline. The teaching team will accompany students during the 150 class hours of this teaching so that they reach their goals of improving their knowledge.



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*You will be able to renew your knowledge about neuroendocrinology and neuroimmunology thanks to an exhaustive syllabus provided by a specialized teaching team”*



## General Objectives

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- Know in detail the principles of Neuroanatomy, delve into the Study the the nervous system and its anatomical and functional organization
- Acquire a thorough knowledge of the main tools of this science, as well as the advantages and disadvantages of their use





## Specific Objectives

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- ♦ Know the origins and the evolutionary process of the nervous system
- ♦ Obtain a general vision on the formation of the nervous system
- ♦ Know the basic fundamentals of neuroanatomy

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*A perfect educational option to delve into studies and advances in Neuroanatomy in a short time”*

# 03

## Structure and Content

The syllabus of this Postgraduate Certificate is made up of innovative multimedia content and a *Relearning* system, that will favor the updating of knowledge in a more visual and dynamic way. Thanks to this, professionals will obtain the most recent information related to the area of neuroanatomy. In addition, they will have hours of high-quality additional material with which they can delve into the different sections in which this study plan is structured. In this way, they will get an academic experience that provides them with the most recent knowledge in neuroanatomy.





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*Delve into the main nervous system problems associated with old age”*

## Module 1. Principles of Neuroanatomy

- 1.1. Formation of the Nervous System
  - 1.1.1. Anatomical and Functional Organization of the Nervous System
  - 1.1.2. Neurons
  - 1.1.3. Glial Cells
  - 1.1.4. Central Nervous System: Brain and Spinal Cord
  - 1.1.5. Main Structures
    - 1.1.5.1. Forebrain
    - 1.1.5.2. Midbrain
    - 1.1.5.3. Rhombencephalon
- 1.2. Formation of the Nervous System II
  - 1.2.1. Peripheral Nervous System
    - 1.2.1.1. Somatic Nervous System
    - 1.2.1.2. Neurovegetative or Autonomic Nervous System
    - 1.2.1.3. White Matter
    - 1.2.1.4. Gray Matter
    - 1.2.1.5. Meninges
    - 1.2.1.6. Cerebrospinal Fluid
- 1.3. The Neurone and its Composition
  - 1.3.1. Introduction to the Neurone and its Function
  - 1.3.2. The Neurone and its Composition
- 1.4. Electric and Chemical Synapses
  - 1.4.1. What is a Synapse?
  - 1.4.2. Electrical Synapse
  - 1.4.3. Chemical Synapse
- 1.5. Neurotransmitters
  - 1.5.1. What is a Neurotransmitter?
  - 1.5.2. Types of Neurotransmitters and their Functioning
- 1.6. Neuroendocrinology (Hypothalamus-Endocrine System Relationship)
  - 1.6.1. Introduction to Neuroendocrinology
  - 1.6.2. Basis of Neuroendocrinological Functioning





- 1.7. Neuroimmunology (Relationship between the Nervous System and Immune System)
  - 1.7.1. Introduction to Neuroimmunology
  - 1.7.2. Basis and Fundamentals of Neuroimmunology
- 1.8. Nervous System in Childhood and Adolescence
  - 1.8.1. Development of CNS
  - 1.8.2. Bases and Characteristics
- 1.9. Nervous System in Adulthood
  - 1.9.1. Bases and Characteristics of the CNS
- 1.10. Nervous System in Old Age
  - 1.10.1. Bases and Characteristics of the CNS in Old Age
  - 1.10.2. Main Related Problems



*A Postgraduate Certificate that gives you the opportunity to recycle your knowledge about the nervous system in childhood and adolescence"*

# 04 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.



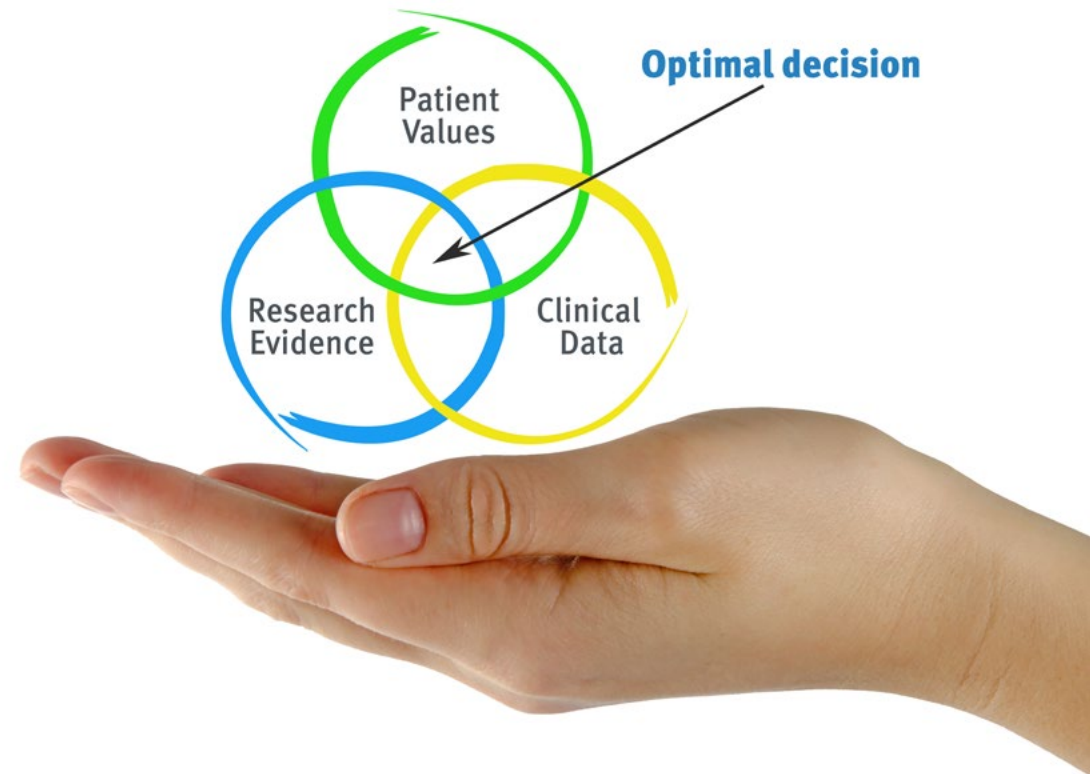
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? 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. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, 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, trying to recreate the real conditions in the physician's professional 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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate 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.



## 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 the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



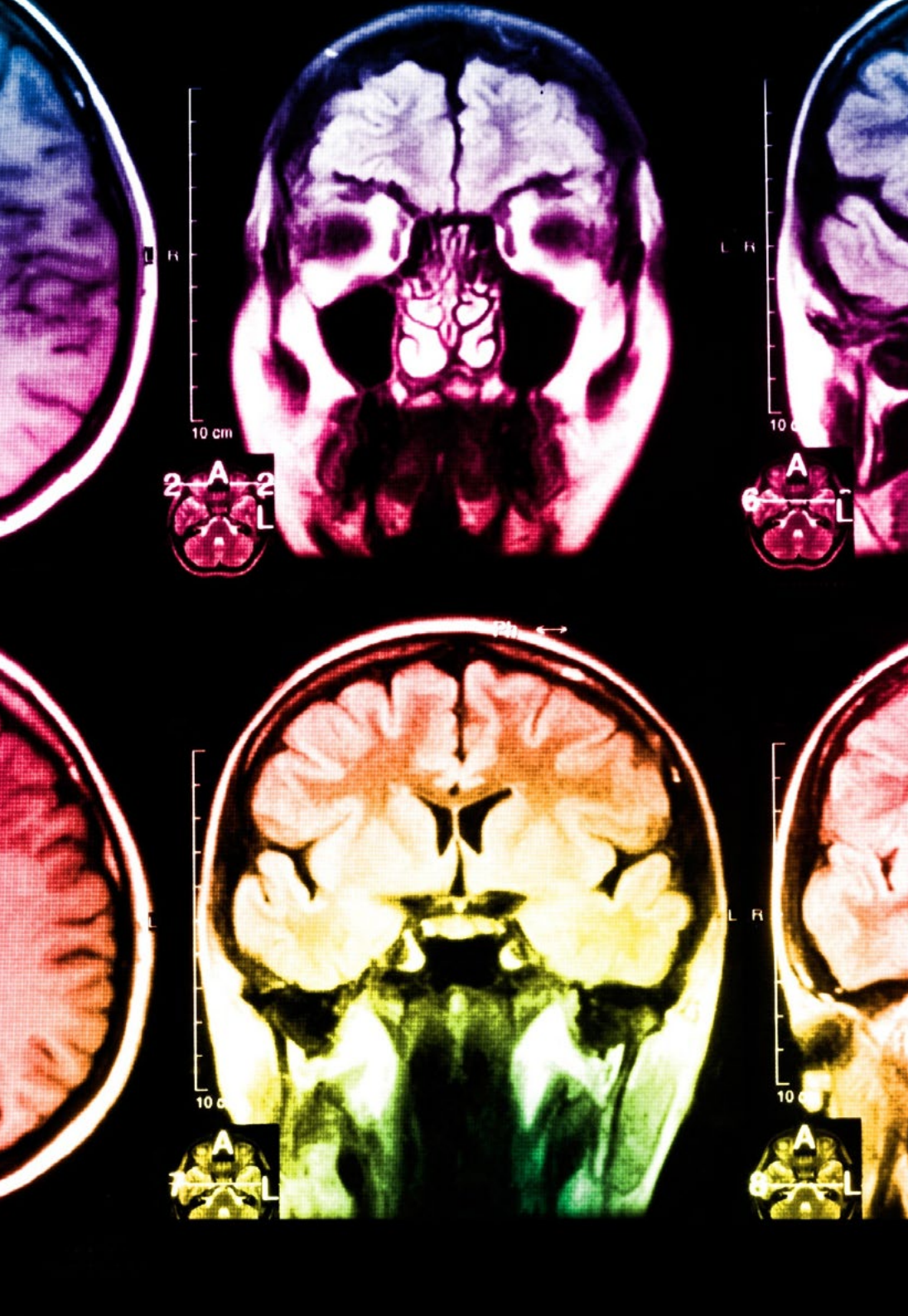
At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. 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.

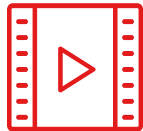
*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

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 highly 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.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and 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 the videos as many times as you like.



#### Interactive Summaries

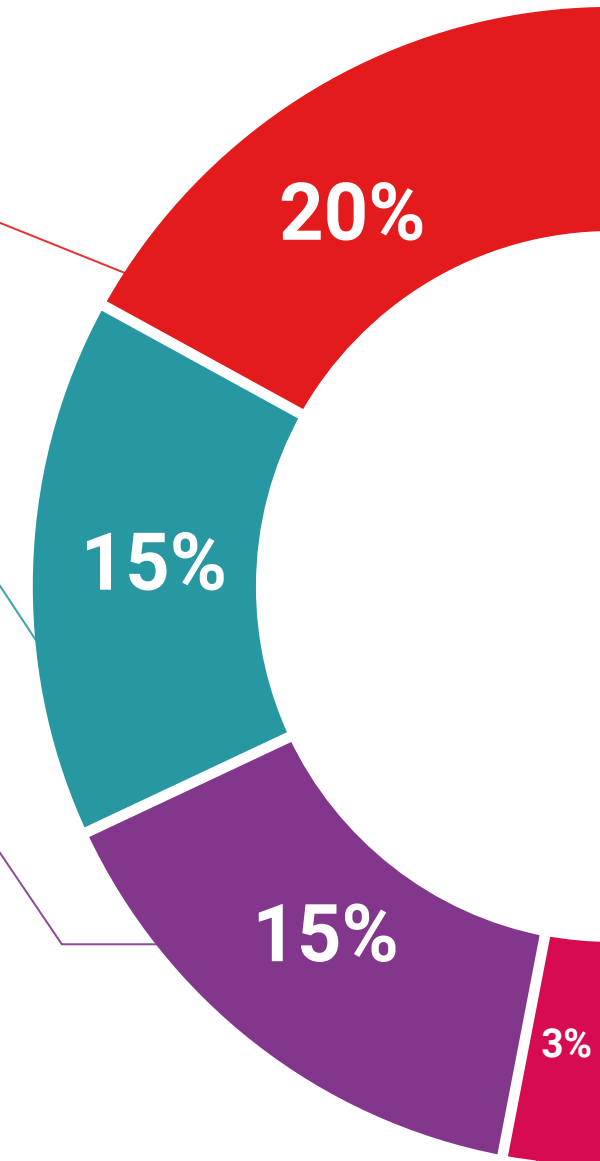
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

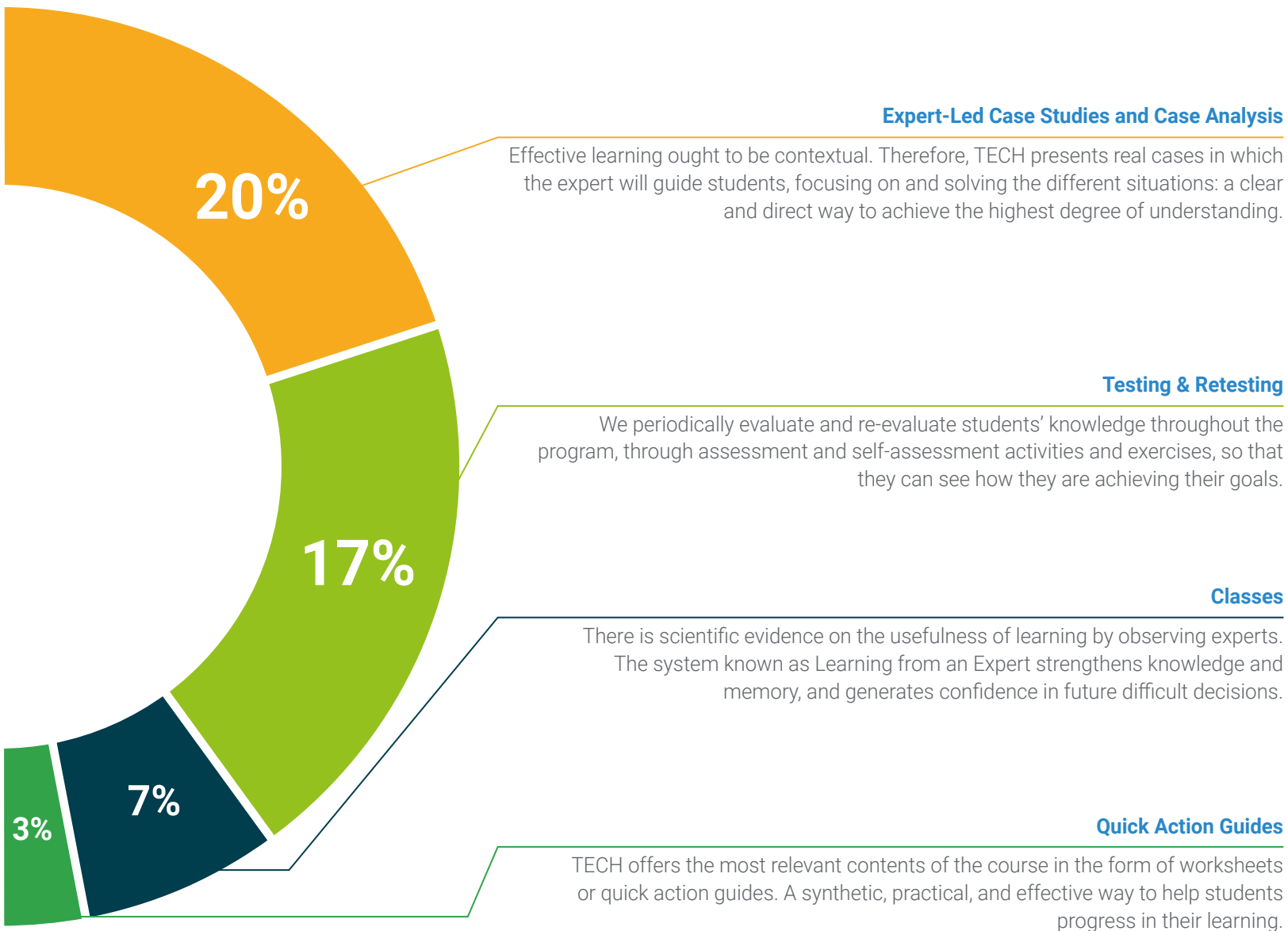
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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.





# 05 Certificate

The Postgraduate Certificate in Principles of Neuroanatomy guarantees students, in addition to the most rigorous and up-to-date education, 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 Principles of Neuroanatomy** 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 Principles of Neuroanatomy**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



## Postgraduate Certificate Principles of Neuroanatomy

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

# Postgraduate Certificate

## Principles of Neuroanatomy