

# Postgraduate Certificate

## Principles of Neuroanatomy



## Postgraduate Certificate Principles of Neuroanatomy

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

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

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

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*p. 28*

# 01

# Introduction

Neuroscience is present in the study of multiple diseases. So far, it has been demonstrated that some states of anxiety or critical traumatic pathologies provoke a pathological response in the gastrointestinal system. In order to study conditions derived from neurological disorders, as well as the neuroanatomical structure itself, specialists are required to enter this clinical area. For this reason, TECH offers a complete program that deeply develops the principles of neuroanatomy and its cellular systems. Thanks to this 100% online program based on a Relearning methodology, graduates in Nursing will be able to participate in the development of this fundamental science for brain health.





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*Modern neuroscience depends on clinicians like you, who take an interest in applying the most innovative clinical technology to ensure the quality of life of their patients”*

Neural diseases and their proliferation in recent years have been one of the major concerns of the healthcare sector. Given the characteristics and the meticulous study that this field requires, the labor market demands specialists with great skills based on the latest scientific, technological and pharmacological evidence. With this program, graduates in Nursing will delve into the nervous system, neurons, electrical and chemical synapses, neurotransmitters, neuroendocrinology, neuroimmunology, as well as the development of the nervous system in childhood, adulthood and old age, approaching the most immediate developments in this area.

TECH has developed a complete and rigorous program specifically oriented to update your knowledge 100% online. A fundamental qualification for those nursing professionals who want to know in detail the latest developments related to this science, focusing on the management of information related to the anatomy of the nervous system. An in-depth knowledge of this science is fundamental for the different surgical approaches that are performed daily.

To achieve this, TECH will provide nurses with the best theoretical-practical and additional content based on the teaching team and adapted to the prestigious and effective Relearning methodology. Thanks to this innovative study methodology, students will not have to invest long hours of memorization, but will progressively assimilate the contents. In a matter of 6 weeks, the specialist will have managed to update and expand their knowledge, as well as perfect their skills with the endorsement of the world's largest online university.

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 Nursing and Neuroanatomy
- ♦ 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 self-assessment can be used 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



*Delve into the anatomical and functional organization of the nervous system and update your knowledge of the latest medical technology"*

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*Enjoy accessible teaching wherever you are, thanks to a 100% online modality and dynamic audiovisual content”*

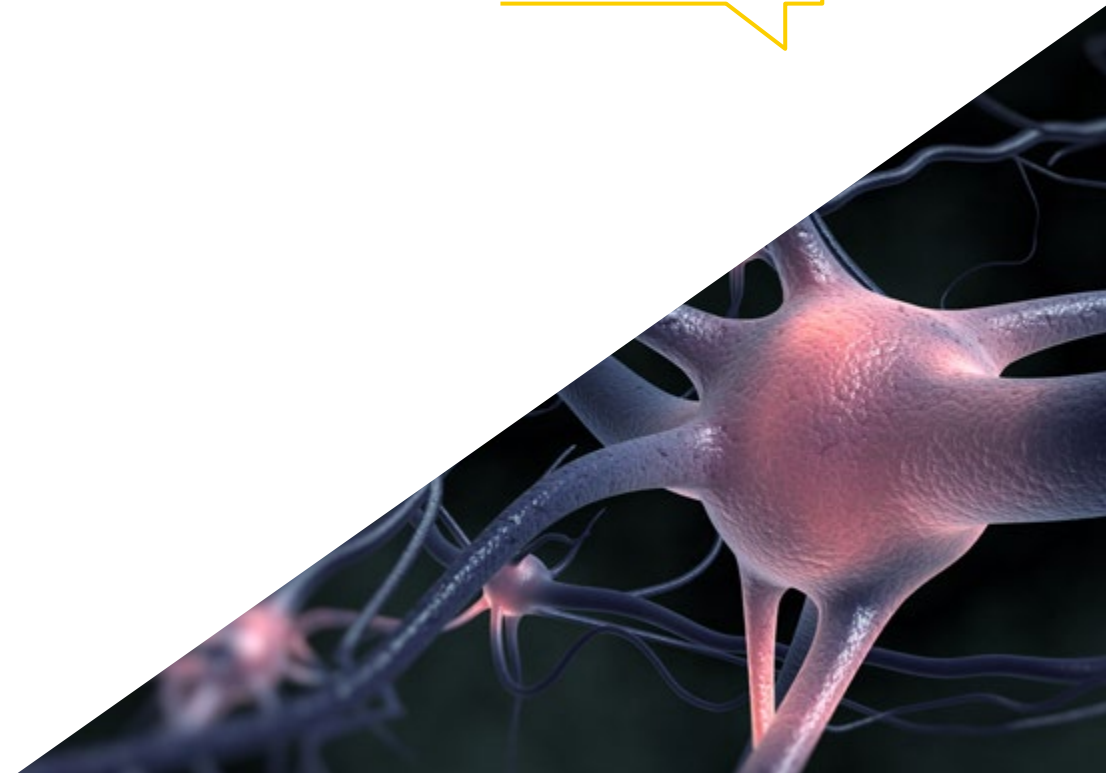
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will allow professionals to learn in a contextual and situated learning environment, i.e., a simulated environment that will provide immersive education programmed to prepare in real situations.

The design of this program focuses on Problem-Based Learning, by means of which professionals must try to solve the different professional practice situations that arise during the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced experts.

*This Postgraduate Certificate will allow you to analyze the structures of the brain and spinal cord and contribute to their treatment.*

*A unique opportunity to increase your knowledge of the peripheral nervous system and apply it in healthcare practice.*



# 02 Objectives

The main objective of this Postgraduate Certificate in Principles of Neuroanatomy is to expand the knowledge and update the skills of graduates in Nursing based on the latest scientific evidence in the neural field. Therefore, students who take this program will be able to investigate the nervous system, its formation, neurons, electrical and chemical synapses, neurotransmitters, neuroendocrinology, neuroimmunology, as well as the development of the nervous system in childhood, adulthood and old age. As a result, they will be able to contribute to the advancement of this science, supported by professionals versed in neuroanatomy working in the field.







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*Fulfill your professional goals by becoming an expert in electrical and chemical synapses and analyze their influence in young, middle-aged and elderly patients"*



## General Objectives

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- Know in detail the principles of Neuroanatomy, delve into the formation of 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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- Gain knowledge about 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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*An ideal educational plan for you to delve into the hypothalamus-endocrine system relationship and be part of the evolution of healthcare of the future"*

03

# Course Management

TECH is continually committed to academic excellence. For this reason, each of its programs has teaching teams of the highest reputation. These experts have extensive experience in their professional fields and, at the same time, have achieved significant results with their empirical research and fieldwork. In addition, these specialists play a leading role within the university qualification, as they are in charge of selecting the most up-to-date and innovative content to be included in the syllabus. In addition, they participate in the elaboration of numerous multimedia resources of high pedagogical rigor.



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*The teaching materials of this program, elaborated by these specialists, have contents that are completely applicable to your professional experiences”*

## International Guest Director

Dr. Steven P. Woods is a leading neuropsychologist, internationally recognized for his outstanding contributions to improving clinical detection, prediction and treatment of real-world health outcomes in diverse neuropsychological populations. He has forged an exceptional career path, which has led him to publish over 300 articles and serve on editorial boards in 5 major Clinical Neuropsychology journals.

His excellent scientific and clinical work focuses primarily on the ways in which cognition can hinder and support daily activities, health and well-being in adults with chronic medical conditions. Other areas of scientific relevance, for this expert, also include health literacy, apathy, intra-individual variability and internet navigation skills. His research projects are funded by the National Institute of Mental Health (NIMH) and the National Institute on Drug Abuse (NIDA).

In this regard, Dr. Woods' research approach explores the application of theoretical models to elucidate the role of neurocognitive deficits (e.g., memory) in everyday functioning and health literacy in people affected by HIV and aging. In this way, his interest focuses, for example, on how people's ability to "Remember to Remember", the so-called prospective memory, influences health-related behaviors, such as medication adherence. This multidisciplinary approach is reflected in his groundbreaking research, available on Google Scholar and ResearchGate.

He has also founded the Clinical Neuropsychology Service at Thomas Street Health Center, where he holds a senior position as Director. Here, Dr. Woods provides Clinical Neuropsychology services to people affected by HIV, providing critical support to communities in need and reaffirming his commitment to the practical application of his research to improve lives..



## Dr. Woods, Steven P.

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- Founder and Director of the Clinical Neuropsychology Service at the Thomas Street Health Center
- Collaborator in the Department of Psychology, University of Houston
- Associate Editor at Neuropsychology and The Clinical Neuropsychologist
- Ph.D. in Clinical Psychology, with a specialization in Neuropsychology, Norfolk State University
- B.S. in Psychology, Portland State University
- Member of:
  - National Academy of Neuropsychology
  - American Psychological Association (Division 40, Society for Clinical Neuropsychology)

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

# 03

## Structure and Content

For the correct distribution of the contents of this program, TECH has integrated the latest teaching technology. Its 100% online format and the prestigious Relearning pedagogical methodology make the Postgraduate Certificate a unique and enriching experience for students. Graduates in Nursing will be able to enjoy a complete and exhaustive program that focuses on the aspects of neuroanatomy in detail. In addition, they will have downloadable audiovisual content and additional support material that, together with the tutoring of teachers, guarantee optimal teaching and adaptable to their needs.





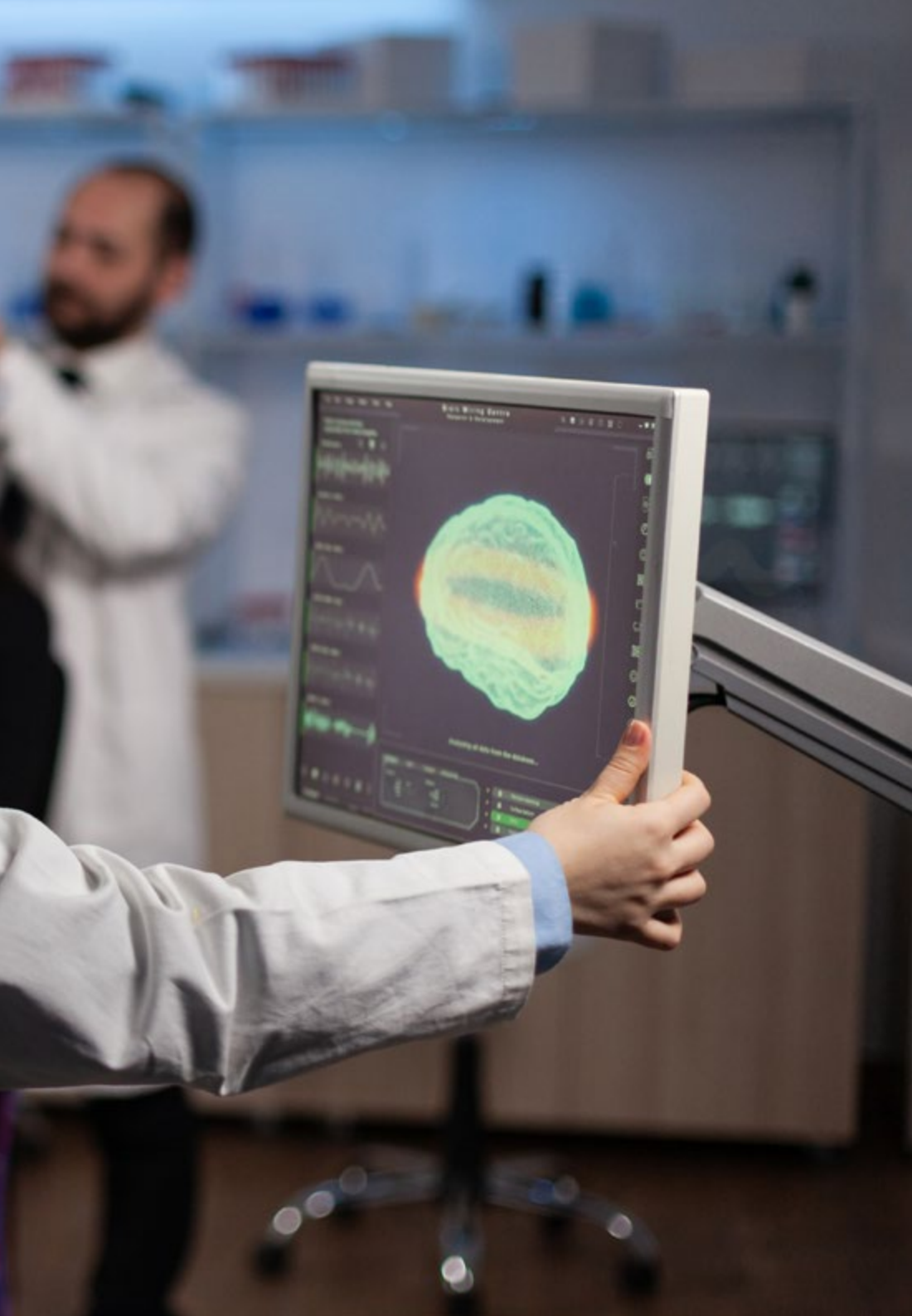
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*A program designed for nurses like you,  
who want access to the most important  
developments in neuroanatomical conditions"*

## 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
    - 1.2.2. Neurovegetative or Autonomic Nervous System
    - 1.2.2.3. White Matter
    - 1.2.2.4. Gray Matter
    - 1.2.2.5. Meninges
    - 1.2.2.6. 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. Principles of Neuroendocrinological Functioning
- 1.7. Neuroimmunology (Relationship between the Nervous System and Immune System)
  - 1.7.1. Introduction to Neuroimmunology
  - 1.7.2. Principles and Fundamentals of Neuroimmunology
- 1.8. Nervous System in Childhood and Adolescence
  - 1.8.1. Development of CNS
  - 1.8.2. Principles and Characteristics
- 1.9. Nervous System in Adulthood
  - 1.9.1. Principles and Characteristics of the CNS
- 1.10. Nervous System in Old Age
  - 1.10.1. Principles and Characteristics of the CNS in Old Age
  - 1.10.2. Main Related Problems



*Delve deeper into the characteristics of the nervous system in old age to cope with neuronal deterioration as a Neuroanatomy professional thanks to TECH"*

# 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 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 re-learn). Therefore, we combine each of these elements concentrically.

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



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



### Study Material

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

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

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



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### 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.



# 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 program will allow you to obtain your **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.

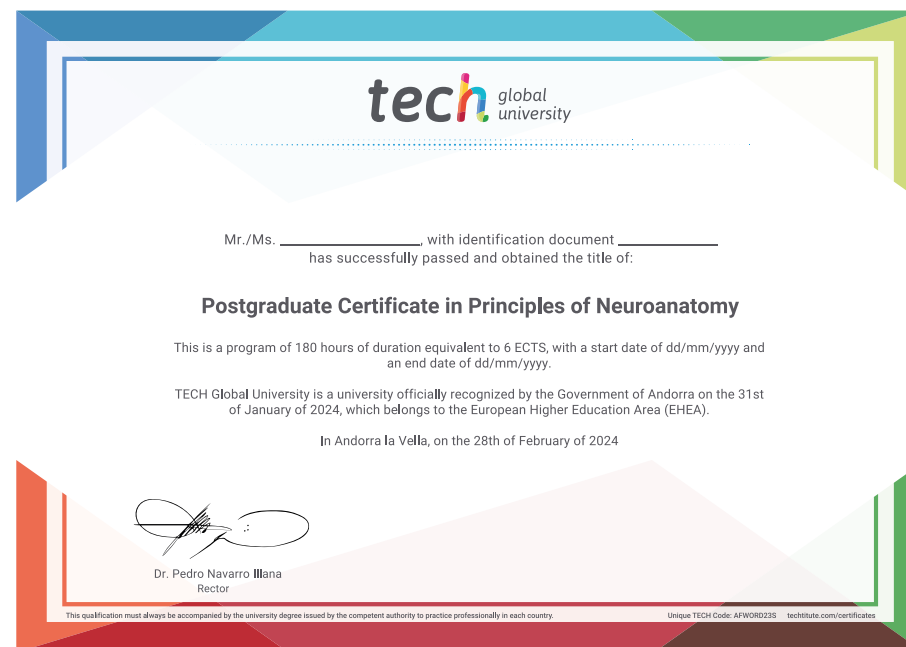
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Principles of Neuroanatomy**

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 language  
virtual classroom



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