

# Postgraduate Certificate Basis of Neurosciences

Endorsed by the NBA





## Postgraduate Certificate Basis in Neurosciences

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/sports-science/postgraduate-certificate/basis-neurosciences](http://www.techtute.com/us/sports-science/postgraduate-certificate/basis-neurosciences)

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# 01

# Introduction

The brain defines us, processes information from the outside world and determines how we respond to stimuli, making us fall in love, recognize ourselves or identify a smell that generates a specific feeling. Due to its great importance, professionals are needed who understand the neurological and functional bases of this important organ. The program has been developed with the purpose of providing sports experts with all the knowledge in neurosciences, understanding brain function, neuronal connections and the different phases in learning.





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*Understand the different levels of learning at the neuronal level to improve your training techniques.*

In recent years, neuroscience has become a fundamental pillar for different disciplines in almost all areas of human development. Its premise is simple: the brain is an organ that shapes, organizes and creates every fundamental aspect of a human being's life. Thus, the new scientific procedures of exploration in this area have opened a new panorama toward a deeper understanding of cognitive processes.

That is why the program has been created to focus on learning the bases and main elements of Neuroeducation, as well as the fundamentals of the nervous system and neuronal connections. This will allow students to learn about the brain mechanisms underlying learning, memory, language, sensory and motor systems, attention span, emotions and the influence the environment has on all of them.

Furthermore, it is a 100% online Postgraduate Certificate that provides students with comfortable study and ease, wherever and whenever they want it. All you need is a device with internet access to take your career one step further. A modality in accord with the current times and all the guarantees to position professionals in a highly demanded field.

This **Postgraduate Certificate in Neuroscience Foundations** contains the most complete and up-to-date educational program on the market. The most important features of the program include:

- ◆ Practical cases presented by experts in Neuroeducation
- ◆ The graphic, schematic, and eminently 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



*Understand how the brain works on a global level to take your career to the next level.*

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*Know what brain mechanisms underly learning, memory, language, sensory and motor systems.*

*You will have access to practical and real cases that will show you the best way to act in certain scenarios.*

*Update yourself professionally with a program that is at the forefront in the field of Neuroscience.*

The program'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 train 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.



# 02 Objectives

In order to accompany its students on the path to excellence, TECH develops a series of general and specific objectives that will allow them to complete their academic profile in a satisfactory manner. Thus, the syllabus focuses on the Bases of Neuroscience with the aim of expanding the knowledge of the functioning of the nervous system and neuronal connections to understanding the effects the environment has on the brain. After completing the Postgraduate Certificate, the professional will be able to understand how learning processes arise and develop in their students.







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*Fulfill your professional goals by completing a program focused on the advances in Neurosciences.*



## General Objectives

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- ◆ Know the basis and main elements of Neuroeducation.
- ◆ Integrate the new contributions in Brain Science in teaching-learning processes

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*At all times you will have at your disposal the tools you need to complete this Postgraduate Certificate".*





## Specific Objectives

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- ◆ Know how nervous system and neuronal connections function.
- ◆ Gain a deeper understanding of basic brain anatomy.
- ◆ Acquire general knowledge about epigenetics.
- ◆ Understand the effects of the environment on brain development.
- ◆ Know the phases of brain evolution.

03

# Course Management

The syllabus was put together by an excellent group of professionals with extensive experience in the field, joining together to create an academic program that includes everything students need to specialize in Motor Tasks in Brain Development, perfectly meeting the demands of today's labor market. This is what will ensure students the certainty of receiving the most updated and complete information, being able to almost immediately put everything they learn in each class into practice.





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*The program puts theory into practice by following the examples of real cases dictated by professionals in the field of neuroscience.*

## Management



### Ms. Pellicer Royo, Irene

- ◆ Degree in Physical Activity and Sports Science
- ◆ Master's Degree in Medical Sciences applied to Physical Activity and Sport
- ◆ Certificate in Management and Administration of Sports Entities
- ◆ Master's Degree in Emotional Education and Well-being
- ◆ Postgraduate in Neuroeducation Learning to our full potential

## Professors

### Dr. De la Serna, Juan Moisés

- ◆ PhD in Psychology
- ◆ Master's Degree in Neurosciences and Behavioral Biology
- ◆ Director of the Open Chair of Psychology and Neurosciences and science communicator
- ◆ University Expert in Didactic Methodology
- ◆ Expert in Project Management
- ◆ University Specialist in Clinical Hypnosis
- ◆ Occupational Trainer

### Dr. Navarro Ardoy, Daniel

- ◆ PhD. Exercise physiology applied to health
- ◆ Physical activity and health program Faculty of Medicine
- ◆ 6-month research stay at Karolinska Institute Stockholm (Sweden)
- ◆ Degree in Physical Activity and Sports Science

### Ms. Rodríguez Ruiz, Celia

- ◆ Graduate in Pedagogy. Degree in Psychology.
- ◆ Specialization in Clinical Psychology and Child Psychotherapy
- ◆ Specialization in Cognitive Behavioral Therapy in Childhood and Adolescence



# 04

## Structure and Content

A group of professionals has designed a program that brings together all the indispensable knowledge to meet the demands of an increasingly competitive labor market. Each module will provide professionals with the specific knowledge to understand the effects of the environment on brain development. All this, from a global perspective for the sake of its application at an international level, incorporating all the fields of work involved in professional development in this type of work environment.







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*An expertly crafted curriculum with quality content is the key to your learning success.”*

## Module 1. Basis of Neurosciences

- 1.1. The Nervous System and Neurons
  - 1.1.1. Introduction
  - 1.1.2. The Nervous System and Neurons
- 1.2. Basic Anatomy of Learning-Related Structures.
  - 1.2.1. Structures Related to Learning.
  - 1.2.2. Basic Anatomy of Learning-Related Structures.
- 1.3. Psychological Processes Related to Learning.
  - 1.3.1. Psychological Processes of Learning.
- 1.4. The Main Brain Structures Related to Motor Skills.
  - 1.4.1. Motricity and Main Brain Structures.
- 1.5. The Plastic Brain and Neuroplasticity.
  - 1.5.1. What is Brain Plasticity?
  - 1.5.2. Neuroplasticity.
- 1.6. Epigenetics.
  - 1.6.1. Definition of Epigenetics.
- 1.7. Effects of the Environment on Brain Development.
  - 1.7.1. Environment and Brain Development.
- 1.8. Changes in the Infant's Brain.
  - 1.8.1. Infant Brain.
- 1.9. Evolution of the Adolescent Brain.
  - 1.9.1. Adolescent Brain.
- 1.10. Adult Brain.
  - 1.10.1. Adult Brain.





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*The best way to improve your work with your students is to know how their brain works at the synapse level.*

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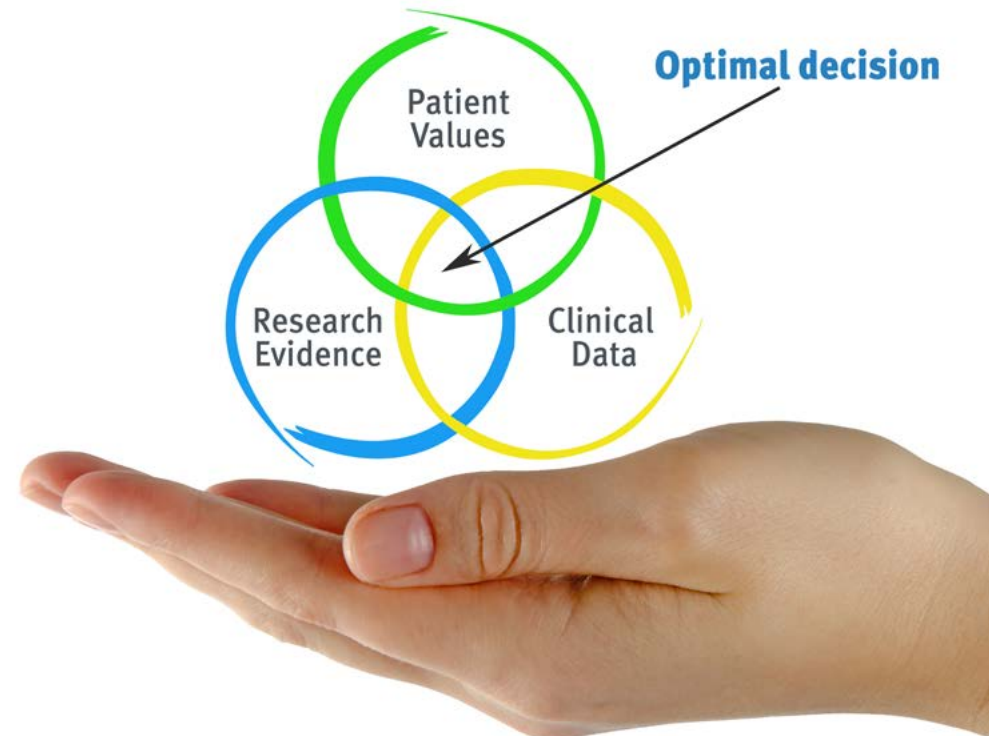
*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world.”*



*Our university is the first in the world to combine Harvard Business School case studies with a 100%-online learning system based on repetition.*



*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This intensive Sports Science program at TECH Technological University prepares you to face all the challenges in this field, both nationally and internationally. We are committed to promoting personal and professional growth, the best way to strive for success, that is why TECH uses Harvard case studies, with which we have a strategic agreement that allows us to provide our students with material from the best university the world.

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*We are the only online university that offers Harvard materials as teaching materials on its courses”*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

Our university is the first in the world to combine Harvard University case studies with a 100%-online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance Harvard case studies with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.





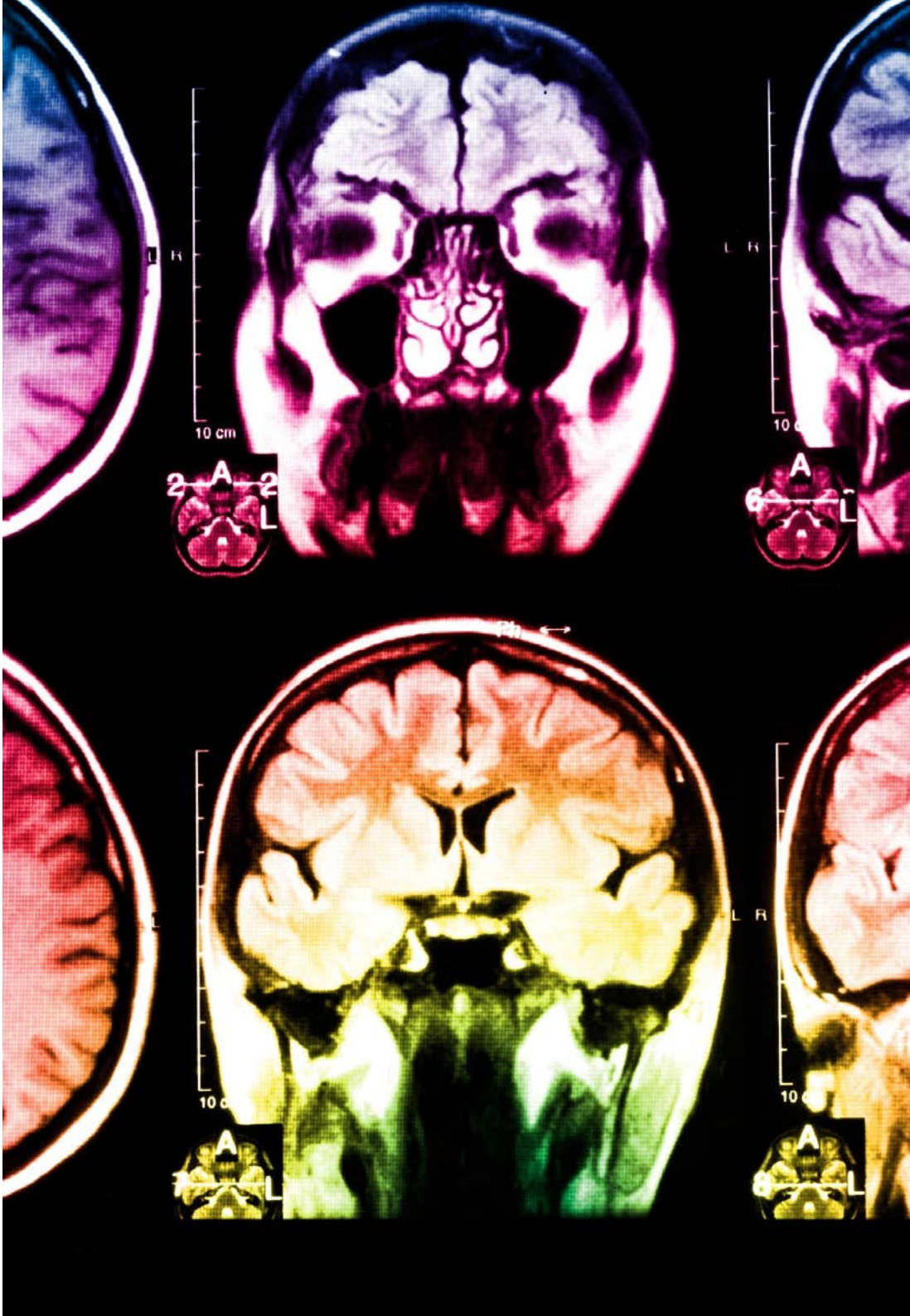
In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

With this methodology, we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



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.



#### 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.



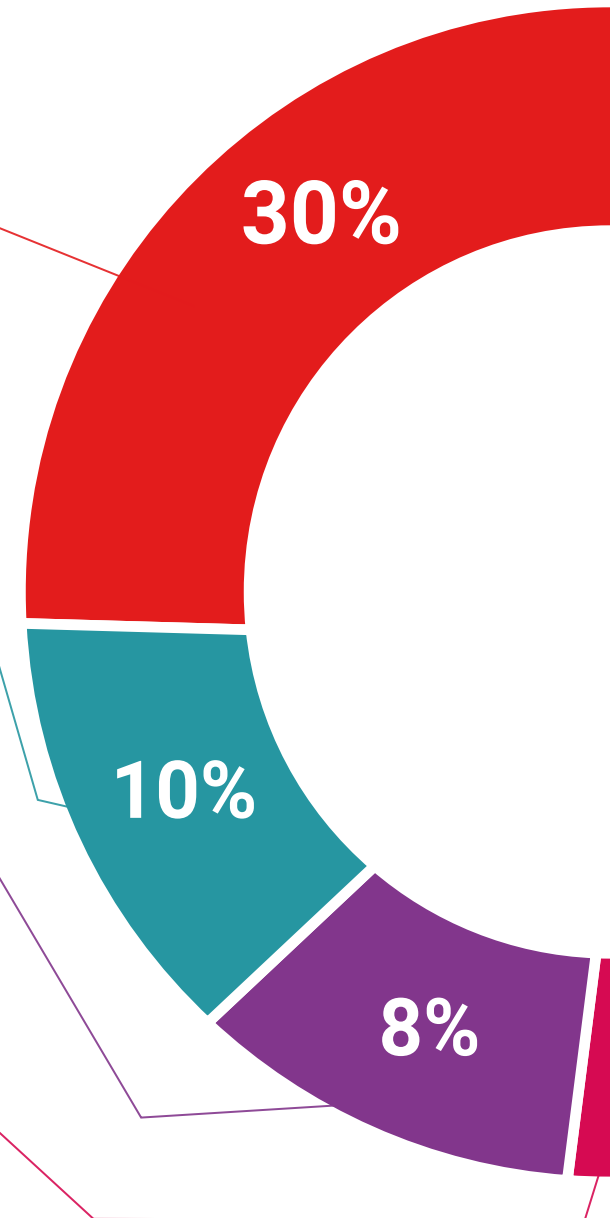
#### Practising Skills and Abilities

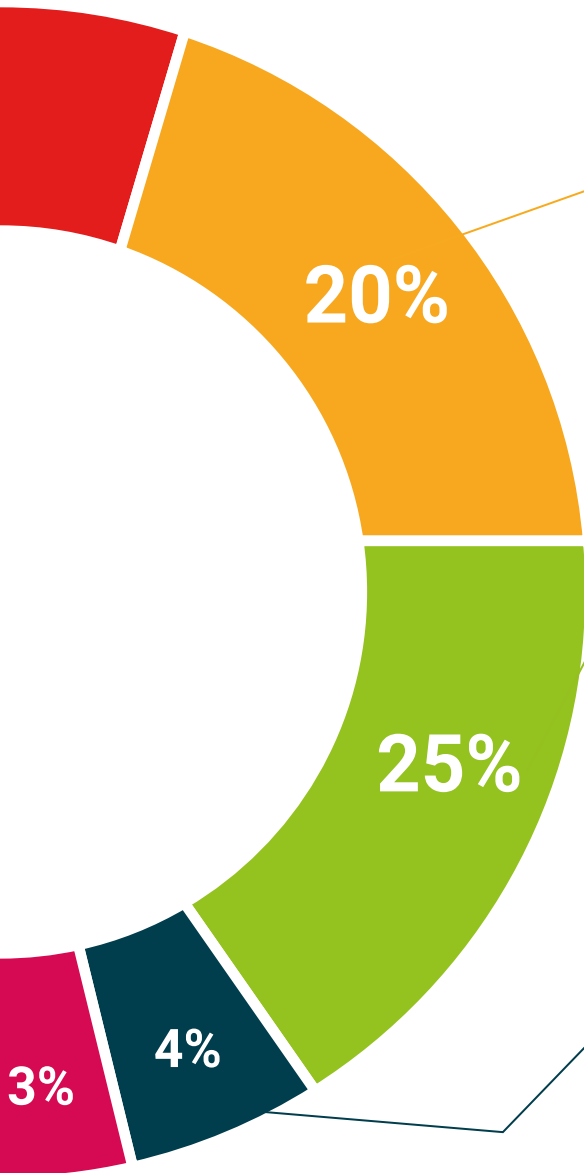
They will carry out activities to develop specific competencies and skills in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



#### 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.





#### Case Studies

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



#### 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".



#### 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.



# 06 Certificate

The Postgraduate Certificate in Basis of Neurosciences guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This **Postgraduate Certificate in the Basis of Neurosciences** 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 **Postgraduate Certificate** diploma issued by **TECH Technological University** via tracked delivery.

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

Title: **Postgraduate Certificate in Basis of Neurosciences**

Official N° of Hours: **150 hours**.

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  
development language  
virtual classroom



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- » Exams: online

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**tech** technological  
university

