

# Postgraduate Diploma

## Neuroeducation and Neurolinguistics



## Postgraduate Diploma Neuroeducation and Neurolinguistics

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

Website: [www.techtute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-neuroeducation-nurolinguistics](http://www.techtute.com/in/medicine/postgraduate-diploma/postgraduate-diploma-neuroeducation-nurolinguistics)

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01

# Introduction

In recent years, neurosciences have become a benchmark for the development of different branches of applied knowledge, whether in clinical practice, education, linguistics, marketing, but also in other innovative areas such as economics, leadership or politics, all thanks to the progress of neuroimaging techniques, which have surpassed the already rudimentary anatomical studies of a few years ago.





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*This education makes professionals in this field increase their ability to succeed, which results in a better practice and social benefit for the whole community"*

Neuroeducation or Neurodidactics can be defined as a bridge discipline between neurology and educational sciences, in which educational psychology plays a key role. It is a scientific development project in which we want to combine the knowledge we have about how the brain works with what is known about educational processes in the field. It is usually focused in the field of education, in school and academic settings.

Neuroeducation or Neurodidactics is a very recent field of action, in which both educators and neuroscientists collaborate. In this emerging field, specialties such as neuroscience, psychology, cognitive science and education converge to improve the methods of teaching and learning.

Aspects that sometimes seem too technical or with a complicated language are addressed and explained in a clear and accessible way for any interested professional, which will have a broad vision of the theoretical and applied aspects of Neurosciences in the different areas of education.

A unique opportunity to contemplate the wide range of Neurosciences applied in the most diverse areas addressed with sufficient clarity to be applied in professional practice.

Students will have access to the latest advances in Neurosciences at a theoretical level, in addition to learning how to apply them in their profession, thus offering a qualitative advantage over other professionals in the sector. It also facilitates the incorporation to the labor market or the promotion in it, with an extensive theoretical and practical knowledge that will improve their skills in the performance of their position.

This **Postgraduate Diploma in Neuroeducation and Neurolinguistics** contains the most complete and up-to-date scientific program on the market. Its most outstanding features are:

- ◆ The development of practical case studies presented by experts in Neuroeducation and Neurolinguistics
- ◆ 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.
- ◆ New developments in Neuroeducation and Neurolinguistics
- ◆ Practical exercises where the self-assessment process can be carried out to improve learning
- ◆ With special emphasis on innovative methodologies in Neuroeducation and Neurolinguistics.
- ◆ 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



*Improve your knowledge through the Postgraduate Diploma program in Neuroeducation and Neurolinguistics"*



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*This Postgraduate Diploma is the best investment you can make in the selection of a professional program for two reasons: in addition to upgrading your knowledge in Neuroeducation and Neurolinguistics, you will obtain a Postgraduate Diploma certificate from TECH Technological University"*

*Increase your confidence in decision making by updating your knowledge through this program.*

*Take the opportunity to learn about the latest advances in this field and apply it to your daily practice.*

The teaching staff includes medical professionals who bring their experience to this training 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 deliver an immersive learning experience, programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the physician must try to solve the different professional practice situations that arise throughout the program. For this purpose, the specialist will be assisted by an innovative interactive video system developed by renowned and experienced experts in the field of Neuroeducation and Neurolinguistics.



# 02

# Objectives

The program in Neuroeducation and Neurolinguistics is oriented to facilitate the physician's the performance of the physician dedicated to work with patients a t an early stage.







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*This program will allow you to improve your knowledge in Neuroeducation and Neurolinguistics with the use of the latest educational technology, to contribute with quality and security to decision making"*



## General Objectives

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- ◆ Improve the knowledge on Neurosciences in its different fields of application, from the clinical, educational or social area, in order to increase the quality of the practice of the professionals in their performance in the field of neuroscience
- ◆ Introduce the student to the vast world of Neurosciences from a practical perspective, so that they learn about the different disciplines covered by the study of the brain in relation to human behavior and its possibilities
- ◆ Learn the tools used in Neuroscience research and practice
- ◆ Enable the development of skills and abilities by encouraging continuous training and research



*Take the next step to get current on the latest developments in Neuroeducation and Neurolinguistics"*





## Specific Objectives

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### Module 1. Principles of Neurosciences

- ◆ Understand the types of neurons
- ◆ Identify brain hemispheres and lobes
- ◆ Differentiate between localizationism and brain functionalism
- ◆ Discover the undifferentiated neurons
- ◆ Learn programmed neural death
- ◆ Recognise interneuronal electrical communication
- ◆ Determine the role of myelin in neurons
- ◆ Understanding interneuronal chemical communication
- ◆ Learn the peculiarities of the human brain
- ◆ Unravel the left brain
- ◆ Explore the white matter
- ◆ Recognize gender differences at the neural level
- ◆ Classify hemispheric functions
- ◆ Discover the new localizationism
- ◆ Understand invasive techniques
- ◆ Recognize non-invasive techniques

### Module 2. Neuroeducation

- ◆ Verify the connection between intelligence and creativity
- ◆ Analyze academic intelligence
- ◆ Observe the connection between the brain and cognition
- ◆ Discover the cognitive processes

### Module 3. Neurolinguistics

- ◆ Differentiate between gross vs. fine motor skills
- ◆ Approach the experience at the neural level
- ◆ Establishing learning at the neuron level
- ◆ Observe the effectiveness of repetitive reinforcement
- ◆ Discover neuromuscular control
- ◆ Exploring the neuronal insigne



03

# Course Management

The direction and development of the program will be carried out with the most qualified professors in this area, in a multidisciplinary approach: Reference experts in the field of Neurosciences at the service of the best online specialization. Throughout 6 months of education, and by means of a high-tech communication system, you will be able to access the tutoring and guidance of your faculty at all times. With the confidence of counting on the best.



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*The highest quality online course  
in the teaching market, with faculty  
who are experts in neuroscience  
and online teaching”*



## Management



### Dr. De la Serna, Juan Moisés

- ◆ Psychologist and Writer expert in Neurosciences
- ◆ Writer specializing in Psychology and Neurosciences
- ◆ Author of the Open Chair in Psychology and Neurosciences
- ◆ Scientific disseminator
- ◆ PhD in Psychology
- ◆ Degree in Psychology. University of Seville
- ◆ Master's Degree in Neurosciences and Behavioral Biology Pablo de Olavide University, Seville
- ◆ Expert in Teaching Methodology. La Salle University
- ◆ University Specialist in Clinical Hypnosis, Hypnotherapy. National University of Distance Education - UNED
- ◆ Diploma in Social Graduate, Human Resources Management, Personnel Administration. University of Seville
- ◆ Expert in Project Management, Administration and Business Management. Federation of Services U.G.T
- ◆ Trainer of Trainers. Official College of Psychologists of Andalusia



### **Ms. Jiménez Romero, Yolanda**

- ♦ Pedagogical advisor and external educational collaborator
- ♦ Academic Coordinator Online University Campus
- ♦ Territorial Director of the Extremeño-Castilla La Mancha Institute of High Abilities
- ♦ Creation of Educational Contents INTEF. Ministry of Education and Science
- ♦ Degree in Primary Education, English specialization
- ♦ Psychopedagogy. International University of Valencia
- ♦ Master's Degree in Neuropsychology of High Abilities
- ♦ Master's Degree in Emotional Intelligence. Specialist in NPL

## **Professors**

### **Ms. Pellicer Royo, Irene**

- ♦ Expert in Emotional Education at the Jesuitas-Caspe School
- ♦ Master's Degree in Medical Sciences Applied to Physical Activity and Sport by the University of Barcelona
- ♦ Master in Emotional Education and Well-being by the University of Barcelona
- ♦ Degree in Physical Activity and Sport Sciences from the University of Lérida

# 04

## Structure and Content

The structure of the contents has been designed by a team of professionals from the best educational centers and universities of the national territory, aware of the relevance of innovative specialization and committed to quality teaching through new educational technologies.





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*A comprehensive teaching program, structured in well-developed teaching units, oriented towards efficient and swift learning that is compatible with your personal and professional life"*

## Module 1. Principles of Neurosciences

- 1.1. The Nervous System and Neurons
  - 1.1.1. The Formation of the Nervous System
  - 1.1.2. Types of Neurons
- 1.2. Neurobiological Principles of the Brain
  - 1.2.1. Brain Hemispheres and Lobes
  - 1.2.2. Localizationism vs Brain Functionalism
- 1.3. Genetics and Neurodevelopment
  - 1.3.1. Undifferentiated Neurons
  - 1.3.2. Programmed Neuronal Death
- 1.4. Myelination
  - 1.4.1. Electrical Interneuronal Communication
  - 1.4.2. Role of Myelin in Neurons
- 1.5. Brain Neurochemistry
  - 1.5.1. Interneuronal Chemical Communication
  - 1.5.2. Neurohormones and Their Functions
- 1.6. Plasticity and Brain Development
  - 1.6.1. Age vs. Neuronal Plasticity
  - 1.6.2. Neurodevelopment
- 1.7. Hemispheric Differences
  - 1.7.1. Right Brain
  - 1.7.2. Left Brain
- 1.8. Interhemispheric Connectivity
  - 1.8.1. White Matter
  - 1.8.2. Differences Between Genders
- 1.9. Localizationism vs Functionalism
  - 1.9.1. Hemispheric Functions
  - 1.9.2. New Localizationism
- 1.10. Invasive vs. Invasive Brain Study Techniques. Non-invasive
  - 1.10.1. Invasive Techniques
  - 1.10.2. Non-Invasive Techniques

## Module 2. Neuroeducation

- 2.1. Neural Principles of Learning
  - 2.1.1. Experience on a Neural Level
  - 2.1.2. Learning on a Neural Level
- 2.2. Cerebral Learning Models
  - 2.2.1. Traditional Learning Models
  - 2.2.2. New Learning Models
- 2.3. Cognitive Processes and Learning
  - 2.3.1. Cognitive Processes and the Brain
  - 2.3.2. Cognitive Processes and Learning
- 2.4. Emotions and Learning
  - 2.4.1. Emotion and the Brain
  - 2.4.2. Emotion and Learning
- 2.5. Socialization and Learning
  - 2.5.1. Socialization and the Brain
  - 2.5.2. Socialization and Learning
- 2.6. Cooperation and Learning
  - 2.6.1. Cooperation and the Brain
  - 2.6.2. Cooperation and Learning
- 2.7. Self-Control and Learning
  - 2.7.1. Self-Control and the Brain
  - 2.7.2. Self-Control and Learning
- 2.8. Different Minds, Different Learning Experiences
  - 2.8.1. Different Minds from Neuroeducation
  - 2.8.2. Giftedness from Neuroeducation
- 2.9. Neuromyths in Education
  - 2.9.1. The Brain and Adult Learning
  - 2.9.2. The Brain and Learning in Autism
- 2.10. Neurodidactics Applied to the Classroom
  - 2.10.1. The Neurodidactics of Attention
  - 2.10.2. The Neurodidactics of Motivation





### Module 3. Neurolinguistics

- 3.1. Language and the Brain
  - 3.1.1. Communicative Processes of the Brain
  - 3.1.2. The Brain and Speech
- 3.2. The Psycholinguistic Context
  - 3.2.1. Foundations of Psycholinguism
  - 3.2.2. The Brain and Psycholinguism
- 3.3. Language Development vs. Neural Development
  - 3.3.1. Neural Foundations of Language
  - 3.3.2. Neural Development of Language
- 3.4. The Spoken Language and Written Language
  - 3.4.1. Childhood and Language
  - 3.4.2. Adulthood and Language
- 3.5. The Brain in Bilingualism
  - 3.5.1. Native Language at the Neural Level
  - 3.5.2. Multiple Languages at the Neural Level
- 3.6. Developmental Speech and Language Disorders
  - 3.6.1. Intelligence and Linguistic Development
  - 3.6.2. Types of Intelligence and Language
- 3.7. Childhood Language Development
  - 3.7.1. Phases of Language in Childhood
  - 3.7.2. Difficulties in Childhood Language Development
- 3.8. Adolescent Brain
  - 3.8.1. Adolescence Language Development
  - 3.8.2. Language Difficulties in Adolescence

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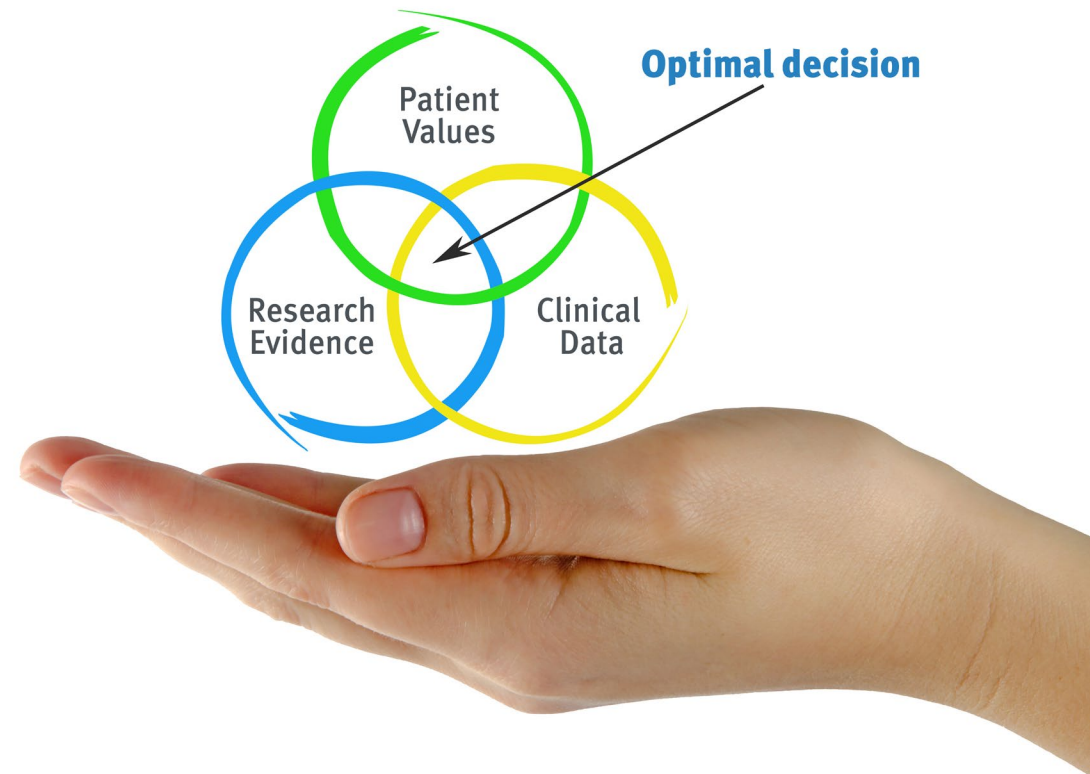
*Discover Relearning, a system that abandons conventional linear learning to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization”*



## At TECH, we use the Case Method

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. 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, 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 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.





## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*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 prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational 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 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.



#### 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.





#### 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 assess and re-assess 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 on the usefulness of learning by observing experts. The system known as 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 Postgraduate Diploma in Neuroeducation and Neurolinguistic guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification 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”*

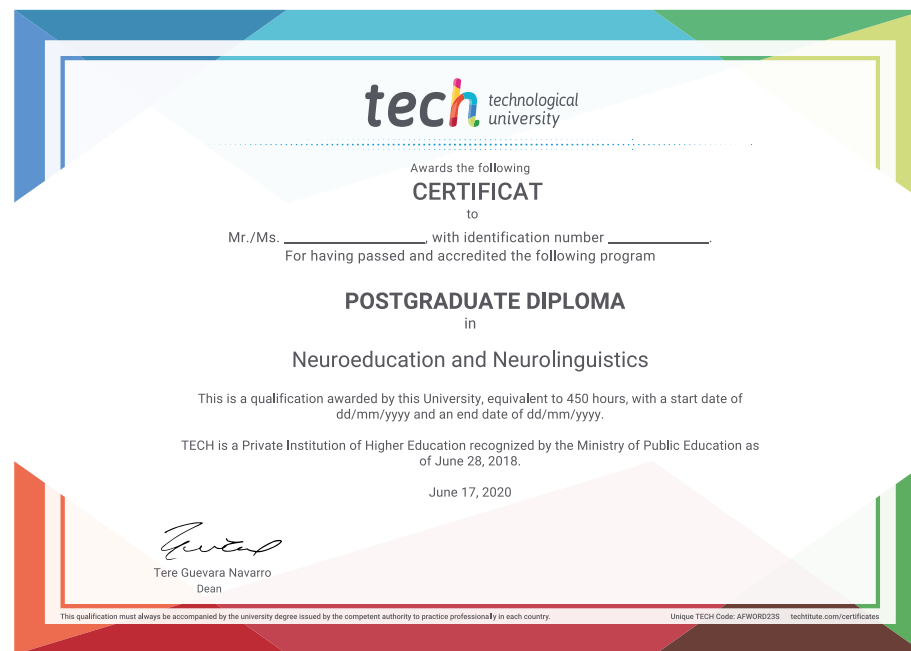
This **Postgraduate Diploma in Neuroeducation and Neurolinguistics** contains the most complete and up-to-date program on the market.

After the student has passed the evaluations, they will receive their corresponding **certificate** issued by **TECH Technological University via tracked delivery**.

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

Title: **Postgraduate Diploma in Neuroeducation and Neurolinguistics**

Official No. of Hours: **450 hours**.



\*Apostille Convention. In the event that the student wishes to have their paper certificate 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 languages  
virtual classroom



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