

Postgraduate Certificate Neurosciences



Postgraduate Certificate Neurosciences

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

Website: www.techtitude.com/us/psychology/postgraduate-certificate/neurosciences



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01

Introduction to the Program

Neurosciences have made significant contributions to understanding how the human nervous system is organized, as well as exploring its development and function to explain certain behaviors. This field provides psychology professionals with valuable insights into the biological foundations of mental disorders (such as depression, anxiety, and post-traumatic stress disorder, among others). As a result, professionals can make more accurate diagnoses and implement the most effective treatments to aid in their patients' recovery. In this context, TECH has launched an online university program aimed at specialists who wish to explore the structural and functional organization of the nervous system to optimize their clinical practice.



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Thanks to this 100% online Postgraduate Certificate, you will apply neuroscientific principles to your daily practice to successfully address mental disorders such as anxiety”

The functioning of the human brain has always been a subject of study by the scientific community due to its importance in behavior, cognition, and the overall human experience. With the advent of Industry 4.0, the field of neuroscience has been enriched with advanced digital technologies (such as Functional Neuroimaging), enabling psychologists to gain a deeper understanding of aspects such as the neurobiological foundations of the brain and neuronal development. As a result, experts can perform more detailed assessments and develop more effective therapeutic interventions. For example, by understanding how certain neurotransmitters are involved in depression, experts can apply the most appropriate pharmacological treatments for those affected.

In this context, TECH presents a revolutionary program in Neurosciences. Designed by true experts in the field, the curriculum will focus on both the function and structure of the nervous system and neurons. As a result, graduates will understand how emotions, thoughts, and behaviors are formed. The syllabus will also analyze the Neurochemistry of the brain, with an emphasis on interneuronal communication and the functions of neurohormones. This will enable students to comprehend the biological basis of major mental disorders (such as anxiety, depression, or schizophrenia) and treat them more effectively. A renowned International Guest Director will also deliver an intensive Masterclass to help graduates acquire advanced competencies that will allow them to experience a significant leap in their professional careers.

Additionally, the program is based on the innovative Relearning method, pioneered by TECH. This teaching system uses the reiteration of key contents in a natural way, guaranteeing that they remain in the professionals' memory without the need to memorize. Additionally, it is important to note that the only requirement to access the Virtual Campus is an electronic device with internet access (smartphones, tablets, or computers).

This **Postgraduate Certificate in Neurosciences** contains the most complete and up-to-date educational program on the market. Its most notable features are:

- ♦ Practical cases presented by experts in Neurosciences
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable 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



A renowned International Guest Director will participate in this program to bring graduates closer to the realities of a profession full of challenges.

“

Do you want to delve into non-invasive techniques for studying the brain? Achieve this with this program in just a few hours”

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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned experts.

You will delve into the process of Programmed Neuronal Death and develop effective coping strategies to help families cope with grief.

You will strengthen your key knowledge through the innovative Relearning methodology, which will enable effective assimilation of the material.



02 Objectives

Upon completing this Postgraduate Certificate, graduates will stand out for their comprehensive knowledge of Neurosciences and their application in the field of Psychology. As a result, professionals will have an integrated understanding of how neurobiological processes underpin a wide range of cognitive and emotional behaviors and functions. At the same time, specialists will acquire skills to assess psychiatric pathologies and design individualized therapeutic plans to help optimize patients' quality of life.



“

You will apply the latest scientific discoveries in Neurosciences to address mental disorders through highly personalized treatments”



General Objectives

- ♦ Update knowledge on Neurosciences in their different fields of application, from the clinical, educational or social area
- ♦ Increase the quality of the teaching professional's practice in their performance
- ♦ Know the different disciplines involved in the study of the brain in relation to human behavior and its possibilities
- ♦ Learn to use the tools used in Neuroscience research and practice
- ♦ Develop skills and abilities in emotional development in the classroom
- ♦ Direct the student towards continuing training and research



This program gives you the opportunity to update your knowledge in a real scenario, with the maximum scientific rigor of an institution at the forefront of technology"





Specific Objectives

- ♦ Learn about the formation of the nervous system
- ♦ Understand the types of neurons
- ♦ Identify brain hemispheres and lobes
- ♦ Differentiate between localizationism and brain functionalism
- ♦ Discover the undifferentiated neurons
- ♦ Learn programmed neural death
- ♦ Recognize 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
- ♦ Recognize gender differences at the neural level
- ♦ Classify hemispheric functions
- ♦ Discover the new localizationism
- ♦ Understand invasive techniques
- ♦ Recognize non-invasive techniques

03

Course Management

For the design and delivery of this Postgraduate Certificate, TECH has assembled a top-tier teaching staff. Comprised of leading experts in the field of Neurosciences, these professionals bring extensive experience from prestigious institutions. Committed to providing services based on excellence, they stay up to date with all the advancements in their area of specialization. In this way, students are guaranteed an academic experience of high quality, enabling them to optimize their daily practice and explore different career paths.



“

An experienced teaching team will accompany you throughout the learning process and address any questions you may have”

International Guest Director

Dr. Malek Bajbouj is a Psychiatrist and Neuroscientist, specialized in the areas of **Global Health**, **Mental Health** and **Affective Sciences**. He also has experience as a **Sleep Physician** and **Social, Affective and Cognitive Neuroscientist**. Together with an interdisciplinary team, his work has focused on **research on stress, affect and emotions**. In particular, to carry out these studies, some of his main work has focused on **cell culture, imaging and brain stimulation**, as well as **humanitarian aid**.

Most of his professional experience has been as **Medical Director** and **Head of the Center for Affective Neuroscience** at the Charité Universitätsmedizin Berlin. In addition, his main **research** focus in the field of **Global Mental Health** has been the development of tailored, low-threshold **preventive and therapeutic interventions** against stress and trauma-related disorders. To this end, he has made use of **digital tools and clinical trials**, conducting interventions focused on **reverse-innovation electrophysiological and neuroimaging approaches** to improve patient phenotyping.

Likewise, Dr. Malek Bajbouj's firm commitment to **Mental Health** worldwide has led him to develop a large part of his professional activity in countries in the **Middle East, Far East and Ukraine**. In this sense, he has participated in various **international conferences** such as the **Ukrainian-German Conference on Mental Health, Psychosocial Support and Rehabilitation**. He has also written more than **175 book chapters** and has an extensive list of **scientific publications** in which he has investigated topics such as **Emotional Neuroscience, Affective Disorders and Global Mental Health**.

In fact, his contributions in **Psychiatry and Neuroscience** have been awarded several times. One of them was in 2014, when he was awarded the **Else Kröner-Fresenius Prize**, recognizing his outstanding **scientific research**. And it is that his tireless work to strengthen the **mental health** of people around the world has positioned him as one of the best professionals in his field.



Dr. Bajbouj, Malek

- Medical Director of the Center for Affective Neuroscience at Charité Universitätsmedizin, Berlin, Germany
- Visiting Research Fellow at the Department of Psychiatry, Columbia University and the New York State Psychiatric Institute
- Physician and Assistant Researcher at the Free University of Berlin
- Specialist in Sleep Medicine
- Specialist in Psychiatry and Psychotherapy
- Master of Business Administration from Steinbeis-Hochschule University
- Graduate in Medicine from the Johannes Gutenberg University
- Member of Research Group Languages of Emotion at the Freie Universität Berlin

“

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

Management



Dr. De la Serna, Juan Moisés

- ♦ Independent Psychologist and expert writer in Neurosciences
- ♦ Writer specialized in Psychology and Neurosciences
- ♦ Author of the Open Chair of Psychology and Neurosciences
- ♦ Scientific Disseminator
- ♦ Doctorate in Psychology
- ♦ Bachelor's 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
- ♦ Certified "Trainer of Trainers" Official College of Psychologists of Andalusia

**Ms. Jiménez Romero, Yolanda**

- ♦ Pedagogical Advisor and External Educational Collaborator
- ♦ Academic Coordinator of Online University Campus
- ♦ Territorial Director of the Extremadura-Castile La Mancha Institute of High Abilities
- ♦ Creation of INTEF Educational Contents in the Ministry of Education and Science
- ♦ Degree in Primary Education with a specialization in English
- ♦ Psychopedagogue by the International University of Valencia
- ♦ Master's Degree in Neuropsychology of High Abilities
- ♦ Master's Degree in Emotional Intelligence Specialist in NLP Practitioner

Faculty**Ms. Pellicer Royo, Irene**

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

04

Structure and Content

Through this Postgraduate Certificate, psychologists will gain a holistic perspective on the anatomy and physiology of the nervous system, as well as the neurochemical processes that underpin human behavior. To this end, the program will analyze in detail the neurological foundations of the brain, addressing factors such as hemispheres and lobes. In this same vein, the syllabus will delve into the process of myelination, aiming to help graduates understand how its alteration may be associated with neurological disorders. Additionally, graduates will develop competencies to assess, diagnose, and address a variety of neurological disorders.



“

You will master the most advanced neuroscience techniques to assess and address a range of psychological disorders”

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. Inter-Neuronal Electrical 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. Gender Differences
- 1.9. Localizationism vs Functionalism
 - 1.9.1. Hemispheric Functions
 - 1.9.2. New Localizationism
- 1.10. Invasive vs Non-Invasive Techniques for Studying the Brain.
 - 1.10.1. Invasive Techniques
 - 1.10.2. Non-Invasive Techniques



“

You will be able to download all the contents of this program, such as specialized readings and multimedia materials, even after completing it” Enroll now!”

05

Study Methodology

TECH is the first university in the world to combine case study methodology with Relearning, a 100% online learning system based on guided repetition.

This innovative pedagogical strategy has been conceived to offer professionals the opportunity to update knowledge and develop skills in an intensive and rigorous way. A learning model that places the student at the center of the academic process and gives them the leading role, adapting to their needs and leaving aside the more conventional methodologies.



“

*TECH prepares 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 absolute protagonist. The pedagogical 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 the student who chooses the time they spend studying, 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 attend live classes, which many times they cannot attend. The learning activities will be done when it is convenient for them. You will always be able to decide when and from where to study.

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*At TECH you will NOT have in person classes
(which you might not be able to attend)”*



The most comprehensive academic programs worldwide

TECH is distinguished by offering the most complete academic pathways within the higher education landscape. This level of comprehensiveness is achieved through the development of curricula that not only encompass essential knowledge but also integrate the latest innovations in each area of study.

By being constantly updated, 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 preparation that provides them with a notable competitive advantage to advance in 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 smartphone wherever you want, whenever you want and for as long as you want*”

Case Studies or Case Method

The case method has been the learning system most used by the best business schools in the world. 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 solve them. In 1924 it was established as a standard teaching method at Harvard.

With this teaching model, it is the student who builds their professional competence through strategies such as Learning by Doing or Design Thinking, which are 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, argue 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 Method

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, they are able to review and reiterate the key concepts of each subject and learn to apply them in a real environment.

Along the same lines, and according to multiple scientific researches, repetition 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 more performance, involving you more in your specialization, developing a critical spirit, defending arguments and contrasting opinions: a direct equation to success.



A 100% online Virtual Campus with the best teaching resources

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 reiteration, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neurosciences 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 for long-term retention. This is a model called Neurocognitive Context-Dependent E-Learning that is consciously applied in this university program.

Furthermore, in order to maximize tutor-student contact, a wide range of communication possibilities are provided, both in real time and deferred (internal messaging, discussion forums, telephone answering service, e-mail contact with the technical secretary, chat and videoconferencing).

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, in accordance with their accelerated professional updating.



The online mode of study of this program will allow you to organize your time and your 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 best rated by its students

The results of this innovative academic model can be seen in the overall satisfaction levels of TECH graduates.

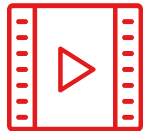
The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution has become the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is up to date with the technological and pedagogical vanguard.

You will be able to learn with the advantages of access to simulated learning environments and the learning by observation approach, that is, the "Learning from an Expert" approach.



Therefore, 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 skills and abilities in each thematic area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the context of the globalization in which we live.



Interactive Summaries

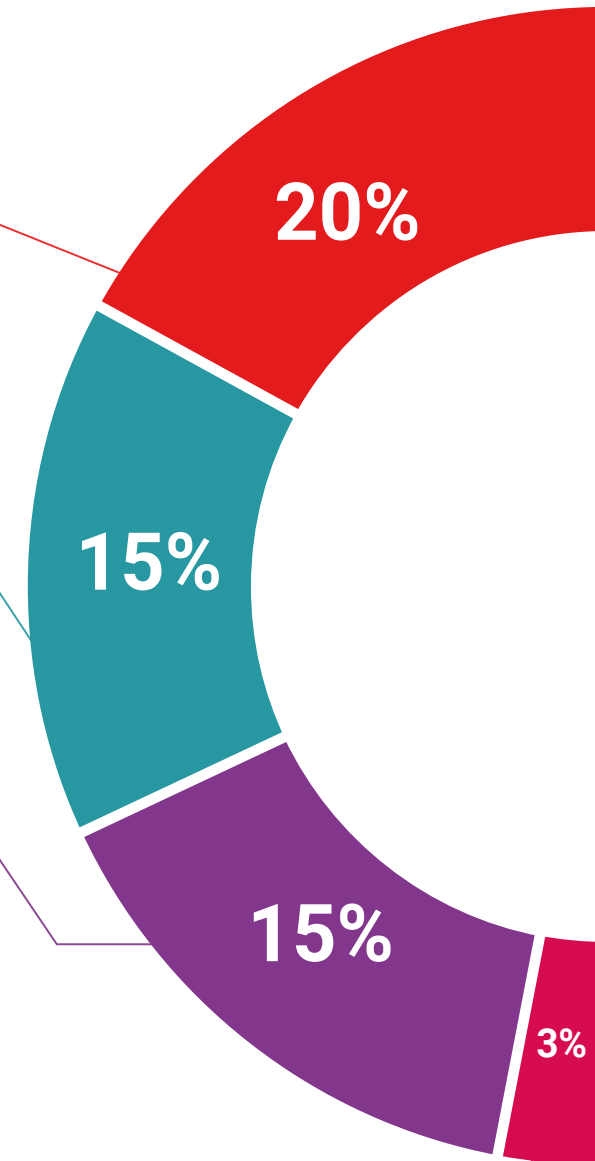
We present the contents in an attractive and dynamic way in multimedia pills that include audio, videos, images, diagrams and concept maps in order to reinforce knowledge.

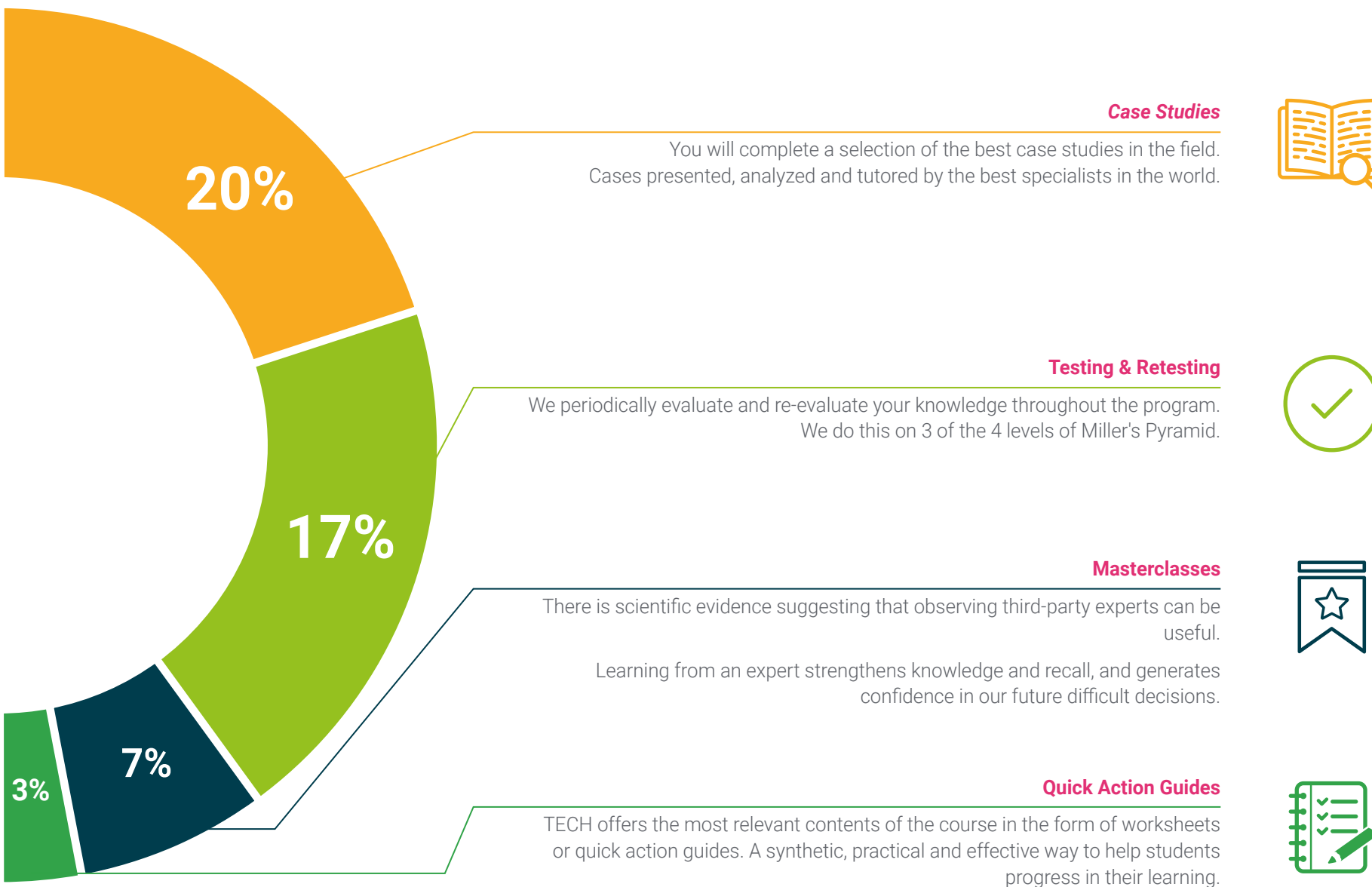
This unique educational system for the presentation of multimedia content was awarded by Microsoft as "Successful Case in Europe."



Additional Reading

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





06 Certificate

The Postgraduate Certificate in Neurosciences guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the 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 diploma for the **Postgraduate Certificate in Neurosciences** 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 private qualification from **TECH Global University** is a European continuing education and professional development program that guarantees the acquisition of competencies in its area of expertise, providing significant curricular value to the student who successfully completes the program.

Title: **Postgraduate Certificate in Neurosciences**

Modality: **online**

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Postgraduate Certificate Neurosciences

- » Modality: online
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Postgraduate Certificate Neurosciences

