

# Postgraduate Certificate

## Advanced Research Methodology in Neuropsychology





## Postgraduate Certificate

### Advanced Research Methodology in Neuropsychology

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

Website: [www.techtute.com/us/education/postgraduate-certificate/advanced-research-methodology-neuropsychology](http://www.techtute.com/us/education/postgraduate-certificate/advanced-research-methodology-neuropsychology)

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01

# Introduction

Neuropsychology has made its way into the educational arena in its own right. Its intervention proposals and developments have provided teaching with a new way of dealing with difficulties and boosting the progress of an increasingly diverse student body. This course offers you the opportunity to include in your training the competencies of this thriving branch of knowledge.





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*Learn in a few weeks, the specific methodology of research in neuropsychology, from the best professionals in the sector"*

The work of neuropsychology is complex. It covers a broad spectrum of intervention that requires the professional to have very specific training in the various branches of brain development. This discipline, deeply linked to neurology and the physiological study of the brain, is affected by the changes that the evolution of knowledge in this scientific branch achieves. This means for the professional an intense challenge of permanent updating that allows them to be at the forefront in terms of approach, intervention and follow-up of the cases that may arise in their consultation.

Throughout this training, the student will go through all the current approaches in the work of the neuropsychologist in the different challenges that his/her profession presents.

The functioning of memory, language, the relationship between laterality and cognitive development, sensoriality and many other aspects, will be the topics of work and study that the student will be able to integrate in their training. A high-level step that will become a process of improvement, not only on a professional level, but also on a personal level.

This challenge is one of TECH's social commitments: to help highly qualified professionals to training and to develop their personal, social and labor competencies during the course of their training.

We will not only take you through the theoretical knowledge we offer, but we will introduce you to another way of studying and learning, one which is simpler, more organic and more efficient. We will work to keep you motivated and to create in you a passion for learning. And we will push you to think and develop critical thinking.

A high level scientific training program, supported by advanced technological development and teaching experience of the best professionals. These are some of its differential qualities:

- ♦ Latest technology in online teaching software.
- ♦ Intensely visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand.
- ♦ Development of case studies presented by practicing experts.
- ♦ State-of-the-art interactive video systems.
- ♦ Teaching supported by telepractice.
- ♦ Continuous updating and recycling systems.
- ♦ Self-regulating learning: full compatibility with other occupations.
- ♦ Practical exercises for self-evaluation and learning verification.
- ♦ Support groups and educational synergies: questions to the expert, discussion and knowledge forums.
- ♦ Communication with the teacher and individual reflection work.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.
- ♦ Banks of complementary documentation permanently available, even after the course.



*A training created for professionals who aspire to excellence and that will allow you to acquire new skills and strategies in a smooth and effective way"*

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*We offer you a course focused on aspects of high interest for the neuropsychologist, created to be compatible with your work and personal life"*

Our teaching staff is made up of working professionals. In this way, we ensure that we provide you with the training update we are aiming for. A multidisciplinary team of professors with training and experience in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will bring their practical knowledge derived from their own experience in the course: one of the differential qualities of this postgraduate certificate.

This mastery of the subject is complemented by the effectiveness of the methodology used in the design of this course. Developed by a multidisciplinary team of e-learning experts, it integrates the latest advances in educational technology. This way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need in your training.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, we will use telepractice learning: with the help of an innovative interactive video system, and learning from an expert, you will be able to acquire the knowledge as if you were actually dealing with the scenario you are learning about. A concept that will allow you to integrate and fix learning in a more realistic and permanent way.

*An effective and proactive way to offer students new ways to improve and progress*

*Become an agent of change in the educational system, working in line with real integration*



# 02

# Objectives

Our objective is to train highly qualified professionals for work experience. An objective that is complemented, moreover, in a global manner, by promoting human development that lays the foundations for a better society. This objective is focused on helping professionals reach a much higher level of expertise and control. A goal that, in just six months, you will be able to achieve with a highly intensive and precise course.





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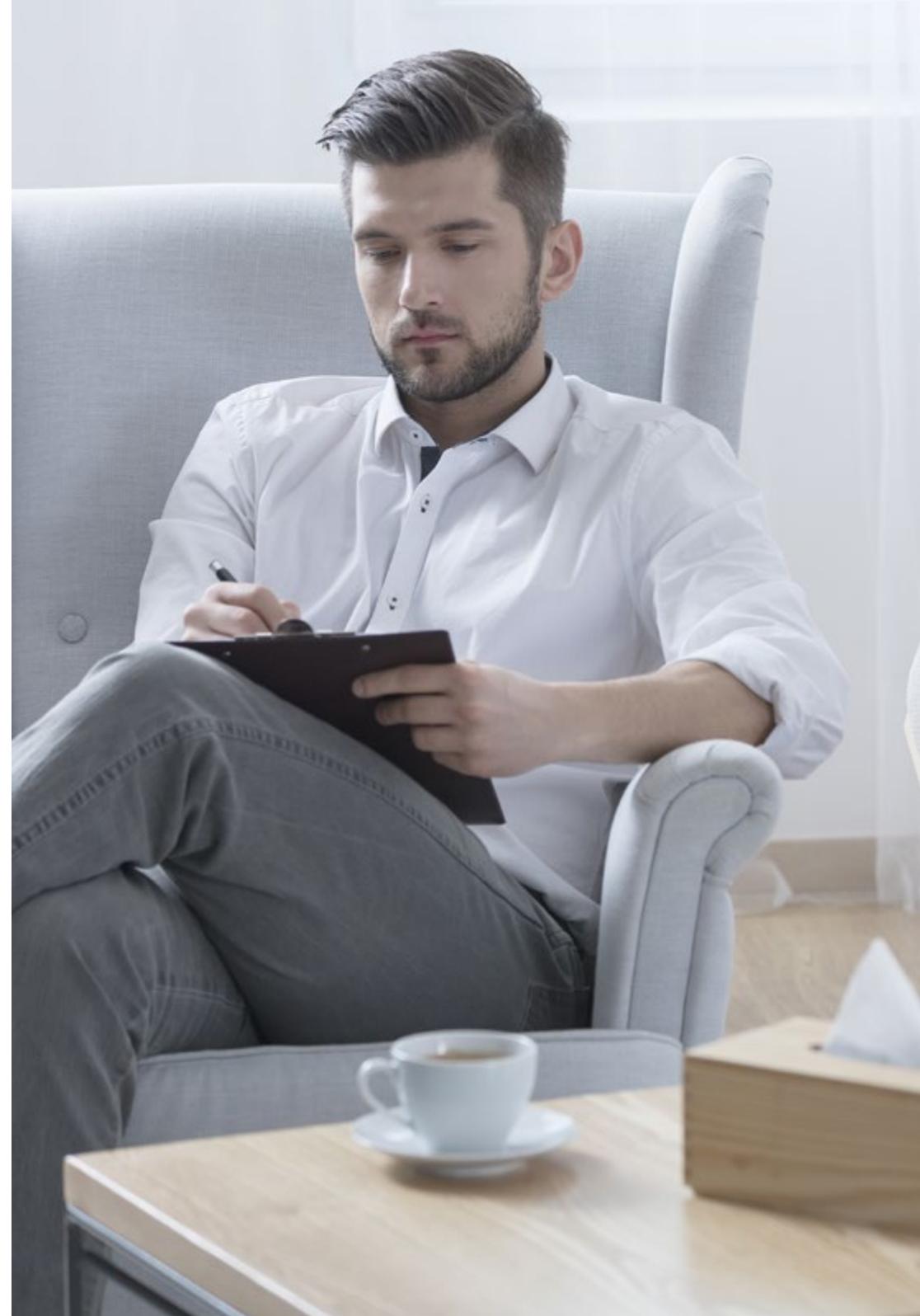
*If your goal is to improve in your profession and acquire a qualification that will enable you to compete with the best, then look no further: Welcome to TECH”*



## General Objectives

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- ♦ Qualify professionals for the practice of neuropsychology in the development of children and youth.
- ♦ Learn how to carry out specific programs to improve school performance.
- ♦ Access to the forms and processes of research in neuropsychology in the school environment.
- ♦ Increase the capacity for work and autonomous resolution of learning processes.
- ♦ Study the attention to diversity from the neuropsychological approach.
- ♦ Knowing the different ways to implement enrichment systems of learning methodologies in the classroom, especially aimed at diverse students.
- ♦ Analyze and integrate the necessary knowledge to promote the students' school and social development.





## Specific Objectives

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- Explore and gain in-depth knowledge of the characteristics and functioning of memory processes, in relation to the global development of the person, in the specific field of learning.



03

# Course Management

For our master's degree to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven track record in the field of education. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.



“

*Our teachers, professionals with vast experience bring their experience and their teaching skills to offer you a stimulating and creative training program”*

## Management



### Sánchez Padrón, Nuria Ester

- ♦ Degree in Psychology from the University of La Laguna
- ♦ Postgraduate Certificate in General Health Psychology from the University of La Rioja
- ♦ Training in Emergency Psychological Care
- ♦ Training in Psychological Care in Penitentiary Institutions
- ♦ Teaching and training experience
- ♦ Experience in educational attention to children at risk



# 04

## Structure and Content

The contents of this training have been developed by the different Professors on this course, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field.

The content of this course enables you to learn all aspects of the different disciplines involved in this field: A complete and well-structured program that will take you to the highest standards of quality and success.



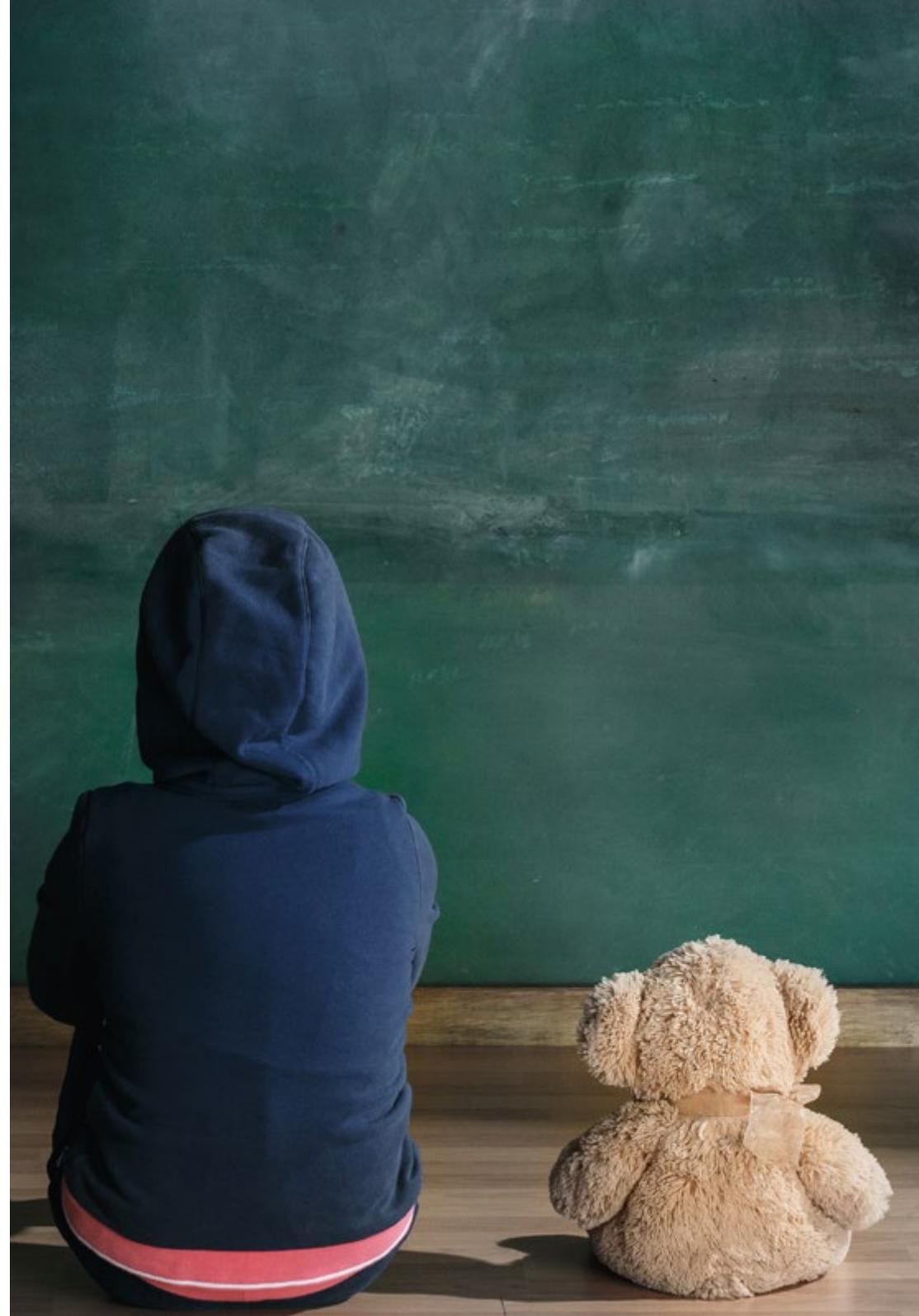


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*Our curriculum has been designed with teaching effectiveness in mind: so that you learn faster, more efficiently, and on a more permanent basis”*

## Module 1. Research Methodology I

- 1.1. Research Methodology
  - 1.1.1. Introduction.
  - 1.1.2. Importance of Research Methodology
  - 1.1.3. Scientific Knowledge
  - 1.1.4. Research Approaches
  - 1.1.5. Summary.
  - 1.1.6. Bibliographic References
- 1.2. Choice of the Research Topic
  - 1.2.1. Introduction.
  - 1.2.2. Research Problem
  - 1.2.3. Problem Definition
  - 1.2.4. Choice of the Research Question
  - 1.2.5. Research Objectives
  - 1.2.6. Variables: Types.
  - 1.2.7. Summary.
  - 1.2.8. Bibliographic References
- 1.3. Research Proposal
  - 1.3.1. Introduction.
  - 1.3.2. Research Hypotheses
  - 1.3.3. Research Project Feasibility
  - 1.3.4. Introduction and Justification of the Research
  - 1.3.5. Summary.
  - 1.3.6. Bibliographic References
- 1.4. Theoretical Framework
  - 1.4.1. Introduction.
  - 1.4.2. Theoretical Framework Elaboration
  - 1.4.3. Resources Employed
  - 1.4.4. APA Standards
  - 1.4.5. Summary.
  - 1.4.6. Bibliographic References



- 1.5. Bibliography
  - 1.5.1. Introduction.
  - 1.5.2. Importance of Bibliographic References
  - 1.5.3. How to Reference according to APA Standards
  - 1.5.4. Format of Annexes: Tables and Figures
  - 1.5.5. Bibliography Managers: What They Are and How to Use Them
  - 1.5.6. Summary.
  - 1.5.7. Bibliographic References
- 1.6. Methodological Framework
  - 1.6.1. Introduction.
  - 1.6.2. Roadmap
  - 1.6.3. Sections to be Included in the Methodological Framework
  - 1.6.4. Population
  - 1.6.5. Samples
  - 1.6.6. Variables
  - 1.6.7. Instruments
  - 1.6.8. Procedure.
  - 1.6.8. Summary.
  - 1.6.10. Bibliographic References
- 1.7. Research Designs.
  - 1.7.1. Introduction.
  - 1.7.2. Design Types
  - 1.7.3. Characteristics of the Designs used in Psychology
  - 1.7.4. Research Designs used in Education
  - 1.7.5. Research Designs used in Neuropsychology of Education
  - 1.7.6. Summary.
  - 1.7.7. Bibliographic References
- 1.8. Quantitative Research.
  - 1.8.1. Introduction.
  - 1.8.2. Randomized Group Designs
  - 1.8.3. Randomized Group Designs with Blocks
  - 1.8.4. Other Designs used in Psychology
  - 1.8.5. Statistical Techniques in Quantitative Research
  - 1.8.6. Summary.
  - 1.8.7. Bibliographic References
- 1.9. Quantitative Research II
  - 1.9.1. Introduction.
  - 1.9.2. Intrasubject Experimental Designs
  - 1.9.3. Techniques for Controlling the Effects of Intrasubject Designs
  - 1.9.4. Statistical Techniques
  - 1.9.5. Summary.
  - 1.9.6. Bibliographic References
- 1.10. Results
  - 1.10.1. Introduction
  - 1.10.2. How to Collect Data
  - 1.10.3. How to Analyze Data
  - 1.10.4. Statistical Programs
  - 1.10.5. Summary.
  - 1.10.6. Bibliographic References
- 1.11. Descriptive Statistics
  - 1.11.1. Introduction.
  - 1.11.2. Variables in Research
  - 1.11.3. Quantitative Analysis
  - 1.11.4. Qualitative Analysis
  - 1.11.5. Resources that Can be Employed
  - 1.11.6. Summary.
  - 1.11.7. Bibliographic References
- 1.12. Hypothesis Contrasting
  - 1.12.1. Introduction.
  - 1.12.2. Statistical Hypotheses
  - 1.12.3. How to Interpret Significance (p-value)
  - 1.12.4. Criteria for the Analysis of Parametric and Nonparametric Tests
  - 1.12.5. Summary.
  - 1.12.6. Bibliographic References

- 1.13. Correlational Statistics and Analysis of Independence
  - 1.13.1. Introduction.
  - 1.13.2. Pearson Correlation
  - 1.13.3. Spearman's Correlation and Chi-Square
  - 1.13.4. Results
  - 1.13.5. Summary.
  - 1.13.6. Bibliographic References
- 1.14. Group Comparison Statistics
  - 1.14.1. Introduction.
  - 1.14.2. Mann-Whitney T-test and U-test
  - 1.14.3. T-test and Wilcoxon Signed Ranges
  - 1.14.4. Results
  - 1.14.5. Summary.
  - 1.14.6. Bibliographic References
- 1.15. Discussion and Conclusions
  - 1.15.1. Introduction.
  - 1.15.2. What is the Discussion
  - 1.15.3. Discussion Organization
  - 1.15.4. Conclusions.
  - 1.15.5. Limitations and Prospective
  - 1.15.6. Summary.
  - 1.15.7. Bibliographic References
- 1.16. Elaboration of the Professional Master's Degree Final Project
  - 1.16.1. Introduction.
  - 1.16.2. Cover and Index
  - 1.16.3. Introduction and Justification.
  - 1.16.4. Theoretical Framework.
  - 1.16.5. Methodological Framework
  - 1.16.6. Results
  - 1.16.7. Intervention Programs
  - 1.16.8. Discussion and Conclusions
  - 1.16.9. Summary.
  - 1.16.10. Bibliographic References

## Module 2. Research Methodology II

- 2.1. Research in the Educational Environment.
  - 2.1.1. Introduction.
  - 2.1.2. Research Characteristics
  - 2.1.3. Research in the Classroom.
  - 2.1.4. Keys Needed for Research.
  - 2.1.5. Examples:
  - 2.1.6. Summary.
  - 2.1.7. Bibliographic References
- 2.2. Neuropsychological Research
  - 2.2.1. Introduction.
  - 2.2.2. Educational Neuropsychological Research.
  - 2.2.3. Knowledge and the Scientific Method.
  - 2.2.4. Types of Approaches.
  - 2.2.5. Research Stages
  - 2.2.6. Summary.
  - 2.2.7. Bibliographic References
- 2.3. Ethics of Research.
  - 2.3.1. Introduction.
  - 2.3.2. Informed Consent.
  - 2.3.3. Data Protection Law.
  - 2.3.4. Summary.
  - 2.3.5. Bibliographic References
- 2.4. Reliability and Validity.
  - 2.4.1. Introduction.
  - 2.4.2. Reliability and Validity in Research.
  - 2.4.3. Reliability and Validity in Assessment.
  - 2.4.4. Summary.
  - 2.4.5. Bibliographic References

- 2.5. Controlling Variables in Research.
  - 2.5.1. Introduction.
  - 2.5.2. Choosing Variables
  - 2.5.3. Controlling Variables
  - 2.5.4. Sample Selection
  - 2.5.5. Summary.
  - 2.5.6. Bibliographic References
- 2.6. The Quantitative Research Approach.
  - 2.6.1. Introduction.
  - 2.6.2. Features.
  - 2.6.3. Stages
  - 2.6.4. Assessment Tools.
  - 2.6.5. Summary.
  - 2.6.6. Bibliographic References
- 2.7. Qualitative Research Approach I.
  - 2.7.1. Introduction.
  - 2.7.2. Systematic Observation
  - 2.7.3. Research Stages
  - 2.7.4. Sampling Techniques.
  - 2.7.5. Quality Control
  - 2.7.6. Statistical Techniques
  - 2.7.7. Summary.
  - 2.7.8. Bibliographic References
- 2.8. Qualitative Research Approach II.
  - 2.8.1. Introduction.
  - 2.8.2. The Survey
  - 2.8.3. Sampling Techniques.
  - 2.8.4. Survey Stages
  - 2.8.5. Research Designs.
  - 2.8.6. Statistical Techniques
  - 2.8.7. Summary.
  - 2.8.8. Bibliographic References
- 2.9. Qualitative Research Approach III.
  - 2.9.1. Introduction.
  - 2.9.2. Types of Interviews and Characteristics.
  - 2.9.3. Preparing the Interview.
  - 2.9.4. Group Interviews
  - 2.9.5. Statistical Techniques
  - 2.9.6. Summary.
  - 2.9.7. Bibliographic References
- 2.10. Single Case Designs.
  - 2.10.1. Introduction.
  - 2.10.2. Features.
  - 2.10.3. Types.
  - 2.10.4. Statistical Techniques
  - 2.10.5. Summary.
  - 2.10.6. Bibliographic References
- 2.11. Research-Action.
  - 2.11.1. Introduction.
  - 2.11.2. Objectives of Research-Action.
  - 2.11.3. Features.
  - 2.11.4. Phases.
  - 2.11.5. Myths
  - 2.11.6. Examples:
  - 2.11.7. Summary.
  - 2.11.1. Bibliographic References
- 2.12. Gathering Information for Research.
  - 2.12.1. Introduction.
  - 2.12.2. Techniques for Gathering Information.
  - 2.12.3. Assessing Research
  - 2.12.4. Evaluation.
  - 2.12.5. Interpreting Results.
  - 2.12.6. Summary.
  - 2.12.7. Bibliographic References

- 2.13. Data Management in Research.
  - 2.13.1. Introduction.
  - 2.13.2. Databases
  - 2.13.3. Data in Excel.
  - 2.13.4. Data in SPSS.
  - 2.13.5. Summary.
  - 2.13.6. Bibliographic References
- 2.14. Spreading Results in Neuropsychology.
  - 2.14.1. Introduction.
  - 2.14.2. Publications
  - 2.14.3. Specialized Journals
  - 2.14.4. Summary.
  - 2.14.5. Bibliographic References
- 2.15. Scientific Journals
  - 2.15.1. Introduction.
  - 2.15.2. Features.
  - 2.15.3. Types of Journals.
  - 2.15.4. Quality Indicators
  - 2.15.5. Submitting Articles
  - 2.15.6. Summary.
  - 2.15.7. Bibliographic References
- 2.16. The Scientific Article.
  - 2.16.1. Introduction.
  - 2.16.2. Types and Characteristics.
  - 2.16.3. Structure.
  - 2.16.4. Quality Indicator
  - 2.16.5. Summary.
  - 2.16.6. Bibliographic References
- 2.17. Scientific Conferences
  - 2.17.1. Introduction.



- 2.17.2. The Importance of Conferences.
- 2.17.3. Scientific Committees
- 2.17.4. Oral Communications
- 2.17.5. The Scientific Poster.
- 2.17.6. Summary.
- 2.17.7. Bibliographic References

“*A complete training that will take you through the knowledge you need to compete among the best*”



# 05

# Methodology

One of the differentiating criteria of our training is the way we approach learning. As part of our quality objective, we have implemented in our methodology the most effective teaching systems in the university world: case studies, coming from Harvard, with which the study is based on real situations, and Relearning, which abandons the traditional linear learning systems to create a better and faster assimilation of the contents.





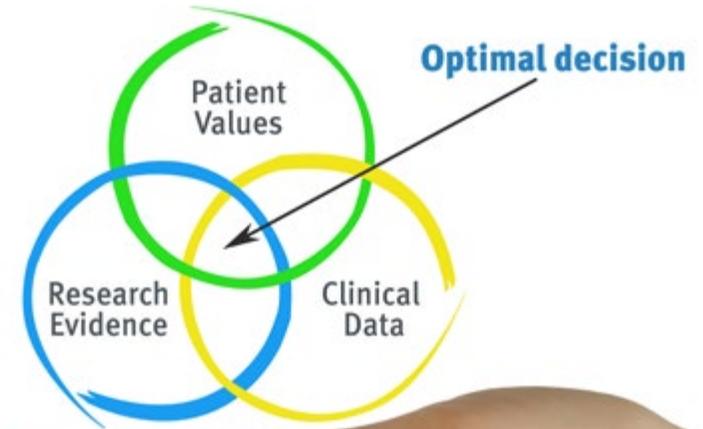
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*We offer you a way of learning adapted to the needs of a course compatible with your personal and professional life, with the most effective learning systems of the most prestigious universities in the world"*

In a given situation, what would you do? This is the question that you are presented with in case studies, an action-oriented learning method. Throughout this training programme, you will have to combine all your knowledge to work in teams, and research, argue, and defend your ideas and decisions.

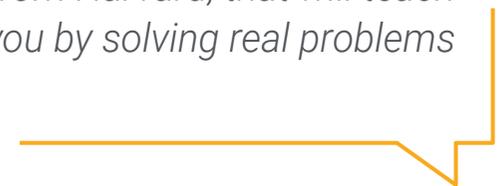


*Our university is the only Spanish-speaking university licensed to use Relearning: a unique opportunity for highly effective learning"*



This methodology is complemented by Relearning. With its implementation we have managed to improve the overall satisfaction levels of our students (teaching quality, quality of teaching materials, course structure, objectives.) as far as the indicators of the best online university in Spanish-speaking countries are concerned.

*A fully immersive system, centered on case studies from Harvard, that will teach you by solving real problems*



The effectiveness of the method is justified by four fundamental achievements:

**01**

Teachers integrate learning better, evaluating real situations and applying the concepts studied in them.

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**02**

Teachers finish their training with a better mastery of the subjects, prepared for the development of their professional activity.

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**03**

Ideas and concepts are better assimilated when they are applied in situations that have arisen from reality.

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**04**

Student motivation is maintained at very high levels throughout the course, which leads to greater dedication and effort.

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*In our line of efficiency, the student will have access to simulated environments with the approach of learning by observation, "Learning from an Expert"*

*Discover Re-learning, 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*

You will learn quickly, efficiently and stimulatingly with the combination of the best teaching methods in the world: those chosen by universities such as Harvard and Yale. This way we help you achieve your goals with more confidence and less effort.





We are the first Spanish-speaking educational institution licensed to use *Relearning* in its educational offerings. After years of using this successful method, we have managed to improve the overall satisfaction levels (teaching quality, quality of materials, course structure and achieving objectives) of professors who complete the courses with respect to the indicators of the best online university in Spanish-speaking countries.

*With more than 40,000 professionals trained in this methodology and a satisfaction rating of 8.0, relearning has proven to be on par with the most demanding assessment frameworks*

In our training, learning is not a linear process, but happens in a spiral (we learn, unlearn, forget and relearn); that is why we combine each of these elements in a concentric way.

This training will be based, above all, on experience. The safest way to test the knowledge you will acquire, consolidating and improving it gradually.

*Contextualized, real-world learning will help you assimilate content effectively and keep you motivated throughout the training*

Throughout the training, you will have access to the best educational material, prepared with you 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.

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.



### Educational Techniques and Procedures on Video

We bring you closer to the newest techniques, to the latest advances, to the forefront of news. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

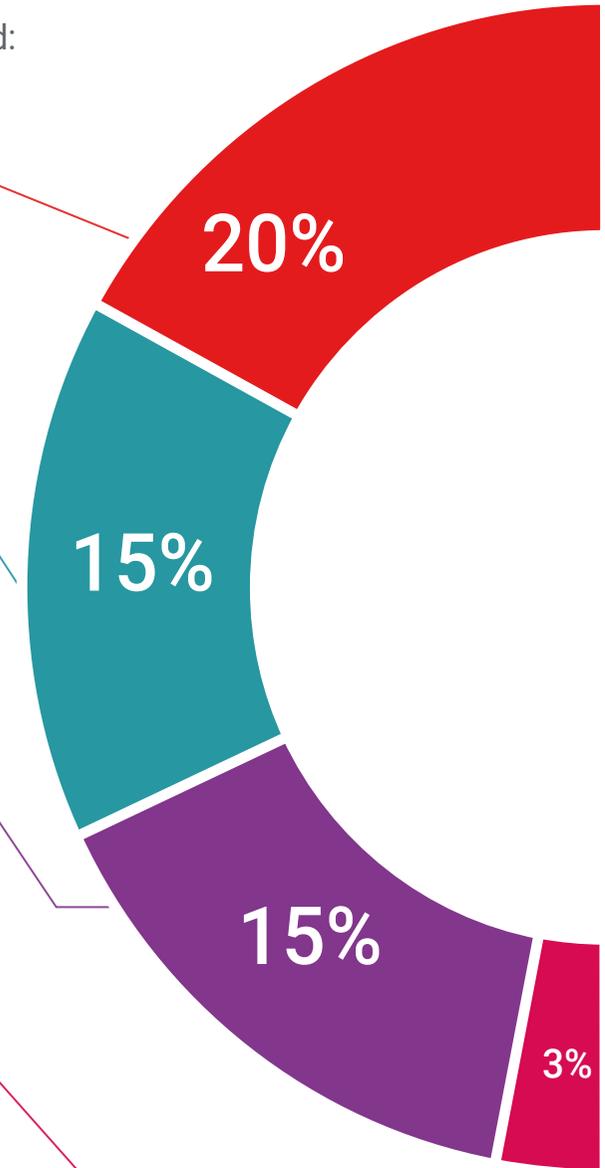
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

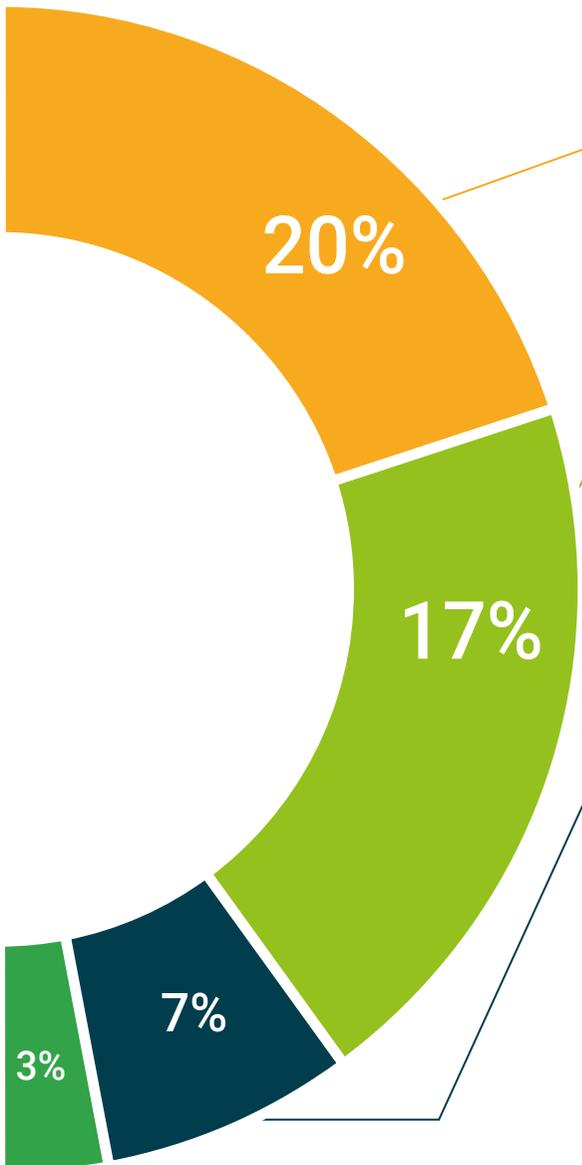


### Additional Reading

By participating in this course you will have access to a virtual library where you will be able to complement and keep your training up-to-date with articles, consensus documents, international guidelines.

An invaluable resource that you will be able to use, even when you finish your course with us.





### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through 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 your knowledge throughout the program through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



### Learning From an Expert

Observing an expert performing a task is the most effective way of learning. It is called **Learning From an Expert**: a proven way to reinforce knowledge and memory of what has been learned. For this reason, we include this type of learning in our course 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 our future difficult decisions.



### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

Through a different and stimulating learning experience, you will be able to acquire the necessary skills to take a big step in your training. An opportunity to progress, with support and monitoring of a modern and specialized university, which will propel you to another professional level.





*Include in your training a Postgraduate Certificate in Research Methodology: A huge step forward in your competitiveness in the sector”*

This program will allow you to obtain your **Postgraduate Certificate in Advanced Research Methodology in Neuropsychology** 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 Advanced Research Methodology in Neuropsychology**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





## Postgraduate Certificate

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