

# Postgraduate Certificate

## Social Brain in Motor Action from a Neuroscientific Perspective





## Postgraduate Certificate

### Social Brain in Motor Action from a Neuroscientific Perspective

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

Website: [www.techtute.com/in/physiotherapy/postgraduate-certificate/social-brain-motor-action-neuroscientific-perspective](http://www.techtute.com/in/physiotherapy/postgraduate-certificate/social-brain-motor-action-neuroscientific-perspective)

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# 01

# Introduction

Recent research in neuroscience has revealed that social perception, such as empathy and theory of mind, are closely related to the ability to plan and execute complex motor actions. Understanding how these brain systems interact and influence each other may have important implications for the development of more effective and personalized physical therapy interventions. Therefore, it is crucial that physical therapy professionals have up-to-date knowledge about this area of research in order to apply the findings in clinical practice and improve the quality of life of their patients. Therefore, this 100% online program designed by TECH presents the most up-to-date information in the field, which the professionals will be able to access from any device with an Internet connection once enrolled.



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*Adding to the academic content,  
you will find the best digital tools”*

The social brain in motor action is a field of neuroscience research that focuses on the interaction between brain systems that control social perception and motor coordination. This suggests that the brain systems involved in social perception and motor action are more integrated than previously thought. Therefore, professionals in the field should keep up to date and be aware of every new development that is presented.

In response to this demand, TECH has launched the following 100% online program, which will present through audiovisual resources such as interactive videos, multiple forums and complementary readings the most updated and rigorous knowledge in the field, based on high-impact scientific evidence. Over the following weeks, the professionals will delve into aspects such as the brain, motor action and its relationship with social environments.

The physical therapists will be able to access all this material once they have enrolled. The best thing is that to carry out the development of the program you will only need a device with an Internet connection, easily accessible and at the times of your choice. Also, you will have the participation of experts and specialists, who in addition to leading the program, have worked on each of the academic topics presented. In summary, this Postgraduate Certificate becomes the best opportunity for professional training.

This **Postgraduate Certificate in Social Brain in Motor Action from a Neuroscientific Perspective** contains the most complete and up-to-date Scientific program on the market. Its most outstanding features are:

- ♦ The development of case studies presented by experts in Social brain in motor action from a neuroscientific perspective
- ♦ The graphic, schematic, and practical contents with which they are created, provide 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



*You will delve into the processes of integral health improvement based on social competence"*

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*This program offers you the ease of being able to take it from anywhere you want, you will only need a device with an Internet connection"*

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

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

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

*You will have access to high-impact content that addresses accurate information about the social brain.*

*Download the syllabus to your device of choice and review it as often as you need.*



# 02 Objectives

One of TECH's main objectives when it comes to developing a program is the selection of academic subjects that allow professionals to enhance their skills and abilities in order to achieve their work goals. Therefore, with the *Relearning* methodology, a practical process is guaranteed, developing activities based on real cases and simulations. In this way, the professionals will be trained in a booming and constantly evolving sector such as Neuroeducation and Physical Education.







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*Once you have successfully completed this program, you will be one step closer to professional excellence”*



## General Objectives

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- ♦ Know the basis and main elements of Neuroeducation
- ♦ Integrate the new contributions of brain science in the teaching-learning processes
- ♦ Discover how to enhance brain development through motor action
- ♦ Implement the innovations of Neuroeducation in the subject of Physical Education
- ♦ Achieve specialized education as a Neuroeducation professional in the field of motor action





## Specific Objectives

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- Describe mirror neurons
- Explain complex social functions
- Describe the role of motor action in the development of social health
- Explain the social relationship in personal wellbeing
- Explain the implication of mental health and interpersonal relationships
- Define the relevance of cooperation from a neuroeducational perspective
- Explain the importance of climate in learning environments



*Get up to date with the latest social interaction processes in which the brain is involved"*

03

# Course Management

To ensure rigorous training with great results, TECH has selected an experienced and active teaching staff to lead the program. They are experts and specialists in the analysis and management of the social brain in motor action, who in turn have extensive experience in the neuroscientific sector, contributing to numerous investigations throughout their years. Therefore, they have contributed to the realization of the study material, pouring their knowledge and trajectory in each of the academic topics.



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*The best professionals in the field are ready to share with you the keys to the social brain from a neuroscientific perspective"*

## Management



### Ms. Pellicer Royo, Irene

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

## Professors

### Dr. De la Serna, Juan Moisés

- ♦ 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
- ♦ Professional Master's Degree in Neurosciences and Behavioral Biology Pablo de Olavide University, Seville
- ♦ Postgraduate Diploma in Teaching Methodology. La Salle University
- ♦ University Specialist in Clinical Hypnosis, Hypnotherapy. National University of Distance Education - UNED

- ♦ Postgraduate Certificate in Social Graduate, Human Resources Management, Personnel Administration. University of Seville
- ♦ Postgraduate Diploma in Project Management, Administration and Business Management. Federation of Services U.G.T
- ♦ Trainer of Trainers. Official College of Psychologists of Andalusia



**Dr. Navarro Ardoy, Daniel**

- ◆ Principal CEO at Teacher MBA
- ◆ PROFITH (PRoMoting FITness and Health) Research Group
- ◆ SAFE Research Group
- ◆ EFFECTS 262 Research Group
- ◆ Physical Education Teacher
- ◆ PhD in Physical Education Applied to Health by the Physical Activity and Health Program of the University of Granada
- ◆ PhD in Physical Education Applied to Health with research stay at Karolinska Institutet in Stockholm
- ◆ Degree in Physical Activity and Sport Sciences from the University of Granada

**Ms. Rodríguez Ruiz, Celia**

- ◆ Clinical Psychologist at EVEL Center
- ◆ Psychopedagogical Area Manager at Atenea Study Center
- ◆ Pedagogical Advisor at Cuadernos Rubio
- ◆ Editor of Hacer Familia Magazine
- ◆ Editor of Webconsultas Healthcare Medical Team
- ◆ Collaborator at the Eduardo Punset Foundation
- ◆ Degree in Psychology, UNED
- ◆ Degree in Pedagogies from the Complutense University of Madrid
- ◆ University Specialist in Cognitive Behavioral Therapy in Childhood and Adolescence by the UNED
- ◆ Specialist in Clinical Psychology and Child Psychotherapy by INUPSI
- ◆ Trained in Emotional Intelligence, Neuropsychology, Dyslexia, ADHD, Positive Emotions and Communication

# 04

## Structure and Content

The syllabus of this program has been designed following the guidelines required by the field of Neurosciences and its application to Physical Education. Inside, the professionals will find updated and rigorous information on the study of the social brain in motor action. This content will be available in the virtual campus, which can be accessed from any device with an Internet connection and will be available 24 hours a day. In this way, the professionals will be trained to become specialists in this field.





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*You are just one click away from accessing the best virtual campus in the academic market"*

## Module 1. The Social Brain in Motor Action from a Neuroscientific Perspective

- 1.1. The Human Being: A Social Being
  - 1.1.1. The Social Nature of the Human Being
  - 1.1.2. Evolution of Human Social Capabilities
  - 1.1.3. Why We Live in Society
  - 1.1.4. The Individual as Part of the Social Group
  - 1.1.5. Social Development: Socialization
  - 1.1.6. The Social and Affective Needs of the Human Being
  - 1.1.7. The Consequences of Social Deprivation
  - 1.1.8. The Development of Identity in Society
  - 1.1.9. Human Societies and Social Groups: Coexistence and Conflicts
- 1.2. The Social Brain
  - 1.2.1. A Brain Prepared for the Social
  - 1.2.2. How Does the Social Brain Work?
  - 1.2.3. The Autonomic Nervous System
  - 1.2.4. Oxytocin: An Essential Neurochemical Mediator
  - 1.2.5. The Antisocial Capacity: Serotonin and MAO Enzyme
  - 1.2.6. The Dorsal Vagus Nucleus: Responsible for Playful and Welcoming Social Interaction
  - 1.2.7. Face Perception
- 1.3. Mirror Neurons
  - 1.3.1. The Discovery of Mirror Neurons
  - 1.3.2. How do Mirror Neurons Work?
  - 1.3.3. Social Empathy and Mirror Neurons
  - 1.3.4. Identification with Others
  - 1.3.5. Theory of Mind. Representing the Mind of Others
  - 1.3.6. The Educational and Therapeutic Implication of Mirror Neurons



- 1.4. The Complex Social Functions
  - 1.4.1. Social Functions
  - 1.4.2. Executive Functions
  - 1.4.3. Self-Control Function
  - 1.4.4. Social Emotions
  - 1.4.5. Altruism and Prosocial Behavior
  - 1.4.6. Conflict, Aggression and Violence
  - 1.4.7. Social relations
  - 1.4.8. Prejudice and Stereotypes
  - 1.4.9. Living Together
- 1.5. Integral Health from a Social Competence Perspective
  - 1.5.1. What is Integral Health?
  - 1.5.2. Health and Social Competence as a Component of Integral Health
  - 1.5.3. Adaptive Behaviors that Make Up Social Competence
  - 1.5.4. Disadaptive behaviors
  - 1.5.5. The Effect of the Absence of Social Competence on Health
  - 1.5.6. How to Promote the Development of Social Competence
- 1.6. Role of Motor Action in the Development of Social Health
  - 1.6.1. What is Meant by Social Health?
  - 1.6.2. Why is Social Health important?
  - 1.6.3. The Body as an Element of Social and Emotional Health
  - 1.6.4. The Motor Action and the Development of Health
  - 1.6.5. Promotion of the Social Health through the Motor Action
  - 1.6.6. Tools to Promote Motor Action and Social Health Development
- 1.7. Social Relationship in Personal Well-Being
  - 1.7.1. Social Interactions
  - 1.7.2. Why do Human Beings Need Relationships?
  - 1.7.3. Social Relationships and Individual Needs
  - 1.7.4. The Power of Healthy and Satisfactory Relationships
  - 1.7.5. The Social Role
  - 1.7.6. The Social Relationship and Well-Being
  - 1.7.7. Lack of Relationships and Their Consequences
  - 1.7.8. Social Isolation
- 1.8. Mental Health and Interpersonal Relationships
  - 1.8.1. Interpersonal Relationships and Their Role
  - 1.8.2. Affective Needs
  - 1.8.3. Social Expectations and Beliefs
  - 1.8.4. The Role of Stereotypes and our Mental Health
  - 1.8.5. The Importance of Social Support for Mental Health (Perceived and Real)
  - 1.8.6. Interpersonal Relationships as a Basis for Well-Being
  - 1.8.7. The Quality of Interpersonal Relationships
  - 1.8.8. The Consequences on Mental Health of the Lack of Relationships
- 1.9. Relevance of Cooperation from a Neuroeducational Perspective
  - 1.9.1. What is Cooperation
  - 1.9.2. The Brain that Learns in a Group
  - 1.9.3. The Role of Cooperation for Development
  - 1.9.4. Oxytocin, the Chemical Element of Cooperation
  - 1.9.5. Reward Processes and Cooperation
  - 1.9.6. Why is Cooperation Important?
- 1.10. Climate in Learning Environments
  - 1.10.1. Social climate
  - 1.10.2. Positive and Negative Climates
  - 1.10.3. Factors that Determine the Type of Climate
  - 1.10.4. The Influence of Climate on the Learning Environment
  - 1.10.5. Elements of a Climate that Favors the Learning Environment
  - 1.10.6. Recognizing Climates in Learning Environments
  - 1.10.7. The Role of the Teacher as a Promoter of a Favorable Climate
  - 1.10.8. Tools to Create Positive and Favorable Climates



*You will face real and simulation cases, having an approach to the challenges of today's labor field"*

# 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. Physiotherapists/kinesiologists 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. Gervas, 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 of professional physiotherapy 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. Physiotherapists/kinesiologists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the physiotherapist/kinesiologist 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

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.



*The physiotherapist/kinesiologist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we trained more than 65,000 physiotherapists/kinesiologists with unprecedented success in all clinical specialties, regardless of the workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for 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 our learning system is 8.01, according to the highest international standards.



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



#### Study Material

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

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



#### Physiotherapy Techniques and Procedures on Video

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



#### Interactive Summaries

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

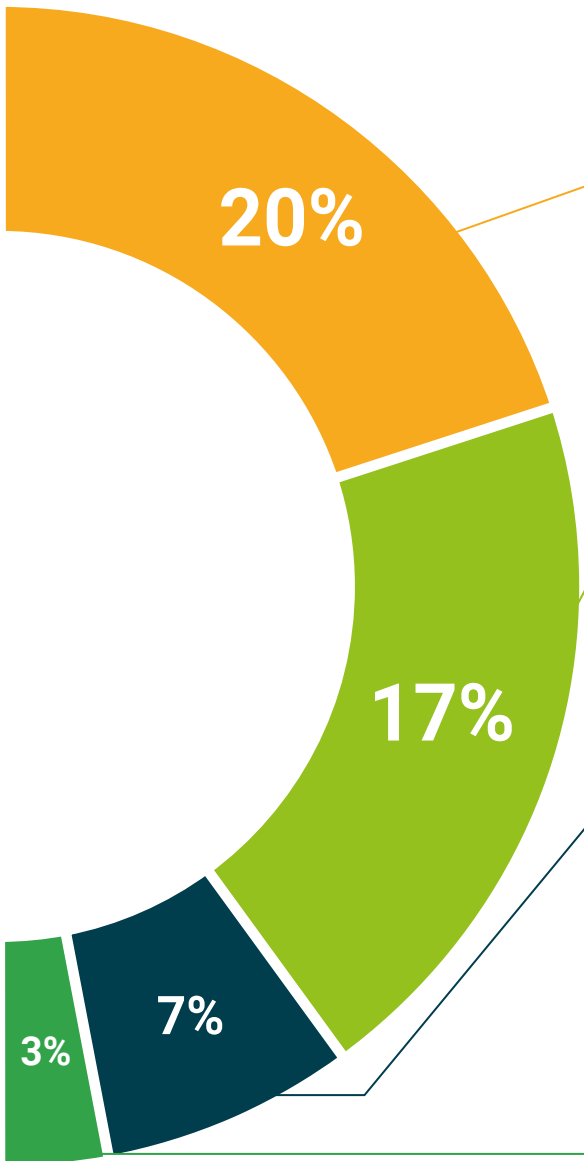
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

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





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence 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 Certificate in Social Brain in Motor Action from a Neuroscientific Perspective 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 Social Brain in Motor Action from a Neuroscientific Perspective** 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** issued by **TECH Technological University** via tracked delivery\*.

The certificate 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 Social Brain in Motor Action from a Neuroscientific Perspective**

Official N° of Hours: **150 h.**



\*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.



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