

# Postgraduate Certificate Microbiota in Pediatrics



## Postgraduate Certificate Microbiota in Pediatrics

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

Website: [www.techtitute.com/us/physiotherapy/postgraduate-certificate/microbiota-pediatrics](http://www.techtitute.com/us/physiotherapy/postgraduate-certificate/microbiota-pediatrics)

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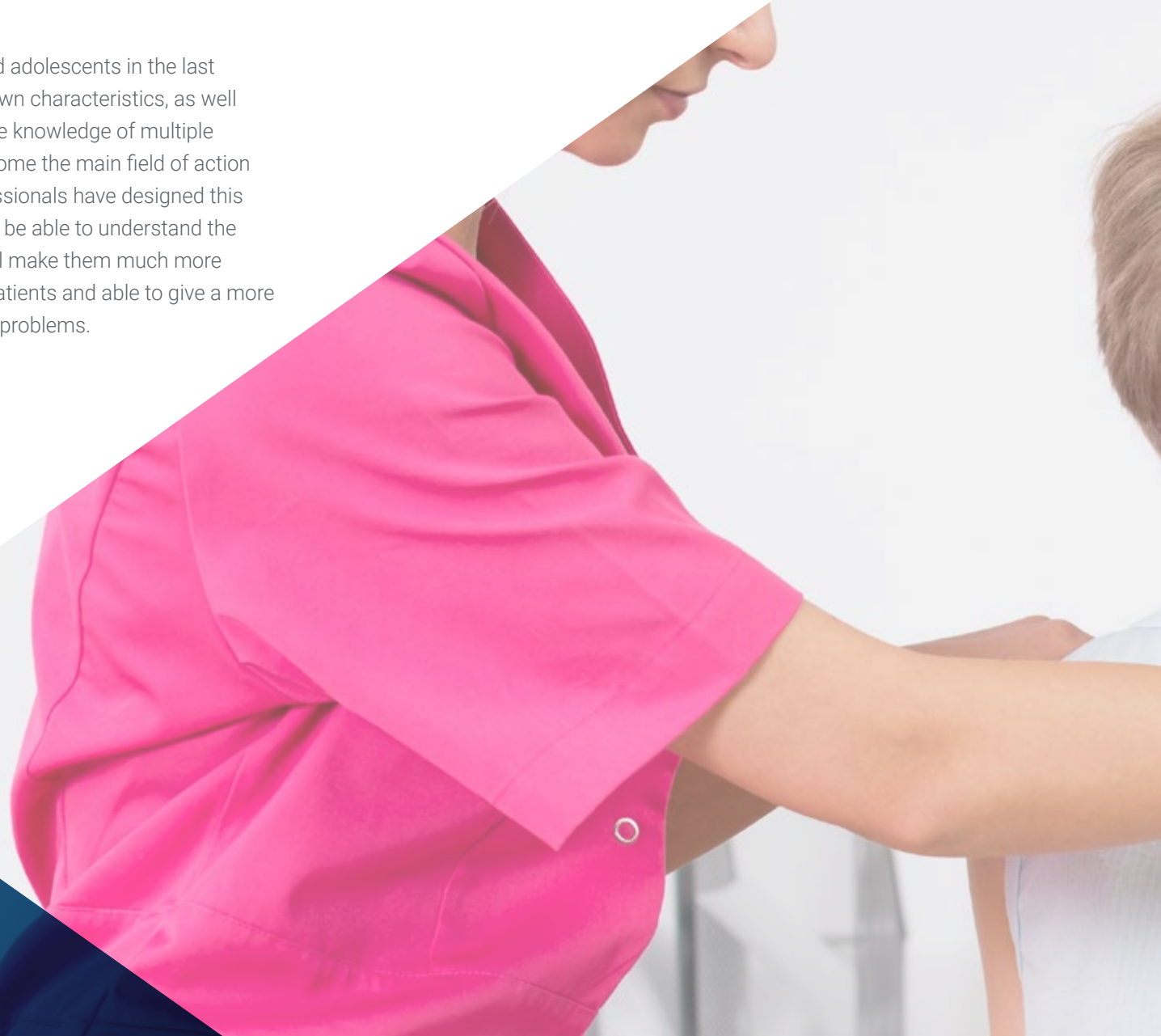
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# 01

# Introduction

Scientific research in the field of the Microbiota of children and adolescents in the last decades is booming. This is aimed both at the study of their own characteristics, as well as the impact on the health of minors, as it opens a door to the knowledge of multiple diseases, especially those called functional, being the microbiome the main field of action of health professionals in this field. Aware of this, TECH professionals have designed this Postgraduate Certificate that aims to train physiotherapists to be able to understand the functioning of the microbiome in pediatric patients. All this will make them much more competent professionals, prepared to work with this type of patients and able to give a more appropriate treatment to their physical, sensory and/or motor problems.





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*The study of the pediatric microbiota opens a door to the knowledge of multiple physical pathologies, adding great value to the CV of the physical therapist"*

Numerous scientific evidences have implicated the infant microbiome and its potential impact on various pathological conditions in recent years, giving rise to new therapeutic strategies to control and regulate this ecosystem. The study of this ecosystem is a field that is undergoing rapid scientific progress, and it is universally accepted that, in order to achieve an adequate state of health in children, it is necessary to promote the existence of a "healthy" Microbiota.

The Microbiota undergoes changes as children grow older. Our microbiota undergoes changes as a consequence of the influence of multiple factors, diet, lifestyle, pharmacological treatments etc., generating alterations in this bacterial ecosystem. This abnormal interaction that the organism could have with it is related to certain processes: allergies, acute and chronic intestinal diseases, obesity and metabolic syndrome, neurological diseases, dermatitis and other alterations in the dermis and even some types of cancer.

In this sense, this Postgraduate Certificate in Microbiota in Pediatrics responds to the need of physiotherapists who need to learn information in this field. Therefore, this program focuses on providing them with general knowledge of all topics related to the microbiota, its eubiosis and dysbiosis, and the recommended physical treatment for the pathologies that are triggered by it.

Likewise, during the training course, the use of Probiotics and Prebiotics and the growing market launch of new products with very specific strains for very specific problems and diseases will be discussed in depth. This will help the physiotherapist to better understand the treatment of pathologies in pediatric patients, and will allow them to offer a much better adapted and more personalized treatment to children and adolescents.

This will enable the physiotherapist to guide children so that they can recover and maintain that bacterial eubiosis and thus have a good state of health, in addition to collaborating in a positive way with the recommended medical treatment.

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

- ♦ Practical cases presented by practising experts in Microbiota in Neonatology and Pediatrics
- ♦ 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
- ♦ Latest information on Microbiota in Neonatology and Pediatrics
- ♦ It contains practical exercises where the self-evaluation process can be carried out to improve learning
- ♦ Special emphasis on innovative methodologies in Microbiota in Neonatology and Pediatrics
- ♦ All of this will be complemented by 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 in Microbiota in Pediatrics through this program, where you will find the best didactic material with real cases"*

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*This Postgraduate Certificate is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge in Microbiota in Pediatrics, you will obtain a qualification from TECH Technological University"*

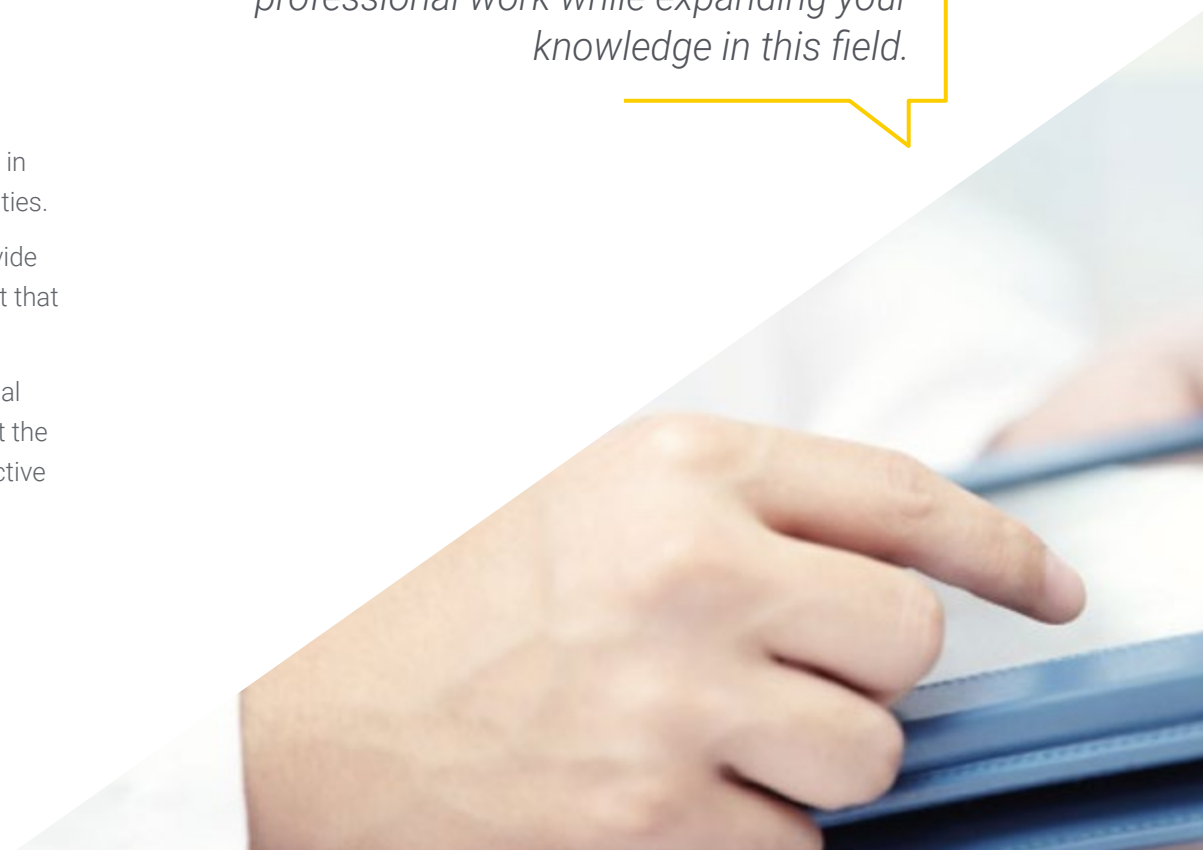
The program includes, in its teaching staff, professionals belonging to the field of medicine and physiotherapy, who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

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

*The Postgraduate Certificate allows you to study through simulated environments, which provide immersive learning programmed to train for real situations.*

*This 100% online course will allow you to combine your studies with your professional work while expanding your knowledge in this field.*



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the professional can master, in a practical and rigorous way, the study of microbiota in the daily practice of their profession. In this sense, the Postgraduate Certificate in Microbiota in Pediatrics responds to the continuous demand of professionals for quality training in this area, which serves as a means to use physical therapy as a preventive or therapeutic tool in maintaining the health of their pediatric patients.





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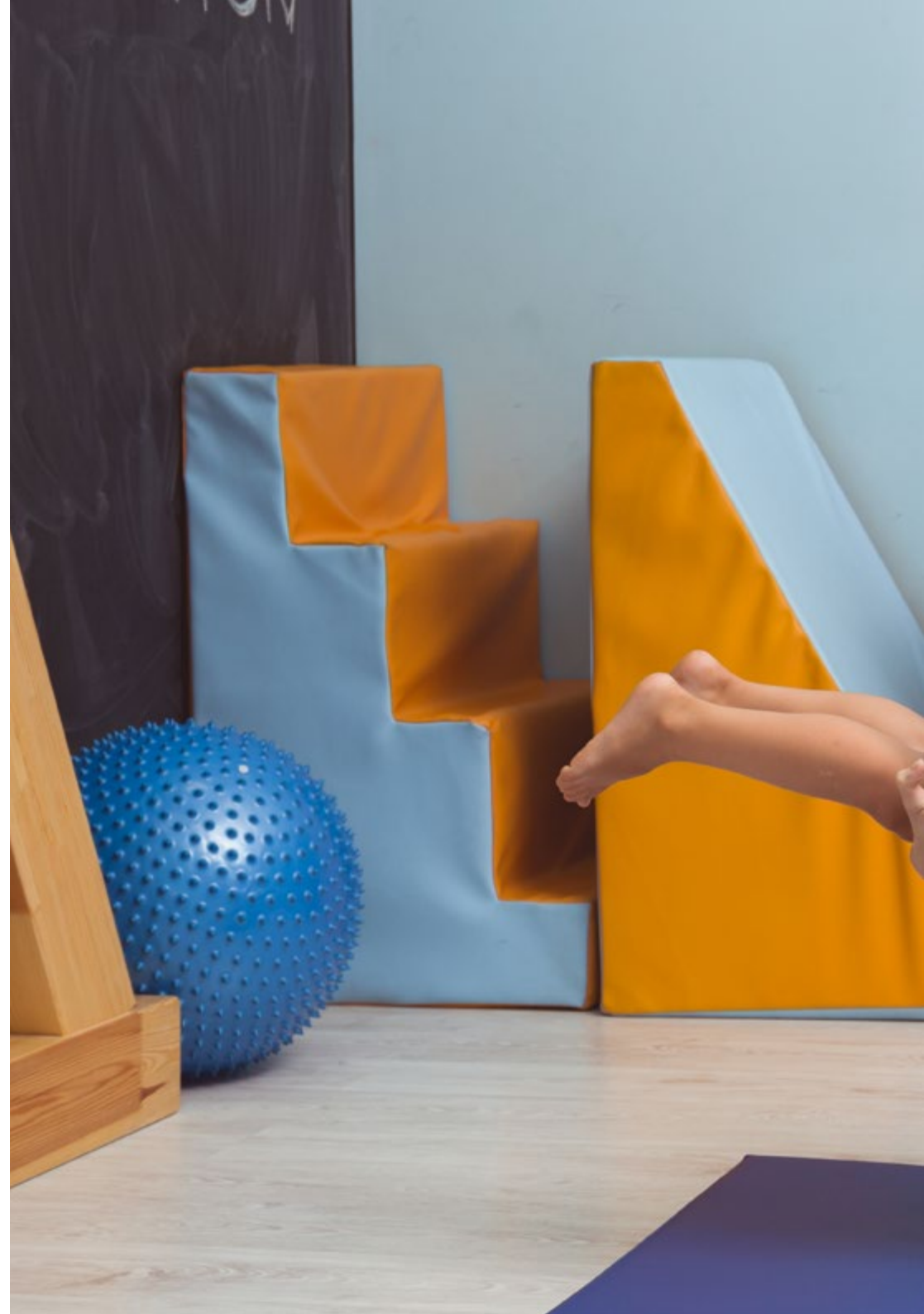
*This Postgraduate Certificate is designed for you to update your knowledge in Microbiota in Pediatrics, with the use of the latest educational technology, to contribute with quality and safety to decision making in this innovative field"*



## General Objectives

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- ♦ This Postgraduate Certificate meets a need of today's society, a quality and up-to-date training that allows the use of microbiological therapy as a preventive or therapeutic tool for the maintenance of health
- ♦ Offer a complete and broad vision of the current situation in the area of the Human Microbiota, in its widest sense, the importance of the balance of this microbiota as a direct effect on our health, with the multiple factors that influence it positively and negatively
- ♦ Argue with the backing of scientific evidence how the microbiota is in a privileged position based on its interaction with many non-digestive pathologies, those of autoimmune nature or its relationship with immune system dysregulation, disease prevention and as a support to other medical treatments
- ♦ Promote work strategies based on the integral approach of the patient as a reference model, not only focusing on the symptomatology of the specific pathology, but also looking at its interaction with the microbiota and how it may be influencing it.
- ♦ Encourage professional stimulation through continuous education and research





## Specific Objectives

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- ◆ Know the mother-infant symbiosis
- ◆ Understand the factors influencing the Intestinal microbiota of the mother in the gestational stage and at the time of birth
- ◆ Understand the influence of the type of delivery on the microbiota of the neonatal
- ◆ Understand the influence of the type of breastfeeding on the infant's microbiota
- ◆ Know the clinical applications of probiotics and prebiotics in the pediatric patient
- ◆ Understand the influence of antibiotic and other psychotropic treatment on the infant microbiota
- ◆ Deepen in the current lines of research on the subject



*Highly specialized goals in a program that has been created to train the best physiotherapy professionals in Microbiota in Pediatrics"*

# 03

## Course Management

The program's teaching staff includes leading specialists in Human Microbiota and other related areas, who bring their years of work experience to this training program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner. All this, with the aim of providing physiotherapists with the most complete information and contents of the educational panorama so that they can practice their profession with greater guarantees of success and care for pediatric patients with a deeper knowledge of the functioning of their Microbiota and its implications on physical, sensory and/or motor pathologies.





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*Learn from leading professionals,  
the latest advances in procedures in  
the field of Microbiota in Pediatrics"*

## Management



### Ms. Fernández Montalvo, María Ángeles

- Degree in Biochemistry from the University of Valencia
- Specialist Degree in Nutrition, Dietetics and Diet Therapy
- Expert in Microbiological Food Analysis
- Expert in Nutrition, Food, and Cancer. Prevention and Treatment.
- Expert in Vegetarian, Clinical, and Sports Nutrition
- Specialist in food intolerances and the study of the intestinal microbiota
- Numerous courses on Intestinal Microbiota, methods of analysis and applications
- Diploma in Natural and Orthomolecular Medicine
- Expert in the current use of Nutricosmetics and Nutraceuticals in general.
- Expert in point-of-sale management in Pharmacies and Parapharmacies.
- Member of the Spanish Society of Probiotics and Prebiotics (SEPyP).
- Member of the Spanish Society of Dietetics (SEDCA)
- Member of the Spanish Society of Nutrition (SEÑ).

## Professors

### Dr. Lombó Burgos, Felipe

- ♦ Doctor in Biology from the University of Oviedo
- ♦ Professor at the university.

### Dr. López López, Aranzazu

- ♦ Ph.D. in Biological Sciences
- ♦ Researcher in oral microbiology at FISABIO foundation
- ♦ Public Health Research Center of Valencia

### Dr. Méndez García, Celia

- ♦ Doctorate in Microbiology from the University of Oviedo.
- ♦ Research at Novartis Laboratories (Boston)

### Dr. Gonzalez Rodríguez, Silvia Pilar

- ♦ PhD in Medicine and Surgery from the University of Alcalá de Henares. Gynecology Specialist.
- ♦ Medical Subdirector, Research Coordinator and Clinical Chief of the Menopause and Osteoporosis Unit at the Velázquez Medical Cabinet (Madrid)

### Dr. Álvarez García, Verónica

- ♦ Degree in Medicine
- ♦ Digestive system specialist at the Central Hospital of Asturias (HUCA).

### Dr. Solís Sánchez, Gonzalo

- ♦ Neonatologist at the Hospital Universitario Central de Asturias (HUCA)
- ♦ Researcher, Associate Professor of the University of Oviedo

### Dr. Suárez Rodríguez, Marta

- ♦ Neonatologist of the Central University Hospital of Asturias (HUCA)
- ♦ Researcher and Professor of the Professional Master's Degree in Early Care and the Professional Master's Degree in Critical Care Nursing at the University of Oviedo and other training courses.

### Dr. Díaz Martín, Juan José

- ♦ Pediatric gastroenterologist at the Central Hospital of Asturias (HUCA)
- ♦ Member of the Spanish Society of Pediatric Gastroenterology, Hepatology, and Nutrition
- ♦ Associate Professor of Pediatrics at the University of Oviedo

### Dr. Fernández Madera, Juan José

- ♦ Degree in Medicine
- ♦ Specialist in Allergology and Clinical Immunology
- ♦ Specialist in Sports Medicine

# 04

## Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in the country, aware of the relevance of current training to prevent, detect and intervene in those pathologies related to alterations in the human microbiota, and committed to quality teaching through new educational technologies. All of this, with the aim of training physiotherapists to be much more competent and prepared to offer treatments that help and support the microbiome of pediatric patients.







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*This Postgraduate Certificate in Microbiota in Pediatrics contains the most complete and up-to-date scientific program on the market”*

## Module 1. Microbiota in Neonatology and Pediatrics

- 1.1. Mother-Child Symbiosis.
- 1.2. Influencing Factors on the Gut Microbiota of the Mother During Pregnancy and During Birth. Influence of the Type of Delivery on the Microbiota of the New-born
- 1.3. Type and Duration of Breastfeeding, Influence on the Infant's Microbiota
  - 1.3.1. Breast Milk: Composition of the Microbiota of Breast Milk. Importance of Breastfeeding on the Microbiota of the Neonate
  - 1.3.2. Artificial Breastfeeding. Use of Probiotics and Prebiotics in Infant Milk Formulas
- 1.4. Clinical Applications of Probiotics and Prebiotics in Pediatric Patients
  - 1.4.1. Pathology: Functional Digestive Disorders, Diarrhea, Necrotizing Enterocolitis. Intolerances
  - 1.4.2. Pathology: Respiratory and ENT, Atopic Diseases, Metabolic Diseases. Allergies
- 1.5. Influence of Antibiotic and Other Psychotropic Treatment on the Microbiota of the Infant
- 1.6. Current Lines of Research





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*A unique, key, and decisive training experience to boost your professional development”*

# 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. 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 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 Microbiota in Pediatrics guarantees students, in addition to the most rigorous and up-to-date training, 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 Microbiota in Pediatrics** 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 diploma issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Postgraduate Certificate in Microbiota in Pediatrics**

Official N° of Hours: **150 h.**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

health future  
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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