

# Postgraduate Certificate

## Functional Aspects of Vision and Associated Disorders in Children



## Postgraduate Certificate

### Functional Aspects of Vision and Associated Disorders in Children

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/functional-aspects-vision-associated-disorders-children](http://www.techtute.com/us/medicine/postgraduate-certificate/functional-aspects-vision-associated-disorders-children)

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# 01

# Introduction

Sight is one of the five senses that the human being has and, perhaps, one of the most important. For many years the world has revolved around the identification and visual interpretation, so today the ocular system has taken a fairly high relevance in the medical sector, ensuring that from an early age all kinds of pathology has a recovery and rehabilitation treatment. For this reason, TECH has developed this 100% online qualification in order to provide the Pediatric Ophthalmology professional with new content related to recognizing the visual implications of prematurity syndrome. All this, through high quality audiovisual material, developed by a teaching team with extensive experience in Vision Sciences.



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*TECH has a first level content in Functional Aspects of Vision that will allow you to update your knowledge in only 6 weeks"*

The visual problems lie from the levels of demand that exerts the eye according to age, which the development of ocular skills in a child of early age is an aspect of vital importance. In this way, it would avoid the difficulties of performing daily tasks and even interfere in their learning. Also, sight provides many conditions such as the meaning of things and understanding of what is seen.

Time goes by and Ophthalmology is a discipline that has become more important in the field of medicine, incorporating new methods of ocular rehabilitation. And although the purpose does not change, which is to provide welfare and quality of life to infants, it is evident that this area of knowledge has evolved, being one of the most important fields of Pediatrics and Medicine. Accordingly, this Postgraduate Certificate will provide the professional with the latest updates on the Functional Aspects of Vision and Associated Disorders in Children.

The graduate will enhance their skills in specific aspects related to treatment strategies and visual rehabilitation in children with infantile cerebral palsy. In this sense, this is a qualification that has a teaching staff of great experience that, at the same time, has the support of audiovisual material of high standards providing facilities in the learning process in this academic program.

On the other hand, TECH thinks in comfort and excellence, so this program provides an exclusive update and the best academic quality, being this way, a qualification of great flexibility by only needing a device with Internet connection to easily access the virtual campus from the comfort of the place where you are.

This **Postgraduate Certificate in Functional Aspects of Vision and Associated Disorders in Children** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Practical case studies presented by experts in Pediatric Ophthalmology
- ♦ 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
- ♦ Practical exercises where the self-assessment process can be carried out 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



*In this course you will understand the importance of simulation in the training of health professionals and with TECH you will delve into this and other specific aspects"*



*The graduate will enhance and expand their knowledge related to therapies and treatments in CVI"*

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 academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*This program provides the best educational strategies and support for dyslexia and related disorders.*

*The successful development and completion of this program goes hand in hand with the audiovisual support provided by TECH.*



# 02

## Objectives

This Postgraduate Certificate in Functional Aspects of Vision and Associated Disorders in Children has been created in order to provide the specialist with the latest updates concerning the ophthalmologic manifestations in children with infantile cerebral palsy within Pediatric Ophthalmology. For this reason, TECH provides several tools of academic innovation, ensuring the success in the development and completion of this program. At the end of this degree, students will have enhanced their knowledge of neuropsychological aspects in children with CP.





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*This Postgraduate Certificate aims to provide the expert with unique and innovative content on dyslexia in children: diagnosis and approach"*



## General Objectives

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- Acquire a thorough and up-to-date knowledge of the diagnosis and treatment of ophthalmologic conditions in children, including neonates and infants
- Develop a solid understanding of the basics of childhood vision development, covering ocular embryology, related genetics, and the anatomy and physiology of the growing visual system
- Understand and address ocular anterior segment pathologies, including palpebral, orbital, conjunctival pathology, developmental alterations of the anterior segment, and corneal and ectatic diseases in the pediatric age group
- Become familiar with the diagnosis and management of pediatric glaucoma, pediatric uveitis, aniridia and other conditions related to the anterior segment
- Acquire specific knowledge of retinopathy of prematurity, retinoblastoma, hereditary retinal disorders, retinal vascular anomalies, pediatric retinal detachment, and other pediatric retinal conditions
- Delve into the field of pediatric neuro-ophthalmology, covering topics such as nystagmus, supranuclear motility disorders, congenital optic nerve anomalies and hereditary optic neuropathies





## Specific Objectives

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- Understand the characteristics of CVI in the pediatric population
- Deepen knowledge of intervention strategies for children with CVI
- Identify and evaluate visual maturational delay in childhood
- Recognize the visual implications of prematurity syndrome
- Study the ophthalmologic manifestations in children with infantile cerebral palsy
- Deepen in treatment strategies and visual rehabilitation in children with infantile cerebral palsy
- Identify and solve common visual problems in children with visual impairment
- Understand the importance of Simulation in the training of health professionals.
- Recognize disorders related to vision and reading, such as dyslexia and cross laterality

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*This Postgraduate Certificate has important novelties in the characteristics and diagnosis of cerebral visual impairment (CVI)”*

03

# Course Management

TECH emphasizes high quality learning, thus offering elite teaching for the professional who attends its programs. In this way, students will have access to didactic tools that allow them to successfully develop each one of their program together with the support of a high level teaching staff in the ophthalmology sector. Likewise, the graduate will have access to content created by a faculty specialized in Pediatric Neurophthalmology and Strabismus, Optics and Optometry focused on vision and neurodevelopment. His extensive experience and vast knowledge will enable the graduate to rigorously face the difficulties offered by the work environment.





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*In this Postgraduate Certificate you will find a professional team specialized in Ophthalmology and Vision Sciences”*

## Management



### Dr. Sánchez Monroy, Jorge

- Corresponsable for Pediatric Ophthalmology at Quirónsalud Hospital in Zaragoza
- Specialist in the Ophthalmology Miguel Servet University Hospital in Zaragoza
- Master'in in Clinical Ophthalmology from UCJC
- Degree in Medicine from the University of Zaragoza
- Expert in Pediatric Neurophthalmology and Strabismus
- Postgraduate Diploma in Ophthalmology and Vision Sciences



## Professors

### Dr. González, Inmaculada

- ◆ Specialist in the Pediatric Ophthalmology Miguel Servet University Hospital in Zaragoza
- ◆ Area Specialist in Psychiatry
- ◆ Member of the Spanish Society of Ophthalmology
- ◆ Member of the Spanish Society of Strabology
- ◆ Professor for the Ophthalmology Degree in Orthodontics, CEU Cardenal Herrera University
- ◆ Bachelor in Medicine and Surgery from the University of Zaragoza

### Dr. Pueyo Royo, Victoria

- ◆ Specialist in the Pediatric Ophthalmology Miguel Servet University Hospital in Zaragoza
- ◆ Member of the Maternal, Child and Developmental Health Network
- ◆ Professor, Grade of Optics and Optometry, University of Zaragoza
- ◆ Grade in Pediatric Ophthalmology

### Dr. Pinilla, Juan

- ◆ Attending Physician of Pediatric Ophthalmology Unit, Miguel Servet University Hospital
- ◆ Specialist in the Pediatric Ophthalmology Miguel Servet University Hospital in Zaragoza
- ◆ Doctorate in Medicine and Surgery, University of Zaragoza
- ◆ Professional Master's in Initiation to Research in Medicine
- ◆ Degree in Medicine from the University of Zaragoza

# 04

## Structure and Content

This Postgraduate Certificate has been specifically designed based on the most recent scientific studies in the area of Pediatric Ophthalmology, establishing a curriculum that integrates a new content on classification and types of infantile cerebral palsy. This program is oriented to provide exclusive information on the therapeutic approach in children with visual maturational delay. All this, through a variety of audiovisual tools that offer dynamism and a greater attractiveness to this qualification.





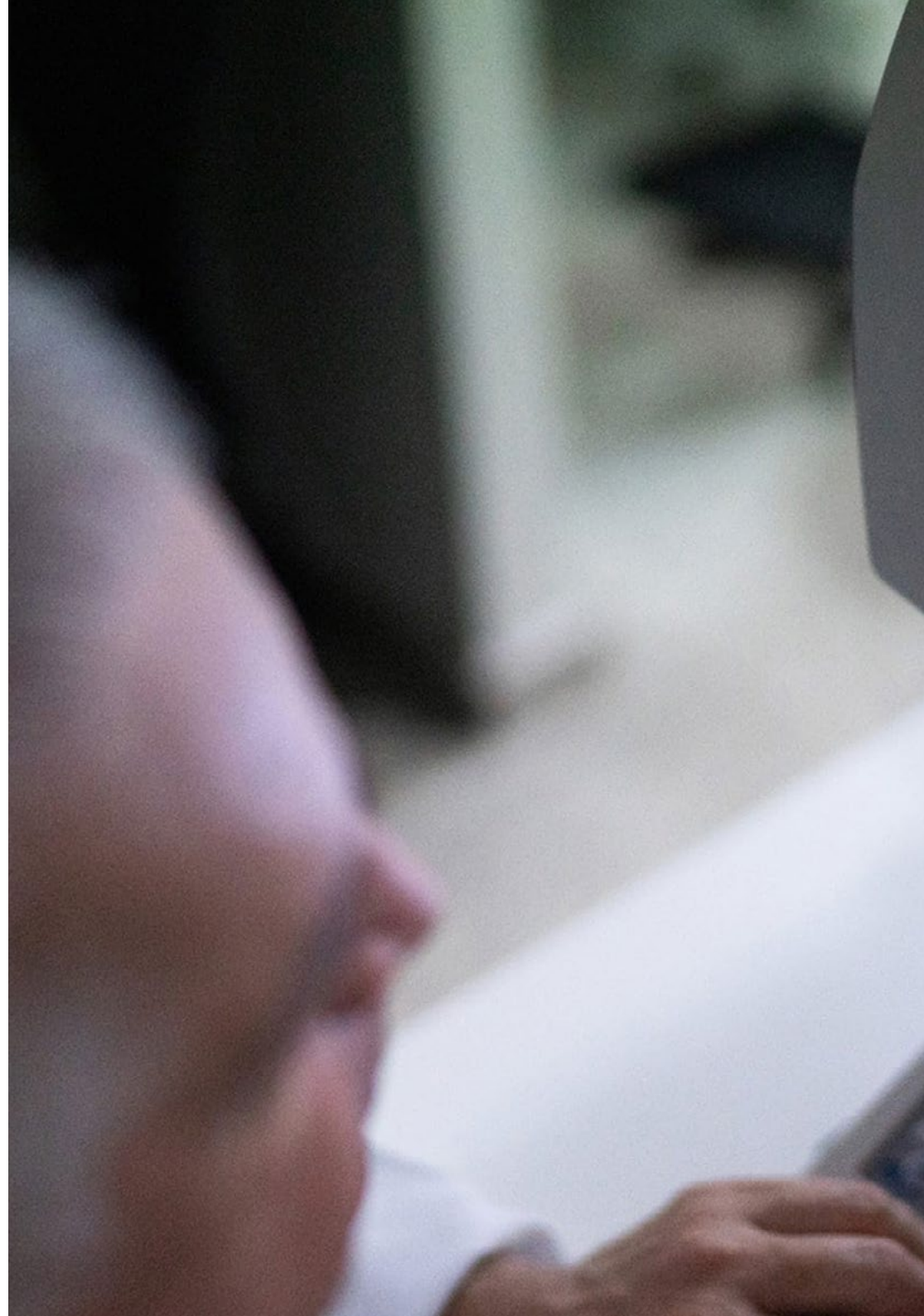


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*Thanks to the Relearning method, based on the repetition of content, the graduate will reduce the hours of study and memorization"*

## Module 1. Functional Aspects of Vision or Other Associated Disorders

- 1.1. Child with Low Vision
  - 1.1.1. Evaluation and diagnosis of low vision in children
  - 1.1.2. Multidisciplinary approach to children with low vision
  - 1.1.3. Visual aids and assistive devices
  - 1.1.4. Rehabilitation and therapy in children with low vision
- 1.2. Cerebral visual impairment I
  - 1.2.1. Characteristics and diagnosis of cerebral visual impairment (CVI)
  - 1.2.2. Etiology and risk factors in CVI
  - 1.2.3. Therapies and treatments in CVI
  - 1.2.4. Outcomes and prognosis in children with CVI
- 1.3. Cerebral visual impairment II
  - 1.3.1. Functional and cognitive assessment in CVI
  - 1.3.2. Educational intervention and support in CVI
  - 1.3.3. Clinical cases and examples of CVI
  - 1.3.4. Research and advances in cerebral visual impairment
- 1.4. Visual maturational delay
  - 1.4.1. Evaluation and diagnosis of visual maturational delay
  - 1.4.2. Early intervention and visual stimulation
  - 1.4.3. Therapeutic approach in children with visual maturational delay
  - 1.4.4. Outcomes and follow-up in visual maturational delay
- 1.5. Prematurity syndrome
  - 1.5.1. Retinopathy of prematurity: diagnosis and classification
  - 1.5.2. Treatment and follow-up in retinopathy of prematurity
  - 1.5.3. Visual complications in premature infants
  - 1.5.4. Prevention and care in prematurity syndrome
- 1.6. Infantile cerebral palsy
  - 1.6.1. Classification and types of infantile cerebral palsy (ICP)
  - 1.6.2. Functional assessment and diagnosis in CP
  - 1.6.3. Therapeutic approach in CP
  - 1.6.4. Specific therapies and treatments in PCI



- 1.7. Infantile cerebral palsy and vision
  - 1.7.1. Complications and visual problems in CPI
  - 1.7.2. Neuropsychological aspects in children with CPI
  - 1.7.3. Quality of life and support in ICH
  - 1.7.4. Clinical cases and experiences in PCI
- 1.8. Addressing common problems in children with visual impairment
  - 1.8.1. Learning and developmental problems in children with visual impairment
  - 1.8.2. Communication and social skills in children with visual impairment
  - 1.8.3. Educational and social inclusion in children with visual impairment
  - 1.8.4. Strategies and resources for families of children with visual impairment
- 1.9. Simulation in the child
  - 1.9.1. Simulation of visual impairment in children
  - 1.9.2. Benefits and limitations of simulation
  - 1.9.3. Sensitization and empathy towards children with visual impairment
  - 1.9.4. Simulation tools and techniques
- 1.10. Dyslexia, crossed laterality and other disorders
  - 1.10.1. Dyslexia in children: diagnosis and approach
  - 1.10.2. Cross laterality in childhood
  - 1.10.3. Other learning and developmental disorders in children
  - 1.10.4. Educational strategies and support in dyslexia and related disorders

“*TECH provides various tools around the functional aspects of vision so that you can successfully integrate it into your professional career*”



05

# Methodology

This academic program offers students a different way of learning. Our methodology follows a cyclical learning process: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.



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

## At TECH, we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a “case”, an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician’s professional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method.*

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

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

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

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

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





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

With this methodology, more than 250,000 physicians have been prepared with unprecedented success in all clinical specialties regardless of surgical load. Our educational methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.





### Study Material

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

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



### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



### Interactive Summaries

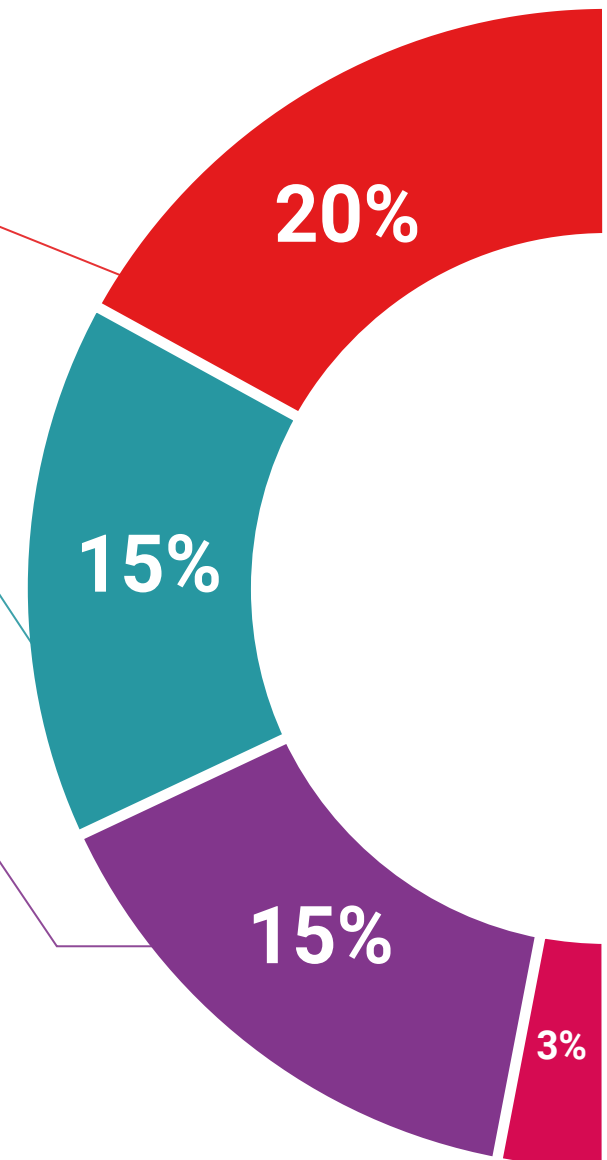
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### Additional Reading

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





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

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



#### Testing & Retesting

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



#### Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



06

# Certificate

The Postgraduate Certificate in Functional Aspects of Vision and Associated Disorders in Children 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 Functional Aspects of Vision and Associated Disorders in Children** 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 Functional Aspects of Vision and Associated Disorders in Children**

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.



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