

# Postgraduate Certificate Pediatric Retina





## Postgraduate Certificate Pediatric Retina

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/pediatric-retina](http://www.techtute.com/us/medicine/postgraduate-certificate/pediatric-retina)

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# 01

# Introduction

During the last few years, a series of technological advances have been made in the treatment and diagnosis of retinal pathologies in children, which has allowed for more timely interventions in this type of ocular disease. In this way, specialists have been able to provide solutions to conditions that impair the vision of infants. Therefore, given the relevance in the health and welfare of the child, TECH has designed this academic degree with the purpose of providing the specialist with exclusive content related to acquired disorders of the pediatric retina, such as inflammatory retinopathies. All this with a 100% online pedagogical format providing the necessary time flexibility, in addition to the support of a team of experienced teachers in Pediatric Ophthalmology.



A close-up photograph of a human eye, showing the iris and pupil. The eye is positioned in the upper left quadrant of the page, partially overlapping a dark blue background. The rest of the page is divided into a white and a blue triangular section.

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*Update your skills on the evaluation  
and diagnosis of ROP through this  
Postgraduate Certificate”*

Retinal pathologies in early ages are not so frequent, since infants at that stage do not tend to complain about vision loss. In this way, there are indirect signs that lead the infant to this type of diseases such as ocular deviations. For this reason, specialists have carried out multiple investigations and have succeeded in developing solutions and treatments to help mitigate this type of anomalies in children at an early age.

In this way, studies in this field have progressed, achieving an optimal integration of ophthalmologic retinal treatments in children at an early age. A development that has achieved the prevention of ocular diseases of high impact in infants. Likewise, this Postgraduate Certificate will offer the specialist the latest updates on hereditary disorders of the retina in childhood and its natural history, all this in just 6 weeks.

The specialist will enhance their knowledge in specific areas related to the importance of multidisciplinary management in cases of retinoblastoma. Likewise, this degree has an excellent team of experts in Pediatric Retina, which integrates multimedia content of the highest quality that offers dynamism and comfort with the online modality.

In this sense, TECH thinks in comfort and excellence, that is why this program offers the most unique and complete up to date with the highest standards, being a qualification of great flexibility as the graduate only needs a device with Internet connection to easily access the virtual platform from wherever they are.

This **Postgraduate Certificate in Pediatric Retina** 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



*With TECH you will enhance your knowledge of therapeutic strategies for retinoblastoma in the pediatric population”*

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*You will strengthen your skills to recognize acquired disorders of the pediatric retina, such as inflammatory retinopathies in only 150 teaching hours”*

*From a theoretical-practical perspective you will delve into advanced treatments in retinoblastoma.*

*TECH not only presents a program with the convenience of the online modality, it also focuses on the highest standards of its content.*

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.



# 02

# Objectives

This Postgraduate Certificate in Pediatric Retina has been developed essentially to provide the professional with the most current innovations related to cases of retinal detachment in children and its etiology. Therefore, TECH provides the best technological resources, ensuring the success of a program that contains a complete up to date in the area of Ophthalmology, in addition to the support of the best teaching tools offered by this qualification. Therefore, the graduate will have broadened their competencies regarding rare retinal disorders in childhood and their diagnosis.





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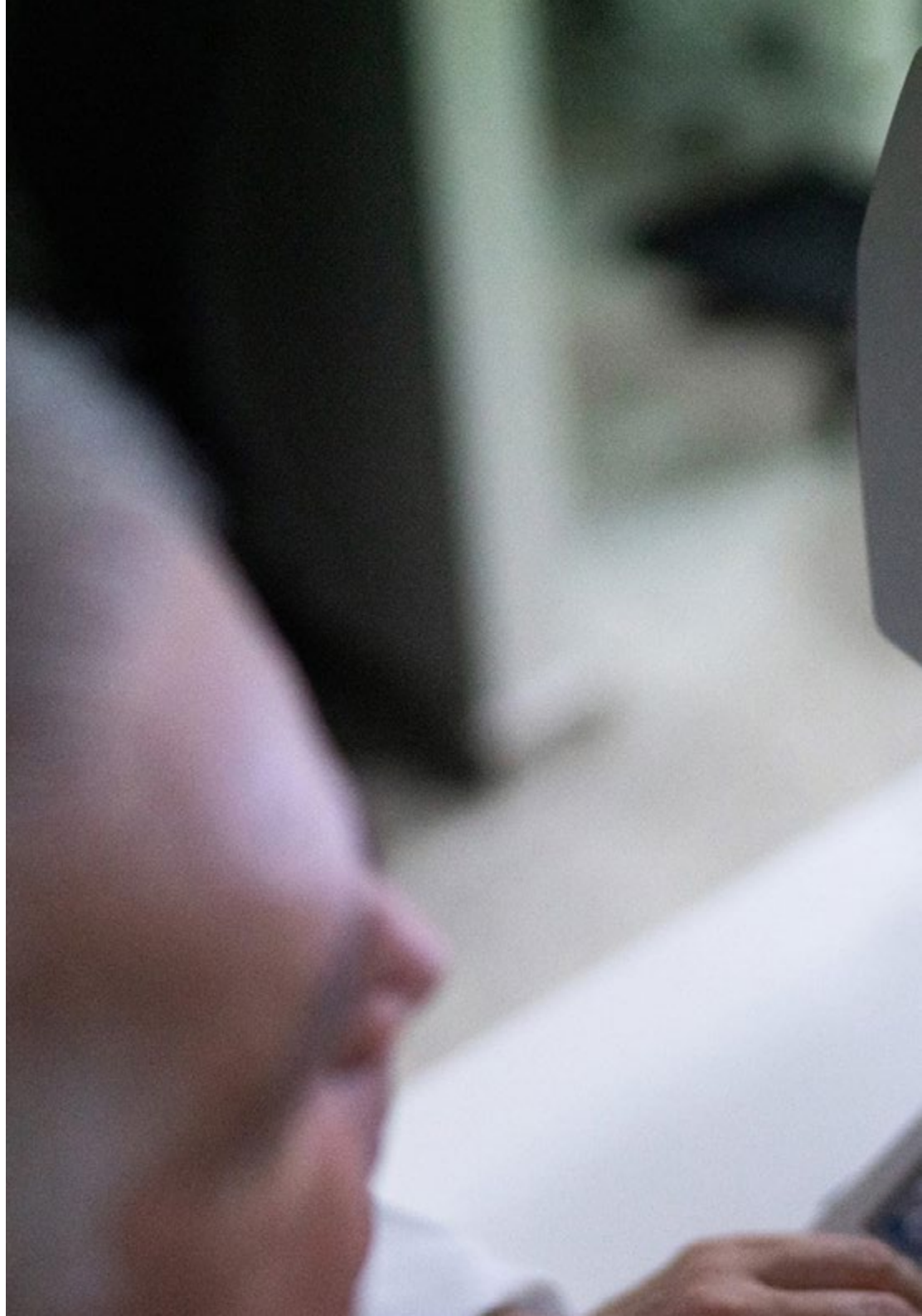
*TECH provides you with the best didactic methods and tools, allowing you to effectively achieve the objectives of this academic program”*



## 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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- Identify the clinical and genetic characteristics of retinoblastoma in children
- Address therapeutic strategies for retinoblastoma in the pediatric population
- Understand the importance of multidisciplinary management in cases of retinoblastoma
- Studying the retinopathy of Clothing its risk factors
- Deepen in the advanced stages of ROP and its clinical implications
- Identify inherited retinal disorders in childhood and their natural history
- Evaluate prognosis and treatment options for retinal disorders in children
- Recognize genetic syndromes associated with retinal disorders in children
- Study rare retinal disorders in childhood and their diagnosis
- Identify retinal vascular anomalies in children and their association with visual problems
- Recognize acquired disorders of the pediatric retina, such as inflammatory retinopathies
- Evaluate cases of retinal detachment in children and their etiology

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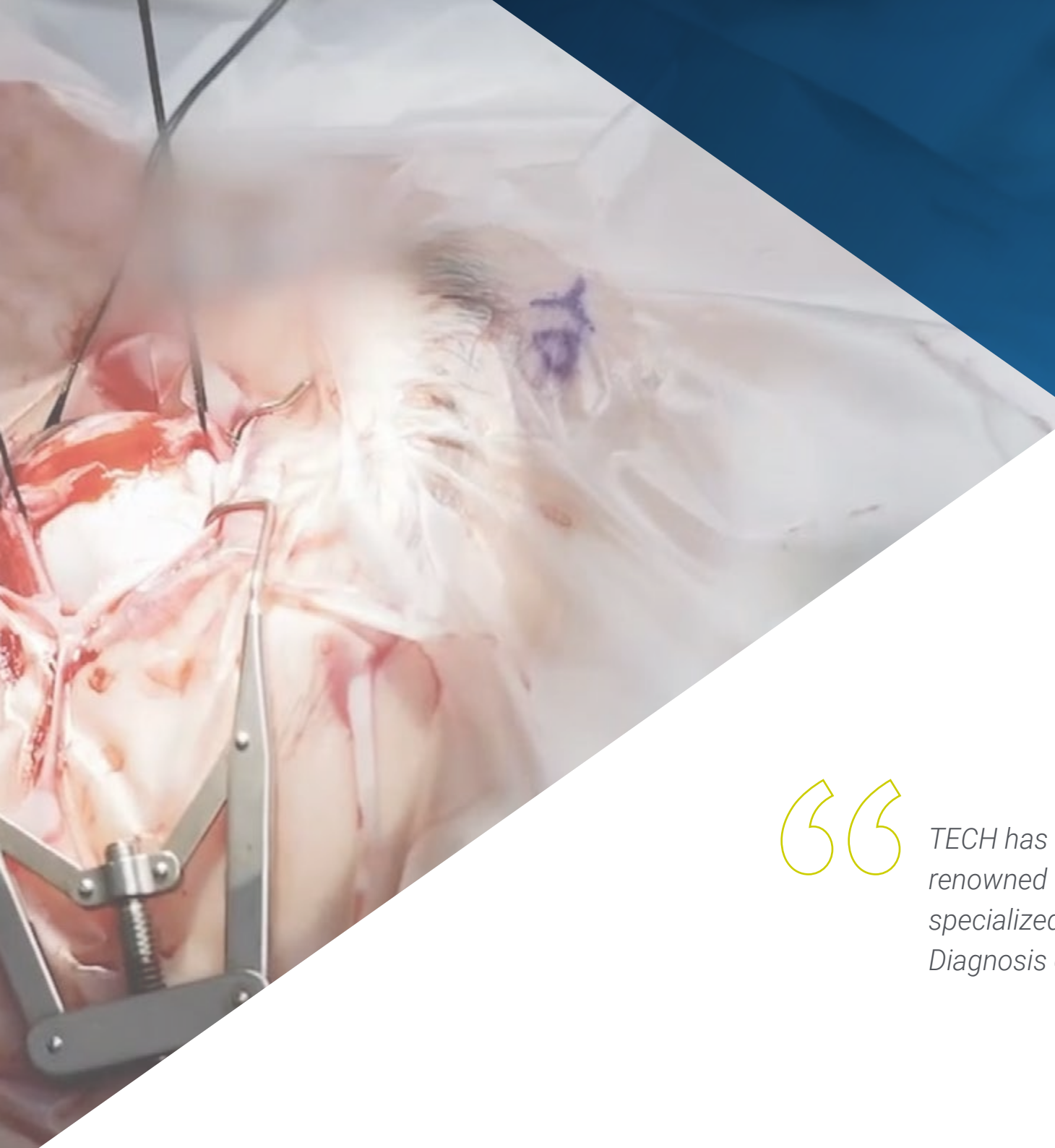
*In this university program in the advanced stages of (ROP) and its clinical implications”*

# 03

# Course Management

TECH is an institution that focuses on high quality education, offering students one of the most advanced qualifications in terms of academics and technology. For this reason, the graduate will have access to a syllabus designed by a highly specialized teaching staff in Pediatric Neurophthalmology and Strabismus, Pathologies and Ocular Treatment. His clinical background and in-depth knowledge will enable the graduate to obtain an effective update and resolve all kinds of difficulties during the course of this program.





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*TECH has assembled a renowned team of experts specialized in Image-Based Diagnosis of Retinal Pathology”*

## 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. Romero Sanz, María

- ♦ Corresponsable for Children's Ophthalmology at Hospital Quirónsalud Zaragoza
- ♦ Specialist in the Ophthalmology Miguel Servet University Hospital in Zaragoza
- ♦ Master' in in Clinical Ophthalmology at CEU Cardenal Herrera University
- ♦ Master's Degree in Clinical Medicine at the Camilo José Cela University
- ♦ Grade in Medicine and Surgery from the Faculty of Medicine of the Zaragoza University
- ♦ Expert in Ophthalmic Surgery at the University CEU Cardenal Herrera
- ♦ Expert in Pathologies and Eye Treatment CEU Cardenal Herrera University
- ♦ Expert in Uveitis and the Retina CEU Cardenal Herrera University



**Dr. D'anna Mardero, Oriana**

- ◆ Attending physician at the the Pediatrics Unit of the la Paz University Hospital from Madrid
- ◆ Area Specialist in Hospitals of the Public Health System
- ◆ Doctor in Ophthalmology
- ◆ Degree in Medicine and Surgery from UCLA

**Dr. Arias Del Peso, Borja**

- ◆ Ophthalmology Assistant Physician in
- ◆ Clinical Research
- ◆ Doctor in Ophthalmology
- ◆ Master's Degree in Image-Based Diagnosis of Retinal Pathology
- ◆ Professional Master's in Initiation to Research in Medicine
- ◆ Degree in Medicine

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*Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"*

# 04

# Structure and Content

This program has been developed and guided by the most recent research in the field of Pediatric Ophthalmology, integrating a curriculum that provides a great content on Pediatric Retina. This Postgraduate Certificate is oriented to provide advanced and innovative material on therapies and treatments in hereditary retinal dystrophies. All this, by means of several multimedia resources that offer dynamism and a greater attractiveness to this university qualification.





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*This Postgraduate Certificate will provide you with first level content on outcomes and follow-up in pediatric patients with retinal detachment”*

## Module 1. Pediatric Retina

- 1.1. Retinoblastoma
  - 1.1.1. Epidemiology and Risk Factors
  - 1.1.2. Diagnosis and classification of retinoblastoma
  - 1.1.3. Treatment methods: enucleation and eye preservation
  - 1.1.4. Outcome and follow-up in retinoblastoma
- 1.2. Retinoblastoma: treatment
  - 1.2.1. Advanced treatments in retinoblastoma
  - 1.2.2. Complications and management of side effects
  - 1.2.3. Survival and quality of life in patients with retinoblastoma
  - 1.2.4. Clinical cases and case studies in retinoblastoma
- 1.3. Retinopathy of Prematurity
  - 1.3.1. Pathophysiology of retinopathy of prematurity
  - 1.3.2. Staging of ROP
  - 1.3.3. Evaluation and diagnosis of ROP
  - 1.3.4. Long-term outcomes in ROP
- 1.4. Retinopathy of prematurity: treatment and follow-up
  - 1.4.1. Therapeutic management options in retinopathy of prematurity
  - 1.4.2. Long-term follow-up and care in patients with ROP
  - 1.4.3. Prevention and management strategies in ROP
  - 1.4.4. Clinical cases and experiences in ROP
- 1.5. Hereditary retinal disorders I
  - 1.5.1. Retinitis pigmentosa: diagnosis and classification
  - 1.5.2. Genetic approach in hereditary retinal disorders
  - 1.5.3. Therapies and treatments in retinitis pigmentosa
  - 1.5.4. Research and advances in gene therapies
- 1.6. Hereditary Retinal Disorders II
  - 1.6.1. Cone and rod dystrophies: diagnosis and management
  - 1.6.2. Atrophy of the retinal pigment epithelium (AERP)
  - 1.6.3. Therapies and treatments in hereditary retinal dystrophies
  - 1.6.4. Comprehensive approach to patients with hereditary retinal disorders



- 1.7. Hereditary Retinal Disorders III
  - 1.7.1. Choroideremia: diagnosis and therapeutic approach
  - 1.7.2. Usher syndrome and other rare diseases
  - 1.7.3. Quality of life and psychological support in patients with hereditary retinal disorders retinal disorders
  - 1.7.4. Clinical cases and research advances
- 1.8. Retinal vascular anomalies
  - 1.8.1. Retinal hemangiomas and telangiectasias
  - 1.8.2. Retinal vascular malformations
  - 1.8.3. Diagnosis and treatment of vascular anomalies
  - 1.8.4. Visual outcome and prognosis in patients with vascular anomalies
- 1.9. Acquired disorders
  - 1.9.1. Ocular trauma in childhood
  - 1.9.2. Inflammation and infection of the retina in children
  - 1.9.3. Pediatric age-related macular degeneration
  - 1.9.4. Other acquired retinal pathologies in children
- 1.10. Retinal detachment in the pediatric age group
  - 1.10.1. Causes and risk factors in pediatric retinal detachment
  - 1.10.2. Clinical evaluation and diagnosis
  - 1.10.3. Medical and surgical treatments in retinal detachment
  - 1.10.4. Outcomes and follow-up in pediatric patients with retinal detachment

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*Thanks to this university proposal  
you will be aware of pediatric age-  
related macular degeneration”*



# 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. 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 evaluate 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

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.

*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 trained with unprecedented success in all clinical specialties regardless of surgical load. 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 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.



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 highly 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.



#### 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 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 Pediatric Retina guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.





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*Successfully complete this program  
and receive your university qualification  
without having to travel or fill out  
laborious paperwork”*

This program will allow you to obtain your **Postgraduate Certificate in Pediatric Retina** 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 Pediatric Retina**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**





## Postgraduate Certificate Pediatric Retina

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

# Postgraduate Certificate

## Pediatric Retina

