

# Postgraduate Certificate

## Refractive Surgery with Phakic Lenses





## Postgraduate Certificate Refractive Surgery with Phakic Lenses

- » 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/refractive-surgery-phakic-lenses](http://www.techtute.com/us/medicine/postgraduate-certificate/refractive-surgery-phakic-lenses)

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# 01

# Introduction

Refractive surgery with phakic lenses is a branch of ophthalmology that focuses on the correction of refractive errors of the eye through the use of intraocular lenses. This field is becoming more and more relevant due to the increasing demand from patients seeking a solution to their vision problems. For this reason, TECH has proposed a 100% online program with the objective of training ophthalmology professionals in the use of this surgical technique. The program offers an innovative pedagogical methodology called Relearning, which focuses on problem-based learning and clinical case resolution.





*The Postgraduate Certificate in Refractive Surgery with Phakic Lenses offers ophthalmic professionals a unique opportunity to acquire high quality skills and knowledge in an area in constant evolution and demand in the sector"*

Refractive Surgery is an area specialized in the correction of refractive errors of the eye, such as myopia, hyperopia and astigmatism. Among the different existing surgical techniques, phakic lenses are an attractive option for those patients who are not candidates for other interventions or who have special visual requirements. Therefore, it is essential for ophthalmology professionals, who are constantly updating their skills, to have solid training and knowledge in this field.

The Postgraduate Certificate in Refractive Surgery with Phakic Lenses proposed by TECH, deals in an exhaustive way with the study of Phakic Lenses, from their conception and historical evolution to the latest innovations. This is based on a comprehensive syllabus, which includes the anatomy of the eye and the biometric data necessary for the correct selection of phakic lenses, as well as ocular optics and phakic lenses, spherical and astigmatism correction, indications and contraindications, and the implantation technique and its possible complications.

The pedagogical methodology of Relearning, characteristic of TECH, focuses on the active and personalized learning of the student, through quality, dynamic and interactive study materials. In addition, the program is 100% online, which allows students to organize their time and academic resources in a flexible way, without having to sacrifice their work and personal life rhythm at any time.

This **Postgraduate Certificate in Refractive Surgery with Phakic Lenses** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of case studies presented by medical experts focused on Refractive Surgery with Phakic Lenses
- ◆ 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 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



*Boost your career in ophthalmology with this degree, where you will learn from experts in the field and gain skills in one of the most innovative techniques in refractive surgery"*

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*Do you want to be an expert in Refractive Surgery with Phakic Lenses? This Postgraduate Certificate is 100% online, flexible and uses the Relearning pedagogical methodology so that you can study at your own pace"*

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 professional 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 professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*The program agenda covers key aspects, from the anatomical and optical characteristics of phakic lenses to clinical indications and contraindications.*

*This Postgraduate Certificate in Refractive Surgery with Phakic Lenses is an excellent option for ophthalmologists seeking to update and improve their knowledge in this constantly evolving area.*



# 02 Objectives

The creation of this Postgraduate Certificate in Refractive Surgery with Phakic Lenses is focused on providing students with specialized and complete knowledge about this surgical technique. In order to achieve a deep understanding of the technical, anatomical and optical aspects related to Phakic Lenses. In addition, the degree provides students with the tools and skills necessary for the safe and effective application of this technique in patients with different types of ametropia.







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*Upon completion of this program, students will be able to perform preoperative evaluations, select and calculate the appropriate Phakic Lens for each patient, and perform surgical implantation of the Phakic Lens”*



## General Objectives

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- ◆ Delve into the basic principles of optics, as well as refractive defects and their treatment possibilities
- ◆ Describe the corneal morphology and function on which much of Refractive Surgery is applied
- ◆ Deepen knowledge on the operation of an excimer laser and what are the fundamental characteristics of some excimer platforms
- ◆ Investigate the indications and contraindications of Refractive Surgery, as well as the algorithms used for the surgery
- ◆ Get updated on the studies to be performed on patients in order to correctly assess the indication for surgery
- ◆ Describe the processes of preparation for Refractive Surgery
- ◆ To deepen in the different techniques applied on the cornea for the correction of refractive errors
- ◆ Identify the surgeries that can be performed on the crystalline lens to eliminate the patients' graduation defects
- ◆ Be aware of the different lenses that are used for this surgery without acting on the cornea or lens
- ◆ To deepen the relationship between Glaucoma and Refractive Surgery





## Specific Objectives

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- ◆ Delve into the history of phakic lenses and their evolution
- ◆ Identify the different models of lenses and how each one works
- ◆ To deepen in the surgical complications of the same

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*The main objective of the Postgraduate Certificate is to train competent professionals in the field of Refractive Surgery with Phakic Lenses, so that they can improve the vision of their patients”*

# 03

# Course Management

Being aware that the direction of a Postgraduate Certificate is of utmost importance to guarantee the quality of the academic content and the training of the students. TECH has assembled a group of highly qualified and experienced teachers in the area, who have developed a complete and updated syllabus that will allow students to acquire the skills and knowledge necessary to perform successfully in the clinical practice of Refractive Surgery with Phakic Lenses. In this way, students will be able to acquire the necessary tools to face the challenges of the field of refractive surgery and achieve professional success in this field.





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*The syllabus of this degree has been developed by the best professionals in this sector, so the contents are fully in line with the reality of the market”*

## International Guest Director

Dr. Beeran Meghpara is an internationally renowned ophthalmologist specializing in Cornea, Cataract and Laser Refractive Surgery.

He has served as Director of Refractive Surgery and member of the Cornea Service at Wills Eye Hospital in Philadelphia, a world leading center in the treatment of eye diseases. Here, this expert has performed all forms of Corneal Transplantation, including Partial Thickness DMEK and DALK. In addition, he has extensive experience with the latest technology in Cataract Surgery, including Femtosecond Laser and Intraocular Lens Implants, which correct Astigmatism and Presbyopia. He also specializes in the use of Bladeless Custom LASIK, Advanced Surface Ablation and Phakic Intraocular Lens Surgery to help patients reduce their dependence on glasses and contact lenses.

In addition, Dr. Beeran Meghpara has excelled as a scholar by publishing numerous articles and presenting his research at local, national and international conferences, contributing to the field of Ophthalmology. Likewise, he has been honored with the prestigious Golden Apple Resident Teaching Award (2019), in recognition of his dedication to teaching residents in Ophthalmology. In addition, he has been selected by his peers as one of Philadelphia magazine's Best Doctors (2021-2024) and Best Doctor by Castle Connolly (2021), a leading research and information resource for patients seeking the best medical care.

In addition to his clinical and academic work, he has served as an ophthalmologist for the Philadelphia Phillies baseball team, underscoring his ability to handle highly complex cases. In this sense, his commitment to technological innovation, as well as his excellence in medical care, continues to raise the standards in ophthalmic practice worldwide.



## Dr. Beeran Meghpara

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- Director of the Department of Refractive Surgery at Wills Eye Hospital, Pennsylvania, United States
- Ophthalmic Surgeon at the Center for Advanced Ophthalmic Care, Delaware
- Fellow in Cornea, Refractive Surgery and External Disease at the University of Colorado
- Resident Ophthalmology Physician at Cullen Eye Institute, Texas
- Intern at St. Joseph's Hospital, New Hampshire
- Doctor of Medicine from the University of Illinois, Chicago
- Graduate of the University of Illinois, Chicago
- Selected for the Alpha Omega Alpha Medical Honor Society
- Awards: Golden Apple Resident Teaching Award (2019), Best Doctor from, Philadelphia Magazine (2021-2024), Best Doctor from Castle Connolly (2021)

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*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### Dr. Hazem Alaskar Alani

- ◆ Ophthalmologist at Oftalvist Málaga
- ◆ Surgical Director of Poniente University Hospital
- ◆ Head of the Ophthalmology Diseases Department, Poniente Hospital
- ◆ Specialist in Ophthalmology at the Puerta De las Nieves University Hospital
- ◆ Degree in Medicine and Surgery from the University of Valencia
- ◆ Doctor of Medicine and Surgery from the University of Almería
- ◆ Master's Degree in Health Management and Planning, European University of Madrid
- ◆ Master's Degree in Ophthalmology Medicine from Cardenal Herrera University
- ◆ Member of: European Retina Society EURETINA, SEDISA, The Spanish Society of Health Managers, Fellow of the European Board of Ophthalmology, FEBO European Society of Cataract and Refractive Surgery, ESCRS, Spanish Society of Implanto Refractive Surgery SECOIR, Andalusian Society of Ophthalmology SAO, Spanish Society of Retina and Vitreous SERV, Fellow of the European School of Retina and Vitreous Surgery EVRS





### Dr. Román Guindo, José Miguel

- ◆ Ophthalmologist at Oftalvist Málaga
- ◆ Ophthalmologist at Vissum Madrid
- ◆ Ophthalmologist at Dubai International Medical Center
- ◆ Medical Director of Vissum Madrid Sur and Vissum Málaga
- ◆ Specialist in Ophthalmology at the San Carlos Clinical Hospital
- ◆ Doctor in Ophthalmology
- ◆ Degree in Medicine and Surgery General: from the Autonomous University of Madrid
- ◆ Member of: Spanish Society of Ophthalmology, International Society of Ocular Inflammation, International Society of Ocular Inflammation

## Professors

### Dr. Cuevas Santamaría, Diego

- ◆ Ophthalmology Specialist in the Ophthalmology Clinical Management Unit of the Poniente Hospital
- ◆ Specialist Doctor in Ophthalmology, Virgen del Rocio University Hospital
- ◆ Ophthalmologist at Oftalvist Almeria Clinic
- ◆ Specialist in the Ophthalmology Service of the Dr. Pascual Hospital
- ◆ Ophthalmological at Instituto Tumors VISSUM
- ◆ Graduate in Medicine and Surgery from the University of Malaga
- ◆ PhD in Medical Science University of Almeria
- ◆ Master's Degree in Medical Management and Clinical Management by the UNED
- ◆ Master's Degree in Ophthalmology from CEU San Pablo University
- ◆ University Expert in Public Health and Health Promotion by the University of Almeria
- ◆ Postgraduate Diploma in Uveitis and Retina from the Autonomous University of Madrid
- ◆ Member of the Sociedad Española de Oftalmología, American Academy of Ophthalmology, Grupo Español de Superficie Ocular (GESOC), Sociedad Andaluza de Oftalmología, Sociedad Española de Cirugía Implanto Refractiva

# 04

## Structure and Content

Thanks to this Postgraduate Certificate the health professionals will be able to deepen their knowledge in technical, anatomical and optical aspects of Refractive Surgery. The program covers key concepts such as lens use, materials, indications and contraindications. Relevant anatomical and optical aspects, techniques and measurement tools are studied. It also discusses the historical evolution of lenses, their relationship with other refractive surgery techniques and new innovations. In addition, best practices and associated complications are discussed, and recommendations for safe and effective use are provided. Thus, upon completion, students will be familiar with the latest advances in the field and will be able to apply their knowledge to perform Refractive Surgery with Phakic Lenses in a safe and effective manner.





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*Acquire the most important knowledge about Refractive Surgery with Phakic Lenses, thanks to the extensive experience of the teachers of this program"*

## Module 1. Cirugía con lentes fáquicas

- 1.1. Phakic lenses
  - 1.1.1. Concept
  - 1.1.2. Type of phakic lenses
  - 1.1.3. Current use of phakic lenses
  - 1.1.4. Materials used in phakic lenses
- 1.2. Anatomical aspects in relation to the use of phakic lenses
  - 1.2.1. Anatomy of the anterior pole of the eyeball
  - 1.2.2. Biometric data to be taken into account for the implantation of phakic lenses
  - 1.2.3. Measuring instruments used
  - 1.2.4. Anatomical contraindications
- 1.3. Optical aspects of phakic lenses
  - 1.3.1. Ocular optics
  - 1.3.2. Phakic lens optics
  - 1.3.3. Spherical correction with phakic lenses
  - 1.3.4. Correction of Astigmatism with phakic lenses
- 1.4. Indications for phakic lens implantation
  - 1.4.1. Indications in the adult eye
  - 1.4.2. Indications in children
  - 1.4.3. Indications in the pathological eye
  - 1.4.4. Clinical contraindications
- 1.5. History of phakic lens development
  - 1.5.1. The precursors
  - 1.5.2. First models
  - 1.5.3. Disused models
  - 1.5.4. Development of current models
- 1.6. Angle-supported phakic lenses
  - 1.6.1. Concept
  - 1.6.2. Indications
  - 1.6.3. Implantation Techniques
  - 1.6.4. Complications



- 1.7. Iridian fixation phakic anterior chamber lenses
  - 1.7.1. Concept
  - 1.7.2. Indications
  - 1.7.3. Implantation Technique
  - 1.7.4. Complications
- 1.8. Epicrystalline lenses
  - 1.8.1. Concept
  - 1.8.2. Indications
  - 1.8.3. Implantation Technique
  - 1.8.4. Complications
- 1.9. Evolution of phakic lenses
  - 1.9.1. Innovation in phakic lenses
  - 1.9.2. New indications for phakic lenses
  - 1.9.3. Future of phakic lenses
  - 1.9.4. Phakic lenses in relation to other Refractive Surgery techniques
- 1.10. Conclusions
  - 1.10.1. Phakic lenses in context
  - 1.10.2. Epicrystalline lenses in relation to phakic lenses
  - 1.10.3. Best practice phakic lenses
  - 1.10.4. Summary



*Have you ever imagined learning from the best professionals and studying from the best content? With this program, these elements will no longer be a fantasy"*

# 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 Refractive Surgery with Phakic Lenses 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 Refractive Surgery with Phakic Lenses** 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 Refractive Surgery with Phakic Lenses**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 ECTS**



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



future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

**tech** global  
university

personalized service innovation

knowledge present  
with Phakic Lenses

online training

development language

virtual classroom

## Postgraduate Certificate

Refractive Surgery  
with Phakic Lenses

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# Postgraduate Certificate Refractive Surgery with Phakic Lenses

