

Internship Program  
Optical Technologies  
and Clinical Optometry





**tech** global  
university

Internship Program  
Optical Technologies  
and Clinical Optometry

# Index

01

Introduction

---

*p. 4*

02

Why Study an Internship Program?

---

*p. 6*

03

Objectives

---

*p. 8*

04

Educational Plan

---

*p. 10*

05

Where Can I Do the Internship Program?

---

*p. 12*

06

General Conditions

---

*p. 16*

07

Certificate

---

*p. 18*

# 01 Introduction

The prolonged and excessive use of electronic devices is causing irreparable consequences on the eyesight of users. Only in the confinement have their prejudices been reproduced, and is that exposure to screens increased exponentially by adults and minors in this period. Experts indicate that the line of use of digital devices is increasing, so it is necessary that optometrists today are developed around strategies and techniques that can face the new pathologies. Taking into account that part of the rehabilitation of patients with visual health problems is going to depend on these skills, TECH has developed a completely practical program, which addresses optical therapies and which is proposed with on-site training, together with expert optometrists to ensure correct practical instruction for specialists.



*Enroll now to be part of a 3-week intensive internship at a prestigious center and get up-to-date on the latest corneal surgical procedures"*





The latest scientific and healthcare advances have shown that the use of technology in medicine is essential for the development of less intrusive and more effective therapies. These tools are essential in ophthalmology, as there are more and more variants of visual pathologies.

Therefore, specialists must have up-to-date knowledge in special contact lens fittings, cataract surgery, biostatistics, low vision treatments, pediatric optometry, as well as vision therapy with a practical approach and the latest advances in instrumentation and treatment of amblyopia.

TECH offers an internship program in prestigious hospital centers for optometrists to develop clinical techniques in the real scenario. This internship will consist of 3 weeks of learning that will be distributed from Monday to Friday in 8-hour shifts.

In this way, the specialist will apply the latest technological tools and will work in a demanding, high-level clinical environment. In addition, they will have the support and monitoring of professionals who belong to the team of experts of the health center itself, which will guarantee an immediate and direct process of updating their knowledge.

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*Expand your knowledge in visual acuity and become a specialist with extensive skills developing in the clinical performance scenario”*

# 02

## Why Study an Internship Program?

In contrast to other academic options that offer rigid and purely theoretical syllabus, this program offers a completely practical learning experience. And it does so by providing the student with the opportunity to spend a stay in a prestigious clinical center where they will be able to update themselves in the latest optical and optometric processes and technologies. In this way, they will get an immediate update in a real professional environment, accompanied by specialists from the clinic itself.



*TECH offers you the great opportunity to do a clinical internship in a reference center in the field of Optics and Optometry"*

### 1. Updating from the latest technology available

Optometry and Optics have advanced in recent years, incorporating numerous techniques and equipment that have made diagnostic work more precise. Topography, tomography, tonometry and the use of different types of lasers have transformed these disciplines, and this TECH program will bring these technologies to the professional, in a practical way, within a prestigious clinical environment.

### 2. Gaining In-Depth Knowledge from the Experience of Top Specialists

TECH gives the professional the opportunity to participate in a prestigious clinical center with the best specialists in Optical Technologies and Clinical Optometry. Therefore, this program is a great option to be up-to-date with renowned international experts, learning about the latest technological and procedural advances in these disciplines.

### 3. Entering First-Class Clinical Environments

TECH carefully selects all available centers for Internship Programs. Thanks to this, the specialist will have guaranteed access to a prestigious clinical environment in the area of Clinical Optometry and Optics. In this way, you will be able to see the day-to-day work of a demanding, rigorous and exhaustive sector, always applying the latest theses and scientific postulates in its work methodology.



#### **4. Putting the acquired knowledge into daily practice from the very first moment**

The focus of this program is totally practical and will allow the professional to immediately apply all the advances in the discipline to their work. Therefore, through this internship, the specialist will integrate in their daily work the latest techniques and procedures in optical examination and in the surgical approach to different conditions and pathologies.

#### **5. Expanding the Boundaries of Knowledge**

TECH offers the possibility of doing this Internship Program, not only in national, but also in international centers. This way, the specialist will be able to expand their frontiers and catch up with the best professionals, who practice in first class centers and in different continents. A unique opportunity that only TECH, the largest online university in the world, could offer.



*You will have full practical immersion at the center of your choice"*

# 03

## Objectives

This program aims to expand and update the optometrist's knowledge in a practical way. TECH achieves this through a practical experience in a rigorous hospital clinic that applies technological innovation to its diagnostics. The expert will be able to develop around the assessment of clinical cases, the prevention of ocular pathologies, the mechanisms of action and routes of administration of drugs at the ocular level, as well as being able to intervene with instruments for measuring the quality and quantity of tears, characterization of the cornea and sclera, measurement of the anterior chamber and the iridocorneal angle, etc. All this to ensure a superior service to rehabilitate patients.



### General Objectives

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- ♦ Manage the latest procedures and techniques in optics and optometry, taking into account the latest technological advances available
- ♦ Integrate into daily work the latest surgical methods and the most innovative visual assessment tests
- ♦ Master the specific approach to the different optical conditions, as well as the different types of patients that may present these pathologies and deficiencies





## Specific Objectives

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- ♦ In-depth understanding of ocular optics and how to act on it to modify refraction by modifying corneal power
- ♦ Deepen in the special procedures for calculating the pseudophakic intraocular lens in eyes that have previously undergone corneal refractive surgery
- ♦ Define the concepts of statistics, biostatistics and epidemiology
- ♦ Deepen in the visual alterations that can occur in an acquired brain injury
- ♦ Lay the foundations for evidence-based vision therapy intervention and interdisciplinary work
- ♦ Know in depth the visual alterations that occur in the different types of amblyopia
- ♦ Learn the visual examination protocol to be performed for the detection and follow-up of amblyopia
- ♦ Learn the visual examination protocol to be performed for the detection and follow-up of the patient with low vision. Know the techniques of the TR applied to patients
- ♦ Delve deeper into the groups of drugs used in the treatment of infectious ocular pathologies and antifungal drugs
- ♦ Know precisely the instruments necessary for the characterization of the sclera
- ♦ Specialize in the prevalence in the pediatric population and relate it to clinical practice
- ♦ Handle the basics of orthokeratology and the adaptation of this type of lenses
- ♦ Control the fitting of multifocal lenses and know how to improve and optimize a fitting by describing the fundamentals of some optical instruments, specifically the telescope and the microscope
- ♦ Describe pseudophakic intraocular lens surgery, its indications, procedures and complications

# 04 Educational Plan

The Internship Program in Optical Technologies and Clinical Optometry will be developed during 3 weeks of exhaustive practices in which the specialists will get into the ophthalmologic field of action. The 8-hour consecutive shifts will take place from Monday to Friday with the support of an expert assistant, who will guide and orient the students at all times to guarantee the correct attention to the patients.

This internship proposal has been developed to improve the performance of optometrists and to provide them with useful knowledge about the technological provision of the latest clinical tools. The clinical internship at the hospital will allow the professional to complete a minimum number of practical clinical activities in vision therapy, optometric procedures in corneal, intraocular and cataract refractive surgery, visual quality metrics, as well as many other disciplines such as geriatric and pediatric optometry.

In this way, the participant of the Internship Program will be able to perform field work in situ, with real patients and with the endorsement of the tutors to carry out a good praxis. This is a unique opportunity to approach optometry procedures with the support of professionals with years of experience in the sector. The best way to understand and integrate healthcare processes through innovative tools and in a real scenario.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of knowledge (learning to learn and learning to do), with the accompaniment and guidance of teachers and other fellow trainees that facilitate teamwork and multidisciplinary integration as transversal competencies for the ophthalmological praxis (learning to be and learning to relate).

The procedures described below will form the basis of the practical part of the training, and their implementation is subject to both the suitability of the patients and the availability of the center and its workload, with the proposed activities being as follows:



*Get qualified thanks to an institution that offers knowledge in visual anomalies and their intervention with the latest clinical tools"*

Module	Practical Activity
<b>Surgical Procedures and Vision Therapy Techniques</b>	Perform preparatory tests for corneal and intraocular refractive surgery
	Intervene using the latest techniques in corneal refractive surgery
	Manage and use the different types of lasers in refractive surgery such as PRK, LASIK, LASEK or EPILASIK
	Perform the calculation of intraocular lenses
	Perform postoperative follow-up and control possible complications after surgery
	Perform the specific intervention in accommodative, binocular, oculomotor and strabismus dysfunctions
	Make a correct optometric report
	Assess and treat amblyopia through treatments with refractive status correction and with occlusion and pharmacological penalization
<b>Biostatistics and Metrics in Optics, Optometry and Visual Quality</b>	Use biostatistics to perform tests for comparison of two or more samples and two or more ratios
	Use specific metrics, using the most advanced instrumentation, for the assessment of the patient's visual quality (Zernike coefficients, Strehl Ratio, CSF and MTF, RMS)
	Treat, from the different measurement methods, the ocular anomalies, as well as spherical and cylindrical ametropias
<b>Technological Innovations, Contactology and Optical and Optometric Instrumentation</b>	Perform corneal topography using Placido systems and Scheimpflug photography
	Use optical coherence tomography (OCT) of the anterior segment
	Assess, using optical and optometric instrumentation, tear patterns, anterior chamber and iridocorneal angle, as well as the lens, retinal optic nerve and visual field
	Apply endothelial microscopy analysis
	Address, by tonometry techniques, the intraocular pressure status
	Use optical instruments such as the telescope and the microscope in different clinical procedures
	Perform contact lens fitting in regular and irregular corneas
	Apply orthokeratology treatment
	Design lenses adapted to each patient, according to their visual conditions

Module	Practical Activity
<b>Techniques of Geriatric and Pediatric Optometry</b>	Perform low vision examination in the geriatric patient
	Apply specific tests to assess the visual and ocular status of the geriatric patient
	Assess the perception of binocular function in the pediatric patient
	Distinguish pharmacodynamics in the geriatric patient and how it affects the main prescribed drugs
	Detect pathological alterations in the pediatric patient
	Adapt contact lenses for pediatric patients
	Identify common problems in pediatric patients such as amblyopia, visual efficiency problems and impact on visual and school performance
	Use drugs that modify the pupil diameter
<b>Pharmacology for Ophthalmologic Use</b>	Apply ocular hypotensive drugs, as well as anti-infective and anti-inflammatory drugs
	Use of botulinum toxin in strabismus
	Approach different procedures according to the pharmacological effects of anesthetics applied at ocular level
	Assess the use of parasympathomimetics and brimonidine in cases of presbyopia



*You will learn first-hand about the working reality of the area, in a demanding and rewarding environment"*

# 05 Where Can I Do the Internship Program?

TECH has proposed a 3-week clinical internship to ensure the practical education of optometrists in order to update their practical knowledge in the real world. Thanks to the collaboration of prestigious hospital centers, the specialist will be able to expand their knowledge in the field of action and respond to the diversity of ocular pathologies. All this, with the support and monitoring of experts working in the field of optics and optometry.

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*Join now to enjoy an enriching clinical internship in a prestigious clinic, where you will apply the latest technological advances in refractive surgery”*





The student will be able to do this program at the following centers:



Medicine

### Vissum Madrid

Country: Spain City: Madrid

Address: C. Polvoranca, 9, 28901 Getafe, Madrid

Ophthalmology assistance center of international reference

**Related internship programs:**

- Clinical Ophthalmology
- Optical Technologies and Clinical Optometry



Medicine

### Vissum Alicante

Country: Spain City: Alicante

Address: Calle Cabañal 1, 03016, Alicante, España

Ophthalmologic care assistance clinic

**Related internship programs:**

- Clinical Ophthalmology
- Optical Technologies and Clinical Optometry



Medicine

### Hospital HM Modelo

Country: Spain City: La Coruña

Address: Rúa Virrey Osorio, 30, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

### Hospital Maternidad HM Belén

Country: Spain City: La Coruña

Address: R. Filantropía, 3, 15011, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Update in Assisted Reproduction
- Hospitals and Health Services Management



Medicine

### Hospital HM Rosaleda

Country: Spain City: La Coruña

Address: Rúa de Santiago León de Caracas, 1, 15701, Santiago de Compostela, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Hair Transplantation
- Orthodontics and Dentofacial Orthopedics



Medicine

### Hospital HM La Esperanza

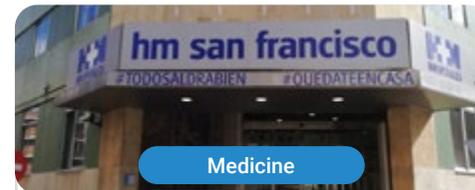
Country: Spain City: La Coruña

Address: Av. das Burgas, 2, 15705, Santiago de Compostela, A Coruña

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Oncology Nursing
- Clinical Ophthalmology



Medicine

### Hospital HM San Francisco

Country: Spain City: León

Address: C. Marqueses de San Isidro, 11, 24004, León

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Update in Anesthesiology and Resuscitation
- Trauma Nursing



Medicine

### Hospital HM Nou Delfos

Country: Spain City: Barcelona

Address: Avinguda de Vallcarca, 151, 08023 Barcelona

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Aesthetic Medicine
- Clinical Nutrition in Medicine



Medicine

### Hospital HM Madrid

Country	City
Spain	Madrid

Address: Pl. del Conde del Valle de Súchil, 16, 28015, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Palliative Care
- Anaesthesiology and Resuscitation



Medicine

### Hospital HM Montepríncipe

Country	City
Spain	Madrid

Address: Av. de Montepríncipe, 25, 28660, Boadilla del Monte, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Palliative Care
- Aesthetic Medicine



Medicine

### Hospital HM Torrelodones

Country	City
Spain	Madrid

Address: Av. Castillo Olivares, s/n, 28250, Torrelodones, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

### Hospital HM Sanchinarro

Country	City
Spain	Madrid

Address: Calle de Oña, 10, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Anaesthesiology and Resuscitation
- Palliative Care



Medicine

### Hospital HM Puerta del Sur

Country	City
Spain	Madrid

Address: Av. Carlos V, 70, 28938, Móstoles, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Palliative Care
- Clinical Ophthalmology



Medicine

### Hospital HM Vallés

Country	City
Spain	Madrid

Address: Calle Santiago, 14, 28801, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Gynecologic Oncology
- Clinical Ophthalmology



Medicine

### Policlínico HM Cruz Verde

Country	City
Spain	Madrid

Address: Plaza de la Cruz Verde, 1-3, 28807, Alcalá de Henares, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Advanced Clinical Podiatry
- Optical Technologies and Clinical Optometry



Medicine

### Policlínico HM Distrito Telefónica

Country	City
Spain	Madrid

Address: Ronda de la Comunicación, 28050, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain.

**Related internship programs:**

- Optical Technologies and Clinical Optometry
- General and Digestive System Surgery



### Policlínico HM Gabinete Velázquez

Country	City
Spain	Madrid

Address: C. de Jorge Juan, 19, 1º 28001, 28001, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Clinical Nutrition in Medicine
- Aesthetic Plastic Surgery



### Policlínico HM Moraleja

Country	City
Spain	Madrid

Address: P.º de Alcobendas, 10, 28109, Alcobendas, Madrid

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Rehabilitation Medicine in Acquired Brain Injury Management



### Policlínico HM Rosaleda Lalín

Country	City
Spain	Pontevedra

Address: Av. Buenos Aires, 102, 36500, Lalín, Pontevedra

Network of private clinics, hospitals and specialized centers distributed throughout Spain

**Related internship programs:**

- Advances in Hematology and Hemotherapy
- Neurological Physiotherapy

# 06

## General Conditions

### Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



## General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

**1. TUTOR:** During the Internship Program, students will be assigned two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned an academic tutor, whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

**2. DURATION:** The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

**3. ABSENCE:** If the student does not show up on the start date of the Internship Program, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

**4. CERTIFICATION:** Professionals who pass the Internship Program will receive a certificate accrediting their stay at the center.

**5. EMPLOYMENT RELATIONSHIP:** The Internship Program shall not constitute an employment relationship of any kind.

**6. PRIOR EDUCATION:** Some centers may require a certificate of prior education for the Internship Program. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

**7. NOT INCLUDED:** The Internship Program shall not include any element not described in these conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

# 07 Certificate

This program will allow you to obtain your **Internship Program diploma in Optical Technologies and Clinical Optometry** 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: **Internship Program in Optical Technologies and Clinical Optometry**

Duration: **3 weeks**

Attendance: **Monday to Friday, 8-hour consecutive shifts**

Accreditation: **5 ECTS**





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