

# Postgraduate Certificate Principles of Applied Optics for Nursing





## Postgraduate Certificate Principles of Applied Optics for Nursing

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

Website: [www.techtute.com/us/nursing/postgraduate-certificate/principles-applied-optics-nursing](http://www.techtute.com/us/nursing/postgraduate-certificate/principles-applied-optics-nursing)

# Index

01

Introduction

---

*p. 4*

02

Objectives

---

*p. 8*

03

Course Management

---

*p. 12*

04

Structure and Content

---

*p. 16*

05

Methodology

---

*p. 20*

06

Certificate

---

*p. 28*

# 01

# Introduction

The Postgraduate Certificate in Principles of Applied Optics for Nursing is aimed at specializing quality nursing personnel to perform high-level ophthalmological work. This Postgraduate Certificate aims to provide these professionals with the skills and abilities to develop their work activity in a more competent manner and with the confidence of working with the necessary knowledge. A multidisciplinary approach based on the experience of different areas of Ophthalmic Nursing, which will allow you to grow in your profession with the most effective system in the educational market.





IDING

“

*Acquire the necessary skills to work in the best ophthalmology units with a high-intensity Postgraduate Certificate"*

The work of the nursing professional is developed in multiple and different areas of intervention. From the patient's reception and accompaniment to the moment of treatment application and follow-up control, the nursing staff must have the capacity of a multifunctional worker.

This is also essential in the Ophthalmic Nursing The nursing professional requires a solid specialization that qualifies them in the work areas in which they are going to develop their work. This performance is also affected by the constant technical and technological advances in this field, which means that professionals must be attentive to all updates so as not to become outdated at great speed.

However, achieving this update requires a dedication that is not always compatible with real life.

In this Postgraduate Certificate, we have managed to reconcile the intensity of a very complete program, which covers all the essential aspects of the specialization of a professional in ophthalmic nursing, with the daily life of any professional, even those in practice.

Through a study approach that takes advantage of the most efficient teaching formulas and the most useful and versatile online systems, this Postgraduate Certificate is a highly qualified tool that will take you, step by step, at your own pace but without delay, to the most demanding educational goal.

A luxury program that we put within your reach with the best conditions of the educational market.

This **Postgraduate Certificate in Applied Optics for Nursing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ The latest technology in online teaching software
- ♦ Visual learning system, supported by graphic and schematic contents that are easy to assimilate and understand
- ♦ Practical cases presented by practising experts
- ♦ State-of-the-art interactive video systems
- ♦ Teaching supported by telepractice
- ♦ Continuous updating and recycling systems
- ♦ Autonomous learning: full compatibility with other occupations
- ♦ Practical exercises for self-evaluation and learning verification
- ♦ Support groups and educational synergies: questions to the expert, debate and knowledge forums.
- ♦ Communication with the teacher and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ Supplementary documentation databases are permanently available, even after the course



*With this Postgraduate Certificate you will be able to combine a high intensity qualification with your personal and professional life, achieving your goals in a simple and real way”*

“

*A program created and directed by professional experts in Ophthalmic Nursing that make this Postgraduate Certificate a unique opportunity for professional growth”*

Our teaching staff is made up of professionals from different fields related to this specialty. In this way we ensure that we provide you with the up-to-date training we are aiming for. A multidisciplinary staff, made up of trained and experienced professionals in different environments, who will develop the theoretical knowledge in an efficient way, but, above all, will put at the service of the Postgraduate Certificate the practical knowledge derived from their own experience: one of the differential qualities of this program.

This mastery of the subject is complemented by the effectiveness of the methodological design of this Postgraduate Certificate in Principles of Applied Optics for Nursing. Developed by a multidisciplinary team of experts, it integrates the latest advances in educational technology. In this way, you will be able to study with a range of comfortable and versatile multimedia tools that will give you the operability you need for your specialization.

The design of this program is based on Problem-Based Learning: an approach that conceives learning as a highly practical process. To achieve this remotely, telepractice will be used: with the help of an innovative system of interactive videos, and learning from an expert you will be able to acquire the knowledge as if you were facing the case you are learning at that moment. A concept that will allow students to integrate and memorize what they have learnt in a more realistic and permanent way.

*Learning with this Postgraduate Certificate is developed through the most advanced teaching methods in online teaching to guarantee that your effort will have the best possible results.*

*A Postgraduate Certificate that will enable you to work in the field of Ophthalmic Nursing, with the solvency of a high-level professional.*



# 02

# Objectives

The objective of this program is to provide nursing professionals with the necessary knowledge and skills to perform their activity in the field of Ophthalmology. Through a work approach that is totally adaptable to the student, this Postgraduate Certificate will progressively lead him or her to acquire the competencies that will propel him or her to a much higher professional level.





“

*Become one of the most sought-after professionals of the moment, with this Postgraduate Certificate in Principles of Applied Optics for Nursing"*



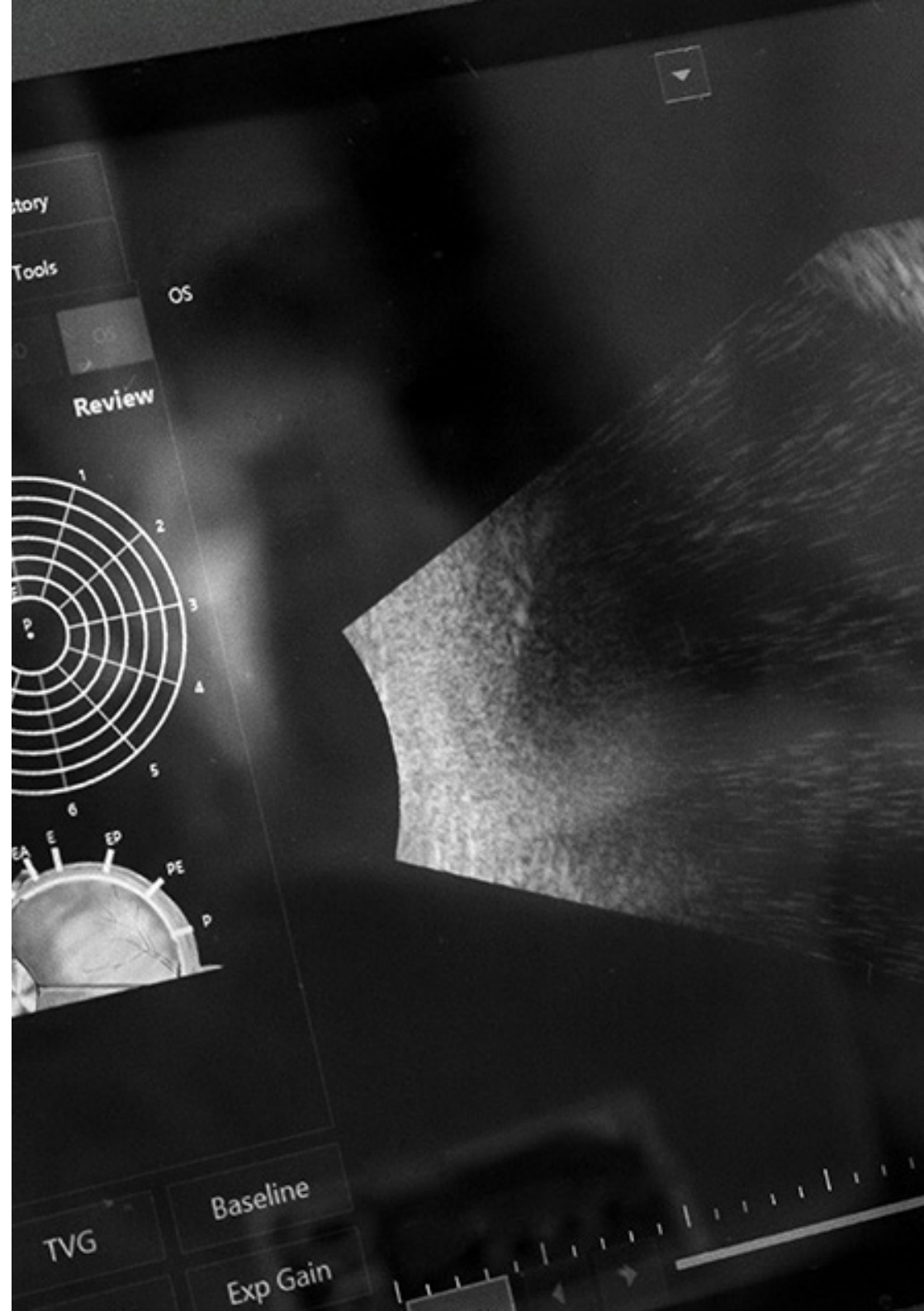
## General Objectives

---

- ◆ Specialize quality nurses to offer high-level ophthalmic nursing care
- ◆ Acquire knowledge and skills that will enable nurses to practice their profession autonomously within the field of ophthalmic nursing



*A boost to your CV that will give you the competitiveness of the best prepared professionals in the labor market"*



Saturday Jan 30 2016  
01:07:49.30 PM



## Specific Objectives

---

- ◆ Explain in a simple way what optics applied to vision consists of so that the student understands the importance of the concepts in daily clinical practice
- ◆ Value and incorporate the technological improvements necessary for the correct development of their professional activity
- ◆ Demonstrate understanding of the general structure of optometry and its connection with other specific and complementary disciplines
- ◆ Demonstrate the ability to participate effectively in unidisciplinary and multidisciplinary work groups in projects related to optometry

03

# Course Management

For our course to be of the highest quality, we are proud to work with a teaching staff of the highest level, chosen for their proven experience. Professionals from different areas and fields of expertise that make up a complete, multidisciplinary team. A unique opportunity to learn from the best.





“

*An impressive teaching staff, made up of professionals from different areas of expertise will be your teachers during the program: a unique opportunity not to be missed”*

## Management



### Mr. Medina Andana, Francisco Javier

- ♦ Nurse in charge of operating rooms
- ♦ University Diploma in Nursing, University School Virgen del Rocio
- ♦ University Diploma in Nursing, University of Seville
- ♦ Member of the Spanish Society of Ophthalmic Nursing

## Professors

### Mr. Lopez Muñoz, Alfredo

- ♦ Responsible for the Refractive Unit at Virgen de Luján Clinic
- ♦ Degree in Optics and Optometry from the European University of Madrid
- ♦ Official Master's Degree in Clinical Optometry and Research at Camilo José Cela University, Madrid
- ♦ Diploma in Optics from the Complutense University of Madrid
- ♦ PhD from the University of Seville
- ♦ Associate Professor. Dept. of Condensed Matter Physics - Degree in Optics and Optometry at the University of Seville

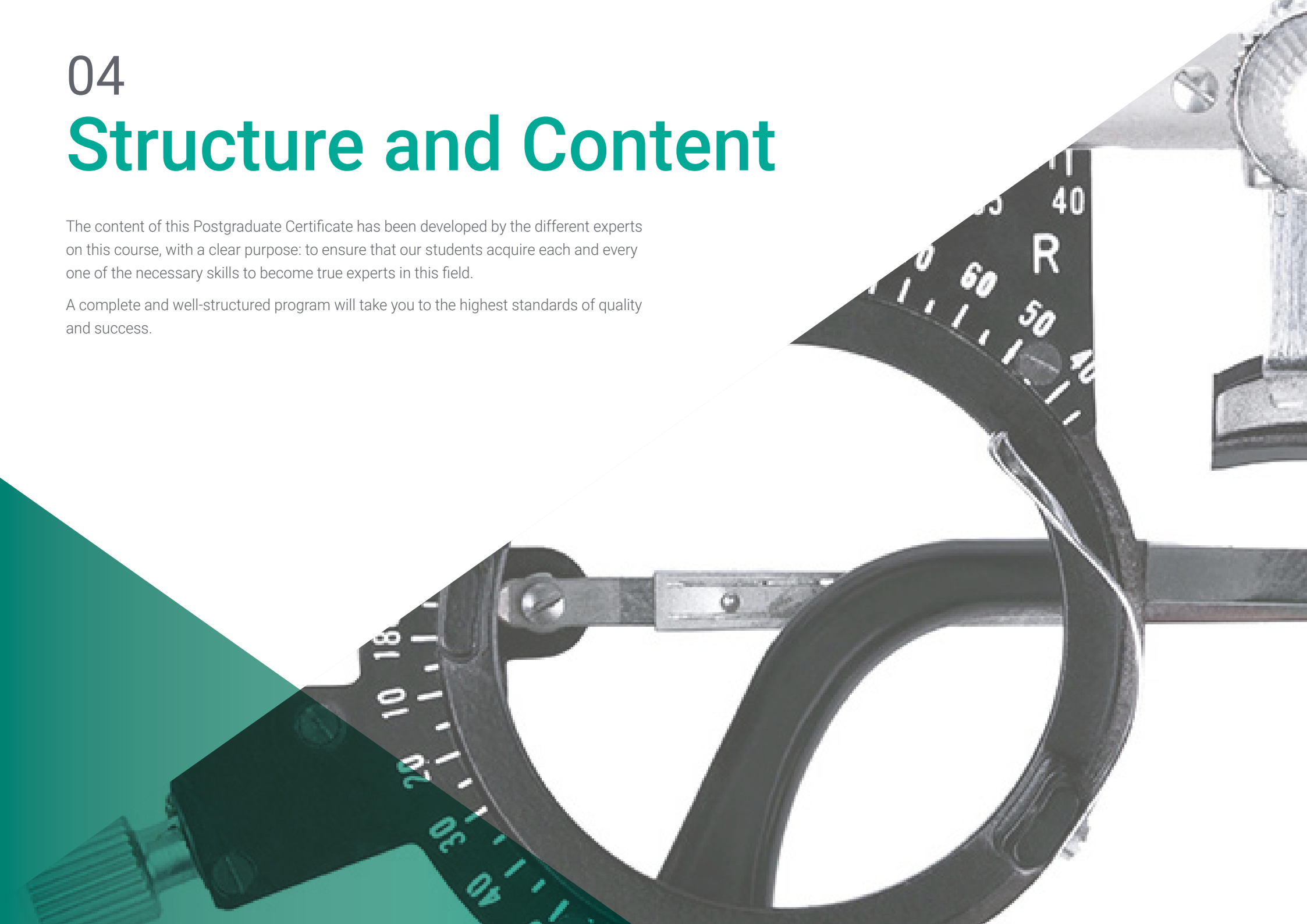


04

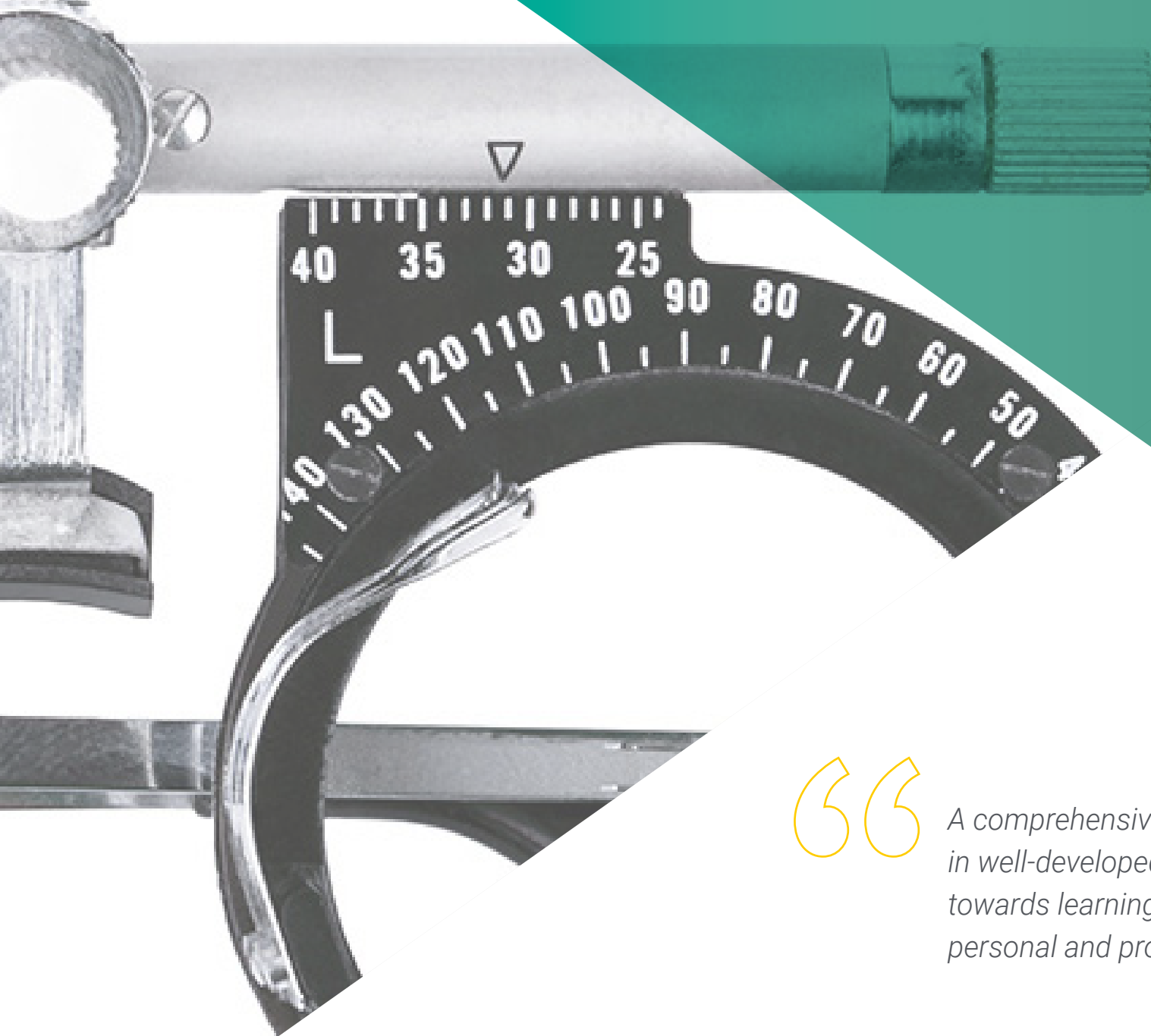
# Structure and Content

The content of this Postgraduate Certificate has been developed by the different experts on this course, with a clear purpose: to ensure that our students acquire each and every one of the necessary skills to become true experts in this field.

A complete and well-structured program will take you to the highest standards of quality and success.







“

*A comprehensive teaching program, structured in well-developed teaching units, oriented towards learning that is compatible with your personal and professional life”*

## Module 1. Principles of Applied Optics

- 1.1. Refractive Status of the Human Eye
  - 1.1.1. Normal Eyes Description
  - 1.1.2. Refractive Defects or Ametropias
- 1.2. Myopia
  - 1.2.1. Description
  - 1.2.2. Types of Myopia
  - 1.2.3. Causes and Symptoms
  - 1.2.4. Correction of Myopia
- 1.3. Hyperopia
  - 1.3.1. Description
  - 1.3.2. Types of Hyperopia
  - 1.3.3. Causes and Symptoms
  - 1.3.4. Correction of Hyperopia
- 1.4. Astigmatism
  - 1.4.1. Description
  - 1.4.2. Types of Astigmatism
  - 1.4.3. Causes and Symptoms
  - 1.4.4. Correction of Astigmatism
- 1.5. Anisometropia
  - 1.5.1. Concept
  - 1.5.2. Classification
  - 1.5.3. Treatment
  - 1.5.4. Aniseikonia
- 1.6. Presbyopia and Accommodation
  - 1.6.1. Concept
  - 1.6.2. Causes and Symptoms
  - 1.6.3. Anatomy of the Accommodative System
  - 1.6.4. Mechanism of Accommodation





- 1.7. Binocular Vision
  - 1.7.1. Concept
  - 1.7.2. Stages of Development
  - 1.7.3. Determination of Stereoscopic Visual Acuity
    - 1.7.3.1. Types of Coincidence
    - 1.7.3.2. Lang Test
    - 1.7.3.3. Titmus Test
    - 1.7.3.4. TNO Test
    - 1.7.3.5. Frisby Test
  - 1.7.4. Amblyopia
    - 1.7.4.1. Concept
    - 1.7.4.2. Classification of Amblyopia
  - 1.7.5. Strabismus
    - 1.7.5.1. Concept
    - 1.7.5.2. Classification
    - 1.7.5.3. Motor Adaptation to Strabismus
- 1.8. Chromatic Vision
  - 1.8.1. Concept
  - 1.8.2. Types of Anomalies
  - 1.8.3. Anomaly Detection Systems
- 1.9. Measurement of Ocular Refraction
  - 1.9.1. Concept
  - 1.9.2. Types of Measurement
    - 1.9.2.1. Objective Refraction
    - 1.9.2.2. Retinoscopy
    - 1.9.2.3. Autorefractometry
    - 1.9.2.4. Keratometry
- 1.10. Types of Ophthalmic Lenses
  - 1.10.1. Optical Lens Concept
  - 1.10.2. Types of Optical Lenses
    - 1.10.2.1. Spherical Lenses
    - 1.10.2.2. Astigmatic Lenses
    - 1.10.2.3. Prismatic Lenses
    - 1.10.2.4. Multifocal Lenses

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.





“

*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 Nursing School we use the Case Method

In a given situation, what should a professional do? 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. Nurses learn better, faster, and more sustainably over time.

*With TECH, nurses can experience a learning methodology 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, in an attempt to recreate the real conditions in professional nursing practice.

“

*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. Nurses who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process has a clear focus on practical skills that allow the nursing professional to better integrate knowledge acquisition into the hospital setting or primary care.
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 case studies with a 100% online learning system based on repetition combining a minimum of 8 different elements in each lesson, which is a real revolution compared to the simple study and analysis of cases.



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



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

With this methodology we have trained more than 175,000 nurses with unprecedented success in all specialities regardless of practical workload. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning will allow you to learn with less effort and better performance, involving you more in your 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 really specific and precise.

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



### Nursing Techniques and Procedures on Video

We introduce you to the latest techniques, to the latest educational advances, 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 them as many times as you want.



### Interactive Summaries

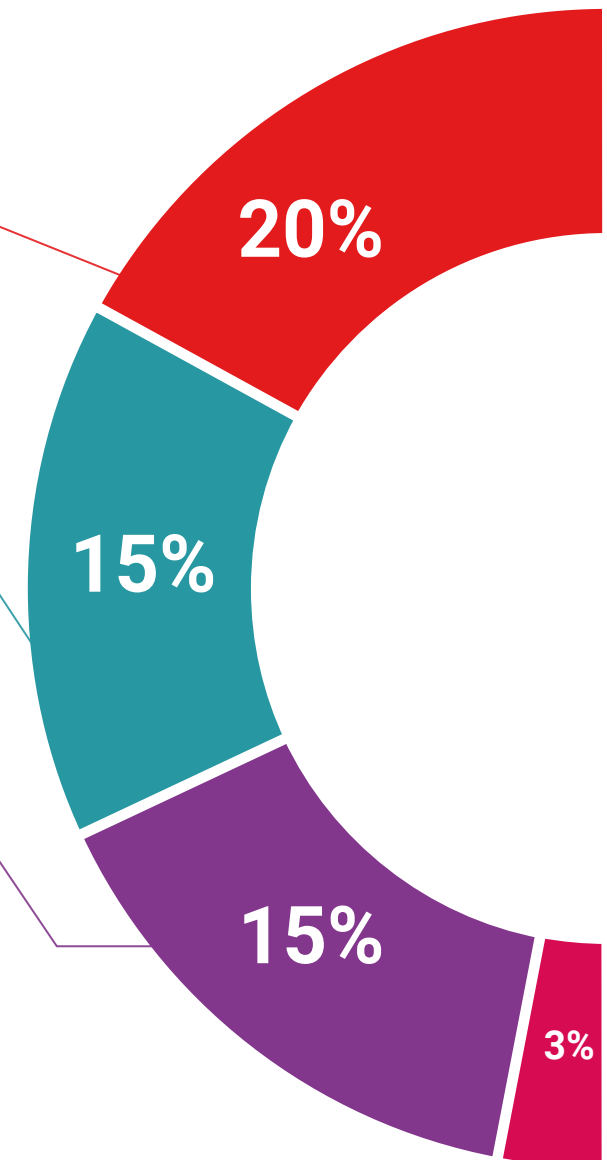
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This 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 suggesting that observing third-party experts can be useful.

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 Principles of Applied Optics for Nursing guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



“

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

This private qualification will allow you to obtain a **Postgraduate Certificate in Principles of Applied Optics for Nursing** 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.

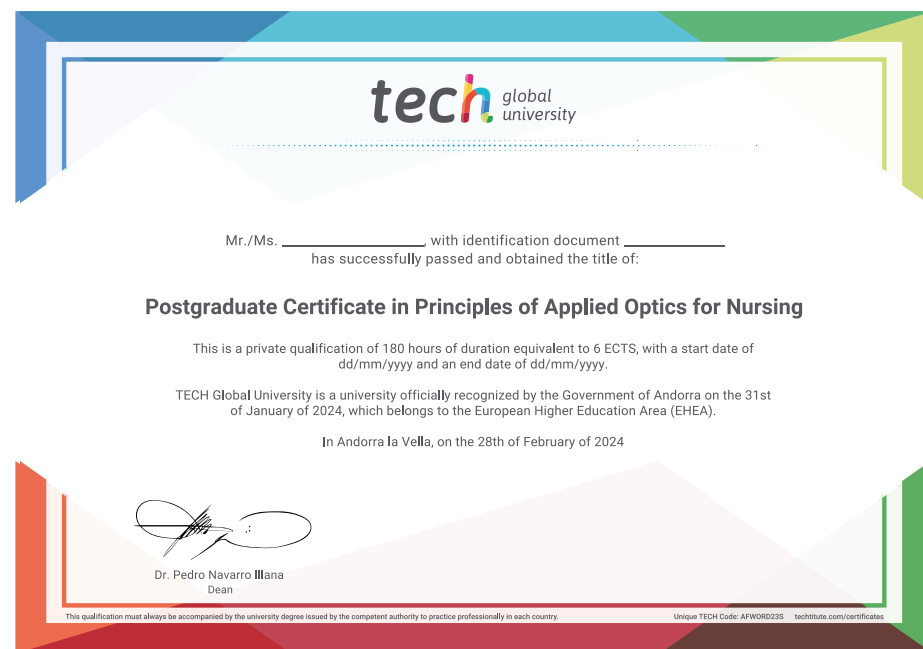
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Principles of Applied Optics for Nursing**

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  
personalized service innovation  
knowledge present  
development language  
classroom



**Postgraduate Certificate**  
Principles of Applied  
Optics for Nursing

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

# Postgraduate Certificate

## Principles of Applied Optics for Nursing

