



# Course guide

## 370049 - CIRREFR - Refractive Surgery

Last modified: 26/06/2024

**Unit in charge:** Terrassa School of Optics and Optometry  
**Teaching unit:** 731 - OO - Department of Optics and Optometry.

**Degree:** BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2020). (Optional subject).

**Academic year:** 2024    **ECTS Credits:** 3.0    **Languages:**

### LECTURER

**Coordinating lecturer:**

**Others:**

### TEACHING METHODOLOGY

### LEARNING OBJECTIVES OF THE SUBJECT

### STUDY LOAD

Type	Hours	Percentage
Self study	45,0	60.00
Hours medium group	22,5	30.00
Hours small group	7,5	10.00

**Total learning time:** 75 h

### CONTENTS

#### 1. Options for the correction of refractive error: refractive surgery.

**Description:**

Refractive error Emmetropization and refractive changes with age. Refractive error compensation and correction options. Introduction to refractive surgery.

**Full-or-part-time:** 9h

Practical classes: 3h

Self study : 6h



## 2. History of refractive surgery.

### Description:

Changes in corneal curvature due to refractive error compensation. Keratomileusis. Radial keratotomy. PRK. LASIK

**Full-or-part-time:** 11h

Practical classes: 3h

Laboratory classes: 2h

Self study : 6h

## 3. Types of refractive surgeries. Description, advantages and disadvantages.

### Description:

Corneals. Incisional: Surface (PRK and LASEK); LASIK and FemtLASIK; SMILE; Corneal rings. Based on lenses: Phakic intraocular lenses; Aphakic intraocular lenses. Special treatments for presbyopia.

**Full-or-part-time:** 25h

Practical classes: 8h

Laboratory classes: 2h

Self study : 15h

## 4. Clinical examination.

### Description:

Pre-operative: Diagnostic tests; Patient selection; Selection of type of surgery: technique, treatment, suitable ablation profile.

Post-operative and follow-up: Diagnostic tests; Complications of refractive surgery. Postoperative clinical decisions: retouching, biopsies and cataract surgery post-refractive surgery.

**Full-or-part-time:** 30h

Practical classes: 8h 30m

Laboratory classes: 3h 30m

Self study : 18h

## ACTIVITIES

### Laboratory practice

#### Description:

Pre- and post-operative clinical examination. Tests may include: Preoperative analysis of refractive status, biometry, topography, pachymetry, pupillometry and aberrometry. Post-operative clinical examination, complications and post-operative clinical decisions: touch-up, bioptics and cataract surgery post-refractive surgery.

**Full-or-part-time:** 4h

Laboratory classes: 4h

### Group work

#### Description:

Work in small groups or in pairs. Preparation and presentation of a paper on a topic of the subject.

**Full-or-part-time:** 3h 30m

Laboratory classes: 3h 30m



## GRADING SYSTEM

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## BIBLIOGRAPHY

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### Basic:

- Azar, D. T. Cirugía refractiva. 2020. Elsevier, ISBN 9788491137269.
- Rapuano, C. J. . Cirugía refractiva. . 2012. Elsevier, ISBN 9788480863629.
- Montero, MG. Cirugía Refractiva. Protocolo de Exploración de Visión Binocular Y Acomodación. 2021. Elsevier, ISBN 9788491138327.