

## 26810 - Visual Optics II

### Syllabus Information

**Academic Year:** 2022/23

**Subject:** 26810 - Visual Optics II

**Faculty / School:** 100 - Facultad de Ciencias

**Degree:** 297 - Degree in Optics and Optometry

**ECTS:** 6.0

**Year:** 2

**Semester:** First semester

**Subject Type:** Compulsory

**Module:**

### 1. General information

### 2. Learning goals

### 3. Assessment (1st and 2nd call)

### 4. Methodology, learning tasks, syllabus and resources

#### 4.1. Methodological overview

The general methodology of the subject is determined by the organization of matter within the optometry degree curriculum. Learning this matter is structured in the subjects of Optometry I and II and the Laboratory of Optometry. The first two focuses on the theoretical and conceptual aspects of the subject and the latter is entirely oriented to learning practical aspects.

#### 4.2. Learning tasks

Three types of training activities were designed and proposed for the students:

**Training activity I:** Presentation and acquisition of basic knowledge of the subject matter.

The methodology is based primarily on lectures addressed to the whole group of students. It is complemented with tutorial care (individualized or in small groups). (3.5 ECTS).

**Training activity II:** Analysis of practical cases.

The methodology is based on classes with the widest possible interaction between teacher and students, promoted from the proposal and common discussion of practical cases to apply the concepts covered in the previous activity (1 ECTS).

**Training activity III :** Acquisition of practical knowledge and skills in visual perception and binocular vision (1.5 ECTS).

The methodology is based on laboratory practices and preparation of scientific technical reports in small groups.

#### 4.3. Syllabus

##### Theory:

The eye and the light: light propagation and detection through the ocular media.

Spatial vision: Optical quality of the eye.

Darkness adaptation and luminance thresholds.

Temporal aspects of vision.

Color vision. Basics.

Ocular motility and binocular convergence.

Binocular vision and stereopsis.

#### **Laboratory:**

Session 1: Photometry. Measurement of luminance threshold of the eye.

Session 2: Measurement of the optical and visual quality of the eye.

Session 3: Binocular vision and stereopsis.

Session 4: Scientific seminar.

#### **4.4. Course planning and calendar**

Official calendar will be posted at the website of the Sciences Faculty: <http://ciencias.unizar.es/>.

#### **4.5. Bibliography and recommended resources**

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=26810>