

**COURSE DATA****Data Subject**

<b>Code</b>	34298
<b>Name</b>	Optometry practicum I
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2018 - 2019

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. Period</b> <b>year</b>
1207 - Degree in Optics and Optometry	Faculty of Physics	2 Second term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1207 - Degree in Optics and Optometry	12 - Optometry	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
CERVIÑO EXPOSITO, ALEJANDRO	280 - Optics and Optometry and Vision Sciences

**SUMMARY**

The Optometry Practice I module consists of the application of the theoretical knowledge on the principles that underlie the different clinical techniques for the determination of refractive error addressed in the previous semester in the Optometry I module.

It is a subject of great importance that allows to obtain skills that will be essential in all Optometry modules to be attended in the following years, as well as in clinical practice.

**PREVIOUS KNOWLEDGE****Relationship to other subjects of the same degree**

There are no specified enrollment restrictions with other subjects of the curriculum.



### Other requirements

It is highly recommended to have attended the Optometry I module before enrolling in the subject Optometry I Practice module, given the necessity of having acquired knowledge in the refractive aspects of Optometry, the characteristics of the ametropic eye, and the basics of the clinical examination of the ametropic eye, in order to understand the fundamentals of the different techniques that are dealt with in the course.

It is also highly recommended a base-knowledge in Physiological Optics

## OUTCOMES

### 1207 - Degree in Optics and Optometry

- To have and to understand the fundamentals of Optometry for its correct clinical and healthcare application.
- Knowing how to apply the knowledge acquired to professional activity, knowing how to solve problems and develop and defend arguments.
- Being able to gather and interpret relevant data to make judgments.
- Being able to transmit information, ideas, problems and solutions to both a specialized and non-specialized audience.
- Development of learning skills necessary to undertake further studies with a high degree of autonomy.
- To develop communication skills, data recording and medical record making.
- To acquire the skills for the interpretation and clinical judgment of the results of visual tests, to establish the most appropriate diagnosis and treatment.
- To acquire skills in the instrumental tests for the evaluation of visual functions and eye health. To know how to take a complete anamnesis.
- Ability to measure, interpret and treat refractive and binocular errors.
- Ability to prescribe, control and monitor optical corrections.
- To know, to apply and to interpret instrumental tests related to visual health problems.
- To know the differences in treatment and refractive diagnosis of the pediatric patient.
- To acquire the ability to examine, to diagnose and to treat visual abnormalities with special emphasis on differential diagnosis.
- To acquire the clinical skills necessary for the examination and treatment of patients.
- To know the nature and organization of the different types of clinical care.
- To know the different protocols applied to patients.
- To know and to apply visual screening techniques applied to different populations.



- To know and to apply new technologies in the field of optometric clinic.
- Ability to act as a primary visual care agent.
- To identify and to analyze environmental and occupational risk factors that can cause visual problems.

## LEARNING OUTCOMES

Learning outcomes can be summarized as to when the student is capable of:

- Understanding the foundations of Optometry for their proper care and clinical application.
- Compiling and interpreting relevant data for making judgements.
- Developing learning skills necessary for undertaking studies with a high degree of autonomy. Developing communication, data registration and case history elaboration skills.
- Interpretation and clinical judgement of Visual tests outcomes, to establish the diagnosis and the most appropriate treatment.
- Acquiring the clinical skills necessary for refractive examination
- Knowing different protocols applied to patients with refractive errors.
- Identifying and analyzing occupational and environmental risk factors that can cause visual problems

## DESCRIPTION OF CONTENTS

### 1. Refractive prescreening.

Description and management of the cabinet. Anamnesis. Preliminary testing and evaluation of the VA in terms of the ametropia.

### 2. OBJECTIVES Optometrist PROCEDURES

Introduction to the retinoscope. Neutralization of spherical ametropia. Recognition and neutralization of astigmatism. Retinoscopy in real eye. Automatic objective refraction. Management of Javal and Hemholtz keratometers.

### 3. Subjective optometric procedures

Monocular refraction, bichromatic test, test schedule, Jackson cross cylinders, ocular dominance, binocular balance biocular and refraction, refraction in near vision: determination of adding nearby.



## WORKLOAD

ACTIVITY	Hours	% To be attended
Other activities	60,00	100
<b>TOTAL</b>	<b>60,00</b>	

## TEACHING METHODOLOGY

Practical classes: classes of presential modality in which theoretical concepts will be developed in a practical way of application in the Optometry cabinet. These classes, small groups of 8 students maximum, will be first carried out on simulated patients and then, later in the subject sequence, on real patients

Student work

- Study of theoretical foundations
- Development on work and issues raised in class
- Individual tutorials in the cabinet
- Individual tutorials

## EVALUATION

The module assessments will be made applying the following criteria (over 100 points):

- Written exam (30% of the final grade), consists of a single answer multiple choice test relative to theoretical and practical issues.
- The overcoming of this test (get a rating equal to or greater than 5 points out of 10) allows access to the test practica
- Practical exam (70% of the final grade), consisting of three assessments in which the student must demonstrate his/her ability to perform various clinical procedures dealt with in the module.
  - Keratometry assessment (5% of the final grade)- The student shall determine and record correctly the keratometry values of a patient within a certain period of time
  - Retinoscopy assessment (25% of the final grade)- The student shall determine and record accurately the refractive error of an artificial eye, using a retinoscope, within a certain amount of time
  - Subjective assessment (40% of the final grade)- The student shall demonstrate knowledge of principles and application, as well as an ability to carry it out, of three techniques at random from among all the grouped together within the subjective refractive examination, addressed throughout the course of the module.



In order to pass this part of the assessment, a score equal or greater than 5 on each of the different parts (b.1, b.2 y b.3) will be needed. That is, 2.5% from part b.1., 12.5% from part b.2. and 20% from part b.3.

## REFERENCES

### Basic

- Referencia b1: Montes-Micó R. Optometría: Principios Básicos y Aplicación Clínica. Elsevier. 2011. ISBN: 978-84-8086-822-8
- Referencia b2: Montés-Micó R. Optometría: Aspectos Avanzados y Consideraciones Especiales. Elsevier. 2011. ISBN: 978-84-8086-890-7
- Referencia b3: Furlan W., García J., Muñoz L.: Fundamentos de Optometría. Refracción ocular. (2009)
- Referencia b4: Rosenfield M, Logan N. Optometry. Science, Techniques and Clinical Management. 2nd Edition. Butterworth-Heinemann-Elsevier. 2009
- Referencia b5: Elliott DB. Clinical procedures in Primary Eye Care. Butterworth-Heinemann. 2007
- Referencia b6: Grosvenor T. Primary Care Optometry. Butterworth-Heinemann. 5th edition. 2006