COURSE DATA

DATA SUBJECT

Code: 34298
Name: Optometry practicum I
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1207 - Degree in Optics and Optometry	Facultat de Física	2	Second quarter, Sin determinar

SUBJECT-MATTER

Degree	Subject-matter	Character
1207 - Degree in Optics and Optometry	Optometry	COMPULSORY

COORDINATION

CERVIÑO EXPOSITO ALEJANDRO

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 adquired 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

COMPETENCES / LEARNING OUTCOMES

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Ability to act as a primary visual care agent.

Ability to measure, interpret and treat refractive and binocular errors.

Ability to prescribe, control and monitor optical corrections.

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.

Knowing how to apply the knowledge acquired to professional activity, knowing how to solve problems and develop and defend arguments.

To acquire skills in the instrumental tests for the evaluation of visual functions and eye health. To know how to take a complete anamnesis.

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 acquire the skills for the interpretation and clinical judgment of the results of visual tests, to establish the most appropriate diagnosis and treatment.

To develop communication skills, data recording and medical record making.

To have and to understand the fundamentals of Optometry for its correct clinical and healthcare application.

To identify and to analyze environmental and occupational risk factors that can cause visual problems.

To know, to apply and to interpret instrumental tests related to visual health problems.

To know and to apply new technologies in the field of optometric clinic.

To know and to apply visual screening techniques applied to different populations.

To know the differences in treatment and refractive diagnosis of the pediatric patient.

To know the different protocols applied to patients.

To know the nature and organization of the different types of clinical care.

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. Management of Javal and Hemhotlz 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

PRESENCIAL ACTIVITIES

Activity	Hours
Other activities	60,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	60,00
Preparation of lessons	10,00
Preparation for assessment activities	20,00
Resolution of case studies	0,00
Total hours	**90,00**

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

In general, attendance to the practical sessions is absolutely mandatory. The unexcused absence or inappropriate behavior may result in a penalty in the overall rating of the course at the discretion of the tutors. The final mark to pass this subject has to be equal to or greater than 5 point on a 10 points scale.

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

a) Objective refraction (50% of the final grade), consisting of two assessments in which the student must demonstrate his/her ability to perform various clinical procedures dealt with in the module.

a.1) Keratometry assessment (10% of the final grade). The student shall determine and record correctly the keratometry values of a patient within a certain period of time

a.2) Retinoscopy assessment (40% 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

b) Subjective refraction (40% of the final grade). The student shall display knowledge of basics and application, as well as being able to carry out, of the different procedures composing this part of the refractive assessment on a patient, real or simulated.

It is necessary to obtain more than half of the maximum score for each of parts a) and b) to pass the course.

c) Continuous assessment (10% of the final grade). During the practical sessions, attendance at the practical sessions and completion of the activities proposed in each will be assessed.

On the second sitting, only the part not passed in the first sitting (a and/or b) will be examined, maintaining the grade for the passed part and the continuous assessment (c).

REFERENCES

Basic

- Montes-Micó R. Optometría: Principios Básicos y Aplicación Clínica. Elsevier. 2011. ISBN: 978-84-8086-822-8
- Montés-Micó R. Optometría: Aspectos Avanzados y Consideraciones Especiales. Elsevier. 2011. ISBN: 978-84-8086-890-7
- Furlan W., García J., Muñoz L.: Fundamentos de Optometría. Refracción ocular. (2009)

Complementary

- Rosenfield M, Logan N. Optometry. Science, Techniques and Clinical Management. 2nd Edition. Butterworth-Heinemann-Elsevier. 2009
- Elliott DB. Clinical procedures in Primary Eye Care. Butterworth-Heinemann. 2007
- Grosvenor T. Primary Care Optometry. Butterworth-Heinemann. 5th edition. 2006