COURSE DATA

DATA SUBJECT

Code: 34301
Name: Optometry III
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1207 - Degree in Optics and Optometry	Facultat de Física	3	First quarter

SUBJECT-MATTER

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

COORDINATION

MONTES MICO ROBERT

SUMMARY

The general objective of this course is to provide students with the broadest possible overview of the basic ocular examination methods required for the assessment of ocular health. As outlined in the syllabus, these methods are aimed at evaluating aspects such as visual field testing and intraocular pressure control. A comprehensive evaluation of the optometric examination will be carried out, as well as the clinical protocol to be followed when examining a patient.

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 advisable to have taken and passed courses related to Optometry, such as Optometry I and Optometry II. It is also recommended to have successfully completed basic training modules such as Physics, Geometrical Optics, Anatomy and Physiological Optics, as well as courses from the

Optics module, such as Optical and Optometric Instruments and Ophthalmic 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 apply the clinical procedures associated with the adaptation of contact lenses to different refractive and ocular dysfunctions.

To design, to apply and to control visual therapy programs. To know the current techniques of eye surgery andto have the ability to perform the eye tests included in the pre and post-operative exam.

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 applicable legislation in professional practice, with special attention to matters of gender equality between men and women, human rights, solidarity, protection of the environment and promotion of the culture of peace.

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

To know the different protocols applied to patients.

To know the fundamentals and techniques of health education and the main generic health programs to which the optometrist must contribute from their scope of action.

To know the legal and psychosocial aspects of the profession.

To know the modifications linked to aging in perceptual processes.

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

To know the principles and to have the skills to measure, interpret, and treat accommodative and binocular vision abnormalities.

To know the sensory and oculomotor mechanisms of binocular vision.

DESCRIPTION OF CONTENTS

Block 1 - Basic ocular examination methods and clinical protocol
This block presents the importance of primary visual health and the optometrist's role in the initial assessment. Preliminary tests and key instruments for examining the anterior segment of the eye, such as the slit lamp and corneal topography, are addressed. Advanced imaging techniques such as confocal and specular microscopy are also introduced.

- Topic 1: Introduction. Primary visual health and preliminary tests
- Topic 2: Anterior segment examination with slit-lamp biomicroscope
- Topic 3: Corneal topography
- Topic 4: Confocal and specular microscopy
- Clinical cases: practical application through a full optometric examination

Block 2 - Ocular health assessment
This block focuses on techniques for observing the fundus (direct and indirect) and the basic interpretation of images obtained using optical coherence tomography (OCT). The most relevant

clinical findings in the optometric context are analysed.

- Topic 5: Direct and indirect ophthalmoscopy
- Topic 6: Optical coherence tomography
- Clinical cases: integration of tests in the optometric examination

Block 3 - Visual field assessment, intraocular pressure and tear film evaluation
Fundamental techniques are presented for assessing the visual field and measuring intraocular pressure, as well as for the functional evaluation of the tear film. These procedures are essential for early detection of conditions such as glaucoma or ocular surface disorders.

- Topic 7: Intraocular pressure and visual field testing
- Topic 8: Tear film evaluation
- Clinical cases: practical approach focused on optometric diagnosis

Block 4 - Practical sessions
Three practical sessions focused on the use and interpretation of the main clinical examination tools:

- Practical 1: Anterior segment evaluation
- Practical 2: Posterior segment evaluation
- Practical 3: Visual field evaluation

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	30,00
Other activities	15,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	5,50
Independent study and work	0,00
Preparation of lessons	22,00
Preparation for assessment activities	40,00
Resolution of case studies	0,00
Total hours	**67,50**

TEACHING METHODOLOGY

Lectures:
Face-to-face sessions in which the theoretical content of the subject will be delivered. The use of audiovisual methods will be reinforced to illustrate the theoretical concepts and examples more clearly.

Practical sessions:
Face-to-face sessions where the theoretical concepts will be developed through practical application in the optometry clinic.

EVALUATION

The final grade out of 10 points is composed of two parts:

1. Multiple-choice exam (7 points)
2. Practical component (3 points)

To pass the course, students must achieve at least half of the points in each part in both the first and second exam sessions:

- Multiple-choice exam almost 3.5/7
- Practical component almost 1.5/3

First Exam Session
The final grade in the first session is calculated by weighting the two components as follows:

- Theoretical component (70%). To pass this part, students must score at least 5 out of 10 on the multiple-choice theoretical exam.
- Practical component (30%). Involves submission of a report on the practical sessions conducted in the labs, in which the student details all clinical activities performed. A minimum score of 5 out of 10 is required.

Second Exam Session

- If a student does not pass the course in the first session, the final grade in the second session is calculated by weighting the same two components as follows:
- The same point weighting applies (7 + 3).
- If the student failed the theoretical component in the first session but passed the practical component, they must retake the theoretical component via a multiple¿choice exam, retaining their practical component score from the first session.
- If the student failed the practical component in the first session but passed the theoretical component, they must retake the practical component by submitting the practical session report, retaining their theoretical score from the first session.
- If the student failed both the theoretical and practical components in the first session, they must retake the theoretical component via a multiple¿choice exam and the practical component by submitting the practical session report.

REFERENCES

Basic references:

- *Atlas de lámpara de hendidura y lentes de contacto. Biomicroscopía ocular*. González-Cavada, J. Editorial ICM, 2015. ISBN 978-84-939656-8-6
- *Manual de optometría*. Martín Herrán, R.; Vecilla Antolínez, G. Editorial Médica Panamericana, 2018. ISBN 978-84-9110-248-9
- *Kanski. Manual de oftalmología clínica*. Salmon, J. F. 4.ª ed. Elsevier, 2023. ISBN 978-84-1382-463-5

Complementary references:

- *Borish's Clinical Refraction*. Benjamin, W. J. 2.ª ed. Butterworth-Heinemann, 2006. ISBN 978-0-7506-7524-6