COURSE DATA

DATA SUBJECT

Code: 34301
Name: Optometry III
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2026-27

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 taken and passed courses from the basic training module, 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

1207 - Degree in Optics and Optometry

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 care and the role of the optometrist in the initial assessment. Preliminary tests and the main instruments used to examine the anterior segment of the eye, such as the slit-lamp biomicroscope and corneal topography, are addressed. Advanced imaging techniques, such as confocal and specular microscopy, are also introduced.

• Topic 1: Introduction. Primary visual care 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 complete optometric examination

Block 2 - Ocular health assessment

This block focuses on direct and indirect fundus examination techniques and on 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

This block presents the fundamental techniques used to assess the visual field and measure intraocular pressure, as well as the functional evaluation of the tear film. These procedures are essential for the early detection of conditions such as glaucoma and 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 session 1: Anterior segment evaluation
• Practical session 2: Posterior segment evaluation
• Practical session 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 contents of the subject will be taught. The use of audiovisual methodologies will be reinforced in order to illustrate the theoretical contents and clinical cases more clearly.

Practical sessions:

Face-to-face sessions in which theoretical concepts will be applied in the optometry clinic through the use of clinical instruments, ocular examination procedures and the basic interpretation of the results obtained.

EVALUATION

The final grade, out of 10 points, consists of two components:

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

To pass the course, students must obtain at least half of the score in each component, both in the first and in the second examination period:

• Multiple-choice exam: at least 3.5/7.
• Practical component: at least 1.5/3.

Attendance at the practical sessions is compulsory and non-recoverable, since these sessions involve face-to-face clinical activities in the optometry clinic. The assessment of the practical component can be recovered in the second examination period, under the conditions indicated below.

First examination period:

The final grade in the first examination period is obtained by weighting the following components:

• Theoretical component (70%). This will consist of a theoretical multiple-choice exam. To pass this component, students must obtain at least 5 points out of 10, equivalent to 3.5 points out of the 7 points assigned to this component.

• Practical component (30%). This will consist of the submission of a report on the practical sessions carried out in the clinics, in which students will describe in detail the clinical activity performed during the practical sessions. To pass this component, students must obtain at least 5 points out of 10, equivalent to 1.5 points out of the 3 points assigned to this component.

Second examination period:

In the second examination period, the same weighting of the final grade will be maintained: 70% for the theoretical component and 30% for the practical component.

• If students have passed the practical component in the first examination period but have not passed the theoretical component, they will retain the grade obtained in the practical component and will only have to retake the theoretical component by means of a multiple-choice exam.

• If students have passed the theoretical component in the first examination period but have not passed the practical component, they will retain the grade obtained in the theoretical component and will have to recover the practical component. If they attended the compulsory practical sessions, recovery will consist of submitting or correcting the practical session report. If they did not attend the compulsory practical sessions, recovery of the practical component will consist of a practical exam, since they will not have the clinical material required to prepare the report.

• If students have not passed either the theoretical component or the practical component in the first examination period, they will have to retake the theoretical component by means of a multiple-choice exam and recover the practical component by submitting or correcting the practical session report, provided that they attended the compulsory practical sessions. If they did not attend the compulsory practical sessions, recovery of the practical component will consist of a practical exam.

Attendance at the compulsory practical sessions is not retained as a numerical grade, but as a requirement for the practical component to be assessed by means of a 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. 2ª ed. Editorial Médica Panamericana, 2018. ISBN 978-84-9110-248-9

• Kanski. Oftalmología Clínica. Un enfoque sistemático. Salmon, J.F. 10ª ed. Editorial Elsevier, 2025. ISBN 978-84-1382-880-0

Complementary references:

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

• Kanski. Manual de oftalmología clínica. Salmon, J. F. 4ª ed. Editorial Elsevier, 2023. ISBN 978-84-1382-463-5

• Manual de Oftalmología del Wills Eye Hospital: Diagnóstico y tratamiento de la enfermedad ocular en la consulta y urgencias. Gervasio, K.A.; Peck, T.P. 8ª ed. Lippincott Williams & Wilkins, 2022. ISBN 978-84-1889-205-9