



Universitat de Lleida

## DEGREE CURRICULUM **OPHTHALMOLOGY**

Coordination: HUERVA ESCANILLA, VALENTIN

Academic year 2023-24

## Subject's general information

Subject name	OPHTALMOLOGY			
Code	100575			
Semester	2D SEMESTER - DEGREE - JUN/SET			
Typology	Degree	Course	Character	Modality
	Bachelor's Degree in Medicine	4	COMPULSORY	Attendance-based
Course number of credits (ECTS)	3.5			
Type of activity, credits, and groups	Activity type	PRAULA		TEORIA
	Number of credits	1		2.5
	Number of groups	4		1
Coordination	HUERVA ESCANILLA, VALENTIN			
Department	MEDICINE AND SURGERY			
Important information on data processing	Consult <a href="#">this link</a> for more information.			
Language	Catalan and Spanish			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
HUERVA ESCANILLA, VALENTIN	valentin.huerva@udl.cat	3	Tuesday: 8-9am Ophthalmology outpatient consultations
VILALTELLA ORTIZ, MAGI	magi.vilaltella@udl.cat	3,5	

## Subject's extra information

It is recommended that students have knowledge of Anatomy, Histology, Physiology, Genetics, Medical Physics, especially Optical Physics, Biochemistry, Microbiology, Immunology, Pathological Anatomy and Pharmacology. In this subject, the most common eye diseases will be reviewed, as well as an introduction to both medical and surgical treatments of the different ophthalmological conditions. In addition, it is intended to teach ocular pharmacology to be able to treat pathological processes of the specialty if possible. It is the only subject of the Degree in Medicine where ocular pathologies and their different treatments are studied, so it is essential for the training of the doctor as it is a core subject.

## Learning objectives

At the end of the course, it is intended that students have the theoretical and practical knowledge necessary to: 1. Know in general and be able to make a differential diagnosis of the most frequent eye diseases, being able to treat them if possible, or refer them to an ophthalmology specialist, but in any case making a diagnosis as early as possible. 2. Know how to make an early diagnosis in emergency situations with serious commitment to the eyeball. 3. Know the complications or repercussions of systemic diseases on the eyeball. 4. Have the knowledge to interpret an ophthalmological report.

**THEORETICAL TEACHING OBJECTIVES** Ophthalmology is a medical-surgical specialty where the student must obtain theoretical knowledge to be able to guide an ophthalmological picture, as well as practical notions to be able to function in daily clinical practice and emergency situations. Most of this knowledge will be learned in master classes or theoretical seminars of the specialty. After completing the course, the student must know, diagnose and guide the management of the following entities: 1. Alterations of refraction: Myopia, hyperopia and astigmatism. 2. Diagnosis of amblyopia and strabismus. 3. Pathology of the conjunctiva. Red eye recognition. Diagnosis of conjunctivitis 4. Pathology of the cornea. Due to its severity, knowing how to diagnose keratitis 5. Pathology of the sclera 6. Pathology of the lens. Know the cataract clinic and its surgery. 7. Glaucoma. Diagnostic criteria and knowledge of exploratory tests 8. Pathology of the retina. Know the most frequent vascular pathology such as diabetic and hypertensive retinopathy and age-related macular degeneration, in addition to knowing how to diagnose or suspect retinal detachment due to its severity. 9. Know the most frequent palpebral pathology: ectropion, entropion, ptosis, tumors 10. Lacrimal duct pathology: Know how to diagnose dacryocystitis. 11. Pathology of the optic pathway. Know the direct and consensual reflexes. Optic neuropathies clinic. Papilloedema In addition, the following entities must be known: 1. Orbital pathology. 2. Eye injuries. 3. Most frequent ocular tumors. 4. Ocular motility disorders. 5. Ocular manifestations of systemic diseases. 6. Congenital anomalies. 7. Refractive surgery. Pachymetry, corneal topography and refractive surgery techniques 8. Corneal transplant, indications and types. 9. Ocular Pharmacology

**PRACTICAL TEACHING OBJECTIVES** 1. Brief clinical history oriented to the ophthalmic process that is being studied. 2. Know how to administer eye drops and ophthalmic ointments. 3. Know how to perform an eye wash, for example in case of caustication. 4. Know how to determine an emergency situation, caustication, vision loss..... 5. Know how to explore ocular and palpebral motility. Know how to establish oculomotor paralysis, etc. 6. Know

how to explore pupillary reflexes and visual acuity. 7. Know how to explore the anterior segment and adnexa (diagnose conjunctivitis, styes, dacryocystitis, keratitis...) 8. Know how to place an eye bandage 9. See highly relevant eye interventions. For example cataract surgery, cornea transplant, retinal detachment.

## Competences

A) transversal: 1. Knowing how to make an anamnesis, oriented to the different pathologies, interpreting their meaning. 2. Know how to interpret and assess the changes in the clinical parameters of the pathology at different ages. 3. Establish one's own limitations and the need to maintain and update professional competence, through the habit of permanent study. 4. Know how to establish the diagnosis, prognosis and treatment of diseases in conditions of clinical safety. 5. Establish clinical action based on the principles of ethics, bioethics and deontology. 6. Know, use and appropriately manage the sources of scientific information. 7. Possess the ability to understand and interpret scientific texts on ophthalmology in English.

B) Specific skills: 1. Know the main ocular diseases and syndromes 2. Diagnose and guide the management of the main ophthalmological pathologies. 3. Recognize and guide a picture of acute or chronic loss of visual acuity 4. Be able to explore the pathologies of the anterior segment of the eye and the ocular adnexa. 5. Recognize and orient a red eye condition 6. Be able to explore extrinsic and intrinsic ocular motility (pupillary reflexes). 7. Be able to explore the fundus by direct ophthalmoscopy. 8. Know the repercussions of diseases and systemic treatments on the eyeball. 9. Know how to interpret an ophthalmological report and some ophthalmological tests such as retinography, visual field and optical coherence tomography. 10. Know the symptoms and initial signs of serious ophthalmological diseases in order to refer to a specialist. 11. Know information about the pathology and treatments in ophthalmology and use it critically.

## Subject contents

BLOCK 1: MASTER CLASSES Master classes with the following agenda

UNIT 1: Anatomy, embryology and physiology of the visual system

UNIT 2: Clinical history and ophthalmological examination T

EMA 3: Red Eye: Generalities and Differential Diagnosis

UNIT 4: Pathology of the conjunctiva

UNIT 5: Pathology of the cornea and sclera T

EMA 6: Pathology of the Uvea

UNIT 7: Pathology of the eyelid and the lacrimal ducts

UNIT 8: Orbital Pathology

UNIT 9: Refractive Errors

UNIT 10: Pathology of the lens

UNIT 11: Retinal Pathology

UNIT 12: Strabismus and binocular vision

UNIT 13: Glaucoma

UNIT 14: Neuro-ophthalmology

UNIT 15: Ocular Traumatology

UNIT 16: Pediatric Pathology

UNIT 17: Ocular pharmacology

Some of the songs are made up of several classes.

BLOCK 2: SEMINARS (COMMON): Each seminar is 1 - 2 hours. The agenda will be previously exposed. Presentation of cases. Participatory and reverse classroom

BLOCK 3. CARE PRACTICES

## Methodology

BLOCK 1 AND 2 METHODOLOGY: - Classic theoretical master classes in Block 1, there may be flipped classrooms in some subjects - The flipped classroom system will be implemented, especially in block 2 - The topics to be developed by this method will be indicated on the Virtual Campus website - Part of the teaching material will be available to the student on the Virtual Campus. - Gamification will be implemented in the teaching of Ophthalmology.

Learning of the different explorations and equipment in Ophthalmology.

METHODOLOGY BLOCK PRACTICES Develop the practical teaching objectives mentioned above. Ophthalmology external consultations. You will be assigned a tutor during its duration. The duration will be one week. Operating room practices: assistance to at least one surgical session with different procedures. This block will be included in the subject Care Practices III

## Development plan

During the second semester and at a time that will be published, the theoretical topics will be presented through master classes.

Teaching will be implemented in flipped classroom mode as far as possible.

The seminars will be mandatory and their objective is to teach the most practical part of the subject.

PDFs of the theoretical as well as the practical themes will be uploaded to the Virtual Campus. In addition to links, videos and images for a better understanding and comprehension of the subject.

Through the virtual campus video conference, these topics can be taught if, for known reasons, they cannot be taught in person.

It will be possible to attend surgical sessions of the different processes in ophthalmic surgery

The student's attendance at outpatient ophthalmology consultations and attendance at ophthalmology surgical sessions are included in the rotation of the subject Care Practices III.

## Evaluation

The student will have the right to have two calls, one ordinary and one extraordinary. The evaluation criteria will be the same in both calls

Exam on the theoretical / practical knowledge acquired in master classes, seminars and practices and final grade: It will consist of 80 multiple choice questions with 5 answers, only one is true. Some questions (A minimum of 10) will deal with a clinical case and or surgical technique learned in practices or seminars. This will be the practical evaluation. The image of the case of the question will be exposed by means of power point. For each failed response, 0.25 points will be subtracted, that is, 4 random failed responses subtract 1 point. To pass the exam it

will be necessary to hit > 50% of all the tests. In other words, you have to have 40 points out of 80 after subtracting the negatives. Example: A student could have 40 correct questions, but has answered a minimum of 4 incorrectly, subtracting 1 point would be 39, then fail. HONOURS: The corresponding number of honors will be awarded according to current regulations by number of students, to those who obtain the highest scores.

The final grade will take into account the attendance at the different sessions and the active participation in the seminars, as well as the presentation of additional works if necessary.