1. OVERVIEW

Subject Area	OPHTHALMOLOGY
Degree	MEDICINE
School/Faculty	BIOMEDICAL AND HEALTH SCIENCES
Ac. Year	6º
ECTS	3 ECTS+ 3 ECTS CLINICAL PLACEMENTS
Type	COMPULSORY
Language(s)	SPANISH
Delivery Mode	ON CAMPUS
Semester	YEARLY

2. INTRODUCTION

This is a compulsory subject belonging to the Human Clinical Training module and is taught during the 6th year. This module is worth 101 ECTS + 82 (73 ECTS in tutored clinical placements and 9 ECTS in optional subjects). Human Clinical Training brings together all the knowledge, skills and attitudes students acquire throughout the degree programme.
The Ophthalmology subject consists of 3 theory-based ECTS and 3 ECTS in clinical placements. To take this course, students must have passed at least 150 ECTS in the first years of the degree programme.

The overall objectives of this subject are:
- Provide knowledge of aetiology, symptomatology, diagnostics, prognosis and prevention of eye diseases.
- Teach how to do a clinical history of the eyes, obtaining all relevant information from the patient.
- Establish the diagnosis, prognosis and treatment, applying the principles based on the most reliable information possible.
- Decide on and propose the suitable preventative measures in different clinical ophthalmological situations.

3. SKILLS AND LEARNING OUTCOMES

Basic Skills (CB, as per the Spanish acronym):

- CB2. Students can apply their knowledge to their work professionally and possess the necessary skills, usually demonstrated by forming and defending opinions, as well as resolving problems within their study area.
- CB3. Students have the ability to gather and interpret relevant information (usually within their study area) to form opinions which include reflecting on relevant social, scientific or ethical matters.
- CB4. Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences
- CB5. Students will develop the learning capacity required to undertake subsequent study with a high degree of autonomy.

General skills (CG, by the acronym in Spanish):

- CG1 Recognise the essential parts of being a medical professional, including ethical principles and legal responsibilities, together with how to provide a patient-centred service.
- CG2 Understand the importance of such principles to benefit patients, society and the profession, with particular attention paid to professional secrecy.
- CG3 Know how to apply the principle of social justice to professional practice and understand the ethical implications of health in a constantly changing world.
- CG4 Develop professional practice taking into account patient autonomy, beliefs and culture.
- CG5 Be aware of the need to maintain and update professional skills, paying special attention to continuous self-learning of emerging knowledge and to discover new products and techniques with the aim of improving quality.
- CG6 Carry out professional activity with regard to other health professionals, acquiring teamwork skills.
- CG9 Understand and recognise the effects, mechanisms and manifestations of a disease on the structure and functioning of the human body.
- CG10 Understand and recognise the causal agents and risk factors which determine health conditions and the development of a disease.
- CG12 Understand the principles of action, indications and effectiveness of therapeutic interventions, based on the available scientific evidence.
- CG13 Obtain and elaborate a clinical history report with all relevant information.
- CG14 Perform a physical examination and mental health assessment.
- CG15 Have the ability to carry out an initial diagnosis and establish a well-founded approach to making a diagnosis.
- CG17 Establish the diagnosis, prognosis and treatment, applying the principles based on the most reliable information possible.
- CG18 Indicate the most suitable therapy for the most common acute and chronic processes, including patients in the terminal phase.
- CG19 Raise and propose the suitable preventative measures required for each clinical situation.
- CG20 Acquire sufficient clinical experience under supervision in hospital institutions, health centres or other healthcare institutions. This also involves basic knowledge of a patient-centred clinical approach and suitable use of tests, medicinal products and other healthcare system resources.
- CG21 Listen attentively, obtain and synthesise information regarding the problems troubling the patient and understand this information.
- CG22 Write clinical histories and other medical records in a way so they can be understood by other people.
- CG23 Communicate effectively and clearly, both orally and in writing, with patients, family members, media and other professionals.
- CG24 Establish good interpersonal communication which allows you to efficiently and empathetically connect with patients, family members, media and other professionals.
- CG26 Assume a role in the prevention and protection against diseases, injuries or accidents, together with the maintenance and promotion of health, both on an individual and community level.
- CG32 Know how to use information and communication technology in clinical, therapeutic, preventative and research activity.

Cross-curricular skills (CT, by the acronym in Spanish):

- CT1: Communication: ability to engage in active listening, ask questions and respond in a clear and concise way, as well as to effectively express ideas and concepts. This includes concise and clear written communication.
- CT3: Teamwork: ability to integrate and collaborate actively with other people, areas and/or organisations to reach common goals, evaluate and integrate contributions from the rest of the group members and create a good working environment.

- CT4: Adaptability: ability to detect, interpret and respond to a changing environment. Ability to equip themselves and work effectively in different situations and/or with different groups or individuals. This means adapting to change depending on circumstances or needs. It involves the confidence to take on crucial challenges on a personal or group level, maintaining a good physical and mental health to allow work to be carried out effectively.
- CT7: Decision making: ability to choose between different options or methods to effectively solve different problems or situations.
- CT10: Independent learning: the ability to govern your own development by choosing the most effective lines of action, strategies, tools and opportunities to independently learn and apply knowledge to practice.

Specific skills (CE, by the acronym in Spanish):

- CE3.14 Recognise, diagnose and direct treatment of the main ophthalmological pathologies.
- CE3.2.1 Know how to do a full anamnesis focused on the patient and with a view to diverse pathologies, interpreting its meaning.
- CE3.2.2 Know how to perform a physical examination of the systems and apparatus, as well as a psychopathological assessment, being able to interpret the results
- CE5.1.1 Complete a student work placement, involving independent clinical rotation and a final skills assessment in health centres, hospitals and other care facilities, which allows students to incorporate professional values, healthcare communication skills, clinical reasoning, clinical management and critical judgement. This also requires students to familiarise themselves with the most common health problems in Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Psychiatry and other clinical areas.

Learning outcomes (RA, by the acronym in Spanish):

- Recognise the most common eye pathologies: palpebral and lacrimal, cornea, crystalline lens, retina, sclera, visual pathway and other important ophthalmological pathologies.
- Diagnosed the most common ophthalmological pathologies: clinical history and physical examination (ocular fundus, visual sharpness, visual field test, etc.) aimed at eye pathologies.
- Direct the medicosurgical treatment of the most common ophthalmological pathologies.

The following table shows how the skills developed in the subject area match up with the intended learning outcomes:

Skills	Learning outcomes
CB2, CB5, CG5, CG9, CG10, CGB12, CG32, CT1, CE3.1.4	Recognise the most common eye pathologies: palpebral and lacrimal, cornea, crystalline lens, retina, sclera, visual pathway and other important ophthalmological pathologies.
CB3, CB4, CB5, CG5, CG6, CG13, CG14, CG15, CG17, CG20, CG21, CG23, CG24, CG32, CT3, CT4, CT7. CE3.1.4, CE3.2.1, CE3.2.2, CE5.1.1	Diagnosed the most common ophthalmological pathologies: clinical history and physical examination (ocular fundus, visual sharpness, visual field test, etc.) aimed at eye pathologies.

CB5, CG1, CG2, CG3, CG4, CG13, CG14, CG15, CG17, CG20, CG21, CG23, CG24, CG31, CT3, CT5, CT6, CE3.1.4, CE3.2.1, CE3.2.2, CE5.1.1	Direct the medicosurgical treatment of the most common ophthalmological pathologies.

4. CONTENTS

Topic	Qualification
Topic 1	Anatomy of the eyeball. Vascularisation and innervation.
Topic 2	Orbicularis oculi anatomy. Physiology of vision.
Topic 3	Ametropia. Accommodation. Presbyopia. Refractive surgery.
Topic 4	Pathology of the conjunctiva I. Infectious and allergic conjunctivitis.
Topic 5	Pathology of the conjunctiva II. Conjunctiva scarring. Degenerations. Tumours. Pathology of the sclera.
Topic 6	Diseases of the eyelids. Inflammatory alterations. Tumours of the eyelids. Congenital alterations. Positional alterations.
Topic 7	Lacrimal system.
Topic 8	Pathology of the cornea I. Infectious keratitis and peripheral corneal diseases.
Topic 9	Pathology of the cornea II. Degenerations and corneal dystrophy. Corneal transplantation.
Topic 10	Crystalline lens pathology. Cataracts. Displacement of the crystalline lens.
Topic 11	Open angle glaucoma. Primary and secondary.
Topic 12	Closed angle glaucoma (primary and secondary). Congenital glaucoma.
Topic 13	Macular pathology. Degenerations and dystrophy. Acquired macular disorders.
Topic 14	Pathology of the vitreous. Retinal detachment. Peripheral retinal degenerations.
Topic 15	Diabetic retinopathy. Haematological diseases.
Topic 16	Retinal vein occlusion. Hypertensive retinopathy.
Topic 17	Anterior and posterior uveitis. Endophthalmitis.

Topic 18	Paediatric ophthalmology. Leukocoria. Watery eyes/epiphora.
Topic 19	Pathology of binocular vision. Amblyopia and strabismus.
Topic 20	Pathology optical nerve. Papilloedema. Optical neuropathies.
Topic 21	Pathology of the chiasm and the retrochiasmatic visual pathway.
Topic 22	Pathology of the pupillary pathway. Oculomotor paralysis.
Topic 23	Orbital pathology.
Topic 24	Intraocular tumours.

5. TEACHING/LEARNING METHODS

The types of teaching/learning methods are as follows:

- Problem-based learning: Presentation of problems, reorganising into small groups, literature analysis, analysis of scientific texts and documents, symposiums and presentations, directed debates, specialised individual and collective tutorials, and reaching a consensus.
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- Case studies and problem solving: approach and solving cases and problems either as an individual or in small groups.
- Specialised seminars: literature research and debate on scientific data in small groups.
- Lectures: classroom presentations by the professor on basic theory, encouraging debate and student participation.
- Case study method: presentation and discussion of clinical cases in small groups.
- Learning in skills workshops and simulation scenarios: practical work with IT programs, anatomical models, human dissection and standardised patients.
- Experiential learning in supervised clinical placements in the different hospital services: problem-solving in a practical context observing the tutor, being observed by the tutor, or with the tutor's supervision. Students will integrate themselves and participate in the activities performed in the healthcare units. The student activities will be programmed, tutor-assisted and assessed by the tutor.

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

Learning activity	Number of hours
AF1: Theory/practical learning activities on-campus	32
AF2: Directed learning activities	10
AF3: Independent working	25
AF4: Clinical placements	75
AF5: Tutorials	6
AF6: Knowledge tests	2
TOTAL	**150**

7. ASSESSMENT

The assessment methods, plus their weighting in the final grade for the subject area, are as follows:

	Assessment system	Weighting
THEORY (50%)	Continuous assessment	10%
	Final assessment exam	40%
PRACTICAL PART (50%)	Attitude (rubric)	5%
	Clinical practice (rubric)	20%
	ECOE	25%

On the Virtual Campus, when you open the subject area, you can see all the details of your assessment activities and the deadlines and assessment procedures for each activity.

8. BIBLIOGRAPHY

The reference work for the follow-up of the subject is:

- KANSKI Oftalmología Clínica. Un Enfoque Sistemático. Salmon, J. 9ª Edición abril 2021 - ISBN 9788491138938

Recommended bibliography is indicated below:

- Barrancos Julián C, Sales Sanz M, Sánchez Sánchez C. PROMIR: Oftalmología 2022-2023, 2ª ed. Madrid: Editorial Médica Panamericana; 2022.