

Course Guide 34309 Ocular pathology and pharmacology

COURSE DATA

Data Subject			
Code	34309		
Name	Ocular pathology and pharmacology		
Cycle	Grade		
ECTS Credits	9.0		
Academic year	2018 - 2019		
Study (s)			
Degree		Center	Acad. Period year
1207 - Degree in Optics and Optometry		Faculty of Physics	2 Annual
Subject-matter			
Degree	486 58%	Subject-matter	Character
1207 - Degree in Optics and Optometry		15 - Ocular pathology and pharmacology	Obligatory
Coordination			
Name		Department	
DIAZ LLOPIS, MAN	IUEL JOSE	40 - Surgery	

SUMMARY

The subject of ocular pathology and pharmacology aims to study the pathological aspects of the visual system to distinguish this perspective the refractive power of the other problems that may simulate disease. At the same time seeks to establish the bases of knowledge of drug therapy, and individual clinical examination techniques to accurately assess both the knowledge of the pathology and the degree of response to different treatments

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree



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There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

The student should have basic knowledge of anatomy and physiology of the eye.

OUTCOMES

1207 - Degree in Optics and Optometry

- To have and to understand the fundamentals of Optometry for its correct clinical and healthcare application.
- Knowing how to apply the knowledge acquired to professional activity, knowing how to solve problems and develop and defend arguments.
- 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.
- To know the applicable legislation in professional practice, with special attention to matters of gender equality between men and women, human rights, solidarity, sustainability, protection of the environment and promotion of the culture of peace.
- To know the properties and functions of the different elements that make up the visual system.
- To recognize the different types of mechanisms and pathophysiological processes that trigger eye diseases.
- To know the symptoms of visual diseases and to recognize the signs associated with them. To recognize the alterations that modify normal functioning and trigger pathological processes that affect vision.
- To know and to apply the procedures and indications of the different methods of clinical examination and complementary diagnostic techniques.
- To know the forms of presentation and general routes of administration of drugs.
- To know the general principles of pharmacokinetics and pharmacodynamics.
- To know the pharmacological actions, the collateral effects and drug interactions.
- To know the ocular topical preparations, with special attention to the use of drugs that facilitate the visual and optometric examination.
- To know the most frequent adverse systemic effects after the application of the usual ocular topical drugs.
- To detect and to assess the main ophthalmological disorders, in order to refer patients to the ophthalmologist for study and treatment.



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- To know the manifestations of systemic diseases at the ocular level.
- To know the epidemiological models of the main visual pathologies.
- To know and to apply health education techniques and the main generic eye health problems. To know the principles of health and disease.
- To know the manifestations of the pathological processes and the mechanisms by which the main human diseases occur.
- To know some of the most common psychophysical techniques in clinical practice.
- To apply standard psychophysical techniques to characterize anomalous visual systems.
- To know the fundamentals of the latest generation instruments for the diagnosis of ocular pathologies.
- Acquire basic skills to handle specialized instruments.
- To know how to interpret the results of the measurements taken.

LEARNING OUTCOMES

- Being able to handle major eye diseases, to establish the seriousness and urgency of treatment.
- Understand and manage ophthalmic techniques for analysis, measurement, correction and control of ocular pathologies.
- Identify the main treatments commonly applied in ophthalmology.

DESCRIPTION OF CONTENTS

1. ocular pathology

- I. Introduction. Anatomy and physiology of the visual system in relation to pathology.
- II. Pathology of refractive errors
- III. Pathology of the eyelids
- IV. Pathology of the conjunctiva
- V. Pathology of the lacrimal system
- VI. Pathology of the cornea
- VII. Pathology of the lens: cataract
- VIII. Pathology of intraocular pressure, glaucoma
- IX. Pathology of the sclera and the uvea
- X. Pathology of vitreous and retinal detachment
- XI. Retinal vascular disease: diabetic retinopathy
- XII. Degenerative disease of the retina: AMD spherical lenses
- XIII. Neurophthalmology of the optic pathway, and pupillary reflexes
- XIV. Oculomotor palsy Neurophthalmology of
- XV. Neurophthalmology strabismus and amblyopia in
- XVI. Pathology of the orbit
- XVII. ocular trauma



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XVIII. Videocirugías

2. Ocular Pharmacology and ophthalmological examinations

1. General principles of action on the visual system of systemically applied drugs and topical eye drops / ointment / gel

- 2. Mydriatic and miotic
- 3. antibiotics
- 4. Inflammatory, antiallergic and corticosteroids
- 5. antiglaucoma
- 6. Ocular surface lubricants
- 7. other drugs
- 8. iatrogenic
- 9. Exploration of visual function pathological and quantitative alterations of color vision.
- 10. Examination of the anterior segment (topography, test Shirmer, October) and intraocular pressure
- 11. Exploration of the posterior segment (October, fluorescein and indocyanine green angiography, electroretinography)
- 12. Exploration of the optic nerve (visual field and evoked potentials)

3. Practices

Learn to make a history of a patient eye, take your vision, eye pressure, explore the fundus and anterior segment, use of direct and indirect ophthalmoscope. Corneal fluorescein angiography and fluorescence. Assistance to the operating room.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	50,00	100
Tutorials	25,00	100
Laboratory practices	15,00	100
Attendance at events and external activities	5,00	0
Development of group work	10,00	0
Development of individual work	10,00	0
Study and independent work	75,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	15,00	0
Preparing lectures	5,00	0
Preparation of practical classes and problem	10,00	0
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TEACHING METHODOLOGY

English version is not available

EVALUATION

The practice note will be a 20% of the grade of the subject.

Be valued practical assistance to patients in the hospital.

The note will be testing the 80% mark will

There will be a midterm exam at the end of each thematic. Each exam will consist of two questions of conceptual development.

In the second call will be a comprehensive review of the whole course.

REFERENCES

Basic

Referencia b1: Oftalmología básica. Lang. Ed. Masson 2009
Referencia b2: Esquemas clínico-visuales en oftalmología. Bonafonte. Ed. Elsevier 2005