Universitat Autònoma de Barcelona

2021/2022

Clinical Ophthalmology

Code: 102939
ECTS Credits: 4.5

Degree	Type	Year	Semester
2502442 Medicine	OB	4	0

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

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Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

José Antonio Buil Calvo
Maria Teresa Sellarès Fabrés
Francesc Xavier Valldeperas Hernández
Miguel Angel Zapata Victori
Tirso Alonso Alonso

Prerequisites

It is advisable that the student has previously acquired skills in cell biology and histology. It is advisable to have previously acquired sufficient knowledge and competence in:

1. General and specific anatomy of the different organs and systems.
2. General and specific physiology of the different organs and systems

The student will acquire the commitment of preserving the confidentiality and professional secrecy of the data to which he / she may have access because of the learning in the assistance services. Also to maintain an attitude of professional ethics in all its actions.

Objectives and Contextualisation

Objectives of the course

The aims of the subject are the following:

To give the student general knowledge of the normal and pathological aspects in the Ophthalmology field. To empower the student to be able to identify the symptoms and signs of the ophthalmological diseases and be able to properly understand the basic complementary tests of the speciality (visual field, angiography, Optical Coherence Tomography, retinography).

The student will be expected:

To be in the position to give a first diagnostic approach of some diseases, particularly those found in higher prevalence.

To acknowledge alarm signs and symptoms that indicate the need of urgent assistance, for both the beginning and the course of the illness.

To have the specific knowledge regarding aetiology, clinical feature, diagnosis, treatment and prognosis of ophthalmological diseases, with particular emphasis in the most frequent ones, both in primary care medicine and at hospital level.

To become familiar with the diagnostic sequence in an ordered way for ophthalmological diseases.

To take part in the differential diagnosis process, by means of a rational use of the suitable tests in the speciality.

To deepen the acquired knowledge in lectures about the latest aspects in Ophthalmology or those related with other areas of the degree program, which might be presented as iconographic material or by use of audio visual tools.

To make a proper anamnesis and a basic examination of ophthalmological patients, as well as being able to interpret the basic complementary tests.

To know the indications for both medical and surgical treatments in Ophthalmology

To obtain general information about the ophthalmological patient features both in surgery room, outpatient services and emergency room.

Competences

- Demonstrate basic research skills.
- Demonstrate understanding of the manifestations of the illness in the structure and function of the human body.
- Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
- Establish a diagnostic approach and a well thought-out strategy for action, taking account of the results of the anamnesis and the physical examination, and the results of the appropriate complementary tests carried out subsequently.
- Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
- Indicate the basic diagnosis techniques and procedures and analyse and interpret the results so as to better pinpoint the nature of the problems.
- Indicate the most suitable treatment for the most prevalent acute and chronic processes, and for the terminally ill.
- Obtain and prepare a patient record that contains all important information and is structured and patient-centred, taking into account all age and gender groups and cultural, social and ethnic factors.
- Perform a general and a system-by-system physical examination appropriate to the patient's age and sex, in complete and systematic way, and a mental evaluation.

Learning Outcomes

1. Demonstrate basic research skills.
2. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
3. Describe the main pathological situations with treatment of the visual system.
4. Describe the manifestations of illness on the structure and function of the visual system.
5. Design the treatment for the main medical pathologies of the visual system.
6. Design the treatment for the main surgical pathologies of the visual system.

7. Discover affectations of the different structures that make up the visual system.
8. Examine the functional capacity of the visual system.
9. Explain the mechanisms by which illness affects the different components of the visual system.
10. Explain the most probable diagnosis in the main surgical pathologies of the visual system.
11. Express the most probable diagnosis in the main medical pathologies of the visual system.
12. Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
13. Indicate suitable complementary examinations for the diagnosis of major medical pathologies of the visual system.
14. Indicate suitable complementary examinations for the diagnosis of major surgical pathologies of the visual system.
15. Perform a complete, systematic physical examination of the visual system.
16. Perform a suitable physical examination for the main medical pathologies of the visual system.
17. Perform an examination with commonly used devices in clinical ophthalmology.
18. Write a report giving guidance on diagnosing the main medico-surgical pathologies of the visual system.

Content

CONTENTS

Theory (24 hours)

Theme 1. Anatomy and physiology of the ocular system. Basic concepts.

Theme 2. Periocular soft tissues. Eyelids. Meibomitis and Chalazion. Eyelid tumors. Entropion and ectropion.

Theme 3. Lacrimal system. Dry eye. Acute and chronic dacryocystitis.

Theme 4. Orbital disorders. Thyroid Eye Disease. Orbital Tumors.

Theme 5. Conjunctiva. Conjunctivitis. Conjunctival Tumors.

Theme 6. Cornea and sclera. Epithelial disorders. Keratitis. Cornea Transplant. Sclera.

Theme 7. Refractive Errors. Hypermetropia, Myopia and Astigmatism concepts. Refractive Error Treatment.

Theme 8. Crystalline Lens Disorders. Cataract: clinical feature and treatment.

Theme 9. Glaucoma. Epidemiology. Basic concepts. Clinical feature and examination.

Theme 10. Glaucoma. Medical and surgical treatment of the different glaucoma types. Introduction to laser use in glaucoma.

Theme 11 and 12. Uvea. Concept. Anterior Uveitis. Intermediate Uveitis. Posterior Uveitis. Panuveitis.

Theme 13 and 14. Anatomy and physiology of the retina. The Macula. Complementary tests. Introduction to Fluorescein angiography, Optic Coherence Tomography and Ocular Ultrasonography. Semiology of the Ocular Fundus Lesions. Causes of decrease in visual acuity.

Theme 15. Diabetic Retinopathy. Physiopathology, classification and examination.

Theme 16. Treatment. Laser photocoagulation indications. Introduction to vitreo-retinal surgery.

Theme 17. Vascular pathology of the retina. Arterial Hypertension. Venous occlusions. Arterial occlusions

Theme 18. Retinal detachment. Physiopathology. Classification. Surgery of retinal detachment.

Theme 19. Maculopathy. Age-related Macular Degeneration. Retinal dystrophies. Macular hole. Epiretinal Membrane.

Theme 20. Intraocular tumors and Leukocoria. Choroidal melanoma. Retinoblastoma. Vascular tumors. Lymphatic tumors.

Theme 21. Optic way diseases. Optic Disc Swelling. Optic Neuritis. Other disorders of the optic nerve.

Theme 22. Pupillary disorders. Chiasmatic and Post-chiasmatic Disorders.

Theme 23. Ophthalmoplegia. Disorders of the extraocular muscles motility.

Theme 24. Strabismus. Amblyopia. Binocular vision

Theme 25. Ocular Trauma. Penetrating and Perforating Trauma. Anterior Segment trauma. Posterior Segment Trauma. Orbital Trauma.

Theme 26. Ophthalmological Manifestations of Systemic Diseases.

Clinical care practices (20 hours)

Day 1. Functional examination of the eye.

Día 2. Anterior segment eye examination.

Day 3. Glaucoma patient examination.

Day 4. Posterior segment eye examination.

Day 5. Ocular angiography.

Day 6. Ophthalmological lasers.

Day 7. Neuro-ophthalmology patient examination.

Day 8. Examination of the patient with orbital, oculoplastic and lacrimal system disorders.

Day 9. Attendance to surgical interventions.

Day 10. Anamnesis and preparation of clinical history in Ophthalmology.

Seminars (7 hours)

Seminar 1: Red eye seminar.

Seminar 2: Decrease in visual acuity seminar.

Seminar 3: Ocular adnexa seminar.

Seminar 4: Neuro-ophthalmology seminar.

Seminar 5: Systemic disease seminar.

Seminar 6: Ocular pharmacology seminar.

Seminar 7: Anterior segment images seminar. Posterior segment images seminar.

Methodology

This guide describes the framework, contents, methodology and general rules of the subject, in accordance with the current curriculum. The final organization of the subject with regard to the number and size of groups, distribution in the calendar and dates of examinations, specific criteria for evaluation and review of exams, will be specified in each of the Hospital Docent Units (UDH), which will be explained through their web pages and the first day of class of each subject, through the teachers responsible for the subject at UDH.

Due to the exceptional COVID situation we are living, theoric lessons, classroom practices and clinical care practices might take place in a virtual format.

For the present year, the professors appointed by the Departments as responsible for the subject at the Faculty level and the UDH are:

Responsible department (s): Surgery

Head of Faculty: José García Arumí

Responsible UDH:

UDHSant Pau: José Antonio Buil: 16080jbc@comb.es

UDHVall D'Hebron: José García Arumí: josgarci@vhebron.net

UDGermans Trias i Pujol: Francesc Xavier Valldeperas: xvalldeperas.germanstrias@gencat.cat

In the current exceptional circumstances, at the discretion of the teachers and also depending on the resources available and the public health situation, some of the theoretical classes, practicals and seminars organized by the Teaching Units may be taught either in person or virtually.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
CLASSROOM PRACTICES	7	0.28	10, 11, 12, 13, 14, 18
CLINICAL CARE PRACTICES	20	0.8	10, 11, 12, 13, 14, 18
THEORY	24	0.96	7, 4, 3, 9
Type: Autonomous			
PREPARATION OF WRITTEN WORKS	1.25	0.05	12
READING ARTICLES / REPORTS OF INTEREST	35	1.4	10, 11, 18
SELF-STUDY	20	0.8	1, 2, 5, 6, 12

Assessment

The programming of the evaluation activities will be done according to calendars

For the theoretical part: 70%

Theoretical partial examinations will be programmed with multiple selection items eliminatory when the mark obtained is greater than 4. Each partial has the same weight on the final grade mark

For the practical part: 30%

In accordance with the particularities of each Teaching Unit and subject, the practices / seminars can be evaluated continuously. The continuous assessment will be specified in the UDH's program.

The clinical evaluation is the summation of problem solving, presentation of work and practices.

The practices will be mandatory. Absences should be justified, otherwise the practices will be considered as unresolved.

The evaluated clinical skills acquired will be: ability to develop a clinical history, ability to quantify visual acuity and training in the management of direct ophthalmoscope.

Final grade

The final grade will be the theoretical knowledge (70%) and the clinical evaluation (30%). The average between the theoretical evaluation and the clinical evaluation can not be made if a minimum score of 4/10 is not obtained in both tests, although the average score is greater than 5. In the case of not being able to do the average , the final grade will correspond to the lowest quantitative value among those obtained in theoretical and clinical evaluations.

The expression of the same will be a numerical note with a decimal from 0 to 10. The qualitative qualification will be: suspense, approved, remarkable, excellent and matrícula of honor.

Final recovery test

The student who has not passed the theoretical partial examinations and / or has not passed the practices, may submit to the final test of recovery. The final test of recovery will be a theoretical exam with multiple selection items, once the student has been previously evaluated in a set of activities whose weight equals to a minimumof two thirds of the total grade of the student, subject

Procedure for the review of qualifications

The review of exams will be done individually with the student, upon written request within the established deadlines.

Students who fail to carry out the theoretical and practical evaluation tests will be considered as Not evaluated by exhausting the rights to the registration of the assignment@tuli.cat

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Practices: Attendance and active participation in seminars	15%	0	0	1, 2, 5, 6, 10, 11, 13, 14
Practices: Practical evaluations: Objective and structured clinical examination	15%	1.25	0.05	17, 16, 10, 11, 12, 13, 14, 8, 15
Theory: Written evaluation with Objective Tests	70%	4	0.16	7, 4, 3, 10, 9, 11, 13, 14, 18

Bibliography

REFERENCES

-Jack J Kansky. Oftalmología Clínica. Edició en castellà de la 6a edició de l'obra original en anglès Clinical ophthalmology. A systematic approach. 2009 Elsevier España. Barcelona.

-Jack J Kansky. Clinical Diagnosis in Ophthalmology. Mosby Elsevier. Philadelphia 2006.

-Miron Yanoff & Jay S. Duker. Ophthalmology. Mosby Elsevier. 2009.

-Curso de Ciencias básicas y Clínicas. 12 Secciones. American Academy of Ophthalmology. Elsevier España, 2008-2009. Barcelona

Manual de Oftalmología Clínica García Feijoo, Pablo Julvez. Elsevier 2012.

Bibliografia de consulta

-Thomas T. Duane and Edward A. Jaeger. Clinical Ophthalmology. Harper & Row Publishers. Philadelphia.

INTERNET

http://oftalmologos.org.ar/biblioteca/galerias.html http://www.intermedicina.com/Librosyatlas/NEUR-PAT.html.

http://www.atlasophthalmology.com/atlas/photo.jsf?node=1547&locale=es

Software

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