Course guide
370812 - CLTECDIAG - (Ang) Clínica de Tècniques Diagnòstiques en Salut Ocular

Last modified: 14/07/2025

Unit in charge: Terrassa School of Optics and Optometry
Teaching unit: 731 - OO - Department of Optics and Optometry.

Degree: MASTER'S DEGREE IN OPTOMETRY AND VISION SCIENCES (Syllabus 2022). (Compulsory subject).

Academic year: 2025 **ECTS Credits:** 3.5 **Languages:** Catalan, Spanish, English

LECTURER

Coordinating lecturer: Clavé Cerezo, Laura https://futur.upc.edu/LauraClaveCerezo
Cazal, Jorge

Others: Clavé Cerezo, Laura
Argemí Barella, Núria
Cazal, Jorge

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
M-CE6. (ENG) Conocer los principios de funcionamiento de las distintas técnicas de examen en la práctica clínica: fotografía basada en la configuración Scheimpflug, topografía de discos de Plácido, Tomografía de Coherencia Óptica, aberrometría y pruebas electrofisiológicas, entre ellas. Interpretar los resultados de dichas técnicas para
detectar signos de posibles patologías, aplicar tratamientos ópticos, remitir al especialista y utilizar los conocimientos en trabajos de investigación.

Generical:
M-CG1. (ENG) Capacitar para el ejercicio de la profesión de óptico optometrista en áreas diversas de especialización clínica, como la atención a la discapacidad visual, las adaptaciones especiales de lentes de contacto, el control de la miopía, el uso de técnicas avanzadas de exploración visual o la visión infantil.
M-CG2. (ENG) Aplicar los modelos existentes de toma de decisiones clínicas, según la tipología de los pacientes, basándose en la evidencia, atendiendo, de forma especial, a la evidencia científica.

Transversal:
M-CT2. (ENG) Sostenibilidad y Compromiso Social. Conocer y comprender la complejidad de los fenómenos económicos y sociales típicos de la sociedad del bienestar; tener capacidad para relacionar el bienestar con la globalización
y la sostenibilidad; lograr habilidades para utilizar de forma equilibrada y compatible la técnica, la tecnología, la economía y la sostenibilidad.
M-CT3. (ENG) Trabajo en equipo. Ser capaz de trabajar como miembro de un equipo interdisciplinar, ya sea como un miembro más o realizando tareas de dirección, con la finalidad de contribuir a desarrollar proyectos con
pragmatismo y sentido de la responsabilidad, asumiendo compromisos teniendo en cuenta los recursos disponibles.
M-CT5. (ENG) Tercera lengua. Conocer una tercera lengua, preferentemente el inglés, con un nivel adecuado oral y escrito y en consonancia con las necesidades que tendrán los titulados y tituladas.
M-CT6. (ENG) Perspectiva de género. (Text definitiu pendent de definir)

Basic:
CB8. (ENG) Que los estudiantes sean capaces de integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta o limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios
CB9. (ENG) Que los estudiantes sepan comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades

TEACHING METHODOLOGY

. Participatory expository class of theoretical and practical content.
. Active methodologies in the classroom (project-based learning (PBL), case studies, role-playing games, cooperative learning, ...).
. Practical resolution class, with the participation of the students, of practical cases and/or exercises related to the contents of the subject
. Reading of didactic material, texts and articles related to the contents of the subject.
. Resolution of cases with real patients in health establishments

LEARNING OBJECTIVES OF THE SUBJECT

Know and be able to apply to the professional practice of optics and optometry the operating principles of the different examination techniques in clinical practice: photography based on the Scheimpflug configuration, Placido disk topography, Optical Coherence Tomography, aberrometry and tests electrophysiological, among them.
Interpret the results of the different examination techniques to detect possible signs of pathology, apply optical treatments, refer to a specialist or use the results in research work.
Acquire and know how to apply knowledge of ocular pharmacology in clinical practice.
Know how to identify the signs and symptoms of the most common pathologies that affect society, to inform and refer the patient to the ophthalmologist.

STUDY LOAD

Type	Hours	Percentage
Hours small group	28,0	32.00
Self study	59,5	68.00

Total learning time: 87.5 h

CONTENTS

title english

Description:
1.- Corneal topography
2.- OCT optic nerve
3.- Macular OCT
4.- OCT anterior segment
5.- Visual field analysis

ACTIVITIES

Clinical Sessions

Description:
There will be 7 clinical sessions of 4 hours, where real patients who come from the referral of patients visited at the University Vision Center will be attended, for complementary tests and ophthalmological visit. In Three sessions there will be 1-hour seminars.

Full-or-part-time: 28h
Laboratory classes: 21h
Self study: 7h

Clinical Seminar

Description:
3seminars of 2 hours will be held
The students will make the exhibition, defense and debate of clinical cases carried out in the clinical sessions.
The results of the different complementary tests that allow a differential diagnosis will be analyzed, as well as the most appropriate strategies and parameters for the follow-up of each case.

Full-or-part-time: 34h 30m
Laboratory classes: 7h
Self study: 27h 30m

name english

Description:
Presentation, defense and debate of a clinical case carried out in the clinical sessions.

Full-or-part-time: 6h
Self study: 6h

name english

Full-or-part-time: 9h 30m
Self study: 9h 30m

GRADING SYSTEM

Continuous evaluation.
The grade for the course is obtained as follows:
• Continuous evaluation of all cases attended. Clinical skills of visual examination, reasoning in diagnosis, treatment and introduction of all data in the clinical history will be evaluated (40%).
•Individual preparation of an abstract to send to a cientific journal or congress of a clinical case seen in clinical sessions . (15%)
•Presentation of an activity of the instrumentation records of a clinical case seen in the clinical sessions. (10%)
• Preparation of an anamnesis protocol and selection of tests according to the syntomatology of a case exposed by the teacher (10%)
• Presentation of cases seen during the practical sessions. Elaboration and participation (25%)

Attendance to this course is mandatory and in order to pass the course it is necessary to attend at least 90% of the classroom sessions and contribute to the debates and discussion of cases.

EXAMINATION RULES.

In the event of partial or total copying in any of the evaluations of the subject, the provisions of the General Academic Regulations of the UPC will apply:
"Irregular actions that can lead to a significant variation in the grade of one or more students constitute a fraudulent performance of an evaluation act. This action entails a descriptive grade of fail and a numerical grade of 0 for the evaluation act and the subject, without prejudice to the disciplinary process that may arise as a result of the acts carried out.
If the student considers the decision incorrect, she can file a complaint with the director or dean of the educational center and, if the answer is not satisfactory, she can file an appeal with the rector.
The total or partial reproduction of academic or research works, or their use for any other purpose, must have the explicit authorization of the authors.
It is up to the director or director or the dean of the educational center to resolve the allegations about the aspects not included in the regulations."

BIBLIOGRAPHY

Basic:

- Anderson, Douglas R; Patella, Vincent Michael. Automated static perimetry. 2nd ed. St. Louis: Mosby, ccop. 1999. ISBN 0815143842.
- Agarwal, Amar; Henderson, Bonnie An. Dr Agarwals' textbook on corneal topography: including Pentacam and anterior segment OCT [on line]. 3rd ed. New Delhi: The Health Sciences Publisher, 2015 [Consultation: 25/07/2024]. Available on: https://search-ebscohost-com.recursos.biblioteca.upc.edu/login.aspx?direct=true&AuthType=ip,uid&db=nlebk&AN=1234454&site=ehost-live&ebv=EB&ppid=pp_Cover. ISBN 9789386056474.
- Kanclerz, Priotr; Khoramnia, Ramin; Wang, Xiaogang. "Current developments in corneal topography and tomography". Diagnostics [on line]. 2021, vol 11, núm. 8, p. 1466 [Consultation: 15/02/2023]. Available on: https://www.proquest.com/docview/2565109659?fromopenview=true&parentSessionId=bbWWXdgTuhDuMi%2B7pod5XHEjkbKJ2xzVw2byWy1U08s%3D&pq-origsite=gscholar&accountid=15300.