

**COURSE DATA****Data Subject**

Code	43867
Name	Clinical diagnostic techniques
Cycle	Master's degree
ECTS Credits	4.5
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
2175 - M.U. en Optometría Avanzada y Ciencias de la Visión 13-V.2	Faculty of Physics	1	First term

Subject-matter

Degree	Subject-matter	Character
2175 - M.U. en Optometría Avanzada y Ciencias de la Visión 13-V.2	3 - Clinical diagnostic techniques	Obligatory

Coordination

Name	Department
GARCIA DOMENE, MARIA DEL CARMEN	280 - Optics and Optometry and Vision Sciences
GENE SAMPEDRO, ANDRES	280 - Optics and Optometry and Vision Sciences

SUMMARY

There are a multitude of examination methods and diagnostic and monitoring techniques, some more specific than others. The most important ones will be described, which will allow an adequate assessment of the majority of ocular structures, as well as the visual function. The course is complemented by all those subjects of the Master's degree with direct clinical application, as numerous systems and clinical diagnostic techniques will be analysed. Many of these techniques can be carried out in the optometry offices themselves, others will be carried out in specialised centres, where the patient is able to come with the report to demand our professional advice and the professional should be able to interpret it and understand its clinical application.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

It is suitable, to have dealt and overcome the subjects relating to Optics and Optometry Degree.

OUTCOMES

2175 - M.U. en Optometría Avanzada y Ciencias de la Visión 13-V.2

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Know how to work in multidisciplinary teams reproducing real contexts and contributing and coordinating their own knowledge with that of other branches and participants.
- Participate in, lead and coordinate debates and discussions, be able to summarize them and extract the most relevant conclusions accepted by the majority.
- Use different presentation formats (oral, written, slide presentations, boards, etc.) to communicate knowledge, proposals and positions.
- Proyectar sobre problemas concretos sus conocimientos y saber resumir y extraer los argumentos y las conclusiones más relevantes para su resolución.
- Tener capacidad de análisis crítico de la información especializada en los ámbitos propios del máster.
- Tener un compromiso ético y responsabilidad social, tanto en lo que compete a la componente asistencial ligada a la profesión de óptico-optometrista como a lo que respecta a la investigación clínica.
- Tener capacidad de trabajo en equipos multidisciplinares en el área de las ciencias de la salud.
- Conocer la legislación aplicable en el ejercicio profesional, con especial atención a las materias de de igualdad de género entre hombre y mujeres, derechos humanos, solidaridad, protección del medio ambiente y fomento de la cultura de la paz.



- Familiarizar con las distintas técnicas de exploración ocular bajo un enfoque clínico.
- Proporcionar la última información sobre el manejo y valoración de instrumental y técnicas de reciente aparición.
- Mostrar la utilidad clínica de las técnicas exploratorias que analizan los segmentos oculares anterior, medio y posterior.

LEARNING OUTCOMES

To provide advanced knowledge in the analysis handling to be applied in the interpretation under different conditions, as well as knowledge of different instruments. Apply the exploratory technique in clinical practice. Strengthen their knowledge about diagnostic methods and techniques and their contribution to daily clinical practice.

DESCRIPTION OF CONTENTS

1. PART 1: Analyzers and technologies for the analysis of the anterior segment

Exploration technologies for anterior segment. Equipments. Clinical application

2. PART 2: Analyzers and technologies for the analysis of the posterior segment

Exploration technologies. Equipments. Clinical application

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	24,00	100
Seminars	12,00	100
Preparation of evaluation activities	10,00	0
Preparing lectures	42,00	0
Preparation of practical classes and problem	18,00	0
TOTAL	106,00	

TEACHING METHODOLOGY

The teaching methodology of this subject consists of two types of face-to-face activities:



Theoretical lessons:

Face-to-face lessons (with the possibility of also including blended or online modalities) where the theoretical contents of the subject will be taught. The use of audiovisual methodology will be reinforced, with examples that give greater clarity to the theoretical contents and the examples to be developed.

Small group theory sessions:

These sessions are dedicated to group work, with proposals of real cases to be analysed and studied by the group. The interactivity of the group will be sought through oral presentations and examples in the classroom, which will be assessed in the continuous evaluation.

EVALUATION

The evaluation of the subject will be done in two parts:

- 1.- First part: continuous evaluation of the student through work carried out throughout the semester with a maximum of 3 points out of 10 and the reading of articles proposed with the creation of multiple choice questions up to 1 point out of 10 (a 40% of the total, this part is not recoverable for the second call).
- 2.- Second part: multiple choice exam on the contents of the subject. This exam will consist of multiple-choice answer questions, with only one correct. A wrongly answered question will subtract half of a correct question. This score will have a maximum of 6 points out of 10 (60% of the total).

In order to pass the subject, at least 2 out of 6 must be obtained in the second part and the student must have a total of 5 points out of 10 in the sum of the two parts (50% of the total).

REFERENCES

Basic

- Optometría. Principios básicos y aplicación clínica. Montés-Micó, Robert (editor). Elsevier. 2011. ISBN: 9788480868228
- Optometría: Aspectos avanzados y consideraciones especiales. Montés-Micó, Robert (editor). Elsevier. 2011. ISBN: 9788480868907

Additional

- Kanski JJ. Clinical Ophthalmology: A Systematic Approach: Expert Consult, 7th edition. Elsevier. 2009.



- Kaschke M, Donnerhacke KH, Rill MS. Optical Devices in Ophthalmology and Optometry: Technology, Design Principles and Clinical Applications. Wiley-VCH. 2014
- Yogesan K , Cuadros J, Goldschmidt L. Digital Teleretinal Screening: Teleophthalmology in Practice, Berlin, Heidelberg: Springer-Verlag, 2012
- Mohammadpour M. Diagnostics in Ocular Imaging: Cornea, Retina, Glaucoma and Orbit Cham: Springer International Publishing AG, 2020
- Michalewska Z, Nawrocki J. Atlas of Swept Source Optical Coherence Tomography Cham: Springer International Publishing AG, 2017