

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

Code	43865
Name	Advanced optometry
Cycle	Master's degree
ECTS Credits	4.5
Academic year	2021 - 2022

Study (s)

Degree	Center	Acad. 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	1 - Advanced optometry	Obligatory

Coordination

Name	Department
DIEZ AJENJO, MARIA AMPARO	280 - Optics and Optometry and Vision Sciences

SUMMARY

It is intended that in this course the students apply their knowledge in optometry to patients with various pathologies. It is intended that the student knows what are the symptoms of each of the various pathological patients, based on the presented pathology. Also the clinical diagnostic tests that an optometrist can performed to help the ophthalmologist to reach the final diagnosis of the disease will be explained. Besides, how to act at an optometry level with these patients for maximum visual performance will be also covered counting with the latest scientific advances.

PREVIOUS KNOWLEDGE



Relationship to other subjects of the same degree

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

Other requirements

For this course, the student requires some knowledge of structure and function of the visual system. This knowledge should be given in previous Human ocular anatomy and Ocular pathology courses. The student also should be knowledgeable about methods of optometric and optical compensation analysis of the visual system. This knowledge should be given in previous courses of Optometry, Contact Lenses, Ophthalmic Optics and Optical and Optometric Instruments. All of these courses are given in the Gra

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.



- Proporcionar conocimientos avanzados y criterios específicos de actuación clínica para la evaluación, diagnóstico diferencial y los tratamientos de los diferentes problemas visuales propios del ámbito de la Optometría.
- Ejercer actividades de planificación y gestión en servicios de salud públicos y privados.
- Relacionar las manifestaciones oftalmológicas, enfermedades sistémicas, neurológicas y endocrinas con las alteraciones visuales más prevalentes.
- Analizar y comprender los nuevos métodos de exploración visual, en especial en su aplicación a visión pediátrica, geriátrica y nuevas técnicas de compensación.
- 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.
- Permitir al estudiante la mejora de conocimientos en los diferentes campos propios de la atención visual, desde la atención primaria a la especializada en clínica pública o privada.
- Manejo de técnicas optométricas para obtener el mejor resultado visual.
- Capacidad de interpretación y análisis de pruebas oftalmológicas de diagnóstico clínico.
- Manejo de búsqueda de información bibliográfica científica.

LEARNING OUTCOMES

To detect the problems and limitations of patients with specific characteristics. To be able to manage the most appropriate clinical tests in the most appropriate conditions.

To be able to choose the clinical test that best suits for a particular purpose (type of dysfunction to detect and type of information we want to obtain to the patient).

To acquire fluency in the usual interpretation of clinical trials. To know how to evaluate the reliability of a measurement with a clinical device.

To understand the difficulties that patients must undergo in a pathological clinical examination (anxiety about the outcome, difficulty of the task, fatigue, impaired comprehension, illiteracy, very low visual function) and to develop strategies to minimize them.

To acquire the ability to decide at any time the most appropriate optometric solution for each individual patient.

To know the limitations of optometric compensation. To know how to evaluate when these solutions are not the best choice for the patient and when we must refer them to other specialist.



DESCRIPTION OF CONTENTS

1. Pathological patients with optometrics needs

Definition of pathologic patient. Effect of age and environmental factors on the human eye. Pediatric and geriatric patients. Classification of the pathological patients depending on their eye disorder.

2. Eyelid and muscular disorders

Anatomical review. Experimental devices used in the analysis of the patient. Optometric and medical diagnostic tests and solutions. Pathologies.

3. Corneal and tear disorders

Anatomical review. Experimental devices used in the analysis of the patient. Optometric and medical diagnostic tests and solutions. Pathologies.

4. Ocular lens disorders

Anatomical review. Experimental devices used in the analysis of the patient. Optometric and medical diagnostic tests and solutions. Pathologies.

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 subject in the classroom modality has two differentiated methodology lessons:

- (1) Theoretical classes
- (2) Seminars



In the theoretical classes the contents of the subject will be exposed, alternating practical and theoretical cases of all the topics to be treated. In addition, students will be encouraged to take their own clinical cases to discuss and analyze in the classes.

In the seminars each of the students, individually, will present cases of articles related to the theme of the subject. The articles will be provided in the class. The student must make a presentation (about 15 minutes). In this presentation the student has to expose the article and make a critical judgment on it, assessing the measurement procedure and the conclusions reached by the authors. In addition, invited speakers and professionals will contribute from their work experience related to this theoretical classes in seminars. And, finally, seminars will be use to solve questions and problems regarding the subject or proposed by the students also related to the subject.

In online mode, students will be provided with slides and additional material to follow the course. In addition, they will have audios recorded with slides of a maximum of 10-15 minutes that will allow us to follow the subject.

EVALUATION

The evaluation of the subject will be done with the following criteria (over 100 points):

Class mode:

1. An exam of the knowledge acquired in the theoretical classes. This exam will suppose 65 points of the total of the subject. The questions will be from theoretical classes and seminars. It will have two parts (a maximum of 32.5 points at each part): a part of a test with questions related to the theory of the subject and the works exposed, with several answers to choose, but with only a valid solution. Every three invalid responses, a valid response will be voided. The second part will consist on three problems related to the direct application of the theory. The student only will need to solve two problems. To complete the total evaluation of the subject, the student needs a minimum of 13 points of 32.5 in each part. The total evaluation of this part of the exam must be at least 26 points out of the 65 possible.
2. An oral presentation (about 15 minutes) that will be carried out during the seminars of the theoretical classes. A scientific article related to the will be presented. The student will choose it from a list provided at the beginning of the course. The date and time will be agree previously with each student. All the material will be delivery at the same day of the oral presentation, in electronic version. The exhibition will have a maximum value of 20 points. It will be valued the structure, the domain of the thematic, the logical, clear and organized structure of the presentation and the amount of information collected.

This section will not require a minimum of points to compensate the note with the other parts. There will be no possibility of recovery once the delivery period has been closed.

The online students must record this presentation with sound and deliver it in time and form that will be specified and with the format that will be recommended.



3. Resolution of problems. These problems will be asked throughout the course and will have to be delivered in time and form as specified. This part will be 15 points of the total note. In this section, a minimum of points will not be required to compensate the note with the other parts and there will be no possibility of recovery once the delivery period has been closed.

The total note of the subject will be the sum of the three sections. 100 points will be the maximum note that the student can obtain in the subject. The minimum qualification required to pass the subject will be 50 points. If the first part does not reach the minimum required of 13 points in each part, although the sum is equal to or greater than 50 points, the subject will not be passed.

REFERENCES

Basic

- Optometría Pediátrica. Antonio López Alemany. Ed Ulleye, 2004.
- Vision and aging. A.A. Rosenbloom, Jr; M.W. Mogan, Ed. Butterworth-Heinemann, 1992.
- Oftalmología clínica. Jack J Kanski. Elsevier, 2004.

Additional

- Artículos seleccionados de varias revistas - Articles seleccionats de diverses revistes - Selected articles from various journals:
Journal of Cataract and Refractive Surgery, Ophthalmology, Journal of Refractive Surgery, European Journal of Ophthalmology, etc.

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

English version is not available