

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

<b>Code</b>	43866
<b>Name</b>	Advanced contactology
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	4.5
<b>Academic year</b>	2022 - 2023

**Study (s)**

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

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2175 - M.U. en Optometría Avanzada y Ciencias de la Visión 13-V.2	2 - Advanced contactology	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
FURLAN, WALTER DANIEL	280 - Optics and Optometry and Vision Sciences

**SUMMARY**

The aim of the course is to lay de foundations so that students can begin and deepen the knowledge of adaptations of contact lenses on ectactic corneas (keratoconus, pellucid marginal degeneration, etc) of after surgery (refractive, keratoplasties, etc), change the power of cornea diopter to temporarily compensate for ametropia, wear contact lenses as a therapeutic vehicle and know the indications and adaptations of ocular prosthesis.

**PREVIOUS KNOWLEDGE**



### Relationship to other subjects of the same degree

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

### Other requirements

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

It is appropriate, having taken and passed the subjects relating to contact lenses of the degree of Optometry and Optics.

## OUTCOMES

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

- Students can apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.
- Students are able to integrate knowledge and handle the complexity of formulating judgments based on information that, while being incomplete or limited, includes reflection on social and ethical responsibilities linked to the application of their knowledge and judgments.
- Students can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences, clearly and unambiguously.
- Students have the learning skills that will allow them to continue studying in a way that will be largely self-directed or autonomous.
- Students have the knowledge and understanding that provide a basis or an opportunity for originality in developing and/or applying ideas, often within a research context.
- Know how to work in multidisciplinary teams reproducing real contexts and contributing and coordinating their own knowledge with that of other branches and participants.
- Participar en debates y discusiones, dirigirlos y coordinarlos y ser capaces de resumirlos y extraer de ellos las conclusiones más relevantes y aceptadas por la mayoría.
- Utilizar las distintas técnicas de exposición -oral, escrita, presentaciones, paneles, etc- para comunicar sus conocimientos, propuestas y posiciones.
- 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 sistemática de la adaptación de lentes de contacto en poblaciones especiales.
- Conocer los tipos de biopolímeros de uso de forma terapéutica sobre la superficie ocular.
- Conocimiento de la sistemática a emplear para la adaptación de una lente de contacto de diseños especiales sobre la superficie ocular compensando alteraciones morfológicas y no induciendo ningún tipo de iatrogenia.
- Conocimiento de las técnicas de lección de lentes en los diferentes tipos de ortoqueratología.
- Capacitar al alumno para que conozca que características oculares son las mas adecuadas para intentar eliminar o disminuir temporalmente la ametropía ocular.
- Capacitar al alumno para conocer en que casos patológicos está indicada una lente de contacto te tipo corneal o escleral.
- Diseño y características de fabricación de las prótesis oculares y de anejos. Procesos de adaptación de las prótesis oculares ante los distintos casos posibles
- 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.

## LEARNING OUTCOMES

Knowing how to identify cases morphological alterations of the cornea that can be indications of improved vision with contact lenses.

Knowing how to use contact lenses as a means of therapeutic action at the pathology of cornea.

Known as contact lens interacts with the tear film.

Knowing how to change the morphology corneal refractive temporary compensatory purpose.

Know the signs of scleral lenses support and how to adapt.

Knowing the different types of reconstructive elements for the eyeball cavity and adnexa.



## DESCRIPTION OF CONTENTS

### 1. CONTACT LENSES

THEME I: ORTHOKERATOLOGY

THEME II: CONTACT LENS POST CORNEAL SURGERY

THEME III: CONTROL OF THE DEVELOPMENT OF MYOPIA

THEME IV: THERAPEUTIC CONTACT LENSES

THEME V: CONTACT LENSES AND TEARS

THEME VI: CONTACT LENSES FOR CORNEAL MORPHOLOGICAL ALTERATIONS:  
KERATOCONUS

THEME VII: SEMI-SCLERAL AND SCLERAL CONTACT LENSES

### 2. EYE PROSTHESIS

THEME I: INTRODUCTION TO THE EYE PROSTHESIS. TYPES. CAUSES OF EYE AND ANNEXES LOSS

THEME II: ADAPTATION AND TECHNICAL EYE PROSTHESIS

THEME III: COMPLICATIONS IN USE EYE PROSTHESES

THEME IV: MAINTENANCE AND CONTROL OF THE EYE PROSTHESIS

## 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
<b>TOTAL</b>	<b>106,00</b>	

## TEACHING METHODOLOGY

The teaching methodology of this matter has two types of classroom activities:

Lectures (0.9 ECTS)

Classes modality (with possibility to include semi-on line or on line modalities) where the theoretical contents of the subject will be taught. The use of audiovisual methods, that illustrate more clearly the theoretical content and examples to develop will be strengthened.

Theoretical small group sessions (0.48 ECTS)

They are sessions dedicated to individual work or student group, with proposed or actual cases of scientific papers related to the subject to be analyzed and studied individually or by group. Group interactivity search through oral presentations and classroom examples and accounted in continuous



assessment.

In the semi-on line or online mode pupils perform these sessions through the mechanisms provided by the virtual classroom for interconnection to several bands.

Individualized tutoring:

to be held both in person or online through the mechanisms offered by the Virtual Classroom of the University of Valencia.

## EVALUATION

The evaluation was done through two sections:

Theoretical contents: Examination test (80%)

Oral presentation in class (20%)

To be able overcome the matter it will be necessary:

First, to reach 50% of the mark of the test (4 out of 8) and

Second, add at least with the note of both sections 5 out of 10.

## REFERENCES

### Basic

- Villa Collar, Cesar; González-Méijome, José Manuel.  
ORTOQUERATOLOGIA NOCTURNA.  
CNOO, 2006. Págs. 329.
- López Alemany, A; Ed.  
CIRUGIA REFRACTIVA: SOLUCIONES ÓPTICAS A SUS FRACASOS.  
Xàtiva, Ulleye, 2007.
- López Alemany, A; Ed.  
BIOPOLIMEROS Y SUPERFICIE OCULAR: LENTES DE CONTACTO.  
Xativa. EditoriaUlleye 2010. Pags. 564.



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PRÓTESIS OCULARES Y CIRUGÍA RECONSTRUCTIVA DE CAVIDADES. Ponencia Oficial de la Sociedad Española de Oftalmología 1990.  
Madrid.

#### **Additional**

- Mountford J; Ruston D; Trusit D.  
ORTHOKERATOLOGY. PRINCIPLES AND PRACTICE.  
Edinburgh, Butterworth/Heinemann, 2004. Págs 306.
- Brito, C; Sánchez, A; Bueno, J.  
LENTES DE CONTACTO TERAPÉUTICOS EN PATOLOGÍA CORNEAL.  
Madrid, Allergan, 1998.
- Lowther, G E.  
DRYNESS, TEARS, AND CONTACT LENS WEAR : CLINICAL PRACTICES IN CONTACT LENSES.  
Boston: Butterworth-Heinemann, 1997
- González-Méijome, JM; Villa Collar, C..  
SUPERFICIE OCULAR Y LENTES DE CONTACTO  
Madrid: ICM, 2016