

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

<b>Code</b>	34304
<b>Name</b>	Contactology
<b>Cycle</b>	Grade
<b>ECTS Credits</b>	6.0
<b>Academic year</b>	2023 - 2024

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
1207 - Degree in Optics and Optometry	Faculty of Physics	3	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
1207 - Degree in Optics and Optometry	13 - Contactology	Obligatory

**Coordination**

<b>Name</b>	<b>Department</b>
ALBARRAN DIEGO, CESAR ANTONIO	280 - Optics and Optometry and Vision Sciences

**SUMMARY**

The purpose of this course is that students initiate and deepen their knowledge in all aspects of contact lenses. From the knowledge of the structures of the eye with the lens which it relates, the materials they are designed, different designs to achieve different goals, adaptation techniques, pre and post controls adaptation, as the lenses are kept properly to continue to fulfill its purposes, most common complications that can occur in their use and how to fix them, etc..

**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 would be advisable that the student / to have the knowledge imparted in areas such as Optometry I and II, both theoretical and practical aspects, Ophthalmic Optics, Human Anatomy and Ocular, Human Physiology and Ocular, Ocular Biology and optical materials.

## OUTCOMES

### 1207 - Degree in Optics and Optometry

- To know the properties of the types of contact lenses and ocular prostheses.
- To know the geometry and physicochemical properties of the contact lens and to associate them with the ocular and refractive characteristics.
- To know and to use clinical and instrumental protocols in the exploration associated with the adaptation of contact lenses.
- To know the maintenance, diagnosis and treatment solutions and to associate them with the lenticular and ocular characteristics.
- To apply the clinical procedures associated with the adaptation of contact lenses to different refractive and ocular dysfunctions.
- To detect, to assess and to solve anomalies associated with the wearing of contact lenses.
- To adapt contact lenses and ocular prostheses to improve vision and the external appearance of the eye.

## LEARNING OUTCOMES

The student, at the end of his teaching must know how to know in which cases could adapt a contact lens and how to adapt to meet their goals safely.

## DESCRIPTION OF CONTENTS

### 1. Concept. History of contact lens. Current development and future perspectives.

Concept of contact lens.

Historical development of contact lens.

The current situation and future prospects of contact lens in the field of practice of optometry.

### 2. Terminology of the contact lens

Terms used in the practice of contact lens.

Standard tolerances of contact lenses.



### **3. Anatomy, histology and physiology of eye structures and annexes related to the fitting contact lenses.**

Introduction.  
Cornea.  
Limb.  
Conjunctiva.  
Sclera.  
Lacrimal system.  
Eyelids.

### **4. Materials for contact lenses.**

Introduction.  
Materials for contact lenses.  
Properties of the materials for contact lenses.  
Methods manufacturing contact lens.

### **5. Design of contact lenses**

Introduction  
Parameters of contact lenses.  
Design of contact lens

### **6. Contact lens optics**

Introduction.  
Principle of neutralization and replacement.  
Power lenses.  
Contact lens power: distometry.  
Post lenticular tear meniscus.  
Equivalent lenses.  
Size of retinal images

### **7. Preliminary examination of the eye and annexes before fitting contact lens.**

Introduction  
Preadaptation: overview  
Exploration of structures related to the contact lens wear: eye biomicroscopy, estesiometry and pachymetry.  
Qualitative and quantitative study of the tear film.  
Dynamic and static of lids.



## **8. Spherical rigid contact lens fitting method.**

Introduction.  
Indications.  
Contraindications.  
Candidate profile.  
Material and design issues to consider.  
Selection criteria initial contact lens.  
Criteria successful fitting.  
Types of fitting.  
Process to follow of the fitting.  
Clinical evaluation of fitting: problems and solutions.

## **9. Spherical soft contact lens fitting method.**

Introduccion.  
Indications.  
Contraindications.  
Candidate profile.  
Material and design issues to consider.  
Selection criteria initial contact lens.  
Characteristics of a correct fitting  
Criteria of a successful fitting.  
Process to follow of the fitting.  
Clinical evaluation of adaptation: problems and solutions.

## **10. Toric rigid contact lens fitting method.**

Introduccion.  
Indications.  
Contraindications.  
Material and design issues to consider.  
Selection criteria initial contact lens.  
Clinical evaluation of adaptation: problems and solutions.

## **11. Toric soft contact lens fitting method.**

Introduccion.  
Indications.  
Contraindications.  
Material and design issues to consider.  
Selection criteria initial contact lens.  
Clinical evaluation of adaptation: problems and solutions.

**12. Contact lens care systems.**

Introduction.

Objectives of a contact lens care.

Characteristics of a contact lens care.

Types of foreign elements in contact lens: deposits.

Care systems ratings.

Elements of a care system for contact lens.

Components of a care system for contact lens.

Care systems based on the type of lens.

Intensive cleaning of the contact lens.

Negative effects of care systems on contact lens.

Hygienic practices.

**13. Follow up contact lens wear: monitoring and control.**

Introduction.

Control of the rigid contact lenses daily wear.

Control of the rigid contact lenses extended wear.

Control of soft contact lens for daily wear.

Control of soft contact lenses extended wear

**14. Frequent replacement systems of contact lens wear.**

Introduction

Aim

Types of systems

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Theory classes	45,00	100
Tutorials	15,00	100
Attendance at events and external activities	5,00	0
Development of individual work	5,00	0
Study and independent work	60,00	0
Preparing lectures	20,00	0
<b>TOTAL</b>	<b>150,00</b>	



## TEACHING METHODOLOGY

The teaching methodology of this subject are the lectures with abundant support projected images. They demand them through student participation issues matter explained and addressed to all attendees for discussion explained. The seminars allow students to be active in teaching through discussion of the papers presented by him and his companions.

## EVALUATION

The student's attendance and participation in the seminars will be the 10% of the final grade. An exam at the end of semester on the date specified by the University schedule, will count 90% of the total mark.

## REFERENCES

### Basic

- Referencia b1: López Alemany, Antonio; Serés Revés, Carmen; Durban Fornieles, Juan José; Company Vidal, José Luis.  
Lentes de contacto: teoría y práctica  
Editorial Ulleye. Xàtiva. 2019 - ISBN 978-84-949495-6-2

### Additional

- Referencia c1: González-Cavada Benavides, Javier  
Atlas de lámpara de hendidura y lentes de contacto.  
Editorial ICM, Madrid. 2015 ISBN 978-84-939656-8-6
- Referencia c2: López Alemany, Antonio, ed.  
Superficie ocular y biomateriales: lentes de contacto.  
Editorial Ulleye, Xàtiva, 2010 ISBN 978-84-937878-3-7
- Referencia c2: Hom, MM, Bruce S.  
Manual de prescripcion y adaptacion de lentes de contacto + cd-rom (incluye videos) (3ª ed.)  
Editorial Masson, Madrid, 2007 ISBN 978-84-458176-0-5
- Referencia c2: López Alemany, Antonio; Serés Revés, Carmen; y cols.  
Uso prolongado de lentes de contacto.  
Editorial Ulleye. Xàtiva, 2003 ISBN 84-930828-1-3