

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

Code	34304
Name	Contactology
Cycle	Grade
ECTS Credits	6.0
Academic year	2018 - 2019

Study (s)

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

Subject-matter

Degree	Subject-matter	Character
1207 - Degree in Optics and Optometry	13 - Contactology	Obligatory

Coordination

Name	Department
LOPEZ ALEMANY, 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 CONTACTOLOGY. DEVELOPMENT

- 1.1 CONCEPT OF CONTACTOLOGY.
- 1.2 HISTORICAL DEVELOPMENT CONTACTOLOGY.
- 1.3 THE CURRENT SITUATION AND FUTURE PROSPECTS Contactology
IN THE FIELD OF PRACTICE OF OPTOMETRY.



2. CONTACTOLOGY TERMNILOGY

- 2.1 TERMS USED IN CONTACTOLOGY.
- 2.2 STANDARD TOLERANCES IN CONTACTOLOGY.

3. Anatomy, histology and physiology of the ocular structures and annexes

- 3.1 INTRODUCTION.
- 3.2 cornea.
- 3.3. LIMB.
- 3.4 conjunctiva.
- 3.5 sclera.
- 3.6 lacrimal system.
- 3.7 eyelids.

4. mATERIALS IN CONTACTOLOGY

- 4.1 INTRODUCTION.
- 4.2 Materials for contact lenses.
- 4.3 Properties of the materials for contact lenses.
- 4.4 Methods MANUFACTURING CONTACT LENS.

5. GEOMETRY OF THE CONTACT LENS

- 5.1 INTRODUCTION
- 5.2 Parameters OF CONTACT LENSES.
- 5.3 DESIGN OF CONTACT LENS

6. CONTACT LENS OPTICS

- 6.1 INTRODUCTION.
- 6.2 PRINCIPLE OF NEUTRALZIATION AND REPLACEMENT.
- 6.3 POWER LENSES.
- 6.4 CONTACT lens power: DISTOMETRÍA.
- 6.5 POSTLENTICULAR tear meniscus.
- 6.6 EQUIVALENT LENSES.
- 6.7 SIZE OF RETINAL IMAGES



7. PRELIMINAR EXAMINATION

7.1 INTRODUCTION

7.2 Preadaptation: OVERVIEW

7.3 EXPLORATION OF STRUCTURES RELATED TO THE USE OF CONTACT LENSES: BIOMICROSCOPY EYE. ESTESIOMETRIA. Pachymetry.

7.4 Qualitative and quantitative study of the tear film.

7.5 PALPEBRAL Dynamics and Statics

8. MORPHOLOGICAL ANALYSIS OF THE CORNEAL SURFACE

8.1 INTRODUCTION.

8.2 corneal topography.

8.3 keratometry.

8.4. CORNEAL topometry

8.5 COMPUTER AIDED ANALYSIS: videokeratoscopy.

9. METODOLOGY OF THE RIGID SPHERICAL CONTACT LENS ADAPTATION

9.1 INTRODUCTION.

9.2. INDICATIONS

9.3. CONTRAINDICATIONS

9.4. CANDIDATE PROFILE

9.5 MATERIAL AND DESIGN ISSUES TO CONSIDER.

9.6 SELECTION CRITERIA INITIAL CONTACT LENS.

9.7 CRITERIA successful adaptation.

10. METHODOLOGY OF ADAPTATION OF SPHERICAL SOFT CONTACT LENSES.

10.1 INTRODUCTION.

10.2 Guidelines.

10.3. CONTRAINDICATIONS

10.4. CANDIDATE PROFILE

10.5 Options MATERIAL AND DESIGN CONSIDERATIONS.

10.6 SELECTION CRITERIA INITIAL CONTACT LENS.

10.7 CHARACTERISTICS OF ADAPTATION CORRECT.

10.8 CRITERIA successful adaptation.

10.9 PROCESS FORWARD IN ADAPTATION.

10.10 CLINICAL EVALUATION OF ADAPTATION: PROBLEMS AND SOLUTIONS.



11. METHODOLOGY OF ADAPTATION OF TORIC RIGID CONTACT LENSES.

- 11.1 Introduction.
- 11.2 Notes.
- 11.3.CONTRAINDICATIONS
- 11.4 MATERIAL ISSUES IN DESIGN CONSIDERATIONS.
- 11.5 SELECTION CRITERIA INITIAL CONTACT LENS.
- 11.6 CLINICAL EVALUATION OF ADAPTATION: PROBLEMS AND SOLUTIONS.

12. METHODOLOGY OF ADAPTATION OF TORIC SOFT CONTACT LENSES.

- 11.1 Introduction.
- 11.2 GUIDELINES
- 11.3.CONTRAINDICATIONS
- 11.4 MATERIAL ISSUES IN DESIGN CONSIDERATIONS.
- 11.5 SELECTION CRITERIA INITIAL CONTACT LENS.
- 11.6 CLINICAL EVALUATION OF ADAPTATION: PROBLEMS AND SOLUTIONS.

13. CLEANING AND MAINTENANCE SYSTEMS OF CONTACT LENSES

- 13.1 INTRODUCTION.
- 13.2 OBJECTIVES OF SYSTEM MAINTENANCE.
- 13.3 CHARACTERISTICS OF A MAINTENANCE.
- 13.4 TYPES OF FOREIGN ELEMENTS IN CONTACT LENS: DEPOSITS.
- 13.5 MAINTENANCE SYSTEMS RATINGS.
- 13.6 MAINTENANCE SYSTEMS.ELEMENTS
- 13.7 COMPONENTS OF A MAINTENANCE.
- 13.8 MAINTENANCE SYSTEMS BASED ON THE TYPE OF LENS.
- 13.9 Intensive cleaning the lens.
- 13.10 NEGATIVE EFFECTS ON SYSTEMS MAINTENANCE CONTACT LENS.
- 13.11.HYGIENIC PRACTICES

14. POSTADAPTATION: MONITORING AND CONTROL.

- 14.1 INTRODUCTION.
- 14.2 CONTROL OF THE rigid contact lenses DAILY USER.
- 14.3 CONTROL OF THE rigid contact lenses extended wear USER.
- 14.4 CONTROL OF SOFT CONTACT LENS FOR DAILY USE.
- 14.5 CONTROL OF SOFT CONTACT LENSES prolonged use.



15. ANALYSIS AND CONTROL OF THE PARAMETERS OF CONTACT LENSES.

- 15.1 INTRODUCTION
- 15.2 SURFACE ANALYSIS
- 15.3 DIAMETER.
- 15.4 CURVATURE RADIUS.
- 15.5 PERIPHERICAL CURVES.
- 15.6 EDGES.

16. FREQUENT REPLACEMENT SYSTEMS IN THE USE OF CONTACT LENSES.

- 16.1 INTRODUCTION
- 16.2 AIM
- 16.3 TYPES OF SYSTEMS

17. PRESBYOPIA AND CONTACT LENSES

- 17.1 Introduction
- 17.2 presbyopic patient's eye.
- 17.3 features and designs.
- 17.4 TYPES OF SOLUTIONS for presbyopia with contact lenses.
- 17.5 TIPS

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
TOTAL	150,00	

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; DURBANFORNIELES, JUAN JOSÉ; COMPANY VIDAL, JOSÉ LUIS.
LENTES DE CONTACTO: TEORÍA Y PRÁCTICA
Editorial Ulleye. Xàtiva. 2008 ISBN 978-84-935497-5-6
- Referencia b2: COMPANY VIDAL, JOSE LUIS; y cols.
MANUAL DE PRÁCTICAS DE CONTACTOLOGÍA.
Editorial Universidad de Alicante, 2002.
- Referencia b3: GONZÁLEZ-CAVADA BENAVIDES
ATLAS DE LÁMPARA DE HENDIDURA
Editorial Complutense, 2001

10.2 Referencias Complementarias

- Referencia c1: LÓPEZ ALEMANY, ANTONIO; SERÉS REVÉS, CARMEN; y cols.
USO PROLONGADO DE LENTES DE CONTACTO.
Ed. Ulleye. Xàtiva 2003.
- Referencia c2: LOPEZ ALEMANY, ANTONIO.
SUPERFICIE OCULAR Y BIOMATERIALES: LENTES DE CONTACTO.
Ed. Ulleye, Xàtiva, 2010.
- Referencia c3: BENNETT S., WEISSMAN B A., EDS.
CLINICAL CONTACT LENS PRACTICE
PHILADELPHIA [ETC.] : LIPPINCOTT WILLIAMS & WILKINS, COP. 2005
- Referencia c4: MARTÍN HERRANZ, RAÚL.
CONTACTOLOGÍA APLICADA.
ICM. Madrid, 2005
- Referencia c5: SAONA SANTOS, CARLOS L.
CONTACTOLOGÍA CLÍNICA.
ED. MASSON, 2002.
- Referencia c6: GONZALEZ MEIJOME, JOSE MANUEL.
CONTACTOLOGIA.
Ed. UNIDIXITAL,, S.L. Santiago de Compostela. 2005.
- Referencia c7: HOM, MILTON.
MANUAL DE PRESCRIPCIÓN Y ADAPTACIÓN DE LENTES DE CONTACTO.
3ª EDICION, ED: MASSON, 2007



Referencia c8: DURAN DE LA COLINA, J.
COMPLIACIONES DE LAS LENTES DE CONTACTO.
TECNIMEDIA EDITORIAL, Madrid, 1998.

Referencia c9: DOUTHWAITE W A.
CONTACT LENS OPTICS AND LENS DESING
BUTTERWORTH-HEIN

