Course guide
370029 - CONCLIN I - Contact Lens Clinics I

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Unit in charge: Terrassa School of Optics and Optometry
Teaching unit: 731 - OO - Department of Optics and Optometry.

Degree: BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2020). (Compulsory subject).

Academic year: 2025 **ECTS Credits:** 3.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Lucena Ibarzábal , Montserrat . (https://futur.upc.edu/MontserratLucenaIbarzabal)

Others: Solà Parés, Ramon (https://futur.upc.edu/RamonSolaPares)
Cortilla Santamaria, Bernat
Garcia Ponce, Victor

REQUIREMENTS

Have enrolled in Applied Contact Lenses.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE14. (ENG) Comprendre els aspectes psicològics en la relació entre l'òptic-optometrista i el pacient. Conèixer el sistema sanitari espanyol i els aspectes bàsics relacionats amb la gestió dels serveis de salut, fonamentalment els que estiguin relacionats amb l'atenció i rehabilitació de la salut. Conèixer i aplicar les tènciques d'educació sanitària i els principals problemes genèrics de salut ocular. Conèixer els principis de sallut i malaltia. Capacitat per actuar com agent d'atenció primària visual. Conèixer els fonaments i tècniques d'educació sanitaria i els principals programes genèrics de salut als que l'opotmetrista ha de contribuir des del seu àmbit d'actuació.

CE17. Demonstrate knowledge of manifestations of the pathological processes and mechanisms by which the main human diseases are generated. Recognise the types of mechanisms and physiopathological processes that trigger eye diseases. Demonstrate knowledge of the symptoms of visual disorders and recognise the signs associated with them. Recognise alterations that change normal functioning and trigger pathological processes that affect vision. Detect and assess the main ophthalmological disorders to refer patients to an ophthalmologist for examination and treatment. Demonstrate knowledge of manifestations of systemic diseases at the ocular level. Demonstrate knowledge of epidemiological models of the main pathologies.
CE20. Measure, interpret and treat refractive errors. Describe the sensory and oculomotor mechanisms of binocular vision. Identify the principles of and measure, interpret and treat accommodative and binocular vision anomalies. Demonstrate skills in communication, recording data and writing clinical histories. Demonstrate skills in the interpretation and clinical judgement of results of vision tests, to establish the most suitable diagnosis and treatment. Demonstrate skills in instrumental assessment tests of visual function and eye health. Carry out a complete medical history. Identify, apply and interpret instrumental tests relating to visual health problems. Demonstrate the clinical skills required for the examination and treatment of patients. Examine, diagnose and treat visual anomalies with an emphasis on differential diagnosis. Describe the nature and organisation of types of clinical care. Describe the protocols that are applied to patients.
CE23. Describe the properties of the types of contact lenses and ocular prostheses. Describe the geometry and physical-chemical properties of contact lenses and associate them with specific ocular and refractive characteristics. Identify and use clinical and instrumental protocols associated with fitting contact lenses. Identify the solutions used for maintenance, diagnosis and treatment and associate them with lenticular and ocular characteristics. Apply the clinical procedures associated with contact lens fitting to various refractive and ocular dysfunctions. Apply the controlled modification techniques of corneal topography with the use of contact lenses. Detect, assess and resolve abnormalities associated with the use of contact lenses. Adapt contact lenses and ocular prostheses to improve vision and the outer appearance of the eye.
CE25. (ENG) Conèixer els aspectes legals i psicosocials de la professió

CE26. (ENG) Pràctiques preprofessionals, amb una avaluació final de competències, i que permeti a l'alumne incorporar els valors professionals i competències dirigits a: aplicar els coneixements adquirits en els mòduls anteriors en establiments d'òptica, clíniques i hospitals, centres de salut, i empreses del sector. Realitzar activitats clíniques relacionades amb la refracció, exploració visual, adaptació de lents de contacte, entrenament visual i baixa visió. Aplicar les tècniques de muntatge de correccions o compensacions visuals en ulleres i possible retoc de lents de contacte. Prendre contacte amb la compercialització dels productes, aprovisionament, emmagatzematge, conservació i informació. Conèixer i aplicar les tècniques de fabricació d'ajudes visuals i instruments òptics i optomètrics. Conèixer els diferents protocols d'actuació en funció del pacient. Conèixer les indicacions i procediment de realització i interpretació de les proves comple mentàries necessaries en la consulta de visió. Realitzar el protocol d'atenció a pacients a la consulta/clínica optomètrica. Realitzar una història clínica adecuada al perfil del pacient. Seleccionar i aplicar correctament en cada cas totels les destreses, habilitats i competències adquirides en optometria. Fomentar la col·laboració amb altres professionals sanitaris. Comunicar i informar al pacient de tots els actes i proves que es realitzaran i explicar clarament el resutats i seu diagnòstic

Generical:
CG1. Demonstrate knowledge of, design and apply prevention and maintenance programmes relating to the population's visual health.
CG2. Carry out each stage of visual examinations effectively: medical history, selection and implementation of diagnostic tests, establishment of a prognosis, selection and execution of treatment and, if necessary, preparation of referral reports that establish levels of collaboration with other professionals, to ensure the best possible care for the patient.
CG3. Advise and guide patients and relatives during the entire treatment.
CG4. Critically reflect on the clinical, scientific, ethical and social issues involved in the professional practice of optometry, understand the scientific foundations of optics and optometry and critically evaluate terminology, clinical trials and research methods related to optics and optometry.
CG5. Give opinions and produce reports and expert reports when necessary.
CG6. Assess and incorporate the technological improvements necessary to properly carry out professional activities.

CG9. Expand and update one's professional abilities through continuing education.
CG10. Communicate treatment indications of visual health and their conclusions to the patient, relatives and other professionals involved in the patient's care, adapting to the sociocultural characteristics of each person.
CG11. Locate new information and interpret it in context.

CG12. (ENG) The ability to understand the general structure of optometry and its connection to other specific disciplines and other complementary ones.

CG14. Demonstrate knowledge, skills and abilities in patient healthcare.
CG16. Participate effectively in both single-discipline and multidisciplinary work groups on projects related to optometry.

CG17. (ENG) Incorporar els principis ètics i legals de la professió a la pràctica professional, respectant l'autonomia del pacient, els seus determinants genètics, demogràfics, culturals i socioeconòmics, integrant els aspectes socials i comunitaris en la presa de decisions, aplicant els principis de justícia social en la pràctica professional, en un context mundial en transformació.

CG18. (ENG) Adquirir la capacitat per a realitzar una gestió clínica centrada en el pacient, el l'economia de la salut i en l´ús eficient dels recursos sanitaris, així com la gestió eficaç de la documentació clínica amb especial atenció a la confidencialitat.

Transversal:
CT6. Independent learning. Identify and overcome gaps in one's knowledge by thinking critically and choosing the best approach to extending one's knowledge.
CT4. (ENG) Teamwork. The ability to work as a member of an interdisciplinary team, as just another member or in a leadership role, who can contribute to developing projects pragmatically and with a sense of responsibility and make commitments that take into account the resources that are available.
CT9. (ENG) Pràctica basada en evidència

TEACHING METHODOLOGY

MD7 - Tutorials
MD8 - Resolution of cases with real patients in health centres
The practical sessions will be carried out with real patients in the facilities of the University Vision Centre in Terrassa or Barcelona.

LEARNING OBJECTIVES OF THE SUBJECT

Knowledge and competence to carry out an anamnesis on a contact lens candidate.
Competence to apply the different contact lens fitting protocols for the treatment of refractive defects and presbyopia.
Basic competence to apply contact lens fitting protocols in special cases: irregularities or corneal post-refractive surgery.
Competence to select potential users of nocturnal orthokeratology.
Competence to detect and provide solutions to complications or cases of intolerance in contact lens users.

STUDY LOAD

Type	Hours	Percentage
Hours medium group	7,5	12.50
Hours small group	22,5	37.50
Self study	30,0	50.00

Total learning time: 60 h

CONTENTS

Compensation of patients with myopia, hyperopia or astigmatism with contact lenses.

Description:
Patients with various refractive defects are fitted with RPG or soft contact lenses in a healthcare facility under the supervision of a tutor.
During the process, the tutor ensures that the student is guided to do so or becomes competent when applying their knowledge in a real patient environment.

Full-or-part-time: 37h 30m
Laboratory classes: 15h
Self study : 22h 30m

Revisió d'usuaris de LC, detecció i tractament de possibles complicacions.

Description:
LC users will be reviewed to detect possible complications and appropriate treatments will be implemented.

Related competencies :
CG4. Critically reflect on the clinical, scientific, ethical and social issues involved in the professional practice of optometry, understand the scientific foundations of optics and optometry and critically evaluate terminology, clinical trials and research methods related to optics and optometry.
CG3. Advise and guide patients and relatives during the entire treatment.

Full-or-part-time: 37h 30m
Laboratory classes: 15h
Self study : 22h 30m

ACTIVITIES

Initial examination.

Description:
A level test will be carried out to check that students have the minimum skills necessary
to practice contact lens fitting in a patient-intensive environment.
It will be a multiple choice test and its results will help to create work pairs in the clinic, promoting peer learning.

Material:
The test will be held in a FOOT classroom.

Delivery:
The same day of the test and it will be announced in ATENEA with the welcome message.

Full-or-part-time: 1h
Theory classes: 1h

Case file.

Description:
Each student will submit a dossier containing the most relevant information on the cases he/she has seen during the practical sessions.

Delivery:
Once all sessions have been completed, through ATENEA, in PDF format and on the deadline that the teaching staff will announce.

Full-or-part-time: 8h
Self study: 8h

Practice Sessions.

Description:
There will be 3-hour practice sessions on a weekly basis for 10 weeks.
During these sessions, the first hour will be devoted to a short seminar to discuss the cases with the group and two hours to attending to a couple of patients.

Material:
The CUV facilities or equipment in Terrassa or Barcelona.

Full-or-part-time: 22h 30m
Laboratory classes: 22h 30m

Case Seminars.

Description:
Seminars in which the cases seen in the practical sessions and others that the teaching staff may propose will be discussed.

Specific objectives:
Share with the entire group the most interesting lessons that may arise from each of the cases.
Go into greater depth on those aspects that the teacher thinks are most relevant to the cases, encouraging a critical review of the actions in the office.

Full-or-part-time: 7h 30m
Laboratory classes: 7h 30m

EUROPEAN DIPLOMA IN OPTOMETRY COMPETENCES

Description:
This module contributes to the European Diploma in Optometry competencies indicated in the following link:
https://drive.google.com/drive/folders/1bwmHBsvkrGnY63DfXAnWZB_i0I2pXa-I?usp=drive_link

CLINICAL PORTFOLIO

Description:
A complete contact lens fitting case will be performed.
Example of information needed for a contact lens fitting case.
Not only should it contain the specific contact lens information,
it should also include a complete baseline eye exam including segment assessment prior to fitting the lens.

- 1. Complete eye exam.
- 2. Contact lens specific testing
o Refraction
o Corneal topographic data:
â☐☐ Central and peripheral keratometry readings.
â☐☐ Corneal topography images with legible K readings.
â☐☐ Selected preliminary lens data
o Preliminary lens evaluation including supporting testing.
â☐☐ Images or videos showing lens movement and position.
â☐☐ Fluorescein evaluation (for RGP lenses)
o Preliminary lens refraction.
- 3. Observations.
- 4. Action plan:
â☐☐ Include the changes you need to make to improve the fit of the lens.
â☐☐ Explain why you have made the changes.
â☐☐ Include a follow-up visit with evaluation of the fit of the lens.
â☐☐ Include the data of the prescribed lens.
- 5. Case discussion:
Choose a soft contact lens fitting (astigmatism > 2 diopters).

Full-or-part-time: 5h
Self study: 5h

GRADING SYSTEM

Initial level exam (20%)
Case dossier (40%)
Evaluation of practical sessions (40%)
A necessary condition for passing the course will be to have completed all the compulsory tasks of the course.

There is no Reassessment.

The assessment of transversal competences will be carried out in accordance with the document approved by the permanent commission on April 14, 2021:
"Evaluation of the Transversal Competencies in the FOOT for the Degree studies in Optics and Optometry (2020 plan) or future modifications that may be approved.

There is no option to re-evaluate the subject.

EXAMINATION RULES.

Attendance at clinical sessions and seminars is mandatory.
Unjustified absence from more than 10% of the sessions will result in a grade of NP in the subject.

In the evaluation of the practical sessions, the teaching staff will follow a rubric according to which the following will be evaluated:
the student's communication skills with the patient, the competence to carry out and interpret the tests prior to fitting,
the competence to analyse the results and propose a solution with contact lenses, the skills of handling and inserting the lenses,
the competence to evaluate the trial lenses, the competence to make a final order and a first review of the LC.

In the event of partial or total copying in any of the evaluations of the subject, the provisions of the General Academic Regulations of the UPC will apply:
"Irregular actions that may lead to a significant variation in the grade of one or more students constitute a fraudulent performance of an assessment act.
This action involves a descriptive grade of fail and a numerical grade of 0 for the assessment act and the subject, without prejudice to the disciplinary process that may arise as a consequence of the acts carried out.
If the student considers the decision incorrect, he or she may file a complaint with the director or dean of the educational center and, if the response does not satisfy him or her, he or she may appeal to the rector.
The total or partial reproduction of academic or research works, or their use for any other purpose, must have the explicit authorization of the authors.
It is the responsibility of the director or dean of the educational center to resolve allegations regarding aspects not included in the regulations."

BIBLIOGRAPHY

Basic:
- Efron, Nathan. Contact lens complications [on line]. 4th ed. Philadelphia: Elsevier, 2018 [Consultation: 13/12/2024]. Available on: https://www-sciencedirect-com.recursos.biblioteca.upc.edu/book/9780702076114/contact-lens-complications. ISBN 9780702076114.
- Veys, Jane; Meyler, John; Davies, Ian. Essential contact lens practice. Oxford [etc.]: Butterworth Heinemann, 2002. ISBN 0750649127.
- González-Cavada, Javier. Atlas de lámpara de hendidura y lentes de contacto. 2ª ed. Grupo ICM de Comunicación, 2015. ISBN 9788493965686.
- Martín Herranz, Raúl. Contactología aplicada : un manual práctico para la adaptación de lentes de contacto. Madrid: Imagen y Comunicación Multimedia, 2005. ISBN 8493356956.