Course guide
370012 - INSTRUMOPT - Optometrics Instruments

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: 2023  ECTS Credits: 6.0  Languages: Catalan

LECTURER

Coordinating lecturer: Núria Tomas Corominas, TU
(http://futur.upc.edu/NuriaTomasCorominas

Others: Alvarez Muñoz, José Luis TEU
https://futur.upc.edu/JoseLuisAlvarezMunoz

PRIOR SKILLS

Have a solid knowledge of geometrical optics, instrumental optics, and visual optics

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE04. (ENG) The ability to understand the process of image formation and the properties of optical systems. The ability to understand aberrations in optical systems. The ability to understand radiometric and photometric fundamentals and laws.
CE07. (ENG) The ability to understand and manage basic laboratory materials and techniques.
CE09. (ENG) The ability to understand the principles, descriptions and characteristics of basic optical instruments and the instruments used in optometric and ophthalmic practice.
CE22. (ENG) Conèixer i aplicar ajudes òptiques i no òptiques per a la baixa visió.

General:
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.

CG8. Plan and carry out research projects that contribute to the production of knowledge in the field of optometry and disseminate this scientific knowledge via the typical communication channels.
CG9. Expand and update one's professional abilities through continuing education.

Transversal:
CT7. Foreign language. Demonstrate knowledge of a foreign language, preferably English, at an oral and written level that is consistent with graduates’ future needs.

CT2. SUSTAINABILITY AND SOCIAL COMMITMENT: Being aware of and understanding the complexity of the economic and social phenomena typical of a welfare society, and being able to relate social welfare to globalisation and sustainability and to use technique, technology, economics and sustainability in a balanced and compatible manner.
TEACHING METHODOLOGY
MD1 - Participatory lecture class of theoretical and practical content
MD2 - Active methodologies in the classroom (project-based learning (PBL), case studies, role-playing games, cooperative learning, ...)
MD3 - Practical class of resolution, with the participation of the students, of practical cases and / or exercises related to the contents of the subject
MD4 - Laboratory practices

LEARNING OBJECTIVES OF THE SUBJECT
Objectiu: conèixer els instruments òptics fonamentals, així com els instruments optomètrics

STUDY LOAD

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<th>Type</th>
<th>Hours</th>
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<td>Hours small group</td>
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Total learning time: 150 h

CONTENTS

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**ACTIVITIES**

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Europena Diploma

Related competencies:
CE09. (ENG) The ability to understand the principles, descriptions and characteristics of basic optical instruments and the instruments used in optometric and ophthalmic practice.

Full-or-part-time: 1h
Guided activities: 1h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:
- Arjona, Montserrat; Tomàs, Núria; Arasa, Josep. "El queratómetro ¿Por qué hay tanta variedad?". Ver y oir. 2002, núm. 170, p. 758-768.

Complementary: