

370534 - TSBL0M - Surface Treatments in Biomaterials, Lenses and Frames

Coordinating unit: 370 - FOOT - Terrassa School of Optics and Optometry
Teaching unit: 713 - EQ - Department of Chemical Engineering
Academic year: 2019
Degree: BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2009). (Teaching unit Optional)
ECTS credits: 6 Teaching languages: Catalan

Teaching staff

Coordinator: - JUAN TORRENT BURGUES (<http://futur.upc.edu/JuanTorrentBurgues>)
Others: Joan Torrent (<http://futur.upc.edu/JuanTorrentBurgues>)
Ester Gaus (<http://futur.upc.edu/EsterGausGuerrero>)

Degree competences to which the subject contributes

Specific:

0. Applying the scientific basis needed for the development of the profession.

1.2.2. Establish protocols, analyze results and elaborate the corresponding reports

3a.3.1. Distinguish between the characteristics of materials and designs of various types of ophthalmic lenses (including prisms and filters) and frames, and understand the basic principles of optics and not optical systems used for low vision.

0.8. Being able to take, treat, represent and interpret experimental data. "Use basic laboratory equipment and techniques"

Generical:

T4.2.3. Working with evidence, methodology and rigour.

T4.1.3. Encourage methodical work, rigorous, consistent and innovative

T3. Teamwork

Teaching methodology

Learning objectives of the subject



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Study load

Total learning time: 150h	Hours large group:	0h	0.00%
	Hours medium group:	32h	21.33%
	Hours small group:	28h	18.67%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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Content

(ENG) -Tema 1	Learning time: 30h Practical classes: 6h Laboratory classes: 7h Self study : 17h
Description: Surfaces and interfaces.	
(ENG) -Tema 2	Learning time: 24h Practical classes: 5h Laboratory classes: 4h Self study : 15h
Description: The surface of biomaterials	
(ENG) -Tema 3	Learning time: 30h 30m Practical classes: 7h Laboratory classes: 4h 30m Self study : 19h
Description: Optical coatings	
(ENG) -Tema 4	Learning time: 8h Practical classes: 3h Self study : 5h
Description: Damages and treatments on lens	
(ENG) -Tema 5	Learning time: 32h 30m Practical classes: 7h Laboratory classes: 6h 30m Self study : 19h
Description: Damages and treatments on metal and plastic mounting	

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Exam	Learning time: 25h Practical classes: 4h Laboratory classes: 6h Self study : 15h
Description: Exams	

Qualification system

Regulations for carrying out activities

Bibliography

Basic:

Torrent Burgués, J. Química de superficies y tratamientos superficiales en materiales ópticos. Terrassa: L'autor, 2003. ISBN 8460785467.

Gaus Guerrero, E. Apunts de caracterització i propietats de muntures. Terrassa, 2002.