

370539 - ERGONOMIA - Visual Ergonomics

Coordinating unit: 370 - FOOT - Terrassa School of Optics and Optometry
Teaching unit: 731 - OO - Department of Optics and Optometry
Academic year: 2019
Degree: BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2009). (Teaching unit Optional)
ECTS credits: 6 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: José Luis Alvarez Muñoz (<http://futur.upc.edu/JoseLuisAlvarezMunoz>)
Others: Montserrat Tàpias Anton (<http://futur.upc.edu/MontserratTapiasAnton>)

Degree competences to which the subject contributes

Specific:

- 0. Applying the scientific basis needed for the development of the profession.
- 0.6. Apply geometry, calculations and statistics for modeling and solving problems related to optics and optometry.
- 0.8. Being able to take, treat, represent and interpret experimental data. "Use basic laboratory equipment and techniques"
- 0.10. Technical english applied to optics and optometry
- 1. Intervention in health care and prevention of visual health.
 - 1.0.1. Prevent problems with visual health
 - 1.0.3. Collaborate with other interdisciplinary professionals to get a comprehensive eye care
 - 1.2.1. Being able to design and create the optimal work environment to prevent the development of visual problems
 - 1.2.3. Ability to write and interpret a report
 - 1.3.2. Designing protocols for prevention of visual health
- 3a.1.1. Understand the different functions that can have glasses: compensation of ametropias, eye protection to general and labour use, low vision aids.
- 3a.4.3. Transmit the user the necessary information for make a good use of the compensator system (prescription glasses, protective glasses or optical aids)

Generical:

- T1.1.2. Adaptation of all the fields of professional activity envers compatible aspects with the medium ambient (recycling, reuse of the materials,...)
- T1.2.2. Being able to collaborate on initiatives, both locally and globally, committed to improving the visual health of the population
- T2.1.1. Extract the main points of a text or any source of information (oral or written)
- T2.2.1. Synthesize and organize information to convey it effectively orally and / or written
- T2.3.1. Display information orally and in writing of reasonably and coherent.
- T2.3.2. Judgments (ratings) reports and surveys

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T3. Teamwork

T3.0.1. Being able to participate in multidisciplinary working groups, multicultural and multilingual

T3.2.1. Define the general objectives and to carry out a specific group

T3.3.2. Acquire communication techniques appropriate to ensure the success of teamwork

T4. Work independently and with initiative

T4.0.1. Analyze and relate the knowledge and acquired skills.

T4.0.2. Expand and upgrade skills for professional practice and knowledge through continuing education

T4.0.3. Be innovative and entrepreneurial

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

T4.2.1. Value the methods used to achieve the objectives.

T4.2.2. Value and incorporate technological necessary improvements for the proper development of the profession

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

T4.3.1. Reflect and be able to make a critic of the knowledge and developed skills and the level of achievement.

T5. Use reliable information resources. Manage the acquisition, structuring, analysis and visualization of data and information in the field of specialty and critically evaluate the results of this management.

T6. Third language. To learn a third language, which is mainly English, with an adequate level of oral and written according to the needs of graduates have the qualifications.

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:	48h	32.00%
	Hours small group:	12h	8.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%



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Content

title english	Learning time: 5h Practical classes: 2h Laboratory classes: 0h Self study : 3h
Description: content english	
title english	Learning time: 10h 30m Practical classes: 3h 30m Laboratory classes: 1h Self study : 6h
Description: content english	
title english	Learning time: 12h Practical classes: 2h Laboratory classes: 3h Self study : 7h
Description: content english	
title english	Learning time: 4h 30m Practical classes: 2h Laboratory classes: 0h Self study : 2h 30m
Description: content english	

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<p>title english</p>	<p>Learning time: 4h 30m Practical classes: 2h Laboratory classes: 0h Self study : 2h 30m</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 10h Practical classes: 2h Laboratory classes: 2h Self study : 6h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 8h 30m Practical classes: 3h 30m Laboratory classes: 0h Self study : 5h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 7h Practical classes: 3h Laboratory classes: 0h Self study : 4h</p>
<p>Description: content english</p>	

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<p>title english</p>	<p>Learning time: 10h 30m Practical classes: 3h 30m Laboratory classes: 1h Self study : 6h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 10h Practical classes: 3h Laboratory classes: 1h Self study : 6h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 6h Practical classes: 2h Laboratory classes: 0h Self study : 4h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 4h 30m Practical classes: 1h 30m Laboratory classes: 0h Self study : 3h</p>
<p>Description: content english</p>	

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<p>title english</p>	<p>Learning time: 8h 30m Practical classes: 2h 30m Laboratory classes: 1h Self study : 5h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 10h Practical classes: 3h Laboratory classes: 1h Self study : 6h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 4h 30m Practical classes: 1h 30m Laboratory classes: 0h Self study : 3h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 11h 30m Practical classes: 3h Laboratory classes: 2h Self study : 6h 30m</p>
<p>Description: content english</p>	

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<p>title english</p>	<p>Learning time: 8h Practical classes: 3h Laboratory classes: 0h Self study : 5h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 5h Practical classes: 2h Laboratory classes: 0h Self study : 3h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 4h Practical classes: 1h 30m Laboratory classes: 0h Self study : 2h 30m</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 5h 30m Practical classes: 1h 30m Laboratory classes: 0h Self study : 4h</p>
<p>Description: content english</p>	

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Planning of activities

name english	Hours: 2h Laboratory classes: 2h
name english	Hours: 2h Laboratory classes: 2h
name english	Hours: 2h Laboratory classes: 2h
name english	Hours: 2h Laboratory classes: 2h
name english	Hours: 2h Laboratory classes: 2h
name english	Hours: 2h Laboratory classes: 2h
name english	Hours: 2h Practical classes: 2h
name english	Hours: 2h Practical classes: 2h
name english	Hours: 2h Practical classes: 2h
name english	Hours: 2h Practical classes: 2h

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name english	Hours: 4h Practical classes: 4h
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Qualification system

The final mark is the partial sum of the following qualifications:

$$QF=0.15 \cdot PAC1 + 0.15 \cdot PAC2 + 0.4 \cdot PAF + 0.1 \cdot EA + 0.2 \cdot PAL$$

QF: final results

PAC1: first test of continuous assessment

PAC2: second test of continuous assessment

EA: classroom exercises

PAL: laboratory test

Bibliography

Basic:

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Complementary:

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