

370533 - ESTADÍSTIC - Introduction to Statistical Analysis of Visual Data

Coordinating unit: 370 - FOOT - Terrassa School of Optics and Optometry
Teaching unit: 727 - MA III - Department of Applied Mathematics III
Academic year: 2012
Degree: BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY (Syllabus 2009). (Teaching unit Optional)
ECTS credits: 6 Teaching languages: Catalan

Teaching staff

Coordinator: MIGUEL RALLO CAPDEVILA

Degree competences to which the subject contributes

Specific:

1. Apply geometry, calculations and statistics for modeling and solving problems related to optics and optometry.
2. Being able to take, treat, represent and interpret experimental data. "Use basic laboratory equipment and techniques"
3. Establish protocols, analyze results and elaborate the corresponding reports
4. Designing protocols for prevention of visual health
5. Detecting the need to derive the patient with the corresponding report to the appropriate professional and be able to collaborate keeping the follow-up of the patient
6. Acquire skills in patient care
7. Recognize the characteristics of different population groups according to the age, or demands or visual needs.

Generical:

8. - Know the influence of the visual health in the education and the global well-being (and the development)
- Know the influence of the visual health for the development
- Know the fundamental values of the bioethics
- Know the model of sustainable development
- Know the environmental and social impacts of the technology
9. Extract the main points of a text or any source of information (oral or written)
10. Develop empathy with people
11. Display information orally and in writing of reasonably and coherent.
12. Judgments (ratings) reports and surveys
13. Assessing the acquisition of the course objectives.
14. Encourage methodical work, rigorous, consistent and innovative
15. Working with evidence, methodology and rigour.



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Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	0h	0.00%
	Hours medium group:	21h	14.00%
	Hours small group:	45h	30.00%
	Guided activities:	0h	0.00%
	Self study:	84h	56.00%

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Content

(ENG) 1. Seminaris Clínics	Learning time: 32h Practical classes: 9h Self study : 23h
(ENG) 2. Atenció a pacients	Learning time: 30h Laboratory classes: 18h Self study : 12h
(ENG) 3. Població i Mostra. Estadístics mostrals.	Learning time: 15h Practical classes: 3h Laboratory classes: 6h Self study : 6h
(ENG) 4. Estimació per intervals. Contrastos d'hipòtesis	Learning time: 15h Practical classes: 3h Laboratory classes: 6h Self study : 6h
(ENG) 5. Relació entre dues variables.	Learning time: 15h Practical classes: 3h Laboratory classes: 6h Self study : 6h
(ENG) 6. Variables amb distribució no normal	Learning time: 9h Practical classes: 3h Laboratory classes: 3h Self study : 3h

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(ENG) 7. Treball final	Learning time: 34h Laboratory classes: 6h Self study : 28h
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Planning of activities

(ENG) 1. PRÀCTIQUES AL CUV
(ENG) 2. PRÀCTIQUES D'ESTADÍSTICA
(ENG) 3. QÜESTIONARIS DE TEORIA
(ENG) 4. TREBALL FINAL
(ENG) 5. ACTIVITATS D'APRENTATGE ACTIU

Bibliography

Basic:

- Peck, R.; Olsen, C.; Devore, J. Introduction to statistics and data analysis. Pacific Grove: Duxbury, 2001. ISBN 0534370926.
- Johnson, R.A.; Bhattacharyya, G.K. Statistics: principles and methods. 4th ed. New York: John Wiley & Sons, 2001. ISBN 0471388971.
- Prevent Blindness America. Preschool vision screening for healthcare professionals. Schaumburg, Illinois: American Academy of Pediatrics, 2005. ISBN 1581101600.
- Moreno i Oliver, F.X. Visió i aprenentatge: bateria per al diagnòstic de la visió a l'escola. Bellaterra: Universitat Autònoma de Barcelona. Servei de Publicacions, 2002. ISBN 8449022894.
- Pediatric vision screening. Vol 98. American Academy of Pediatrics, 1996.

Complementary:

- Freedman, D. [et al.]. Statistics. 2nd ed. New York: W.W. Norton, 1991. ISBN 0393960439.