



Course guide

370019 - PERCEPVIS - Visual Perception

Last modified: 16/04/2024

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: MERITXELL VILASECA, CATEDRÀTICA PERMANENT,
<https://futur.upc.edu/MeritxellVilasecaRicart>

Others: Aurora Torrents, PROFESSORA TITULAR, <https://futur.upc.edu/AuroraTorrentsGomez>
Jaume Pujol, CATEDRÀTIC FUNCIONARI, <https://futur.upc.edu/JaumePujolRamo>

PRIOR SKILLS

It is recommended to have completed VISUAL OPTICS, FUNDAMENTALS OF BINOCULAR VISION, PHYSIOLOGY I BIOCHEMISTRY, PHOTOMETRY AND OPTICAL INSTRUMENTS, ANATOMY OF THE VISUAL SYSTEM.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CE13. Understand the factors that limit retinal image quality. Demonstrate knowledge of the spatial and temporal aspects of vision. Carry out psychophysical tests to determine levels of visual perception. Demonstrate knowledge of the functioning of the retina as a receptor of radiant energy. Demonstrate knowledge of the basic models of vision of colour, shape and movement. Demonstrate knowledge of age-related changes in perceptual processes. Measure and interpret psychophysical data obtained from an assessment of visual perception.

Generical:

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

Transversal:

CT3. Teamwork. To be able to work as a member of a multidisciplinary team, either as a base member or undertaking managerial decisions aiming at developing projects from a practical and responsible standpoint, adopting commitments given the available resources

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

2. Competence in carrying out instrumental tests for the evaluation of visual functions and eye health.



STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours small group	15,0	10.00
Hours medium group	45,0	30.00

Total learning time: 150 h

CONTENTS

title english

Description:

content english

Full-or-part-time: 5h

Practical classes: 2h

Self study : 3h

content english

Description:

content english

Related activities:

content english

Full-or-part-time: 7h

Practical classes: 3h

Self study : 4h

title english

Description:

content english

Full-or-part-time: 12h

Practical classes: 5h

Self study : 7h

title english

Description:

content english

Full-or-part-time: 12h

Practical classes: 5h

Self study : 7h



title english

Description:

content english

Full-or-part-time: 9h

Practical classes: 4h

Self study : 5h

title english

Description:

content english

Full-or-part-time: 12h

Practical classes: 5h

Self study : 7h

title english

Description:

content english

Full-or-part-time: 5h

Practical classes: 2h

Self study : 3h

title english

Description:

content english

Full-or-part-time: 5h

Practical classes: 2h

Self study : 3h

title english

Description:

content english

Full-or-part-time: 12h

Practical classes: 5h

Self study : 7h



title english

Description:

content english

Full-or-part-time: 7h

Practical classes: 3h

Self study : 4h

title english

Description:

content english

Full-or-part-time: 12h

Practical classes: 5h

Self study : 7h

title english

Description:

content english

Full-or-part-time: 3h

Practical classes: 1h

Self study : 2h

ACTIVITIES

LABORATORY SKILLS

Full-or-part-time: 35h

Laboratory classes: 14h

Self study: 21h

name english

Full-or-part-time: 2h

Practical classes: 2h

name english

Full-or-part-time: 2h

Practical classes: 2h



name english

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

name english

Full-or-part-time: 9h
Self study: 9h

name english

Full-or-part-time: 82h
Practical classes: 82h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Schwartz, Steven H. Visual perception: a clinical orientation. 5th ed. New York: McGraw-Hill, 2017. ISBN 9781259585012.
- Artigas, J.M [et al.]. Óptica fisiológica: psicofísica de la visión. Madrid: McGraw-Hill-Interamericana, cop. 1995. ISBN 8448601157.
- Urtubia Vicario, César. Neurobiología de la visión [on line]. 2ª ed. Barcelona: Edicions UPC, 1999 [Consultation: 24/02/2023]. Available on: <http://hdl.handle.net/2099.3/36204>. ISBN 8483013568.

Complementary:

- Norton, Thomas T; Corliss, David A; Bailey, James E. The psychophysical measurement of visual function. Boston [etc.]: Butterworth-Heinemann, cop. 2002. ISBN 0750699353.
- Bear, M.F.; Connors, B.W.; Paradiso, M.A. Neurociencia: la exploración del cerebro [on line]. 4ª ed. Burlington, MA: Jones & Bartlett Learning, 2016 [Consultation: 13/05/2022]. Available on: <https://web-p-ebshost-com.recursos.biblioteca.upc.edu/ehost/ebookviewer/ebook?sid=92150cd0-98a2-4f45-b0f7-a3d2fd2192ad%40redis&vid=0&format=EK>. ISBN 9781284349023.
- Adler, Francis Heed; Kaufman, Paul L; Alm, Albert. Adler fisiología del ojo: aplicación clínica. 10ª ed. Madrid [etc.]: Elsevier, cop. 2004. ISBN 848174705X.
- Romero Mora, Javier; García García, José Antonio; García Beltrán, Antonio. Curso introductorio a la óptica fisiológica. Granada: Comares, DL 1996. ISBN 8481512533.
- Schiffman, Harvey Richard. Sensation and perception: an integrated approach. 3rd ed. New York [etc.]: John Wiley & Sons, cop. 1990. ISBN 0471610488.
- Valberg, Arne. Light vision color. Hoboken, N.J: John Wiley & Sons, cop. 2005. ISBN 0470849037.
- Cornsweet, Tom N. Visual perception. New York: Academic Press, [1970]. ISBN 0155949365.
- Birch, Jennifer. Diagnosis of defective colour vision. 2nd ed. Oxford [etc.]: Butterworth-Heinemann, 2001. ISBN 0750641746.
- De Valois, Russell L; De Valois, Karen K. Spatial vision. New York; Oxford: Oxford University Press: Clarendon Press, cop. 1990. ISBN 019506657X.