

Course guide

370018 - MICRO - Microbiology

Last modified: 11/03/2024

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, Spanish

LECTURER

Coordinating lecturer: Miquel Bellmunt, Nuria
Parladé Molist, Eloi

Others:

PRIOR SKILLS

The knowledge acquired in the subjects of Anatomy of the Visual System and Physiology and Biochemistry taken in the Degree in Optics and Optometry
They will constitute the essential basis to be able to carry out correct monitoring and use of the subject.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

CE02. Determine the functions of systems in the human body. Demonstrate knowledge of the principles and foundations of the biological processes involved in the normal functioning of the visual system. Recognise, with macroscopic and microscopic methods, the morphology and structure of the tissues, organs and systems in the human body. Demonstrate knowledge of and describe, macroscopically and microscopically, the structures that make up the visual system and ocular adnexa. Demonstrate knowledge of the structure of the cell, embryonic development and organogenesis. Describe the development of the visual system. Demonstrate knowledge of the microorganisms involved in visual system disorders. Demonstrate knowledge of the properties and functions of the various parts that make up the visual system.

CE07. (ENG) The ability to understand and manage basic laboratory materials and techniques.

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.

CG13. Demonstrate and interpret methods for critical analysis and theory development and apply them to the field of optometry.

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.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

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STUDY LOAD

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

Total learning time: 150 h

CONTENTS

title english

Description:

content english

Full-or-part-time: 6h

Practical classes: 2h

Self study : 4h

title english

Description:

content english

Full-or-part-time: 46h

Practical classes: 13h 20m

Laboratory classes: 6h

Self study : 26h 40m

title english

Description:

content english

Full-or-part-time: 18h

Practical classes: 4h

Laboratory classes: 6h

Self study : 8h

title english

Description:

content english

Full-or-part-time: 43h

Practical classes: 14h 20m

Self study : 28h 40m



title english

Description:

content english

Full-or-part-time: 12h

Practical classes: 3h

Laboratory classes: 6h

Self study : 3h

title english

Description:

content english

Full-or-part-time: 25h

Theory classes: 8h 20m

Self study : 16h 40m

ACTIVITIES

name english

Full-or-part-time: 20h

Laboratory classes: 8h

Self study: 12h

name english

Full-or-part-time: 17h 30m

Laboratory classes: 7h

Self study: 10h 30m

name english

Full-or-part-time: 6h

Practical classes: 6h

name english

Full-or-part-time: 3h

Practical classes: 3h

name english

Full-or-part-time: 3h

Self study: 3h



name english

Description:

The subject MICROBIOLOGY participates in the competences of the European diploma nº 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 of the area C18 " general Microbiology and Immunology Knowledge" with a weight of 6 ECT

Full-or-part-time: 1h

Practical classes: 1h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Madigan, Michael T; Martinko, John M; Parker, Jack. Brock biología de los microorganismos [on line]. 14ª ed. Madrid [etc.]: Pearson Educación S.A., cop. 2015 [Consultation: 06/05/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=5850. ISBN 9788490352793.
- Murray, Patrick R; Rosenthal, Ken S; Pfaller, Michael A. Microbiología médica. 6ª ed. Elsevier Science, cop. 2009. ISBN 9788480864657.
- Ingraham, John L; Ingraham, Catherine A. Introduction to microbiology. 2nd ed. Pacific Grove: Brooks/Cole Thomson Learning, cop. 2004. ISBN 0534394655.
- Stagner, Anna M [et al.]. "Infections of the eye and its adnexa". Kradin, Richard L. Diagnostic pathology of infectious disease. Philadelphia: Elsevier, 2018. p. 648-685.
- Díaz López, MD [et al.]. Diagnóstico microbiológico de las infecciones oculares. 2019. 31a [on line]. Madrid: Sociedad Española de Enfermedades Infecciosas y Microbiología, 2019 [Consultation: 23/02/2023]. Available on: <https://seimc.org/contenidos/documentoscientificos/procedimientosmicrobiologia/seimc-procedimientomicrobiologia31A.pdf>. ISBN 9788409158775.

Complementary:

- Gardner, Joan F; Peel, Margaret M. Introduction to sterilization, disinfection and infection control. 2nd ed. Melbourne [etc.]: Churchill Livingstone, cop. 1991. ISBN 0443042861.
- Renneberg, Reinhard; Centelles Serra, Josep Joan; Ferrer Peralta, María Magdalena. Biotecnología para principiantes [on line]. Barcelona: Reverté, cop. 2008 [Consultation: 09/05/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=8599. ISBN 9788429174830.
- Archivos de la Sociedad Española de Oftalmología. Madrid: Elsevier Doyma, 1971-.
- Bennett, John; Dolin, Raphael; Blaser, Martin J. Mandell, Douglas, and Bennett's : Principles and practice of infectious diseases. 2015. Saunders Co, 2015.

RESOURCES

Audiovisual material:

- Nom recurs. Resource