

26809 - Optical Physics

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	297 - Degree in Optics and Optometry
ECTS	6.0
Course	2
Period	First semester
Subject Type	Compulsory
Module	---

1. Basic info

1.1. Recommendations to take this course

1.2. Activities and key dates for the course

2. Initiation

2.1. Learning outcomes that define the subject

2.2. Introduction

3. Context and competences

3.1. Goals

3.2. Context and meaning of the subject in the degree

3.3. Competences

3.4. Importance of learning outcomes

4. Evaluation

5. Activities and resources

5.1. General methodological presentation

5.2. Learning activities

5.3. Program

1.- Introduction. Nature of light.

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- 2.- Waves; basic concepts.
- 3.- Electromagnetic waves; fundaments.
- 4.- Interferences.
- 5.- Diffraction.
- 6.- Polarization.
- 7.- Reflection and refraction of plane waves.
- 8.- Light-matter interaction. Dispersion.
- 9.- Modern Optics.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources

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|-----------|---|
| BB | Cabrera, José Manuel. Óptica electromagnética. Vol. I, Fundamentos / José Manuel Cabrera, Fernando Jesús López, Fernando Agullo López . 2ª ed. Madrid [etc.] : Addison Wesley : Universidad Autónoma de Madrid, cop. 1998 |
| BB | Cabrera, José Manuel. Óptica electromagnética. Vol. II, Materiales y aplicaciones / José Manuel Cabrera, Fernando Agulló López, Fernando Jesús López . Madrid [etc.] : Addison Wesley : Universidad Autónoma de Madrid, D.L. 2000 |
| BB | Casas Pelaez, Justiniano. Optica / Justiniano Casas . - 7a. ed. Zaragoza : [El Autor], 1994 |
| BB | Hecht, Eugene. Optica / Eugene Hecht ; traducción Raffaello Dal Col, revisión técnica Rosa Weingard Talavera, José Manuel Guerra Pérez . - 3a ed. en español Madrid [etc] : Addison-Wesley, D.L. 1999 |

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- BC** Pedrotti, Frank L.. Introduction to optics / Frank L. Pedrotti, Leno S. Pedrotti, Leno M. Pedrotti . - 3rd ed. Upper Saddle River, N.J. : Pearson Prentice Hall, cop. 2007
- BC** Pedrotti, Leno S.. Optics and vision / Leno S. Pedrotti, Frank L. Pedrotti, S. J. Upper Saddle River : Prentice-Hall, cop. 1998