Degree in Physical Engineering
Subject: Photonics
Course: Photonics (6 credits ECTS)
Professors: Ramón Vilaseca; Jose Trull

Course Program

PART II APPLICATIONS OF PHOTONICS

II.1 MICROSCOPY AND IMAGE PROCESSING (BIOPHOTONICS)

II.2 NANOPHOTONICS

II.3 QUANTUM OPTICS

II.4 NONLINEAR OPTICS

II.5 OPTICAL COMMUNICATIONS

II.6 METROLOGY AND MATERIAL PROCESSSING

Bibliography

Basic:

1. Hecht, "*Optics*", (4th edition; Addison Wesley, San Francisco, 2002)

2. B.E.A Saleh and M.C. Teich " *Fundamentals of Photonics*" (2nd edition, John Wiley & Sons, Inc. New York, 2007)

Complementary:

3. J. M. Cabrera, F.J. López, F. Agulló, "Óptica Electromagnética" Vols. 1 y 2 (2ª ed. Addison- Wesley/Universidad Autónoma de Madrid, Madrid, 2006)

4. R. Loudon, "The Quantum Theory of Light" (3 ed. Oxford University Press, 2000)

Evaluation system

The students evaluation will consist of a final exam (EF), a partial exam (EP) and an evaluation of the student's participation in the exercise classes and in the realization of an assigned task (P). The final mark will be given by:

Max(EF,0.55*EF+0.30*EP+0.15*P)