Course guides
32138 - NDPCM - Optical Metamaterials

Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 748 - FIS - Department of Physics.
Degree: MASTER'S DEGREE IN PHOTO-NIC (Syllabus 2009). (Optional subject).
ERASMUS MUNDUS MASTER'S DEGREE IN PHOTO-NICS ENGINEERING, NANOPHOTONICS AND BIOPHOTONICS (Syllabus 2010). (Optional subject).

Academic year: 2015 ECTS Credits: 2.5 Languages: English

LECTURER
Coordinating lecturer: KESTUTIS STALIUNAS
Others: RAMON HERRERO

TEACHING METHODOLOGY
PRESENCIAL TEACHING + ACTIVITIES

LEARNING OBJECTIVES OF THE SUBJECT
An introduction of the main concepts and a perspective of the current research on light propagation and light dynamics in spatially modulated materials like Photonic Crystals or Methamaterials, allowing the understanding of the latest scientific literature in this field

CONTENTS

-An introduction of few fundamental concepts, subjects of current interest in the topic of nonlinear dynamics of optical systems will be studied.

Fundamentals in the general theory of Photonic Crystals

One dimensional Photonic Crystals

Two and three dimensional Photonic Crystals

Modification of diffraction

Nonlinear Photonic Crystals
GRADING SYSTEM

The full grade will be assigned according to the attendance to and participation in the lectures, and upon completion of a project based on either what has been discussed in the lectures or a scientific paper related to the topics discussed in the course.

EXAMINATION RULES.

THE USUAL IN UNIVERSITY TEACHING

BIBLIOGRAPHY

Basic:

Complementary:
- Depending on the contents of the course.