Course guides
32086 - OTN - Optical Telecommunication Networks

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Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 731 - OO - Department of Optics and Optometry.

Degree: DOCTORAL DEGREE IN PHOTONICS (Syllabus 2007). (Optional subject).
MASTER'S DEGREE IN PHOTONICS (Syllabus 2009). (Optional subject).
ERASMUS MUNDUS MASTER'S DEGREE IN PHOTONICS ENGINEERING, NANOPHOTONICS AND BIOPHOTONICS (Syllabus 2010). (Optional subject).

Academic year: 2015  ECTS Credits: 2.5  Languages: English

LECTURER

Coordinating lecturer: Maria C. Santos
Others: Josep Prat

TEACHING METHODOLOGY

Presencial Teaching + activities

LEARNING OBJECTIVES OF THE SUBJECT

Fabrication of optical elements is one of the key aspects for proper optical performance. Several techniques are applied to transform the native material into an optical element until the desired specifications are achieved. The fabrication of microoptics, conventional glass or plastic optics, fibers and compound optical elements will be analyzed in depth in this course. Students will be provided with the basic knowledge on the fabrication techniques of optical elements from two different sides: the manufacture of the element itself and the manufacture of an assembled compound optical system.

CONTENTS

(ENG) Microwave-Photonic Systems: concepts and devices

(ENG) Radio-over-fiber systems

(ENG) Antenna optical beam forming and beam steering networks

(ENG) Terahertz Photonics

(ENG) Microwave-photonic and Terahertz systems case studies
GRADING SYSTEM

Home assignments, class exercises and participation
Project on network design

EXAMINATION RULES.

The usual in University teaching

BIBLIOGRAPHY

Basic: