Course guides
32085 - ORS - Optical Remote Sensing

Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications.
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: Francesc Rocadenbosch (07/08)
Others: Alejandro Rodríguez (07/08), Michaël Sicard, Federico Dios

TEACHING METHODOLOGY

Presencial Teaching + activities

LEARNING OBJECTIVES OF THE SUBJECT

This course focus on a tutorial discussion of the main techniques, systems and subsystems related to optical remote sensing both active (laser radar or lidar) and passive. The course presents the grounds of the optical, electro-optical technologies, and physical processes involved as well as the applications of these remote sensing systems in present-day fields such as detection and monitoring of chemical species, Earth observation, atmospheric concentration (pollution) and physical variables, and others, up to a point, of industrial application.

CONTENTS

(ENG) - Introduction to optical remote sensing
(ENG) - Optical and technological considerations for remote sensing
(ENG) - Active remote sensing systems (laser radar)
(ENG) - Passive remote sensing
GRADING SYSTEM

Resolution of one or more problems (usually computer based, 50%) and final test exam (50%). Subjective evaluation will give special weight to continuous assessment of student's progress and interactivity in the discussion sessions of the course as well as to course attendance (80% minimum).

EXAMINATION RULES.

The usual in University teaching

BIBLIOGRAPHY

Basic:

Complementary: