32085 - ORS - Optical Remote Sensing

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 739 - TSC - Department of Signal Theory and Communications
Academic year: 2015
Degree: MASTER'S DEGREE IN PHOTONICS (Syllabus 2009). (Teaching unit Optional)
ERASMUS MUNDUS MASTER'S DEGREE IN PHOTONICS ENGINEERING, NANOPHOTONICS AND BIOPHOTONICS (Syllabus 2010). (Teaching unit Optional)
DOCTORAL DEGREE IN PHOTONICS (Syllabus 2007). (Teaching unit Optional)
ECTS credits: 2.5

Teaching staff
Coordinator: 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.
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).

Bibliography

Basic:

Complementary: