### 32062 - FT - Fibres and Telecommunications

<table>
<thead>
<tr>
<th>Coordinating unit:</th>
<th>230 - ETSETB - Barcelona School of Telecommunications Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching unit:</td>
<td>731 - 00 - Department of Optics and Optometry</td>
</tr>
<tr>
<td>Academic year:</td>
<td>2015</td>
</tr>
<tr>
<td>Degree:</td>
<td>MASTER'S DEGREE IN PHOTONICS (Syllabus 2009). (Teaching unit Optional)</td>
</tr>
<tr>
<td></td>
<td>ERASMUS MUNDUS MASTER'S DEGREE IN PHotonics ENGINEering, Nanophotonics And Biophotonics (Syllabus 2010). (Teaching unit Optional)</td>
</tr>
<tr>
<td></td>
<td>Doctoral Degree in Photonics (Syllabus 2007). (Teaching unit Optional)</td>
</tr>
<tr>
<td>ECTS credits:</td>
<td>5</td>
</tr>
<tr>
<td>Teaching languages:</td>
<td>English</td>
</tr>
</tbody>
</table>

#### Teaching staff

- **Coordinator:** JOSÉ ANTONIO LÁZARO
- **Others:** JOSEP PRAT

#### Teaching methodology

Presencial teaching + activities

#### Learning objectives of the subject

Optical fibers are one of the most relevant technological achievements of photonics, as all the Internet traffic generated in any European country can be transported by a single fiber. Nevertheless, several physical effects limit the maximum transmission distance, influenced also by performance limitations of optical sources, amplifiers and receivers used in contemporary fiber-optical communication system. Fibers and Telecoms provides a comprehensive overview of the key characteristics of the optical and optoelectronic technologies and components used in up-to-date transmission systems. One of the main goals of F&T is to provide a solid background to physicists and engineers for: designing and dimensioning optical communication systems, with the assistance of tutorial software, and the understanding of the physical phenomena limiting current systems and the new photonic technologies overcoming current limitations.
32062 - FT - Fibres and Telecommunications

Content

(ENG) - Light propagation in fibers

Degree competences to which the content contributes:

(ENG) - Optical transmitter and receivers

Degree competences to which the content contributes:

(ENG) - Lightwave systems

Degree competences to which the content contributes:

(ENG) - Optical amplifiers

Degree competences to which the content contributes:

(ENG) - Multichannel systems and networks

Degree competences to which the content contributes:

Qualification system

Class exercises and participation

Team work for solving a System project with tutorial software

Oral presentation of the main challenges and results of the project

Regulations for carrying out activities

The usual in University teaching
Bibliography

Basic:


Complementary: