"Photonics laboratory" aims to provide the students with an experimental overview over different phenomena and aspects of PHOTONICS that are theoretically studied in the different core and semi-core subjects. The course consists of 5 laboratory works of 8 hours, organized in weekly packets and devoted to different topics of basic and applied photonics. We offer a list of 13 topics. Each student will have to choose five laboratory works from this list, taking into account her/his preferences and availability of laboratories.

Each topic will be covered in two lab sessions of 4 hours. Guidelines for each subject are available in ATENEA, aiming to provide the student with a broad overview on main sides of the topic: a phenomenological study, description and interpretation of a variety of phenomena that the student is suppose to observe in the lab, consolidation of basic theoretical concepts, manipulation of different experimental apparatus, definition of experimental objectives, etc. After the finalization of the work a written report has to be submitted.
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interference and coherence (1)</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Interference and coherence (2)</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Diffraction. Talbot effect</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Polarization and polarizing materials</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) 5. Light-matter interaction phenomena</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Active and nonlinear optical media: lasers and second harmonic generation</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Optical instruments</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Photoemitters and photodetectors. Optical sensing for control and distance measurements.</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
<tr>
<td><strong>(CAST) Optical Image Processing</strong></td>
</tr>
<tr>
<td>Competencias de la titulación a las que contribuye el contenido:</td>
</tr>
</tbody>
</table>
Sistema de calificación

- Evaluation of the 5 reports corresponding to the laboratory works done by the student (60%)
- Evaluation of individual student activity in the laboratory and previous preparation of the guidelines (40%).

Normas de realización de las actividades

The usual in University teaching

Bibliografía

Básica:

Laboratory guidelines with the specific bibliography inside.