32079 - DH - Digital Holography

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering
Teaching unit: 1022 - UAB - (ANG) pendent
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)
DOCTORAL Degree in Optical Engineering (Syllabus 2007). (Teaching unit Optional)
ECTS credits: 2,5  
Teaching languages: English

Teaching staff
Coordinator: Juan Campos (UAB), Estela Martín (UB)
Others: Estela Martín (UB)

Teaching methodology
Presencial Teaching + activities

Learning objectives of the subject
Digital holography is a widespread technique allowing dynamic wave front control, with many applications such as beam steering and shaping, adaptive optics, optical interconnections and holographic optical tweezers, among others. The student will learn how to compute a digital hologram, encode it in a limited diffractive element and optically reconstruct it. This subject is mainly experimental and it is essentially held in the computer room and in the Laboratory.
### 32079 - DH - Digital Holography

<table>
<thead>
<tr>
<th><strong>Content</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(ENG) Introduction</strong></td>
</tr>
<tr>
<td>Degree competences to which the content contributes:</td>
</tr>
<tr>
<td><strong>(ENG) Diffractive elements: constraints</strong></td>
</tr>
<tr>
<td>Degree competences to which the content contributes:</td>
</tr>
<tr>
<td><strong>(ENG) Encoding methods</strong></td>
</tr>
<tr>
<td>Degree competences to which the content contributes:</td>
</tr>
<tr>
<td><strong>(ENG) Other techniques</strong></td>
</tr>
<tr>
<td>Degree competences to which the content contributes:</td>
</tr>
<tr>
<td><strong>(ENG) -</strong></td>
</tr>
<tr>
<td>Degree competences to which the content contributes:</td>
</tr>
</tbody>
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### Qualification system

- At the end of the term the students should give an oral presentation and prepare a dissertation about a practical work developed during the course, which includes the development of a modern hologram encoding method and its optical reconstruction. This is about 75% of the evaluation.
- They should also write down short reports on the practical sessions (about 25% of the evaluation).

### Regulations for carrying out activities

The usual in University teaching
Bibliography

Complementary:


