Course guides
230365 - PCBD - Printed Circuit Board Design

Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 710 - EEL - Department of Electronic Engineering.
Degree: MASTER’S DEGREE IN TELECOMMUNICATIONS ENGINEERING (Syllabus 2013). (Optional subject).
MASTER’S DEGREE IN ELECTRONIC ENGINEERING (Syllabus 2013). (Optional subject).
Academic year: 2019 ECTS Credits: 2.5 Languages: English

LECTURER

Coordinating lecturer: Jimenez Serres, Vicente
Others:

TEACHING METHODOLOGY

Theoretical lectures
Laboratory sessions
Team assignments (at home)

LEARNING OBJECTIVES OF THE SUBJECT

Learn the PCB design basic concepts
Be able to design a medium complexity PCB

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>4.0</td>
<td>6.40</td>
</tr>
<tr>
<td>Self study</td>
<td>42.5</td>
<td>68.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>16.0</td>
<td>25.60</td>
</tr>
</tbody>
</table>

Total learning time: 62.5 h

CONTENTS

Basic PCB concepts

Description:
PCB elements: Base, Tracks, Vias
PCB requirements: Electrical and mechanical
PCB fabrication process
PCB Stack-Up
PCB design from schematic to Gerber files
Full-or-part-time: 16 h
Theory classes: 8h
Self study : 8h
PCB design tutorial

**Description:**
Simple PCB design tutorial using the KiCad application

**Full-or-part-time:** 12 h  
Laboratory classes: 6h  
Self study: 6h

Medium complexity PCB design project

**Description:**
A medium size PCB project will be developed.  
Students will work out the project from the circuit specifications.

**Full-or-part-time:** 34 h  
Laboratory classes: 6h  
Guided activities: 22h 30m  
Self study: 6h

GRADING SYSTEM

Development and delivery of PCB design projects

BIBLIOGRAPHY

**Basic:**