



## 230365 - PCBD - Printed Circuit Board Design

Coordinating unit: 230 - ETSETB - Barcelona School of Telecommunications Engineering  
 Teaching unit: 710 - EEL - Department of Electronic Engineering  
 Academic year: 2017  
 Degree: MASTER'S DEGREE IN TELECOMMUNICATIONS ENGINEERING (Syllabus 2013). (Teaching unit Optional)  
 MASTER'S DEGREE IN ELECTRONIC ENGINEERING (Syllabus 2013). (Teaching unit Optional)  
 ECTS credits: 2,5 Teaching languages: English

### Teaching staff

Coordinator: Jimenez Serres, Vicente

### 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

Total learning time: 62h 30m	Hours large group:	4h	6.40%
	Hours small group:	16h	25.60%
	Self study:	42h 30m	68.00%

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### Content

<p>Basic PCB concepts</p>	<p>Learning time: 16h Theory classes: 8h Self study : 8h</p>
<p>Description: PCB elements: Base, Tracks, Vias PCB requirements: Electrical and mechanical PCB fabrication process PCB Stack-Up PCB design from schematic to Gerber files</p>	
<p>PCB design tutorial</p>	<p>Learning time: 12h Laboratory classes: 6h Self study : 6h</p>
<p>Description: Simple PCB design tutorial using the KiCad application</p>	
<p>Medium complexity PCB design project</p>	<p>Learning time: 34h 30m Laboratory classes: 6h Guided activities: 22h 30m Self study : 6h</p>
<p>Description: A medium size PCB project will be developed. Students will work out the project from the circuit specifications.</p>	

### Qualification system

Development and delivery of PCB design projects

### Bibliography

Basic:

Coombs, Clyde F. Printed circuits handbook. 7th. ed. McGraw-Hill, 2016. ISBN 9780071833950.