

Course guide 230365 - PCBD - Printed Circuit Board Design

Last modified: 11/04/2025

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 2022). (Optional subject).

Academic year: 2025 ECTS Credits: 2.5 Languages: English

LECTURER

Coordinating lecturer: VICENTE JIMENEZ SERRES

Others: Primer quadrimestre:

VICENTE JIMENEZ SERRES - 11

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

Туре	Hours	Percentage
Hours small group	16,0	25.60
Self study	42,5	68.00
Hours large group	4,0	6.40

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: 16h Theory classes: 8h Self study: 8h



PCB design tutorial

Description:

Simple PCB design tutorial using the KiCad application

Full-or-part-time: 12h 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: 34h 30m Laboratory classes: 6h Guided activities: 22h 30m

Self study: 6h

GRADING SYSTEM

Development and delivery of PCB design projects

BIBLIOGRAPHY

Basic:

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

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