# Course guide
# 230365 - PCBD - Printed Circuit Board Design

**Last modified:** 24/05/2024

**Unit in charge:** Barcelona School of Telecommunications Engineering
**Teaching unit:** 710 - EEL - Department of Electronic Engineering.

**Degree:** MASTER'S DEGREE IN ELECTRONIC ENGINEERING (Syllabus 2013). (Optional subject).
MASTER'S DEGREE IN TELECOMMUNICATIONS ENGINEERING (Syllabus 2013). (Optional subject).
MASTER'S DEGREE IN ELECTRONIC ENGINEERING (Syllabus 2022). (Optional subject).

**Academic year:** 2024 **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

| Type | 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.