# Micro-nano technologies

ECTS
3 crédits

Hourly volume
23h

# Introducing

## Description

## Objectives

The goal of the course is to introduce the techniques used in the micro-electronics industry for the fabrication of integrated circuits (photolithography, growth and deposition of thin films, doping, etching techniques), as well as various optical and electrical characterization techniques.
The physical and the chemical processes involved in these techniques are studied.

The complete fabrication process of NMOS and CMOS circuits is presented.

The students are also initiated to the design and the simulation of integrated circuits.

## Necessary prerequisites

Semiconductor physics (electrons, holes, doping, band structure).
Design and working principle of basics electronics components (PN junction, MOS transistor).

## Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

# Practical info

## Location(s)

Toulouse


Non-contractual information