Micro-nano technologies

ECTS
3 crédits

Hourly volume
23h

Introducing

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).

Location(s)

Toulouse

Practical info