UE Micro-Nano Fabrication

Niveau d'étude
Bac +5

ECTS
3 crédits

Composante
UFR Physique, Ingénierie, Terre, Environnement, Mécanique (PhITEM)

Période de l'année
Automne (sept. à dec./janv.)

Diplômes intégrant cet élément

- Master Nanosciences et nanotechnologies

Langue(s) d'enseignement: Français
Ouvert aux étudiants en échange: Oui
Code d'export Apogée: PAX9NAAC

Présentation

Description

This course will be focused on the main nanofabrication and characterization techniques used in clean-rooms in research laboratory and semi-industrial environments for the fabrication of current and future semiconductor devices. It will combine regular lectures and a practical training on nanobiotechnology in clean room facilities.
Outline
This course will include a first part covering the main nanofabrication and characterization techniques used in clean-rooms and a second part dedicated to a practical training.

- The first part will be taught as regular lectures. The principles of these techniques will be presented and illustrated through concrete examples obtained in the clean-rooms of the Minatech Campus in Grenoble. This course will provide you with the basics of technological steps, thin film deposition techniques, lithography processes, and advanced characterization used during the fabrication of single devices up to their large-scale integration.

Informations non contractuelles.
Dernière mise à jour le 30 juin 2026

- The practical training (second part) will consist in the construction of a micro-patterned device using state-of-the art microfabrication techniques. Fluorescently marked cells will be deposited on the constructed micropatterns and different cell.

Heures d'enseignement

CM	CM	12h
TP	TP	12h

Période : Semestre 9

Infos pratiques

Lieu(x) ville

Grenoble

Campus

Grenoble - Domaine universitaire

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