EE-490(i)

Lab in nanoelectronics

Kis Andras

Cursus	Sem.	Type
Electrical and Electronical Engineering	MA1, MA3	Opt.

Language of teaching	English
Credits	4
Withdrawal	Unauthorized
Session	Winter
Semester	Fall
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
Practical work	4 weekly
Number of positions	

Il n'est pas autorisé de se retirer de cette matière après le délai d'inscription.

Summary

The students will learn techniques for fabrication and characterization of functional nanoelectronic devices through hands-on experiments in a laboratory and in the EPFL cleanroom.

Content

1. Nanomaterial preparation
2. Nanomaterial characterisation
3. Integration into functional electronic devices
4. Lithography and patterning
4. Characterisation of FETs, memory and optoelectronic devices based on 2D materials

Keywords

Nanoelectronics, nanodevices, 2D materials, transistors, memory devices.

Learning Prerequisites

Required courses

Semiconductor devices I
General Physics 4

Recommended courses

Semiconductor devices II