SCIENCES, TECHNOLOGIES AND HEALTH

Nanobiotechnologies 2nd year

Master in Nanosciences and nanotechnologies

Target level
Baccalaureate +5

ECTS
60 credits

Duration
1 year

Component
UFR PhITEM (physique, ingénierie, terre, environnement, mécanique), Grenoble INP, Institut d'ingénierie et de management - UGA, Grenoble INP - Phelma (Physique, électronique et matériaux), UGA

Language(s) of instruction
English

Presentation

The course offers disciplinary training focused on development and characterization at the nanometric scale with a strong multidisciplinary dimension (physics, soft matter, biology). It relies on research units working in various fields, ranging from biology to physics.It equips students with skills in the development, manipulation, characterization, understanding and exploitation of nano-systems, nano-materials, nano-structures and unique molecules, as well as knowledge of their application potentials. It makes students aware of the environmental and societal challenges of nanotechnologies.

International education : Internationally-oriented programmes

International dimension

This program can be followed within the framework of an Erasmus Mundus in partnership Katholieke Universiteit Leuven (KU Leuven) (Belgium).

All students start their first year at the KU Leuven where they follow a common set of compulsory courses and some electives to prepare for their specialisation option.

For their second year, they select a specialization area at one of the Consortium Partners where they follow specialisation and broadening courses and do their master thesis research project.

Professor in charge of Erasmus Mundus: Mr. David FERRAND

Admission

Access conditions

National diploma conferring the degree of license in a field compatible with that of the master Title or acquired recognized equivalent by the admissions committee of the University of Grenoble Alpes

Public continuing education: You fall under continuing education:

- if you resume your studies after 2 years of interruption of studies
- or if you followed training under the continuing education regime in one of the previous 2 years or if you are an employee, job seeker, self-employed person

If you do not have the required diploma to integrate the training, you can undertake a process of validation of personal and professional achievements (VAPP)

For more information, see the web page of the Continuing Education and Learning Department

Candidature / Application

Would you like to apply and register ? Be aware that the procedure differs depending on the diploma, the degree obtained, or the place of residence for foreign students. Let us guide you simply by following this link

Fees

Tuition fees 2023-2024: 243 €+100€ CVEC

Useful info

Contacts

Program director

Johannes Geiselmann

Hans.geiselmann@univ-grenoble-alpes.fr

Administrative contact

Registrar's Office for the Master in Nanosciences and nanotechnologies

phitem.master.nano@univ-grenoble-alpes.fr

Administrative contact

Application

phitem.candidature.etudiant@univ-grenoble-alpes.fr

Continuing education manager

Laura DI RUZZA

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Course location(s) - City

Grenoble

Campus

Grenoble - University campus

Program

Master 2nd year

Semester 9

	Nature	CM	TD	TP	Crédits
UE Surface Functionalisation	Teaching Unit (UE)				3 credits
UE Biosensors & high through-put analysis	Teaching Unit (UE)	12h		12h	3 credits
UE Bio-molecular interactions : methods and applications	Teaching Unit (UE)	12h		12h	3 credits
UE Micro-nano fabrication techniques	Teaching Unit (UE)			12h	3 credits
UE Nano-safety	Teaching Unit (UE)	19,5h		4h	3 credits
UE Research training	Teaching Unit (UE)				3 credits
UE Fundamentals of structural biology	Teaching Unit (UE)	11h	11h		3 credits
UE Optics for bio systems	Teaching Unit (UE)	20h			3 credits
UE Metabolic and cardiovascular physiology	Teaching Unit (UE)	20h			3 credits
UE Introduction to Neurosciences	Teaching Unit (UE)	18h			3 credits
UE Cell signaling and cancer biology	Teaching Unit (UE)				3 credits
UE Biomaterials and Biocompatible Surface Engineering	Teaching Unit (UE)				3 credits
UE Molecular markers for medical Imaging and therapy	Teaching Unit (UE)	12h			3 credits
UE Nano-pores and membranes technologies	Teaching Unit (UE)				3 credits
UE Introduction to Machine Learning and Deep Learning	Teaching Unit (UE)			8h	3 credits

UE Active matter	Teaching Unit (UE)				3 credits
UE Physics of biological systems	Teaching Unit (UE)				3 credits
UE International School in Soft Nanoscience (ESONN)	Teaching Unit (UE)				6 credits
UE in another program	CHOICE				6 credits
UE Microfluidics	Teaching Unit (UE)	14h		8h	3 credits

Semester 10

	Nature	CM	TD	TP	Crédits
UE Master thesis	Teaching Unit (UE)				30 credits