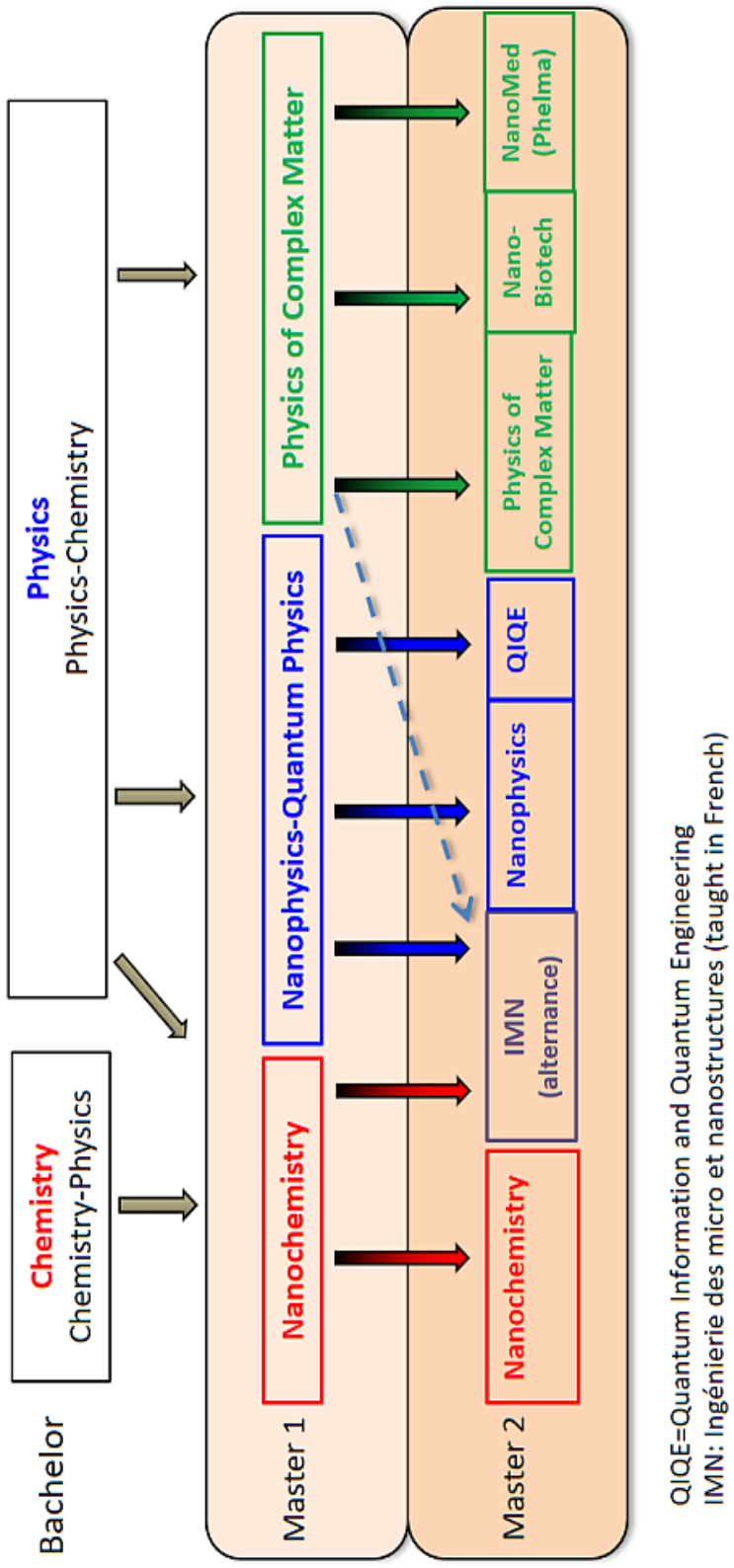


QIQE=Quantum Information and Quantum Engineering
IMN: Ingénierie des micro et nanostructures (taught in French)

Pratical information

APPLICATION/REGISTRATION

https://phitem.univ-grenoble-alpes.fr/formation/candidatures-et-inscriptions/

QUESTION ?

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

MASTER'S WEBSITE

https://master-nanosciences.univ-grenoble-alpes.fr/

Admission...

more info... register

Professional integration

Success rates — Graduate careers

https://phitem.univ-grenoble-alpes.fr/formation/devenir-des-diplomes-indicateurs-uga-/

Cette formation est éligible à la **TAXE D'APPRENTISSAGE**

N° UAI 383443L

UGA UFR PhITEM Université Grenoble Alpes

MASTER INTERNATIONAL

NANOSCIENCES & NANOTECHNOLOGIES

English version

DIPLÔME NATIONAL DE MASTER CONTRÔLÉ PAR L'ÉTAT

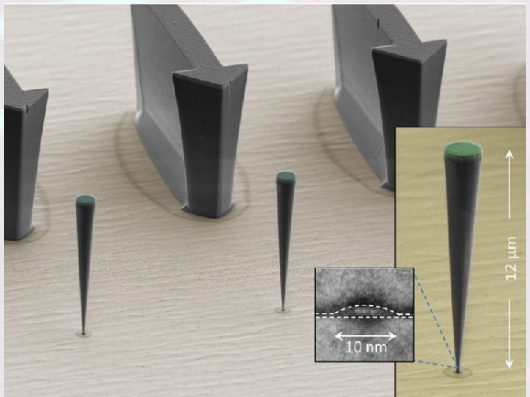
UGA UFR PhITEM Université Grenoble Alpes

Nanosciences & Nanotechnologies

Nanoscience studies phenomena and the manipulation of matter at the nanometric, molecular, and atomic scale to understand how this multi-scale structuring affects the electrical, optical, mechanical, chemical, and biological properties of matter.
Nanotechnology is the application of this science to new nanomaterials and nanodevices that exploit the possibilities of custom design of these materials.
These scientific disciplines are at the interface of physics, chemistry, materials science, microelectronics, quantum information and engineering, biochemistry, and biotechnology.

International and interdisciplinary Master's program: understanding, structuring, and using matter at the nanometric scale.

The Master's program in Nanosciences and Nanotechnologies is supported by the many research units and industries in Grenoble working in this field. It has a strong international character, with courses taught in English and integrated into the Erasmus Mundus Master EMM-Nano+ (KU Leuven, TU-Dresden, UB Barcelona, Chalmers Gothenburg, UGA Grenoble), double degree agreements (University of Tsukuba), and two thematic programs, Soft Nano and Quantum, from the Graduate School of UGA.



International courses

(taught in English only)

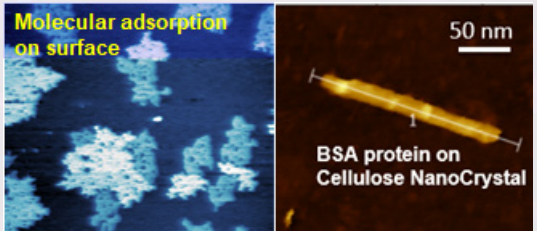
M1-M2 Nanochemistry
Two-year multidisciplinary program focused on the design and characterization of molecular architectures, nanoparticles, nanostructured materials, and interfaces for a wide range of applications such as catalysis, sensors, and materials for information storage or energy conversion.

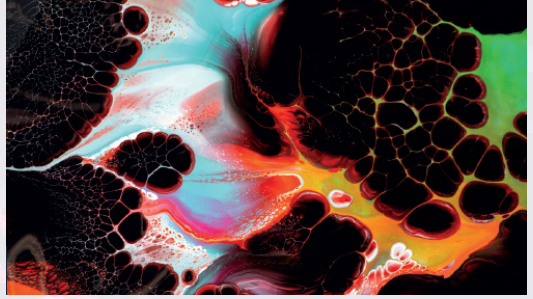
M1 Nanophysics - Quantum physics
First-year program providing solid disciplinary skills in condensed matter physics, complemented by transversal skills (optional courses) tailored to second-year Master's tracks M2 Nanophysics, M2 QIQE and M2 IMN.

M2 Nanophysics
Program focused on the detailed physics of metal, dielectric, or semiconductor-based nanostructures: transport, optical, and magnetic properties, as well as the design, nanofabrication, and advanced characterization techniques of these nanostructures.

M2 Quantum information and quantum engineering (QIQE)
Program providing expertise at the interface between the fundamental and experimental aspects of quantum physics for the control of quantum objects and their applications in quantum communication and quantum information processing.

M1-M2 Physics of complex matter
Two-year multidisciplinary program that allows students to immerse themselves in the fascinating world of matter and complex systems: complex fluids, soft matter, biophysical systems, bio-inspired materials, active matter, self-organized dynamic environments, from the nanometric to the macroscopic scale.





M2 Nanobiotechnologies
Program in close collaboration with Grenoble INP – Phelma, focusing on the application of nanosciences for use in biology and medicine (sensors, imaging, etc).

Professional courses

(taught in French only)

M2 Ingénierie des micro et nanostructures (IMN)
Work-study track aimed at providing a multidisciplinary training on the development of nanomaterials and thin films, along with associated characterizations (chemical, optical, via microscopy) for applications primarily in microelectronics and photovoltaics, fields that are highly represented in the local industrial sector.

This master's program prepares students for careers in both academic research and industrial R&D departments.