Master in Nanosciences and nanotechnologies

The programme offers the following course(s):

- Research intensive track 1st year
- Nanochemistry
- Nanophysics
- Nanobiosciences
- Nanomedicine and structural biology
- Micro and nanostructure engineering

Presentation

Course co-accredited by the Université Grenoble Alpes and the National Polytechnic Institute of Grenoble

Nanosciences study phenomena and manipulation of matter on the atomic and molecular scale (nanometers: i.e., one billionth of a meter). Important properties of matter such as the electrical, optical and mechanical properties are determined by the way molecules and atoms assemble into larger structures on the nanoscale. Nanotechnology is the application of this science in new nanomaterials and nano-concepts for new components, systems and products. Therefore, nanotechnology will provide us with the ability to design custom-made materials with any property we require.

These newborn scientific disciplines are situated at the interface of physics, chemistry, material science, microelectronics, biochemistry and biotechnology. The master Nanoscience & nanotechnology of Grenoble is a 2-years integrated program with a strong research backbone and an important international outreach, providing a top quality multidisciplinary education in nanoscience and nanotechnology. The key assets of master N² are:

- A multi-disciplinary approach with five tracks in nanophysics, nano-chemistry, nano-biosciences, nanomedicine, and micro and nano-engineering
- A broad international exposure sustained by an Erasmus Mundus program and several other international partnerships
- An experimental training of exceptional quality in the many nano-facilities of the Grenoble area
- An excellent immersion in the world-class research environment of the Grenoble area, with the Nanosciences conferences courses, the research training program, and the extended master thesis (see RIT track).

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The first year has 3 majors in nano-physics, nano-chemistry and nano-biosciences, tailored to receive students from different background. It prepares them to one of the 5 tracks of the 2nd year.

The 1st year Research intensive track (RIT) is dedicated to bachelors of Science totalizing 4 years of higher education (equivalent to 240 ECTS), or student having validated a 1st year of a master in another field and who want to change their orientation. They start their master thesis in the first year and pursue their second year in one of the 2nd year track.

The IMN track is available in “alternance” for professional students who work in a company. This track is taught in french.

The program for the master in Nanosciences and nanotechnologies provides students with the background needed for continuing to doctoral level in fundamental or applied sciences. It also prepares them for high-level positions in the nanotechnologies industry.

Registration and scholarships

National diploma equivalent to a bachelor degree (licence) in a field compatible with that of the master. Qualification or achievement recognised as equivalent by the admissions board of the Université Grenoble Alpes.

Public continuing education : You are in charge of continuing education :

• if you resume your studies after 2 years of interruption of studies
• or if you followed a formation under the regime formation continues one of the 2 preceding years
• or if you are an employee, job seeker, self-employed

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

### Further studies

Continuation of study possible in PhD.

### Practicals informations:

- Component: Grenoble INP, Institut d'ingénierie et de management, UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)
- Level: Baccalaureate +5
- Duration: 2 years
- Course type: Initial and Continuing Education, Professionalisation contract, Education in apprenticeship
- Location(s): Grenoble - University campus

### Contacts

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