UCLouvain

NANO2MC

2024 - 2025

NANO2MC - Introduction

Introduction

Introduction

The programme trains in the multidisciplinary aspect of nanotechnologies and offers five specialisations:

- nanophysics: quantum phenomena, molecular transports, spintronics, simulation, physical characterisations, etc.;
- nanochemistry: synthesis of nanoparticles, chemical and physico-chemical characterisation, quantum chemistry, etc.;
- nanoelectronics: micro- and nanoelectronics, MEMS, NEMS, electronic characterisation, etc.;
- nanomaterials: nanocomposites, nanothreads, nanotubes, polymers, etc.;
- nanobiotechnologies: biomaterials, biophysics, nanomedicine, biosensors, etc.

The Master's program in nanotechnology is interuniversity. The Catholic University of Louvain co-certifies this Master's degree with the

☒ ENANO2803 [redacted]

ENANO2501	Simulation en Physique des Matériaux		FR

The programme's courses and learning outcomes

For each UCLouvain training programme, a reference framework of learning outcomes specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

Management Committee to be similar to one of the above-mentioned degrees. The Management Committee decides on the basis of the application submitted by the student.

3) Access to the Advanced Master in Nanotechnology is conditional for holders of a Master's degree 120 other than those listed in 1) and 2), as well as holders of a second cycle foreign degree of at least 300 credits. The enrolment procedure is identical to that in 2).

Applications received will be subject to scrutiny by the program committee with a view to admission. The admission application should contain the following items :

- Motivation letter
- Complete resume
- Copies of the Bachelor and Master's degree or a document listing successful completion of the program
- All transcript of records of the Bachelor and Master studies testifying of the successful valorisation of 300 credits

A selection interview may be organised to make sure that the applicant properly masters the basic concepts needed for the study program.

A maximum of 15 credits of prerequisites may be imposed on candidates covered by points 2) and 3).

Special admission and registration procedures

Students who do not hold a Master's degree in Civil Engineering awarded in the French-speaking Community of Belgium must submit an application for admission to the Master's Management Committee (see above) at the time of their application, which will be assessed by the Master's Management Committee.

Holders of a Master's degree in Civil Engineering as described above obtained at a university other than the Université Catholique de Louvain must contact the Vice-Dean for Admissions at the Ecole Polytechnique de Louvain in order to obtain formal permission to enrol.

Teaching method

The Advanced Master in Nanotechnology is a resolutely multidisciplinary program, the objective of which is to train students in both theoretical, and experimental and applied approaches in the field of nanotechnology.

By its structure of leaving a very wide choice of courses, this program allows students to construct a program to suit them and their personal needs.

A variety of the learning structures and scientific approaches is provided by the inter-university organisation of the program.

Evaluation

The evaluation methods comply with the regulations concerning studies and exams. More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".

The learning activities are evaluated accordiing to the regulations in force at the university (see the examination regulations), viz. written and oral examinations, laboratory examinations, individual or group assignments, public presentations of projects, thesis.

Mobility and/or Internationalisation outlook

To allow access to the Master's program to non-French speaking students, a major part of the program will be given in English.

Most of the laboratories of the teachers involved in the Master's program belong to European networks of excellence (FAME, SINANO, NANOSIL, ...), and international research programs.

Possible trainings at the end of the programme

With its training and research components, the Advanced Master in Nanotechnology also prepares students for the PhD program. Most of the teachers involved in the Master's are members of the thematic doctoral school MAIN (Science et Ingénierie des Matériaux, des Interfaces et des Nanostructures) which can supervise students wishing to do a PhD.

Contacts

Curriculum Management

Entity

Structure entity	SST/IMCN/BSMA
Denomination	(BSMA)
(IMCN)	
Sector	Sciences and Technology (SST)
Acronym	BSMA
Postal address	Croix du Sud 1 - bte L7.04.02
	1348 Louvain-la-Neuve

Academic supervisor: Bernard Nysten

Jury

- Président du Jury: Bernard Nysten
- Secrétaire du Jury: benoit.champagne@unamur.be
- ULB: gilles.bruylants@ulb.be
- UMons: roberto.lazzaroni@umons.ac.be
- ULiège: ngocDuy.Nguyen@uliege.be