# NANO2MC - Introduction

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

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### NANO2MC - Teaching profile

### **Learning outcomes**

The Advanced Master in Nanotechnology offers holders of a basic second cycle degree complementary and/or advanced second cycle training in the fields of nanoscience and nanotechnology. It is intended for, on the one hand, those who do not have any training in this field and who wish to specialise in it, or on the other hand, for those who have already taken an option in this field during their Master's and who wish to further their training with a specialisation in another area of nanotechnology, e.g. an electrical engineer wanting to further his/her training in nano-biotechnology.

The Advanced Master in Nanotechnology is a program of 60 credits organised around five main areas of specialisation:

- nanophysics: quantum phenomena, molecular transportation, spintronics, simulation, physical characterisations ...
- nanochemistry: synthesis of nanoparticles, chemical and physico-chemical characterisation, quantum chemistry

**UCL - Université catholique de Louvain** Study Programme 2024-2025

NANO2MC: Advanced Master in Nanotechnologies

SENANO2803

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NANO2MC: Advanced Master in Nanotechnologies

# The programme's courses and learning outcomes

reference fL -ework of learning outcomes specifies the the skills expected of every bL duate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference fL -ework of learning outcomes.

#### **NANO2MC - Information**

#### **Access Requirements**

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail. Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.

The admission requirements must be met prior to enrolment in the University.

Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed on this page are to be understood as those issued by an institution of the French, Flemish or German-speaking Community, or by the Royal Military Academy.

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.

#### **SUMMARY**

- General access requirements
- Specific access requirements

### **General access requirements**

Translated from https://www.gallilex.cfwb.be/fr/leg\_res\_01.php?ncda=39681&referant=l02

Art. 112. of the "Décret définissant le paysage de l'enseignement supérieur et l'organisation académique des études" :

- § 1. In accordance with the general requirements established by the academic authorities, students who have:
- 1. a master's degree;
- 2. an academic degree similar to the one mentioned in the preceding paragraph awarded by a higher education institution in the Flemish Community or the German-speaking Community, or by the Royal Military Academy, by virtue of a decision of the academic authorities and in accordance with any additional requirements they may establish;
- 3. a foreign academic degree deemed equivalent to the one mentioned in paragraph 1, in accordance with this Decree, a European directive, an international convention or other legislation, in accordance with the same requirements.

The additional admission requirements referred to in paragraph 2 are intended to ensure that the student has acquired the knowledge and skills required for the studies in question. When the additional admission requirements consist of one or more additional course units, these may not represent more than 60 additional credits for the student, taking into account all the credits that he or she may otherwise use for admission. These course units are part of the student's study programme.

- § 2. In accordance with the general requirements established by the academic authorities, a student who holds a title, diploma, degree or certificate of higher education, in the French Community or outside it, which does not grant him or her eligibility for admission to a specialised master's course by virtue of the preceding paragraph, may nevertheless be admitted by the jury of the course in question, in accordance with the additional requirements that it establishes, if the totality of the higher education that he or she has completed or the expertise that he or she has acquired is valued by the jury to be at least 240 credits.
- § 3. By way of derogation from these general requirements, the academic authorities may also admit to a specialised master's course holders of a title, diploma, degree or certificate awarded outside the French Community which, in that system of origin, grants direct eligibility for postgraduate studies, even if the studies sanctioned by these credentials are not organised into distinct degree courses or within a time period of at least five years.

#### Specific access requirements

#### Specific Admission Requirements

As several options in this programme are taught in English, no prior proof of proficiency in French is required. However, students with no knowledge of French may be refused registration if they choose options not taught in English. Students must state their level of proficiency in French in their application.

In accordance with the decree of 7 November 2013 defining higher education, promoting its integration into the European Higher Education Area and refinancing universities, the general admission conditions are set out on the "Admission conditions - Specialised Masters: <a href="https://uclouvain.be/en/study/inscriptions/advanced-master-s-degree.html">https://uclouvain.be/en/study/inscriptions/advanced-master-s-degree.html</a> web page.

The specific admission conditions to this program are as follows:

- 1) Access to the Advanced Master in Nanotechnology is unconditional for holders of a Master's degree of at least 120 credits in study area No.19 of the Sciences de l'Ingénieur: Master in Engineering (ir.) awarded by the French-speaking community of Belgium, as well as holders of a similar degree awarded by the Dutch-speaking community of Belgium.
- 2) Access to the Advanced Master in Nanotechnology is conditional for holders of a Master's degree with at least 120 credits in study areas No.18 in Agronomy and Bioengineering, No. 17 in Science, and No. 15 in Biomedicine and Pharmacy, awarded by the French-speaking community of Belgium, as well as the holder of a university degree awarded in the Flemish Community and declared by the

### **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 <u>regulations concerning studies and exams</u>. 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 according 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.