Academic year 2019-2020
Admission procedures for the Master's Degree Programme
with verification of requirements and of personal preparation in:
Nanotechnology Engineering
Ingegneria delle nanotecnologie
Cross-faculty (Civil and Industrial Engineering – Information Engineering, Informatics and Statistics)
Class: LM-53

Admission requirements

In order to successfully attend the master's degree programme in Nanotechnology Engineering, an adequate knowledge of the general scientific methods and contents related to the fundamental scientific disciplines, including physical and chemical sciences and other disciplines related to engineering, is strongly recommended. Indeed, such disciplines are considered propaedeutic to the specific teachings envisaged by the Study Programme regulation (LM-53 – Science and engineering of materials) to which the master's degree in Nanotechnology Engineering belongs and they are normally acquired attending a three-year bachelor's degree in Industrial Engineering or in Electronic and Telecommunication Engineering (degree codes L7, L8 and L9). Alternatively, the competences related to the fundamental scientific disciplines can be achieved attending a first cycle degree in Physical and Technological Sciences (degree code L30) or Chemical and Technological Sciences (degree code L27). However, depending on their academic background, students who have attended one of these degrees may be required to integrate their competences with specific subjects pertaining to engineering and related disciplines.

- First Cycle Degree in ENGINEERING (class L7, L8 and L9)

  At least 85 Credits (ECTS/CFU) in the Academic Disciplines (SSD) schema below is a necessary requirement:

  - at least 27 Credits in the Academic Disciplines (SSD): CHIM/03; FIS/01; FIS/03; MAT/02; MAT/03; MAT/05; MAT/06; MAT/07.
  - at least 58 Credits in the Academic Disciplines (SSD): CHIM/02; CHIM/07; FIS/07; INF/01; ING-IND/03; ING- IND/04; ING-IND/06; ING-IND/07; ING-IND/08; ING-IND/09; ING-IND/10; ING-IND/11; ING-IND/12; ING-IND/13; ING-IND/14; ING-IND/21; ING-IND/22; ING-IND/24; ING- IND/25; ING-IND/26; ING-IND/27; ING-IND/31; ING-IND/32; ING-IND/33; ING-IND/34; ICAR/08; ING-INF/01; ING-INF/02; ING-INF/03; ING-INF/04; ING-INF/06; ING-INF/07; MAT/08; MAT/09.

- First Cycle Degree in PHYSICS (class L30) and CHEMISTRY (class L27)

  Additionally, candidates must have achieved at least 24 Credits (ECTS/CFU) in the Engineering Academic Disciplines below:

  - at least 6 Credits in the Academic Discipline (SSD) ING-IND/31
  - at least 6 Credits in the Academic Discipline (SSD) ING-IND/13
  - at least 6 Credits in the Academic Disciplines (SSD) ICAR/08
  - at least 6 Credits in the Academic Discipline (SSD) ING-IND/06, or ING-INF/04, or ING-IND/25

- Other types of Degrees

  For candidates who either obtained an educational qualification at Universities abroad or have an Old Academic System degree, requirements are indicated in the Degree Programme Educational Regulation. In order to assess that the candidates possess the basic knowledge required to be trained as a Nanotechnologies engineers, the Area Committee verifies that candidates meet the admission requirements through the evaluation of their academic curricula.

English Proficiency

Considering the international context in which Nanotechnology Engineers are going to operate, the programme is entirely taught in English. Therefore, at least a B2 level of the CEF (Common European Framework) in English writing and speaking is mandatory.

Personal preparation adequacy verification

Admission is subject to the verification of students' personal preparation based on the average of the grades achieved in the exams of their previous degree programme. An average grade 23/30 is considered enough for admission. If the aforementioned requirement is not met, the personal preparation verification will be carried out with a specific admission test.

Admission test

Students who do not meet all the admission requirements may be asked to take a written and/or oral admission test on topics related to engineering. The admission test syllabus, schedule, and calendar will be published on the Area Committee website. The admission test may give as a result a pass or a fail. If the result is a fail, enrolment will not be allowed.

Credits recognition

Previously acquired credits (CFU) can be recognized provided that they have been acquired through the attendance of courses consistent with one of the study plans foreseen by the master's degree programme. To have the credits acknowledged, documentary evidence of the courses' syllabuses must be provided. If an equivalence between Scientific Disciplinary Sectors (SSD) – based on the topics of teaching and in compliance with the master's degree programme regulations – is acknowledged, the CAD can proceed with the attribution of the corresponding number of credits.

Previously acquired credits related to teachings that are considered equivalent to those offered by the master's degree programme can be recognized with the denominations foreseen by the master's degree in which the student wants to enroll. In such circumstance, the CAD may approve the recognition with the following modalities:

if the number of CFU is the same for both courses, the recognition will be approved immediately;

if the number of CFU of the two courses is different, the CAD will proceed with the evaluation of the student's curriculum. Additionally, the CAD may ask for a supplementary interview with the student.

The CAD may also recognize as credits any competences and professional abilities certified in accordance with the existing legislation, including competences and abilities acquired through second-cycle learning activities offered by the University itself. These credits can be acknowledged either as free-choice credits (up to 12 CFU) or as optional exams. In any case, a maximum of 18 credits can be recognized in this area.

Any activities already acknowledged as CFU in another degree programme cannot be recognized anew by the master's degree in Nanotechnology Engineering.