MSC IN NANOSCIENCE*

PRACTICAL AND RESEARCH-ORIENTED STUDY IN AN INTERNATIONAL ENVIRONMENT

Nanoscience is an interdisciplinary field within the natural sciences. It deals with understanding and utilising materials and phenomena at the nanoscale – that is, between 0.1 and 100 nanometres. The ability to work on this scale makes it possible to develop highly improved or completely new functions and properties in a wide range of materials.

The MSc in Nanoscience programme at Aarhus University is relevant for students with a BSc degree from a Danish or international university in either nanoscience or an interdisciplinary combination of physics, chemistry, and molecular biology. The Nanoscience degree programme is both practical and research-oriented. Students can complete an MSc project in a number of areas, including nanomaterials, interfaces and catalysis, nano-medicine, synthetic biology, and nano-food.

PROGRAMME STRUCTURE
The MSc programme consists of 120 ECTS credits. Students study subjects within the fields of physics, chemistry, and molecular biology, as well as specific nanoscience subjects. Based on their previous academic specialisation, students choose their courses and the subject of their MSc project so as to specialise in one of four areas: nanomaterials, biomedical nanotechnology, structural biology and biophysics, or organic nanochemistry/soft matter. Students are offered guidance in selecting their individual course programmes from a suite of master's courses offered by iNANO and the relevant departments. The degree programme concludes with the Master's project.

INTERDISCIPLINARY INANO
The Nanoscience degree programme at Aarhus University is based at the Interdisciplinary Nanoscience Centre, iNANO. iNANO is staffed by its own researchers as well as researchers drawn from the departments of Physics, Chemistry, Molecular Biology, and Genetics as well as researchers from other departments and the Faculty of Health. The centre's mission is to build on three basic pillars: top-level international research, education at all levels from BSc to PhD, and innovation and interaction with industry and society at large.

I strongly recommend anyone interested in any field of nanotechnology to study at iNANO. It is a new institute with first-rate facilities and excellent professionals, and it offers a range of courses for students to specialise in their area of interest. I am currently doing my Master's thesis experiments at the hybrid materials lab, and it has been an amazing experience. The labs are well equipped and the projects are interconnected, so the students can support each other.

FABIANE FANTINELLI FRANCO
Student, MSc in Nanoscience, from Brazil

The flexibility students have to design their individual customised study programme was a very positive surprise, and the informal academic environment lets students actively engage with teachers and vastly improve their understanding of the topic as a result. A science-based Innovation and Entrepreneurship course encouraged Fabiane and me to embark on an entrepreneurial venture – NanoScreen – and we have taken part in international start-up competitions.

PRIYANK SHYAM
Student, MSc in Nanoscience, from India

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PLACE OF STUDY
Aarhus

ANNUAL TUITION FEE
EU/EEA/Swiss citizens: FREE
Others: EUR 14,500

WWW
masters.au.dk/nanoscience

* Fees are subject to change. See international.au.dk
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CAREERS
As a graduate in Nanoscience, you will be qualified to work in R&D in both public and private sectors in medicine, the environment, biotechnology, and the IT and communication industries. A number of R&D projects are currently under way at iNANO, in collaboration with approximately a hundred Danish and international companies, including Novo Nordisk, Aalborg Portland, Arla Foods, Danfoss, Grundfos, Haldor Topsøe, Lundbeck, Unisense, Carlsberg, Dupont and Novozymes. The iNANO School – part of the iNANO Centre – comprises both an international graduate school and associated research groups in physics, chemistry, biology, and molecular biology, working in the field of nanoscience and nanotechnology. iNANO promotes excellent science and provides an academic environment for PhD students of the highest calibre, and many graduates of the programme go on to do a PhD.

ADMISSION REQUIREMENTS
A bachelor’s degree amounting to at least 60 ECTS credits in Nanoscience can qualify the student for admission.

Other qualifications can also provide admission to the Master’s degree programme, provided the university assesses that their level, extent and content correspond to the degrees mentioned above.

SELECTION CRITERIA
As the Master’s programme admits only a limited number of students each year, meeting the admission requirements does not in itself guarantee admission to the programme. Student places are allocated on the basis of an overall assessment. In evaluating qualified applicants, the admissions committee assesses applicants according to the following criteria: academic background; overall grade level of bachelor’s degree; grades achieved on relevant courses; and relevant courses (measured in credit units) included in the bachelor’s degree.

Relevant courses include dedicated nanoscience courses as well as relevant courses within the subject areas of chemistry, physics, molecular biology, and mathematics.

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