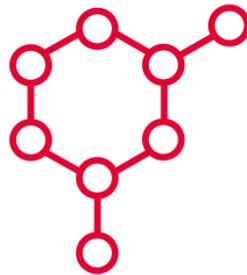


SDC

The university partnership
Denmark – China

Master's Programme in

Nanoscience and Technology



Academic Regulations

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Legal Frame

Students enrolled in this programme are admitted as full-time students at University of Chinese Academy of Sciences.

These regulations applies from 2019.

This master's programme is established within the framework of the following:

- Partnership Agreement between Graduate University of Chinese Academy of Sciences and University of Copenhagen (KU), Aarhus University (AU), University of Southern Denmark (SDU), Aalborg University (AAU), Roskilde University (RUC), Technical University of Denmark (DTU), Copenhagen Business School (CBS), IT University of Copenhagen (ITU), on the establishment of the Sino-Danish Centre for Education and Research, Graduate University of Chinese Academy of Sciences, signed on 12 April 2010
- Agreement between Graduate University of Chinese Academy of Sciences (GUCAS) and University of Copenhagen (KU), Aarhus University (AU), University of Southern Denmark (SDU), Aalborg University (AAU), Roskilde University (RUC), Technical University of Denmark (DTU), Copenhagen Business School (CBS), IT University of Copenhagen (ITU) concerning Master's Programmes at Sino-Danish Centre for Education and Research, Graduate University of Chinese Academy of Sciences, signed on 29 August 2011
- Agreement between Graduate University of Chinese Academy of Sciences and University of Copenhagen concerning Provision of the Master's Programme in Nanoscience and Technology at Sino-Danish Centre for Education and Research (SDC), Graduate University of Chinese Academy of Sciences, signed on 29 August 2011.

Students must observe and act accordingly to the following rules issued by the SDC Directors:

- Courses and Exams
- Exam regulations
- Thesis regulations 10 steps
- Avoid cheating on exams
- Student complaints

Students must also observe and act accordingly to Rules and Regulations for UCAS International Students.

SDC rules are published on Moodle.

Title and degree

The degree awarded by University of Copenhagen is Master of Science (MSc) in Nanoscience and Technology. The degree awarded by University of Chinese Academy of Sciences is Master of Nanoscience and Technology.

Duration

The master's programme has a duration of two academic year's equivalent to 120 ECTS points (European Credit Transfer System). 60 ECTS points correspond to one year of full-time studies.

4-YEARS LIMIT

All SDC students must complete their Danish and UCAS degree within 4 years from the enrolment. This period includes leave of absence. It is possible to apply for an exemption due to illness or other extraordinary circumstances.

The 4-year limit for the Danish degree applies for the 2016 cohort and onward. Students in the 2012-2015 cohorts have to complete their studies before the 1st of January 2020 to obtain their Danish degree.

When choosing thesis period *Danish/International students* must be aware of UCAS' 4 years limit for awarding diploma. UCAS' degree application procedure **STEP 10 CN**(see Thesis regulations 10 steps) has to be completed within 4 years from enrolment. This period includes leave of absence.

Admission requirements

Admission to the Master's programme in Nanoscience and Technology is based on:

- A successfully completed bachelor's degree (or equivalent) or higher in a natural science field such as Nanoscience. Other bachelor's degree in a natural science such as chemistry, physics, biochemistry or material sciences.
- High-level English language proficiency (English level B).

DK	12	10	7	4	02	00	-3
CN	100-95	94-9	89-76	75-61	60	59-40	39-0

General programme regulations

The language of instruction in the SDC master's programmes is English. Teaching, supervision and assessment will be carried out in English.

Students will be graded according to both the Chinese and the Danish grading scale. However, for the Master's Thesis, students will be graded according to the Chinese 4-point scale. See Thesis regulations 10 steps.

Leave of absence can be granted to students on the grounds of becoming a parent, illness, military service or exceptional circumstances.

Students who wish to complete degree programme elements at another university or institution of higher education in Denmark, China or abroad as part of their degree programme may apply the Teaching Committee for advance approval of transfer credit for planned subject elements.

Students can maximum be granted 30 ECTS credit transfer.

Either the Teaching Committee or the SDC Directors may grant exemptions to this curriculum or other SDC rules. Application for exemption shall be submitted to the SDC Secretariat

Qualifications

Purpose

The MSc programme in Nanoscience and Technology is an interdisciplinary, research-based study programme with focus on theoretical, experimental and practical disciplines. The programme enables students to handle nanoscience and nanotechnology concepts and methodologies and provides students with fundamental knowledge within business innovation and entrepreneurship. The programme recruits students from many different basic science subjects such as physics, chemistry, molecular biology and biology and from engineering programmes as well as BSc programmes in nanoscience. Common to these areas is that graduates of the MSc in Nanoscience and Technology programme have in-depth knowledge of the methodologies of the subject area and have applied these in specific projects, typically involving colleagues from other subject areas.

Graduates of the MSc programme in Nanoscience and Technology will be able to function as a link between specialists in, for example, physics and biology, and will be able to communicate technical and conceptual issues across the subject areas. Graduates of the MSc in Nanoscience and Technology programme will in particular have an eye for new and unconventional applications of natural science techniques and methodologies, based on the many specific examples taught on the study programme.

Qualification Profile

Competences

Graduates of the MSc programme in Nanoscience and Technology are able to:

- formulate, structure and complete a research project involving development and application of the methodologies of the subject area.
- manage complex work and development situations in collaboration with other disciplines, such as physics, chemistry and biology.
- enter into constructive collaboration on solving academic issues on a scientific background within the fields of nanoscience and nanotechnology.
- seek out and summarise the knowledge available within a specific nanoscience field.
- assess the possibilities and limitations of the methodologies of the subject area.
- discuss the methodologies, theory and results of the subject area in general as well as at an academic level.
- assess the applicability and appropriateness of theoretical, experimental and practical methodologies of the results of the subject area in an industrial, social and ethical context on a nano-scientific basis.
- independently plan, manage and complete projects and apply the results of these in an academically related decision-making process.
- systematically and critically familiarise themselves with new subject areas.
- independently and critically structure their own competency development.
- identify business opportunities and plan the establishment of a business.

Skills

Graduates of the MSc programme in Nanoscience and Technology have are able to:

- process and analyse data.

- analyse and solve academic questions and issues.
- set up and analyse theoretical models.
- read and understand original academic literature.
- use the most important databases within the subject area.
- disseminate and communicate nano-scientific questions and academic issues to both academic and general audiences.
- develop business models.
- analyse the market for technological products and services, among other things in connection with the establishment of a business.

Knowledge

Graduates of the MSc programme in Nanoscience and Technology have acquired:

- general knowledge about current nanoscience trends and, based on the highest level of international research, detailed knowledge of key disciplines, methodologies, theories and concepts within one or more of the basic physics, chemistry, molecular biology and biology disciplines.
- basic knowledge of business innovation and entrepreneurship, enabling the graduate to develop and assess plans for the establishment of a business.
- the necessary knowledge and methodology within selected research active areas, through courses and project work.
- in-depth knowledge of a specialised field at international level, through independent research under supervision.

Structure

The programme contains these elements

Semester	Course / Programme element	Exam	Grading	Examiners	ECTS
1	Unifying Concepts in Nanoscience (UCN)	Oral	7/100 scale	Internal	15
	Nanobiotechnology	Written	7/100 scale	Internal	5
	Nanocharacterization	Written	7/100 scale	Internal	10
2	Nanoelectronics	Oral	7/100 scale	Internal	5
	Synthesis and Fabrication	Assignment and oral	7/100 scale	Internal	10
	Bionanomaterials	Assignment	7/100 scale	Internal	5
	Business Innovation and Entrepreneurship	Written	7/100 scale	Internal	5
	Nano Energy Materials	Written	7/100 scale	Internal	5
3	Thesis	Assignment and oral	7/4 scale	External	60
4					

All programme elements are mandatory.

The first two semesters provide the common core of the programme. In the 3rd and 4th semester, the student will write the thesis.

Commencement

Effective as of 01.09.2019

Changes to the Academic Regulations

2018.09.01: A maximum completion time has been added to the study program. All students from cohort 2016 and onwards has to complete their studies within 4 years from their enrolment. Students in the 2012-2015 cohorts have to complete their studies before the 1st of January 2020 to obtain their Danish degree. This has been approved by the SDC Directors.

2019.09.01: Course descriptions are now placed in a separate course catalogue for the autumn and spring semesters.