Stockholm university

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Education plan

for

Master's Programme in Materials Chemistry
Masterprogram i materialkemi

120.0 Higher Education Credits
120.0 ECTS credits

Programme code:	NMAKO
Valid from:	Autumn 2007
Date of approval:	2006-10-18

Decision

This study programme has been approved by the Board of the Faculty of Science at Stockholm University.

Prerequisites and special admittance requirements

Degree of Bachelor, or equivalent, including at least 90 HECs in Chemistry. Also required is knowledge equivalent to Swedish upper secondary school course English B or equivalent to one of the following tests; Cambridge CPE and CAE: Pass, IELTS: 6.0 (with no part of the test below 5.0), TOEFL (paper based): 550 (with minimum grade 4 on the written test part), TOEFL (computer based): 213, TOEFL (internet based): 79.

Programme structure

The programme comprises a block of three compulsory courses making up 30 higher education credits, and an optional part of 75 higher education credits. The optional consists of a degree project comprising 30, 45 or 60 higher education credits plus courses given by the host department. There is additional scope for optional courses (at most 15 higher education credits) that may lie within or beyond the subject field. The programme offers a structured choice of courses with a scope and depth that will enable the student to meet the requirements for a Master's degree, comprising in-depth studies within the field of Materials Chemistry.

Goals

For a Master’s degree the student must demonstrate:
• Knowledge and understanding of the major field of Materials Chemistry, including broad knowledge within the field as well as appreciable in-depth knowledge within certain parts of the field and in-depth insight into topical R&D work in materials chemistry.
• In-depth knowledge of methodology in materials chemistry.
• Ability to integrate knowledge in materials chemistry critically and systematically in order to analyze, evaluate and handle complex phenomena.
• Ability to critically, independently and creatively identify and formulate problems of relevance to materials chemistry, to plan and, using adequate methods, carry out advanced tasks within given time limits and thereby contribute to the development of knowledge, and also to evaluate this work.
• Ability to, orally and in writing, in both national and international settings, account for and discuss conclusions and the knowledge and arguments supporting these conclusions, in interaction with different groups.
• Skills required for participation in R&D work or for independent work in other advanced functions.
• Ability to make evaluations within the field of materials chemistry, with regard to relevant scientific, societal and ethical aspects and to demonstrate awareness of ethical issues in R&D work.
• Insight into the possibilities and limitations of science, its societal role, and human responsibility for its use.

• Ability to identify the need for additional knowledge and to assume own responsibility for competence development.

Courses

Compulsory courses:
Introduction to Materials Chemistry, FC, 15 higher education credits.
Structure analysis by diffraction, FC, 7.5 higher education credits.
Structure and properties of solid materials, FC, 7.5 higher education credits.
Degree Project in Materials Chemistry, FC, at least 30 higher education credits.
Optional courses within the field
The choice of optional courses is decided by the department board. The list of all optional courses is updated before the start of each academic year. When a programme begins, there will be a list showing a minimum choice of optional courses with guaranteed education during the programme period.
Optional courses
Optional courses within or beyond the main field, at most 15 higher education credits.

Degree

Master' degree.

Misc

Students who have been admitted to the programme but not completed it within the two planned years of study may request that they be allowed to complete the programme even if the study programme has ceased to apply. The restrictions stated in the syllabus of the courses comprised in the education are then applicable.