

Education plan

for

**Master's Programme in Environmental Chemistry (Swedish School of
Environmental Chemistry, SSEC)
Masterprogram i miljökemi**

**120.0 Higher Education
Credits
120.0 ECTS credits**

Programme code:	NMIKO
Valid from:	Autumn 2008
Date of approval:	2006-10-18
Changed:	2008-04-07
Department:	Department of Materials and Environmental Chemistry

Decision

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

Prerequisites and special admittance requirements

Knowledge equivalent to a Bachelor's degree, comprising at least 90 higher education credits in chemistry, is required for admission to the programme. 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 education, given in collaboration with Umeå University, comprises four advanced compulsory courses (60 higher education credits) and a degree project of at least 30 higher education credits, and additional optional courses.

The programme is closely related to research at both universities, and is designed to cover most specializations within environmental chemistry.

The programme provides knowledge and skills that form a useful foundation for both postgraduate studies and a professional career, both domestically and abroad.

Goals

For a Master's degree the student must demonstrate:

- Knowledge and understanding of the major field of Environmental 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-depth knowledge of methodology in environmental chemistry.
- Ability to integrate knowledge in environmental chemistry critically and systematically in order to analyze, evaluate and handle complex phenomena, issues and situations in environmental chemistry, even with limited information.
- Ability to critically, independently and creatively identify and formulate problems of relevance to environmental chemistry, to plan and, using adequate methods in environmental chemistry, 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 environmental 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 within the major field, first semester (UmU):

UMU-56010 (Basic Environmental Chemistry, SC, 15 higher education credits).*

UMU-56012 (Measurement and Modelling of Environmental Contaminants, SC, 15 higher education credits).

Compulsory courses within the major field, second semester (SU):

KM7002 (Chemistry of Organic Environmental Contaminants, SC, 15 higher education credits).

KM7001 (Metabolism and Risk Assessment of Chemicals in the Environment, SC, 15 higher education credits).

Third and fourth semester (SU and/or UmU):

Degree Project in Environmental Chemistry, at least 30 higher education credits.

Optional courses to make up the sum total 120 higher education credits for the programme.

*The course 5KE044 (Basic Environmental Chemistry) is not compulsory if the courses KM5001 (Organic Environmental Chemistry) and KY4008 (Aquatic Chemistry – Inorganic Environmental Chemistry) have been taken previously at SU.

Degree

Master's 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.