Department of Mathematics
(incl. Math. Statistics)

Stockholm University

Education plan

for

Master's Programme in Computer Science
Masterprogram i datalogi

120.0 Higher Education Credits
120.0 ECTS credits

Programme code:	NDATO
Valid from:	Autumn 2007
Date of approval:	2006-10-18
Department:	Department of Mathematics (incl. Math. Statistics)

Decision

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

Prerequisites and special admittance requirements

For programme admission knowledge equivalent to a Bachelor's Degree, including a minimum of 90 HECs in Computer Science, is required.

Programme structure

The programme starts with four compulsory courses, and (at least) one of the advanced specializations Computer Security, Computer Vision and Robotics, Internetworking, Human-Computer Interaction, Software Systems Technology and Theoretical Computer Science. Then the students perform a Degree Project within the chosen specialization. In addition the students choose elective courses, in computer science or from other areas. A maximum of 30 HECs of elective courses may be from the first level. The programme is a qualification for advanced professional work, or a graduate education, within the chosen specialization area.

Goals

For a Degree of Master in the main field of Computer Science the student must
• demonstrate knowledge and understanding in the main field of Computer Science, including both broad knowledge in the field and substantially deeper knowledge of certain parts of the field, together with deeper insight into current research and development work,

• demonstrate deeper methodological knowledge in the main field of Computer Science,

•demonstrate an ability to critically and systematically integrate knowledge and to analyse, assess and deal with complex phenomena, issues and situations, even when limited information is available,

• demonstrate an ability to critically, independently and creatively identify and formulate issues and to plan and, using appropriate methods, carry out advanced tasks within specified time limits, so as to contribute to the development of knowledge and to evaluate this work,

• demonstrate an ability to clearly present and discuss his/her conclusions and the knowledge and arguments behind them, in dialogue with different groups, orally and in writing, in national and international contexts; and - demonstrate the skill required to participate in research and development work or to work independently in other advanced contexts,

• demonstrate an ability to make assessments in the main field of Computer Science, taking into account relevant scientific, social and ethical aspects, and demonstrate an awareness of ethical aspects of research and development work,

• demonstrate insight into the potential and limitations of science, its role in society and people's responsibility for how it is used, and,

• demonstrate an ability to identify his/her need of further knowledge and to take responsibility for developing his/her knowledge.

Courses

The first year of the programme consists of four compulsory courses:
1 Human-Computer Interaction
2 Programming Paradigms
3 Computer Architecture and Low Level Programming
4 Algebra III
and (at least) one out of the courses:
i Computer Security
ii Computer Vision and Robotics
iii Internetworking
iv Human-Computer Interaction II
v Software Systems Technology
vi Theoretical Computer Science

The second year consists of a Degree Project and elective courses.

Courses 1-3, i-vi, and the Degree Project, are part of the main field of study - Computer Science.

Degree

Master degree.

Misc

Students, admitted to the programme, that have not completed it within the planned two years of study, may request to complete the programme even after the study programme syllabus has ceased to apply. In this case the limitations stated in the syllabus for each course included in the programme do apply.
The Department of Mathematics, Stockholm University, also takes part in the programme.