Department of Mathematics
(incl. Math. Statistics)

Stockholm University

Education plan

for

Bachelor's Programme in Computer Science
Kandidatprogram i datalogi

180.0 Higher Education Credits
180.0 ECTS credits

Programme code:	NDATK
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

Swedish upper secondary school courses Physics B, Chemistry A and Mathematics D, or equivalent.

Programme structure

The programme consists of compulsory courses in Computer Science (including a Degree Project), Mathematics, Scientific Computing, and Mathematical Statistics. Through the intertwining of Mathematics and Computer Science, the students will get both a solid basis in mathematics and knowledge applied in different areas of computer science.
In the programme also 15 HECs of elegible courses are included, which can be brought from the first or second level.
The programme gives a basis for professional work, or Master's studies, in Computer Science.

Goals

For a Degree of Bachelor in the main field of Computer Science the student must
• demonstrate knowledge and understanding in the main field of Computer Science, including knowledge of the scientific basis of the field, knowledge of Computer Science methods, in-depth knowledge of some part of Computer Science and a general sense of current research issues,

• demonstrate an ability to seek, gather and critically interpret information that is relevant to a problem and to critically discuss phenomena, issues and situations,

• demonstrate an ability to independently identify, formulate and solve problems and to perform tasks within specified time limits,

• demonstrate an ability to present and discuss information, problems and solutions in dialogue with different groups, orally and in writing,

• demonstrate the skills required to work independently in the Computer Science field,

• demonstrate an ability to make assessments in the Computer Science field, taking into account relevant scientific, social and ethical aspects,

• demonstrate insight into the role of knowledge in society and into people's responsibility for how knowledge is used, and

• demonstrate an ability to identify his/her need of further knowledge and to upgrade his/her capabilities.

Courses

Year 1, compulsory courses
• Mathematics, FL (MM2001), algebra part
• Computer Science I, FL (DA2001)*
• Linear Algebra, FL (MM5004)
• Algebra and Combinatorics, FL (MM5003)
• Computer Science II, FL (DA3001)*

Year 2, compulsory courses
• Logic, SL (MM7008)*
• Combinatorics II, SL (MM7007)
• Database Technology, FL (DA3003)*
• Writing Technology and Typography with Computer Support, FL (DA3006)*
• Software Engineering and Project Work, FL (DA3005)*
• Mathematics, FL (MM2001), analysis part
Elective courses

Year 3, compulsory courses
• Probability Theory I, FL (MT3001)
• Mathematical Analysis III, FL (MM5001)
• Numerical and Applied Mathematics, FL (BE3004)
• Algorithms and Complexity, FL (DA3004)*
• Computer Science, Degree Project. FL (DA6003)*
Elective courses

* The course is part of the main field of study - Computer Science.

Degree

Bachelor degree.

Misc

Students, admitted to the programme, that have not completed it within the planned three 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.