Education plan

for

Master's Programme in Computer and Systems Sciences	**120.0 Higher Education**
Masterprogram i data- och systemvetenskap	**Credits**
	120.0 ECTS credits

Programme code:	SDSVO
Valid from:	Autumn 2007
Date of approval:	2006-09-28
Department:	Department of Computer and Systems Sciences

Decision

This programme syllabus is approved by the Faculty of Social Sciences at Stockholm's University

Prerequisites and special admittance requirements

A Bachelor degree or a degree equal to 180 ECTS. A minimum of 90 ECTS in the area of computer and systems sciences.

Language requirements: English B or
• IELTS (International English Language Testing Service)- Academic Module: Overall minimum score of 6.5 and a minimum of 6 in each subtest: listening, reading, speaking, and writing.
• TOEFL (Test of English as a Foreign Language)
- Computer Based: Overall minimum score of 233 including a minimum Test of Written English (TWE) score of 5.0
- Paper Based: Overall minimum score of 577 including a minimum TWE score of 5.0.
• UEEC (UNSW Institute of Languages University English Entry Course): Overall minimum score of C+ (Grade point 7.0) with a minimum score of 20 in the writing component.
• CULT (Combined Universities Language Test): Overall minimum score of 70 with a minimum score of 17 in each of the sub-tests of listening, reading, speaking, and writing.
• CPE (Certificate of Proficiency in English): minimum grade B.

Programme structure

Only the courses, Bridging Course in Computer and Systems Sciences as well as Scientific Communication and Research Methodology are obligatory. Within the framework of the first of these, the student is permitted to choose courses and modules within the main field so that knowledge for ensuing elective courses are obtained, and if the student already has sufficient knowledge, courses and modules can be chosen freely within the main field.

The remaining courses are chosen from a pool of courses, in Computer and Systems Sciences or other relevant fields.

The courses shall be chosen so that the student obtains advanced knowledge within each of the fields, information security, interactive systems, systems analysis and systems development.

The education is completed with a thesis work of 30 ECTS.

Goals

Knowledge and skills
The student is expected after a completed education to:
- have in depth knowledge about the interaction between information systems and their environment
- have knowledge about different types of system development methods
- have knowledge about different design and analysis tools
- have knowledge about formal methods, algorithms and programming languages
- understand different aspects of information security and threats
- know about current research fields within modern information technology (IT)
Skills and abilities
The student is expected after a completed education to:
- have the ability to analyze and design models
- be able to design and analyze algorithms
- be able to work with different support tools
- formulate, plan and carry out systems development project
- based on solid grounds, choose a method for studying a specific problem
- systematically be able to evaluate the work of others

Assessment ability and approach
The student is expected after a completed education to:
- have the ability to assess the quality of different systems development approaches and models
- be able to assess effectively in a systems development project
- have a notion about coming trends within the subject area
- have the ability to identify the need of additional knowledge
- be able to observe ethical aspects and consequences of an IT project
- be able to critically evaluate methods within the IT field
- understand and reflect over general questions within the IT field

Additionally, there are the following general educational objectives:
- to give a scientific base within the main field of study to allow for studies at the research level
- to develop the students ability to search and assess knowledge in the main field at a scientific level
- to give basic skills in oral and written communication
- to give skills in communication, in terms of oral skills as well as writing skills, within an international, scientific community.

Courses
Scientific communication and research methodology, 15 ECTS, semester 1-3

Bridging course in Computer and Systems Sciences, 15 ECTS, semester 1

Elective specialization in Computer and Systems Sciences or other subject 1, 30 ECTS, semester 1-3

Elective specialization in Computer and Systems Sciences or other subject 2, 30 ECTS, semester 1-3

Thesis work, 30 ECTS, semester 4

Degree
The programme leads to a Degree of Master of Science in the main field of study: Computer and Systems Sciences.