



Programme syllabus

[An accessible version of the syllabus can be found in the Course and programme directory.](#)

Degree Programme in Computer Science and Engineering 300 credits

Civilingenjörsutbildning i datateknik

Valid for students admitted to the education from autumn 08 (HT - Autumn term; VT - Spring term).

This is a translation of the Swedish, legally binding, programme syllabus.

Programme objectives

Computer Science and Engineering is the most influential factor on society and will remain so during the foreseeable future. An essential usage of Computer Science and Engineering is the efficiency of resource usage and communication in society for a sustainable development.

The Master of Science in Computer Science and Engineering programme at KTH aims to give the student the prerequisites and abilities to participate and lead work with appraisal, development and influence of new Computer Science and Engineering technologies.

Knowledge and understanding

The programme has the goal that a Master of Computer Science and Engineering should:

- show fundamental knowledge within Computer Science and Engineering
- show fundamental knowledge in math. With this, the ability to explain and carry out mathematical reasoning and define and analyze mathematical models.
- show knowledge in human and natural sciences, especially such knowledge which has consequences for computerized systems' design.
- show knowledge about industrial entrepreneurship and relevant legislation.

Skills and abilities

The programme has the goal that a Master of Computer Science and Engineering should:

- have prerequisites and abilities to participate in and develop the practices which are applied in industry, administration, and academic research.
- have the ability to independently define and solve computer-related constructions problems.
- have the prerequisites for successful work in international and multidisciplinary project groups which consist of people from both technical and non-technical backgrounds. This includes the ability to orally, and in writing, present as well as argue in Swedish and English.

Ability to make judgements and adopt a standpoint

The programme has the goal that a Master of Computer Science and Engineering should:

- Independently analyze and adopt a standpoint on economical, societal, environment-related and ethical consequences of computer science applications, and to design systems concerning this.
- Through self-development, retain one's professional abilities during a professional career.
- Follow the discussion with technology in society and promote this.

A full description of degree requirements for the Master of Science in Engineering degree, Bachelor degree, and master's degrees can be found in KTHs local degree ordinance.

<http://www.kth.se/info/kth-handboken/II/19/1x.html>

Extent and content of the programme

The Master of Computer Science and Engineering is composed of 300 ECTS credits, which, at normal study rate, corresponds to 5 years of full-time study (10 semesters).

The first three years (180 ECTS credits) are on the first level and can, if the student applies for it, be finished with a Bachelor degree of computer Science and Engineering. The last two years are mainly in the second level (120 ECTS credits).

Programme Specialisations*

Autonomous Systems
Calculation Technology
Biomedical Technology
Computer Security
Computer Systems Technology
Distributed Systems
Industrial information and control systems
Informations Systems and Database Technology
Intelligent interactive systems
Internet Technology
Communications Systems
Human-Computer Interaction
Program Systems Technology
Language Technology
Theoretical Computer Science

* The list of specialisations is subject to change. Updated lists of all specialisations can be found in the Course and program directory.

There are two international profiles for asiatic languages: one for Chinese and one for Japanese. There is also an international profile for European languages where one of the languages French, Spanish, and German is studied.

The international profiles have special application codes at studera.nu.

Language of Instruction

The language of instruction, during the first three years of the programme is mostly Swedish; although English literature will be used. The concluding two years some courses are given in Swedish and some in English. For each course the language of instruction is found in the Course and program directory on the KTH student web site.

Eligibility and selection

In order to be accepted to the Master of Computer Science and Engineering programme the basic eligibility requirements as well as the following requirements must be met:

Mathematics D

Physics B

Chemistry A

All with at least a grade of G.

For eligibility requirements and selection guidelines, see the KTH admission policy
<http://www.kth.se/info/kth-handboken/II/11/1.html>

Implementation of the education

Structure of the education

The programme plan for the Master of Computer Science and Engineering partly consists of compulsory courses in study years 1 and 2, and part of study year 3. In the spring of study year 3, the desired specialization is chosen. The entirety of study year 4 and half of study year 5 consist of courses in the second level from the specialization, corresponding to at least 37.5 ECTS credits. There is also room for elective courses in study years 4 and 5. The programme is concluded in the spring semester of study year 5 with a degree project worth 30 ECTS credits.

The specialisation in *Language Engineering* is special because it begins in the fall semester in study year 2 with the course Linguistics I which is taken at Stockholm university during the fall semester and replaces three compulsory courses and one conditionally elective course. (See appendix 2)

The programme is designed in such a manner that the student after three years of studies can obtain a bachelor's degree. The student can then continue his/her studies on the Computer science and engineering program, continue his/her studies in another program at KTH or another University in Sweden or abroad or start his/her work career.

International specialisation

The programme plan for the Master of Computer Science in Engineering with the international profile starts with compulsory courses in study years 1-3 and courses within the specialisation language. Study year three is concluded by a first level degree project. In study year 4, one of the Computer Science specialisations is taken. Beyond the specialisation, those who have chosen the European languages take more language courses, and those who have chosen Japanese or Chinese take elective courses. In study year 5, in the fall semester, those who have chosen Japanese or Chinese and those who have chosen the European languages will take elective courses. The programme is concluded in the spring semester in study year 5 with a degree project consisting of 30 ECTS credits.

The student is offered to spend two semesters at one of the KTH partner universities using the language of the specialization. These semesters are allocated to the portion of the programme which is given on the second level.

The international specialisation is special because the language courses start in the first year and are taken throughout the programme. In total, 60 ECTS credits in Japanese or Chinese are taken. Within the European languages, 40 ECTS credits within one of the languages: French, Spanish, or German are taken. Compared to the normal Computer Science programme, three courses are omitted for those taking the international specialisation: Communication in Engineering sciences, Physics and a conditionally elective course.

Academic year

The KTH academic year is 40 weeks, divided into four periods. Each study period is followed by an examination period. There are also three re-examination periods.

For details about the structure of the academic year see http://www.kth.se/student/schema/1.1007?l=en_UK

Courses

The programme is course-based. Lists of courses are included in appendix 1.

The programme consists of compulsory, conditionally elective and elective courses. The compulsory courses are defined for every study year and specialization in the teaching and time schedule. The goals, prerequisites, contents and examination requirements for each course can be found in the Course and program directory on the KTH student web.

In study year three, there is allocated space for conditionally elective courses and elective courses within the Computer Science and Engineering programme. Only under certain circumstances can elective courses be taken earlier.

Elective courses can be chosen from KTH's course selection for Master of Science in Engineering programmes. Courses from other universities can be recognized for credit, if the degree requirements are fulfilled.

For elective courses, the following restrictions apply:

- Elective courses can not be taken in study year 1
- Only under certain circumstances can elective courses be taken in study year 2.
- The number of higher education credits which can be taken per semester can be limited.

Grading system

Courses in the first and the second cycle are graded on a scale from A to F. A-E are passing grades, A is the highest grade. The grades pass (P) and fail (F) are used for courses under certain circumstances.

Conditions for participation in the programme

Semester enrollment

No later than November 15 and May 15 the student is required to make a study enrollment for the next semester at the CSC Program Office.

This study enrollment is required in order for the exam results to be registered.

Approved leave from studies

Approved leave from studies means that the student does not participate in the education during at least one study period. The student has the right to return to the education at a time agreed upon, and has the right to participate in the examination of non-finished courses.

Application for an approved leave is done on according to instructions from the CSC program office. When the student decides to return to the education, he/she is required to re-enroll to the studies.

Course Selection

Application to conditionally elective and elective courses

From study year 3 and on the student is responsible for applying to all courses he/she wishes to take. This also applies to compulsory courses. The application for admission to a course is done according to instructions from the CSC school no later than

May 15th for the fall semester

November 15th for the spring semester

Applications made after this date are only granted if there are vacancies in the courses. Applications to language courses with prerequisites should be preceded by a qualification test.

In a few courses, the number of participants is limited. Selection is done by the school responsible for the course.

Admission to compulsory courses during study years 1–2 is, in most cases, automatic. Students wishing to study an individual specialization or choosing among alternative compulsory courses have to submit a special form.

Course registration

The student must register with the school responsible for the course at the start of each course, and also report to the school responsible for the course if the studies are discontinued.

Registration to a course requires formal acceptance to the course (by the school responsible for the course). Applications should be made according to instructions from the CSC school.

Conditions for being promoted to the next level

The following promotion requirements apply in order to participate in the next level of the education.

Requirements for promotion from study year 1 to study year 2:

A total of at least 45 ECTS credits from study year 1 must be completed.

Requirements for promotion from study year 2 to study year 3:

A total of at least 90 ECTS credits from study years 1 and 2 must be completed.

Requirements for promotion from study year 3 to study year 4:

A total of at least 150 ECTS credits from study years 1-3 must be completed whereof 110 ECTS credits from study year 1-2, and the first level degree project.

Requirements for promotion from study year 4 to study year 5:

In addition to what applies for promotion to study 4, at least 45 higher education credits from study year 4 must be completed.

Individual study plan

Students who do not fulfill these requirements must – in cooperation with the CSC program office – make an individual study plan for continued studies.

Please see the KTH regulations: http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/1.27217?l=en_UK

Specialisation Selection

The first opportunity for course selection occurs in the spring semester in study year 3. At this time you choose those compulsory and conditionally elective courses that are in the specialisation you have chosen, as well as those elective courses you may wish to take the following semester.

For choice of specialization, you must turn in a form “preliminary specialisation choice” which can be found on the KTH student web.

In a few courses, the number of places is limited and selection is done based on merits such as grades and number of credits for the student who applied before the deadline. Selection is done by the school responsible for the course.

Recognition of previous academic studies

The recognition of previous academic studies is an important element to facilitate the mobility within the country and between countries, for the internationalization work of higher education and for life-long learning.

KTH will have an open attitude to recognition of previous academic studies. Recognition can, therefore, be made even if the programme does not exist at KTH or the contents in, for example, course plans do not exactly correspond to KTH's. The requirements which KTH normally sets on the study programme's level and quality will be taken into consideration when recognizing previous academic studies.

Recognition of previous academic studies decided by another higher education institution in Sweden must normally be accepted by KTH.

A student at KTH who carries out studies at another university within the boundaries of an exchange agreement has the right to receive advanced notification about recognition of previous studies. Such a notification can, for example, be given through a Learning Agreement which must be established and signed by the coordinator at KTH, contact person at the university abroad and the student.

The student at KTH has the right to receive a trial recognition of previous academic studies. Even a person who is not a student at KTH, but has academic education and strives to complete it should – if possible – get a preliminary decision (advanced notification) about the recognition of previous academic studies.

Even degree project work can be recognized. KTH considers it, nevertheless, appropriate that the degree project work is performed at KTH (within a school or at a company with supervisor from KTH).

Decision about recognition of courses can be appealed through the Board of Appeals for higher education. The appeal must be submitted to KTH at the latest within three weeks from the day the applicant was notified of the decision.

In order for a trial recognition of previous academic studies, the applicant must normally be able to document that he/she has graduated in courses (corresponding) with at least passing results. The study performance is graded by the university where the exam was taken, not by the recognition of KTH.

<http://www.kth.se/info/kth-handboken/II/13/3.html>

Studies abroad

Students at the Master of Science in Engineering in Computer Science and Engineering programme have the opportunity to study one or two semesters abroad through agreements KTH has with universities within and outside the EU. Exchange studies are appropriate during the fourth or fifth study years. It is also possible to make the final degree project (second cycle) abroad.

It is also possible to take two degrees at certain European universities.

For more information contact the international coordinator at CSC.

Degree project

In the programme, a project work is done which corresponds to a course worth 30 ECTS credits, or about 5 months of full-time studies.

- The degree project is normally carried out within a subject central to the programme's technical area.
- The degree project may not be started before the topic is approved by the examiner at the chosen department and is submitted to the programme office on a special form.

- The main portion of the studies, at least 240 higher education credits must be completed. The student may not have more than two unfinished courses from the compulsory courses (in years 1-3).
- The examiner is responsible for the student having sufficient prerequisites for the chosen assignment.
- The degree project work is based on the knowledge which is acquired during the entire study time and will normally be done during the tenth semester within the chosen specialisation. If the student desires to do the degree project within another specialisation area, it must be approved by the programme office.
- The degree project should show that the student is capable of independently applying his/her acquired knowledge during the study time and is therefore done at the end of the programme.
- The degree project must provide proof of an independent, scientific/engineering-related work, extensive theoretical, and/or experimental work with a corresponding report. The degree project can include other elements, for example, seminars, information searching, opposition, or other elements that the examiner or supervisor deems suitable.
- The degree project is carried out individually or together with another student. In the latter case, the examiner must ensure that the work of each student fulfills the requirements for an individual degree project.
- The supervisor is appointed by the examiner.

The application form for degree projects must be signed by the student and the examiner and submitted to the programme office.

More information, details and guidelines for degree projects can be found at the respective department.

The degree project can be carried out in the degree project subjects: Computer Science, Biomedical Engineering, Human-Computer Interaction, Media Technology, Numerical Analysis, Music Acoustics, Electro Acoustics, Speech Communication, Computer and Systems Sciences, Teleinformatics, and Industrial control systems.

Other subjects for the degree project may be considered upon application. For more information, contact the CSC program office.

<http://www.kth.se/info/kth-handboken/II/15/1.html>

Degree

Conditions for the Degree of Master of Science in Engineering 300 ECTS credits
The Master of Science in Engineering degree is received after completing the programme. The programme is designed so that the student fulfills the national degree requirements and has completed courses corresponding to 300 ECTS credits, including

- courses of at least 45 ECTS credits within mathematics-natural sciences, and, in addition, courses of at least 180 higher ECTS credits (including 30 ECTS credits from the degree project) in the subjects central to the technical area
- courses of at least 90 ECTS credits in the second cycle, whereof at least 60 ECTS credits (including 30 ECTS credits from degree project) in subjects central to the technical area

Degree name

Civilingenjörsexamen

Degree of Master of Science in Engineering, Degree Programme in Computer Science and Technology

Application for the Degree

The student applies for the Degree of Master of Science and Engineering: Computer Science and Engineering. The application for the degree is done on a special form and is submitted to the CSC program office.

KTHs local degree ordinance (KTH-Handbook)

<http://www.kth.se/info/kth-handboken/II/19/1x.html>

Appendix 1 - Course list

Appendix 2 - Programme syllabus descriptions



Appendix 1: Course list

Degree Programme in Computer Science and Engineering (CDATE)

General courses

Year 1

Mandatory courses (60.0 Credits)

Code	Name	Credits	Edu. level
DD1340	Introduction to Computer Science	18.0 hp	First cycle
DD1350	Logic for Computer Science	6.0 hp	First cycle
DH1600	Communication in Engineering Sciences	7.5 hp	First cycle
IE1204	Digital Design	7.5 hp	First cycle
SF1600	Calculus I, part 1	7.5 hp	First cycle
SF1604	Linear Algebra	7.5 hp	First cycle
SF1612	Mathematics, Basic Course	6.0 hp	First cycle

Optional courses

Code	Name	Credits	Edu. level
EL1150	Introductory Matlab Course	1.5 hp	First cycle
SF1611	Introductory Course in Mathematics I	1.5 hp	First cycle

Supplementary information

Batch 09 take the first study year during the academic year 2008/09.

Year 2

Mandatory courses (64.5 Credits)

Code	Name	Credits	Edu. level
DD1352	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
DD1361	Programming Paradigms	7.5 hp	First cycle
DN1241	Numerical Methods, Basic Course III	7.5 hp	First cycle
IS1200	Computer Hardware Engineering	7.5 hp	First cycle
ME1010	Organization and Knowledge-Intensive Work	6.0 hp	First cycle
SF1626	Calculus in Several Variables	7.5 hp	First cycle
SF1631	Discrete Mathematics	12.0 hp	First cycle
SK1131	Physics: Waves and Particles	7.5 hp	First cycle

Supplementary information

Batch 08 take the second study year during the academic year 2009/10.

Year 3

Mandatory courses (37.5 Credits)

Code	Name	Credits	Edu. level
DD1364	Database Technology	7.5 hp	First cycle
DD1365	Software Engineering	6.0 hp	First cycle
DD143X	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
SF1901	Probability Theory and Statistics	6.0 hp	First cycle
SF1904	Markov Processes, Basic Course	3.0 hp	First cycle

Supplementary information

Batch 08 take the third study year during 2010/11.

Year 4

Supplementary information

Batch 08 take the fourth study year during 2011/12.

Master programs to choose between

Batch 08 may choose between the following master's programs:

- Computational and systems biology
- Computer science
- Machine learning
- Human-computer interaction
- Scientific computing
- Network systems and services
- Systems, control and robotics
- Wireless systems
- Embedded systems
- Communication systems
- Software engineering of distributed systems
- System on chip design, track Embedded System-on-Chip Platforms
- Industrial management
- Mathematics, track Mathematics may not be chosen
- Medical engineering

Students may also choose one of the following Erasmus Mundus programs and apply for them as any student outside of KTH (seat is not guaranteed).

- Computer simulation for science and engineering
- Systems biology
- Distributed systems

Each master's program has eligibility requirements that must be fulfilled.

For some of the above master's programs certain choices of elective courses are required

Industrial management

In order to get a degree of master of science in engineering in Computer science and engineering the student must have at least 90 credits at second level, of which at least 60 credits (including a 30-credit degree project) must be within the framework of the engineering area. Since the courses in industrial management are not within the framework you must choose 30 credits within the framework and also choose a task for the degree project that makes makes the degree project be within the framework.

Mathematics

The track mathematics may not be chosen.

Medical engineering

In order to get a degree of master of science in engineering in Computer science and engineering the student must have at least 90 credits at second level, of which at least 60 credits (including a 30-credit degree project) must be within the framework of the engineering area. Since the courses in medical engineering are not within the framework you must choose 30 credits within the framework and also choose a task for the degree project that makes makes the degree project be within the framework.

System on chip design

The track Embedded System-on-Chip Platforms must be chosen.

Year 5

Supplementary information

Batch 08 take the fifth study year during 2012/13.

During study years 4 and 5 the students follow a master program of their choice.

Not only the requirements set by the selected Master program to begin the degree project apply but also the following: The student must have 240 ECTS credits from completed courses within the Master of science of engineering program and may have at the most three unfinished compulsory courses from study years 1–3.

Master, Computational and Systems Biology (BSB)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tbsbm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tbsbm/ht11/arskurs2?l=en_UK

Master, Communication Systems (COM)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tcomm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tcomm/ht11/arskurs2?l=en_UK

Master, Computer Science (CSC)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tcscm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tcscm/ht11/arskurs2?l=en_UK

Master, Distributed Computing (DIS)

Year 4

Supplementary information

This is an Erasmus Mundus program. Students on the Computer science and engineering program do not have guaranteed seats and apply as any student outside of KTH.

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tdism/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tdism/ht11/arskurs2?l=en_UK

Master, Computer Simulation for Science and Engineering (DTN)

Year 4

Supplementary information

This is an Erasmus Mundus program. Students on the Computer science and engineering program do not have guaranteed seats and apply as any student outside of KTH.

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tdtnm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tdtnm/ht11/arskurs2?l=en_UK

Master, Human-Computer Interaction (HCI)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/thcim/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/thcim/ht11/arskurs2?l=en_UK

Master, Industrial Management (INE)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tinem/ht11/arskurs1?l=en_UK

Special requirements

Please note that you must meet some special requirements in order to receive a degree from the Computer science and engineering program. These requirements are listed under "Courses for all specializations above".

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tinem/ht11/arskurs2?l=en_UK

Special requirements

Please note that you must meet some special requirements in order to receive a degree from the Computer science and engineering program. These requirements are listed under "Courses for all specializations above".

International Profile (INT)

Year 1

Mandatory courses (52.5 Credits)

Code	Name	Credits	Edu. level
DD1340	Introduction to Computer Science	18.0 hp	First cycle
DD1350	Logic for Computer Science	6.0 hp	First cycle
IE1204	Digital Design	7.5 hp	First cycle
SF1600	Calculus I, part 1	7.5 hp	First cycle
SF1604	Linear Algebra	7.5 hp	First cycle
SF1612	Mathematics, Basic Course	6.0 hp	First cycle

Optional courses

Code	Name	Credits	Edu. level
EL1150	Introductory Matlab Course	1.5 hp	First cycle
SF1611	Introductory Course in Mathematics I	1.5 hp	First cycle

Conditionally elective courses

Code	Name	Credits	Edu. level
DS1323	German, Advanced Beginners Level	7.5 hp	First cycle
DS1338	French, Advanced Beginners Level	7.5 hp	First cycle
DS1344	Spanish, Advanced Beginners Level	7.5 hp	First cycle

Year 2

Mandatory courses (51.0 Credits)

Code	Name	Credits	Edu. level
DD1352	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
DD1361	Programming Paradigms	7.5 hp	First cycle
DN1241	Numerical Methods, Basic Course III	7.5 hp	First cycle
IS1200	Computer Hardware Engineering	7.5 hp	First cycle
SF1626	Calculus in Several Variables	7.5 hp	First cycle
SF1631	Discrete Mathematics	12.0 hp	First cycle

Conditionally elective courses

Code	Name	Credits	Edu. level
DS1324	Technical German, Intermediate Level	9.0 hp	First cycle
DS1334	Technical French, Intermediate Level	9.0 hp	First cycle
DS1348	Technical Spanish, Intermediate Level	9.0 hp	First cycle

Year 3

Mandatory courses (37.5 Credits)

Code	Name	Credits	Edu. level
DD1364	Database Technology	7.5 hp	First cycle
DD1365	Software Engineering	6.0 hp	First cycle
DD143X	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
SF1901	Probability Theory and Statistics	6.0 hp	First cycle
SF1904	Markov Processes, Basic Course	3.0 hp	First cycle

Conditionally elective courses

Code	Name	Credits	Edu. level
DS2326	Technical German, Advanced Level <i>Same language as during years 1;2</i>	9.0 hp	Second cycle
DS2336	Technical French, Advanced Level <i>Same language as during years 1;2</i>	9.0 hp	Second cycle
DS2349	Technical Spanish, Advanced Level <i>Same language as during years 1;2</i>	9.0 hp	Second cycle

Supplementary information

Batch 08 take the third study year during 2010/11.

Year 4

Supplementary information

Batch 08 take the fourth study year during 2011/12.

Since the students on the international profile take language courses during study years 4-5 the choice of master programs is more limited. The student has three possibilities:

1. Take the master program in Computer science that offers a sufficient number of credits for elective courses.
2. In consultation with the program co-ordinator and the international co-ordinator investigate the possibilities of choosing another master program.
3. In consultation with the program co-ordinator and the international co-ordinator skip some of the mandatory courses from the selected master program and only receive the degree of Master of Science in Engineering degree (civilingenjör) and not the degree of Master of Science.

Year 5

Supplementary information

Batch 08 take the fifth study year during 2012/13.

During study year 5 the student continues on the master's program.

Not only the requirements set by the selected Master program to begin the degree project apply but also the following: The student must have 240 ECTS credits from completed courses within the Master of science of engineering program and may have at the most three unfinished compulsory courses from study years 1–3.

International Profile, Japanese (JAP)

Year 1

Mandatory courses (58.5 Credits)

Code	Name	Credits	Edu. level
DD1340	Introduction to Computer Science	18.0 hp	First cycle
DD1350	Logic for Computer Science	6.0 hp	First cycle
DS1381	Elementary Japanese and Japanese Studies	6.0 hp	First cycle
IE1204	Digital Design	7.5 hp	First cycle
SF1600	Calculus I, part 1	7.5 hp	First cycle
SF1604	Linear Algebra	7.5 hp	First cycle
SF1612	Mathematics, Basic Course	6.0 hp	First cycle

Optional courses

Code	Name	Credits	Edu. level
EL1150	Introductory Matlab Course	1.5 hp	First cycle
SF1611	Introductory Course in Mathematics I	1.5 hp	First cycle

Year 2

Mandatory courses (57.0 Credits)

Code	Name	Credits	Edu. level
DD1352	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
DD1361	Programming Paradigms	7.5 hp	First cycle

DN1241	Numerical Methods, Basic Course III	7.5 hp	First cycle
DS1383	Japanese, Advanced Beginners Level I	6.0 hp	First cycle
IS1200	Computer Hardware Engineering	7.5 hp	First cycle
SF1626	Calculus in Several Variables	7.5 hp	First cycle
SF1631	Discrete Mathematics	12.0 hp	First cycle

Year 3

Mandatory courses (46.5 Credits)

Code	Name	Credits	Edu. level
DD1364	Database Technology	7.5 hp	First cycle
DD1365	Software Engineering	6.0 hp	First cycle
DD143X	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
DS1384	Japanese, Advanced Beginners Level II	9.0 hp	First cycle
SF1901	Probability Theory and Statistics	6.0 hp	First cycle
SF1904	Markov Processes, Basic Course	3.0 hp	First cycle

Supplementary information

Batch 08 take the third study year during 2010/11.

Year 4

Supplementary information

Batch 08 take the fourth study year during 2011/12.

Since the students on the international profile take language courses during study years 4-5 the choice of master programs is more limited. The student has three possibilities:

1. Take the master program in Computer science that offers a sufficient number of credits for elective courses.
2. In consultation with the program co-ordinator and the international co-ordinator investigate the possibilities of choosing another master program.

3. In consultation with the program co-ordinator and the international co-ordinator skip some of the mandatory courses from the selected master program and only receive the degree of Master of Science in Engineering degree (civilingenjör) and not the degree of Master of Science.

Year 5

Supplementary information

Batch 08 take the fifth study year during 2012/13.

During study year 5 the student continues on the master's program.

Not only the requirements set by the selected Master program to begin the degree project apply but also the following: The student must have 240 ECTS credits from completed courses within the Master of science of engineering program and may have at the most three unfinished compulsory courses from study years 1–3.

International Profile, Chinese (KIN)

Year 1

Mandatory courses (58.5 Credits)

Code	Name	Credits	Edu. level
DD1340	Introduction to Computer Science	18.0 hp	First cycle
DD1350	Logic for Computer Science	6.0 hp	First cycle
DS1391	Elementary Chinese and Chinese Studies	6.0 hp	First cycle
IE1204	Digital Design	7.5 hp	First cycle
SF1600	Calculus I, part 1	7.5 hp	First cycle
SF1604	Linear Algebra	7.5 hp	First cycle
SF1612	Mathematics, Basic Course	6.0 hp	First cycle

Optional courses

Code	Name	Credits	Edu. level

EL1150	Introductory Matlab Course	1.5 hp	First cycle
SF1611	Introductory Course in Mathematics I	1.5 hp	First cycle

Year 2

Mandatory courses (57.0 Credits)

Code	Name	Credits	Edu. level
DD1352	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
DD1361	Programming Paradigms	7.5 hp	First cycle
DN1241	Numerical Methods, Basic Course III	7.5 hp	First cycle
DS1393	Chinese, Advanced Beginners Level I	6.0 hp	First cycle
IS1200	Computer Hardware Engineering	7.5 hp	First cycle
SF1626	Calculus in Several Variables	7.5 hp	First cycle
SF1631	Discrete Mathematics	12.0 hp	First cycle

Year 3

Mandatory courses (46.5 Credits)

Code	Name	Credits	Edu. level
DD1364	Database Technology	7.5 hp	First cycle
DD1365	Software Engineering	6.0 hp	First cycle
DD143X	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
DS1394	Chinese, Advanced Beginners Level II	9.0 hp	First cycle
SF1901	Probability Theory and Statistics	6.0 hp	First cycle
SF1904	Markov Processes, Basic Course	3.0 hp	First cycle

Supplementary information

Batch 08 take the third study year during 2010/11.

Year 4

Supplementary information

Batch 08 take the fourth study year during 2011/12.

Since the students on the international profile take language courses during study years 4-5 the choice of master programs is more limited. The student has three possibilities:

1. Take the master program in Computer science that offers a sufficient number of credits for elective courses.
2. In consultation with the program co-ordinator and the international co-ordinator investigate the possibilities of choosing another master program.
3. In consultation with the program co-ordinator and the international co-ordinator skip some of the mandatory courses from the selected master program and only receive the degree of Master of Science in Engineering degree (civilingenjör) and not the degree of Master of Science.

Year 5

Supplementary information

Batch 08 take the fifth study year during 2012/13.

During study year 5 the student continues on the master's program.

Not only the requirements set by the selected Master program to begin the degree project apply but also the following: The student must have 240 ECTS credits from completed courses within the Master of science of engineering program and may have at the most three unfinished compulsory courses from study years 1–3.

Master, Machine Learning (MAI2)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tmaim/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tmaim/ht11/arskurs2?l=en_UK

Master, Medical Engineering (MEG)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tmlem/ht11/arskurs1?l=en_UK

Special requirements

Please note that you must meet some special requirements in order to receive a degree from the Computer science and engineering program. These requirements are listed under "Courses for all specializations above".

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tmlem/ht11/arskurs2?l=en_UK

Special requirements

Please note that you must meet some special requirements in order to receive a degree from the Computer science and engineering program. These requirements are listed under "Courses for all specializations above".

Master, Mathematics (MTH)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tmthm/ht11/arskurs1?l=en_UK

Special requirements

Please note that you must meet some special requirements in order to receive a degree from the Computer science and engineering program. These requirements are listed under "Courses for all specializations above".

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tmthm/ht11/arskurs2?l=en_UK

Special requirements

Please note that you must meet some special requirements in order to receive a degree from the Computer science and engineering program. These requirements are listed under "Courses for all specializations above".

Master, Network Services and Systems (NSS)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tncsm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tncsm/ht11/arskurs2?l=en_UK

Master, Scientific Computing (SCC)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tscsm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tscm/ht11/arskurs2?l=en_UK

Master, Systems, Control and Robotics (SCR)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tscrm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tscrm/ht11/arskurs2?l=en_UK

Master, Software Engineering of Distributed Systems (SED)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tsedm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tsedm/ht11/arskurs2?l=en_UK

Master, System-on-Chip Design (SKK)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tskkm/ht11/arskurs1?l=en_UK

Special requirements

You must follow the track: "Embedded System-on-Chip Platforms"

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tskkm/ht11/arskurs2?l=en_UK

Special requirements

You must follow the track: "Embedded System-on-Chip Platforms"

Language Technology (STEK)

Year 2

Mandatory courses (34.5 Credits)

Code	Name	Credits	Edu. level
DD1352	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
ME1010	Organization and Knowledge-Intensive Work	6.0 hp	First cycle
SF1626	Calculus in Several Variables	7.5 hp	First cycle
SF1631	Discrete Mathematics	12.0 hp	First cycle

Recommended courses

Code	Name	Credits	Edu. level
IS1200	Computer Hardware Engineering	7.5 hp	First cycle

Year 3

Mandatory courses (51.0 Credits)

Code	Name	Credits	Edu. level
DD1361	Programming Paradigms	7.5 hp	First cycle
DD1364	Database Technology	7.5 hp	First cycle
DD1365	Software Engineering	6.0 hp	First cycle
DD143X	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
ME1012	Organization and knowledge-Intensive Work	6.0 hp	First cycle
SF1901	Probability Theory and Statistics	6.0 hp	First cycle
SF1904	Markov Processes, Basic Course	3.0 hp	First cycle

Supplementary information

Students in the language technology specialization take courses in linguistics at Stockholm university during the fall of the second study year. The rest of the courses within the specialization are taken during study years 4–5.

Year 4

Supplementary information

Batch 08 take the fourth study year during 2011/12.

During study years 4 and 5 the students follow the master program Computer science, track language technology

Year 5

Supplementary information

Batch 08 take the fifth study year during 2012/13.

During study years 4 and 5 the students follow the master program Computer science, track language technology

Master, Systems Biology (SYB)

Year 4

Supplementary information

This is an Erasmus Mundus program. Students on the Computer science and engineering program do not have guaranteed seats and apply as any student outside of KTH.

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tsybm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

This is an Erasmus Mundus program. Students on the Computer science and engineering program do not have guaranteed seats and apply as any student outside of KTH.

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tsybm/ht11/arskurs2?l=en_UK

Master, Wireless Systems (TLS)

Year 4

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tt1sm/ht11/arskurs1?l=en_UK

Year 5

Supplementary information

For information about the master's program please see the KTH Course and program directory.

A course list is found at:

http://www.kth.se/student/kurser/program/tt1sm/ht11/arskurs2?l=en_UK



Appendix 2: Specialisations

Degree Programme in Computer Science and Engineering (CDATE)

Master, Computational and Systems Biology (BSB)

No information entered.

Master, Communication Systems (COM)

No information entered.

Master, Computer Science (CSC)

No information entered.

Master, Distributed Computing (DIS)

No information entered.

Master, Computer Simulation for Science and Engineering (DTN)

No information entered.

Master, Human-Computer Interaction (HCI)

No information entered.

Master, Industrial Management (INE)

No information entered.

International Profile (INT)

The programme of studies for the masters degree in computer engineering with an international focus begins with the compulsory courses in grades 1-2, and courses in the language chosen. In grade 3 is read compulsory courses and courses in the language chosen. In grade 4 read one of information technology specializations. In addition to targeting those who read selected French, Spanish or German additional language courses, those who opted for Japanese or Chinese read optional courses. In grade 5 in the autumn term, which reads the chosen Japanese or Chinese language and those who opted for French, Spanish or German optional courses. The programme ends in the spring semester in grades 5 with a thesis on 30 *credits*. It's given the opportunity to relocate two semesters of study abroad at one of KTH's partner in the chosen language. These futures located in the part of the training provided at the second level. The international focus is special because language courses are already beginning to read in grades 1 and read then continuously during training. Total read 60 credits in Japanese or Chinese. Within the European languages are read 40 credits in any of the languages of French, Spanish or German. Compared with the normal Computer Science and Engineering program assumes three courses for those who read the international focus: Communications in engineering, Physics and a conditional optional course.

International Profile, Japanese (JAP)

The programme of studies for the masters degree in computer engineering with an international focus begins with the compulsory courses in grades 1-2, and courses in the language chosen. In grade 3 is read compulsory courses and courses in the language chosen. In grade 4 read one of information technology specializations. In addition to targeting those who read selected French, Spanish or German additional language courses, those who opted for Japanese or Chinese read optional courses. In grade 5 in the autumn term, which reads the chosen Japanese or Chinese language and those who opted for French, Spanish or German optional courses. The programme ends in the spring semester in grades 5 with a thesis on 30 *credits*. It's given the opportunity to relocate two semesters of study abroad at one of KTH's partner in the chosen language. These futures located in the part of the training provided at the second level. The international focus is special because language courses are already beginning to read in grades 1 and read then continuously during training. Total read 60 credits in Japanese or Chinese. Within the European languages are read 40 credits in any of the languages of French, Spanish or German. Compared with the normal Computer Science and Engineering program assumes three courses for those who read the international focus: Communications in engineering, Physics and a conditional optional course.

International Profile, Chinese (KIN)

The programme of studies for the masters degree in computer engineering with an international focus begins with the compulsory courses in grades 1-2, and courses in the language chosen. In grade 3 is read compulsory courses and courses in the language chosen. In grade 4 read one of information technology specializations. In addition to targeting those who read selected French, Spanish or German additional language courses, those who opted for Japanese or Chinese read optional courses. In grade 5 in the autumn term, which reads the chosen Japanese or Chinese language and those who opted for French, Spanish or German optional courses. The programme ends in the spring semester in grades 5 with a thesis on 30 *credits*. It's given the opportunity to relocate two semesters of study abroad at one of KTHs partner in the chosen language. These futures located in the part of the training provided at the second level. The international focus is special because language courses are already beginning to read in grades 1 and read then continuously during training. Total read 60 credits in Japanese or Chinese. Within the European languages are read 40 credits in any of the languages of French, Spanish or German. Compared with the normal Computer Science and Engineering program assumes three courses for those who read the international focus: Communications in engineering, Physics and a conditional optional course.

Master, Machine Learning (MAI2)

No information entered.

Master, Medical Engineering (MEG)

No information entered.

Master, Mathematics (MTH)

No information entered.

Master, Network Services and Systems (NSS)

No information entered.

Master, Scientific Computing (SCC)

No information entered.

Master, Systems, Control and Robotics (SCR)

No information entered.

Master, Software Engineering of Distributed Systems (SED)

No information entered.

Master, System-on-Chip Design (SKK)

No information entered.

Language Technology (STEK)

Language Engineering is an interdisciplinary area where language science and computer science meet. Language Engineering consists of all applications and usages of language knowledge during the development of programmes and systems which can recognize, interpret, and generate human language, both for spoken and written language.

The specialisation is special because it is started in the first term and contains: Linguistics I, 30 higher education credits, at SU during the fall term in study year 2. Other courses in the specialisation are given by KTH during the spring term in study year 3 and study year 4. Compared to the normal D-programme, four courses are missed for those taking the specialisation: Numerical methods, Computer Engineering, Physics and a conditionally optional course, in total 25 higher education credits.

Master, Systems Biology (SYB)

No information entered.

Master, Wireless Systems (TLS)

No information entered.