



# 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 12 (HT - Autumn term; VT - Spring term).*

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

### Programme objectives

***This program syllabus, established by the CSC Undergraduate education advisory group 2011-09-07 and 2011-10-03 and then decided by the CSC dean 2011-09-15 and 2011-10-03. Which courses that belong a study year is decided in the fall the year before. Please see "Study year 1" etc. or the appendices. Changes may occur in the contents of the program and in the KTH regulations, please see [www.kth.se/student](http://www.kth.se/student).***

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 in and lead work with appraisal, development and influence of new Computer Science and Engineering technologies.

**Besides the goals stated in the Swedish Higher Education Ordinance the following goals apply.**

## Knowledge and understanding

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

- have fundamental knowledge within Computer Science and Engineering
- have profound knowledge in mathematics, i.e. have the ability to explain and carry out mathematical reasoning and define and analyze mathematical models.
- have knowledge in human and natural sciences, especially such knowledge which has consequences for design of computerized systems.
- have 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 construction 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 and promote the discussion concerning technology in society.

# 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. The first three years (180 ECTS credits) are on the first level. The final two years (120 ECTS credits) are mainly on the second level.

## *Master's programs*

The last two years the student takes a master's program of his/her choice. The master's programs consist of courses mainly in the second level. The education leads to a master's degree as well as a "civilingenjör" degree.

Each year a list of master's programs that the students can choose from is presented. For some master's programs there are restrictions as to choice of tracks or eligible courses.

## *International profiles*

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 are mostly 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 E, Physics B, Chemistry A (according to the swedish school system). All with at least a grade of Godkänd (Passed).

For eligibility requirements and selection, see the KTH admission policy  
[http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/antagning/1.27186?l=en\\_UK](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/antagning/1.27186?l=en_UK)

# Implementation of the education

## Structure of the education

*This program syllabus, established by the CSC Undergraduate education advisory group 2011-09-07 and then decided by the CSC dean, is valid for students beginning their studies during the academic year 2012/13. Which courses that belong a study year is decided in the fall the year before. Please see "Study year 1" etc. or the appendices. Changes may occur in the contents of the program and in the KTH regulations, please see [www.kth.se/student](http://www.kth.se/student).*

The syllabus for the Master of Computer Science and Engineering program consists of

- compulsory first level courses during study years 1–3 concluded by a first level degree project.
- courses within the master's program that the student has chosen for study years 4–5, concluded by a second level degree project.
- elective first and second level courses giving the education the profile desired by the student.

### ***Specialization in language engineering***

The specialisation in Language Engineering begins in the fall semester in study year 2 with courses in linguistics taken at Stockholm University. These courses replace some of the compulsory courses. (See appendix 2)

### ***International profile***

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 years 4–5 the student follows a master's program of his/her choice. Within this program additional language courses are taken. Study year 5 is concluded by a second level degree project.

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.

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.

The international specialisation is special because the language courses start in the first year and are taken continuously throughout the programme. In total, 60 ECTS credits in Japanese or Chinese or 40 ECTS credits in French, Spanish, or German are taken. Compared to the normal Computer Science programme, three courses are omitted for students on the international specialisation.

### ***Bachelor's degree***

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.

### ***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](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 course goals, prerequisites, contents and examination requirements are found in the course syllabus in the Course and program directory on the KTH student web. The programme consists of compulsory, conditionally elective and elective courses. The compulsory courses are defined in course lists for each study year.

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 in exceptional cases can elective courses be taken in study year 2
- The number of credits that can be chosen per semester can be limited.
- Elective courses may not overlap a course already taken to a considerable extent.
- Higher education preparation courses may not be counted as elective course.

- Courses on lower levels within a subject than the programme courses may not count as elective courses.

## 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.

Since the grading systems differ very much between different countries, the grades are not translated from exchange studies abroad.

## Conditions for participation in the programme

### *Semester enrollment*

At the start of each semester the student is required to make a study enrollment for the next semester at My pages.

The study enrollment is required for taking new courses and for study results to be registered.

### *Selection of courses*

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

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.

A student may only take courses that are included in the study plan.

### *Choice of master's program*

The student must apply for the master's program he/she wishes to follow during study years 4–5 according to instructions given by the CSC program office.

### ***Course registration***

Course registration is done by the school/department giving the course. It can only be done if the course has been selected.

The student must, at the first scheduled lecture, register for the course. Course registration for compulsory as well as elective courses must be done individually. If the student registers for a course and then decides to not continue, the student must notify the school/department giving the course as soon as possible.

### ***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 whereof at least 50 higher education credits from study year 1.

#### ***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](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/1.27217?l=en_UK)

## **Recognition of previous academic studies**

Credits for studies at another university can be transferred. An application form can be found on the KTH Student pages.

The application form is submitted to the CSC program office.

For in-depth information about the KTH policy for credit transfer, see [http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/prestationer/1.27200?l=en\\_UK](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/prestationer/1.27200?l=en_UK)

# 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 not appropriate during the first and second study years. It is also possible to make the final degree project (second cycle) abroad.

For more information contact the international coordinator at CSC.

Mer information finns på KTHs studentwebb och på [http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/utbytesstudier?l=en\\_UK](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/utbytesstudier?l=en_UK)

## Degree project

### *Degree project, first cycle*

A degree project of 15 ECTS credits (first cycle) is done during study year 3.

KTH comprehensive rules and guidelines for degree projects of 15 ECTS credits for Degree of Bachelor of Science 180 ECTS credits, and grading of the project are found in the KTH regulations.

[http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/examensarbete/1.27211?l=en\\_UK](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/examensarbete/1.27211?l=en_UK)

### *Degree project, second cycle*

A second degree project of 30 ECTS credits (second cycle) is done during study year 5.

KTH comprehensive rules and guidelines for degree projects of 30 ECTS credits for Degree of Master of Science in Engineering, Degree Programme in Computer Science and Technology 300 ECTS credits, and grading of the project is found in the KTH regulations.

[http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/examensarbete/1.27205?l=en\\_UK](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/examensarbete/1.27205?l=en_UK)

In addition the following applies:

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.

For a student who within the selected Master program does a degree project examined by any other school than CSC, the program director for the Master of science of engineering program in Computer Science and Engineering must approve the specification and the final report to certify the relevance and quality of the degree project in relation to the program.



# Degree

## ***Application for graduation***

Students may apply for the following degrees: Degree of Bachelor of Science and Degree of Master of Science in Engineering, Degree Programme in Computer Science. Students can also request for Degree of Master of Science (Two Years) if the requirements for this degree are met.

Instructions for the application are available on the KTH student web.

## ***Conditions for the Degree of Bachelor of Science 180 ECTS credits***

The Degree of Bachelor of Science is received if the student applies for graduation after the completion of the 3rd study year and fulfills the national degree requirements, i.e. has completed courses corresponding to 180 ECTS credits, including

- courses of at least 25 ECTS credits within mathematics-natural sciences,
- courses of at least 90 ECTS credits (including 15 ECTS credits from the degree project) with successive progression in the main field of education.

## ***Degree name***

Teknologie kandidatexamen  
Degree of Bachelor of Science

## ***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 the subjects central to the technical area

## ***Degree name***

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

***Conditions for Degree of Master of Science (Two Years) 120 ECTS credits.  
See KTH regulations (see link below).***

## ***Degree name***

Teknologie masterexamen  
Degree of Master of Science (Two Years)

***Information on degree requirements in the KTH regulations:***

[http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/examina/1.27227?l=en\\_UK](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/examina/1.27227?l=en_UK)

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 (64.0 Credits)

Code	Name	Credits	Edu. level
<a href="#">AG1814</a>	Sustainable Development for Computer Science and Engineering	6.0 hp	First cycle
<a href="#">DD1339</a>	Introduction to Computer Science	19.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>2 cr belong to study year 1; distribution over the periods: 0,1; 1,5; 0,2; 0,2</i>	6.0 hp	First cycle
<a href="#">DH1600</a>	Communication in Engineering Sciences	7.5 hp	First cycle
<a href="#">DH1620</a>	Human-Computer Interaction, Introductory Course	6.0 hp	First cycle
<a href="#">SF1604</a>	Linear Algebra	7.5 hp	First cycle
<a href="#">SF1625</a>	Calculus in One Variable	7.5 hp	First cycle
<a href="#">SF1659</a>	Mathematics, Basic Course	4.5 hp	First cycle

## Year 2

### Mandatory courses (63.0 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1350</a>	Logic for Computer Science	6.0 hp	First cycle
<a href="#">DD1361</a>	Programming Paradigms	7.5 hp	First cycle
<a href="#">DD1368</a>	Database Technology	6.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>3 cr belong to study year 2; distribution over the periods: 0,1; 0,4; 0,5; 2,0</i>	6.0 hp	First cycle
<a href="#">DD1392</a>	Introduction to Software Engineering	9.0 hp	First cycle
<a href="#">IS1500</a>	Computer Organization and Components	9.0 hp	First cycle
<a href="#">ME1010</a>	Organization and Knowledge-Intensive Work	6.0 hp	First cycle
<a href="#">SF1541</a>	Numerical Methods, Basic Course	7.5 hp	First cycle
<a href="#">SF1901</a>	Probability Theory and Statistics	6.0 hp	First cycle

## Year 3

### Mandatory courses (45.0 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1352</a>	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering	6.0 hp	First cycle
<a href="#">DD143X</a>	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
<a href="#">ID2200</a>	Operating Systems	6.0 hp	Second cycle
<a href="#">SF1630</a>	Discrete Mathematics	9.0 hp	First cycle

## Recommended courses

Code	Name	Credits	Edu. level
<a href="#">DD1354</a>	Models and Simulation	6.0 hp	First cycle
<a href="#">SF1626</a>	Calculus in Several Variables	7.5 hp	First cycle

## Supplementary information

Both DD1354 and SF1626 can be followed.

## International Profile (INT)

### Year 1

### Mandatory courses (56.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">AG1814</a>	Sustainable Development for Computer Science and Engineering	6.0 hp	First cycle
<a href="#">DD1339</a>	Introduction to Computer Science	19.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>2 cr belong to study year 1; distribution over the periods: 0,1; 1,5; 0,2; 0,2</i>	6.0 hp	First cycle
<a href="#">DH1620</a>	Human-Computer Interaction, Introductory Course	6.0 hp	First cycle
<a href="#">SF1604</a>	Linear Algebra	7.5 hp	First cycle
<a href="#">SF1625</a>	Calculus in One Variable	7.5 hp	First cycle
<a href="#">SF1659</a>	Mathematics, Basic Course	4.5 hp	First cycle

### Optional courses

Code	Name	Credits	Edu. level
<a href="#">SF1611</a>	Introductory Course in Mathematics I	1.5 hp	First cycle

## Conditionally elective courses

Code	Name	Credits	Edu. level
<a href="#">DS1323</a>	German, Advanced Beginners Level	7.5 hp	First cycle
<a href="#">DS1339</a>	French, Advanced Beginners Level	7.5 hp	First cycle
<a href="#">DS1343</a>	Spanish, Advanced Beginners Level	7.5 hp	First cycle

## Supplementary information

One of the language courses must be taken.

## Year 2

### Mandatory courses (49.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1361</a>	Programming Paradigms	7.5 hp	First cycle
<a href="#">DD1368</a>	Database Technology	6.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>3 cr belong to study year 2; distribution over the periods: 0,1; 0,4; 0,5; 2,0</i>	6.0 hp	First cycle
<a href="#">DD1392</a>	Introduction to Software Engineering	9.0 hp	First cycle
<a href="#">IS1500</a>	Computer Organization and Components	9.0 hp	First cycle
<a href="#">ME1010</a>	Organization and Knowledge-Intensive Work	6.0 hp	First cycle
<a href="#">SF1901</a>	Probability Theory and Statistics	6.0 hp	First cycle

## Conditionally elective courses

Code	Name	Credits	Edu. level
<a href="#">DD1350</a>	Logic for Computer Science	6.0 hp	First cycle
<a href="#">LS1324</a>	German B1	9.0 hp	First cycle
<a href="#">LS1334</a>	French B1	9.0 hp	First cycle
<a href="#">LS1348</a>	Spanish B1	9.0 hp	First cycle
<a href="#">SF1541</a>	Numerical Methods, Basic Course	7.5 hp	First cycle

## Supplementary information

At least one of the courses DN1241 Numerical methods and DD1350 Logic must be taken. If both are taken then DD2395 Computer security can be skipped in study year 3.

Those who choose DD1350 must take 1,5 credits more to reach 60 credits over the academic year.

## Year 3

### Mandatory courses (39.0 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1352</a>	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering	6.0 hp	First cycle
<a href="#">DD143X</a>	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
<a href="#">SF1630</a>	Discrete Mathematics	9.0 hp	First cycle

## Conditionally elective courses

Code	Name	Credits	Edu. level
<a href="#">ID2200</a>	Operating Systems	6.0 hp	Second cycle

## Recommended courses

Code	Name	Credits	Edu. level
<a href="#">DD1354</a>	Models and Simulation	6.0 hp	First cycle
<a href="#">SF1626</a>	Calculus in Several Variables	7.5 hp	First cycle

## Supplementary information

- Two of the courses shall be followed: ID2200, SF1541, DD1350.
- Recommended courses: DD1354 and SF1626. Both courses can be followed.
- Elective course (follow one): LS1385 or LS1384, LS1394 or LS1395, LS2349, LS2336, LS2326.

## International Profile, Japanese (JAP)

### Year 1

### Mandatory courses (62.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">AG1814</a>	Sustainable Development for Computer Science and Engineering	6.0 hp	First cycle
<a href="#">DD1339</a>	Introduction to Computer Science	19.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>2 cr belong to study year 1; distribution over the periods: 0,1; 1,5; 0,2; 0,2</i>	6.0 hp	First cycle
<a href="#">DH1620</a>	Human-Computer Interaction, Introductory Course	6.0 hp	First cycle
<a href="#">DS1381</a>	Elementary Japanese and Japanese Studies	6.0 hp	First cycle
<a href="#">SF1604</a>	Linear Algebra	7.5 hp	First cycle
<a href="#">SF1625</a>	Calculus in One Variable	7.5 hp	First cycle
<a href="#">SF1659</a>	Mathematics, Basic Course	4.5 hp	First cycle

## Supplementary information

For those who wants to achieve 60 credits during the first year mus add a course for 1,5 credits



## Year 2

### Mandatory courses (55.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1361</a>	Programming Paradigms	7.5 hp	First cycle
<a href="#">DD1368</a>	Database Technology	6.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>3 cr belong to study year 2; distribution over the periods: 0,1; 0,4; 0,5; 2,0</i>	6.0 hp	First cycle
<a href="#">DD1392</a>	Introduction to Software Engineering	9.0 hp	First cycle
<a href="#">IS1500</a>	Computer Organization and Components	9.0 hp	First cycle
<a href="#">LS1383</a>	Japanese A1	6.0 hp	First cycle
<a href="#">ME1010</a>	Organization and Knowledge-Intensive Work	6.0 hp	First cycle
<a href="#">SF1901</a>	Probability Theory and Statistics	6.0 hp	First cycle

### Conditionally elective courses

Code	Name	Credits	Edu. level
<a href="#">DD1350</a>	Logic for Computer Science	6.0 hp	First cycle
<a href="#">SF1541</a>	Numerical Methods, Basic Course	7.5 hp	First cycle

### Supplementary information

At least one of the courses DN1241 Numerical methods and DD1350 Logic must be taken. If both are taken then DD2395 Computer security can be skipped in study year 3.

If DD1350 is chosen then the student must take 1,5 credits more to reach 60 credits over the academic year.

# International Profile, Chinese (KIN)

## Year 1

### Mandatory courses (62.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">AG1814</a>	Sustainable Development for Computer Science and Engineering	6.0 hp	First cycle
<a href="#">DD1339</a>	Introduction to Computer Science	19.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>2 hp läses i årskurs 1; fördelning över perioderna: 0,1; 1,5; 0,2; 0,2</i>	6.0 hp	First cycle
<a href="#">DH1620</a>	Human-Computer Interaction, Introductory Course	6.0 hp	First cycle
<a href="#">DS1391</a>	Elementary Chinese and Chinese Studies	6.0 hp	First cycle
<a href="#">SF1604</a>	Linear Algebra	7.5 hp	First cycle
<a href="#">SF1625</a>	Calculus in One Variable	7.5 hp	First cycle
<a href="#">SF1659</a>	Mathematics, Basic Course	4.5 hp	First cycle

### Supplementary information

Those who wants to achieve 60 credits during the first year must add a course for 1,5 credits

## Year 2

### Mandatory courses (55.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1361</a>	Programming Paradigms	7.5 hp	First cycle
<a href="#">DD1368</a>	Database Technology	6.0 hp	First cycle
<a href="#">DD1390</a>	Programme Integrating Course in Computer Science Engineering <i>3 cr belong to study year 2; distribution over the periods: 0,1; 0,4; 0,5; 2,0</i>	6.0 hp	First cycle
<a href="#">DD1392</a>	Introduction to Software Engineering	9.0 hp	First cycle
<a href="#">IS1500</a>	Computer Organization and Components	9.0 hp	First cycle
<a href="#">LS1393</a>	Chinese A1	6.0 hp	First cycle
<a href="#">ME1010</a>	Organization and Knowledge-Intensive Work	6.0 hp	First cycle
<a href="#">SF1901</a>	Probability Theory and Statistics	6.0 hp	First cycle

### Conditionally elective courses

Code	Name	Credits	Edu. level
<a href="#">DD1350</a>	Logic for Computer Science	6.0 hp	First cycle
<a href="#">SF1541</a>	Numerical Methods, Basic Course	7.5 hp	First cycle

### Supplementary information

At least one of the courses DN1241 Numerical methods and DD1350 Logic must be taken. If both are taken then DD2395 Computer security can be skipped in study year 3.

Those who choose DD1350 must take 1,5 credits more to reach 60 credits over the academic year.

# Language Technology (STEK)

## Year 2

### Supplementary information

Students may choose a Language Technology specialization and then take courses at Stockholm university (SU) during the fall in year 2. The courses at SU are: Introduction to linguistics, 12 credits and the course The Evolution of Language, Development and Variation, 7,5 credits.

These students do not take DD1350, DD1361 and SF1541 during the second study year, preferably during the third year.

## Year 3

### Mandatory courses (40.5 Credits)

Code	Name	Credits	Edu. level
<a href="#">DD1352</a>	Algorithms, Data Structures and Complexity	9.0 hp	First cycle
<a href="#">DD1361</a>	Programming Paradigms	7.5 hp	First cycle
<a href="#">DD143X</a>	Degree Project in Computer Science, First Cycle	15.0 hp	First cycle
<a href="#">SF1630</a>	Discrete Mathematics	9.0 hp	First cycle



# Appendix 2: Specialisations

Degree Programme in Computer Science and Engineering (CDATE)

International Profile (INT)

No information entered.

International Profile, Japanese (JAP)

No information entered.

International Profile, Chinese (KIN)

No information entered.

Language Technology (STEK)

No information entered.