Programme syllabus

Master's Programme, Computer Science, 120 credits
Masterprogram, datalogi
120.0 credits

Valid for students admitted to the education from autumn 15 (HT - Autumn term; VT - Spring term).

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

Programme objectives

The aim of the Master’s programme is to provide a broad education in Computer Science with the possibility of deepening and specializing within the area of computer science, the method science for construction of computer programmes including theoretical foundations as well as the practical ability to develop products and systems which include computers and software.

The programme will provide the students with the requisites and abilities to participate and lead work within evaluation, development and implementation of new technology within the field of computer science.

In addition to this comes the Higher Education Ordinance goal for Master's degree.

Knowledge and understanding

The objective of the program is to provide the student with:

- deepened knowledge within computer science and engineering,
- knowledge within at least one subject area complementary to technology.

The programme shall also provide the student with the opportunity to specialize with one of the following goals:

- provide a deepened knowledge within one or more of the areas: computer vision, robotics, artificial intelligence, and neuro-informatics,
- provide an orientation within computer security, foundations for technical computer security, and a deepened knowledge within one or more areas concerning technical aspects of computer security,
- provide a deepened knowledge within leadership and management of large IT projects and management of complex IT-environments. Also, an orientation within modeling and decision making in company-wide IT questions such as information security, modifiability, interoperability, etc., is offered,
- provide deepened knowledge and understanding for methodology and scientific perspective within the internet technology area and provide the students with practical skills, above all, for initiation, configuration and maintenance of computer networks,
- provide deepened knowledge about software construction in a technical development context,
- provide deepened knowledge about solutions of resource-demanding computational problems and related combinatorial/statistical analysis methods,
- provide an extended understanding for existent and non-existent efficient algorithms for different computational problems,
- implement and use language knowledge in the development of programmes and systems that can recognize, interpret and generate human language.

**Skills and abilities**

The objective of the program is to provide the student with:

- a good analytical problem solving ability,
- the ability to independently define and solve construction problems within computer science,
- the requisites and abilities to participate in and develop practices implemented in industry, maintenance and academic research,
- the requisites for successful work in international and interdisciplinary project groups which include engineers and non-engineers. This goal includes abilities in oral and written presentation and argumentation in Swedish and English.

**Ability to make judgements and adopt a standpoint**

The objective of the program is that the student should:

- be able to evaluate the quality of scientific studies and show a reflective and critical approach to scientific and non-scientific texts,
- through self-development, retain his/her own professional ability during a professional career
- follow the discussion about technology in society and contribute to it.

Beyond this, there are similar goals for the Master of Science in Engineering programme which are defined by the higher education ordinance

**Extent and content of the programme**

The programme is in the second cycle and comprises 120 ECTS credits, which, at normal study rate, corresponds to two years. The programme is given in English, but some elective courses are given in Swedish.

The programme currently offers specializations within autonomous systems, computational biology, computer security, IT-Management with Enterprise architecture, sound and music computing, programme system engineering, language technology and theoretical computer science.
The students also have the possibility to define an individual track which must be approved by the
programme director.

**Eligibility and selection**

General Admission Requirements: See KTHs admission requirements for Master’s Programmes, link
below.

Special Admission Requirements:

The minimum criterias are that the following must be in the bachelor degree

- Mathematics: three different subjects of a total of 22.5 credits. Among those subject there must be
  one course in one-variabel calculus and one course in Linear Algebra or Discrete Mathematics.

- Computer Science/Information technology: three different subjects of a total of 22.5 credits. Among
  those subjects there must be one course in Object oriented programming and one course in
  Algorithms and Data structures.

Please note that additional knowledge might be required to be able to follow certain track in the master
programme.

The special admission requirement may not be assessed as not fullfilled if;

- the average grade is in the lower third on the grading scale used

- the degree does not qualify for admission to equivalent Master level in the country where the degree
  is awarded.

Selection process:

If the number of applicants exceeds the number of places avilable a programme comittee will make a
selection from the following criterias:

1. evaluation of university
2. grades from previous study
3. motivation to study
4. merit rating
5. references
6. proficiency in English

The evaluation scale is 1-75.
Implementation of the education

Structure of the education

This programme syllabus decided by the CSC dean 2014-09-01 is valid for students starting the programme during the study year 2015/2016. 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 programme and in the KTH regulations, please see www.kth.se/en/student.

The KTH academic year is 40 weeks, divided into four periods.

For details about the structure of the academic year see http://www.kth.se/en/student/schema/

During the first study five compulsory courses are taken, totaling 30 ECTS credits.

Beside the compulsory courses, 30 ECTS credits are required in advanced courses within a specific area of computer science. These must either be part of a recommended specialisation or compiled by the student, but in the latter case, the course selection must be approved by the programme coordinator. Within each specialisation, courses can be freely chosen but considering prerequisites, or, in certain cases, places available.

The programme is concluded by a degree project comprising 30 ECTS credits.

Other courses are elective.

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. For each study year there is a course list.

For elective courses, the following restrictions apply:

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

Courses are examined in many ways, for example by home assignments that are presented either using oral presentations or written reports, computer assignments, project work or traditional written exams.
After each course a student evaluation is performed and then analyzed by the course leader in the course analysis document, which is normally published on the web, see the KTH regulations of course analysis: [http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/kursanalys](http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/kursanalys)

**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 the Personal menu at [www.kth.se](http://www.kth.se)

The study enrollment is required for taking new courses and for study 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.

Approved leave from studies is not granted during study year 1. Exceptions may be made if there are extraordinary reasons.


Selection of track is done according to instructions from the CSC school.

**Selection of courses**

The student is required to apply for admission to all courses he/she wishes to take during the next semester. The student is responsible for having the recommended prerequisites. 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.

**Course registration**

The student must, at course start, register for each 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 report this as soon as possible.

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

**Promotion to second year**

At least 45 ECTS credits have to be completed during the first academic year in order for the student to be promoted to the second year of the program.

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/en/regelverk/utbildning-forskning/grundutbildning/

**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/en/regelverk/utbildning-forskning/grundutbildning/prestationer/1.27200

**Studies abroad**

Students of the program have the possibility to spend one or two semesters of study at a foreign university through agreements KTH has with universities within and outside the EU. It is also possible to make the final degree project abroad.

For more information contact the international coordinator at CSC.

More information can be found on the KTH student web and at http://intra.kth.se/regelverk/utbildning-forskning/grundutbildning/utbytesstudier
Degree project

An individual study in the form of a degree project corresponding to 30 ECTS credits is included in the program.

It is the responsibility of the student to find a suitable project task.

More information about the rules for degree projects at KTH can be found at http://intra.kth.se/en/regelverk/utbildning-forskning/grundutbildning/examensarbete/

For students on a Master of science of engineering program not only the requirements set by the selected Master program to begin the degree project apply but also the requirements from the Master of science of engineering program.

Degree

After completing the program, the student may apply for the Degree of Master of Science (Two Years), in Swedish: teknologie masterexamen.

Information on the application process can be found on the KTH Student pages.

Requirements for the Degree of Master of Science (Two Years)

The Degree of Master of Science (Two Years) is obtained after completion of the program. The program is designed so that students, when they graduate, have fulfilled the national requirements for a degree. This means that the students have completed courses comprising 120 ECTS credits, of which at least 90 ECTS credits are second cycle, and at least 60 ECTS credits (including a 30 ECTS credits degree project) constitute indepth studies in the main field of study.

See also the KTH regulations http://intra.kth.se/en/regelverk/utbildning-forskning/grundutbildning/examina/

Appendix 1 - Course list
Appendix 2 - Programme syllabus descriptions
Appendix 1: Course list

Master's Programme, Computer Science, 120 credits (TCSCM), Programme syllabus for studies starting in autumn 2015

General courses

Year 1

Mandatory courses (56.0 Credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA2210</td>
<td>Introduction to the Philosophy of Science and Research Methodology for Computer Scientists</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2300</td>
<td>Program Integrating Course in Computer Science</td>
<td>2.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2352</td>
<td>Algorithms and Complexity</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2380</td>
<td>Artificial Intelligence</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2395</td>
<td>Computer Security</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2440</td>
<td>Advanced Algorithms</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>IK2218</td>
<td>Protocols and Principles of the Internet</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>SF1630</td>
<td>Must be taken if external student (not for CDATE), alternative course is SF2736 (Eng. version).</td>
<td>9.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>SF2736</td>
<td>Must be taken if external student (not for CDATE), alternative course is SF1630 (in Swedish).</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
</tbody>
</table>

Supplementary information

The fall of study year 1 includes four compulsory courses.

For the spring semester the student chooses a track and during the spring semester of study year 1 and fall semester of study year 2 the student takes courses from the chosen track of at least 30 credits.
Students who miss the equivalent courses in previous degree are also required to take:
- DD2352 Algorithms and Complexity 7.5 cr,
- SF1630 Discrete Mathematics 9 cr, or SF2736 Discrete Mathematics 7.5 cr.

**Year 2**

**Mandatory courses (62.0 Credits)**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA221X</td>
<td>Degree Project in Computer Science and Communication, Second Cycle</td>
<td>30.0 hp Second cycle</td>
</tr>
<tr>
<td>DA222X</td>
<td>Degree Project in Computer Science and Communication, Second Cycle</td>
<td>30.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2300</td>
<td>Program Integrating Course in Computer Science One credit each academic year</td>
<td>2.0 hp Second cycle</td>
</tr>
</tbody>
</table>

**Supplementary information**

For the spring semester the student chooses a track. During the spring semester of study year 1 and fall semester of study year 2 the student takes courses from the chosen track of at least 30 credits.

**Track, Autonomous Systems (CSCA)**

**Year 1**

**Conditionally elective courses**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2427</td>
<td>Image Based Recognition and Classification</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2432</td>
<td>Artificial Neural Networks and Other Learning Systems</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2438</td>
<td>Artificial Intelligence and Multi Agent Systems</td>
<td>15.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2476</td>
<td>Search Engines and Information Retrieval Systems</td>
<td>9.0 hp Second cycle</td>
</tr>
<tr>
<td>DT2112</td>
<td>Speech Technology</td>
<td>7.5 hp Second cycle</td>
</tr>
</tbody>
</table>

**Supplementary information**

Subject to changes

**Year 2**

**Conditionally elective courses**

**Course**
<table>
<thead>
<tr>
<th>code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2423</td>
<td>Image Analysis and Computer Vision</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2425</td>
<td>Robotics and Autonomous Systems</td>
<td>9.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2431</td>
<td>Machine Learning</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>EQ2340</td>
<td>Pattern Recognition</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>ID2209</td>
<td>Distributed Artificial Intelligence and Intelligent Agents</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
</tbody>
</table>

**Track, Computer Security (CSCB)**

**Year 1**

Conditionally elective courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2448</td>
<td>Foundations of Cryptography</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2459</td>
<td>Software Reliability</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2460</td>
<td>Software Safety and Security</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>EP2520</td>
<td>Building Networked Systems Security</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
</tbody>
</table>

Given if resources are available

EP2500 (period 2) is recommended prerequisite course.

Supplementary information

Subject to changes

**Year 2**

Conditionally elective courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD1387</td>
<td>Program System Construction Using C++</td>
<td>6.0 hp</td>
<td>First cycle</td>
</tr>
<tr>
<td>DD2443</td>
<td>Parallel and Distributed Computing</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2458</td>
<td>Problem Solving and Programming under Pressure</td>
<td>9.0 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>EP2500</td>
<td>Networked Systems Security</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>EP2510</td>
<td>Advanced Networked Systems Security</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
</tbody>
</table>

**Track, IT-Management with Enterprise Architecture (CSCC)**

**Year 1**

Conditionally elective courses
<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK2014</td>
<td>Decision Theory</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>DD2459</td>
<td>Software Reliability</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>DD2471</td>
<td>Modern Database Systems and Their Applications</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>EH2770</td>
<td>IT Management with Enterprise Architecture I</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>EP2520</td>
<td>Building Networked Systems Security</td>
<td>7.5 hp Second cycle</td>
</tr>
</tbody>
</table>

Supplementary information

Subject to changes

**Year 2**

Conditionally elective courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>EH2030</td>
<td>Business Development and Quality Management</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>EH2720</td>
<td>Management of Projects</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>EH2781</td>
<td>IT Management with Enterprise Architecture II, Case Studies</td>
<td>15.0 hp Second cycle</td>
</tr>
</tbody>
</table>

Supplementary information

Subject to changes

**Track, Program System Technology (CSCD)**

**Year 1**

Conditionally elective courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2372</td>
<td>Automata and Languages</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2390</td>
<td>Internet Programming</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2460</td>
<td>Software Safety and Security</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td></td>
<td>Given if resources are available.</td>
<td></td>
</tr>
<tr>
<td>DD2471</td>
<td>Modern Database Systems and Their Applications</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>DD2476</td>
<td>Search Engines and Information Retrieval Systems</td>
<td>9.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2488</td>
<td>Compiler Construction</td>
<td>9.0 hp Second cycle</td>
</tr>
</tbody>
</table>

Recommended courses
Course code | Course name                                          | Credits | Edu. level   
--- | --- | --- | --- |
DH2642 | Interaction Programming and the Dynamic Web | 7.5 hp | Second cycle |

**Supplementary information**

Subject to changes.

This academic year you can take DD2372 Automata and Languages 6 credits, which will be alternated with DD2457 Program Semantics and Analysis, 6 cr, in period 4, next academic year.

**Year 2**

**Conditionally elective courses**

| Course code | Course name                                          | Credits | Edu. level   
--- | --- | --- | --- |
DD1387 | Program System Construction Using C++ | 6.0 hp | First cycle |
DD2386 | Patterns for Large-scale Development | 7.5 hp | Second cycle |
DD2418 | Language Engineering | 6.0 hp | Second cycle |
DD2431 | Machine Learning | 6.0 hp | Second cycle |
DD2443 | Parallel and Distributed Computing | 7.5 hp | Second cycle |
DD2458 | Problem Solving and Programming under Pressure | 9.0 hp | Second cycle |

**Supplementary information**

Subject to changes

**Track, Language Technology (CSCE)**

**Year 1**

**Conditionally elective courses**

| Course code | Course name                                          | Credits | Edu. level   
--- | --- | --- | --- |
DD2372 | Automata and Languages | 6.0 hp | Second cycle |
DD2390 | Internet Programming | 6.0 hp | Second cycle |
DD2476 | Search Engines and Information Retrieval Systems | 9.0 hp | Second cycle |
DT2112 | Speech Technology | 7.5 hp | Second cycle |

**Supplementary information**

Subject to changes.
This academic year you can take DD2372 Automata and Languages 6 credits, which will be alternated with DD2457 Program Semantics and Analysis, 6 cr, in period 4, next academic year.

Year 2

Conditionally elective courses

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<tbody>
<tr>
<td>DD1387</td>
<td>Program System Construction Using C++</td>
<td>6.0 hp First cycle</td>
</tr>
<tr>
<td>DD2418</td>
<td>Language Engineering</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2431</td>
<td>Machine Learning</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DT2140</td>
<td>Multimodal Interaction and Interfaces</td>
<td>7.5 hp Second cycle</td>
</tr>
</tbody>
</table>

Supplementary information

Subject to changes.

Track, Theoretical Computer Science (CSCF)

Year 1

Conditionally elective courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2372</td>
<td>Automata and Languages</td>
<td>6.0 hp Second cycle</td>
</tr>
<tr>
<td>DD2448</td>
<td>Foundations of Cryptography</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>DD2460</td>
<td>Software Safety and Security</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td></td>
<td>Given if resources are available.</td>
<td></td>
</tr>
</tbody>
</table>

Supplementary information

Subject to changes.

This academic year you can take DD2372 Automata and Languages 6 credits, which will be alternated with DD2457 Program Semantics and Analysis, 6 cr, in period 4, next academic year.

Year 2

Conditionally elective courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2442</td>
<td>Seminars on Theoretical Computer Science</td>
<td>7.5 hp Second cycle</td>
</tr>
</tbody>
</table>
### Track, Computational Biology (CSCG)

#### Year 1

**Conditionally elective courses**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD2401</td>
<td>Neuroscience</td>
<td>7.5 hp</td>
<td>Second cycle</td>
</tr>
<tr>
<td>DD2432</td>
<td>Artificial Neural Networks and Other Learning Systems</td>
<td>6.0 hp</td>
<td>Second cycle</td>
</tr>
</tbody>
</table>

**Supplementary information**

Subject to changes

#### Year 2

**Conditionally elective courses**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits</th>
<th>Edu. level</th>
</tr>
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<td>EQ2340</td>
<td>Pattern Recognition</td>
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### Track, Sound and Music Computing (CSCI)

#### Year 1

**Conditionally elective courses**

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<td>DT2118</td>
<td>Speech and Speaker Recognition</td>
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**DT2213**  Musical Communication and Music Technology  
7.5 hp  Second cycle

**Supplementary information**

Subject to changes

**Year 2**

**Conditionally elective courses**

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<td>DT2140</td>
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<td>DT2350</td>
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Appendix 2: Specialisations

Master's Programme, Computer Science, 120 credits (TCSCM), Programme syllabus for studies starting in autumn 2015

Track, Autonomous Systems (CSCA)
Track, Computer Security (CSCB)
Track, IT-Management with Enterprise Architecture (CSCC)
Track, Program System Technology (CSCD)
Track, Language Technology (CSCE)
Track, Theoretical Computer Science (CSCF)
Track, Computational Biology (CSCG)
Track, Sound and Music Computing (CSCI)