Programme syllabus

Degree Programme in Media Technology
Högskoleingenjörsutbildning i medieteknik
180.0 credits

Valid for students admitted to the education from autumn 07 (HT - Autumn term; VT - Spring term).

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

Programme objectives

The Bachelor of Science in Engineering in Media Technology programme prepares the student for work within a broad field of technical professions which the media industry and other branches with extensive media communications. Applications can, for example, comprise technical system solutions for different types of media production and development of different types of media services. The programme has a theoretical-practical profile.

Knowledge and understanding

The Bachelor of Science in Engineering programme in Media Technology should give the student:

- Basic knowledge and abilities which are required to, with applied methods, successfully work independently and in groups, and, in an engineering-related manner, solve the technical, organisational, methodological, design-related and usage related problems and challenges related to development, production, and usage of media services and products.

- Knowledge about the broad technical and interdisciplinary basis upon which media and its production, distribution and consumer technology rests, and the understanding for the historical development.

Skills and abilities

The Bachelor of Science in Engineering programme in Media Technology should give the student:

- Requisites to, with an encompassing perspective, independently and creatively identify, formulate and handle phenomena, occurrences, inquiries and situations and analyse and evaluate different technical, organisational and design-related solutions.
• The ability to critically and systematically integrate knowledge from different disciplines and experience areas and the ability to model, plan, and evaluate products, services, systems and processes.

• The ability to plan and, with adequate methods, implement assignments within given time constraints and the ability to create and handle products, services, processes and systems with regards to the human condition and need and society’s goals for economic, social and ecologically sustainable development.

• The possibility to develop his/her insight about and ability to work as a team and collaborate with groups with different backgrounds. The ability to orally and in writing, clearly and in a correct, audience adapted manner present and discuss information, problems and solutions in dialogue with different target groups.

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

The Bachelor of Science in Engineering programme in Media Technology should give the student:

• Requisites to make judgements with regards to the relevant scientific, social, ethical, and aesthetic aspects

• Insight into technology’s possibilities and limitations, its role in society and the human responsibility for how it is used, including social economical, environmental and work-environmental aspects

• Insight about the media’s meaningful role in society, opinion building and democratic processes such as in the ethical and judicial aspects in the media and its contents, and about the connection between technology, contents and usage in the media.

• The ability to identify one’s own need of further knowledge and continuously develop competencies.

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 Bachelor of Science in Engineering programme in Media Technology comprises 180 higher education credits which if studied at a normal study tempo, corresponds to 3 years for full-time studies (6 terms). The programme courses are given on the first level. During study year 3, the possibility exists to take one ore more courses on the second level within the constraints for the conditionally optional courses. The programme leads to a Bachelor of Science in Engineering degree in Media Technology.
Language of Instruction
The language of instruction of the programme is mostly Swedish; although, certain English literature will be used. The concluding years’ courses are given in Swedish and English. The language which is used for each course can be found in the Study Handbook.

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 certain places in the Bachelor of Science in Engineering programme in Media Technology (with adapted courses in mathematics) corresponding to Mathematics C with lowest grade G.

For eligibility requirements and selection guidelines, see KTH’s 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 Bachelor of Science in Engineering in Media Technology consists partly of the obligatory courses in study year 1-3 and a conditionally optional course block comprising 30 higher education credits in study year 3. The students which are admitted and are missing the course Mathematics D take a complementing mathematics course in study year 1. The programme is concluded during the spring term in study year 3 with a degree project comprising 15 higher education credits (10 weeks).

The study year consists of 40 weeks. The study year for KTH’s study programme is divided into four periods. The study periods correspond to about seven weeks. Every study period is followed by an examination period.

For details about the study years’ structure, see the Student Web and the KTH-Handbook http://www.kth.se/info/kth-handboken/II/4/2.html

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

The programme consists of obligatory, conditionally eligible and optional courses. The obligatory courses are defined for every study year and specialization in the teaching and time schedule. The different courses’ goals, prerequisites, contents and examination requirements can be found in the respective course plans.
In study year 3, space is allocated for conditionally optional courses comprising 30 higher education credits.

Optional courses can be chosen from KTH’s course selection. Courses from other higher education institutions/universities can be recognised, if the degree requirements are fulfilled.

For the optional courses, the following limitations apply:

- Only optional courses may be taken in study year 1
- Only with exception can optional courses be taken in study year 2
- The number of higher education credits per term 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

Enrolment notification and term registration
Before every term (1-15th May and 1-15 November), an obligatory term enrolment must be submitted via KTH’s web on “My pages” to the study guidance at the programme office for Computer Science and Engineering, office CSC.

Your enrolment notification constitutes the foundation for the office’s planning and that you are registered for the programme. Term registration is required in order for your study results to be registered and for CSN to distribute student aid.

Temporary Postponement
Temporary postponement means that the student does not participate in the programme during at least one study period. If temporary postponement is approved, the student has the right to return to the studies at a pre-determined point in time. During the temporary postponement, the student is able to complete and participate in examinations in incomplete courses.

Notification of temporary postponement is done on a form which is submitted to the programme office which processes it. When the student intends to resume the studies, it is necessary for the student to submit a separate notification.

Course Selection
Application to conditionally eligible and optional courses
The student is responsible from study year 3 and on to apply to those conditionally eligible and optional courses he/she wishes to take in the next term. This even applies to those obligatory and conditionally eligible courses which are included in the chosen specialization which he/she is studying. Decisions about acceptance to courses are decided by the programme office. Consideration is taken to economic and physical space limitations. The application to optional courses must be submitted to the CSC office, at the latest:

- 15th of May for the fall term
• 15th of November for the spring term.

The application is done in the web-form on ”My pages”.

Applications which are submitted after the deadline are only taken into consideration with regards to space considerations. Before course selection of language courses, a test must be taken to determine the appropriate level study.

Course notification of the obligatory courses happens, in most cases, automatically (through the office). Separate notification is required for a student which studies individual specializations and for a student who chooses from alternatively obligatory courses or the corresponding.

**Course registration**

Registration of a course requires that the course has been selected in Ladok. The course selection is done whether via the course selection routine on the web, or via the students programme office. Registration of a course is done by the course’s department.

The student must, at the first scheduled lecture, register him/herself in the course. Course registration in both obligatory and optional courses must be done individually (at the department). If the student registers a course and then decides to not continue with the course, then the student must notify the corresponding department 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.

For studies in study year 2:

At least 45 credits from study year 1 must be completed by the beginning of the fall term.

For studies in study year 3:

At least 90 credits from study year 1 and 2 must be completed by the beginning of the fall term.

Students who have not fulfilled the above requirements must consult with their study advisor to construct an individual study plan for the continuation of studies.

**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 higher education’s internationalization work and for life-long learning.

KTH will have an open manner of recognition of previous academic studies. Recognition will, therefore, be able to happen even if the exact 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 which are decided with 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 must in the most possible degree, submit the application and 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 in the Master of Science in Engineering in Media Technology and Engineering programme have the possibility to study abroad for one year at universities in Europe, Australia, America, South Africa and Asia without needing to pay the course fees which are usually incurred on students studying abroad there. Studies abroad can be done during the fourth or fifth year. It is even possible to do the degree project work abroad.

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

For more info, contact the office.

Degree project

In the programme, a degree project is done which corresponds to a course worth 15 higher education credits, or about 10 weeks full-time studies. For the degree project, the following rules apply:

- The main portion of the studies, at least 120 higher education credits must be completed before the degree project can be started
- It may not be started before the assignment is approved by the examiner and is submitted on a special form. The examiner is responsible that the student has sufficient knowledge 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 sixth term 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 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, student teaching, opposition, or other elements which the examiner or supervisor deems suitable.

The supervisor is appointed by the examiner.

For the degree project, more details can be found in the respective school.

http://www.kth.se/info/kth-handboken/II/15/3.html

The degree project work can be carried out in the degree project subject Media Technology

Reference to KTH’s guidelines (the KTH-handbook)
http://www.kth.se/info/kth-handboken/II/15/3.html

**Degree**

*Conditions for the 180 higher education credit degree* The Bachelor of Science in Engineering degree in Media Technology is received after completing the programme. The programme is formed so that the student, at the time of examination, fulfils the national degree requirements and has completed courses corresponding 180 higher education credits, whereof:

* Mathematical-scientific courses of at least 25 higher education credits, and therewith at least 90 higher education credits (including degree project work, worth 15 higher education credits) in the subjects central to the technical area

**Degree Name**

*Bachelor of Science in Engineering, Degree Programme in Media Technology*

**Application for the degree**

The student applies for the Bachelor of Science in Engineering degree in Media Technology

The application for the degree is done on a special for and is submitted to the CSC at the school for Computer Science and Communication.

Proof of paid student fees should be attached to the application.

KTH’s 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 Media Technology (TIMEH), Programme syllabus for studies starting in autumn 2007

### General courses

**Year 1**

#### Mandatory courses (60.0 Credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>6H2902</td>
<td>Business Economics and Organizational Behaviour</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>DD1050</td>
<td>Programming, Basic Course</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>DM1010</td>
<td>Information Technology and Engineering Methodology</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>DM1011</td>
<td>Introduction to Media Technology</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>DM1012</td>
<td>Multimedia Production, Technical Project</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>DM1013</td>
<td>Creation and Design</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>HH1900</td>
<td>Business Economics and Organizational Behaviour</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>SF1615</td>
<td>Mathematics</td>
<td>7.5 hp</td>
</tr>
</tbody>
</table>

#### Optional courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF1614</td>
<td>Mathematics, Preparation Course</td>
<td>7.5 hp</td>
</tr>
</tbody>
</table>

#### Recommended courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE2702</td>
<td>Management of Development Cooperation Projects</td>
<td>6.0 hp</td>
</tr>
<tr>
<td>DM2590</td>
<td>Media Perception</td>
<td>6.0 hp</td>
</tr>
<tr>
<td>DS1361</td>
<td>Swedish Report Writing</td>
<td>6.0 hp</td>
</tr>
<tr>
<td>IV1011</td>
<td>Online Game, Gaming Communities and Advergames</td>
<td>7.5 hp</td>
</tr>
<tr>
<td>IV1013</td>
<td>Introduction to Computer Security</td>
<td>7.5 hp</td>
</tr>
</tbody>
</table>
ME2044 Human Resource Management 6.0 hp Second cycle

Supplementary information

One of the recommended courses in grades 1 read by those who admitted to the program in NV permission. Those who admitted to the program with S permission to read the course SF1614 Mathematics, preparation.

Year 2

Mandatory courses (60.0 Credits)

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD1051</td>
<td>Database Technology and Data Communication</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>DM1020</td>
<td>Media Technology</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>DM1021</td>
<td>Audio and Video Technology</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>DM1022</td>
<td>Engineering Practice and Development in Media Technology</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>HF1902</td>
<td>Environmental Science and Work Science</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>MF1034</td>
<td>Electronics and Digital Technology</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>SF1600</td>
<td>Calculus I, part 1</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>SF1903</td>
<td>Probability and Statistics</td>
<td>7.5 hp First cycle</td>
</tr>
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</table>

Year 3

Mandatory courses (31.5 Credits)

<table>
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<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM100X</td>
<td>Degree Project in Media Technology, First Cycle</td>
<td>15.0 hp First cycle</td>
</tr>
<tr>
<td>DM1030</td>
<td>Television Technology</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>DT1174</td>
<td>Sound as an Information Medium</td>
<td>9.0 hp First cycle</td>
</tr>
</tbody>
</table>

Recommended courses

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credits Edu. level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD1335</td>
<td>Basic Internet Programming</td>
<td>7.5 hp First cycle</td>
</tr>
<tr>
<td>DM2033</td>
<td>Interactive Media Technology</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>DM2531</td>
<td>Graphic Arts Production</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>ME2022</td>
<td>Economics and Law for Media</td>
<td>7.5 hp Second cycle</td>
</tr>
<tr>
<td>SK2380</td>
<td>Technical Photography</td>
<td>8.0 hp Second cycle</td>
</tr>
</tbody>
</table>

Supplementary information
At least two recommended courses must be taken.
Appendix 2: Specialisations

Degree Programme in Media Technology (TIMEH), Programme syllabus for studies starting in autumn 2007

This programme has no specialisations.