



Programme syllabus

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

Degree Programme in Media Technology 300 credits

Civilingenjörsutbildning i medieteknik

Valid for students admitted to the education from autumn 20 (HT - Autumn term; VT - Spring term).

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

Programme objectives

The educational programme has a technical, scientific base with a foundation in mathematics and natural science. Media Technology focuses on services and products aimed primarily at the consumer market. Therefore, the programme also offers relevant knowledge from social and behavioural science and insights into the contents and design of media. Specialized knowledge is given about technology for static media forms (text and image), dynamic media forms (audio, video) and interactive media forms (internet, games, dialogue systems, etc).

Each student must acquire deeper knowledge within one or two areas of media technology through the choice of specialization for study year 3 and master programme for study years 4–5.

Knowledge and understanding

The Media Technology programme will give the student the fundamental knowledge and abilities needed to successfully work with and from an engineering perspective solve technical, organisational, methodological, design-related, and user-related problems within the media field. The programme gives knowledge about the technical as well as multi-disciplinary foundation that media and their technology for production, distribution, and consumption rely upon.

Skills and abilities

The Media Technology programme will give the student prerequisites to, with a comprehensive perspective, critically, independently and creatively identify, formulate, and handle complex problems, analyse and critically evaluate different technical, organisational, and design-related solutions. The student will also have the ability to plan and implement qualified assignments within given constraints and considering sustainability. The programme will also give a foundation for further education on the research level and an ability to participate in research and development work and thereby contribute to the knowledge development within the area. The student will develop an understanding of and an ability to work in teams and to cooperate in groups with participants from different backgrounds. The students will also be able to continuously develop their skills and abilities.

Ability to make judgements and adopt a standpoint

The Media Technology will gain the ability to integrate knowledge from different disciplines and experiences as well as to model, plan and evaluate products, services, systems, and processes. The student will also get an understanding of the important role of media in society, opinion building and democratic processes as of the ethical aspects of media and their contents, and the relationship between technology, contents and usage in the media. This includes a consciousness about the possibilities and limitations of technology and the responsibility of technology developers for how the technology is used.

Extent and content of the programme

The Master of Media Technology is composed of 300 ECTS credits, which corresponds to 5 years of full-time study (10 semesters). The first three years (180 ECTS credits) are on undergraduate level, and will be given in Swedish. The final two years (120 ECTS credits) will be given in English.

Following master programmes at EECS School will result in a Master of Science Degree in Media Technology (but the programmes can be changed):

- Interactive Media Technology
- Computer Science

- Machine Learning
- ICT Innovation (*only* the tracks Human Computer Interaction and Design (HCID) or Visual Computing and Communication (DMTE) can be chosen).

Eligibility and selection

General admission requirements and Special admission requirements must be fulfilled in order to be admitted: Mathematics 4, Physics 2 and Chemistry 1, with the lowest grade E.

Selection is based on high school grades and results of the university examination, two thirds of the places are appointed on the basis of grades and one third on the basis of the university degree.

Implementation of the education

Structure of the education

Each academic year consists of two semesters which are 20 weeks each, and each semester is further divided into two study periods.

The syllabus for the programme (300 ECTS) consists of:

- mandatory courses in study year 1–3 (180 ECTS), and year 3 ends with a degree project in first cycle,
- courses in study year 4-5 within the chosen master's programme (120 ECTS), shall include at least 60 credits of advanced courses in media technology, and finally a degree project in second cycle.

Courses

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

Courses at KTH can be either mandatory, conditionally elective or elective.

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.

The grading scale is found in the course syllabus.

Conditions for participation in the programme

Participation requires both admission to course and a course registration, for courses given within the programme.

For further studies, special admission requirements for the course are to be fulfilled. Special admission requirements are listed in the respective course syllabus.

Conditions for further studies

The student must apply in year 3 for a master's programme in study years 4–5. In order to be eligible for advanced level studies within the integrated Master of Science programmes at KTH, you are required to complete 150 credits from year 1-3. Of these, 110 credits must be from the year 1-2 curriculum. In addition to these credits, the bachelor thesis needs to be completed before Master's level studies commence. Additional specific eligibility requirements may apply to certain programmes and appear in the respective Education Plan.

Degree project

Within the programme there are requirements for two degree work courses; one in the first cycle in year 3 (15 credits) and one in year 5 within the second cycle (30 credits). The degree project is the final part of the education. The project work may begin when special admission requirements for the course are fulfilled.

Special conditions

If a student does a degree project examined by another school than EECS, shall the specification and the final report be reviewed, due to certify the relevance of the degree project in relation to the programme.

Degree

The degree is entitled Degree of Master of Science in Engineering (civilingenjörsexamen). The text on the degree certificate states the educational programme Media Technology, that has been completed by the student.

Appendix 1 - Course list

Appendix 2 - Programme syllabus descriptions



Appendix 1: Course list

Degree Programme in Media Technology (CMETE)

General courses

Year 1

Mandatory courses (64.0 Credits)

Code	Name	Credits	Edu. level
DD1318	Programming and Scientific Computing	9.0 hp	First cycle
DH1609	Communication and information	7.5 hp	First cycle
DM1578	Program Integrating Course in Media Technology <i>Of which 3 credits belong to study year 1</i>	7.0 hp	First cycle
DM1579	Media Production	6.0 hp	First cycle
DM1581	Introduction to Media Technology	6.0 hp	First cycle
SF1624	Algebra and Geometry	7.5 hp	First cycle
SF1625	Calculus in One Variable	7.5 hp	First cycle
SF1626	Calculus in Several Variables	7.5 hp	First cycle
SK1120	Waves	6.0 hp	First cycle

Year 2

Mandatory courses (65.0 Credits)

Code	Name	Credits	Edu. level
DD1320	Applied Computer Science	6.0 hp	First cycle
DH1622	Human-Computer Interaction, Introductory Course	7.5 hp	First cycle
DM1135	Multimedia Systems and Signals	7.5 hp	First cycle
DM1578	Program Integrating Course in Media Technology <i>Of which 2 credits belong to study year 2</i>	7.0 hp	First cycle
DM1580	Video Technology	6.0 hp	First cycle
DM1588	Sensor Programming for Media Technology	6.0 hp	First cycle
DM1590	Machine Learning for Media Technology	7.5 hp	First cycle
DT1175	Sound	7.5 hp	First cycle
SF1919	Probability Theory and Statistics	6.0 hp	First cycle
SK1140	Photography for Media	4.0 hp	First cycle

Supplementary information

Year 3

Mandatory courses (52.0 Credits)

Code	Name	Credits	Edu. level
DH2642	Interaction Programming and the Dynamic Web	7.5 hp	Second cycle
DM128X	Degree Project in Media Technology, First Cycle	15.0 hp	First cycle
DM1578	Program Integrating Course in Media Technology <i>Of which 2 credits belong to study year 3.</i>	7.0 hp	First cycle
DM1595	Program Development for Interactive Media	7.5 hp	First cycle
DM2573	Sustainability and Media Technology	7.5 hp	Second cycle
ME1039	Industrial Management and Entrepreneurship for Media and ICT	7.5 hp	First cycle

Conditionally elective courses

Code	Name	Credits	Edu. level
AK2203	Media, Technology and Culture	7.5 hp	Second cycle
DD1354	Models and Simulation	6.0 hp	First cycle
DD1380	Java Programming for Python Programmers <i>Mandatory for admission to the Master's Programme in Computer Science</i>	1.5 hp	First cycle
DD2352	Algorithms and Complexity <i>Mandatory for admission to the Master's Programme in Computer Science</i>	7.5 hp	Second cycle
DH2323	Computer Graphics and Interaction	6.0 hp	Second cycle
DM2077	Media Law	7.5 hp	Second cycle
DM2500	Telepresence Production	7.5 hp	Second cycle
DM2518	Mobile Development with Web Technologies	7.5 hp	Second cycle
DM2556	Intercultural communication	7.5 hp	Second cycle
DM2578	Social Media Technologies	7.5 hp	Second cycle
DM2624	Human Centered Technology for Disabilities	7.5 hp	Second cycle
DM2720	Sustainable Information and Communication Technology (ICT) in Practice	7.5 hp	Second cycle
DT2112	Speech Technology	7.5 hp	Second cycle
DT2212	Music Acoustics	7.5 hp	Second cycle
LS1464	Rhetoric - the Art of Persuasion	7.5 hp	First cycle
ME2015	Project Management: Leadership and Control	6.0 hp	Second cycle
ME2163	Leading People and Organizations in Different Contexts	6.0 hp	Second cycle
SF1662	Discrete Mathematics <i>Mandatory for admission to the Master's Programme in Computer Science</i>	7.5 hp	First cycle

Supplementary information

Information regarding conditionally elective courses

Conditionally elective courses, **13 credits**, must be taken.

In addition to listed conditionally elective courses, other courses in language/intercultural competence can be read, see courses at "Language and Communication at KTH".

Year 4

Supplementary information

During study years 4-5 the students follow a master programme of their choice. These master programmes will give a Degree of Master of Science in Engineering in Media Technology:

- Interactive Media Technology (TIMTM)
- Computer Science (TCSCM)
- Machine Learning (TMAIM)
- ICT Innovation (TIVNM) - Notify, *only* these tracks Human Computer Interaction and Design (HCID), and Visual Computing and Communication (DMTE).

Year 5

Supplementary information

During study years 4-5 the students have to follow a master programme.



Appendix 2: Specialisations

Degree Programme in Media Technology (CMETE)

This programme has no specialisations.