



Utbildningsplan

[En tillgänglighetsanpassad version av utbildningsplanen finns i Kurs- och programkatalogen.](#)

Masterprogram, säker och mobil kommunikation 120 hp

Master's Programme, Security and Mobile Computing

Gäller för antagna till utbildningen fr o m HT08.

Utbildningens mål

Kunskap och förståelse

For a Master's degree in Security and Mobile Computing the student shall:

- show knowledge and understanding in the area of Security and Mobile Computing, comprising a wide knowledge of the area as well as more profound knowledge of some parts of the area, and insight into current research and development work, and
- show in-depth knowledge about methodology in Security and Mobile Computing

Färdigheter och förmågor

For a Master's degree in Security and Mobile Computing the student shall:

- show ability to critically and systematically integrate knowledge and to analyze, evaluate and handle complex occurrences, issues and situations even with limited information
- show ability to critically, independently and creatively identify and formulate issues, to plan and with adequate methods perform qualified tasks within given time limits and thereby contribute to the evolution of knowledge as well as assess the work
- show ability, in domestic and international venues, to orally and in writing present and discuss conclusions and the knowledge and the arguments on which these are based, in dialogue with different groups, and
- show such skills which are required for participation in research and development work or in other independent work of a qualified nature.

Värderingsförmåga och förhållningsätt

For a Master's degree in Security and Mobile Computing the student shall:

- show ability to make assessments taking into account relevant scientific, societal and ethical aspects as well as show awareness of ethical aspects of research and development work
- show insight into the possibilities and limitations of science, its role in society and the responsibility of humans for its use,
- show ability to identify her/his need for additional knowledge and take responsibility for the development of his/her own knowledge.

See local degree policy of the Royal Institute of Technology (the KTH-Handbook II, 19.1).

Utbildningens omfattning och innehåll

The educational program comprises two years, and a Master's degree is awarded after completion of the course requirements of 120 hp. The education is on the advanced level (second cycle). All students follow the same line of study. The language of the entire education is English.

Behörighet och urval

The basic requirement for admission to a Master's program at advanced level is a national university degree at basic level (first cycle) of at least 180 hp or an equivalent international degree. A good knowledge of written and spoken English is required. The admission criteria to the programme is a high quality Bachelor's degree encompassing a minimum of 180 ECTS credits in Engineering (Computer Science or Information technology) or equivalent studies, i.e., must be a degree of at least three years of full-time studies. The applicants should have solid knowledge of mathematics (discrete mathematics), programming skills, data structures and algorithms, computer architecture and basics of computer networks. In addition, a basic knowledge of the following subject areas will be an advantage: databases and database management, principles of theoretical computer science, logic in computer science, software engineering, operating systems, and concurrent

programming. The admission of students in the Master's program in Security and Mobile Computing follows an evaluation of merits based mainly on the applicant's knowledge, previous education, the university where the studies have been performed, especially meriting previous subjects, study motivation, and references. The knowledge of the applicant is given preference in this evaluation. Eligible applicants are ranked according to the evaluation and admission is granted according to the number available positions determined for the program.

See local admission policy of the Royal Institute of Technology (the KTH-handbook II, 11.5).

Utbildningens genomförande

Utbildningens upplägg

The programme consists of two academic years, each comprising about 9 months and divided into two terms with two study periods per term. Each study period ends in an examination period.

The programme has 45 credits compulsory courses, a 30 credits Master's thesis and 45 credits conditionally elective courses. Compulsory courses cover Internetworking, Network Security, Communication systems and Research Methodology. Three blocks of elective courses are: in Internetworking, in Wireless systems and in Entrepreneurship. It is mandatory to choose one project oriented course in the elective part. The Master's thesis project is typically carried out in the last term.

Kurser

Utbildningen sker i kursform. Kurslistor finns i bilaga 1.

The courses are either compulsory or conditionally elective. After application, students may be allowed to take extra courses in addition to the compulsory or conditionally elective courses.

Betygssystem

För kurser på KTH används en sjugradig målrelaterad betygsskala A-F som slutbetyg för kurser på grundnivå och avancerad nivå. A-E är godkända betyg med A som högsta betyg. Betygen godkänd (P) och underkänd (F) används som slutbetyg då särskilda skäl föreligger.

At KTH a grading scale with seven levels A-F is used for final grades in advanced level courses and for the thesis. A-E are passing grades where A is the highest grade.

The grades pass (P) and fail (F) are for partial grades in some courses, for example for laboratory assignments, and as final grades in small conditionally elective courses.

Villkor för deltagande i utbildningen

Each student who has been admitted to the Master's program in Security and Mobile Computing is admitted to the compulsory courses belonging to a specific program term after registration on this term. Conditionally elective courses are chosen by the student prior to the second term of the first year and prior to each of the two terms of the second year. The choice is limited to the courses stated as conditionally elective in the course list. Students who are term-registered are considered as expected students in all compulsory courses and in chosen elective courses. Students announce their participation in an individual course to the teacher responsible for the course in the beginning of the course. Students announce possible interruptions in their studies to the teacher responsible for the course.

The condition for promotion to the second year is completion of 45 hp in the first year.

The condition for starting the Master's thesis project is 60 hp.

Tillgodoräknanden

See policy of the Royal Institute of Technology (the KTH-handbook II, 13.3).

Utlandsstudier

All students study in two different countries during the programme, following the directions for mobility in Erasmus Mundus from the European commission.

Examensarbete

To be awarded a Master's degree in Security and Mobile Computing the student must, within the course requirements, have fulfilled an independent work (the master's thesis project) of at least 30 hp in Security and Mobile Computing. The subject for the thesis project may be chosen by the student to be performed at KTH, at other universities, or in industry. A student who has been promoted to the second year may apply to start a thesis project. The thesis is graded on the scale A-F according to the guidelines (criteria: technical content, process and presentation) determined by KTH and by the School of ICT.

See policy of the Royal Institute of Technology (the KTH-handbook II, 15.5).

Examen

The Master's degree is obtained after completion of the courses and the thesis with a total of at least 120 hp. The degree is "Teknologie masterexamen", translated into English as "Degree of Master of Science (two years)". The degree is awarded after application from the student.

See policy of the Royal Institute of Technology (the KTH-handbook II, 19.1).

Bilaga 1 - Kurslista

Bilaga 2 - Inriktningsbeskrivningar



Bilaga 1: Kurslista

Masterprogram, säker och mobil kommunikation
(TSMKM)

Gemensamma kurser

Årskurs 1

Obligatoriska kurser (30,0 Högskolepoäng)

Kurskod	Namn	Omfattning	Utbildningsnivå
II2202	Forskningsmetodik och vetenskapligt skrivande	7,5 hp	Avancerad nivå
IK2205	Inter Domain Routing	7,5 hp	Avancerad nivå
IK2206	Säkerhet och datasekretess på internet	7,5 hp	Avancerad nivå
IK2215	Avancerad internetteknik	7,5 hp	Avancerad nivå

Villkorligt valfria kurser

Kurskod	Namn	Omfattning	Utbildningsnivå
EP2300	Nätverkshantering	7,5 hp	Avancerad nivå
ID2216	Utveckling av mobila tillämpningar	7,5 hp	Avancerad nivå
II1210	Network Society	7,5 hp	Grundnivå
IK1611	Dimensionering av kommunikationssystem	7,5 hp	Grundnivå
IK2200	Kommunikationssystem	15,0 hp	Avancerad nivå
IK2207	Kommunikationssystem	18,0 hp	Avancerad nivå
IK2208	Kommunikationssystem	24,0 hp	Avancerad nivå
IK2209	Kommunikationssystem	30,0 hp	Avancerad nivå
IK2211	Datalänkar och lokala nät	7,5 hp	Avancerad nivå
IK2212	Arkitekturer för kommunikationssystem	7,5 hp	Avancerad nivå
IK2213	Nätverkstjänster och internetbaserade tillämpningar	7,5 hp	Avancerad nivå
IK2214	Policy och regleringsprinciper för telekommunikation	7,5 hp	Avancerad nivå
IK2555	Trådlösa och mobila nätverksarkitekturer	7,5 hp	Avancerad nivå
IV2030	Hantering av IT-stödd förändring	7,5 hp	Avancerad nivå

Årskurs 2

Villkorligt valfria kurser

Kurskod	Namn	Omfattning	Utbildningsnivå
ID2212	Nätverksprogrammering med Java	7,5 hp	Avancerad nivå
IK2554	Röst över IP (VoIP) i praktiken	7,5 hp	Avancerad nivå

Kompletterande information

Optional courses for both first and second year:

EP2300 Management of Networks and Networked Systems
IK2200 Communication Systems Design Project
IK2207 Communication Systems Design Project

IK2208 Communication Systems Design Project
IK2209 Communication Systems Design Project
IK2205 Interdomain routing



Bilaga 2: Inriktningar

Masterprogram, säker och mobil kommunikation (TSMKM)

Programmet har inga inriktningar.