



Programme syllabus

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

Master's Programme, Transport, Mobility and Innovation 120 credits

Masterprogram, transport, mobilitet och innovation

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

This information applies to students starting the programme in the 2020/2021 academic year. There may be some changes to the content in Year 2 of the programme. Always check www.kth.se/utbildning for the latest information about the programme.

Knowledge and understanding

After completing the programme the students will:

- Demonstrate knowledge on theories and concepts in urban planning, transport and sustainability.

- Demonstrate advanced methodological knowledge in the area of the built environment.
- Demonstrate knowledge of economic models of transport and urban development.

Skills and abilities

After completing the programme, the students will acquire practical skills to:

- Demonstrate the ability to critically, independently, and creatively participate in strategic work to address transport-related issues and to relate these issues to sustainable development, planning processes, physical infrastructure and transport
- Demonstrate the ability to prepare decision support for transport systems and urban planning, applying a systems perspective and addressing both public actors and the general public.
- Demonstrate the ability to report and discuss findings, as well as the knowledge and arguments that form the basis for them in both oral and written forms, in national and international contexts, and in dialog with diverse groups.
- Demonstrate the ability to contribute to and lead sustainable planning from a systems perspective.
- Demonstrate the ability to participate in the development of strategies for technological transitions in the area of urban mobility.

Ability to make judgements and adopt a standpoint

After completing the programme, the students will be able to:

- Demonstrate insights into the roll that transport and mobility play in society and its influence on the built environment, as well as humans' responsibility for how transport and mobility are used, including ethical, social, and sustainability perspectives.
- Demonstrate the ability to identify the need for further knowledge and take responsibility for developing that knowledge.

Extent and content of the programme

Duration: 2 years (120 ECTS)

Educational level: second-cycle

Language of instruction: English

The program has a uniform structure that combines 30 ECTS of business-orientated character focusing on innovation and entrepreneurship with 90 ECTS of a specific engineering specialisation.

Students that graduate from the program will be awarded a double degree from KTH and from the other university where the student studies.

The education is implemented in cooperation with EIT Urban Mobility, in accordance with the applicable agreements. This includes compulsory geographic mobility. This mobility implies that studies in Year 1 are implemented at one university, to then continue at another university in the consortium. In addition to Swedish regulations, consideration is also taken here to the exchange university's national laws and the rules and routines of EIT Urban Mobility. The programme also includes a number of common activities such as a kick-off, a summer school and a graduation ceremony. Complete information is available at EIT Urban Mobility's web page, <https://www.eiturbanmobility.eu/>.

Eligibility and selection

- English requirements: IELTS: 6.5 overall, no section lower than 6. TOEFL iBT: min. 92 (writing section 22 and no section below 21)
- A bachelor's degree (180 ECTS) with a specialisation in civil engineering, urban planning, land planning and surveying, energy and the environment, computer science, industrial economy and management, or another area with a clear relevance for the programme.
- 20 ECTS mathematics, including single-variable calculus, linear algebra, mathematical statistics and computer programming.

Selection

The selection process is based on the following criteria: university quality, grade results, relevant career experience, and motivation for studies.

Program-specific documentation for the master program "Transport, Mobility and Innovation" is:

- Motivation letter
- Curriculum Vitae, including relevant career experience
- Recommendation letter (optional).

The selection process is administered by the EIT Urban Mobility Master School Office.

Implementation of the education

Structure of the education

Each academic year consists of two semesters of 20 weeks each. Each semester is divided into two study periods. The first three semesters comprise courses while the fourth semester consists of the degree project. Semesters one to three include both compulsory and conditionally elective courses. The minor package of business-oriented courses is compulsory.

Courses

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

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 system is further specified in each respective course plan.

Conditions for participation in the programme

A prerequisite for studying at KTH is that every term, students must enrol in their courses and register for the term.

To continue studies, specific eligibility requirements to each course must be met. The specific eligibility requirements are specified in each respective course plan.

Recognition of previous academic studies

Students may request to be given credit for a course/courses from another college/university within or outside Sweden. KTH's policy for recognising previous academic studies is available in full in KTH's regulations at www.kth.se.

For more information, please consult the programme's study advisors.

Studies abroad

The programme is based the idea that students will study in two different countries. There is no further possibility to foreign exchanges during the programme. Mobility between countries is organised by the EIT Urban Mobility Master School Office and is assigned in connection with the admissions process.

Degree project

The degree project comprises the conclusive part of the programme. The degree project may be begun when the degree project course's eligibility requirements are fulfilled.

For the degree project, a grading scale of pass (P) and fail (F) is used.

Degree

Title: Master of Science in the Built Environment, 120 ECTS.

To obtain a degree, 120 ECTS of completed courses are required, including the following.

- At least 60 ECTS second-cycle courses including the programme's compulsory and conditionally elective courses
- A degree project of 30 ECTS.

In the event that the master's program is a final part of the degree programme in Civil Engineering and Urban Management there may be additional requirements according to the corresponding study programmes. For example, a master of science degree in the above degree programmes should include mathematics and science subjects for a minimum of 45 higher education credits.

An application for the degree is submitted using the web service in the personal menu at

Appendix 1 - Course list

Appendix 2 - Programme syllabus descriptions



Appendix 1: Course list

Master's Programme, Transport, Mobility and Innovation (TTMIM)

General courses

Year 1

Mandatory courses (60.0 Credits)

Code	Name	Credits	Edu. level
AG2301	Traffic Data Collection and Analysis (short course)	4.5 hp	Second cycle
AH2171	Traffic Engineering and Management	7.5 hp	Second cycle
AH2173	Public Transport	7.5 hp	Second cycle
AH2301	Transport Policy and Evaluation	7.5 hp	Second cycle
AH2307	Urban Modeling and Decision Support	7.5 hp	Second cycle
AK2038	Theory and Methodology of Science with Applications (Social Science)	7.5 hp	Second cycle
ME2750	Innovation and Entrepreneurship for Mobility Challenges	3.0 hp	Second cycle
ME2751	Challenge-driven Project in Urban Mobility, part 1	12.0 hp	Second cycle
MF2098	Design Methodology in Urban Mobility	3.0 hp	Second cycle

Year 2

Mandatory courses (16.5 Credits)

Code	Name	Credits	Edu. level
AG2302	Urban Mobility Summer School	3.0 hp	Second cycle
AK2038	Theory and Methodology of Science with Applications (Social Science) <i>Exchange AH2178</i>	7.5 hp	Second cycle
ME2752	Challenge-driven Project in Urban Mobility, part 2	6.0 hp	Second cycle

Conditionally elective courses

Code	Name	Credits	Edu. level
AG2116	City Networks in Regional Contexts	7.5 hp	Second cycle
AG2144	Sustainable Urban Mobility	7.5 hp	Second cycle
AH203X	Degree Project in Transport Science, Second Cycle	30.0 hp	Second cycle
AH2102	Logistics and Transportation	7.5 hp	Second cycle
AH2174	Traffic Simulation Modelling and Applications	7.5 hp	Second cycle
AH222X	Degree Project in Systems Analysis and Economics, Second Cycle	30.0 hp	Second cycle
ME2053	Logistics & Supply Chain Management	6.0 hp	Second cycle
ME2092	Management of Technology Innovation and Creativity	6.0 hp	Second cycle
ME2094	Internet Marketing	7.5 hp	Second cycle

Supplementary information

Choose one of these courses:

P2 -ME2053 or ME2092 or ME2094

P2 -AH2174 or AH2102 or AG2116 or AG2144

P3-P4 - AH203X or AH222X



Appendix 2: Specialisations

Master's Programme, Transport, Mobility and Innovation (TTMIM)

This programme has no specialisations.