



Programme syllabus

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

Master's Programme, Industrial Management 120 credits

Masterprogram, industriell ekonomi

Valid for students admitted to the education from autumn 16 (HT - Autumn term; VT - Spring term).

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

Programme objectives

In addition to the objectives specified in the Swedish Higher Education Ordinance, there are also specific objectives for this programme. Graduates from the programme shall:

Knowledge and understanding

- Demonstrate extensive and substantial specialised knowledge and understanding within the field of Industrial Management and its scientific basis as a complement to, and an extension of, technical, mathematical and scientific knowledge
- Demonstrate in-depth insight into current research and development in the field.

- Demonstrate advanced knowledge on the establishment, management, planning, monitoring and development of, in particular, industrial/technology-intensive companies and organisations on the basis of strategic choices and how these choices affect the efficiency of the organisation and its stakeholders' contributions and yield.
- Demonstrate in-depth knowledge of scientific methods and tools used to analyse, calculate, process and evaluate facts within the field (including engineering, natural science and social science).

Skills and abilities

- Demonstrate the ability to, through a holistic approach and perspective shifts, critically, constructively and creatively identify, formulate, reflect on, manage and solve technical, economic and organisational problems in industrial/technology-intensive enterprises, both individually (deep) and together (composite), and the ability to place individual operations and technologies in their context and thus contribute to the development of knowledge, and also to evaluate this work.
- Demonstrate the ability to, both independently and in groups of different composition, put theories within Industrial Management into practical action and create solutions with regard to technical and scientific aspects while taking into account relevant scientific, professional and societal standpoints, in order to achieve economic, social and ecological sustainable development.
- Demonstrate the ability to critically and systematically integrate knowledge within Industrial Management and engineering, and demonstrate the ability to analyse, assess, manage, model, simulate, predict and evaluate events and problems, including contexts with limited information.
- Demonstrate the skill required to participate in research and development work or to work independently in other advanced contexts.
- Demonstrate readiness for the successful completion of planning and managerial assignments at different levels within industrial/technology-intensive enterprises, both independently and in groups.
- Demonstrate the capacity to, in both national and international contexts, both orally and in writing, in dialogue with different groups, clearly account for and discuss their conclusions and the knowledge and arguments on which these are based.

Ability to make judgements and adopt a standpoint

- Demonstrate the ability to perform assessments while taking into account relevant scientific, societal and ethical aspects, and demonstrate awareness of ethical aspects of research and development work within industrial and technology-intensive enterprises.
- Demonstrate insight into the opportunities and limitations of science and engineering, its role in society and the responsibility of human beings for how it is used, including social and economic aspects as well as environmental and work environment aspects.
- Demonstrate the ability to identify the need of further knowledge and take responsibility for continuously developing their knowledge and skills.

The KTH local Degree Ordinance can be found in the KTH regulatory framework, www.kth.se.

Extent and content of the programme

The programme comprises 120 higher education credits, which corresponds to two years of full-time studies.

The programme is in the second cycle and the language of instruction is English.

Eligibility and selection

In order to be eligible for the programme, a relevant higher education degree comprising 180 higher education credits is required. In case the first level courses are not finished, an exemption to the normal rules may be made. See KTH's admission ordinance, which can be found in KTH's guidelines, www.kth.se

Required special qualifications: A technical Bachelor's degree with specialization in one of the fields: Mechanical Engineering, Design and Product Development, Information and Communication Technology, Computer Science and Engineering, Materials Science and Engineering (or equivalent). That means, a Bachelor's degree with a specialization in Industrial Management does not fulfill the special requirements. A basic course in Industrial Management is, however, required in order to fulfill the specific requirements.

Furthermore, for all KTH's programmes with English as the language of instruction, there is a special requirement of English B or corresponding knowledge.

The selection process is based on the following selection criteria: University, previous studies (for instance GPA, grades in specific subjects and English), motivation for the studies (for instance letter of motivation, references, thesis proposal and relevant work experience). The evaluation scale is 1-75.

More information can be found in KTH's guidelines, www.kth.se

Implementation of the education

Structure of the education

Programme arrangement

Academic year

The academic year comprises 40 weeks and is divided into four periods. If necessary, instruction may be provided outside the parameters of the academic year.

The division of the academic year is presented on the KTH student web www.kth.se

Structure of the programme

For a Degree of Master of Science in Engineering with a Degree of Master within Industrial Management

The programme begins with a course package that provides a solid base within the area of Industrial Management. In addition, there is a package of conditionally optional and optional courses which allows for courses within engineering and Industrial Management in the second cycle required in order to complete a Degree of Master of Science in Engineering within the respective programmes at KTH. These course packages are primarily undertaken during semester 1 and 2.

For a Degree of Master within Industrial Management

The programme begins with a course package that provides a solid base within the area of Industrial Management. In addition, there is a package of optional courses for specialised study within engineering and the field of Industrial Management. This optional course package offers courses for profiling and research preparatory perspectives within the subject area of Industrial Management. These course packages are primarily undertaken during semester 1 and 2.

An advanced course common to both tracks is given during semester 3, which comprises 12 credits within the field of Industrial Management and where great importance is placed on the implementation of a comprehensive industrial project as well as preparations for the degree project.

The degree project must address a problem within the borderland between Industrial Management and engineering or natural science, and be related to the specialised field chosen by the student.

Courses

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

The programme is structured in the form of courses. Course lists are found in appendix 1.

The programme consists of compulsory, conditionally elective, recommended and optional courses. The compulsory courses are defined for each year and track/profile in course lists. The goals, entrance qualifications, content and course requirements for each course can be found in the official course syllabuses.

The type of instruction and examination format vary between the courses and these are indicated in each official course syllabus.

The optional courses can be chosen from KTH's range of offered courses. Credits from courses at other universities/higher education institutions can also be transferred if the qualification requirements are met.

The following limitations apply to the optional courses:

- There is a limit imposed on the number of credits that may be chosen per semester

- An optional course may not correspond to a significant extent to an existing programme course or an already credited course
 - Higher education preparatory courses may not be counted as optional courses
- Optional courses may be chosen freely but should be relevant to the professional role of engineer.

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

Semester registration

At the beginning of the semester, the student must submit a compulsory semester registration via their personal login at www.kth.se

Semester registration is required to take new courses and for credits awarded to be reported, and for any payments of student aid to be made by CSN.

Application for courses within the programme

Prior to each semester, the student must apply for all courses the student intends to take. Course application is done at www.antagning.se or www.universityadmissions.se

- 1 - 15 May for autumn semester
- 1 - 15 November for spring semester

If the student does not apply via www.antagning.se or www.universityadmissions.se, the application is only considered subject to availability.

Information on how to apply for a course is obtained from the school's office of student affairs.

Course registration

At course start, the student must register themselves on all courses. Course registration must be done individually, either via the student's personal login at www.kth.se or pursuant to instructions from the school offering the course.

A student who has registered on a course, but has subsequently decided not to proceed with the course, must inform the school offering the course as soon as possible, according to the school's instructions.

Course registration requires that the student has been admitted to the course.

Conditions for studies in year 2

At least 45 credits from year 1, according to the course list of the programme syllabus, shall be earned by the end of the re-examination period in August.

Individual study plan

A student who does not fulfil the above requirements must, in consultation with the programme study advisor, establish an individual study plan for the continuing studies.

There are no guaranties for full-time studies for students with an individual study plan

Recognition of previous academic studies

Students have the opportunity to apply to be given credit for results from a course or courses at another higher education institution/university within or outside the country. The entire KTH policy for credit transfer is included in the KTH regulatory framework, www.kth.se

As the grading systems differ widely between countries, grades from exchange studies are not translated to the KTH grading scale. An application is made by submitting a form to the school's office of student affairs.

The entire KTH policy for credit transfer is included in the KTH regulatory framework, www.kth.se

Studies abroad

The opportunity for studies abroad is preferably available in connection with the degree project during semester 2.

The application deadline for studies abroad is around 15 December for the following academic year.

Degree project

Degree project, second cycle

The programme includes a degree project for a Degree of Master that comprises 30 credits and which is usually carried out in the spring semester of year 2.

Commencement of the degree project requires that the majority of the studies in the Master's Programme are completed, i.e.,

- that 60 credits have been obtained, of which 30 credits relate to specialised studies in the second cycle within the Master's Programme.

KTH's comprehensive rules and guidelines for a degree project, 30 credits, for a Degree of Master, 120 credits, can be found in the KTH regulatory framework. www.kth.se

Degree

Application for a certificate

The student must apply for a certificate. Applications are made by logging on to the KTH website where "Applications for degrees" is found under the heading Programme.

Conditions for a Degree of Master, 120 credits

A Degree of Master of Science is obtained after completing the degree programme. The programme is designed so that the student, when they graduate, has fulfilled the national qualification requirements with a passing grade in all courses included in the student's study plan of 120 credits, of which

- at least 90 credits are attained in the second cycle, which includes at least 60 credits (including a 30 credit degree project) of specialised studies within the programme's main field of study.

Title of general qualification at second cycle

Degree of Master of Science (120 credits)

Teknologie masterexamen

Refer to the KTH guidelines (KTH regulatory framework), local directions for higher education qualifications at first and second cycle, the local Degree Ordinance www.kth.se

Appendix 1 - Course list

Appendix 2 - Programme syllabus descriptions



Appendix 1: Course list

Master's Programme, Industrial Management (TINEM)

General courses

Year 1

Mandatory courses (42.0 Credits)

| Code | Name | Credits | Edu. level |
|------------------------|---|---------|--------------|
| ME2016 | Project Management: Leadership and Control <i>Only compulsory for TINEM 2-year master</i> | 6.0 hp | Second cycle |
| ME2063 | Team Leadership and Human Resource Management <i>Only compulsory for TINEM 2-year master</i> | 6.0 hp | Second cycle |
| ME2064 | Finance and Control in Industrial Organizations | 6.0 hp | Second cycle |
| ME2065 | Operations and Supply Chain Strategy | 6.0 hp | Second cycle |
| ME2066 | Strategy and Industrial Marketing | 6.0 hp | Second cycle |
| ME2067 | Industrial Transformation and Technical Changes (ITTEC) | 6.0 hp | Second cycle |
| ME2501 | Perspectives on Industrial Management | 6.0 hp | Second cycle |

Supplementary information

Students within CMAST, CDEPR and CMATD must choose at least 18hp technical courses on the advanced level within a recognized technical profile in semester 1-3. These include: Machine Design, Production engineering and Energy Engineering.

Students within CFATE takes in period 1, year 4 course ME2016 "Project Management: Leadership and Control", and must choose at least 18hp technical courses on the advanced level within a recognized technical profile in semester 1-3. These include: Machine Design, Production engineering and Energy Engineering.

CDATE and CINTE must choose during semester 1-3 within the programme 30hp technical courses and 6hp elective courses.

Students who are not admitted to a Civilingenjör's program will take 22,5 credits elective courses during semesters 1 -3 within the program.

Year 2

Mandatory courses (55.5 Credits)

| Code | Name | Credits | Edu. level |
|------------------------|---|---------|--------------|
| ME2001 | Research Methods in Industrial Engineering and Management | 7.5 hp | Second cycle |
| ME2069 | Managing Research and Innovation | 6.0 hp | Second cycle |
| ME210X | Degree Project in Industrial Economics and Management, Second Cycle | 30.0 hp | Second cycle |
| ME2502 | Change Project in Industrial Management | 12.0 hp | Second cycle |



Appendix 2: Specialisations

Master's Programme, Industrial Management (TINEM)

This programme has no specialisations.