



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 20 (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

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.

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

Academic year

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

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.

Grading scale is found in the course syllabus.

Conditions for participation in the programme

Participation requires admission to courses within the programme and course registration.

For studies at a higher study year there are *specific admission requirements for the courses. Admission requirements are specified in the course syllabus.*

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 done during spring semester of year 2.

The degree project is the finishing part of the programme. The degree project can be started when the special requirements are fulfilled.

Degree

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), Teknologic masterexamen

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	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
ME2163	Leading People and Organizations in Different Contexts <i>If you have taken ME2063 you should not take ME2163</i>	6.0 hp	Second cycle
ME2501	Perspectives on Industrial Management	6.0 hp	Second cycle

Supplementary information

Students who are admitted to the two-year master programme will take 22,5cr elective courses during semester 1 -3 within the program.

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Below information only for KTH MSc students:

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

CFATE takes in period 1, year 4 course ME2016 "Project Management: Leadership and Control", and must choose at least 18cr 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 CİNTE must choose during semester 1-3 within the programme 30cr technical courses and 6cr elective courses.

CİTEH must choose during semester 1-3 within the programme 18cr technical courses and 18cr elective courses.

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ME2016 "Project Management: Leadership and Control" already taken in year 3 by CMAST, CDEPR, CMATD, CİTEH, CDATE och CİNTE.

ME2163 "Leading people and organizations in different contexts" already taken in year 3 by CMAST, CDEPR, CMATD, CİTEH, CDATE, CİNTE och CFATE.

Year 2

Mandatory courses (55.5 Credits)

Code	Name	Credits	Edu. level
ME2003	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.