ME1041 Industrial Management for Chemistry & Biotechnology (4.5 credits)

The course covers 4.5 credits at basic level and students take the course together with ME1003 Industrial Management, basic course (6.0 credits). ME1003 is provided by the department for Industrial Economics and Management (INDEK) three times a year; in English in period 1 and in Swedish in periods 2 and 3. In period 4, a re-exam will be offered according to the schedule on TimeEdit. You can choose whether you wish to use Swedish or English course literature (latest edition), and all examination is provided in both languages.

ME1041 Industrial Management for Chemistry and Biotechnology covers only 4.5 credits of ME1003's 6 credits. Therefore, it is highly recommended that all students join the first lecture (the course introduction) in ME1003 on Monday 24/8 (8:15-10:00) in classroom "F1". During the first lecture, the content of the course, the course syllabus, the examination etc. are described.

Intended learning outcomes

Engineering work involves more than just technology. In order to be able to take part in technology-based transactions, implement projects, develop businesses and lead teams and employees in today's companies, good knowledge of industrial management is necessary. In practice, success lies in understanding both technical and financial aspects of decisions. This course will give you a basic knowledge of industrial management. More specifically, this means that, after completing the course, you will be able to:

1. describe and explain technology-based business models, how value creation, value proposition, and value capture work in various industrial operations, and how such operations are managed, controlled and organized,
2. use and interpret economic calculations as a basis for decision-making in various business situations, such as when determining product costs and evaluating investments.
3. apply basic concepts and methods for bookkeeping, accounting, and interpreting financial reports, as well as describe and explain how an industrial company's operations can be financed.

Main content

The course focuses on basic concepts and models to understand and handle economic, organizational and management issues in technology-based and industrial activities, as an engineer.

Module 1: Industrial value creation

- Technical development as a competitive factor
- Technology-based business models and strategies
- Innovation, product development, production and marketing
- Organization
- Human resource management and leadership

Module 2: Product Costing

- Profit planning
- Product costing (full costing, contribution costing and activity-based costing)
- Investment calculation and investment evaluation

Module 3: Financial accounting and corporate finance

- Bookkeeping and accounting
- Annual report and financial analysis
- Corporate finance
- Corporate risk analysis

Specific prerequisites and future advanced courses
No specific prerequisites are required except general entry requirements. INDEK offers a large number of courses for which this course is a specific prerequisite.

Instruction
The teaching in module 1 is based on lectures, while modules 2 and 3 offer a combination of lectures and tutorials. The course is examined through a final written exam (TEN1, 4.5 credits, A-F).

Educational support
Students who are entitled to compensatory support during the course or exams are asked to contact the FUNKA unit as soon as possible:
https://www.kth.se/en/student/stod/studier/funktionsnedsattning/kontakt-1.963703

Teachers and examiners
Course examiner: Andreas Feldmann
Teacher responsible for the course: Mohammad Akhbari
Teachers: Karin Ahlström and Bo Karlson

The best way to contact the teachers is during the lectures.
All other communication with the teachers is handled via the e-mail address: **me1003@indek.kth.se**.

Please do not use Canvas to communicate with the teachers!

Course registration
In order to gain access to the course homepage on Canvas and to be examined, you must have registered for the course. All questions regarding *signing up for the course* and *course registration* are to be addressed to: **education-itm@kth.se**.

Course homepage
All course information is available on the course homepage "**ME1003/ME1041 HT26-P1 Industrial Management, Basic Course**" on Canvas. A course evaluation is carried out on this Canvas page at the end of the course. Send a message to me1003@indek.kth.se if you do not have access to the course homepage on Canvas despite having registered for the course.

Examination and grade criteria
After completing the course, the student is awarded a grade based on the course's intended learning outcomes. A, B, C, D and E are passing grades. An Fx grade can be increased to an E grade by doing a supplementary assignment.

The course is examined with a final written exam (TEN1). The result of the final exam determines the final grade of the course. The grading criteria are based on how well the student shows that the student has achieved all the learning objectives of the course as follows:

- Written exam (TEN1, 4.5 credits) examines intended learning objectives ILO1-3. Grading scale: A-F

Note! You must sign up for TEN1 via Ladok at latest 29/Sep.

In order to achieve grade E or higher, you must answer all questions with satisfactory results in terms of content. You must also, in a satisfactory manner, demonstrate that your answers are relevant to the course material. Reasoning and discussion shall be clear, well-structured and easy to follow. Basic concepts and models from the area shall be used in the answer. In order to achieve full credits for the questions, calculations need to be correct, and models and methods included in the course material shall be used. Credits are deducted for incomplete or otherwise incorrect steps in the solution.

Grade E

- The student clearly describes the meaning of terms, concepts, theories and working methods in the area of industrial management.
- The student analyzes and explains the results to some extent.
- The student describes and answers questions with some confidence.
- The student analyzes and answers simple questions in familiar situations with satisfactory results.
- The student uses an industrial management language with some confidence and adapts his or her communication to the purpose and context of the problem/question to some extent.

Grade C

- The student fulfills all grading criteria for grade E.
- The student, in detail, describes the meaning of concepts, models, theories and working methods in the area of industrial management.
- The student analyzes and explains the results of the analyses in a manner that shows a good understanding of the course content.
- The student describes and answers questions and provides examples (if asked for) with some confidence.
- The student analyzes and answers advanced questions in familiar situations with satisfactory results.
- The student uses an industrial management language with some confidence and adapts his or her communication to the purpose and context of the problem/question to a large extent.

Grade A

- The student fulfills all grading criteria for grade C.
- The student, in detail and with variation, describes the meaning of concepts, models, theories and working methods in the area of industrial management.
- The student analyzes and explains the results of the analyses in a manner that shows a very good understanding of the course content.
- The student describes and answers questions, provides examples (if asked for) and generalizes (if asked) with confidence.
- The student analyzes and answers advanced and complex questions in familiar situations with good results.
- The student uses an industrial management language with confidence and adapts his or her communication to the purpose and context of the problem/question to a very large extent.

- **The results of final exam are reported within 19 working days of the examination date.**
- **If you have signed up for the final exams and you have not received any email regarding your exam room by latest 3 days before the exam. Please contact: examinationsadm@kth.se.**

Allowed equipment for the final exams

Pencil, eraser, ruler, and calculator with erased memory (the calculator's memory may be checked and if found with any programmed data this will be considered cheating and submitted to KTH Disciplinary Board). Dictionaries are not permitted. Mobile phones/Smart watch are not permitted in an examination room under any circumstances. Formula sheets and interest rate tables will be distributed by the proctor/invigilators. You are not allowed to bring your own formula sheets to the final exam.

Before you begin:

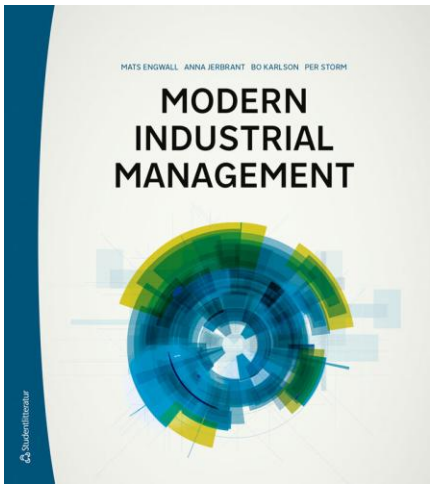
- Note that you must be registered on the course in order to get a grade.
- Write your name and social security number (SWE: personnummer) on the first page and your name on all other pages.
- Start the answer to each problem (1, 2, 3 etc.) on a **NEW PAGE**.

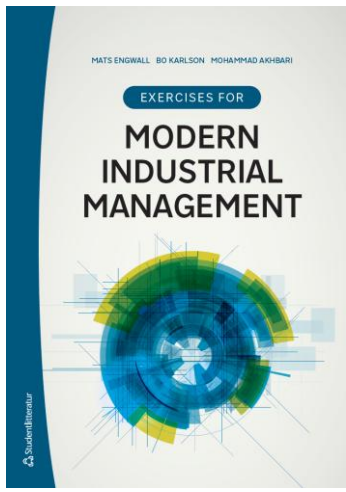
- Write clearly so that the text is readable. Unreadable solutions can obviously not be corrected and therefore not given any points.
- It is important that the solution method and the underlying reasoning are reported correctly and clearly. Only simple answers will not be accepted; also the calculations must be shown. Use widely accepted methods, that is, **those discussed in the course**, to solve the problems.

Grade Fx

Students who have received grade Fx on the final exam can receive grade E on the missing module in the exam by doing a supplementary assignment.

Course literature





- **Modern industrial management** *Engwall, et al* (**Third edition, 2026**), published by Studentlitteratur, **ISBN 9789144178226**. Sold at **KTH's Student Union Bookshop** and on the Internet.

- **Exercises for Modern Industrial Management** *Engwall, et al* (**Third edition, 2026**), published by Studentlitteratur, **ISBN 9789144178233.** Sold at **KTH's Student Union Bookshop** and on the Internet.

In addition to the course books and lecture slides, there are five *instruction videos* (PPT presentations with audio) available for self-study on Canvas (Kullvén, 2014). The videos deal with Cost-Volume-Profit (CVP) analysis, costing, investment appraisal, accounting and finance. Further course material may be made available on the course Canvas page.

Reading instructions for the course book "Modern Industrial Management"

The Following parts of the course book "Modern Industrial Management" are not included in this course:

- ✓ Chapter 2
- ✓ Chapter 5
- ✓ Chapter 14
- ✓ Chapter 18

The following sections of the course book "Modern Industrial Management" are included in the course but can be read briefly (synoptically):

- ✓ Section 6.5
- ✓ Section 7.4
- ✓ Section 8.4

Plagiarism is not permitted. Information on plagiarism can be found at CHEATING AND PLAGIARISM. ***IMPORTANT! Self-plagiarism is also plagiarism.*** See also the document "**Handbook – Guiding students a way from plagiarism**" that can be found on Canvas.

Use of generative AI

Unless otherwise specified in connection with any of the examination components of the course, the following applies to use of "generative AI" (e.g., ChatGPT). The student or student group must analyze and formulate answers to questions and assignments themselves. Generative AI may therefore **ONLY** be used for linguistic improvement of answers that the student or student group has formulated themselves.

All use of generative AI (e.g., ChatGPT) is prohibited in the course's examination and graded assignments. You are also advised to avoid the use of generative AI in your own studies and during class time. This is based on the fact that the use of generative AI is considered to have a negative impact on students' ability to meet the course's learning objectives. The student or student group must analyze and formulate answers to questions and assignments themselves.

The ban on generative AI means that

- All examination and graded assignments must be carried out without the help of generative AI.
- All submissions must be completely human-generated.
- Generative AI may **ONLY** be used for linguistic improvement of answers that the student or student group has formulated themselves.

You as a student are fully responsible for all material you submit and must be able to defend and explain it completely without the support of generative AI.
Students are also advised to avoid using generative AI for support and guidance during their own study, as the answers are unreliable and may omit important parts of the course. Instead, seek support from your fellow students and teachers for guidance and support, and use the course literature for facts.

Disciplinary action for unauthorized use of AI
Everything you submit must be your own work. Using generative AI in the course's examination and graded assignments is considered **unauthorized assistance and may result in disciplinary action**.

Registration for final written exam and "grade improvement" ("plussning")

The final written exam is given during ordinary examination periods 1, 2, 3 and in the re-examination period for course period 3. All exams are provided in both Swedish and English. No re-exams are given during the August period or in any of the other re-examination periods. Extra re-examination dates for individual students are not offered.

It is compulsory to sign up for the final written exam. This is done according to KTH's regular procedure for signing up for exams. Without having signed up, you may take the exam if there is space available and if you can present a printed certificate of having registered for the course. You need to print the certificate yourself.

- For KTH students, sign up for exam opens on **Tuesday 15/Sep** and closes on **Tuesday 29/Sep** at 23:59.
- Sign up for a re-examination (i.e. for the exam in one of the other study periods) is done in the same way.

"Grade improvement" ("Plussning") is not permitted.

Schedule

The current schedule can be found in a separate document.

"Please note that all reports will be checked for plagiarism"

"Self-plagiarism is also plagiarism"

The course content and modules

Module 1	**Industrial management and value creation**
ILO:	(Intended Learning Outcomes 1)
Content:	Industrial operation (industrial dynamics, interaction with competitors, customers, suppliers, employees, society etc.), organizing, human resource management, innovation, technology development, corporate management, strategic planning, and marketing.
Lecture:	Lectures 1-7
Literature:	Chapters 1, 3-4, 6-8, 15-17
Examination:	Final written exam (TEN1, 4.5 credits)

Module 2	**Product costing**
ILO:	(Intended Learning Outcome 2)
Content:	Cost-Volume-Profit (CVP) analysis, product costing, investment evaluation.
Lecture:	Lectures 8-10
Literature:	Chapters 9-10
Tutorials:	Tutorials 1-2
Examination:	Final written exam (TEN1, 4.5 credits)

Module 3	**Financial accounting and corporate finance**
ILO:	(Intended Learning Outcomes 3)
Content:	Bookkeeping, financial accounting, financial analysis, the business's capital requirements and financing
Lecture:	Lectures 11-13
Literature:	Chapters 11-13
Tutorials:	Tutorials 3-5
Examination:	Final written exam (TEN1, 4.5 credits)