



ME1041 Industrial Management for Chemistry and Biotechnology 4.5 credits

Industriell ekonomi för kemi- och bioteknik

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

Establishment

The official course syllabus is valid from autumn semester 2026 as decided by the Director of First and Second Cycle Education. Decision date: 2026-04-20.

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Industrial Management

Specific prerequisites

General entry requirements.

Intended learning outcomes

Upon successful completion of the course, the student should be able to:

1. describe and explain technology-based business models, how value creation, value propositions, 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.

Course contents

In practice, engineering is about combining technology with economic and social considerations. To succeed as an engineer in today's business world—conducting technology-based business, implementing projects, developing operations, and leading teams and colleagues—requires a solid understanding of industrial economics. In practice, success often lies in understanding both the technical and economic aspects of decisions. This course provides you with this foundational knowledge.

The course focuses on fundamental concepts and models to help engineers understand and manage economic, organizational, and managerial issues in technology-based and industrial operations.

Module 1: Industrial Economics and Value Creation

- Technology 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: Costing

- Profit planning.
- Product costing (full costing, contribution costing, and ABC costing).
- Investment calculations and investment evaluation.

Module 3: Accounting and Corporate Finance

- Bookkeeping and accounting.
- Annual reports and financial analysis.
- Corporate financing.
- Corporate risk analysis.

The course consists of lectures and calculation exercises (in Modules 2 and 3) and is assessed through a written exam (4.5 credits).

Examination

- TEN1 - Exam, 4.5 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Transitional regulations

For students who have passed some but not all of the assessment components in the previous course structure (course versions 1 & 2), retakes for KON4-6 will be offered once in Fall 2026-P2, once in Spring 2027-P4, once in Fall 2027-P2, and once in Spring 2028-P4. Starting in Fall 2028-P1, only the final exam will apply to all students, and previously completed assessment components (KON4-6) will not be valid or eligible for credit.

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.

Additional regulations

Course Literature (English edition):

Modern Industrial Management, Engwall et al., (latest edition), Studentlitteratur.

Exercises for Modern Industrial Management, Engwall et al., (latest edition), Studentlitteratur.