ME2016 Project Management: Leadership and Control 6.0 credits

Project Management: Leadership and Control

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

Second cycle

Main field of study

Industrial Management

Specific prerequisites

6 credits in basic industrial economics or business economics,

English B/ English 6 or equivalent.

Intended learning outcomes

On completion of the course, the students should be able to:

For a passing grade E:

1. Describe how project managers and project teams can handle complex assignments with a bearing on technology, finance, sustainability, ethics and social progress.
2. Describe, choose and use tools to define projects and formulate project goals.
3. Describe, choose and use tools for detailed time planning.
4. Describe, choose and use tools for risk and uncertainty handling.
5. Describe, choose and use tools for project budgeting and project follow-up in the carrying out of a project.
6. Describe a project organisation, the relation between projects and their external environment as well as carry out a stakeholder analysis for a specific project.
7. Formulate and analyse practical problems in industrial enterprise by means of project management tools and theoretical models. Using these tools and models, give recommendations on how control of a project can be prepared, executed and improved.
8. Describe the main tasks and the areas of responsibility for a project manager over the whole life cycle of the project in industrial and technology-intensive environments as well as analyse one's own learning and knowledge development in relation to this.

For grade A – D should the students furthermore be able to:

9. Describe project management as a both practical and scientifically emerging knowledge field and based on research-based knowledge analyse complex problems in project organisation.

10. Discuss the main properties and consequences of different types of technology-intensive projects; for example business projects, development projects and renewal projects.

11. Discuss advantages, disadvantages and limitations of different project management models for example the waterfall model and agile project management and discuss concepts, frameworks and tools, and their use in industrial and technology-intensive activities.

Course contents

Project that working method becomes everything more common in soon said all social sectors, and project management become thereby a common task for everything several employees in both companies and administration, in both continuous activities that research and development. In practice, most of today´s science and technology students will somehow be involved in project-based work within only a few years after graduation from higher education. Several of the largest employers of recent engineering graduates have completely or partly changed to be project-based organisations, which suggets that daily production is also organised as projects.

The emergence of projects as a central working method is mirrored by an even clearer 'professionalisation' of the project manager role.Those who continuously have the responsibility for large industrial projects are often professional project managers, and they have in addition to

their first-cycle studies also a deep understanding of so-called project management theory, which is the research-oriented basis of the project work.Project management theory includes many models that can be used for successful generation organisation, management and team leadership of/in projects.These models must be used at the same time with assessment and reflection. Recent research in project management, for which the Department left lndustrial Economics and Organisation is nationally and internationally renowned, emphasises therefore also the importance of leadership, organisation, ethics and a sustainable working environment in the development of industrial project work.Accordingly, this course focuses on giving the students understanding of how project management is developed, documented and spread in the interplay between academic research and practical applications.

The course focuses on management and working methods in business, development and innovation projects in technology-intensive companies. During the course, the research-based project management theory is combined with case studies from different technology-intensive sectors and research and development work. Strong emphasis is placed on how the surrounding conditions influence the project management as well as at the role of the client.

Examination

- INL2 - Hand in assignment, 2.8 credits, grading scale: A, B, C, D, E, FX, F
- KON7 - Partial exam, 1.6 credits, grading scale: P, F
- KON8 - Partial exam, 1.6 credits, grading scale: P, F
- TEN3 - Exam, 0.0 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.

TEN3 is an optional exam component for students seeking a grade higher than E in the course.

Transitional regulations

Admitted students who have not completed earlier set quizzes (KON3 – KON6) will be assessed within the scope of KON7 and KON8.

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.