



ME2314 Systems Engineering, Business and Management, Part 2 7.5 credits

Systemteknik, ekonomi och ledarskap, del 2

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

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

Establishment

Course syllabus for ME2314 valid from Spring 2017

Grading scale

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

Education cycle

Second cycle

Main field of study

Industrial Management

Specific prerequisites

SF1811/41/61 Optimization

SF2863 Systems Engineering

For students admitted to TIEMM - track, Optimization and Systems Theory (OSYT) study year 2, and that has taken ME1305, ME1306, ME1307, ME1308, ME1309, ME1311 and ME2312.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

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

- Apply knowledge and skills from earlier courses and learn to acquire new knowledge when necessary
- Identify, compare and critically assess aspects of a composite systems engineering problem, that requires knowledge within both electrical engineering and industrial management for its solution.
- Apply models and practical methods to prepare and suggest a solution on a composite systems engineering problem that requires knowledge within both electrical engineering and industrial management for its solution
- Organise, handle and lead a complex project task that runs over a long period of time, in collaboration with employers and colleagues.
- Present the work both in writing and orally in a scientific and convincing way
- Argue for the chosen working methods and the reliability of the results when they are exposed to criticism, and give constructive criticism on an equivalent project task
- Describe and discuss different perspectives on relevant sustainability challenges, and how these in different ways can contribute to new opportunities for the business development.

Course contents

The course intends to give the students professional skills that are needed to solve systems engineering problems that are composite and complex enough to require knowledge within optimization and systems theory as well as within industrial management.

The course is carried out in project form.

The project is executed as a cooperation between KTH and a company, the provider of the project. The project treats a concrete problem that can be solved with systems engineering methods. Economics and leadership issues is partly about setting the problem and its solution in an organizational context, partly about obtaining a functional group which completes and delivers the project on time and according to specifications from the company. The interaction with the project provider is important. Problem formulation and intermediate seminars are included, besides the final presentation that is done both in writing and orally. Furthermore, an oral review of another project work is required.

The projects are normally carried out in groups of two or three students with a supervisor from the Department of Industrial economics and organisation with support from the Department of Mathematics.

Course literature

Will be announced at the beginning of the course

Examination

- PRO1 - Project, 7.5 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.

Other requirements for final grade

An approved grade on the project report as well as approved participation in all parts of the course (seminars, lectures and company meetings).
All scheduled activities are considered mandatory.

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.