



MF209X Degree Project in Machine Elements, Second Cycle 30.0 credits

Examensarbete inom maskinelement, avancerad nivå

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 MF209X valid from Autumn 2012

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

To meet the program specific degree requirements, the thesis shall be a deepening in machine design on an advanced level. This means that the thesis will normally be carried out in the field of technology degree in which the student has focused on at the advanced level. If the student wants to perform his/her master's thesis in another area outside the field of machine

design, the must be approved by the director of undergraduate and master's studies at the School of industrial engineering and management.

Language of instruction

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

Intended learning outcomes

After the course the student shall:

- be able to apply relevant knowledge and skills acquired in mechanical engineering to a given problem,
- be able to independently analyze and discuss complex issues and deal with major challenges at an advanced level in mechanical engineering, within a given framework, and even with limited information available,
- reflect on and critically review its own and others scientific results,
- be able to be able to document and present his/her work, for a given target group, with the highest standards of structural, formal and language treatment,
- be able to identify the need for further knowledge and continuously upgrade his/her skills,
- have a deepened personal skill and knowledge in machine design,
- be able to select and use the relevant methods and create the engineering models that are required to successfully address the project task,
- be able to plan and perform a technically focused project within given time and resource constraints.

Course contents

The studies in the two-years master programme are completed with a degree project on advanced level which results in a written master's thesis, and a public oral presentation.

In this course, the student is expected to demonstrate his/her ability to independently address a technical machine design problem in a structured way. The work shall be based on relevant theories and presented in a written report and at a public oral presentation. The thesis process also includes attending the public presentations of two other master's theses at KTH, and to scrutinize another students thesis.

The thesis must have a significant technical content, but the focus between different theses may differ considerably. Examples of thesis with different focus are:

- develop a new concept for a technical system,
- design and evaluate a new component in an existing technological system,

- investigate and develop new engineering design methods and/or tools.

Provided that the thesis meets the above requirements, which is determined by the course coordinator or examiner, and provided that competent supervision is available during the thesis period, the student may choose to perform his/her thesis work, either at an academic department, within an industrial company, or at a consulting firm, in Sweden or in another country.

Examination

- XUPP - Examination Question, 30.0 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.

The person responsible for the course manages the thesis process: appoints the KTH supervisor in consensus with the examiner, selects the opponent for the thesis, and manages the registration and publication procedure.

Other requirements for final grade

KTHs rules

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.