



MF2101 Machine Design 6.0 credits

Maskinkonstruktion

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 MF2101 valid from Autumn 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Bachelor of Science Degree in Mechanical engineering or the equivalent.

Language of instruction

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

Intended learning outcomes

After passing the course, the students should be able to:

- Design and detail mechanical engineering products based on engineering considerations.
- Estimate loads for mechanical engineering products and its included components.
- Apply different design principles of load bearing and load transferring structures.
- Choose engineering materials and standardised components in mechanical engineering products.
- Produce dimensioned and toleranced manufacturing drawings of mechanical engineering products.

Course contents

The course deals with an applied subject, where previously acquired knowledge should be applied and integrated with certain new given theory. The course content can be divided into three main parts:

1. Systems design of products containing:

- Drive units
- Transmissions
- Joints

2. Design structures

- Load carrying structures, load application
- Load lines, stress concentrations
- Choice of material
- Manufacturing adaptation

3. Documentation and communication

- Drawings
- Dimensioning, tolerancing

Course literature

To be announced no later than 4 weeks before start of the course.

Examination

- INL1 - Hand in exercises, 3.0 credits, grading scale: P, F
- TEN1 - Written examination, 3.0 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.

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.