



MF2019 CAD 3D-modelling and Visualization 6.0 credits

CAD 3D-modellering och visualisering

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

Establishment

Course syllabus for MF2019 valid from Spring 2020

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Bachelor of Science, within 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:

- Create a CAD model with product and manufacturing information (PMI) from a system perspective.
- Create a CAD model with mixed technical contents, e.g. mechanical and electric components.
- Be familiar with modelling modules (i.e. different applications and environments) in a CAD system for design of machine elements.
- Make force and motion analysis of a mechanism model.
- Carry out interference analyses.
- Create communicative representations of CAD models to present and describe design and behaviour of a product.

Course contents

The course treats mainly virtual prototype production with parameterized solid models, but the participants will also be introduced in basic surface modelling. Furthermore, the participants will obtain possibility to test, how it is to work synchronous (also called direct modelling), which possibilities and difficulties it gives.

Examination

- ÖVN1 - Exercise, 3.0 credits, grading scale: P, F
- ÖVN2 - Project Work, 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.

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

To pass the course should the following be approved:

Three individual written assignments (ÖVN1; 3 credits) that should be delivered within specified time. The written assignments have grading scale P/F. If all assignments are not approved during one single course offering, all assignments must be redone in a new course offering.

The individual project part (ÖVN2; 3 credits) of the course has grading scale A-F, including the possibility to get an Fx grade. This grade reflects the course grade.

[OBSERVE: If the grade Fx is given, what is missing must be handed in and be approved before the next course offering. If not, the whole project part must be redone in a later course offering.]

If the project is not handed in during the current course offering, the project can only be handed in and be assessed twice each year (in May and in December) in connection with other course offerings. The course is developed continuously and the possibility to be assessed according to course plans of course offerings that were completed more than two years ago, may be lost, completely or partly.

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.