



MG2021 Computer Aided Design and Manufacturing, General Course 6.0 credits

Datorstöd i konstruktion och tillverkning, grundkurs II

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

Establishment

Course syllabus for MG2021 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

M or other program added with 4F1521 Machine Elements and 4G1634 Manufacturing Technology or equivalent.

Language of instruction

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

Intended learning outcomes

To give an understanding of how different kinds of CAD/CAM systems can (or can not) be applied to more efficiently support in the design and planning work at a company. This should be the result of a better control of, structure in, integration of and reuse of the information produced during development and order handling of products and constructions.

Course contents

Demands on and possibilities with computer programs for support in different activities of a product development process will be described, based on a single part (e.g. a cast or moulded product). Such activities include (not necessarily all of the following or in this order) conceptual design, analysis, calculations and simulations, prototyping, detailed design, product data communication, tool design, analysis and simulation of moulding and production and assembly planning. The computer support of each activity will be introduced and discussed from different perspectives and a series of hands-on laborations will be made, to illustrate the different activities. The integration of different activities and their common data will also be a central task throughout the course.

During lab exercises work station based CAD/CAM systems with solid and parametric modelling capabilities and associativity will be used.

Course literature

Course binder.

Examination

- ÖVN1 - Exercise, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory 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.

Other requirements for final grade

Laboration course (LAB1; 3 credits) and one graded exercise (ÖVN1; 3 credits).

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.