



MG1205 Engineering tools and methods 9.0 credits

Ingenjörswerktyg och ingenjörsmetoder

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

The official course syllabus is valid from the spring semester 2025 in accordance with the decision by the Head of the ITM School: M-2023-2483. Date of decision: 2023-11-30

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

General entry requirements.

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 student should be able to:

1. Independently and in a structured way create manufacturing documentation as models and drawings
2. Verify that produced components conform to the manufacturing documentation
3. Use manufacturing equipment in a workshop in a safe way and give an account of safety regulations for work at different machine tools
4. Decide when a certain digital tool should be used and apply this for analysis of different types of data
5. Plan and carry out a small manufacturing project with relevant tools and methods

Course contents

Basic 3D CAD and engineering drawings

- parameterised part models
- assembly models of parts
- dimensioned and toleranced engineering drawings
- assembly drawings with intersections, exploded views and parts lists

Basics of metrology by means of manual measuring tools

Different manufacturing processes and their safety aspects

Illustrate data in different diagrams

Examination

- INL1 - Assignment in CAD, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- KON1 - Partial exam, 1.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory work, 1.0 credits, grading scale: P, F
- LAB2 - Laboratory work, 2.0 credits, grading scale: P, F
- PRO1 - Project group, 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.