



MG2104 Manufacturing Technology and Planning 7.5 credits

Tillverkningssteknik- och planering

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

Establishment

Course syllabus for MG2104 valid from Autumn 2020

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

180 cr in engineering and English B, or the corresponding

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 will be able to:

- explain and visualise how manufacturing equipment and systems work and are used in manufacturing industry explain principles, possibilities and limitations for different manufacturing and measuring methods
- select and evaluate different manufacturing methods for a given product and context
- explain how casting, plastic deformation methods and heat treatment influence the material structure and the mechanical properties of products
- identify and select cutting parameters and explain their influence on the machinability and their mutual relations from a material perspective

Course contents

- introduction to manufacturing technology and planning
- quantitative and qualitative studies of different manufacturing methods
- process selection for achieving desired product properties
- structure and numerical control of machine tools
- metal cutting
- analysis of machining operations
- accuracy problems in manufacturing
- advanced, special and non-conventional machining

Examination

- TEN1 - Written exam, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- LAB2 - Laboratory work, 2.0 credits, grading scale: P, F
- SEM1 - Seminars and study visit, 1.0 credits, grading scale: P, 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

Participation in field trips

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.