MG2009 Advanced Manufacturing Technology 6.0 credits

Avancerad tillverkningsteknik

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

Establishment

Grading scale

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

Education cycle

Second cycle

Main field of study

Mechanical Engineering

Specific prerequisites

Minimum of 45 cr of second cycle courses completed

and

MG1001, MG1006, MG1026 or MG2104,

or the corresponding.

Only one of the courses MG2009 or MG2109 can be taken.

May not be taken by students who have taken MG2031 or MG2209.

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:

- select and present appropriate machining (metal cutting) and forming processes, including unconventional methods
- interpret tolerances in engineering drawings and use this understanding to plan and carry out measurements of given engineering components
- measure and analyze the dynamic characteristics of the manufacturing equipment, i.e machine tools and machining systems
- provide suggestions for economic and sustainable manufacturing processes based on specific conditions

Course contents

Metal cutting and metal forming technology

Machine Dynamics

Machine and process capability

Unconventional manufacturing processes

Machining Economics and sustainability

Advanced measuring technology

Course literature

Meddelas vid kursstart

Examination

- TENA - Written Examination, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- LABA - Workshop Laboratory Exercises, 1.5 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

Approved Workshop laboratory exercises (LABA; 1.5 cr)

Passed Written examination (TENA; 4.5 cr).

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.