



# MG2109 Advanced Manufacturing Technology, Extended Course 9.0 credits

Avancerad tillverkningsteknik, större kurs

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

## Establishment

Course syllabus for MG2109 valid from Autumn 2012

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Mechanical Engineering

## Specific prerequisites

Conditionally Elective for TPRMM, elective for students on other Master programmes.

Only one of the courses MG2009 or MG2109 is elective.

MG2109 is not elective for 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

On successful completion of this course you will be able to:

- Select and present appropriate machining (metal cutting) and forming processes, including unconventional methods
- Measure and analyze the dynamic characteristics of the manufacturing equipment, i.e. machine tools and machining systems
- Interpret tolerances in engineering drawings and using this understanding plan and carry out measurements of given engineering components
- Provide suggestions for economic and sustainable manufacturing processes based on specific conditions
- Independently plan, implement, document and present a research based assignment in manufacturing processes

## Course contents

Metal cutting and metal forming technology  
Machine Dynamics  
Machine and process capability  
Unconventional manufacturing processes  
Machining Economics and sustainability  
Advanced measuring technology  
Research oriented manufacturing technology

## Course literature

Meddelas vid kursstart

## Examination

- INL1 - Homework Assignments, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Workshop Laboratory Exercises, 3.0 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.

LAB1 Laborations, 3hp.

TEN1 Written exam, 3hp.

INL1, Assignments, 3hp.

## **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.