MG1016 Manufacturing Technology 6.0 credits

Tillverkningsteknik

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

Establishment

Course syllabus for MG1016 valid from Spring 2020

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

MF1046/MF1061 Introduction to Design and Product Realisation, MF1001 Mechanical Engineering, introductory course or MJ1103 Mechanical Engineering

Language of instruction

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

Intended learning outcomes

After completing the course with a passing grade the student should be able to:

- define concepts, explain phenomena and use correct terminology in respective subject areas
- describe the function and use of common machines, equipment and systems
- explain principles and state preconditions and results for different manufacturing processes
- carry out manufacturing engineering calculations
- use process planning techniques for manufacturing of simple parts in a mechanical workshop
- use industrial metrology techniques for verification of function and quality
- handle measuring tools and equipment for cutting processing, sheet metal forming, welding and casting by means of instructions

Course contents

In the course, you will study common manufacturing processes and systems and get an insight into the complete production process. Numerically controlled machine tools are central components in a modern manufacturing company. You will have the opportunity to use such machines all the way from the design, programming, rigging and test run, to the manufacturing of parts. Other areas that are treated in the course are engineering drawings as a means of communication, common polymer materials, characteristics of surfaces and basic industrial metrology techniques used to verify function and quality.

Disposition

Lectures
Exercises
Laboratory exercises
Written assignments.

Course literature

"Tillverkningsteknologi" av Jarfors m fl. Studentlitteratur 2010, ISBN: 978-91-44-07039-1

"Formler och tabeller för mekaniska konstruktion" Karl Björk eller motsvarande handbok

ytterligare kursmaterial som kan laddas ner från Canvas av registrerade kursdeltagare

Examination

- TEN1 - Written Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F

- LAB1 - Workshop Practice and Homework Assignments, 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.

The final mark is based on the examination result

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.