ML1200 Engineering Materials and Production, General Course 10.0 credits

Material och produktion, allmän kurs

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

Establishment

Course syllabus for ML1200 valid from Autumn 2016

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

General entry requirements and Chemistry 1, Physics 2 and Mathematics 3c.

Language of instruction

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

Intended learning outcomes

On completion of the course, the student shall be able to:

- Describe the properties and fields of use of the most commonly occurring construction materials and explain the relationships between.
- Describe commonly occurring manufacturing processes, machine types and handling equipment.
- Explain the contexts in which the manufacturing processes are used and what possibilities and limitations they represent.
- Draw conclusions about how and from what materials existing products are produced and explain how environmental and economic aspects are concerned.
- Illustrate relationships between product demands, manufacturing processes and product control.

Course contents

- Iron-based metals as well as other metals, polymers, ceramics, composite materials and powder metallurgical materials.
- Forming processes, for example casting and plastic methods.
- Machining, for example lathe machining, laser cutting and punching.
- Furthermore, measuring techniques, corrosion and planning for machining.

Course literature

Titel: Materiallära
Författare: Willy Leijon
ISBN: 9789147100057
Förlag: Karlebo

Titel: Tillverkningsteknologi
Författare: Jarfors m fl
ISBN: 9789144070391
Förlag: Studentlitteratur

Examination

- TENP - Examination, 3.5 credits, grading scale: P, F
- TENM - Examination, 3.5 credits, grading scale: P, F
- LABA - Laboratory Work, 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.

TENM, Examination, Engineering Materials
TENP, Examination, Manufacturing Methods
LABA, Laboratory Work and Exercises

Other requirements for final grade

Approved examination in Engineering Materials and Production and approved laboratory sessions and exercises.

Grade is based on exam score.

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.