# ML1603 Materials and Manufacturing, Basic Course 6.0 credits

**Material och produktion, grundkurs**

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

## Establishment

Course syllabus for ML1603 valid from Autumn 2017

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

## 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 should be able to:

- describe properties and use of common engineering materials
- describe basic manufacturing processes, machine types and materials handling equipment
- choose appropriate manufacturing processes from context and have understanding which possibilities and limitations they have
- draw conclusions about how and of which materials existing products are produced, as well as explain how environmental and economic aspects influence this

## Course contents

- Physics, chemistry and metallography fundamentals of iron-based and other metals, polymers, ceramics, composite materials and powder metallurgy materials
- Testing methods
- Shape-forming processes e g moulding and other forming methods
- Material removal manufacturing processes e g lathing, laser cutting and punching
- Corrosion
- Polymer materials

## Examination

- LAB2 - Laboratory work, manufacturing, 1.0 credits, grading scale: P, F
- TEN1 - Written examination, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory work, materials, 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

Examination

Laboratory session materials science

Laboratory session production

## 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.