



LT1032 Materials Science for Technology Teachers 7.5 credits

Materialteknik för tekniklärare

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

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for LT1032 valid from Spring 2019

Grading scale

P, 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

After completing the course, students should be able to:

- Describe the common properties of materials and material potentials and limitations on the basis of applications,
- Explain the context in which ordinary manufacturing methods are used and the opportunities and limitations they have,
- Describe how the choice of materials and manufacturing methods can have consequences for the individual, society and the environment,
- with a problem scenario as a starting point propose materials and manufacturing of a product,
- Describe and reflect on how technology content mentioned in the above can serve as subject matter in school technology subjects for grades 7-9 and give suggestions on how it can be taught and assessed.

Course contents

The course aims to provide basic knowledge in materials and manufacturing technology.

- The connection between properties and applications for the most common construction materials
- New materials - their properties and uses
- The production and use of materials in a historical perspective
- The most common manufacturing processes and material-processing methods in mass production
- Recycling and reuse of materials

Course literature

Further information to come at least three weeks before course start

Examination

- INL1 - Assignments, 3.0 credits, grading scale: P, F
- PRO1 - Project work, 3.0 credits, grading scale: P, F
- SEM1 - Seminar, 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.

SEM1, seminar 1.5 credits. Grading scale P / F

INL1 - Task 3 credits. Grading scale P / F

PRO1 - Project 3 credits. Grading scale P / F

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.