



HM105L Structural Materials and Manufacturing, Basic Course 7.5 credits

Material- och produktionsteknik, grundkurs

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

Establishment

Course syllabus for HM105L valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Knowledge corresponding to requirements to the programme for Ekonomi, Teknik och Design at Södertörns högskola.

Language of instruction

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

Intended learning outcomes

The main purpose of the course is that the student will have basic knowledge of common structural materials, their properties and use as well as some general industrial manufacturing processes. The student will be able to:

- Describe properties and use of common structural materials
- Explain connection between properties and use of common structural materials
- Describe some common manufacturing processes
- Explain in what context those processes are used, and their possibilities and limitations
- From a given situation suggest material and manufacturing process for a specific product

Course contents

The course covers material scientific fundamentals, properties of materials, adaptation of material properties, various types of steel, cast iron and other cast materials. Light alloys, powder metallurgy materials, ceramics, polymer materials, composite materials and wood are also covered. Covered production methods are mainly casting, processing of plastics, and jointing. Teaching includes lectures, seminars and a group assignment with a compulsory visit in a production plant.

Examination

- TEN1 - Written examination, 7.5 credits, grading scale: A, B, C, D, E, FX, 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.

- Examination, 7,5 cr, grade scale:A,B,C,D,E,FX,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.