KF2260 Polymers in Engineering Design 6.0 credits

Konstruktion i polymera material II

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

Establishment

Course syllabus for KF2260 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Chemistry and Chemical Engineering

Specific prerequisites

Mechanical properties of polymers, intermediate course (KF2160) and Polymer processing, intermediate course (KF2170)

Language of instruction

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

Intended learning outcomes

After the course the student should know the principles for choice of material, choice of processing method and dimensioning of plastic and rubber details.

Course contents

Polymers in engineering design. Design for manufacturing, assembly, disassembly and recycling. Methods for evaluation of materials and methods. Methods for calculation of stress-strain and long-term performance. Life cycle analysis. Design of products manufactured by injection moulding and extrusion.

Course literature

K Berggren, J-F Jansson, L-Å Nilsson,

H-E Strömvall, “Konstruera i plast”

Examination

- ÖVN1 - Exercises, 0.8 credits, grading scale: P, F
- TEN1 - Examination, 3.7 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 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.

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

Other requirements for final grade

Written examination (TEN1);3 credits
Laboratory work (LAB1);3 credits

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.