



HM1004 Solid Mechanics, Intermediate Course 7.5 credits

Hållfasthetslära, fortsättningskurs

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 HM1004 valid from Autumn 2013

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Language of instruction

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

Intended learning outcomes

To acquire knowledge about the basic principles and terminology of solid mechanics, mechanical behavior of engineering materials, methods to solve problems of solid mechanics, and to apply this knowledge for the solution of simple problems of practical importance.

Course contents

- Multi-dimensional stress and deformation analysis
- Hooke's generalized law
- Statistically indeterminate problems: Structure and bending of beams
- Fatigue, introduction to fracture mechanics
- Finiteelement methods
- Definition of boundary values

Disposition

Lectures

Practical exercises

Specific prerequisites

ML1201 Strength of Materials, General Course and ML1000 Engineering Mathematics or equivalent

Course literature

R C Hibbeler: Statics and Mechanics of Materials, 3rd Edition in SI units, Pearson Education

Handbok och formelsamling i hållfasthetslära, KTH, Institutionen för Hållfasthetslära

Examination

- TEN1 - Examination, 6.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 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.

Other requirements for final grade

Written exam (T6 cr.) grading A-F

Passed assignments (1,5 cr.) grading 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.