HM1004 Solid Mechanics, Intermediate Course 7.5 credits

Hållfasthetslära, fortsättningskurs

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

Establishment

Course syllabus for HM1004 valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

HM1001/6S2401 Strength of Materials with Statistics and HN1901/6S2901 Mathematics I or similar skills.

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 important types of solid mechanics problems, and ability to apply this knowledge for solution of simple problems of practical importance.

Course contents

- Three-dimensional stress and deformation analysis
- Generalized Hooke's law
- Statistically indeterminate problems: Structure and bending of beams
- Fatigue, introduction to fracture mechanics
- The Finite Element Method
- Definition of boundary values

Examination

- ÖVN1 - Exercises, 1.5 credits, grading scale: P, F
- TEN1 - Examination, 6.0 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.

Other requirements for final grade

Written exam (TEN1; 6 cr.).
Passed assignments (ÖVN1; 1,5 cr.).

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.