# HS1722 Statics and Strength of Materials 7.5 credits

## Statik och hållfasthetslära

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

## Establishment

Course syllabus for HS1722 valid from Spring 2012

## Grading scale

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

## Education cycle

First cycle

## Main field of study

The Built Environment, Technology

## Specific prerequisites

Students in year 1 of the Higher Education Diploma programme in Construction Management

## Language of instruction

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

## Intended learning outcomes

Upon completion of the course, students will be able to:

- Determine the magnitude and direction of resultant force
- Calculate the centre of mass for an asymmetric cross-section
- Calculate support reactions for cantilever and simple beams
- Calculate and draw load, shear and moment diagrams
- Calculate normal stresses for axially loaded members
- Perform calculations of deformation using Hooke's law
- Perform calculations of shear stresses for small cross-sections
- Perform calculations of bending stresses in cantilever and simple beams
- Calculate cumulative loads for cases with dead weight and one imposed load

## Course contents

- Support reactions
- Normal force, shear force and bending moment
- Hooke's law
- Axially loaded members. Trusses.
- Normal stresses in beams
- Deflections of beams

## Course literature

Own compendium and practical assignments

## Examination

- TEN1 - 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.

## Other requirements for final grade

Passing grade on written examination (TEN1, 7.5 credits), grading scale: A-F

Overall course grade is based on grading scale A-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.