



# SG1801 Structural Mechanics, Basic Course 7.5 credits

Byggnadsmekanik, grundkurs

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

## Establishment

Course syllabus for SG1801 valid from Autumn 2010

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

SG1107 Mechanics

## Language of instruction

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

## Intended learning outcomes

The student will learn to draw N V M diagrams and calculate strains and stresses for basic beams, frames and bar systems.

## Course contents

- Normal force, shear force and bending moment
- Hooke's law
- Axially loaded members. Trusses
- Normal and shear stresses in beams
- Torsion of circular bars
- Deflections of beams
- Method of superposition. Flexibility method
- Buckling of columns
- Qualitative analysis of trusses, beams and frames

## Course literature

Introduktion till Strukturmekaniken KFS AB - Lund

Susanne Heyden, Ola Dahlblom, Anders Olsson och Göran Sandberg

## Examination

- ÖVN1 - Exercises, 3.0 credits, grading scale: P, F
- TEN1 - Examination, 4.5 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

A written examination (TENA; 4,5 university credits). Exercises (ÖVNA; 3 university 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.