SG2860 FEM Modelling 8.0 credits

Modellering i FEM

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

Establishment

Grading scale

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

Education cycle

Second cycle

Main field of study

The Built Environment

Specific prerequisites

English B / English 6

The course supposes previous knowledge in basic finite element theory.

Language of instruction

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

Intended learning outcomes

Students will learn practical modelling aspects necessary in realistic FEM analyses. Another goal is to provide students with skills in using the commercial FEM package ANSYS.

Course contents

The following modelling aspects in finite element modelling are discussed :

- geometrical and material aspects
- boundary conditions
- choice of the elements
- static and dynamic analyses
- non-linear aspects

Several practical cases are presented.

A large-scale project, consisting of the modelling of a realistic problem, should be treated.

Examination

- ÖVN1 - Exercises, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- PRO1 - Project, 5.0 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

Project (PRO1, 5 university credits).
Exercises (ÖVN1, 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.