FAF3201 Advanced Structure Dynamics, Modelling and Measurements 7.5 credits

Avancerad byggdynamik, modellering och mätning

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 FAF3201 valid from Spring 2011

Grading scale

undefined

Education cycle

Third cycle

Specific prerequisites

- Academic degree in civil engineering.

- Passed courses in basic finite element theory.

- Passed basic courses in structural dynamics.

- Experience in MATLAB programming.

Language of instruction

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

Intended learning outcomes

The purpose of this course is to give a deeper insight into the theory and methods for the analysis of dynamically loaded structures and demonstrates the possibilities of using modelling and field measurements to access the behaviour of existing structures.

Course contents

- Behaviour of structural elements acted on by dynamic loads

- Dynamic vehicle-structure interaction

- Dynamic soil-structure interaction

- Fundamental signal analysis

- Field measurements for structural assessment.

Course literature

Compendia developed at the division of Structural Design and bridges, KTH. Selected journal papers and other texts handed out during the course.

Examination

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.

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.