



Course syllabus

Faculty Board of Science and Engineering
School of Engineering

1BY072 Stål- och träkonstruktioner, 7,5 högskolepoäng
Steel and Timber Structural Engineering, 7.5 credits

Main field of study

Civil Engineering

Subject Group

Building Technology

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved by Organisational Committee 2009-12-15

The course syllabus is valid from autumn semester 2010

Prerequisites

Knowledge corresponding the contents of Building Technology I, Structural Mechanics, alternatively Mechanics of Materials, as well as Concrete Constructions.

Expected learning outcomes

After completing the course the student is expected to

- be able to dimension simple steel and wood constructions for bending with or without normal force, transverse force, centric or excentric pressure with or without simultaneous transversal load
- be able to check the function of serviceability limit states
- have acquired an orientation of the dimensioning process of steel and wood constructions
- be able to make drawings for steel and wood constructions

Content

The course comprises the following elements:

- Steel constructions
- Current regulations
- Steel qualities
- Cross section classes
- Bending and shearing
- Axially loaded bar

- Pressure and simultaneous bending
- Checking steel constructions in ultimate limit states
- Bolted joints
- Welded joints
- Orientation on dimensioning against fire
- Engineering design
- Wood constructions
- Current regulations
- Wood materials
- Bending and shearing in simple construction elements
- Axially loaded bar
- Pressure and simultaneous bending
- Checking wood constructions in ultimate limit states
- Wood joints
- Orientation on composite construction elements
- Wood construction systems

Type of Instruction

The teaching consists of lectures, exercises, laboratory work, project work and study visits. Some elements are compulsory. The extent of the compulsory elements is announced by the examiner at the start of the course.

Examination

The course is assessed with the grades U,3,4 or 5.

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The assessment of student performances usually takes place during special examination periods and may be written and/or oral. The assessment may also be based on submitted reports of laboratory work and exercises.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

Credit Overlap

This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: BYA917

Required Reading and Additional Study Material

Required reading

- Al Emrani, Mohammad, Johansson Peter, Stålbyggnad, Utdrag ur Al-Emrani M., Engström B., Johansson M, Johansson P (2008) Bärande konstruktioner, Del 1 och Bärande konstruktioner del 2, Institutionen för Bygg och miljöteknik, Avdelningen för konstruktionsteknik, CHALMERS TEKNISKA HÖGSKOLA. Utgiven av Växjö Universitet.

- Johansson, Marie. Träbyggnadsteknik, Kompendium utgivet av Växjö Universitet.

- Exempelsamling för Stål- och träbyggnad, Kompendium Växjö Universitet.