Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Engineering

4BY064 Trä i byggsystem, 7,5 högskolepoäng
Timber Based Building Systems, 7.5 credits

Main field of study
Civil Engineering

Subject Group
Building Technology

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by the Board of the School of Engineering 2010-06-28

Revised 2012-04-20. Review of Literature, expected learning outcomes and contents.

The course syllabus is valid from autumn semester 2012

Prerequisites
English B. Bachelor of Science in Civil Engineering or Archtectural Engineering including a minimum of 7,5 credits in Structural Mechanics or Mechanics of Materials and 15 credits Mathematics.

Objectives
After this course students should:

- have a understanding for the basis of structural engineering and load combinations
- have a understanding for the behaviour of structures in timber and engineered wood products
- have the ability to design advanced timber structures including, stabilisation, complex glulam beams, connections and vibrations
- be able to design and analyse advanced timber structures

Content
The course includes:

- the background to the design standards and load combinations
- basic understanding of wood as a structural material; grading, inlfuence of service class and load duration
- design of timber structures subjected to tension, compression or bending

- design of curved beams and beams with varying depth
- stabilisation of timber structures
- timber connections - understanding of the behaviour and design
- springiness and vibrations

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.
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
When the course has finished, an evaluation is compiled. The results are reported to the students and then archived according to the rules of the school.

Required Reading and Additional Study Material
Required reading
Bergkvist, Per (red.) (2011). Design of timber structures. Stockholm: Swedish Forest Industries Federation
Johansson, Marie (2012) Exercises in timber structures, Linneaus University