



Course syllabus

Faculty of Technology

Department of Building Technology

1BY034 Byggnadstekniska konstruktioner, 7,5 högskolepoäng

Structural Engineering and Design, 7.5 credits

Main field of study

Civil Engineering

Subject Group

Building Technology

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved 2010-06-28

Revised 2017-11-22 by Faculty of Technology. Review of objectives, contents and examinations.

The course syllabus is valid from spring semester 2017

Prerequisites

Basic eligibility and Building Technology 1, 7,5 hp or the equivalent.

Objectives

After completing the course the student is expected to:

- have acquired basic knowledge of how structural elements, construction and materials affected by static load
- understand and describe the function of various components and systems
- have the ability to suggest suitable construction solutions on an overarching level
- have an understanding of and be able to explain the constructor's role in the building process
- predict critical phenomena that can occur when a structure charged with progressively increasing load.

Content

The course comprises the following elements:

- Common construction materials' inner structure and mechanical properties
- Construction element forms and their relation to structure composition and function
- The design of the structural system in interaction with architectural demands and ambitions as well as other demands concerning e.g. rigidity and strength
- The constructor's role in the building process
- Concepts, symbols and established definitions for a common language in the building process
- Laboratory exercises to train the understanding of how elements carry the load.

Type of Instruction

The teaching consists of lectures, exercises and laboratory work. Information on compulsory elements is given in the schedule.

Examination

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

The course is examined through a written exam about the equivalent of 6 credits with grades U, 3, 4 or 5 and an active participation in a group project where an existing structure is analyzed with respect to how it carries cargo and a written report compiled. The latter group includes the work 1.5 credits and rate of U or G.

Course Evaluation

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Required Reading and Additional Study Material

Required reading

The art of construction, ISBN: 1-55652-080-8, Mario Salvadori.

Engström, Dan Arkitektur och bärverk, Formas, 2004. 192 s.