Linnæus University

Jnr: 2016/3460-3.1.2.2

# Course syllabus

Faculty of Technology
Department of Building Technology

## 1BY008 Byggteknik 1, 7,5 högskolepoäng
## Building Technology 1, 7.5 credits

**Main field of study**
Civil Engineering

**Subject Group**
Building Technology

**Level of classification**
First Level

**Progression**
G1N

**Date of Ratification**
Approved 2009-12-15
Revised 2016-06-09 by Faculty of Technology. Review of examination and contents.
The course syllabus is valid from autumn semester 2016

**Prerequisites**
General entry requirements and Mathematics 3b / 3c or Mathematics C (Field-specific entry requirements 3/A3).

## Objectives
After completing the course the student:

- have knowledge of building technology constructions
- knowledge of building materials
- will be able to make energy calculations for a house
- have the ability to perform detailed building technology drawings
- have knowledge of the construction industries different sectors and tasks for civil engineers and structural engineers.

## Content
The course comprises the following elements:

- Building technology: The building's main parts foundations, frames, framecomplement, coverings, furnishings and equipment,
- Building physics: Heating, energy balance, U values, heat conduction. Moisture, moisture technology concepts, moisture transportation, moisture sources, critical moisture conditions, moisture measuring,
- Energy: Boverkets energy requirements, calculation of the building's energy balance, low-energy buildings,
- Material science: Concrete, wood, heat insulation and other building materials. Laboratory around the material

Laboratory around the material,
- Drawing techniques: Plans, sections, details for housebuildings,
- Company contacts: Study visits and visits of company and agencies in the building field as well as visits at construction places.

## Type of Instruction
The teaching consists of lectures, laboratory work, exercises and study visits. The extent of the compulsory parts appears from the schedule.

## Examination
The course is assessed with the grades U, 3, 4 or 5.
The course is examined through a written exam 4 credits with the grades U, 3,4 or 5. The practical part is examined through presentations and project work through a written report. Practical exercises and project work together comprise 2.5 credits and is assessed with the grades U, 3,4 or 5. Course company contacts 1 credit is examined with a grade of
U / G through attendance and presentations.

The grade obtained by weighing of the various parts of the examination where the written exam weighs heaviest.

## 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.

## Other
Some elements of the course may entail costs defrayed by the course participant.

## Required Reading and Additional Study Material
**Required reading**
Bodin, Hidemark m fl Arkitektens Handbok, Studentlitteratur, latest edition, about 552 pages.
Burström, Per Gunnar, Byggnadsmaterial, Studentlitteratur, 2007, 562 pages
Strandberg, Bengt, *Bygga hus-Illustrerad bygglära*, Byggegenskaps förslag, 2014, 291 pages.

Byggfysik – Räknetal, lösningsförslag och tabellverk, Inst för byggteknik, LNU, 2016
Byggfysik- Värmekompendium, Inst för byggteknik, LNU, 2016
Ritteknik - Goda exempel, Inst för byggteknik, LNU, 2016

**Recommended Literature**
Hemgren & Wannfors, Husets ABC, 384 sidor
Hamrin, Byggnadsritning – ritsätt och regler, 72 sidor
Sandin, Kenneth, 2007, Praktisk Husbyggnadsteknik, Studentlitteratur, 100 sidor