



# AF1002 Buildings and Civil Engineering Structures 7.5 credits

Hus och anläggningar

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 AF1002 valid from Spring 2014

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

For students not registered on a KTH programme:

Completed upper secondary education including documented proficiency in Swedish corresponding to Swedish B and English corresponding to English A. Introduction to the Planning and Building Process, Physics for the Built Environment, Geology and Geotechnical Engineering, Graphic Information Systems or equivalent.

For students registered on a KTH programme:

Introduction to the Planning and Building Process, Physics for the Built Environment, Geology and Geotechnical Engineering, Graphic Information Systems

## Language of instruction

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

## Intended learning outcomes

The main goal of the course is to give a superficial knowledge on the technical functions of buildings and civil structures.

After having passed the course the student should be able to:

- Perform a superficial inspection of an existing building or civil structure including drawings and be able to make an overview of its technical properties.
- Analyse the possibilities and risks with reconstruction or refurbishment for changed use of the building.

## Course contents

- Short introduction to the modern building and architectural history
- Creation and architectural design of buildings
- Basic design of building structures
- Common foundation structures
- Basic building physics
- Installation systems

Project task

In groups of four students a building or a civil engineering structure is examined and its properties and qualities are evaluated and described in a written report that is also discussed at a seminar.

## Course literature

- Så byggdes staden (från kursen "Samhällsbyggnadsprocessen")
- Så byggdes husen 1880-2000
- Den tekniska delen i kompendiet "Samhällsbyggnadsprocessen"
- Bärande och Buret, kompendium i konstruktionsteknik och grundläggning.
- Installationsteknik för S2, kompendium
- Byggnadsteknikens grunder KTH 2012

De två första böckerna köps på kompendieförsäljningen. Kompendiet "Samhällsbyggnadsprocessen" från kursen AI1137 Samhällsbyggnadsprocessen. Övriga kompendier köps på teknologexpeditionen, Byggetenskap, Brinellvägen 23.

## Examination

- PRO1 - Project Work, 3.0 credits, grading scale: P, F
- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.5 credits, grading scale: P, F

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.

## Other requirements for final grade

One written exam (TEN1, 3 hp), Project task (PRO1; 3hp), Exercises (ÖVN1 1,5 hp)

## 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.