



# AF1004 Building Materials and Building Physics 7.5 credits

## Byggmaterial och byggfysik

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 AF1004 valid from Autumn 2007

## Grading scale

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

## Education cycle

First cycle

## Main field of study

Technology

## Language of instruction

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

## Intended learning outcomes

After the course is completed the student should be able to solve the problems of building physics that are to be encountered during the design phase and during the construction of buildings.

## Course contents

Building materials, moisture and thermal properties, Heat transfer, conduction, radiation, convection. Calculation of heat transfer, moisture transport and assessment of effect on materials and structures. Applications on thermal insulation, density, moisture resistance and safety and effect on interior and exterior environment.

## Specific prerequisites

Buildings and Civil Engineering Structures, Material and Water Chemistry besides Fluid Mechanics for the Built Environment

## Course literature

- Jóhannesson, G.: Lectures on Building Physics. Calculated examples.
- Övningsuppgifter Inst. för Bygghvetenskap, KTH, 2004. In Swedish.
- Burström P.G., Byggnadsmaterial, Studentlitteratur, Lund. In Swedish.

## Examination

- TEN1 - Examination, 4.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 3.0 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.

## 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.