AF1301 Building Materials, Basic Course 7.5 credits

Byggmaterial, grundkurs

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for AF1301 valid from Autumn 2009

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Completed and documented upper secondary education and passed courses:

AI1137 Introduction to the Planning and Building Process and AF1002 Buildings and Civil Engineering Structures or equivalent

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:

- Have a fundamental understanding of relation between the structure and the characteristics of building materials.

- Be able to describe the interaction between materials and the environment i.e. the environmental influence on materials and the materials effect on the environment.

- Assess the materials, existing and new, during the whole life cycle

- Validate information about building materials and communicate with specialists.

Course contents

In the course general demands are described on building materials Chemical and physical structure and mechanical characteristics, and a small part about selection of materials and development of new materials. Next moment treats different building materials divided in groups due to the function in the building. For every material group: raw material, manufacturing, chemical and physical structure, material qualities, characteristics, essential material parameters, common applications, durability and service life in different environments. An introduction to environmental assessments of building materials, recycling and re-use of building materials.

Course literature

Burström, P-G, "Byggnadsmaterial - Uppbyggnad, tillverkning och egenskaper", Studentlitteratur, Lund, 2007.

Burström, P-G, "Byggnadsmaterial. Övningsbok", Studentlitteratur, Lund, 2007.

Examination

- TEN1 - Examination, 6.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 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.

If the course is discontinued, students may request to be examined during the following two academic years.

Examination (TEN1; 6 cr)

Verbal examination of accomplished laboration

Laboration (LAB1; 1,5 cr)

Other requirements for final grade

Pass moment, TEN1 and LAB1

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.