FAF3115 Concrete and Other Cement Based Materials 7.5 credits

Betong och andra cementbaserade material

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 FAF3115 valid from Autumn 2010

Grading scale

G

Education cycle

Third cycle

Specific prerequisites

Background knowledge corresponding to the courses:

AF2101 Concrete Structures 7,5 hp

AF1301 Building Materials, Basic Course 7,5 hp

AF2301 Building Materials, Advanced Course 7,5 hp

Language of instruction

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

Intended learning outcomes

The course gives a deep understanding of concrete as a composite material, its properties in the fresh, young and hardened states. The effects from the various basic materials are studied and also how these can be varied to produce concrete and other cement based materials with prescribed properties.

Course contents

Cementitious materials, hydration mechanisms, properties of aggregates, mix design and admixtures. The effects from each basic material on mixed concrete and other cement based materials. Cementitious materials co-operation with the environment. Durability, repair methods and life-time design.

Course literature

Neville: "Properties of concrete" (or equivalent) and additional material.

Examination

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

Participation in seminars and lectures.

Written examination.

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.