AF269V Foundation Engineering 7.5 credits

Grundläggningsteknik och geokonstruktioner

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

Establishment

Course syllabus for AF269V is valid from Autumn 2025.

Grading scale

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

Education cycle

Second cycle

Main field of study

The Built Environment

Specific prerequisites

Documented knowledge in soil mechanics or foundation engineering, and structural mechanics, structural engineering in at least total 12 ECTS points corresponding to the content in courses AF1601 or AE1106 and AF1005.

Eng B/6 according to the Swedish upper secondary school system.

Language of instruction

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

Intended learning outcomes

The aim of this course is to give advanced knowledge on analysis and design of foundation constructions. After this course, the student will be able to:

- Explain how ground movement affects foundation design and soil-structure interaction.
- Design various types of piles with regard to stability.
- Describe different types of soil reinforcement.
- Design sheet pile walls considering geotechnical and structural failure.
- Design slab foundations with regard to with regard to dynamic aspects.
- Describe design aspects of foundations on rock.

Course contents

- Foundation design in relation to ground movement
- Foundation construction
- Deep foundations
- Piled foundations
- Sheet piling
- Soil dynamics
- Retaining walls
- Soil reinforcement
- Foundations on rock

Examination

- TEN1 - Exam, 0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercise, 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.

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

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.