



Course syllabus

Faculty of Technology

Department of Building Technology

1BY000 Grunder för anläggningsteknik, 7,5 högskolepoäng
Geosciences, 7.5 credits

Main field of study

Civil Engineering

Subject Group

Building Technology

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved 2009-07-24

Revised 2014-03-06 by Faculty of Technology. Review of Literature

The course syllabus is valid from spring semester 2015

Prerequisites

Computational Methods for Technical Applications, 6,0 HEC or similar.

Objectives

After completing the course the student is expected to have acquired:

- basic knowledge on Geology
- basic knowledge on Geotechnics
- introductory knowledge on Water & Wastewater Handling
- introductory knowledge on Road Engineering

Content

The course comprises the following elements:

Geology

- The structure of the earth: earth's materials (minerals, rocks, soils).
- Glacial geology
- Hydrology: hydrological cycle, hydrologic processes & ground water

Geotechnics

- Soil properties
- Stress analysis
- Shear strength of soil
- Lateral earth pressure

Water and Wastewater Technology

- Terminology of Water & Wastewater Systems
- Historical aspects and changes in priorities
- Water distribution network
- Sewer & stormwater net
- Water & wastewater treatment in central system
- Local water supply treatment
- Wastewater treatment in local systems

Road Tehnology

- Road and Traffic terminology
- Road structure
- Maintenance of road structuree

Type of Instruction

The teaching consists of lectures, workshops, laboratory work, exercises. Some of the items are compulsory. The extent of the compulsory parts appears from the schedule.

Examination

The course is assessed with the grades U,3,4 or 5.

The assessment of student performances usually takes place during special examination periods and may take the form of project work, laboratory work, written assignments and written examinations. The examination can be both written and oral.

In order to pass, the objectives of the course should be achieved.

Course Evaluation

A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

Required Reading and Additional Study Material

Required reading

Jägryd, Anders, 2008: Kompendium i geologi

Sällfors, Göran, 2001: *Geoteknik: jordmateriallära, jordmekanik*, Chalmers tekniska högskola

Lindström, V, 2012: *Vårt Vatten, grundläggande lärobok i vatten- och avloppsteknik, Svenskt vatten*. ISSN nr: 1654-5117

Granhage, L. 2007: Kompendium i vägbyggnad, Chalmers tekniska högskola

Utdrag ur: Alm L-O. 2010: Kurskompendium väg-och gatuutformning, KTH

Utdrag ur: Trafikverkets Vägar och gators utformning 2012