

Water Supply and Wastewater Technology

Programme course

4 credits

VA-teknik

TNBI73

Valid from: 2017 Spring semester

Determined by

Board of Studies for Mechanical
Engineering and Design

Date determined

2017-01-25

Main field of study

Civil Engineering

Course level

First cycle

Advancement level

G2X

Course offered for

- Civil Engineering, B Sc in Engineering

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites

Hydrology and hydraulics

Intended learning outcomes

After completing the course the student should be able to construct and evaluate a water and drainage system. This means that the student can:

- Describe and illustrate the parts in a common water supply and wastewater system.
- Calculate dimensions for water and sewer pipes.
- Describe and analyse material for pipes and devices used in water supply and wastewater systems.
- Describe drainage system with focus on environmental sustainability.
- Analyse the stability of shafts.
- Describe and analyse methods for foundation of pipes.
- Describe methods for maintenance of pipes including pipe rehabilitation with so called no dig methods.
- Plan and design a water and sewer pipe system for a residential area.
- Analyse the pipe system from an environmental point of view.

Course content

Freshwater consumption, cleaning of water, water reservoirs. Construction of freshwater- and sewage pipes. Methods for renewal of the freshwater- and sewage system. The project contain the construction of a water- and sewage system for an exploitated area.

Teaching and working methods

The teaching consists of lectures and a project.

Examination

TEN1 Written examination 4 credits U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för teknik och naturvetenskap

Director of Studies or equivalent

Dag Haugum

Examiner

Dag Hagum

Course website and other links

<http://www2.itn.liu.se/utbildning/kurs/index.html?coursecode=TNBI47>

Education components

Preliminary scheduled hours: 50 h

Recommended self-study hours: 57 h

Course literature

Allmänna VA-ledningar. Grundutbildning för rörnätspersonal. Svenskt Vatten AB 2008 Vårt vatten, Svenskt Vatten AB 2012

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.