



AL1304 Water Supply and Wastewater Treatment 7.5 credits

Vattenförsörjnings- och avloppsteknik

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

Establishment

The official course syllabus is valid from the spring semester 2026 as decided by the Director of First and Second Cycle Education: HS-2025-2235. Date of decision: 2025-09-25.

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Basic knowledge of chemistry, with specific focus on water and soil chemistry, as well as hydrology corresponding to the content of the course AE1105 Environmental and Soil Chemistry, and at least 3.5 credits completed from the course AL1303 Soil and Water.

Intended learning outcomes

On completion of the course, the student should be able to:

- Describe the structure and dimensioning of various technical systems for drinking water and wastewater handling and how they are included as part of society's infrastructure.
- Describe requirements and aims for water and wastewater treatment as well as pipe networks.
- Apply knowledge in hydraulics, chemistry and biology in water and wastewater technology.
- Evaluate different water and sludge treatment processes to select appropriate technologies with regard to sustainable development and resource recovery.
- Describe both development trends for new system solutions and how older systems can be rebuilt to a better function.

Course contents

- VA technology as part of society's infrastructure
- Functional requirements of water-wastewater technical systems with waterworks, wastewater treatment plants and pipe networks
- Water use and water quality
- various water supply and wastewater treatment systems
- Drinking water treatment processes
- Wastewater treatment processes
- Sludge handling processes
- Comparison of different water-wastewater technical systems
- Study visits to waterworks and wastewater treatment plants

Examination

- TEN1 - Written exam, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercise work, 2.5 credits, grading scale: A, B, C, D, E, FX, 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.