AE2304 Water and Wastewater Handling 7.5 credits

Vatten- och avloppsteknik

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

The course syllabus is valid from Autumn 2024 according to the Head of school decision: A-2023-3182. Decision date: 2023-12-27

Grading scale

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

Education cycle

Second cycle

Main field of study

Built Environment,Environmental Engineering

Specific prerequisites

Bachelor's degree in the field of civil engineering, environmental engineering, or another subject with clear relevance to the course, of at least 180 higher education credits, which includes the following: General Chemistry and/or Environmental Soil Chemistry or equivalent courses, 7.5 higher education credits. Proficiency in English (English B or equivalent).

Language of instruction

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

Intended learning outcomes

After completion of the course, the students should be able to:

- explain water and material flow in society, need for sustainable development, recycling and reuse.

- analyse problems connected to water scarcity, water quality and health, based on historical perspectives and trends.

- describe requirements and formulate goals of water and wastewater handling, and distribution systems.

- apply their knowledge in treatment methods to choose an appropriate technology for water and wastewater handling as a part of urban infrastructure.

- implement their knowledge in hydraulics, chemistry, and/or microbiology in water and wastewater handling and distribution.

- understand and discuss management of water and wastewater handling and distrubution systems based on experiences and trends from urban areas in different countries.

Course contents

The course describes different systems for handling and distribution of water and wastewater, and criteria for evaluation. Principles and fundamentals of biological, chemical and separation methods. A multi-discriplinary approach is used in evaluation of systems. Study visits at plants for wastewater treatment and water treatment are included.

Examination

- TEN1 - Examination, 5.0 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 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.

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.