



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Vägkonstruktion och VA-system

Road Construction and Water Systems

VTVF95, 7,5 credits, G2 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED V

Date of Decision: 2023-03-21

General Information

Compulsory for: IBYV2

Language of instruction: The course will be given in Swedish

Aim

The course is intended to provide fundamental knowledge and technique in road construction and water and sewerage systems. On completion of the course the student should be familiar with the planning and implementation of different road projects and how various interested parties influence the process.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- Explain and use the basic concepts of road construction and sewerage systems
- Have a comprehensive understanding on the part of society's infrastructure that consists of water and sewer operation
- Have basic knowledge of planning, calculation and design of public sewerage facilities
- Be able to explain and use the concepts of force and torque
- Be able to use the relationship between load and deformation

Competences and skills

For a passing grade the student must

- Draw up a work plan for a standard asphalt surface and evaluate the materials' properties in terms of the established requirements according to prevailing specifications.

- Be able to find an area's need for water and sewerage systems
- Be able to design a smaller water and sewerage system

Judgement and approach

For a passing grade the student must

- Understand the importance of common points in systematic planning and implementation of available information for evaluating the reliability of the results obtained.

Contents

- Calculation of tension, compression and resistance in soil
- Measurement methods from terrace to the finished surface and quality assurance
- Selection of coating types. Criteria for selection of asphalt pavements
- Dimensioning of superstructures. material properties
- General overview of urban wastewater systems from the raw water intake to discharge into receiving waters
- Calculation of design flows, for drinking water and wastewater
- Handling of different kinds of "urban" water in a planning stage for an area
- Design of plant components in the urban sewerage system

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: Students are examined both individually and in a collaborative group. The group examination is based on written group tasks. Individual written exams, includes both theory and calculation.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Admission

Assumed prior knowledge: VTVA45 Road and Railway Engineering

The number of participants is limited to: No

The course overlaps following course/s: VTVF60, VVBF25

Reading list

- Sven Agardh & Ebrahim Parhamifar: Vägbyggnad. Liber, 2014, ISBN: 978-91-47-09346-5.
- Viveka Lidström: Kompendium i VA- System.

Contact and other information

Teacher: Ebrahim Parhamifar, Ebrahim.Parhamifar@tft.lth.se

Examiner: Joacim Lundberg, joacim.lundberg@tft.lth.se

Course homepage: <http://www.tft.lth.se/utbildning/grundutbildning/>

Further information: The course is given at Campus Helsingborg