LUND UNIVERSITY

LTH
FACULTY OF ENGINEERING

Course syllabus

Design av väg- och gaturummet
Road and Street Design

VTVF91, 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

On completion of the course the student should be familiar with the Association of Municipal Corporations and the National Road Administration guidelines TRAST and VGU, and is expected to be able to carry out network analysis, establish prerequisites for dimensioning and conduct analyses according to VGU for both urban and rural environments.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- Explain and use the fundamental concepts and dimensioning basics contained in VGU och TRAST.
- Describe the similarities and differences between VGU och TRAST.

Competences and skills
For a passing grade the student must

- Apply knowledge of VGU och TRAST in designing crossings.
- Use detailed design for elements in both longitudinal and lateral road directions.

Judgement and approach
For a passing grade the student must

- Understand the importance of common points in systematic planning and implementation of infrastructure in urban and rural areas, and analyse the available information for use in evaluating the reliability of the results obtained.

Contents

The contents generally consist of the details of VGU and TRAST. Special attention is paid to the following areas:

- Basic values, for example type of vehicle, acceleration, retardation.
- Dimensioning and general design prerequisites for our road network.
- Choice of cross sections in the urban areas, and what building blocks to include in the toolbox in order to create an attractive street environment.
- Fundamental geometric element construction.
- How to design crossings in order to achieve the greatest possible traffic safety, environmental adaptation and room for long vehicles.
- Pedestrian-cyclist design, overall network building and detailed design of elements in both horizontal and lateral road directions.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)
Assessment: Students are examined individually and in a collaborative group. The group exam is based on written tasks. Written individual examination at the end of term include theory and calculation. afu.

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.

Parts
Code: 0123. **Name:** Road and Street Design.
Credits: 7,5. **Grading scale:** TH.
Code: 0223. **Name:** Project Work.
Credits: 0. **Grading scale:** UG.

Admission

Assumed prior knowledge: VTVA45 Road and Railway Engineering
The number of participants is limited to: No
The course overlaps following course/s: VVBF30, VTVF90

Reading list

- Road construction 2013.

Contact and other information

Course coordinator: Joacim Lundberg, joacim.lundberg@tft.lth.se
Examinator: Joacim Lundberg, joacim.lundberg@tft.lth.se
Course homepage: http://www.tft.lth.se
Further information: Any travel expences related to AFU/mandatory field trips are paid for by the student.