



LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Trafikteknisk analys Traffic Engineering and Analysis

VTVN15, 7,5 credits, A (Second Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED V

Date of Decision: 2023-03-21

General Information

Elective for: V4-tv

Language of instruction: The course will be given in English on demand

Aim

The purpose of the course is to get applied and in depth knowledge within the field of traffic engineering regarding theories, measurement- and analysis methods and management of traffic related data.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- Have knowledge about measurement methods and calculation methods regarding accessibility, level of service, traffic noise and exhaust.
- Have knowledge about which variables influence the effects of traffic regarding accessibility and environment.
- Have knowledge about the most important measures to change/improve the level of service, accessibility, security, traffic noise and pollution.
- Have knowledge about traffic engineering measurement methods on an overall as well as a specific level.
- Have understanding of how road users behaviour changes with different types of measures.

Competences and skills

For a passing grade the student must

- Have the ability to define required data in order to estimate the effects of traffic in a traffic environment and to accomplish the data collection.
- Have the ability to use different software for calculating the effects of traffic and to critically judge the reliability.
- Be able to write reports based on relevant traffic theory.
- Discuss and orally present the results of the own project report.

Judgement and approach

For a passing grade the student must

- Have the ability to use relevant traffic data and traffic theories to draw conclusions about a location's qualities.
- Have a good understanding of the relationship between traffic planning and the effects.
- Have a system view regarding the conditions in the traffic system for different groups of road users and different means of transport.
- Have the ability to evaluate and relate to traffic investigations and the quality of collected data and the conclusions that can be drawn from them.

Contents

The course includes lectures, assignments, project work as well as literature studies. The lectures and the literature studies provide a good theoretical base and a broad knowledge and understanding of the fundamentals in traffic engineering and the practical exercises give applied knowledge. A project work gives the students further in depth knowledge in a specific field.

The project work is presented in a written report as well as an oral presentation and the teachers provide formative as well as summative feedback during the course.

Examination details

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

Assessment: For a passing grade: approved written exam, approved exercises, approved project work, approved oral presentation and presence at the obligatory parts are needed. The grade is awarded on the basis of the written exam, the project work report and the other assignments.

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

Admission requirements:

- VTTF01 Traffic Engineering

The number of participants is limited to: No

The course overlaps following course/s: VTTF05, VTTF10, VTT141

Reading list

- Van Wee, Bert. Annema, Jan Anne. Banister, David: The Transport System and

Transport Policy. Edward Elgar Publishing Ltd, 2012, ISBN: 9781781952047.

Contact and other information

Teacher: Fredrik Pettersson-Löfstedt, fredrik.pettersson-lofstedt@tft.lth.se

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