



*Course syllabus*

# Kollektivtrafik Public Transport

**VTTN10, 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:** IBYI3, IBYV3, V4-tv

**Language of instruction:** The course will be given in Swedish

## Aim

The course is for you who want to learn more about public transport as a whole. The objectives are knowledge of public transport and public transport planning and the different conditions and roles of public transport in society on a local as well as interregional level. The relation between public transport planning and planning for housing and infrastructure is emphasized. The important role of public transport in a sustainable society with the connections towards the transport policies is studied. The economics, both business and social, for public transport is included.

An important part of the course is the large software-based project assignment. The task is designed together with a city, and the objective is that you, together with the other participants, will be able to deliver valuable analyses and concrete proposals regarding improved public transport in the study district. The work requires a large effort, and because of the short course duration we are supported by consultants in order to manage the software tool (VISUM).

## Learning outcomes

*Knowledge and understanding*

For a passing grade the student must

- Have an in-depth knowledge about the role of public transport in a sustainable society
- Have knowledge about different system of public transport

- Have knowledge about the connection between social and infrastructural planning and public transport
- Have an in-depth knowledge about the needs and prerequisites of different traveller categories, regarding the traffic as well as the vehicles and the infrastructure.
- Have knowledge about the organisation and economics of public transport
- Have knowledge about the role of marketing and information in public transport

#### *Competences and skills*

For a passing grade the student must

- Be able to plan a bus route network in a smaller and mid-sized city
- Be able to use advanced software planning tools
- Be able develop own simple tools for analysis, planning and operation
- Be able to plan regional public transport (commuter train and buses) based on difference in conditions
- Be able to design terminals that are both effective and user-friendly
- Be able to calculate social and business economics of different public transport ideas

#### *Judgement and approach*

For a passing grade the student must

- Be able to perform analyses and create decisionmaking documents according to overarching transport policies

## Contents

Basic knowledge about the conditions of public transport:

- Concepts
- Factors of standard
- Organisation
- Demand models
- Pricing

Public transport planning on a local and interregional level:

- Route network planning in smaller/mid-sized cities
- Regional public transport
- Traffic planning and operation, terminals, economics

Public transport in larger cities, information and marketing of public transport, public transport in the future.

## Examination details

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

**Assessment:** The grade is awarded on the basis of the project assignments (groupwise) and an individual written exam.

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 or VTVA50 Transports and Society

**Assumed prior knowledge:** VTVN15 Traffic Engineering and Analysis OR VTTF10 Effects of Traffic: Accessibility, Level of service, Mobility, Safety.  
**The number of participants is limited to:** No

## Reading list

- Christer Hydén (red.): Trafiken i den hållbara staden. Studentlitteratur, 2008, ISBN: 978-91-44-05301-1.
- Norheim, Bård: Kollektivtrafik, Utmaningar, möjligheter och lösningar för tätorter. K2/Statens Vegvesen, Norge, 2017, ISBN: 978-91-7753-342-9.
- Effektsamband för vägtransportsystemet , Kollektivtrafik - Effektkatalog. Vägverket Publikation 2008:10. Trafikverket, 2008.
- Trafikverket & SKL: Kol-Trast, Planeringshandbok för en attraktiv och effektiv kollektivtrafik. 2012, ISBN: 978-91-7164-842-6.

## Contact and other information

**Examinator:** Andreas Persson, [andreas.persson@tft.lth.se](mailto:andreas.persson@tft.lth.se)

**Course coordinator:** Andreas Persson, [andreas.persson@tft.lth.se](mailto:andreas.persson@tft.lth.se)

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

**Further information:** Lectures, project work and study visits. The course is offered in Lund.