



AH2173 Public Transport 7.5 credits

Planering och analys av kollektivtrafiksystem

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

Course syllabus for AH2173 valid from Spring 2011

Grading scale

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

Education cycle

Second cycle

Main field of study

Built Environment

Specific prerequisites

A completed Bachelor's degree in Engineering, Science, Economics or Planning and documented proficiency in English B or equivalent.

Experience within public transport is recommended.

Language of instruction

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

Intended learning outcomes

Students should after the course know PT's role in society, its development potential and its shortcomings. They will know market conditions, supply characteristics and basic planning methods as well as how public transport industry can be organised. The knowledge should be a good start to work with public transport and planning and trigger an interest to do this. The student should be able to discuss PT's future prospects outgoing from today's knowledge and visions.

Course contents

Students should after the course

about the PT market:

- be able to discuss PT's role in society to fulfil various political goals
- describe PT's market; target groups, market shares, weak and strong markets
- describe different market analysis methods
- know the conception of valuation and explain how it relates to transport forecasts and social economic calculus
- give an account of the magnitude of passengers' valuations of for example travel time, waiting time, interchanges and comfort attributes.

about supply, planning and methods:

- be able to explain different steps in public transport planning
- describe characteristics of different PT systems including rail and bus systems, paratransit and new transportation systems
- by oneself make realistic assumptions about capacity measures and calculate on some line dimensioning
- describe good and not so good conditions for PT in geographical planning
- describe design and aim of various infrastructure elements for bus, light rail, metro, local train and elevated beam transport
- having planned (in a teamwork) a rough dimensioning of public transport network in a city or part of town and also self-critically explain and comment the work
- produce a written report that is similar to a consultant report
- know how to run basic functions in VISUM or a similar planning tool for public transport

about organisation, IT and environment:

- give examples of how PT is organised in different parts of the world and having an understanding of the Swedish model

- be able to sketch and explain design and aim of ITS for traffic control and passenger information
- describe PT's own environmental contribution and how it measures relative car transport

Course activities

This course consists of lectures with student participation, one or more exercises, some in the form of a project, study visits and examination in different ways and at more times during the course. Preparation tasks can be included. An extra task will be determined with those who wish to raise their marks.

Course literature

Course literature will be

- a binder with KTH texts and other articles/papers in English
- a PT book in English (probably White P., Public Transport: its planning, management and operation)
- a relevant report or book of your choice
- search on Internet

Examples of books:

- Bruun, E., Better Public Transit Systems, 2007
- Hensher, D., Bus transport: Economics, policy and planning, 2007
- Vuchic, V.R., Urban Transit. Operations, Plannings and Economics, 2005
- White, P., Public transport: Its planning, management and operation, 2002

Equipment

A laptop or other computer will allow you to download the program for the project.

Examination

- PRO1 - Project, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Examination, 3.5 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.

- PRO1 - Project, 4,0 cr, grades: A, B, C, D, E, FX, F
- TEN1 - Examination, 3,5 cr, grades: A, B, C, D, E, FX, F

Other requirements for final grade

Written examination (3,5 cr) and exercises and projects (4,0 cr)

The grades A-F will be given. They will be based on your achievements of knowledge and skill to explain to others what you have learned. They will also be based on your achievements:

- in the exercises
- the skill of presenting your results in written reports and in verbal presentations
- if you explain your choices in the planning process (better than “I think”).
- if you are active and committed to what you do

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.