



# AH2173 Planering och analys av kollektivtrafiksystem 7,5 hp

## Public Transport

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Kursplan för AH2173 gäller från och med HT07

**Betygsskala:**

**Utbildningsnivå:** Avancerad nivå

**Huvudområde:** Samhällsbyggnad

### Lärandemål

Students should after the course know PT's role in society, its development potential and its shortcomings. 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.

### Kursens huvudsakliga innehåll

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.

## Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

## Behörighet

Swedish students: Passed KTH courses AH1021 Stads- och trafikplanering, grundkurs and AH1022 Trafik- och vägteknik, grundkurs or having achieved the same knowledge by other means.

Master students: Passed foundation courses in first term in Master Program Transport Systems.

## Litteratur

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:

- Ceder, A., Public transit planning and operation – theory, modeling and practice, 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

## Examination

### Krav för slutbetyg

Written examination (4,5 hp) and exercises and projects (3hp)

Marks (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