



# AH2300 Transportsystems roll i samhället 7,5 hp

Transport and Society

## Fastställande

Kursplan för AH2300 gäller från och med HT07

## Betygsskala

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

## Utbildningsnivå

Avancerad nivå

## Huvudområden

## Särskild behörighet

A completed Bachelor's degree in engineering, science, economics, planning or a similar degree, which includes at least 60 cr in mathematics, physics, statistics and/or computer science, as defined in the admission requirements for the Master's programme in Transport Systems.

## Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

# Lärandemål

After the course you should be able to:

- Identify important components of the transport system; also, describe major trends in the technological development and use regarding various modes of both passenger and freight transport. Identify the driving forces behind increased mobility and urbanisation and discuss their implications with regards to the design of sustainable transport systems.
- Describe different planning approaches. State typical societal objectives for a sustainable transport system and account for available policy instruments. Account for different transport planning strategies in order to achieve the objectives; and also compare and appraise these strategies' applicability and desirability.
- Account for basic travel demand models, including the four-step model, and basic manipulations of the models. Explain the behavioural assumptions behind different models, identify their area of application, and discuss their advantages and disadvantages.
- Describe methods of detailed planning for specific modes of transport and specific target groups, including freight transport planning.
- Search for relevant literature to clarify some transport policy issue. Describe and discuss some transport issue orally and in writing, then argue for some way of solving the problem.

# Kursinnehåll

- Major components of the transport system and their characteristics. Historical development. Basic trends in the use of the transport system.
- The role of the transport system in society, its interaction with land use, and its significance with regards to economic development.
- The transport planning system. Transport policy objectives for a sustainable transport system. Available policy instruments. Transport planning strategies to achieve the objectives.
- Principles of transport analysis and travel demand forecasting. Principles of economic appraisal of transport projects.
- Methods of detailed planning for specific modes of transport and specific groups. Freight transport planning.

The content of the course is presented and exercised in tutorials. Further training is provided in laboratory exercises. The student will be assigned a project to describe an urgent transport policy issue, relate it to situations in other places and suggest ways to solve the problem. The student will write a report on the project, which then will be presented and discussed in a seminar.

# Kurslitteratur

Meyer, M.D. and Miller, E.J. (2001) *Urban Transportation Planning: A Decision-Oriented Approach* Chapter 1 – 6, McGraw-Hill, Boston, Second edition. In addition, a selection of research articles.

# Examination

- PRO1 - Projekt, 2,5 hp, betygsskala: P, F
- TEN1 - Tentamen, 5,0 hp, betygsskala: A, B, C, D, E, FX, F

Examinator beslutar, baserat på rekommendation från KTH:s handläggare av stöd till studenter med funktionsnedsättning, om eventuell anpassad examination för studenter med dokumenterad, varaktig funktionsnedsättning.

Examinator får medge annan examinationsform vid omexamination av enstaka studenter.

När kurs inte längre ges har student möjlighet att examineras under ytterligare två läsår.

## Övriga krav för slutbetyg

A mandatory written examination equivalent to 5 cr with grading scale A-F and a mandatory project assignment equivalent to 2.5 cr with grading scale P/F.

The course grade will be determined by the grade of the written examination.

## Etiskt förhållningssätt

- Vid grupparbete har alla i gruppen ansvar för gruppens arbete.
- Vid examination ska varje student ärligt redovisa hjälp som erhållits och källor som används.
- Vid muntlig examination ska varje student kunna redogöra för hela uppgiften och hela lösningen.