AH2300 Transport and Society 7.5 credits

Transportsystemets roll i samhället

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for AH2300 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

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.

Language of instruction

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

Intended learning outcomes

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.

Course contents

- 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.

Course literature

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 - Project, 2.5 credits, grading scale: P, F
- TEN1 - Examination, 5.0 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.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

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.

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.