



# AH2302 Transport Modelling

## 7.5 credits

### Trafikprognoser

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 AH2302 valid from Spring 2010

### 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 including at least 60 credits in Mathematics, Physics, Statistics and/or Computer Science (the course Transport Modelling (AH2302) is recommended) **and**
- documented proficiency in English B or equiv (TOEFL, IELTS e g).

# 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:

- Understand the theories behind transport demand and supply models
- Apply these theories in a self-built simple forecasting system
- Understand how hypothetical data can be used to enhance transport modelling
- Understand how traffic matrices can be updated by the use of traffic counts and other data
- Write a report of a simple transport planning study.

## Course contents

- Discrete choice theory, the multinomial and the nested logit model
- Stated Preference techniques
- Network assignment theory for car and public transport
- Car ownership modelling
- Matrix balancing
- Development and application of a simple forecasting system (project task)

The content of the course is presented in lectures and exercised in tutorials. The project task is undertaken as laboratory exercises, where the student will build a simple forecasting system, apply it to a transport policy issue and produce an individually written report of the work.

## Course literature

Ortuzar and Willumsen, Modelling Transport, Third edition, John Wiley & Sons, Ltd. UK. In addition, a selection of research articles.

## Examination

- PRO1 - Project, 3.5 credits, grading scale: P, F
- TEN1 - Examination, 4.0 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.

## Other requirements for final grade

TEN; 4,5 cr ) A-F

(PROJ; 3 cr ) 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.