FAG3185 Transport Modelling 3.0 credits

Transportmodellering

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

Establishment

The course syllabus is valid from Autumn 2023 according to the Head of school decision: A-2023-1462,3.2.2Decision date: 2023-08-23

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Admission to relevant doctoral program: Approved courses of at least 60 ECT in the subject areas of transportation systems, civil engineering, urban planning, economics, computer science, physics, applied mathematics, or other subjects deemed directly relevant. Proficiency in English equivalent to English 6.

Language of instruction

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

Intended learning outcomes

Describe theoretical foundation for the four step model.

Use the four step model for a simple policy analysis, describe its data requirement and output. Discuss its advantages and limitations.

Describe and apply network equilibrium and assignment for car and public transportation.

Apply a four step model for analysisng integrated transport and land-use policies and evaluate them with respect to ecological, economical and social sustainability.

Critically, creatively and independently formulate relevant complex societal challenges, including economical, ecological and social sustainability.

Course contents

Main content:

1. Theory for accessibility analysis.

2. The theoretical foundation of four step models and its variants.

3. Assignment for car and public transport.

4. Integrated land-use and transport interaction.

5. Applying four step models for policy evaluation targeting changes in transport and land use systems.

Examination

- SEM1 - Seminar, 2.0 credits, grading scale: P, F
- TEN1 - Written exam, 1.0 credits, grading scale: P, 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

Assignments and active participation of seminars with passing degree are both mandatory.

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.