

Transport system analysis - demand and planning

Subject area: Other subject area

University:	DTU
Level:	MA1, MA2
Teaching mode:	hybrid: some students participate online, other students attend real-life
Instructor(s):	Stefan E. Mabit, Jeppe Rich

Short description

This course introduces the field of transport planning and demand modelling as well as experience in using various modelling approaches to analyse transport systems. In addition, the course focuses on giving the students an understanding of the role of modelling and sustainability in the planning and the evaluation of transport and infrastructure investments. Finally, the course gives students tools to analyse transport data and support decision making on mobility.

Full description

<https://kurser.dtu.dk/course/42178>

Learning outcomes

A student who has met the objectives of the course will be able to:

- Summarise the role of demand analysis and modelling in the planning of transport systems
- Explain the principles behind the four-stage model and the basic stages
- Discuss and model generation of travel
- Discuss and model distribution of travel
- Model travel mode choice using logit and nested logit models
- Apply a demand model for transport analysis
- Apply cost-benefit analysis to simple transport cases
- Validate a model and use it for forecasting
- Produce a written demand analysis, that describes data, modelling, and results
- Use software for data management, data analysis, and model application
- Discuss how sustainability can be included in the planning of mobility and transport

General information

Contact hours per week:	4
Total workload:	140 (in student hours for the whole course)
ECTS credits:	5
Language:	English
Course start date:	29 August 2022
Course end date:	02 December 2022
Add. info about start date:	We start lectures on Wednesday 31/8
Weekly teaching day/time:	Lectures and exercises are Wednesdays 13-17
Time zone:	CET (Denmark, Germany, France, Netherlands, Switzerland, Czech Republic)

Further information:

Prerequisites:	Introduction to statistics, see description at https://kurser.dtu.dk/course/2021-2022/42178
Activities and methods:	Lectures, Group work, Self-study, Exercises
Presence on campus:	

Final examination

Form:	oral
Date:	19 December 2022
Location/format:	online
Re-sit possibility:	yes
Transcript available:	end of semester
Add. info/requirements:	

Registration

To register for this course, follow the registration requirements of your **home university** as specified here: www.euroteq.eu/courses-registration.

Administration

Number of places:	20
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Minimum participants:

Internal course code: 42178

Contact: Stefan E. Mabit, smab@dtu.dk

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