Course syllabus for PhD course

Course part of the research school: People, Society and Sustainability

Department of Economics/Department of Urban and Rural Development

Discrete Choice Experiments in Agricultural, Food, and Environmental Economics

Diskreta valexperiment inom jordbruks-, livsmedels- och miljöekonomi

Higher education credits

5 HEC

Subject

Other social science

Course type

Methods course

Language

English

Prerequisites

Accepted as a PhD student in social science/business studies/economics (interested students from other subject areas may join upon agreement)

Course period

October 12, 2026 – November 30, 2026

Objective

Upon completion of this course, the students will be able to:

- Describe theory and applications of discrete choice experiments in Agricultural, Food, and Environmental Economics
- Discuss the limitations of discrete choice experiments and when and when not a discrete choice experiment can be applied
- Develop and design discrete choice experiments
- Analyze data from discrete choice experiments with and without accounting for preference heterogeneity
- Discuss recent methodological advances and limitations of discrete choice experiments

Content

- Theoretical models explaining discrete choices in a utility maximization framework
- Econometric models to estimate parameters of utility functions with discrete dependent variables
- Maximum Likelihood Estimation
- Principles of experimental design for discrete choice experiments
- Advanced discrete choice modeling and data analysis and recent methodological advances

Examination

- Students present one recent research paper in the field (assigned by the course leader not later than two weeks before the start of the course); they may also replicate at least part of the analysis of this paper. The exact requirements for this replication will be discussed individually with the teachers and examiner.
- Students submit an assignment on experimental design (by November 30, 2026 the latest)
- Students submit an assignment on data analysis (by November 30, 2026 the latest)
- Students actively take part in the course and contribute to group discussions and seminars

Contact for application and further information

On course content: Julian Sagebiel, julian.sagebiel@idiv.de and Christoph Schulze, Christoph.schulze@zalf.de; on organizational issues: Jens Rommel, jens.rommel@slu.se

Literature

- Train, K. E. (2009). Discrete choice methods with simulation. Cambridge University Press (Chapters 1-3).

- Mariel, P., Hoyos, D., Meyerhoff, J., Czajkowski, M., Dekker, T., Glenk, K., ... & Thiene, M. (2021). Environmental valuation with discrete choice experiments: Guidance on design, implementation and data analysis. Springer Nature.

- Additional literature will be provided before and during the course.

Additional Information

This course is part of the research school People, Society and Sustainability, a joined research school between the Department of Economics and the Department of Urban and Rural Development.

Preparation

1. Read chapters 1-3 in Train (2009)
2. Watch the lecture videos (link will be provided at least three weeks before the on-campus meetings):
    - Theoretical background
    - Econometric model
    - Principles of experimental design
    - Maximum likelihood estimation
3. Work on the exercises assigned to you not later than two weeks before the course. The exercises are directly related to the videos.
4. Get familiar with R and do the data camp courses assigned to you (three weeks before the on-campus meetings)

Course schedule

November 2, 2026

09 – 12	Flipped classroom/discussion: Discuss contents from videos and work with practical examples and exercises (partly in R)
13 – 16	Short student presentations on assigned papers and time to work on assignment

November 3, 2026

09 – 12	Exercises on maximum likelihood estimation (mostly in R)
13 – 16	Time to work on replication and Q&A

November 4, 2026

09 – 12	Estimating discrete choice models with Apollo in R
13 – 16	Exercises on statistical analysis (on student's own project)

November 5, 2026

09 – 12	Estimating advanced discrete choice models with Apollo in R
13 – 16	Exercises on statistical analysis (on student's own project)

November 6, 2026

09 – 16	Seminar: Students present their projects with a clear reference to a methodological debate