

Methods in Transportation Econometrics and Statistics (Master)

Curriculum

WS 2020/21

Subject	# Lectures
General: definition and objectives of econometrics; the role of statistics; mathematical models and their categories	1
Actual use case: data and models of the Covid-19 pandemic	1
Linear models: matrix notation, model specification, parameter estimation, confidence intervals and tests	1
<i>Which parameters fit best?</i> the maximum-likelihood-method	1
<i>Car or public transport?</i> general aspects of discrete-choice theory, its difference to linear models, and their relevance for traffic econometrics	1
<i>Why the interviewer wants to know my age?</i> principles of surveys as input for discrete-choice models: variable categories, revealed preference/choice, stated preference/choice, choice-based conjoint analysis, design of the questionnaire.	1
<i>How to model a homo oeconomicus not knowing everything?</i> binomial and multinomial logit and probit models	2
<i>How to estimate the value of time?</i> parameter estimation of logit models	1
<i>How to keep it as simple as possible but not simpler?</i> the likelihood-ratio test	
<i>How to proceed if my ignorance is correlated?</i> GEV models, particularly nested-logit models	1
<i>How many cars need to be produced so I can buy one?</i> introduction to econometric input-output models	1
<i>Is Greta right in promoting electrical vehicles?</i> introduction to life-cycle assessment (German: "Ökobilanz")	1
Spare time and preparation for the examination	0-1