Module number	Module name	Module coordinator
3013294	Mobility Research and Transportation Modeling	Univ.Prof. Dr.-Ing. Tobias Kuhnimhof kuhnimhof@isb.rwth-aachen.de
Learning goals	Students understand relationships between spatial configurations (e.g. urban densities) and transport, are familiar with the basic concepts of travel demand modelling and understand the concept of choice modelling in the context of transport. Students are able to apply spatial analysis methods in QGIS, e.g. weighted densities, analysis of spatial autocorrelation, computing of accessibilities.	
Content	The course introduces fundamentals of spatial and behavioural data analysis for mobility research. Topics include: Fundamental concepts and terminology of mobility, travel behaviour research and spatial analysis; density measures and their impact on mobility; spatial autocorrelation; accessibility; modelling of travel demand and choices in the context of mobility behaviour.	
Teaching and learning methods	2 SWS lectures, 2 SWS exercise per week, and self-study.	
Prerequisites	None	
(recommended) Requirements	-	
Language	English	
Applicability	Compulsory elective module in the Master's program Transport Engineering and Mobility.	
Requirements for earning credit points	Graded written exam. There are no prerequisites for participation in the written exam.	
Credit points and grades	6 ECTS Credits	
Module frequency	The module is offered every academic year in summer semester.	
Workload	The total workload is 180 hours.	
Module duration	The module lasts one semester.	