

Sustainable Mobilities – SUM (M.Sc.)

This document provides an overview of the lectures, seminars and colloquia within the M.Sc. program on Sustainable Mobilities at Nürtingen-Geislingen University. This program is a social science based research program which integrates an interdisciplinary perspective to study and form solutions for the transition to sustainable mobility. The education is research oriented and will therefore focus on training students to apply various methods and methodologies of social-science based mobilities research in various practice fields. Contact and engagement with practitioners from business, administration, planning and the non-profit sector, among others, will play a central role in the teaching program. Further, this study program aims to teach students through problem-based education, which will empower and enable students to conduct individual, applied research. With a M.Sc. in Sustainable Mobilities, students can pursue jobs and careers in in the public and private sector in research & development, communication, advocacy and planning. In addition, this program provides students with the research tools for pursuing a doctoral project.

Semester 1

Sustainable Mobilities – Theories, concepts, approaches

This module provides students with an overview of the main theories, concepts and scientific approaches in the field of sustainable mobilities. Mobilities research is a growing field of expertise which is routed in the understanding that mobility is not a technical problem of societies but a social phenomenon which is linked to almost every part of human life. This module aims for a deeper understanding of why mobility is a general principle in modern societies and why the current level and organization of mobility and transport is unsustainable and therefore subject to transition and change. Understanding mobility as a social and cultural phenomenon helps to generate better and more sustainable products, services and solutions for modern mobile societies and economies.

Applied philosophy of science (research methodologies)

This module introduces students to the main principles and guidelines of scientific practice, addressing basic questions such as ‘What is science?’ and ‘What qualifies a proposition as scientific?’. Lectures will discuss different approaches from mobilities research and illustrate these with examples from applied sciences. Students will be able to formulate and operationalize questions for research, which will be crucial for researching and applying scientific approaches in the following semesters of study.

Research methods

This module prepares students to apply key knowledge and expertise in how to conduct research. It introduces them to different research methods in social science based mobilities research. Students learn the main aspects and strengths of different research methods and approaches. Further, they will develop and deepen their knowledge and skills in at least one specific method, which will be applied in small-scale research in problem-based group work.

Semester 1 (cont.)

Applied mobilities

This module is organized around a project-oriented and problem-based research seminar. The main goal here is to support students in their first steps towards their own research and solution-oriented studies. In field trips and excursions, students will approach practitioners in industry, administration and the non-profit sector. Key topics to be investigated include innovative best-practice examples of new mobile technologies, applications, new mobility schemes and infrastructures as well as ways of organizing everyday private and professional mobility.

Semester 2

Basic knowledge for the mobility transition

This module provides basic knowledge for the transition towards sustainable mobilities. It introduces students to inter- and transdisciplinary research related to transitions. Not only social sciences, but also engineering and economic literature will be used to frame case studies and discussions of current best practice. Students will be able to assess the potentials, obstacles and risks of redirecting the mobility sector towards sustainability.

Networked urban mobilities

Various kinds of network, from socio-spatial, technological, infrastructural and digital, play an ever increasingly important role in the structuring of all forms of mobility in both private and professional life. This module trains students to assess the different characteristics of these networks as well as how they structure and support people's lives and activities. Students will work with the most important approaches to network analysis and will be introduced to seminal empirical studies for this topic.

Mobile culture and communication

Modern societies have developed mobile cultures of interaction, communication and community. This module explores the cultural aspects of mobility practice, including cases of how different forms of mobilities are integrated in various ways in everyday life. Students will be able to deepen their understanding of mobility cultures through individual research as well as excursions.

Governing Mobilities in Economy and Society I: Concepts and case studies

Politics and the involvement of a variety of stakeholders in policymaking play an essential role in modern societies. Students will be introduced to key concepts in governance and policy networks and will analyze the power dimensions and impacts of various forms of governance on potential transitions to sustainable mobility. Case studies, field trips, guest lectures and the experience of lecturers and other guest speakers in these processes will allow students to learn about on-the-ground politics of sustainable mobility.

Semester 3

First elective course

In this module students can choose between different courses such as scientific journalism, corporate communication or knowledge transfer & consulting.

Governing Mobilities in Economy and Society II: Projects for the mobility transition

This module continues the work started in the previous semester on governance. It will broaden and deepen students' knowledge base in innovative projects and initiatives towards sustainable mobility. While the previous course focused on local, regional and national case studies this course will study transnational, supranational and global networks into account.

Problem based research project

The overarching goal of the master program is to develop students' capacities to conduct high-quality applied research on fostering the transition to sustainable mobility. In this module students will be trained to develop consistent research designs to conduct problem-based research that is systematically and methodologically reliable. They will improve their competency in not only carrying out research, but also in critically reflecting on their own and others' roles in research and practice.

Designing Sustainable Mobilities: Infrastructures, technologies, and social innovations

This module focuses on sustainable product management and design, telecommunications and the city and mobilities design.

Semester 4

Second elective course

In this module students can choose one course from different topics, including new funding models for mobility infrastructures and services; corporate social responsibility and sustainability; methods for measuring and assessing sustainability; the social city and cooperative models for mobility provision; and mobility, ethics and responsibilities.

Writing and submission of Master's Thesis

As a final step of the master's program students develop their individual research project and write their master thesis. Ideally the work in the problem-based research project in the third semester can be deepened and broadened here. The supervisors support the students in finding strong research questions and designing a state-of-the-art research-oriented master project. The research can be elaborated in collaboration with practice partners and in close communication between scientific supervisors and those from practice.

Master colloquium

Concomitant to the process of writing the Master's Thesis, the master colloquium is the place to discuss the progress of the ongoing work with experienced supervisors and researchers. The organization of the colloquium is based on the concept of 'critical friends' as developed in

Scandinavia. Problems, obstacles and the feeling of imperfect information etc. belong to the research process and are important for the successful development of the master thesis. In a trustful and confidential atmosphere these issues can be discussed in the colloquium for the benefit of all participants.