

# Master's Degree Programme MOBILITY TECHNOLOGIES

Study track of the Master's degree programme in Energy and Transport Management

Climate change, traffic gridlocks and environmental pollution are confronting urban areas with major challenges for the future. To ensure that our regions remain liveable for generations to come, we need to develop integrated solutions to manage modern mobility. Be part of these solutions and become a force of change in the field of mobility management.

## Sustainable mobility technologies.

Mobility is a major contributor to greenhouse gas emissions, not only in Austria but around the world. Play your part in shaping tomorrow's sustainable and climate-friendly mobility by addressing innovative mobility and transport solutions in both urban spaces and rural areas. This specialisation focuses on international mobility trends, modern transportation technologies, smart city and regional planning, as well as traffic simulations and intersection design.

As mobility issues are connected to societal developments, you will also immerse yourself in topics of mobility behaviour and ethical aspects of new mobility technologies. In our Mobility Lab you will work on practical traffic simulations and use our of state-of-the-art equipment and driving simulators to work on planning projects.

## Environmental management. Climate change and sustainability.

This obligatory module allows you to explore the key framework conditions and influencing factors for the future. You will immerse yourself into climate change and its effects on the planet. You will gain deep insights into the areas of environmental reporting, big data simulations, but also in the field of management with applied case studies in strategic and sustainability management.


## FACTS

 Master of Science in Engineering (MSc)

 Work-friendly

 4 semesters / 120 ECTS

 FH JOANNEUM Kapfenberg

 Language of instruction: English / German

- 25 student placements each year
- Head of Degree Programme: **DI Dr. Uwe Trattng**
- Tuition fees: no fees for students from the EU, EEA and Switzerland
- All information about dates, requirements, application and admission is available online.
- [www.fh-joanneum.at/met](http://www.fh-joanneum.at/met)

## Electives. Highly relevant and up-to-date.

Our broad range of electives enables you to enhance your specialist knowledge in different, complimentary fields. You can choose courses amounting to a minimum of 34 ECTS credits in the fields of public transport operation, autonomous driving technologies, environmental analytics, innovation and change management or traffic safety.

## Organisation

The course is organized in a work-friendly format allowing a part-time occupation: there are two weekdays of on-campus lectures, one evening/afternoon of online lectures and two blocked on-campus weeks during the semester.

## Career prospects

The future belongs to experts in the fields of energy, mobility and environmental management, who are able to tackle the consequences of climate change. Graduates of this Master's degree programme are highly skilled individuals with a strong focus on

project planning and management and work in a variety of disciplines. Classical green jobs include traffic planning, mobility consultancy, project management, e-mobility or logistics management.

*"My vision as a teenager was to work in a job where I could contribute something positive to society. My interest in traffic planning and mobility research developed in connection with environmental protection during my bachelor's education. My career as a traffic planner at Verkehrplus was only made possible through my master studies Energy and Transport Management."*

Jürgen Sorger, BSc MSc  
Traffic planner and mobility researcher at Verkehrplus

CURRICULUM: 120 ECTS (30 ECTS per semester)

1st semester	2nd semester	3rd semester	4th semester
Climate Change & Dynamics 4 ECTS	Advanced Harvard Case Studies in Sustainable Management 5 ECTS	Integrated Management Systems & Sustainability Reporting 4 ECTS	Seminar Master's Thesis 2 ECTS
Digital Modelling & Big Data Simulation 4 ECTS	Mobility Laboratory I – Traffic Simulations & Telematics 5 ECTS	Mobility Laboratory II – Traffic Simulations & Telematics 5 ECTS	Master's Thesis & Master's Exam 24 ECTS
Environmental Process Engineering 4 ECTS	International Traffic Management & Transport Logistics 4 ECTS	Psychological & Social Aspects on Mobility Behaviour 3 ECTS	
Strategic Management – Cases in International Business (Success & Pitfall Studies) 4 ECTS	Smart Urban & Regional Planning 4 ECTS	Environmental Chemistry & Emission Control 4 ECTS	
Advanced Traffic Technologies 5 ECTS		International Aspects of Energy Law 3 ECTS	
Trends in International & Urban Mobility 5 ECTS		International Aspects of Traffic Law 3 ECTS	
	Applied Environmental & Analytical Laboratory 4 ECTS	Environmental System Aspects & Natural Resource Planning 4 ECTS	
Mobility Infrastructure 4 ECTS	Angewandtes Umwelt- und Anlagenrecht 4 ECTS	International Energy Markets & Trading 4 ECTS	Crisis Communication, Coaching-Skills & Organizational Development 4 ECTS
	Automation & Control – Energy & Transport 4 ECTS	Nachhaltiges Gebäudemanagement 4 ECTS	
	Big Data Security & Safety Aspects 4 ECTS	Public Transport Operation 3 ECTS	Innovation & Change Management 4 ECTS
	International Project Development & Management 4 ECTS	Traffic Safety Aspects (Infrastruktur & Vehicle) 2 ECTS	International Human Resource Management 4 ECTS
		Autonomous Driving Technologies & Impacts 3 ECTS	
Obligatory for all Students	Specialisation in Mobility Technologies	Elective Subjects (at least 34 ECTS)	