

Master's Degree Programme ENERGY AND TRANSPORT MANAGEMENT

Climate change and resource scarcity are confronting regions and cities with major challenges for the future. If we are to ensure that they remain liveable for generations to come, we need to develop new strategies in the fields of sustainable energy supply, innovative mobility and environmentally-friendly urbanisation. Join us and help shape these solutions.

Environmental management. Climate change and sustainability.

This module is obligatory for all students and allows you to explore the key framework conditions and influencing factors for the future. You will consider climate change and its effects, aspects of environmental reporting, big data simulations and case studies in the fields of strategic management and sustainability.

Sustainable energy technologies.

In this **specialisation** we examine a broad portfolio of sustainable energy technologies: from renewable energy generation to industrial energy efficiency. In our Energy Analytics Lab you will take a practical approach to issues of innovative energy generation, distribution and storage, with a particular focus on smart technologies and prosumerism.


Innovative mobility technologies.


Play your part in shaping tomorrow's mobility by addressing innovative mobility and transport solutions in urban spaces. This **specialisation** focuses on international trends in mobility, modern transport technologies, smart city and regional planning, as well as the psychological impacts of mobility. Traffic simulations and planning projects are part of the curriculum in our Mobility Lab.

Electives. Highly topical and relevant.

Our broad range of electives gives you every opportunity to enhance your specialist knowledge in different fields. You can choose courses amounting to a minimum of 34 ECTS credits in fields including sustainable building management, autonomous vehicle technologies, environmental analytics, innovation and change management, or international energy markets.


FACTS

 Master of Science in Engineering (MSc)

 Work-friendly

 4 semesters / 120 ECTS

 FH JOANNEUM Kapfenberg

 Language of instruction:
English / German

- 25 places per 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

Did you know ...

... that we offer graduates of Bachelor's degrees in other fields an introductory industrial engineering and management module during the first semester in order to prepare them for the Master's degree programme.



Organisation

The course is organised in a work-friendly format, which means lectures are held on three week days: This enables you to work part-time whilst studying.

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 management and work in a variety of industries and fields of expertise. Classical jobs include sustainability management, mobility

project management, traffic planning or energy efficiency management.

“At UN Environment, I develop programmes aiming at a holistic and long-term approach to technology. I am deeply motivated to contribute to the sustainable development of our global society and support the transition to a low-carbon economy. In my studies I really enjoyed creative project assignments to develop critical thinking skills and gain practical experience.”

Rashmi Jawahar Ganesh, BSc MSc, Graduate Programme Development Consultant at UNEP

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		Energy Analytics Laboratory I 5 ECTS	Mobility Laboratory I - Traffic Simulations & Telematics 5 ECTS	Energy Analytics Laboratory II 5 ECTS	Mobility Laboratory II - Traffic Simulations & Telematics 5 ECTS	Master's Thesis & Master's Exam 24 ECTS
Environmental Process Engineering 4 ECTS						
Strategic Management - Cases in International Business (Success & Pitfall Studies) 4 ECTS		Applied Energy Grid Planning & Maintenance 4 ECTS		International Traffic Management & Transport Logistics 4 ECTS		
Renewable Energy Generation 5 ECTS	Advanced Traffic Technologies 5 ECTS	Industrial Energy Efficiency 4 ECTS	Smart Urban & Regional Planning 4 ECTS	Environmental Chemistry & Emission Control 4 ECTS		
Energy Networks & Hybrid Technologies 5 ECTS		Trends in International & Urban Mobility 5 ECTS		International Aspects of Energy Law 3 ECTS		Crisis Communication, Coaching-Skills & Organizational Development 4 ECTS
Storage & Power-to-X Technologies 4 ECTS		Mobility Infrastructure 4 ECTS		International Aspects of Traffic Law 3 ECTS		
				Environmental System Aspects & Natural Resource Planning 4 ECTS		
				International Energy Markets & Trading 4 ECTS		Innovation & Change Management 4 ECTS
				Applied Environmental & Analytical Laboratory 4 ECTS		
				Nachhaltiges Gebäudemanagement 4 ECTS		International Human Resource Management 4 ECTS
				Angewandtes Umwelt- und Anlagenrecht 4 ECTS		
				Automation & Control - Energy & Transport 4 ECTS		International Project Development & Management 4 ECTS
				Public Transport Operation 3 ECTS		
				Traffic Safety Aspects (Infrastructure & Vehicle) 2 ECTS		Elective Subjects (at least 34 ECTS)
				Big Data Security & Safety Aspects 4 ECTS		
				Autonomous Driving Technologies & Impacts 3 ECTS		
				Obligatory for all Students		
				Specialisation in Energy Technologies		
				Specialisation in Mobility Technologies		