

INTERNATIONAL MASTER DEGREE PROGRAM

ELECTRICAL ENERGY & MOBILITY SYSTEMS

SUBJECT TO APPROVAL BY THE AUSTRIAN FH-COUNCIL

Electrical Energy & Mobility Systems is a new Master degree program in engineering focusing on research, design and implementation of modern electrical energy, e-mobility, battery technology and electrical drive systems.

Electrical Energy & Mobility Systems graduates are able to understand, develop and modify complex technical systems in the fields of electric power train development, drive control, electrical machines, mobile power electronics, battery technology, power electronics, alternative energy systems and mobility concepts.

COURSE INFORMATION

Students acquire detailed knowledge of electrical power & drive systems, power electronics, mobile energy storage, energy systems, automotive controls, mobility systems, and automotive logistics. These qualifications allow graduates to take up leading positions in research and development in a variety of fields.

SPECIALIST AREAS

The first semester, well combined with the Master degree program Biomimetics in Energy Systems, is followed by two semesters of specialisation on above mentioned topics. In the fourth semester the Master thesis will be written in conjunction with a work placement. On completing the final examination after four semesters, students are awarded the Master of Science in Engineering, MSc.

Further Information:

Electrical Energy & Mobility Systems -
Master Degree Program

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Module	Lectures	TERM				ECTS CREDITS
		1.	2.	3.	4.	
		Semester hours				
Basics	Electrochemistry	1,5				2,5
	Electrical Engineering	1,5				2,0
	Mechanical Engineering	1,5				2,0
Physics	Mechanical Dynamics	1,5				2,0
	Thermodynamics	1,5				2,0
	Fluid Dynamics	1,5				2,5
Mathematics and Statistics	Applied Analysis	2,0				3,0
	Mathematical Models	1,0				2,0
	Industrial Data Processing	1,5				1,5
Control Systems Design 1	Control Systems 1	2,5				3,5
	Control Systems Lab 1	2,0				3,0
Mobile Energy Storage	Battery Technologies		1,5			2,0
	Storage Systems		1,5			2,0
	Battery Lab		1,5			3,0
Energy Systems	Non-Renewable Energy Syst.		1,5			2,0
	Renewable Energy Systems		1,5			2,0
	Alternative Concepts		2,0			3,0
Advanced Electrical Engineering	Advanced Electrical Eng. EE		3,0			4,0
	Power Electronic Systems		2,0			3,0
Power & Drives	Power Train & Traction		2,5			4,0
	Electrical Machines		2,0			3,0
Foreign Languages	Foreign Languages *	4,0	2,0			6,0
Automotive Control	Motion Control			1,0		2,0
	El. Drive and Drive Control			2,0		2,0
	Power Train Simulation			2,0		3,5
Energy Systems 2	Electrical Grids & Distribution			2,0		3,0
	Measurement & Monitoring			1,5		2,5
	Energy Automation			1,5		2,0
Automotive Logistics	Geoinformation Systems			1,0		1,5
	Mobile Information Systems			2,5		3,5
	Automotive Safety			1,5		2,5
Mobility Systems	GUI & Usability			1,5		2,0
	Mobility Concepts			2,0		3,0
	Mobility Concepts Lab			1,5		2,5
Master Thesis	Master Thesis					28,0
	Master Thesis - Seminar				2,0	2,0

*to be chosen from elective course (spanish, italian...). Non-german speaking students can choose „German as a foreign language“.

