



Automotive Mechatronics and Management

Master's Degree Programme, Full-time

Innovations in future vehicle generations

Rapid developments in vehicle engineering have led to a merging of the fields of Mechanics, Electronics and Informatics. One cause of this is that vehicles meet customer demands by the optimal interplay of various mechanical and electronic components. Many functions in the areas of comfort, safety and efficiency are only made possible by mechatronic systems. In this context specific expertise in the mechatronic disciplines, combined with social- and business economics competences, will be central requirements of future employees and managers in the motor vehicle industry. Precisely these requirements are the focus of the new Master's degree programme Automotive Mechatronics and Management.

Career Profile

This international Master's degree programme meets the demand of the motor vehicle industry for engineers who can combine complex individual components into innovative mechatronic systems with improved or completely new functions and in doing so think and act under consideration of qualitative and cost aspects. The fields of activity of graduates are therefore in the execution and management of mechatronic development projects, in the design and validation of mechatronic vehicle systems or as quality engineers in the field of quality assurance in the product development process.

Focus of Studies

- » Vehicle Engineering: vehicle components, drive concepts, road performance
- » Vehicle Mechatronics: sensors, actuators, signal preparation, system architecture
- » Vehicle Systems: regulation-, safety- and support systems
- » Vehicle Informatics: communication structure, Car2X communication
- » Quality Management: quality planning, quality assurance, quality management systems
- » Business Economics & Management: innovation, market-oriented management, IPR: Intellectual Property Right, management, controlling, production economics
- » Social Competence: intercultural-, moderation-, leadership competence

Practice and Research

The practice-orientation of this degree programme is guaranteed by close cooperation with companies in the automotive industry. Further, many of the professors and lecturers work in the automotive industry or closely with it. Within the framework of the practical and Master's projects students work on current projects of the industry.

Essential Information

Degree:

Master of Science in Engineering (MSc)

Duration: 4 Semester (120 ECTS)

Annual Intake: 15

Admission Requirements:

Completed Bachelor's degree (180 ECTS or equivalent) in Electromechanical Engineering, Mechanical Engineering or related subject areas, good English language skills

Application:

Online or in writing. Deadlines: Non-EU Citizens May 30th; EU-Citizens June 30th
www.fh-ooe.at/application

Admission Procedure:

Personal interview (e.g. Skype)

Language of tuition:

100% English

Costs:

Currently no tuition fees

www.fh-ooe.at/amm

Curriculum

Course Name	ECTS per Semester			
	1	2	3	4
Automotive Technology & Mechatronics				
Individual Qualification	3	3		
Vehicle Components & Driving Dynamics	4			
Sensors and Actuators	2			
Model based Engineering	4		4	
New Product Development	3			
Automotive IT Systems	3	3	1	
Drive Systems and E-Mobility		4		
Drive Train Control Systems		4		
Functional Safety		1		
Driving Assistance Systems			3	
Virtual and Augmented Reality			2	
Mechatronic Systems Validation			1	
Elective Course	2	2	2	
Management				
Automotive Quality Management	1	2	2	
Innovation Management	3			
Production Management	3			
Market Oriented Management		2		
Controlling		3		
Academic working		1		
Business Law & Intellectual Property Rights			2	
Entrepreneurship & Business Creation			2	
Business Simulation				1
Social Skills				
Intercultural Communication	2			
Negotiation		2		
Leadership			2	
Projects & Master's Thesis				
Company Project		3		
R&D Project			9	
Master Thesis				29
Total	30	30	30	30

Contact

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International

This programme is taught in English and the target group is a mixture of Austrian and international students. It is therefore inherently international. For all those who wish to gain further international experience, however, there is the possibility to spend the fourth semester at one of our 85 international partner universities.

Did You Know that ...

... Mechatronics and vehicle manufacturing are strongpoints of the Upper Austrian economy? This is why the need for highly-qualified graduates in these fields will continue to grow in the future. Leading companies in the automotive industry are working closely with this degree programme and offering students attractive internships and opportunities for cooperation.



Innovations in future vehicle generations will originate predominantly in the field of Mechatronics. Alongside engineering performance, cost- and market-orientated aspects are becoming increasingly significant.

Prof. Mag. Dr. Kurt Gaubinger
 Head of Studies

