

Master full-time / English
Master of Science (M.Sc.)

MECHATRONICS



HOCHSCHULE
RAVENSBURG-WEINGARTEN
UNIVERSITY
OF APPLIED SCIENCES



AT A GLANCE



Final Degree
Master of Science
(M.Sc.)



Period of Study
3 Semester



Closing Date
April 15th
(Winter Term)



Start
Winter Term

Admission Requirements

Bachelor degree in mechanical or electrical engineering, computer science or similar subject.
Proven English language skills (TOEFL/IELTS)

ECTS

The Course of Study includes
90 Credits

Dean of Studies

Prof. Dr. Raphael Ruf
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Online-Application

www.rwu.de

KNOWLEDGE & PRACTICAL SKILLS

The importance of mechatronics

Wind turbines, airbags, quadrocopters or industrial robots - these products are good examples of the convergence of the three disciplines computer science, electrical engineering and mechanical engineering - mechatronics.

The development of mechatronic systems, however, is more than the mere assembly of sub-systems or components from these areas; in fact, mechatronics means the fusion of the three disciplines from the very beginning of the development process. Interdisciplinary networked thinking and acting enables the creation of innovative products that meet the requirements of the modern industrial and information society.



STUDY PROGRAM & CURRICULUM CONTENT

The Master's program in Mechatronics is designed for three semesters. At the beginning of the course, an individual timetable is worked out together with all students, which takes into account the content of the course completed so far. This strategy is pursued further with the lecture Advanced Mathematics, which provides both a solid foundation and important tools for the further course of study.

The brains of many mechatronic systems are embedded systems, which are mainly dealt with in the second semester. Relevant topics in electrical engineering, such as sensors and actuators, power electronics and electrical drives, are also covered. The simulation and integration of mechatronic

systems, as well as their regulation and control, are the subject of further lectures due to their high relevance.

Within the framework of the Scientific Project, students work on their own projects - independently and in international teams. In the third semester, the Master Thesis is completed, often in regional and national industrial companies.

The RWU is involved in numerous research projects and activities. The main focus of research in mechatronics is on mobile robotics, intelligent systems, material technologies, optical- and energy systems.

SEM. MODULÜBERSICHT

ECTS

1	Advanced Mathematics	Power Electronics	Engineering Design and Materials	Electrical Drives	Engineering Mechanics	Simulation of Mechatronic Systems	
	10	5	6	5	6	5	37
2	Integration of Mechatronic Systems	Process Interface Equipment	Advanced Control Systems	Embedded Computing		Scientific Project	
	5	8	5	10		6	34
3	Master-Thesis incl. Colloquium					Optional Module	
						25	5

■ Lecture subjects

■ Projects and internship

■ Thesis

JOBS & PERSPECTIVES

The Lake Constance and Upper Swabia region is home to numerous innovative companies with a high demand for qualified employees. There are global players such as ZF, Airbus Group and MTU in the immediate vicinity of RWU.

Mechatronics graduates are in high demand in the professional world. The comprehensive knowledge that combines the classic individual disciplines of mechanical engineering, electrical engineering and information technology is needed wherever complex technical systems have to be developed.

Due to the breadth of this future-oriented training, there are excellent job market opportunities in a wide variety of sectors such as energy technology, electromobility, automation technology and robotics. Furthermore, the Master's degree enables you to pursue a career in research and science and entitles you to take up a PhD.



STUDIES AT RWU

The studies at the Ravensburg-Weingarten University of Applied Sciences are characterised by practical training and modern, well-equipped laboratories. Students study in small groups, individually supervised by a team of highly qualified professors and assistants. Nearby dormitories and many leisure activities in the attractive landscape of Upper Swabia, close to Lake Constance and the Alps offer excellent boundary conditions and the best conditions for fun and success in study and work.



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SüdWest

