

Application ...

Please apply through the ONLINE APPLICATION FORM (at www.schmalkalden-university.com/mero) and afterwards send the following documents (applications sent by fax or email will not be considered):

- The printed version of the Application Form including filled and signed annexes
- An officially certified copy of your University Degree(s) including transcript and certified translation into English or German
- A proof of level of English Language
- A curriculum vitae
- A copy of the University entrance qualification (highest School Leaving Certificate)
- A copy of your birth certificate or of your passport

Please send your application to:

Schmalkalden University of Applied Sciences
International Office - Team MERO
Blechhammer 9
98574 Schmalkalden / Germany

The master's programme begins each winter semester (early October). **Deadline for applications: June 15th**

You will find the detailed time schedule on our homepage.

Questions ...

For international applicants:

International Office

Phone +49 (0) 36 83 / 6 88 -10 10

Fax +49 (0) 36 83 / 6 88 -19 99

mero@hs-schmalkalden.de

For national applicants:

Central Academic Counseling Office

Phone +49 (0) 36 83 / 6 88 - 10 23

Fax +49 (0) 36 83 / 6 88 - 19 99

studienberatung@hs-schmalkalden.de



MECHATRONICS & ROBOTICS

M A S T E R O F E N G I N E E R I N G



Mechatronics & Robotics

Characteristics ...

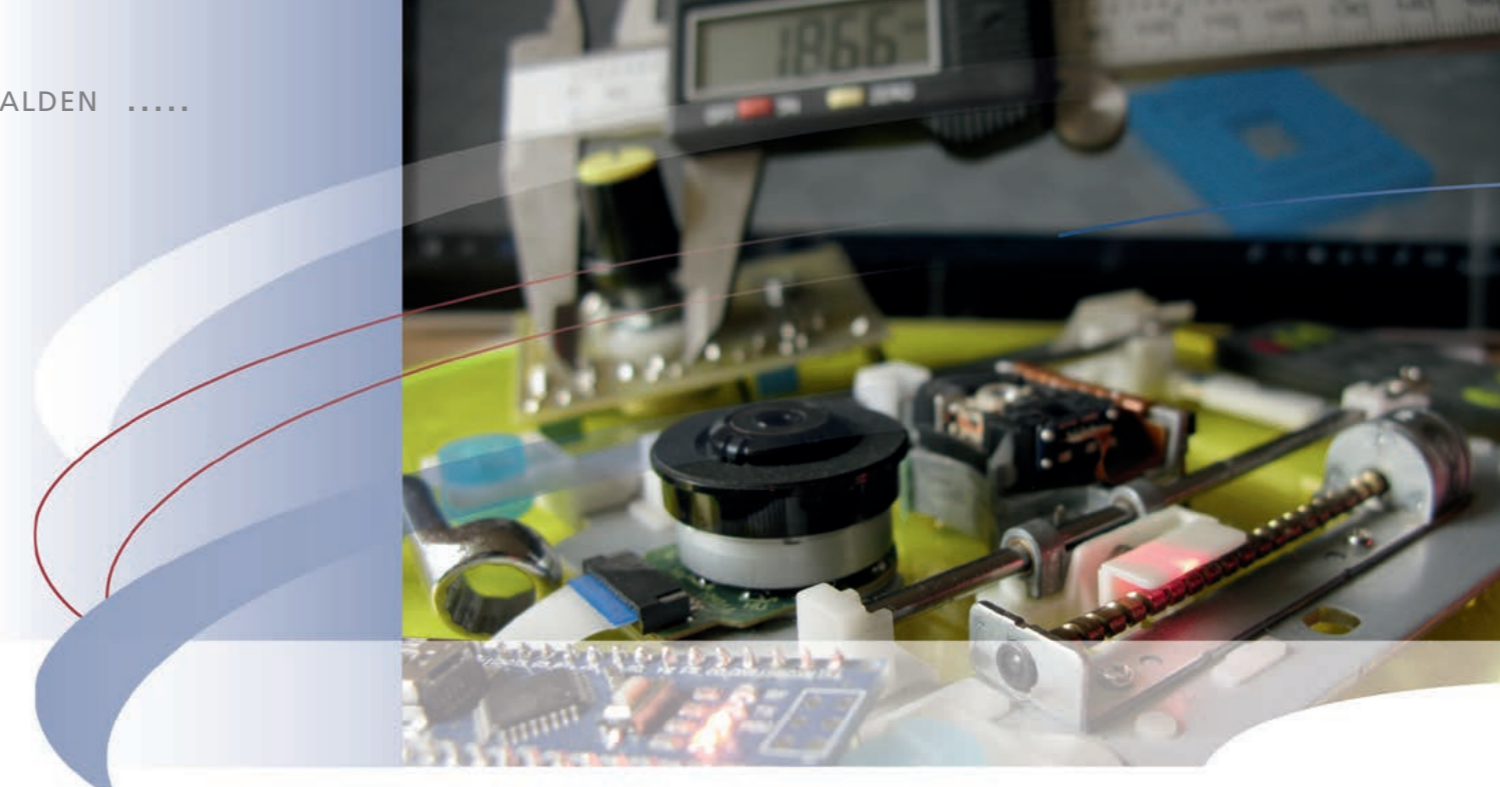
Mechatronics and robotics are two important technologies for the upcoming digital revolution in economy and society. They are the basic components of Industry 4.0 and thus play a decisive role in determining the manufacturing and production processes of the digital future.

The Mechatronics & Robotics Master's programme is a modern, modularised, English-taught full-time programme with a high proportion of practical engineering training. The courses are being offered jointly by the two Faculties of Electrical Engineering and Mechanical Engineering at Schmalkalden University of Applied Sciences. This cooperation makes it possible to provide students with outstanding interdisciplinary learning and study conditions in excellent and modernly equipped laboratories with the latest technologies. Graduates study together during the first two semesters, then are assigned to one of the two specialization subjects: electrical or mechanical engineering. The subject assignment takes place at the beginning of the course and should be oriented towards the respective Bachelor's degree and the individual interest of the applicant.



Interdisciplinary, practice oriented and state of the art

Modules combine skills from electrical engineering, mechanical engineering and practical engineering work – all of them will be applied to individual engineering projects supervised by the faculty.



Study Objectives

Students are taught technical and scientific engineering skills and abilities for the holistic development and manufacture of mechatronic products. In particular, the development methodology, for which German engineering is world-famous, is taught both theoretically and practically in special learning units. Special emphasis is placed on the handling of engineering simulation and software tools as well as on the latest rapid manufacturing technologies. The acquired knowledge and skills enable the graduates to take on responsible work in all areas of a modern business enterprise, including research. This also includes the ability to complete a doctorate in engineering at a later date.

Type	Full time
Duration	3 semesters
Graduation	Master of Engineering
ECTS	90
Enrollment	Winter term
Registration Deadline	June 15th
Language of Instruction	English

Course of Studies and Contents

The Master's programme Mechatronics & Robotics lasts three semesters of full-time studies on site. Matriculation takes place annually in the winter semester. In the first two semesters, students must attend six classroom courses with a workload of 5 ECTS credits each (a total of 30 per semester). All modules are concluded with an examination at the end of the semester. The modules are assigned to three thematic groups: electrical engineering, mechanical engineering and practical engineering work. During both semesters students work on an engineering project with an individual task.

Particularly noteworthy are the two practical workshops in the second semester. The third semester is reserved for the Master's thesis. The Master's thesis is to be completed in a freely elected enterprise with a practical task. Each student is responsible for the topic and the contact to the company. The work is, however, supervised according to the specialization by a professor of the responsible faculties. The study ends with a colloquium (oral defense).

Admission Requirements

We are seeking students with a background in engineering and a strong interest in a specialization in mechatronics and robotics. Our admission requirements are defined in § 5 of the approved study regulation document and contain:

- University degree in Mechanical Engineering, Mechatronics, Electrical Engineering, or similar granted for a seven semester (Bachelor) programme at a recognised University
- Your (Bachelor) degree needs to contain a workload of at least 10 ECTS of mathematics and at least 10 ECTS of physics and an overall workload of engineering/science subjects of at least 90 ECTS.
- Your (Bachelor) degree needs to be granted with a final grade equal or better 2,5 on the German Grading Scale (Grade will be transferred by SUAS).
- English language qualification: E.g. TOEFL Ibt score equal or better 79, proof of English as medium of instruction in Bachelor's programme or others.

1 st Term	2 nd Term	3 rd Term
Automation Control	Systems Theory	Master Thesis (30 ECTS) Master Thesis: 27 ECTS Colloquium (Oral Defense): 3 ECTS
Digital Signal Processing for Engineering Applications	Microelectronics Assembly and Packaging	
Optics and LASERS	Communication Systems	
Vibration Engineering	Simulation Methods for Mechanical Systems	
Drives for Automation Systems	Workshop Mechatronics I (Electrical Engineering)	
VDI 2206 – Development of Mechatronic Systems	Workshop Mechatronics II (Mechanical Engineering)	
Project Work (10 ECTS)		
■ Topics of Electrical Engineering ■ Topics of Mechanical Engineering ■ Practical Engineering Work		

