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# Master's degree

## Master of Science in Mechatronics

**FH Aachen University of Applied Sciences • Aachen**

## Overview

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| Teaching language | • German  
• English |
| Languages | All compulsory modules and most of the elective modules are taught in English. Only some elective modules are given in German. Students can choose to write the Master's thesis in either language. |
| Programme duration | 4 semesters |
| Beginning | Winter semester |
| Application deadline | 15 May for the following winter semester |
| Tuition fees per semester in EUR | None |
| Combined Master's degree / PhD programme | No |
| Joint degree / double degree programme | No |
| Description/content | Students acquire widely ranged interdisciplinary knowledge and understanding of the fundamentals and applications of mechatronics. Our instruction methods include problem-based approaches and integrated team work.  
Our modern, well-equipped labs play a major role in ensuring that students are later able to apply their knowledge to problems arising within the fields of their chosen careers. Advanced students plan projects together, work towards a common goal and then present the results in a written report as well as to the class.  
Compulsory modules:  
• Fundamentals of Mechanical/Electrical Engineering  
• MEMS / Microtechnology  
• Analogue and Digital Control Technology  
• Sensors & Actuators  
• Advanced Mathematics  
• System Engineering  
• Autonomous Mobile Robotic Systems  
• Mechatronics System Simulation  
• Advanced Motion Control  
• Mechatronic Project |
Course Details

Course organisation

In the first semester, all students have to master the basics of electrical engineering (if they have a background in mechanical engineering) or mechanical engineering (if they have a background in electrical engineering), advanced mathematics, an introduction to MEMS and analogue and digital control as basic components of mechatronics systems. In the second and third semesters, students have to study further compulsory modules (e.g., investigating the system behaviour of mechatronic systems and the fundamentals of autonomous and mobile robotic systems as well as an introduction into modern sensors and new type of actuators) and can focus on their specialisation by choosing appropriate elective courses. An integrated project with a duration of two semesters must be carried out by teams of three to six Master’s students. In the last semester, students write a Master’s thesis on a research and development project, on which they can work either at the university or in industry.

Types of assessment

Most modules conclude with a written exam. In some modules, assessment is done through oral presentations and written reports.

A Diploma supplement will be issued

Yes

Integrated internships

No obligatory internships

Course-specific, integrated German language courses

No

Course-specific, integrated English language courses

No

Costs / Funding

Tuition fees per semester

None
### Requirements / Registration

**Academic admission requirements**
Bachelor's degree in mechanical engineering, electrical engineering, mechatronics, physics or related fields with high academic standing, or an equivalent university degree
GRE General test

**Language requirements**
- Proof of English language ability such as TOEFL (550 paper-based test, 213 computer-based test, 79 Internet-based test) or IELTS 6.0
- Proof of German language abilities at level B1 (e.g., Zertifikat Deutsch [B1] or equivalent)

**Application deadline**
15 May for the following winter semester

**Submit application to**
See: [https://www.fh-aachen.de/studium/mechatronics-msc/bewerbung/](https://www.fh-aachen.de/studium/mechatronics-msc/bewerbung/)

### Services

**Possibility of finding part-time employment**
Applicants should not count on financing their stay in Aachen by working part-time during their studies. However, many students are successful in finding part-time jobs at one of the universities in Aachen or one of the many R&D-oriented companies in the region.

**Accommodation**
Many student dormitories are available in Aachen. However, sometimes it may be difficult to find a room there. Private furnished rooms cost from 250 to 350 EUR per month plus approx. 80 EUR per month for electricity, water, and heating. Most rooms require the first month’s rent and a security deposit of one to three months’ rent in advance before you can move into the room. If the room is in a good condition when you move out, your security deposit will be returned.
Contact

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Mechanical Engineering and Mechatronics

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Course website: https://www.fh-aachen.de/en/course-of-study/mechatronics-msc/degree-program/

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