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Automotive Engineering (MSc) • RWTH Aachen University • Aachen .......................................................... 2
# Master's degree

**Automotive Engineering (MSc)**

**RWTH Aachen University • Aachen**

## Overview

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<th><strong>Degree</strong></th>
<th>Master of Science in Automotive Engineering</th>
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<table>
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<tr>
<th><strong>Teaching language</strong></th>
<th>English</th>
</tr>
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<tr>
<th><strong>Languages</strong></th>
<th>The degree programme &quot;Automotive Engineering (MSc)&quot; is a special international Master's programme that is only taught in English.</th>
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<tr>
<th><strong>Programme duration</strong></th>
<th>3 semesters</th>
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<table>
<thead>
<tr>
<th><strong>Beginning</strong></th>
<th>Winter semester</th>
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<tr>
<th><strong>More information on beginning of studies</strong></th>
<th>You can find all of the information via the following link: <a href="http://www.rwth-aachen.de/cms/root/Studium/Im-Studium/~egv/Semestertermine/?lidx=1">http://www.rwth-aachen.de/cms/root/Studium/Im-Studium/~egv/Semestertermine/?lidx=1</a></th>
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<tr>
<th><strong>Application deadline</strong></th>
<th>The application phase for the winter semester:</th>
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**Non-EU students** (Non-EU/EEA citizens): 4 December – 1 March

**European students** (EU/EEA citizens) and international exchange students who are already enrolled as students at RWTH Aachen University: 7 May – 15 July

<table>
<thead>
<tr>
<th><strong>Tuition fees per semester in EUR</strong></th>
<th>None</th>
</tr>
</thead>
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<tr>
<th><strong>Combined Master's degree / PhD programme</strong></th>
<th>No</th>
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<tr>
<th><strong>Joint degree / double degree programme</strong></th>
<th>No</th>
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<tr>
<th><strong>Description/content</strong></th>
<th>In this programme, students are taught the technological basics and in-depth knowledge of the conception and the development of passenger cars and commercial vehicles as well as the conception and the development of motorcycles and off-highway vehicles (optional). This comprises technical vehicle design with regard to market, legislative, and manufacturing requirements. Course modules cover all of the vehicle's main domains such as chassis, body, drivetrain, safety, driver assistance systems, and others. Graduates will be proficient in relevant technological areas like vehicle dynamics, energy efficiency, acoustics, mechatronics, structural fatigue, and durability.</th>
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The programme provides in-depth knowledge of industrial design approaches and research topics with regard to real-world vehicle requirements, market developments, and legislative constraints. |
## Course Details

### Course organisation

This three-semester programme consists of two semesters of compulsory and elective courses; a 22-week Master’s thesis concludes the study programme in the third semester. The courses are taught in English and usually comprise lectures and adjacent exercises as well as a written or an oral examination.

Compulsory subjects add up to 44 credits (CP), and elective courses amounting to 16 credits (CP) are to be taken within the first two semesters. The Master’s thesis itself is worth 30 credits (CP). The students have to earn 90 credit points (CP).

The final grade is the credit-weighted average of all prior modules. They include all modules that were enrolment conditions upon acceptance to the programme (maximum 30 credits (CP)).

### Integrated internships

Furthermore, an industrial internship of 20 weeks is to be approved. It has to be completed prior to the registration of the Master’s thesis. The internship guidelines can be found on the website of the Faculty of Mechanical Engineering (http://www.maschinenbau.rwth-aachen.de).

If you have questions regarding the contents of required internships, please contact the Faculty of Mechanical Engineering Internship Office: praktikantenamt@fb4.rwth-aachen.de.

### Course-specific, integrated German language courses

No

### Course-specific, integrated English language courses

No

### The course of study can be taken entirely online

No

### Digital learning and teaching modules

- RWTHmoodle

### Description of e-learning elements

RWTHmoodle is the central web-based learning platform of RWTH Aachen University. Its virtual course rooms offer a wide range of functions for the implementation of digital teaching formats. The platform can be flexibly expanded thanks to a variety of plug-ins from the Moodle open source community.

### Participation in the e-learning course elements is compulsory

Yes

### Can ECTS points be acquired by taking the online programmes?

No

### Can the e-learning elements be taken without signing up for the course of study?

No

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## Costs / Funding
Tuition fees per semester in EUR  
None

Semester contribution  
There are no tuition fees at RWTH Aachen, with the exception of the programmes from RWTH Academy. However, each student, including international students, must pay a student body and social contribution fee, which includes the cost of the semester ticket. The exact amount varies each year, but on average it is approx. 290 EUR per semester.

Costs of living  
The entire cost of studies and life in Aachen, including rent, insurance, livelihood, etc., is on average at least 1,100 EUR per month or 13,200 EUR per year. Please find more information about general costs via the following website: http://www.rwth-aachen.de/go/id/bqmo/lidx/1

Funding opportunities within the university  
No

Requirements / Registration

Academic admission requirements  
A Bachelor's degree (or equivalent) in mechanical engineering or automotive engineering (minimum seven semesters) with the following content is required:

- mechanics
- machine design
- introduction to CAD
- thermodynamics
- heat and mass transfer
- material science
- control engineering
- fluid mechanics
- mathematics
- automotive engineering ("Längsdynamik")
- automotive engineering ("Vertikal- und Querdynamik")
- internal combustion engine
- mechatronic systems in automotive engineering

Mandatory requirements for your application:

- Tabular resume
- transcript of records (Please submit a transcript of records with all of the completed semesters until now. At the time of application, you should be able to submit your transcript of records for all except your last two semesters of study.)
- module descriptions (diploma supplement / module catalogue)
- supplementary sheet
- copy of university completion certificate (if you already have a degree)
- evidence of English language skills: copy of language certificate (if you have already taken the exam)
- copy of Graduate Record Examination (GRE) General Test certificate (This is only for non-EU/EEA citizens. On the GRE test, you need to have at least the following results: verbal reasoning 145, quantitative reasoning 160, and analytical writing 3.)
- Other proof of performance/assessments: additional documents can be attached as well but are not mandatory for your application. These include internship certificates, job references, GATE test, motivation letter, recommendation letters, etc.
- Translated documents (only documents in English or German can be considered in the application process). The accuracy of the translation must be notarised by the responsible German diplomatic or consulate representative in your home country (e.g., at a German Embassy) or through a sworn interpreter or translator! You can upload copies of the notarisations. However, the stamp of the notary must be clearly legible. Please upload the original versions of the notarised documents as well.
Language requirements

German is not a language requirement. We recommend German courses for daily life in Aachen, but it is not mandatory for the application.

The following language tests are accepted as proof of English language skills:

- Test of English as Foreign Language / TOEFL, iBT 90
- IELTS: 5.5
- Cambridge Test – Certificate of Advanced English CAE
- First Certificate in English, FCE for short, grade: B
- a certificate certifying English skills at the B2 level of the Common European Frame of Reference for Languages, CEFR. This certificate can be a German Abitur certificate, on which it is clear that a student completed English until the end of Qualification Phase 1 – that is grade 11 for the G8 Abitur, otherwise grade 12 – and completed the subject with at least sufficient performance.
- Placement test of the RWTH Aachen Language Center at the B2 level, that is MK 7

Important Information: Only individuals who are already enrolled as students at RWTH Aachen can obtain this language certificate.

Exempt from having to provide evidence for English language skills are all individuals who have completed an educational qualification in the UK, Ireland, USA, Canada, New Zealand, or Australia. Participation in an English-language academic programme in one of the countries listed above does not substitute the language test. Proof that you have studied in an English-language course of study in a country other than one of the countries above is not sufficient! Language tests from other universities will not be accepted either. Certificates and test results from other tests are not accepted either.

Application deadline

The application phase for the winter semester:

Non-EU students (Non-EU/EEA citizens):
4 December – 1 March

European students (EU/EEA citizens) and international exchange students who are already enrolled as students at RWTH Aachen University:
7 May – 15 July

Submit application to

You don’t have to send your application or any documents per e-mail or postal service. Instead please only use the RWTH online application tool.

Services

Possibility of finding part-time employment

International students may take up work in the private sector during the semester or in the semester break for up to four months without having obtained a work permit. Students thus may work full time for 120 days or part time (up to four hours per day) for 240 days. This regulation is also stated on the residence permit.

During the semester, students are allowed to take up jobs with working hours of up to 19 hours a week. During the semester break, students may work full time but only for a maximum of 13 consecutive weeks. To give an example: A student takes up a job at a restaurant. She or he is scheduled to work for 19 hours per week. According to the regulation stated above, the student is allowed to work for 48 weeks of the year. The student’s employer is advised to register the number of days that the student has worked in order to avoid difficulties with the Immigration Office.

Student assistants are more flexible with regard to working hours since the aforementioned regulation does not apply. As a student assistant - the so-called "HiWi" - you are allowed to work up to 19 hours per week throughout the year.

Please find more information about financial matters and work opportunities via the following website: http://www.rwth-aachen.de/go/id/bqmp/lidx/1
Accommodation

Unlike in other countries, you are not automatically assigned a place to live when you come to Germany to study. You must independently look for housing and independently apply for a room in a dorm.

RWTH Aachen University does not own or manage any dorms and thus cannot provide nor guarantee housing. The staff at the International Office can only provide you with information about providers and give you an overview of different options. Here are a few tips to prepare you for apartment hunting in Aachen:

1. Begin your search for housing at least three months before you come. Use the numerous addresses and information on our webpages. When searching for an apartment, you can apply to both the private apartment market or to the Studierendenwerk dorms.
2. In order to increase your chances of finding a room or an apartment, it is important that you are flexible about the location and take the outer districts of Aachen and surrounding cities into consideration. Please note that if you are not a citizen of the EU, the conditions of your visa may not allow you to live outside of Germany.
3. Reserve a room early on for your first few days or weeks in Aachen – for example, in a hostel or guesthouse. That way, you can be sure that you have short-term housing and can continue to look for permanent housing once you are here.

The availability and demand of the housing market often determine whether you find a private apartment, a shared flat, or a room in a student dorm. Your search can take longer than you expect. You aren’t alone though; almost all new students at RWTH are in the same situation. Start your search early and don’t be shy about asking for help.

Specific specialist or non-specialist support for international students and doctoral candidates
- Welcome event
- Buddy programme
- Visa matters
- Specialist counselling

Support programmes for international students
International Office

Contact

RWTH Aachen University
Institute for Automotive Engineering (ika)

Steinbachstr. 7
52074 Aachen

masterprog@ika.rwth-aachen.de
Course website: https://www.ika.rwth-aachen.de/en/education/students/automotive-engineering-msc.html

https://www.facebook.com/RWTH.ika/
https://twitter.com/ika_RWTH
https://de.linkedin.com/company/institut-f-r-kraftfahrwesen-aachen-ika-
https://www.instagram.com/rwthaachenuniversity/?hl=de

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Editor
DAAD - Deutscher Akademischer Austauschdienst e.V.
German Academic Exchange Service
Section K23 – Information on Studying in Germany
(responsible: Judith Lesch)
Kennedyallee 50
D-53175 Bonn
www.daad.de

GATE-Germany
Consortium for International Higher Education Marketing
www.gate-germany.de

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