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Management and Computer-Aided Mechanical Engineering • RWTH Aachen University • Aachen... 2
# Master's degree

**Management and Computer-Aided Mechanical Engineering**  
**RWTH Aachen University • Aachen**

## Overview

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<tr>
<th><strong>Degree</strong></th>
<th>Master of Science (RWTH Aachen University)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teaching language</strong></td>
<td>English</td>
</tr>
<tr>
<td><strong>Languages</strong></td>
<td>Courses are taught entirely in English.</td>
</tr>
<tr>
<td></td>
<td>In addition, students have to complete complementary German courses and a language elective course. RWTH International Academy also encourages and supports students to continue learning German during their studies by offering the &quot;German Language Merit Scholarship&quot;.</td>
</tr>
<tr>
<td><strong>Programme duration</strong></td>
<td>4 semesters</td>
</tr>
<tr>
<td><strong>Beginning</strong></td>
<td>Winter semester</td>
</tr>
<tr>
<td><strong>Application deadline</strong></td>
<td>Non-EU applicants*: 1 December to 1 March</td>
</tr>
<tr>
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<td>**EU applicants (i.e. citizens of an EU/EEA country, applicants who are degree holders of a German university, or applicants who are currently enrolled at RWTH Aachen University) can submit their applications between 2 March and 15 July. However, we strongly recommend that EU applicants apply in March.</td>
</tr>
<tr>
<td><strong>Tuition fees per semester in EUR</strong></td>
<td>5,500</td>
</tr>
<tr>
<td><strong>Additional information on tuition fees</strong></td>
<td>Tuition fee: 5,500 EUR per instalment (22,000 EUR in total, conveniently payable in four instalments)</td>
</tr>
<tr>
<td></td>
<td>Apply early to enjoy the early bird discount!</td>
</tr>
</tbody>
</table>

## Combined Master's degree / PhD programme

No
Joint degree / double degree programme

No

Description/content

Engineering graduates with management skills are increasingly sought after in today’s industrial world. The MSc Management and Engineering in Computer-Aided Mechanical Engineering (MME-CAME) programme caters to this demand as an industrial engineering Master’s degree programme that will give you the choice and the flexibility to work in two increasingly interlinked fields of today’s professional activity: at the interface of technology and economics.

This MSc is an interdisciplinary programme conducted by RWTH Aachen University. The university has one of the best faculties of mechanical engineering worldwide and conducts the programme’s engineering part. In addition, the RWTH School of Business and Economics contributes the management modules.

Course Structure

The programme offers two study tracks: "Modelling and Simulation Engineering" and "Digital Engineering". Students have to choose one specialisation to pursue in their studies. Both tracks are built upon common core courses and allow students to specialise in their field of research in more depth.

The programme’s first year focuses on computer aided methods in mechanical engineering. It provides in-depth knowledge and understanding of finite element methods, numerical methods, simulation, mechanics, and software engineering.

Research directly influences the curriculum, ensuring that students are exposed to the most up-to-date information and practices possible.

Students are trained as globally-oriented managers with solid knowledge of the core management processes and an understanding of the major social and environmental issues that set the scene for business processes in emerging economies. Throughout the programme, students will be challenged to explore feasible innovations that balance business and development prospects.

Course Details

Course organisation

The MSc programme MME-CAME is divided into four credit point-specific areas:

(1) Non-track-specific Engineering and Management Compulsories

Students complete four engineering compulsory modules during the first semester and six management compulsory modules that are distributed over the second and third semesters.

(2) Track-Specific Compulsories

From the second semester on, students can choose to focus on a specific track. Students take five compulsory modules in the respective specialisation field.

(3) Electives

The elective courses allow students to complete a total of 13 CP (credit points) according to their individual interests. The elective areas are defined in a track-specific manner.

(4) Language Course and Master’s Thesis

A German language course of 2 CP is compulsory within the first three semesters. Students who are already proficient in German can take another foreign language course instead.
<table>
<thead>
<tr>
<th>Types of assessment</th>
<th>Written and oral examinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>International elements</td>
<td>• Integrated study abroad unit(s)</td>
</tr>
<tr>
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<td>The programme takes place in Aachen (Germany). The voluntary internship or Master’s thesis can be completed in other countries.</td>
</tr>
<tr>
<td>Course-specific, integrated German language courses</td>
<td>No</td>
</tr>
<tr>
<td>Course-specific, integrated English language courses</td>
<td>No</td>
</tr>
<tr>
<td>The course of study can be taken entirely online</td>
<td>No</td>
</tr>
<tr>
<td>Digital learning and teaching modules</td>
<td>• Virtual classrooms</td>
</tr>
<tr>
<td></td>
<td>• Video learning</td>
</tr>
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<td></td>
<td>• Online seminar</td>
</tr>
<tr>
<td></td>
<td>• Chats with lecturers</td>
</tr>
<tr>
<td>Description of e-learning elements</td>
<td>Basic knowledge in business administration is requested as a requirement for admission. Students with no or too little previous knowledge in management have to participate in an online preparatory course conducted by the School of Business and Economics at RWTH Aachen University prior to the beginning of the course of study (August to October). Furthermore, all course materials are shared on the Moodle online learning platform.</td>
</tr>
<tr>
<td>Participation in the e-learning course elements is compulsory</td>
<td>No</td>
</tr>
<tr>
<td>Can ECTS points be acquired by taking the online programmes?</td>
<td>Yes</td>
</tr>
<tr>
<td>Can the e-learning elements be taken without signing up for the course of study?</td>
<td>No</td>
</tr>
</tbody>
</table>

**Costs / Funding**

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Semester contribution
All students at RWTH Aachen University are subject to the current semester fee of approx. 290 EUR per semester. It includes, among other benefits, a "semester ticket" covering public transport in the federal state of North Rhine-Westphalia in Germany as well as the region of South Limburg in the Netherlands.

Costs of living
The average cost of living and studying, including food, accommodation, personal and social expenses, and study-related costs is estimated to be a minimum of 800 to 900 EUR per month.

Funding opportunities within the university
Yes

Description of the above-mentioned funding opportunities within the university
A limited number of scholarships from various organisations are available to help students finance their studies. Please see the following website for a list of exchange programmes, scholarships, and grants as well as specific application requirements and conditions:
https://www.academy.rwth-aachen.de/en/education-formats/msc-degree-programmes/general-information/scholarships
Alternatively, students can contact the International Office directly for advice and assistance.

Requirements / Registration

Academic admission requirements
- Bachelor of Engineering or Bachelor of Science in mechanical engineering or a related discipline, such as automotive, aerospace or energy engineering, manufacturing, structural, industrial, or production engineering, awarded by an internationally recognised university-level institution
- Fundamental knowledge in the following subjects: mechanics, material science, thermodynamics, machine design, informatics, mathematics, physics, fluid mechanics, automatic control, finite elements, modelling, theory of vibrations, manufacturing engineering, CAD
- Basic knowledge in business administration is required. Students with no or too little previous knowledge in management must participate in preparatory online courses conducted by the School of Business and Economics at RWTH Aachen University prior to the beginning of the course (August-October).
- In addition, students should have gained at least one year of relevant work experience during or after their Bachelor’s degree programmes by the time of enrolment (or six months of work experience by the time of application).
- The GRE must be presented as an application document. The minimum requirements are as follows: verbal reasoning 145 points, quantitative reasoning 160 points, analytical writing 3 points. (Applicants from the EU, EWG, and "Bildungsinländer" are exempt!)

Language requirements
If you want to attend this English-taught Master’s degree programme, you must be fluent in English (oral and written) in order to understand lectures, textbooks, and manuals in English and to participate in lab projects, industrial internships and examinations.
One of the following certificates must be submitted:
- TOEFL Internet-based: minimum of 90 points
- IELTS test minimum overall band 5.5 points
- Cambridge Test – Certificate in Advanced English (CAE)
- First Certificate in English (FCE), completed with B
- placement test of RWTH Aachen University’s Language Centre (B2 - only available for students already enrolled at the RWTH Aachen University)

Applicants who have graduated with a Bachelor’s degree in the USA, UK, Canada (English-speaking parts), Ireland, New Zealand or Australia do not need to submit English language certificates.

Certification of German language proficiency is not necessary in order to apply for this English-
taught Master’s degree programme. Admitted students will attend an obligatory German language course during their studies.

**Application deadline**

Non-EU applicants*: 1 December to 1 March

EU applicants**: 2 March to 15 July

*Non-EU applicants can submit their applications by 1 March for the following winter semester.

**EU applicants (i.e. citizens of an EU/EEA country, applicants who are degree holders of a German university, or applicants who are currently enrolled at RWTH Aachen University) can submit their applications between 2 March and 15 July. However, we strongly recommend that EU applicants apply in March.

**Submit application to**

Please use the RWTH Aachen University online application portal and submit your electronic application via: https://online.rwth-aachen.de/

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**Services**

**Possibility of finding part-time employment**

Students enrolled at RWTH Aachen University have the opportunity to find a job on campus and work for up to 19 hours per week. This also allows students to become more familiar with the University institutes and take part in projects related to their field of study. The maximum working limit for off-campus work is 120 full days / 240 half days per year for non-EU students.

**Accommodation**

One of the services that the Master Office provides to new students is assistance in finding accommodation. RWTH International Academy offers new flat-shares with fully furnished rooms in the city of Aachen. Further guidance on student housing in Aachen can be found here: [https://www.academy.rwth-aachen.de/en/education-formats/msc-degree-programmes/general-information/accommodation](https://www.academy.rwth-aachen.de/en/education-formats/msc-degree-programmes/general-information/accommodation)

**Career advisory service**

Our Career Services offer support for students looking for internships or full-time employment. Among other services, students can make use of CV checks, LinkedIn profile upgrades, assessment centre training, and interview preparation. Furthermore, we organise excursions to companies and factories regularly so that our students gain first-hand insight into the industry. Our graduates have promising prospects, as on average they:

- find a job within six months after graduation (90%),
- receive a job offer from companies directly after finishing an internship and before submitting their final Master’s theses (21%), and
- stay in Germany to pursue their career (70%).

**Specific specialist or non-specialist support for international students and doctoral candidates**

- Welcome event
- Buddy programme
- Cultural and linguistic preparation
- Specialist counselling
- Visa matters
NEW international students: Welcome Week at RWTH

Participating in the information sessions and meeting with many advisers from the university and related institutions, you will be guided through your first steps in Aachen. This will help you manage your academic, personal and social transition into the university. Quick integration is the key to both your well-being and future success in your studies.

more: https://www.youtube.com/watch?v=VdIJs8w916A

RWTH Aachen University

For the third time in a row, RWTH Aachen University stands among Germany’s eleven universities of excellence that receive state funding amounting to 148 million EUR per year. RWTH Aachen is the leading German university in third party funding, receiving close to 300 million EUR yearly. The university is also part of TU9, an alliance of nine leading technical universities in Germany. RWTH ranks among the QS top 60 worldwide in graduate employability. Nationally, RWTH graduates are the most sought-after on the German job market (according to
Succeed with RWTH International Academy

As the central, executive education institute of RWTH Aachen University, the RWTH International Academy is able to call upon the expertise of the university’s research institutes. Each of our MSc programmes is developed in conjunction with RWTH institutes. While the institute nominates the academic director and delivers the courses, the International Academy administers the programmes and offers students additional support. Thus, international students not only profit from the university’s expertise in a practical manner but also enjoy extraordinary assistance through the Academy’s Master Office Team.

University location

The city of Aachen is the most western metropolis in Germany. It is directly on the border triangle with the Netherlands and Belgium, located in the heart of Europe. Aachen is the perfect starting point for city trips and excursions into nature. It is on the edge of the Eifel and the High Fens and close to cities such as Cologne, Düsseldorf, and Maastricht.

A bonus point is that you can use the public transportation system (buses, trains, etc.) in North Rhine-Westphalia for free with your RWTH student ticket!

Contact

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