



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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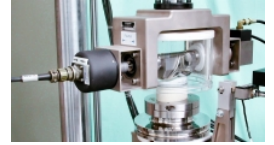
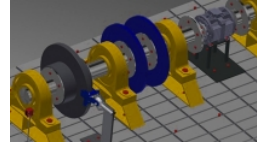
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# Master's degree



## Computer-Aided Mechanical Engineering (CAME)

RWTH Aachen University • Aachen



## Overview

|  |  |
|--|--|
| Degree                                   | Master of Science (RWTH Aachen University)   |
| Teaching language                        | <ul style="list-style-type: none"><li>English</li></ul>  |
| Languages                                | Courses are taught entirely in English.  |
| Full-time / part-time                    | <ul style="list-style-type: none"><li>full-time</li></ul>  |
| Programme duration                       | 4 semesters  |
| Beginning                                | Winter semester  |
| Application deadline                     | <p>Non-EU applicants (applicants who have citizenship of a country outside EU/EEA):<br/>2 December to 1 March</p> <p>EU applicants (applicants who have citizenship of an EU/EEA country, are currently enrolled at RWTH Aachen or hold a German university degree):<br/>2 December to 15 July</p> <p><b>Apply by 15 January (non-EU) / 15 April (EU) to benefit from a 10% early bird discount on the tuition fees!</b></p> |
| Tuition fees per semester in EUR         | 6,000 EUR  |
| Additional information on tuition fees   | 24,000 EUR in total for four semesters   |
| Combined Master's degree / PhD programme | No   |
| Joint degree / double degree programme   | No   |
| Description/content                      | The MSc Computer-Aided Conception and Production in Mechanical Engineering (MSc CAME) incorporates most recent topics in computer-aided engineering (CAE) by providing a deep  |

understanding of methods, technologies and software tools used to design and develop digital models of complex technical systems, objects or products. In particular, the programme focuses on advanced computer simulation software required for the creation of digital twins, which significantly improve the accuracy and reliability of design tasks in mechanical engineering. In addition, sound interdisciplinary engineering knowledge in the finite element methods, numerical methods, continuum mechanics or multibody dynamics will be conveyed in lectures. Become a computational engineer with strong digital engineering skills to meet the challenges of today's changing manufacturing, design, automation and production!

#### Your studies – your choice: choose a study track

To equip you with the specialisation you need for your individual career path, we offer two study tracks in the MSc CAME:

##### Conception of Machines

In this design-oriented track, you will focus on:

- the development and application of modern software-based methods focused on construction and dimensioning of structures and systems
- the use of complex technical drawings
- the improvement of digital models and designs according to operational requirements

##### Production of Machines

In this production-oriented track, you will focus on:

- the development and use of software-based tools and solutions in modern industrial production
- the design, modelling and simulations of manufacturing processes
- the life cycle prediction of materials, elements, and components

## Course Details

### Course organisation

The MSc CAME consists of:

- track-specific compulsory courses and electives
- an integrated mobility window to complete a nine-week internship or write a mini-thesis with a research institute
- two language courses and a linguistic elective
- the Master's thesis, which can be written internally with an institute or externally with a company

Get a detailed overview of the programme structure on our [MSc CAME website](#).

### International elements

- Integrated study abroad unit(s)

### Integrated study abroad unit(s)

The programme takes place in Aachen (Germany). The study-integrated industrial internship and/or one of the scientific projects (mini thesis or Master's thesis) can be completed in other countries.

### Integrated internships

The third semester includes a mobility window to encourage work or research experience during your studies. Depending on your career goal you will either complete an industrial internship to gain further practical experience or work on a research project to enhance your academic profile.

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|--|-----|
| Course-specific, integrated German language courses  | No  |
| Course-specific, integrated English language courses | Yes |

## Costs / Funding

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|--|--|
| Tuition fees per semester in EUR   | 6,000 EUR  |
| Additional information on tuition fees   | 24,000 EUR in total for four semesters   |
| Semester contribution  | The RWTH Aachen University's semester fee of approx. 300 EUR is a student body and social contribution fee that every student must pay each semester in order to stay enrolled as an active student. 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, including food, accommodation, personal and social expenses, and study-related costs, is estimated to be at least 900 to 1,000 EUR per month.  |
| Funding opportunities within the university                                    | Yes  |
| Description of the above-mentioned funding opportunities within the university | <p><b>Women in Engineering Scholarship:</b> This scholarship was created to enable for more qualified female engineering students to pursue a Master's degree programme. The scholarship can grant admitted students a reduction of up to 25% of the tuition fees.</p> <p><b>High Potential Student Grant:</b> This scholarship was created to enable highly qualified students to complete their Master's degree programme. The scholarship can grant admitted students a reduction of up to 25% of the tuition fees.</p> <p><b>Outstanding Performance Award:</b> This scholarship honours talented students who have successfully completed one of our <a href="#">Master's qualification programmes</a> in engineering. Their remarkable performance will be rewarded with a reduction of up to 50% of the tuition fees.</p> |

## Requirements / Registration

|                                 |  |
|---------------------------------|--|
| Academic admission requirements | <p>Please see our website for detailed information on the admission requirements for the <a href="#">MSc CAME</a>.</p> <ul style="list-style-type: none"> <li>• Bachelor of Engineering, Bachelor of Technology or Bachelor of Science in mechanical engineering or a related discipline</li> <li>• Relevant work experience of six months by the time of application</li> <li>• GRE General Test (Verbal Reasoning: 145 points   Quantitative Reasoning: 160 points   Analytical Writing: 3 points) or proof of completion of <a href="#">German Engineering College</a></li> <li>• Fundamental knowledge in engineering</li> </ul> |
| Language requirements           | If you would like to attend an English-taught Master's degree programme, you must be fluent in   |

English (oral and written) in order to understand lectures, textbooks and manuals 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 RWTH Aachen University)

All applicants who have a school leaving qualification or first degree in English that was issued by an institution in the United Kingdom, Ireland, Australia, New Zealand, Canada, or the US are exempt from the English language certificate requirement. Please note that having German citizenship or citizenship of an English-speaking country, even those listed above, does not in and of itself exempt you from the respective language certificate requirement.

No German language skills are required for admission and enrolment. However, you will have the chance to take German language courses as part of your curriculum at RWTH Aachen University Language Centre.

#### Application deadline

Non-EU applicants (applicants who have citizenship of a country outside EU/EEA):  
2 December to 1 March

EU applicants (applicants who have citizenship of an EU/EEA country, are currently enrolled at RWTH Aachen or hold a German university degree):  
2 December to 15 July

**Apply by 15 January (non-EU) / 15 April (EU) to benefit from a 10% early bird discount on the tuition fees!**

#### Submit application to

Please use [the official online application portal of RWTH Aachen University](#) and submit your electronic application.

## Services

#### Possibility of finding part-time employment

Generally, students enrolled at RWTH Aachen University have the opportunity to find a job on campus and work up to 19 hours per week. This also allows students to become more familiar with the university institutes and to 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

Aachen is a vibrant university city with several hundred new students arriving each semester. The housing market is quite tough as a result, especially during the months of March/April and September/October. Finding suitable and affordable accommodation can be time consuming and challenging.

Therefore, we as RWTH International Academy offer our own accommodation in two apartment buildings in the city centre to students of our Master's degree programmes. Benefit from exclusive prices and in-house services, whether you only need short-term accommodation before moving into your own apartment, or you are looking for a new home for the duration of your studies. Visit our [housing website](#) for more information.

#### Career advisory service

Studying with RWTH International Academy involves much more than just a degree. With us, you get an all-round career package: during your studies, we are there to advise you so that you can

ideally prepare for the start of your career. Our goal is to provide you with the necessary hard and soft skills for the job market. We will facilitate your networking directly with companies and/or the university.

#### **Benefits from our Career Services Expertise**

- Career counselling
- Online Career Portal
- Application tips
- Company Meet & Greet
- E-Coaching
- Recruiting events

With our Career Service, we want to lay the foundation for your career success. We support you with valuable tips, advice and personal coaching from the preparation of your application documents to networking with companies for internships, theses and career entry.

#### **Support for international students and doctoral candidates**

- Welcome event
- Cultural and linguistic preparation
- Visa matters
- Specialist counselling
- Help with finding accommodation

#### **General services and support for international students and doctoral candidates**

We look forward to welcoming students of all nationalities! For students from [China](#), [India](#) and [Latin America](#), we provide exclusive access, special support and individual consultation through our Academy Offices on site.



©RWTH International Academy

**Bhavin Patel**  
MSc

The MSc CAME is designed in such a manner to fulfil the needs of each individual. Now I see my friends working in different fields, such as CFD, simulation, and production. This course of study has actively qualified us for our respective jobs and has given us a deep insight into different fields.



## MSc Computer-Aided Conception and Production in Mechanical Engineering

As a student of our executive Master's degree programme in Computer-Aided Mechanical Engineering, you will design, apply and optimise cutting-edge computer modelling for the development of high-tech products in all emerging fields of technology: automotive, environmental, and biomedical... You name it — we will teach it to you. We look forward to welcoming you to Aachen!

» more:

[https://www.youtube.com/watch?v=IbBjF-x9\\_T8](https://www.youtube.com/watch?v=IbBjF-x9_T8)

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# RWTH Aachen University

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RWTH Aachen University

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With 260 institutes, nine faculties and three Clusters of Excellence, RWTH Aachen University is one of Europe's leading institutions for science and research. Currently, more than 47,000 students are enrolled in 170 courses of study. Of these students, more than 13,000 are

international students. RWTH Aachen is well-known for its state-of-the-art education that tackles some of the world's most pressing global challenges. Our graduates are highly sought after by businesses and industry as trainees and for executive positions.

As the official academy for education of RWTH Aachen University, RWTH International Academy is tasked with promoting and developing the integration of professional and academic education. Our goal is to make knowledge accessible to international participants through application-oriented educational formats and programmes, thus making a lasting contribution to lifelong learning.

[More about RWTH International Academy](#)



## University location

The student city of Aachen is a vibrant and historic place located at the border triangle of Germany, Belgium and the Netherlands. Aachen was a favoured residence of Charlemagne. After the departure of the Romans from this region, Charlemagne finally managed to forge the lion's share of Europe into something that resembled an administrative unity, with Aachen as the beating heart of the empire. The "Rathaus" (city hall) and "Dom" (cathedral) bear witness to this earliest Carolingian building history. During your time in Aachen, you will have the opportunity to discover the city, its history and its most important sights. Moreover, you will experience student life at one of Europe's leading technical universities and become part of the international student community. There is no better place to encounter European culture while challenging yourself in our programmes.

## Contact


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 Course website: <http://bit.ly/3HHKOCn>

 <https://www.facebook.com/RWTHInternationalAcademy/>

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 <https://www.instagram.com/rwthacademy>

 <https://www.youtube.com/user/RWTHAcademy>

Last update 06.07.2024 23:22:53



# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

## Editor

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## GATE-Germany

Consortium for International Higher Education Marketing  
[www.gate-germany.de](http://www.gate-germany.de)

## Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.



Federal Ministry  
of Education  
and Research