

Deutscher Akademischer Austauschdienst German Academic Exchange Service

INTERNATIONAL PROGRAMMES

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Master's degree

RWTH ACHEN



Robotic Systems Engineering (RoboSys)

RWTH Aachen University • Aachen



Overview

Degree	Master of Science (RWTH Aachen University)
Teaching language	• English
Languages	Courses are taught entirely in English.
Full-time / part-time	• full-time
Programme duration	4 semesters
Beginning	Winter semester
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!
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	Shape the future with robotics technology and design, implement and program new intelligent robotic solutions for industrial applications!

The MSc Robotic Systems Engineering (MSc RoboSys) focuses on the integration of Artificial Intelligence into robotics engineering to improve human-robot collaboration in industry and society alike. Using robotic solutions in production processes is on the rise, not only to increase productivity but also to create high-quality, safe and affordable products. The demand for intelligent robots that cooperate and interact with humans, such as autonomous mobile robots (AMRs) and cobots, is growing rapidly. The MSc RoboSys addresses this development and integrates current technological innovations and trends into the curriculum, preparing you to be at the forefront of robotics technology.

Your studies - your choice: choose a study track

To equip you with the specialisation you need for your individual career path, we offer three exclusive study tracks in the MSc RoboSys. They reflect current trends in robotic engineering and are designed to help meet the high demand for qualified engineers for innovative and modern robotics design, development and applications.

Development & Design

Choosing this study track, you will:

- gain in-depth understanding of the development and design of robots and robotic systems
- learn to design, implement, apply and evaluate complex robot systems including sensor technology and control structures
- acquire knowledge and skills for condition monitoring of robotic systems, for individual service life forecasts or for operational optimisation

Data & Al

Choosing this study track, you will:

- gain in-depth understanding of the concepts, algorithms and applications of robotics, data
- learn to design, implement, apply and evaluate complex robotic systems and artificial intelligence algorithms
- understand and apply artificial intelligence technologies

Autonomous & Sensor-Based Systems

Choosing this study track, you will:

- focus on aspects of sensor-based planning and control for robotic systems
- concentrate on the applications of technical robotic systems that are characterised by different sensory perception and actuator-based physical interaction capabilities
- deepen your understanding of autonomous sensor technology, machine learning, decision-making and AI-driven control systems

Course Details

Course organisation

The MSc RoboSys consists of:

- engineering compulsories
- elective courses
- an internship or a research project
- language courses
- 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 ourMSc RoboSys website.

International elements	 Language training provided Projects with partners in Germany and abroad Integrated/optional study abroad unit(s) Opportunities for students to work abroad Specialist literature in other languages
Integrated/optional study abroad unit(s)	The programme takes place in Aachen (Germany). The study-integrated elective industrial internship and/or the Master's thesis can be completed in other countries.
Integrated internships	An internship can be integrated in your studies to give you the opportunity to gain further practical experience in the industry.
Course-specific, integrated German language courses	Νο
Course-specific, integrated English language courses	Νο

Costs / Funding

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	 Women in Engineering Scholarship: This scholarship was created to support qualified female engineering students. The scholarship grants a reduction of up to 25% of the tuition fees. High Potential Student Grant: This scholarship was created to support highly qualified students. The scholarship grants a reduction of up to 25% of the tuition fees. Global Talent Scholarship: This scholarship was created to support promising students from Egypt/Indonesia/Iran/Nigeria/Turkey. The scholarship grants a reduction of 35% of the tuition fees.
	Outstanding Performance Award : This scholarship honours students who have successfully completed our German Engineering College. Their remarkable performance will be rewarded with a reduction of up to 50% of the tuition fees.

Requirements / Registration

Academic admission requirements	Please see our website for detailed information on the admission requirements for the MSc RoboSys.
	 Bachelor of Engineering, Bachelor of Technology or Bachelor of Science in mechanical engineering or a related discipline Relevant work experience of 6 months by the time of application GRE General Test (Verbal Reasoning: 145 points Quantitative Reasoning: 160 points Analytical Writing: 3 points) or proof of completion of German Engineering College Fundamental knowledge in engineering
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 at the time of enrolment (not at the time of
	 application): TOEFL Internet-based: minimum of 90 points IELTS test: minimum overall band 6.0 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 Universityand submit your electronic application.

Services

time employment campus the univ	y, students enrolled at RWTH Aachen University have the opportunity to find a job on and work up to 19 hours per week. This also allows students to become more familiar with ersity institutes and to take part in projects related to their field of study. imum working limit for off-campus work is 120 full days / 240 half days per year for non-EU
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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	Our Career Service is an integral part of our student success management. It is designed to empower you to proactively drive your career forward from the first day of your studies. You will have seamless access to a valuable and comprehensive career programme matching your studies. Experience extensive career services and mutually beneficial connections to employers, research facilities and institutes at RWTH Aachen University throughout the academic year. As alumni of RWTH Aachen University, we will support you in achieving your career goals and lifelong success by providing innovative further education programmes and networking events. Benefit from: • career programme • advice and coaching • professional collaborations and partnerships • career platform
Support for international students and doctoral candidates	 Welcome event Specialist counselling Cultural and linguistic preparation Visa matters Help with finding accommodation Tutors Accompanying programme Support with registration procedures
General services and support for international students and doctoral candidates	We look forward to welcoming students of all nationalities! For students fromChina, India and Latin America, we provide exclusive access, special support and individual consultation through our Academy Offices on site.



Find out more about Robotic Systems at RWTH Aachen University!

Get to know the MSc Robotic Systems Engineering (RoboSys) at RWTH International Academy. In this executive Master's degree programme, our robotic systems engineers create and develop innovative and intelligent robotic solutions and systems to meet today's most pressing global challenges: industrial productivity, energy efficiency, environmental responsibility, and mobility services.

>> more: https://www.youtube.com/watch? v=64Cw7Ssaz58

RWTH Aachen University



RWTH Aachen University © RWTH International Academy

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

RWITHAACHEN UNIVERSITY

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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f https://www.facebook.com/RWTHInternationalAcademy/

- https://twitter.com/RWTH_Academy
- in https://www.linkedin.com/company/rwth-international-academy/
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- https://www.youtube.com/user/RWTHAcademy

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Disclaimer

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