

# INTERNATIONAL PROGRAMMES

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# Bachelor's degree



# **Bachelor of Engineering in Mechanical Engineering**

FH Aachen University of Applied Sciences • Jülich

## Overview

Degree	Bachelor of Engineering in Mechanical Engineering
Teaching language	• German
Languages	The course of study is conducted in German. A technical German course is required for international students during the first two semesters.
Full-time / part-time	• full-time
Programme duration	6 semesters
Beginning	Winter semester
Application deadline	15 July for international applicants (only through uni-assist) See https://www.fh-aachen.de/en/studies/applying/international-applicants/applicants-with-foreign-proofs-of-education for more information.
	31 August for applicants with German Abitur or Fachhochschulreife
Tuition fees per semester in EUR	None
Joint degree / double degree programme	No
Description/content	The degree programme has a strong focus on applied engineering with practical experience. Students are required to complete an internship before their studies in order to obtain practical experience in their chosen field.
	The Bachelor of Mechanical Engineering programme is a clearly structured programme covering energy systems, in particular renewable energy systems, environmental technology, and other related fields. Finding a global solution to the way to decarbonise the industrial and energy sector is one of the most difficult challenges in this and the following decades towards 2050. The demand for energy must be met in an environmentally friendly way, on the one hand to counteract climate change and on the other hand to stop the rise in energy prices. Our graduates seek to be part of this solution!
	The efficient use of energy, the development of new energy sources, the influence of energy conversion on changes in the environment, and new energy transfer technologies are key issues in determining our future. Due to possible future energy shortages and the changing climate, employment opportunities for young engineers include modernisation of power stations as well the renewable energy sector, which includes solar technology, wind, and biomass energy. Students will find jobs in increasingly important fields such as combustible fuel cells, energy-saving

technologies, and environmental engineering. Germany leads the field in the construction of plants that produce electricity as well as heat.

Our Jülich campus offers modern, flexible study programmes with an emphasis on teaching professional competence and a methodical approach. Our graduates demonstrate a high degree of flexibility and an outstanding sense of responsibility in their studies and later careers. Our modern, well-equipped labs play a major role in ensuring that students are later able to apply their knowledge to 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.

Students can complete their Bachelor's projects in industry or at any of the nearby research institutions such as the Research Centre Jülich (https://www.fz-juelich.de), the German Aerospace Center (https://www.dlr.de) and the IEG Institute of the Fraunhofer-Gesellschaft (https://www.ieg.fraunhofer.de/) as well as in the laboratories or institutes of the university, such as the Institut NOVUM-Energy (https://www.fh-aachen.de/forschung/institut-nowum-energy) or the Solar-Institut Jülich (https://www.fh-aachen.de/forschung/solar-institut-juelich).

Some students choose to continue in a Master's programme, such as our Master of Science in Energy Systems, Master in Energy Economics and Informatics, Master of Science in Mechatronics or another Master's programme offered at our university or another institution.

More details about the programme are available on our website: https://www.fh-aachen.de/studium/studiengaenge/mechanical-engineering-beng.

### **Course Details**

### **Course organisation**

During the first three semesters, students focus on basic sciences and engineering courses. Starting in the fourth semester, students are in their advanced studies, which focus on a specialisation. In the sixth semester, each student conducts the research for a practical project or chooses three elective modules.

The goal of the studies is to obtain a first professional degree in mechanical engineering in the field of energy technology. In detail, students will be able, among other things, to design, improve and operate efficient and sustainable energy systems from a mechanical engineering perspective. Within the framework of the Internationally-Oriented Studies (IOS) programme, students attend technical language courses with a focus on the German language, but the courses are also partly in English. Another goal is preparation for the international job market.

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A Diploma supplement will be issued	Yes
International elements	Language training provided
Integrated internships	Students are required to complete an eight-week internship related to their field of study before enrolment.  The purpose of the internship is to give students practical experience in their chosen field and to expose them to a working environment.
Course-specific, integrated German language courses	Yes
Course-specific, integrated English language courses	No

### **Costs / Funding**

Tuition fees per semester in EUR	None
Semester contribution	Currently approx. 320 EUR per semester
Costs of living	Approx. 934 EUR per month, including mandatory health insurance  The semester ticket (included in the student activity fee) includes free use of public transport in the German state of North Rhine-Westphalia.
Funding opportunities within the university	No

# Requirements / Registration

Academic admission requirements	German entrance qualification for universities of applied sciences or equivalent (http://anabin.kmk.org)
	Eight weeks of the required internship must be completed before enrolment.
	Many international students do not fulfil these requirements, but can qualify through the "Freshman Year" (http://www.fh-aachen.de/en/university/freshman/).
Language requirements	Applicants must provide proof of their German language proficiency at the B2 level of the Common European Framework of Reference for Languages.
Application deadline	15 July for international applicants (only through uni-assist) See https://www.fh-aachen.de/en/studies/applying/international-applicants/applicants-with-foreign-proofs-of-education for more information.  31 August for applicants with German Abitur or Fachhochschulreife
Submit application to	https://hi.fh-aachen.de

# Services

Possibility of finding part- time employment	Applicants should not count on financing their stay in Jülich or Aachen by working part-time during their studies. However, some students are successful in finding part-time jobs either at the university or elsewhere.
Accommodation	Some students live in student dormitories. Other students generally live in shared apartments in which each student has his or her own room. Living areas, bathrooms, and cooking facilities are shared. Furnished rooms start at about 300 EUR per month, plus about 75 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 good condition when you move out, your security deposit will be returned. International students can place their names on a waiting list for the student dormitories.

Career advisory service

https://www.fh-aachen.de/hochschule/career-service/

Support for international students and doctoral candidates

- Welcome event
- Specialist counselling

## **Contact**

### **FH Aachen University of Applied Sciences**

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# International Programmes in Germany - Database

www.daad.de/international-programmes www.daad.de/sommerkurse

#### Editor

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### **GATE-Germany**

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

### Disclaimer

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