

Deutscher Akademischer Austauschdienst German Academic Exchange Service

# INTERNATIONAL PROGRAMMES

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## Master's degree

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## **Automation and Robotics**

TU Dortmund University • Dortmund



## Overview

Degree	Master of Science
Teaching language	• English
Languages	The curriculum of the course is designed in a way that it can be completely taken in English. However, at the discretion of each student, classes similar to or supplementing the curriculum may be chosen in German as well if language proficiency, schedule and content allow for such a choice. In this case, the transfer of credits to the individual student account has to be ratified by the board of examiners.
Full-time / part-time	• full-time
Mode of study	Fully on-site with voluntary online elements
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	Depending on your location, your application deadlines may vary: If your are neither an EU citizen nor have done your BSc in Germany, the rules published on www.automationrobotics.tu-dortmund.de apply. Currently, you need to usewww.uni-assist.de to start your application (from beginning of February) and must finish up by 15 May. In all other cases, you need to apply via ourcampus portal. Please note that other deadlines for portal opening times apply here.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No

The course has three major directions:

- Robotics (of all kinds)
- Process Automation (biochemical systems)
- Cognitive Systems (as control system for collaborative systems)

In general, basic control theory topics are covered as well as sophisticated specialisations into collaborative operation, real time video or image processing, advanced communication between system components or AI-based control systems.

Participants may freely select from ourlist of electives. This list isn't static, but it will undergo periodic changes to reflect scientific progress and keep participants at the forefront of knowledge during their time of studies.

### **Course Details**

Course organisation	<ul> <li>Teaching is split into classroom teaching, tutorials and labs in general. Two further practical parts are a so called project group (run by six+ students) and an individual Master's thesis that completes your education. Both of the latter focus on a unique topic that keeps pace with technological and scientific development.</li> <li>The further you go, the more the individual and practical parts come into focus. Your planned schedule will start with one semester of mandatory classroom courses, intended to bring all students from different backgrounds to a common, solid level that enables the successful completion of consecutive elective classes.</li> <li>Based on your electives, the major of your degree will be derived, namely: <ul> <li>Robotics,</li> <li>Process Automation or</li> <li>Cognitive Systems.</li> </ul> </li> <li>There's no pre-assignment from your side in this regard, but you chose as you go. These electives are likely to establish the contact to the specific institutes of scientific working groups which, later on, will offer topics for the project groups and MSc thesis works which have been mentioned above.</li> <li>Due to the vast spectrum of offered topics, ranging from electrical/electronic problems via advanced application scenarios in all three majors, challenges in programming scenarios and theoretical computer science tasks or mechanical challenges, practically every personal preference of interest can be addressed.</li> </ul>
A Diploma supplement will be issued	Yes
Integrated internships	As this programme is on the MSc level, there are no internships allocated to the curriculum. A candidate may do an internship, but there's no encouragement to do so from the faculty.
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	At time of this writing, the semester contribution is approx. 340 EUR. The most up to date information on this can always be found on the TU pages.
Funding opportunities within the university	No

## **Requirements / Registration**

Academic admission requirements	It is compulsory to show mathematical proficiency and substantial knowledge in computer systems to gain admission in the course. With reference to our examination order (§3), these items are checked only by the amount of classes in the relevant directions in your BSc curriculum. Additional experience (whether from non-academic courses or from work experience) will be disregarded for formal reasons.
Language requirements	<ul> <li>An English proficiency level in the range of the European CEFR C1 or C2 is requested. For instance, this translates to</li> <li>IETLS 7 (overall, academic test)</li> <li>TOEFL ibT 95</li> <li>or similar test frameworks.</li> </ul>
Application deadline	Depending on your location, your application deadlines may vary: If your are neither an EU citizen nor have done your BSc in Germany, the rules published on www.automationrobotics.tu-dortmund.de apply. Currently, you need to usewww.uni-assist.de to start your application (from beginning of February) and must finish up by 15 May. In all other cases, you need to apply via ourcampus portal. Please note that other deadlines for portal opening times apply here.
Submit application to	Students with an international degree and non-EU applicants submit their application online using uni-assist (www.uni-assist.de). All other applicants use the campus portalcampus.tu-dortmund.de. Please note the different deadlines for each platform!

## Services



### We are TU Dortmund University

Communicative – innovative – unique

more: https://www.youtube.com/watch? v=VjidIUt0frk

## **TU Dortmund University**



View of the Math Tower © TU Dortmund University

A university with a unique profile: Since its founding in 1968, TU Dortmund University has developed a special profile encompassing 17 departments ranging from science and engineering to social sciences and cultural studies. The university has more than 30,000 students and 6,500 employees, including 300 professors.

TU Dortmund University has a strong focus on research. The university's departments, e.g. mechanical engineering (with its emphasis on production and logistics), physics, biochemical and chemical engineering, statistics and computer science, and education research, are well known for their outstanding research achievements both nationally and internationally.

Students at TU Dortmund University can choose from classical subjects and innovative courses of study such as medical physics or degree programmes in spatial planning, statistics, and journalism. A particular focus is on teacher training. TU Dortmund University is one of only a few universities in Germany that offers professional teaching qualifications for all types of schools.

## • University location

With around 6,500 employees, TU Dortmund University is one of Dortmund's largest employers and has helped drive the transformation of the city and the Ruhr region from Europe's largest coal mining and steel production area into a high-tech and service location as well as a cultural metropolis.

Dortmund is located in the heart of Europe. It is the largest city in the Ruhr region and is home to the Borussia Dortmund (BVB) soccer club. All of this contributes to the many advantages that will make studying in Dortmund an unforgettable experience. Apart from destinations for football fans, there are many other places of interest to discover in Dortmund and the Ruhr region.

Of particular importance for the development of the region is the University Alliance Ruhr (UA Ruhr), in which TU Dortmund University, the University of Duisburg-Essen, and Ruhr University Bochum joined forces more than a decade ago. Since the founding of the UA Ruhr, the Ruhr area has developed into one of the strongest science regions in Germany.

## Contact

### **TU Dortmund University**

Fakultät für Elektrotechnik und Informationstechnik

Ralf Burda

44221 Dortmund

Tel. +49 2317554514

- Course website: https://www.automationrobotics.tu-dortmund.de

https://www.youtube.com/@TUDortmund\_official/about

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## **International Programmes in Germany - Database**

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

#### Editor

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

### GATE-Germany

Consortium for International Higher Education Marketing 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".

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