



Deutscher Akademischer Austauschdienst  
German Academic Exchange Service



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# Master's degree



## Digital Engineering (DigiEng)

Otto von Guericke University Magdeburg • Magdeburg



## Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none"><li>• English</li><li>• German</li></ul>
Languages	The programme can be studied 100% in English as well as 100% in German. Knowledge of both languages increases the number of courses students can choose from.
Programme duration	4 semesters
Beginning	Winter and summer semester
Application deadline	Winter semester: 15 May (international applicants) Summer semester: 15 November (international applicants)  Dates may differ for the current semester, please check the programme website.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>The Master's degree programme targets students with a Bachelor's degree in Engineering or Computer Science. The course of study imparts comprehensive knowledge for the development, construction and operation of complex technical products as well as systems to be found in industrial engineering or in the automotive industry. The degree programme provides important competences for realisation of both academic research and advanced industrial development.</p> <p>Unique to this course is an extraordinary high share of project work, which will prepare the students for special challenges of interdisciplinary work. Many projects offer collaboration with world leading industrial partners or research institutes. Another significant focus of the programme is on human interaction while working in interdisciplinary engineering teams and the management of such teams.</p>

# Course Details

## Course organisation

Students who have completed a Bachelor's degree in an engineering discipline will take computer science-related modules in the first semester (15 CP) and complete their education in engineering with one or two modules (5 CP). Students who have completed a Bachelor's degree in a computer science-related degree programme will take modules in engineering subjects in the first semester (15 CP) and complete their computer science education with one module (5 CP).

Following this first semester, students receive specific education in topics which cross the frontier between engineering and computer science. These topics are grouped into four categories:

- **Team projects:** the aim of the team projects, apart from gaining knowledge in the complementary sciences, is mainly to build up key competences for interdisciplinary work on related topics, which will be achieved by students working in teams supervised by teaching staff members from the areas of engineering or computer science.
- **Methods of digital engineering:** the aim here is to procure professional knowledge of current technological developments as they appear through the use of technologies such as virtual and expanded reality, integrated product development, etc.
- **Methods of computer science:** methodical knowledge of the development and input of current computer science technologies will be imparted.
- **Human factors:** the main focus is on soft skills as well as human and psychological factors in engineering activities.

In the third semester, specialised lectures will be offered on certain domains of application (e.g. process engineering, logistics, mechatronics, power engineering, medical engineering, etc.), on the one hand, and on technological domains (e.g. visualisation technology, interaction, interoperability, security, reliability, etc.), on the other hand. At the same time, students will be integrated into a digital engineering project, in which they can participate in current research projects offered by cooperating chairs, making use of resources made available by partners in industry-related research, such as the Fraunhofer Institute for Factory Operation and Automation IFF. Apart from consolidating their professional competences, students will be introduced to academic work, e.g. by having the opportunity to collaborate on scientific publications or to participate in scientific events.

Master's thesis: The scientific thesis will be written on a current topic in digital engineering. Ideally, it can build on the research work performed in the third semester.

## A Diploma supplement will be issued

Yes

## International elements

- Projects with partners in Germany and abroad
- International guest lecturers
- Integrated/optional study abroad unit(s)

## Integrated/optional study abroad unit(s)

Possibility to study abroad with numerous ERASMUS partners; double degree programme with SIIT (Thailand)

## Integrated internships

All students will participate in a digital engineering project. Here, they will be integrated into current research projects offered by cooperating chairs, making use of resources made available by partners in industry-related research, such as the Fraunhofer Institute for Factory Operation and Automation IFF. Apart from consolidating their professional competences, students will be introduced to academic work, e.g. by having the opportunity to collaborate on scientific publications or to participate in scientific events.

## Course-specific, integrated German language courses

No

Course-specific, integrated English language courses No

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## Costs / Funding

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Tuition fees per semester in EUR None

**Semester contribution** Currently, the semester fee is 277.90 EUR. It covers services offered by the "Studentenwerk" (student union) and the student representatives. Enrolled students receive the "Deutschland-Semesterticket" for free use of public transport throughout Germany, along with student discounts in the campus cafeteria, and more.

**Costs of living** A minimum of 934 EUR per month must be budgeted for accommodation, cost of living, health insurance, books, and miscellaneous expenses. In comparison with many other towns and cities, the rental prices in Magdeburg are still relatively low. There are no tuition fees for the majority of programmes, and the semester fee already includes the cost of bus and tram travel within Magdeburg. The following link provides a fair picture of the cost of living in Magdeburg: [Finance](#).

**Funding opportunities within the university** No

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## Requirements / Registration

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**Academic admission requirements** General admission requirements and information regarding the application procedure for international students can be found at: [www.ovgu.de/unimagdeburg/en/Study/Full\\_Time+Studies.html](http://www.ovgu.de/unimagdeburg/en/Study/Full_Time+Studies.html)

Degree-specific admission requirements and deadlines can be found at: [www.ovgu.de/unimagdeburg/en/Study/Study+Programmes/Master/Digital+Engineering.html](http://www.ovgu.de/unimagdeburg/en/Study/Study+Programmes/Master/Digital+Engineering.html)

See also: <http://www.digi-eng.ovgu.de/en/>

**Language requirements** Applicants must provide proof of their German or English skills: level C1 (according to the Common European Framework of Reference for Languages) or native speaker.

**Application deadline** Winter semester: 15 May (international applicants)  
Summer semester: 15 November (international applicants)

Dates may differ for the current semester, please check the programme website.

**Submit application to** Otto-von-Guericke-Universität Magdeburg  
c/o uni-assist e.V.  
11507 Berlin  
Germany

[www.uni-assist.de/en/](http://www.uni-assist.de/en/)

# Services

## Possibility of finding part-time employment

It is possible to find a part-time job as a research or student assistant at one of the faculties or in the university administration (maximum: 80 hours per month). Other opportunities are student jobs at different companies, restaurants, and shops. Information on how to find a job can be found on our website: [Career Service](#).

## Accommodation

The "Studentenwerk" (student union) in Magdeburg manages the on-campus halls of residence (mostly one- to four-room apartments). Currently, the monthly rent ranges from 178 EUR to 421 EUR per room (approx. 12 to 35 square meters), depending on the size and furnishing. Rooms in the halls of residence are limited in number. The accommodation application can be found on the website of the Studentenwerk.

The Studentenwerk assists all new students in finding adequate accommodation, either on or off campus. Private accommodation is available on the Magdeburg accommodation market. However, fully furnished units are in somewhat short supply.

## Career advisory service

<https://www.ovgu.de/en/careerservice.html>

## Support for international students and doctoral candidates

- Specialist counselling
- Welcome event
- Buddy programme
- Cultural and linguistic preparation



## Study and Research at the Otto von Guericke University Magdeburg

The Otto von Guericke University Magdeburg, founded in 1993, is a young university with nine faculties and about 14,000 students from all around the world. In terms of research and teaching, the focus of the dynamic and cosmopolitan university is on meeting the challenges of the modern knowledge society. The campus is modern and compact, and it is located in the centre of Magdeburg.

» more:  
<https://youtu.be/6nbfAExH6B0>

# — Otto von Guericke University Magdeburg —



Otto von Guericke University Magdeburg (OVGU) was founded in 1993 and is one of Germany's youngest universities. It was formed by a merger of the existing technical university, the teacher training college, and the medical school. The university now comprises nine faculties and about 13,000 students and is becoming increasingly more important as a centre for education and research. It plays an important role in the regional capital of Magdeburg, which is developing into a centre for business, scholarship, and culture. The university is a member of many organisations and committees. It is named after Otto von Guericke (1602-1686), Magdeburg's famous citizen, whose pioneering research into the vacuum brought him renown well beyond Germany's borders. The university aspires to teach and research in the tradition of this great scientist, philosopher, and engineer and to continue with his humanist work.

At the Otto von Guericke University Magdeburg, students can choose from more than 90 degree courses in various areas of study and specialisation. In addition to these, a range of postgraduate courses are offered. There are also many possibilities to combine different subjects across faculties. The conditions for students are ideal, with modern laboratories, experimental workshops, and clinics equipped with high-performance computers and an excellent staff-student ratio. The offer of a sound, thorough education, combining a high level of theoretical expertise with practical experience, makes Magdeburg an attractive choice.

In recent years, research at the university has gone through a decisive change, from applied research to innovative, fundamental research. Among the many areas represented, the neurosciences, immunology, non-linear systems, new materials, processes and products, computational visualistics, social transformation, communication, and culture deserve a special mention. The university hopes to make a significant contribution to economic and social development in Magdeburg and the surrounding area through its research. Equally, disciplines such as humanities, economics, and management, which have been established more recently at the university, have already made their mark on our research profile. Special emphasis is placed on close cooperation between teaching staff and students.

Magdeburg also attracts students because it offers accommodation with either a single bed or twin beds in its halls of residence.

[Take a virtual trip through our international campus!](#)



## 📍 University location

As the capital of the federal state of Saxony-Anhalt, Magdeburg is the seat of the state parliament and administration. The town is more than 1,200 years old and has about 236,000 inhabitants. Its excellent location on the River Elbe and its proximity to Berlin, Hanover, and Leipzig have proven to be a significant asset to the city. In the 19th century, the town developed into an important industrial and trade centre. Nowadays, another quite distinctive feature of Magdeburg is its considerable research and innovation potential at the university, the Max Planck and Fraunhofer research institutes, and the university of applied sciences, which are all located in close proximity to each other. Magdeburg offers an extensive park and garden landscape, a rich cultural and sports life, and an ideal atmosphere for being a student. Please visit the website: [www.magdeburg.de](http://www.magdeburg.de).

# Contact

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🌐 Course website:

<https://www.inf.ovgu.de/inf/en/Study/Before+you+start+studies/Study+courses/Master+courses/Digital+Engineering.html>

📘 <http://www.facebook.com/OVGU.Magdeburg>

🐦 <http://www.twitter.com/OVGUpresse>

🌐 <https://www.linkedin.com/school/otto-von-guericke-university-magdeburg/>

📷 [http://www.instagram.com/uni\\_magdeburg](http://www.instagram.com/uni_magdeburg)

📺 <https://www.youtube.com/channel/UCX7sej01ntgujN3NilAUkUw>

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# 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

DAAD - Deutscher Akademischer Austauschdienst e.V.  
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D-53175 Bonn  
[www.daad.de](http://www.daad.de)

## 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".

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