



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



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Master's degree



Biomechanical Engineering

Otto von Guericke University Magdeburg • Magdeburg

Overview

Degree	Master of Science
Teaching language	<ul style="list-style-type: none">English
Languages	Courses are held in English (100%).
Programme duration	4 semesters
Beginning	Winter semester
Additional information on beginning, duration and mode of study	More information on the Master's degree programme can be found here: https://www.bime.ovgu.de/
Application deadline	Application deadline for <ul style="list-style-type: none">applicants with a German Bachelor's degree is 15 Septemberapplicants with an international Bachelor's degree is 15 July for the following winter semester.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	No
Joint degree / double degree programme	No
Description/content	<p>With respect to the demographic evolution and new rising challenges such as autonomy and mobility in senior life or aspects of regenerative medicine, graduates are offered wide occupational fields of recent and popular jobs with great potential.</p> <p>The Master's degree programme aims at generating professional and methodical competences that allow a comprehensive analysis of biomedical-technical relationships by using basic scientific knowledge. Concerning the aspect of lifelong learning, graduates will be able to steadily gain new and complex knowledge.</p> <p>Combining specific knowledge in mechanical engineering, medicine, biology and science of sports and motricity helps to realise an interdisciplinary approach and allows the transfer of the basics and principles of engineering into biological and biomedical systems. Thus, the design and development of biomedical products that work on mechanical principles can be supported comprehensively and adapted on recent challenges. The curricular course offering includes both</p>

specific and interdisciplinary modules in the fields of materials science, mechanical engineering and construction, mechanics, human medicine and biology and medical device regulation.

Students are offered two different specialisation tracks within the course programme – endoprosthetics and exoprosthetics. All complex requirements with respect to the development, design, calculation, adaptation, installation and purposive improvements of sustainable medical devices will be addressed with four dedicated modules for each specialisation track to provide academic education and professional qualification within the chosen specialisation.

Course Details

Course organisation

The figure shows the schematic structure of the Master's degree programme Biomechanical Engineering, which consists of the following:

- a mandatory area with 10 modules of 5 CP each
- student-individual choice of one of the specialisations (Exoprosthetics or Endoprosthetics) with four modules of 5 CP each
- one interdisciplinary project of 5 CP
- three elective modules of 5 CP each, chosen from the broad range of modules available for this purpose
- the final Master's thesis

The specialisation area and the elective area enable the students to pursue individual inclinations and interests or to take into account subject-specific requirements of the later field of activity. The mandatory and elective areas are distributed over the first three semesters. The project work is designed as an interdisciplinary project and is recommended to be arranged within the third semester.

The programme concludes with a final thesis – the Master's thesis – and its presentation in a scientific colloquium. The thesis should show that the students are able to work on a problem independently, scientifically and professionally within a given period of time.

[» PDF Download](#)

A Diploma supplement will be issued

Yes

Integrated internships

Students have the additional option to spend a semester abroad at a partner university or to perform an internship. Credit transfer of studies performed at a partner university during the Master's programme is possible.

Course-specific, integrated German language courses

No

Course-specific, integrated English language courses

No

Costs / Funding

Tuition fees per semester in EUR

None

Semester contribution

Currently, the semester fee is 155.20 EUR. It covers services offered by the "Studentenwerk" (student union) and the student representatives. Enrolled students receive a semester ticket for

free use of public transport, student discounts in the campus cafeteria, etc.

Costs of living

A minimum of 861 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

Yes

Description of the above-mentioned funding opportunities within the university

The university provides a limited number of excellence scholarships. Eligible candidates are students in advanced semesters who clearly show above-average results. Scholarships cannot be provided for new students.

Requirements / Registration

Academic admission requirements

Entry requirements

- Adequate Bachelor's degree with at least 180 CP and a minimum average grade of 2.5 (as averaged result of all provided examination performances)
- Proof of professional qualification by providing at least:
 - 10 CP in mathematics
 - 10 CP in natural science
 - 15 CP in engineering science (mechanical engineering)
 - 5 CP in materials science

A provisional admission on conditions can be made to a maximum extent of 30 CP.

Please note that as an additional admission requirement, proof of measles vaccination is necessary due to events taking place on the campus of the University Hospital Magdeburg.

Language requirements

English language skills on the C1 level according to the Common European Framework of Reference for Languages need to be attested. One of the following certificates has to be submitted for application:

- TOEFL: C1 (95–120 iBT) (We also accept TOEFL iBT® Special Home Edition.)
- IELTS: C1 (7.0) (We also accept IELTS Indicator.)
- CAE (Certificate of Advanced English): C1 Advanced
- PTE Academic: C1 (76–84)

An assessment of equivalence of a different certificate can be requested at the examination committee of the Faculty of Mechanical Engineering as well.

Application deadline

Application deadline for

- applicants with a German Bachelor's degree is 15 September
- applicants with an international Bachelor's degree is 15 July

for the following winter semester.

Submit application to

Applicants with a German Bachelor's degree apply directly at Otto von Guericke University Magdeburg (OVGU): https://www.ovgu.de/immatrikulation_bewerbung.html

Applicants with an international Bachelor's degree apply via uni-assist:
<https://www.uni-assist.de/>

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 200 to 370 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.

Support for international students and doctoral candidates

- Welcome event
- Buddy programme
- Visa matters
- Pick-up service
- Specialist counselling
- Cultural and linguistic preparation

General services and support for international students and doctoral candidates

Advisory service for international students is provided by our International Office:
<https://www.ovgu.de/international.html>

Contact

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🌐 Course website: <https://www.bime.ovgu.de/>

📘 <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

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

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International Programmes in Germany - Database

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

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Disclaimer

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