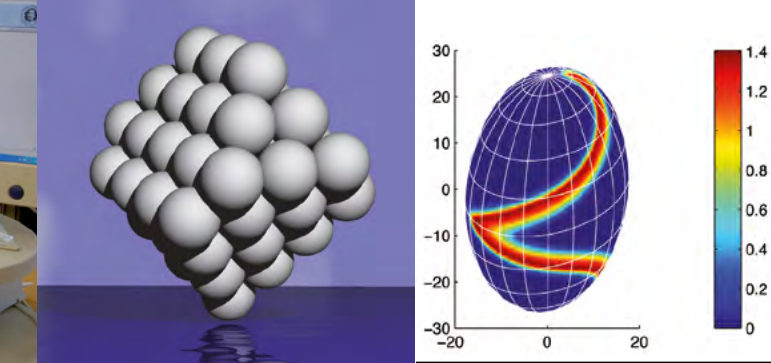




MATH FACULTY OF MATHEMATICS



→ **Otto von Guericke University Magdeburg**

The Otto von Guericke University Magdeburg focuses on engineering and natural sciences, economics and management as well as medicine. The university, which was founded in 1993, has also found expansion to be essential in the areas of social sciences and humanities in order to meet the challenge of today's knowledge society. Over 14,000 students, including over 2,000 international students, are enrolled in over 80 programmes across the nine faculties. The dynamic, high-profile university offers state-of-the-art facilities, excellent student support and practical, hands-on education. The university's main areas of research and transfer are interdisciplinary in nature and strengthened on a lasting basis by the neighbouring non-university research institutes. Otto von Guericke University is characterised by openness and tolerance in its research and teaching.

Research focuses

- Neuroscience
- Dynamic Systems

Transfer focuses

- Automotive
- Digital Engineering
- Renewable Energies
- Medical Technology
- Fluidised Bed Technology

Otto von Guericke (1602-1686)

The founder of experimental physics and famous son of the city of Magdeburg gives the university its name. The university aspires to teach and research in the tradition of this scientist, philosopher and engineer.



A Faculty Overview

The key to advanced technology

"If it weren't for mathematics we would still be in the dark."
(Werner von Siemens)

Innovations in areas such as telecommunications, energy, process technology, finances, transport, biology and much more are very much based on state-of-the-art mathematical methods.

Mathematics as a science ...

... is therefore laying the foundations for the key technologies of the 21st century. This is partly a response to specific application questions. But it is often the case that research findings developed on a purely mathematical basis prove to be the key to new developments.

Our faculty ...

... therefore has a very strong profile in fundamental mathematical research and in interdisciplinary projects, e.g. in line with the „Dynamic Systems - Biosystem Technology“ research centre founded in conjunction with the Max Planck Institute.

Those studying mathematics at OVGU,

- get to know a fascinating science,
- obtain a perfect starting position for careers in a range of industries,
- are precise, structured thinkers with logical argumentation,
- utilise mathematics algorithmically from the very first semester,
- receive individual support in an excellent scientific environment,
- have excellent career prospects, irrespective of the current economic situation.

Qualifications and courses

⇒ Bachelor / Master of Science (6 semesters, 4 semesters)

Mathematics in one of the focus areas

- Mathematics
- Computational mathematics
- Technomathematics
- Business mathematics

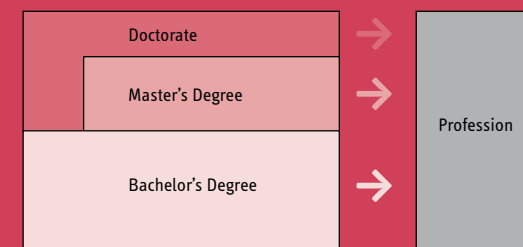
⇒ Bachelor of Science (7 semesters)

• Applied statistics (together with Magdeburg-Stendal University of Applied Sciences)

⇒ Master of Science (4 semesters)

- Statistics

Doctorate, Master, Bachelor, career



In the mathematics bachelor's course

- you will learn the major concepts, methods and areas of application of modern mathematics,
- you will extend your mathematical skills with an elective such as information technology, physics, electrical engineering, mechanical engineering or economics,
- you will be qualified to start your career after three years of study,
- you will lay the foundations for a subsequent masters course,
- you can start one of the focus areas of computational, technical or business mathematics in the 4th semester.

Structure of the bachelor's course

6 Semesters ↑	Consolidation (inc. dissertation)	Elective
	Extension (e.g. numerics, optimisation, stochastics)	
	Principles (analysis, linear algebra, algorithmic mathematics)	

The proportion of mathematical content in the course depends on the option selected at the beginning of the 4th semester:

Mathematics course



Options - technical, computational or business mathematics



→ **Mathematics course**

The right choice for anyone who really enjoyed the basic scientific side of maths. A wide range of lectures in the 3rd year provide the option of focussing on different areas while also discovering cross-references within mathematics.

Applied subjects are never lost from sight. Applied algebra consists of coding theory and cryptography, for example, optimisation in strategic and operative planning in business, analysis and investigation of physical and engineering models, numerics in the development of computer-based simulation processes for such models and mathematical stochastics in the modelling of random phenomena and data analysis.



Eugenia Holm

Why mathematics? "Studying mathematics opens doors in many different industries. You learn to abstract, to structure relationships and argue them accurately - these are skills which are universally appreciated."

Why Magdeburg? "The city is exactly the right size. The university has excellent, modern facilities. The teaching staff are keen to meet individual needs, which was very helpful for me as a student with a child."

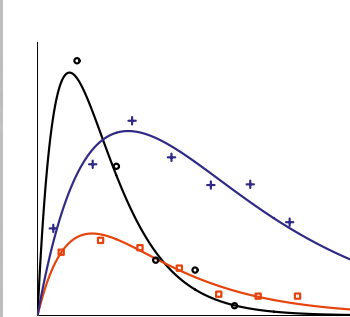
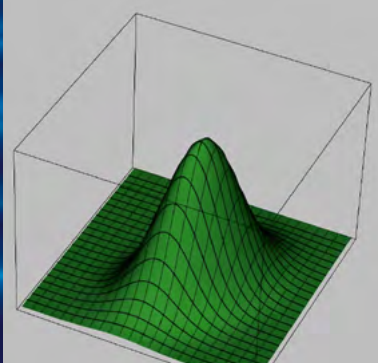
→ **Computational mathematics course**

Nearly all commercial applications of mathematics are computer-based. The development and application of software play an extremely important role. The computational mathematics course takes these factors into consideration by expanding the information technology elective into a second focus area.

This direction fits in very well with consolidation in the mathematical subjects of numerics (simulation of technical and physical processes), computer-oriented algebra (e.g. coding theory, cryptography) and optimisation.

→ **Technical mathematics course**

This is an excellent option for those who are interested in the application of mathematical processes in key technologies. They can build up their technical elective (electrical engineering, mechanical engineering or process technology) to a second focus area and aim to work in research and development within a technology-oriented company.



→ Business mathematics course

Especially suited to those who are interested in the application of mathematical methods to economic questions. This requires opting for the elective in economics, which is expanded to a second focus area. At a mathematical level, the in-depth knowledge of optimisation and stochastics taught in the 3rd year play an important role.

Why mathematics? "It is difficult to imagine what frequency allocations for telephone antennae have in common with hotel room reservations. However, in mathematical terms, they represent the same problem. Thinking in abstract structures is what makes maths so fascinating for me."



Kathrin Niermann

Why Magdeburg? "The uni not only has excellent facilities, but also an ideal support ratio thanks to its size. The course content communicated prepares students for either a career in business or a scientific career. I was so interested in the academic side of the course that I stayed on at the uni after I graduated."

→ Applied statistics in bachelor's course

- you will learn the major concepts, methods, processes and applications of modern statistics,
- you will not only receive a thorough introduction to the fundamentals of mathematics and an in-depth training in statistics, but also training in information technology which is tailored to the requirements of statistics and basic training in various applied subjects, such as engineering, economics, natural science, environmental science and biosciences,
- you can learn practical statistics from lectures, exercises, seminars and projects, plus a three month work experience,
- you will be qualified to start your career as a statistician in business or industry or in research facilities and institutions after three and a half years of study,
- you will lay the foundations for a subsequent master's course

The bachelor's course is offered in conjunction with Magdeburg-Stendal University of Applied Sciences and is therefore very application-oriented.

Further information can be found at www.statistik.ovgu.de.

Advice, Applications and Admission Requirements

There are no admission restrictions for courses at the faculty of mathematics. You must have obtained a general university entrance qualification in order to be admitted to a study programme (Abitur) or another equivalent, recognised university admission qualification. Advice

For detailed information on the content of the courses, course applicants are asked to contact the student office of the Faculty of Mathematics directly. They also have the current examination and course regulations.

Faculty of Mathematics
of Otto von Guericke University Magdeburg
Universitätsplatz 2
39106 Magdeburg
Student Office, Building 02, Room 218
Dr Burkhard Thiele
Tel.: +49 391 67-52889
Fax: +49 391 67-12758
E-mail: fma@uni-magdeburg.de
www.math.uni-magdeburg.de

Application:

Applications for course places must be sent directly to Otto von Guericke University Magdeburg. You can use the online application form. There are instructions here: www.uni-magdeburg.de/Studieninteressenten.html

Contact for any queries relating to application:

Dezernat Studienangelegenheiten (Department of Academic Affairs)
Abteilung Studentensekretariat (Student Secretariat Department)
Tel.: +49 391 67-12260

Send your application to:

Campus Service Center
The CSC team can help with any questions relating to your course.
Web: www.servicecenter.ovgu.de
E-mail: servicecenter@ovgu.de
Tel.: +49 391 50000

Send your application for accommodation to:

Studentenwerk Magdeburg (Magdeburg Student Union)
Anstalt des öffentlichen rechts (Public Law Institution)
Abteilung Wohnheime (Resident Housing Department)
Postfach 4053, D-39015 Magdeburg
www.studentenwerk-magdeburg.de

PROGRAM INFORMATION

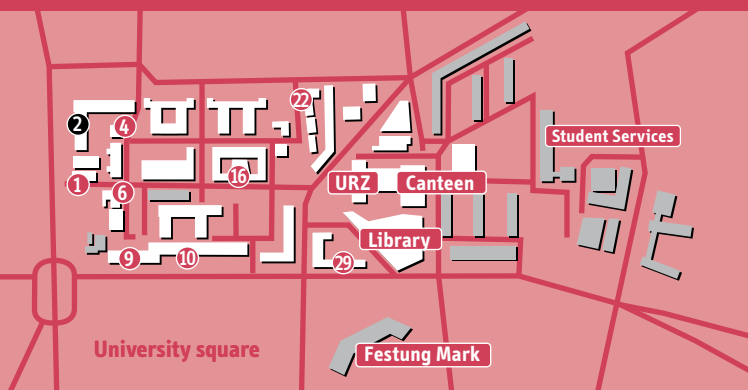
Faculty of Mathematics

MATH FACULTY OF MATHEMATICS



THE UNIVERSITY CAMPUS

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|--|---|
| 1 Campus-Service-Center | 10 Faculty of Process and Systems Engineering |
| 2 Faculty of Mathematics | 16 Faculty of Natural Sciences |
| 4 Principal's Office | 22 Faculty of Economics and Management |
| 6 Department of Academic Affairs | 29 Faculty of Computer Science |
| 9 Faculty of Electrical Engineering and Information Technology | |
| 10 Faculty of Mechanical Engineering | |



The main building of the Faculty for the Humanities, Social Sciences and Education is located in Zschokkestrasse 32.