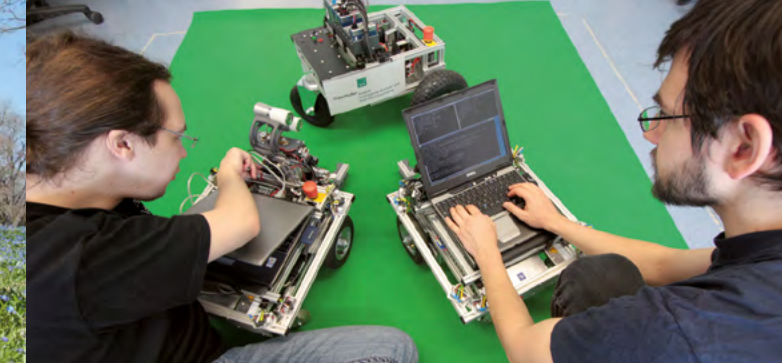




INF FACULTY OF
COMPUTER SCIENCE



→ **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

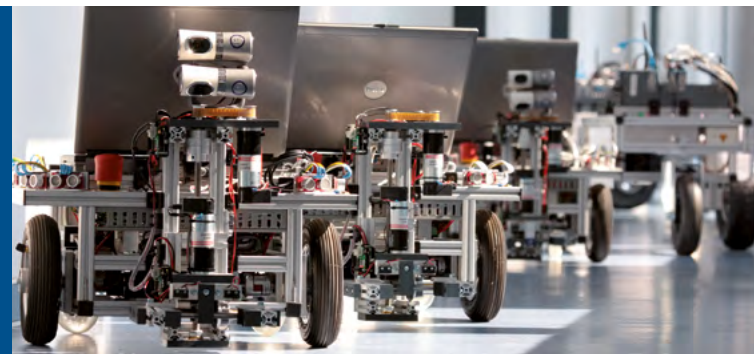
- Neuroscience
- Dynamic Systems

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.



The Faculty at a Glance

The Faculty of Computer Science is one of the largest computer science faculties in the state of Saxony-Anhalt with nearly 20 professorships. The education it provides can be summarised in three words:

practical. personal. interdisciplinary.



practical.

The faculty offers its students ideal organisational conditions. Work in student teams is fostered and special emphasis is placed on teaching and applying key competencies and methodological skills. Its practical orientation is exemplified by a host of special equipment and student labs, and by integrating internships into all of its bachelor's programmes. In addition, students can take advantage of combining education and vocational training.

personal.

The university fosters close contact between its students and professors. There is also active support offered during the degree programme in the form of mentoring programmes and the student council. Academic advisors are also on hand for every degree programme. An alumni programme helps maintain a long-term relationship with graduates.

interdisciplinary.

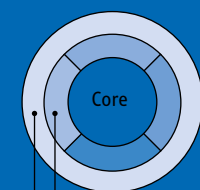
All of our students broaden their horizons in other subjects as well, including the humanities, engineering, economics and medicine. This allows our graduates to acquire jobs in many different sectors such as computer and software production, industry, insurance and banking, administration, R&D and education.

Degree Programmes at the Faculty of Computer Science:

All basic courses are accredited and have a uniform structure. The core modules in the bachelor's programmes ensure that all students receive basic knowledge of computer science. In addition to this, each degree programme has its own compulsory modules that impart the knowledge specific to that course of study. In their final semesters students choose a specialisation subject to study more intensively. The bachelor's programme lasts seven semesters and includes an internship. The follow-on master's programme lasts three semesters. Here the students choose three subjects from elective modules to specialise in.

Structure of the degree programmes:

Semester	10	Master's thesis	Master's
	9	Specialisation subjects	
	8		
	7	Bachelor's thesis	Bachelor's
	6	20 week internship	
	5	Core subjects, compulsory subjects and electives	
	4		
	3		
	2		
	1		



Compulsory subjects
Elective subjects

→ **The Computational Visualistics Programme**

This interdisciplinary bachelor's and master's programme is only offered at two universities in Germany. It covers computer science methods and tools for processing image files and for generating images from computer-internal models. In addition to basic knowledge, other areas of computer science are covered which involve producing, storing, analysing and generating image-related information. In particular, this includes algorithmic geometry, computer graphics, image processing and visualisation. In order to enable students to find solutions to complex application problems, their education is supplemented by social science and educational science subjects (e.g. psychology, media education), design and an application subject in which computer-assisted analysis and the generation of images play an integral part (medicine, image information technology, materials science or engineering and design).

Career Perspectives:

Graduates of computational visualistics typically find work in many sectors including the automotive industry, medical engineering, media and the entertainment industry. The application subjects in the computational visualistics programme are specifically chosen to prepare students for the most important areas of application.

Prerequisites for Studying Computational Visualistics:

Applicants should have a good knowledge of mathematics and scientific technology subjects. In addition, it is expected that the student be able to acquire in-depth knowledge and insights into mathematics and technology and to apply these to computer science and computational visualistics problems.

The programme can also be completed as a dual study programme (parallel to vocational training).

→ **The Computer Science Programme**

The bachelor's and master's programmes in computer science cover the basics in designing and creating software-intensive systems that industry and society are increasingly dependent upon. Methods, concepts and techniques are taught for mastering highly-complex correlations that extend far beyond pure programming. This program particularly consists of methods for modelling and formalising problems, concepts for automated processes for solving these problems and techniques for implementing a functional, true system. Computer science students study algorithms and data structures, theoretical computer science, practical computer science and the application of these areas in other fields, for example in medicine, telecommunication, mechanical engineering and electrical engineering.

Career Perspectives:

Computer science graduates design and create new software-based products in data processing industries. They design and develop innovative systems in areas of application such as the automotive industry, mechanical engineering or consumer electronics. They work as system analysts, consultants or sales representatives of DP-supported systems, or are employed as qualified specialists in training and further education.

Prerequisites for Studying Computer Science:

Applicants should have a good knowledge of mathematics and scientific technology subjects. In addition, it is expected that the student be able to acquire in-depth knowledge and insights into mathematics and technology and to apply these to computer science problems.

The programme can also be completed as a dual study programme (parallel to vocational training).

→ **The Computer Systems in Engineering Programme**

In this bachelor's and master's programme, engineering sciences and computer sciences are consolidated to form one degree programme. Application subjects at the Otto von Guericke University Magdeburg are: process and systems engineering, mechanical engineering/design engineering, mechanical engineering/production engineering and electrical engineering.

Career Perspectives:

Graduates in computational engineering science can look forward to future careers in developing and providing software solutions that make engineering processes safer and more effective. This includes simulation solutions for product design, database applications for product data administration, control of production processes in real-time operation and skills for information and quality management.

Prerequisites for Studying Computational Engineering Science:

Applicants should have a good knowledge of mathematics and scientific technology subjects. In addition, it is expected that the student be able to acquire in-depth knowledge and insights into mathematics and technology and to apply these to computer science and computational engineering problems.

The programme can also be completed as a dual study programme (parallel to vocational training).



→ The Business Informatics Programme

The bachelor's programme in business informatics combines sound basic scientific knowledge of economics and an introduction into subject-related legal principles and comprehensive scientific analysis. It prepares the student for the job-market and a career in business informatics. This programme is designed to be consecutive and students can start the master's programme directly after completing the bachelor's programme.

The business informatics master's programme enables students to design information and communication systems in organisations, to support these systems throughout their entire life cycle and to take on managerial functions.

A special feature of the business informatics programme in Magdeburg is its location within the faculty of computer science so that it is associated with a considerably higher amount of computer science. The SAP-UCC (SAP University Competence Center) has been located at the faculty for many years. Here special SAP software can be used centrally and inexpensively.

Career Perspectives:

Graduates of business informatics typically find careers as industry and corporate consultants, in insurance and banking, in computer and software production, in training and further education and in research institutes at universities and companies.

Prerequisites for Studying Business Informatics:

Applicants should have a good knowledge of mathematics, economics and scientific technology subjects. In addition, it is expected that the student be able to acquire in-depth knowledge and insights into mathematics and technology and to apply these to computer science and business informatics problems.

The programme can also be completed as a dual study programme (parallel to vocational training).

→ The Data and Knowledge Engineering Programme

This four-semester long master's programme is oriented towards both German and international students. In this master's programme students learn about the analysis, structuring and integration of large inventories of data, information and knowledge. In addition to basic theoretical principles (including data mining and warehousing, database technologies, mechanical learning, and language and models for knowledge representation), a practical connection is established through interdisciplinary events. Application-based projects and skills for designing innovative solutions are also taught. Fields of application include the natural sciences, biotechnology, security, industrial manufacturing and aspects of controlling and economics.

→ The Digital Engineering Programme

This four-semester long master's programme is oriented towards both German and international students with an engineering or computer science background. Students acquire comprehensive knowledge in developing, designing and operating complex technical products and systems used, for instance, in production engineering or the automotive industry. Special projects allow students to look more in-depth at computer science and engineering methods and fields of application. The aim, content and scope of these projects surpass similar projects thanks to collaboration with industry.

→ Teaching Computer Sciences

Students receive qualifications to teach computer science at grammar schools, secondary schools and vocational schools. This can partly be done on an extra-occupational basis. Furthermore, training of computer science educators is also offered in the form of a one-semester post-graduate programme and as one-day events.

Applications and Admissions Criteria

Information and Advice:

Otto von Guericke University Magdeburg
Registrar's Office at the Faculty of Computer Science
Postfach 4120, 39016 Magdeburg
Building 29, Room 101
Tel. +49 391 67-58662
E-mail pa@cs.uni-magdeburg.de
www.fin.ovgu.de

Admissions Restrictions:

There are **no admissions restrictions** for all programmes.

Requirements for admission:

The right to be admitted to study is usually established by: A general qualification for university admittance, a relevant subject-related higher education entrance qualification, or authorisation by the Saxony-Anhalt Ministry of Culture and Education to study at a university.

Start of Programme:

For all bachelor's and master's programmes starting in summer semester (1 April) and winter semester (1 October)

Applications:

For winter semester:
Applications can be submitted between 1 June and 15 September of that year for all Faculty of Computer Science programmes.

For summer semester:

Applications can be submitted between 1 January and 15 March of that year for all Faculty of Computer Science programmes

Special submission dates apply to international applications.

These dates can be found at:

www.ovgu.de/studium/inhalt/internationale_studieninteressenten.html

Applications:

www.uni-magdeburg.de/Studieninteressenten.html

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Postfach 4120, 39016 Magdeburg
Tel. +49 391 67-12260, -67-12285

Send student housing applications to:

Student Union Magdeburg
Institution under public law
Department of Student Housing
Postfach 4053, 39015 Magdeburg
www.studentenwerk-magdeburg.de

PROGRAM INFORMATION

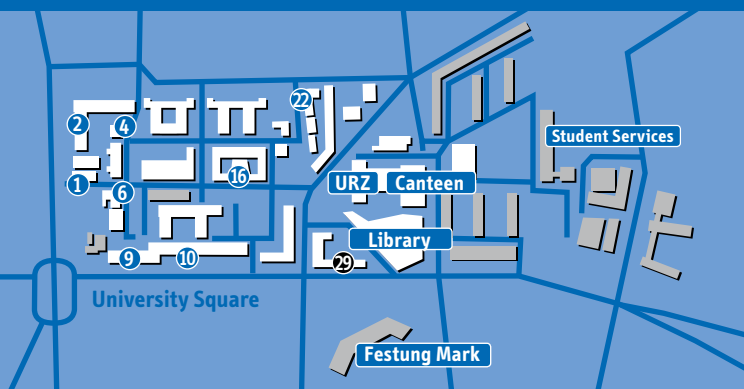
Faculty of Computer Science

Now also starts
in summer term!



THE UNIVERSITY CAMPUS

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



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



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