

The Faculty at a Glance

The Faculty offers, in addition to a BA program that provides a solid computer science foundation, interdisciplinary programs that integrate aspects of visualistics, engineering or business sciences in the curricula: Computational Visualistics, Computer Systems in Engineering and Business Informatics. All programs are accredited.

Degree Programms at the Faculty of Computer Science

- Computervisualistik (B. Sc. / M. Sc.)
- Informatik (B. Sc. / M. Sc.)
- Ingenieurinformatik (B. Sc. / M. Sc.)
- Wirtschaftsinformatik (B. Sc. / M. Sc.)
- Data and Knowledge Engineering (M. Sc.)
- **DigitalEngineering (M. Sc.)**
- Lehramtsausbildung Informatik



→ **Master Degree Digital Engineering**

The Master Digital Engineering (DigiEng) is the Future of Engineering. In almost all domains of engineering applications (e.g. automotive, automation industry, energy, ...), there is a constant rise of information technology. New innovations are most often based on additional and/or more complex software tools. Examples include new firmware reducing fuel consumption of a car's engine, smart meters controlling electrical household for better use of regenerative energies or computer simulations for building virtual products and/or factories.

This trend continuously accelerates with the spread of mobile communication and increase of network bandwidth. In near future, it will be possible to link every single smallest piece of electronic equipment with a unique IP-V6 number. This allows completely new scenarios like self-organizing networks of traffic lights, which adapt their green phase to real-time traffic or novel business models, where functionalities in well-known products can be booked on demand.

As a consequence, designing future products and realizing new innovations will become a very interdisciplinary challenge. This is what we call: **Digital Engineering!**

Semester	4	Master Thesis (30)		
	3	Professional specialisation (18)	Digital Engineering Project (12)	
	2	Interdisciplinary team-project (6)	Methods of DE (12)	Methods of informatic (12)
	1	Human Factors (6)	Basics of informatics (18 or 6)	Basics of engineering (18 or 6)

→ **Career Perspectives**

At first, as a digital engineer you are an interdisciplinary expert, who has knowledge in information technology and at least one engineering discipline. This makes you a very flexible human resource, who is not only capable of working in different domains but much more important acting as a mediator between traditional engineers and computer scientist. Job opportunities range from technical domains like quality assessment and/or development and design challenges to requirements engineering.

In addition, you have done a uniquely large number of scientific, interdisciplinary team projects (18 CP). This is very valuable asset for industrial qualification as it provides important experience for technical project lead and management.

Finally, you will have had lectures in human resources and/or management giving you a perfect qualification of team or group.

→ **Prerequisites for the Master Digital Engineering**

The Master Digital Engineering (DigiEng) is a four-semester degree. It requires a 6-semester bachelor. This can be in either computer science or(!) an engineering discipline. Depending on your background, your curriculum will slightly change: engineers take extra lectures in computer science and computer scientists take extra lectures in an engineering discipline. You will also need to have completed your bachelor with "good" grad and have sufficient proficiency in English (e.g. IELTS) or German (e.g. Goethe).

During your Master's studies you will be typically focusing on a specific domain of application (e.g. digital engineering for automotive) and organize your lectures and projects around this focus. Uniquely is the "Digital Engineering Project" a large joint and interdisciplinary project. Here, you will develop with a group of other students a complex interdisciplinary application. Some examples include: a new customizable prototype of a robot, an electronic device which smartly light shading a car's wind screen or building a virtual prototype of a factory.

For more information, visit us at www.digi-eng.de



How to apply

The Master Digital Engineering enrolls both in the winter term and in the summer term. You will find the submission deadlines for each term under:

<http://www.ovgu.de/en/Education.html>

Applications must be submitted via uni-assist.

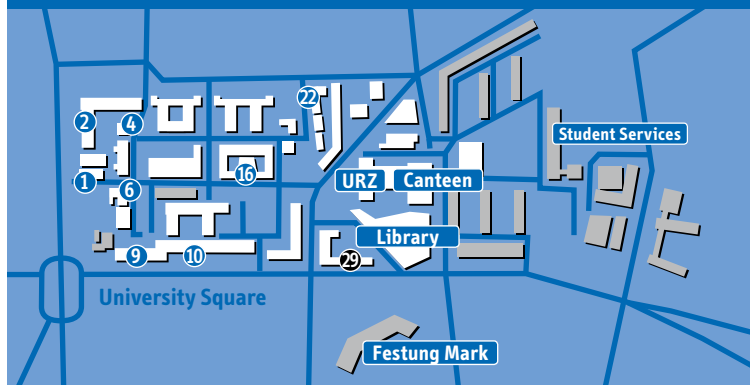
Further details and up-to-date information regarding the admission process will be provided on the web site mentioned above. This includes fill-in forms, the list of documents to submit, the general admission requirements and information regarding the application procedure itself.

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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.

FACULTY OF COMPUTER SCIENCE

Master Digital Engineering



→ Otto von Guericke University Magdeburg

Otto von Guericke University Magdeburg is one of Germany's newest universities. Founded in 1993, it arose as a result of the merger of three renowned institutions of higher education in the city, namely the Technical University, the Teacher Training College and the Academy of Medicine. These traditional strands are still evident today in the University's focal areas, which are engineering and the natural sciences, information technology, economics & management and medicine. OVGU considers the humanities to be an essential part of a modern university with a distinctive profile. Thanks to its position at the heart of Germany and its history, OVGU is seen as a bridge between Western and Eastern Europe. This is particularly evident in the comprehensive internationalization of its teaching and research. The University's main areas of research - the neurosciences, dynamic systems / systems biology, the automotive industry and medical technology are interdisciplinary in nature and strengthened on a lasting basis by the neighbouring research institutes. Over 14,000 students, including over 1,600 international students, are enrolled in over 80 programmes across the nine faculties. The University offers state-of-the-art facilities, an excellent student/teacher ratio and practical, hands-on education.

Areas of Excellence in Research:

- Neuroscience
- Dynamic Systems
- Automotive

Otto von Guericke, Founder of Experimental Physics

Otto von Guericke was born in 1602 in Magdeburg and as the mayor of the city on the Elbe, he participated in the negotiations of the Peace of Westphalia at the end of the 30 Years War. He is renowned by proving the existence of air pressure, above all through his famous experiment using the Magdeburg hemispheres. He is considered the founder of vacuum technology and inventor of the air pump and the barometer.



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