

## ADMISSION AND COSTS

Admission to the programme requires a qualified B.Sc. in Electrical Engineering or related fields. Non-native speakers should prove a command of English corresponding to 550 points of the TOEFL test (220 points computer based). If official certificate and transcript are not issued in German, English, French or Spanish, an official certified translation is required. The application forms can be downloaded from the web-site:

[www.uni-magdeburg.de/akaa/magdeburg/download.htm](http://www.uni-magdeburg.de/akaa/magdeburg/download.htm)

For further information please contact:

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## ACCOMODATION AND LIVING EXPENSES

The University may offer students residences on the University Campus. The city offers plenty of reasonably priced rooms ranging from 150 to 220 Euros per month. 645 Euros provide most students with a reasonable standard of living.

## LOCATION OF MAGDEBURG

Magdeburg is located halfway between Hannover and Berlin, the capital of Germany. The distance to Berlin is about 130 km. Berlin and Hannover can be reached by international flights.



## MAGDEBURG, THE 1200 YEAR OLD CITY

Magdeburg, the capital of the state Saxony-Anhalt, is 1,200 years old. In the nineteenth century, Magdeburg developed into an important industrial and trade city. Despite the repeated destruction of the city, during the Thirty Years War and later during the Second World War, one can still find splendid architectural works here. The city's landmark is the early-gothic cathedral. The city is decorated with large open parks such as Rotehorn Park, Herrenkrug Park with its horse racing track and Klosterberge Garden.



## OTTO VON GUERICKE (1602-1686)

The University is named after Otto von Guericke, who attained fame and recognition as a scientist, engineer, and philosopher even outside of Germany. He generated noticeable vacuums for the first time, by using newly invented pumps. With this he demonstrated the existence and the power of air pressure. The best-known experiment of Otto von Guericke was demonstrated for the first time in Magdeburg in 1658, when sixteen horses tried to pull apart evacuated hemispheres.



## OTTO-VON-GUERICKE UNIVERSITY OF MAGDEBURG GERMANY



## DEPARTMENT OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY



## GRADUATE PROGRAMME

## Master of Science in Electrical Engineering and Information Technology

## OTTO-VON-GUERICKE UNIVERSITY

The university, with 12,500 students registered, offers graduate and postgraduate degrees in nine departments mainly in the fields of engineering, natural science, economics, medicine and social science.

### DEPARTMENT OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

Conditions like an optimal ratio between teaching staff and students, a thorough technical education at a high theoretical level, as well as proximity to practice, are advantages which make studying at the Department a most rewarding experience. The favourable study facilities include modern laboratories with high-end computer technology.

There are five main areas within the department:

- Automatic Control
- Electric Power Systems
- Image and Speech Processing, Integrated Circuits, Communications and Healthcare Telematics
- Fundamental Electrical Engineering and Electromagnetic Compatibility
- Micro-and Sensor Systems

Additionally, the faculty carries out research in cooperation with other independent research centres based in Magdeburg such as:

- The Fraunhofer Institute for Factory Operation and Automation
- Institute for Automation and Communication
- Max Planck Institute for Dynamics of Complex Technical Systems
- Leibniz-Institute for Neurobiology



## PROGRAMME STRUCTURE

Duration of MSc programme is two years including a Master's Thesis of 4 months. The complete study lasts from beginning of October until the end of September. Instruction is exclusively in English. The curriculum consists of a total of seven compulsory courses. The specialized optional courses are designed to provide students with knowledge, insight and skills in advanced electrical and information technologies.

### Compulsory Core Courses

- **Electromagnetic Field Theory**
- **Electronic Circuits**
- **Digital Communication Systems**
- **Digital Information Processing**
- **Power Electronics**
- **Power Network Planning and Operation**
- **Systems and Control**

### Optional Courses

- **Modern Concepts of EMC and EMC Measurements**
- **Integrated Analog Circuits**
- **CMOS Silicon Process**
- **Introduction to RF Communication Systems**
- **Image Acquisition and Coding**
- **Medical Imaging – Computer Tomography**
- **Speech Recognition**
- **Advanced Power Electronics**
- **Variable Speed Drives**
- **Renewable Energy Sources**
- **Power System Economics and Special Topics**
- **Distributed Control Systems**
- **Automation Lab**
- **Mechatronics**
- **Sensors and Microsystems**

### Master's Thesis

The aim of the thesis is to demonstrate the student's ability to apply the acquired knowledge independently. Qualified MSc students may carry out their Master's Theses in one of the currently running research projects.

## LABORATORY

In addition to the theory most optional courses include laboratories to teach practical skills. Training is given in well equipped LABs of Mechatronics, Automation Systems, EMC, Power Electronics, Image Processing, Information Technology and Clean Room Facilities.



For further information on courses please contact :

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