



### MAGDEBURG – CITY ON THE ELBE

More than 1200 years old, Magdeburg is the capital city of the federal state of Sachsen-Anhalt, located in the western part of eastern Germany and at the center of Europe. Located on the banks of the river Elbe, it is one of the greenest cities in Germany and home to about 230,000 residents and 20,000 students. The city offers a wide variety of recreational activities – a pedestrian path along the river Elbe, numerous parks, concerts and theaters, shopping, restaurants, and a nightlife centered around Hasselbachplatz. Student life in Magdeburg is inexpensive and comfortable.

Its most famous inhabitant was Otto von Guericke (1602-1686). He is best known for his experiments using two hemispheres to prove the existence of vacuum and understand atmospheric pressure. He is regarded to be the founder of vacuum technology and inventor of the air pump and barometer. He also served the town as Mayor during the Thirty Years War. During his tenure as Mayor, he participated in the negotiations that resulted in the Peace of Westphalia, ending the 30 Years War. The university is named after Otto von Guericke and aspires to teach and research in the tradition of this great scientist, philosopher, and engineer and to continue his tradition of humanist work.

# OTTO VON GUERICKE UNIVERSITY MAGDEBURG

The university in Magdeburg belongs to the youngest colleges in Germany. Founded in 1993, it incorporated three renowned institutions: the technical university TU Magdeburg, the pedagogical college, and the medical academy. Their traditions are represented in the focal points of the profile of the modern university, which emphasizes topics in engineering and science, medicine, social sciences, economics, and humanities.

The Otto-von-Guericke University serves as a bridge between eastern and western Europe based on its location in the middle of Germany and its history. This function is apparent in the widespread globalization its research and teaching activities.

14,000 students are matriculated among the programs offered from 9 faculties. More than 15 % of the students come from foreign countries. A total of 62 study programs are offered, which offers the students a high degree of flexibility and the opportunity to combine programs and design their personal course of study.

The university offers students state of the art facilities, an optimal mentoring relationship between students and teachers as well as industry-relevant training and preparation for their future careers. The average time to obtain a degree lies considerably below the average time for Germany.

[WWW.OVGU.DE](http://WWW.OVGU.DE)

MASTER STUDY PROGRAM

## Process Safety and Environmental Engineering



VST

FACULTY OF PROCESS  
AND SYSTEMS ENGINEERING

## Process Safety and Environmental Engineering

### THE PROCESS SAFETY AND ENVIRONMENTAL ENGINEERING PROGRAM

The economical usage of energy resources, safe production and handling of materials, and the protection of the environment are gaining importance worldwide. Safety and environmental protection are indispensable elements of any industrial activity. In a modern society technical processes will only be accepted if the emerging hazards are identified and kept under control and if the environmental impact is reduced to an acceptable minimum. To achieve these aims, experts are needed which possess both an in-depth understanding of process engineering as well as specific knowledge of safety and environmental technologies. The master program Process Safety and Environmental Engineering aims to educate experts for industry as well as for authorities, research organizations, and higher education.

Graduates from the program are versed in the natural scientific fundamentals of technical processes, especially those related to safety and environment, and think and act holistically in the assessment of safety and environmental concerns and their prevention and mitigation. They are capable of applying their engineering know-how to provide appropriate solutions for safety and environmental problems.

The study program prepares students for careers in industry, business, management, or for doctoral studies. Possible employment fields include the chemical and pharmaceutical industry, petro-chemical industry, oil and gas industry, power generation, waste management, animal feed and food industries, materials science, apparatus, machine and plant engineering, research organizations, etc.



### THE MASTER PROGRAM COURSE OF STUDY DEGREE: MASTER OF SCIENCE (M.Sc.)

The Process Safety and Environmental Engineering master program consists of 9 modules. In addition to the compulsory modules on the topics of process engineering, safety and environmental technology, heat and mass transfer, and legal and management issues related to safety and environment, students are required to compose their own study program with elective courses from the module catalogue. Completion of the master thesis demonstrates that the student is qualified to work independently on academic topics.

After a standard study period of 3 semesters, students can acquire 90 ECTS credit points. The Process Safety and Environmental Engineering master program provides students with the opportunity to perform further research, particularly in areas such as process technology, environmental technology, energy technology, and safety technology. Graduates are able to independently develop products, processes, technologies, and engineering solutions, making them into nationally and internationally respected experts in the field.

- Module 1 - Thermal Process Engineering
- Module 2 - Advanced Heat and Mass Transfer
- Module 3 - Chemical Reaction Engineering
- Module 4 - Hazardous Properties of Materials
- Module 5 - Technical Risks and Risk Assessment
- Module 6 - Environmental Engineering
- Module 7 - Process Safety
- Module 8 - Elective Courses
- Module 9 - Master Thesis

### APPLICATION AND ADMISSION REQUIREMENTS

A solid background in engineering and mathematics, interest and enjoyment in scientific and technical problem solving, and the ability to transfer theoretical concepts into a practical setting are required.

#### Academic requirements

Applicants must have obtained a bachelor degree (210 Credit Points, EQF 6) in:

- Chemical engineering,
- Process engineering,
- Energy engineering,
- or a related field.

#### Language requirements

The Process Safety and Environmental Engineering master program is taught in the English language. Adequate English language skills must be demonstrated through:

- TOEFL-test (550 points paper based, 213 points computer based, or 80 points internet based)
- Cambridge Certificate of Proficiency in English (CPE) – minimum score: C
- Cambridge Certificate of Advanced English (CAE) – minimum score: B
- IELTS-test overall band score 6.0

#### Application deadlines

Applications are accepted through the web portal [www.uni-assist.de/index\\_en.html](http://www.uni-assist.de/index_en.html)

For winter semester: April 15–July 15

For summer semester: October 15–January 15

#### Tuition and fees

A fee must be paid each semester (94.50 EUR in 2016). The fee covers services provided by the Student Service Office and student representatives as well as a ticket for the public transportation system.

#### For further information

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