MB FACULTY OF MECHANICAL ENGINEERING

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 Guerike 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

Mechanical engineering is among the more traditional subject areas; after all construction and the use of tools go back a long way in the history of mankind. In the course of industrialization, mechanical engineering acquired the role of a key technology. Magdeburg secured itself a good reputation in this tradition. And today, innovation and quality are distinguishing features of mechanical engineering in Magdeburg.

Mechanical engineering is one of the most interesting and varied technical disciplines and has a secure future and offers a broad range of fields of application. Modern institutes provide the right framework for effective teaching and research. The Faculty of Mechanical Engineering offers courses that focus consistently on current key aspects of and developments in engineering.
In interaction with other faculties in the University, studying mechanical engineering opens up the possibility of acquiring an in-depth education in many other areas, such as economics and management, electrical and process engineering or computer science.

Degrees offered by the Faculty of Mechanical Engineering
- Mechanical Engineering (B.Sc.)
- Industrial Engineering / Mechanical Engineering (B.Sc.)
- Industrial Engineering / Logistics (B.Sc.)
- Mechatronics (B.Sc.), jointly with the Faculty of Electrical Engineering and Information Technology
- Mechanical Engineering (M.Sc.)
- Industrial Engineering / Mechanical Engineering (M.Sc.)
- Industrial Engineering / Logistics (M.Sc.)
- Mechatronics (M.Sc.), jointly with the Faculty of Electrical Engineering and Information Technology
- Integrated Design Engineering (M.Sc.)

Institutes of the Faculty of Mechanical Engineering
- Institute of Mechanics (IFME)
- Institute of Machine Design (IMK)
- Institute of Manufacturing Technology and Quality Management (IFQ)
- Institute of Ergonomics, Manufacturing Systems and Automation (IAF)
- Institute of Logistics and Material Handling Systems (ILM)
- Institute of Mobile Systems (IMS)
- Institute of Materials and Joining Technology (IWF)

Mechanical Engineering – At the Top of the Rankings
The Faculty of Mechanical Engineering at Otto-von-Guericke-University Magdeburg is among the middle group of faculties in Germany according to the current rankings of the German Center for Higher Education (CHE).
In 2012 the faculty once again received the German Mechanical and Process Engineering Faculty Association's seal of approval. This recognition demonstrates that it meets high standards in teaching and research.

Program in Mechanical Engineering / Mechanical Engineering Dual Model

Industries such as mechanical and plant engineering, automobile and vehicle construction, energy and environmental engineering and medical technology offer good prospects for graduates of the mechanical engineering program. Admission to the program requires solid knowledge of mathematics and physics as well as an interest in the natural science and in technical issues.
The bachelor degree course, which has a standard duration of 6 semesters (180 credit points), may be followed by a master's degree courses lasting a further four semesters (120 credit points). The B.Sc. in Mechanical Engineering course may also be completed over a period of 8 semesters in combination with an industrial apprenticeship.
Until the third semester the course deals with the basics, after which the contents vary according to the area of specialization.

Master's

4	Master Thesis	
3		
2		
1	Enrolment in one of the core areas	

Core areas:
- PT Production technology
- PD Product development
- AS Automotive Systems
- M Materials

Bachelor's

6	Bachelor Thesis	
5	Specialization	Possible Specializations (PT / PD / M / AS / ME / MH)
4		
3		
2	Basic principles of natural and engineering sciences	
1		

Specializations:
- PT Production technology
- PD Product development
- M Materials
- AS Automobile systems
- ME Mechanics
- MH Material handling systems

Semester

Building on the foundation of the bachelor's degree in mechanical engineering, other master courses may be undertaken, such as:
- Industrial Engineering / Mechanical Engineering (M.Sc.)
- Integrated Design Engineering (M.Sc.)

Program in Industrial and Mechanical Engineering

Graduates have access to careers in business and project management, management accounting and technical procurement and sales. Prerequisites for admission to the course are good knowledge of mathematics and physics plus a basic technical understanding. After studying the basics, students can develop specializations. The industrial engineering / mechanical engineering program offers a broadly based education in both mechanical engineering and economics.
The bachelor's course comprises a standard duration of seven semesters (210 credit points), whilst the master's course covers three semesters (90 credit points).

Master's

3	Master Thesis	
2		
1	Enrolment in one of the core areas	
0	If nec. bridge semester depending on the extent to which the admission requirements are met	

Core areas:
- PT Production technology
- PS Production systems
- PD Product development
- AS Automotive Systems

Bachelor's

7	Bachelor Thesis	
6	Specialization	Possible Specializations (PT/PD/AS/MH + Log/ES/M)
5		
4		
3		
2	Basic principles of natural and engineering sciences and economics	
1		

Specializations:
- PT Production technology
- PD Product development
- AS Automobile systems
- MH Material handling systems + Logistics
- M Materials

Semester

Building on the foundation of the bachelor's degree in industrial engineering / mechanical engineering, other master courses may be undertaken, such as:
- Industrial Engineering / Logistics (M.Sc.)
- Mechanical Engineering (M.Sc.)
- Integrated Design Engineering (M.Sc.)

Program in Industrial Engineering Logistics

Graduates design, control and implement logistics processes, systems and regional to global production, disposal and transport networks. They organise the flows of goods and information, partnerships between logistics service providers and their customers worldwide and develop materials handling products. They solve complex problems with experts in computer science, production and automation engineering, materials handling and transport technology as well as with social scientists and ergonomists. The bachelor degree course comprises a standard duration of seven semesters (210 credit points), whilst the master degree course covers three semesters (90 credit points).

Master's

3	Master Thesis				
2	Logistics planning & VR	SCM & Network	Project work Compulsory modules	Sustainable Logistics	Materialfluss-technik
1					
0	If nec. bridge semester depending on the extent to which the admission requirements are met				

Bachelor's

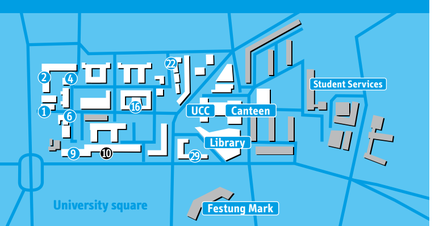
7	Bachelor Thesis	
6	Specializations: energy efficiency & value creation, supply chain network & IT, automation & ergonomics, transport & environment	
5		
4		
3		
2	Basic principles of natural and engineering sciences and economics	
1		

Semester

Building on the foundation of the bachelor's degree in industrial engineering / logistics, other master's courses may be undertaken, such as:
- Industrial Engineering / Mechanical Engineering (M.Sc.)
- Mechanical Engineering (M.Sc.)
- Integrated Design Engineering (M.Sc.)

THE UNIVERSITY CAMPUS

1 Campus Service Center
2 Faculty of Mathematics
4 President'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 of Humanities is located at Zschokkestrasse 32.

OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

Published by:
Otto von Guericke University Magdeburg
President
Edited by: Department of Communication and Marketing
Picture credits: if not otherwise specified: the archive of the University of Magdeburg and its faculties
Edition: 04/2015

Program in Mechatronics

Graduates are in high demand in all sectors of the mechanical and electrical engineering industries, in the automobile industry and many other industrial sectors in which innovative products are developed as a result of the intelligent interaction between mechanics and electronics. Prerequisites for admission are a good knowledge of mathematics and the natural sciences, plus enjoyment of technical challenges and a strong interest in interdisciplinary working methods. Mechatronics is the combination of mechanical engineering, electrical engineering and computer science. Mechatronic products integrate sensors, actuators and processors in a mechanical structure, thus offering completely new functions and product features. The course delivers specialized knowledge of mechanical engineering, electrical engineering and information technology as well as computer science, and combines these subject areas to create an interdisciplinary mechatronic systems approach.

The consecutive bachelor/master program:

- seven semesters (210 Credit Points) for the bachelor's program
- three semesters (90 Credit Points) for the master's program.

Master's

3	Master Thesis
2	Specialization in two applied subject areas
1	Consolidation of principles of engineering
0	If nec. bridge semester depending on the extent to which the admission requirements are met

- Mechatronic systems
- Electrical drives
- Automotive systems
- Robotics • Energy systems
- Microsystems • Adaptronics
- Medical technology systems
- Control /automation technology

Bachelor's

7	Bachelor Thesis
6	Specializations: mechanical engineering, electrical engineering-electronics, computer science, mechatronic systems
5	
4	Additional qualifications: mechatronics project, economics/law, soft skills
3	Basic principles of natural and engineering sciences
2	
1	

Semester

Master Program in Integrated Design Engineering

Integrated Design Engineering is an individually configurable master's course, which combines different aspects of product development in a program with a duration of four semesters.
It brings together theoretical knowledge and practical project work in order to develop sophisticated, individualized and innovative products.

Students may choose from the following free elective modules: mechanical engineering, industrial design, computer science, economics, ergonomics and social science or sports and technology

4	Master Thesis	
3		
2	Lecture modules	Project modules
1		

Semester

Basic theoretical principles are applied in three projects that are to be completed, each of which has a strong practical relevance and is worked upon for one semester by the students either in cooperation with industry or in the context of start-up projects.

During a project, students work through a joint project development process from the initial idea to the construction of a model or prototype.

All technically oriented courses have access to the IDE master's program, thus enriching the interdisciplinary education on offer.

www.ide-master.de
www.facebook.com/IntegratedDesignEngineering

Advice, Admission Requirements, Applications

In order to qualify for admission to the bachelor degree program, students must have obtained the general university entrance qualification. For other eligibility criteria, especially for the master's degree programs, please refer to the study and examination regulations. The lessons are mainly in German. Therefore, students need a language certificate in German. There are no restrictions to admission to the courses of study listed above.

Closing date for applications:
15 July or 15 January respectively

Advice and Information:
Otto von Guericke University Magdeburg
Faculty of Mechanical Engineering
Universitätsplatz 2, 39106 Magdeburg
Dean's Office:
Secretariat: Kirstin Winter
Building 10, Room 158
Tel. +49 (0) 391 67-18520, Email: kirstin.winter@ovgu.de

For more information see:
http://www.fmb.ovgu.de http://www.mechatronik.ovgu.de

Applications and enquiries can be forwarded to:
Postal address:
Otto von Guericke University Magdeburg
Postfach 4120, 39016 Magdeburg
Street address:
Universitätsplatz 2, 39106 Magdeburg

Campus Service Center
The CSC team can help with any questions relating to your course.
http://www.servicecenter.ovgu.de
Email: servicecenter@ovgu.de
Tel.: +49 (0) 391 67 50000

Student Advisors:

Mechanical Engineering program:
Prof. Dr.-Ing. habil. B. Karpuschewski, Dr.-Ing. S. Wengler
Tel. +49 (0) 391 671 8568; +49 (0) 391 671 2820
Email: karpu@ovgu.de; steffen.wengler@ovgu.de

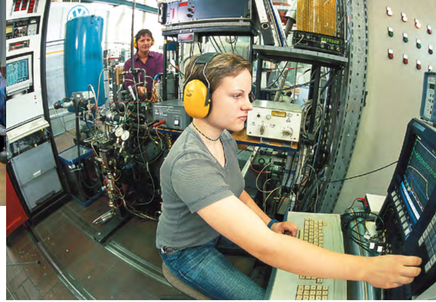
Industrial Engineering / Mechanical Engineering program:
Dr.-Ing. S. Wengler; Dipl.-Ing. A. Gerecke
Tel. +49 (0) 391 671 2820; +49 (0) 391 67 52619
Email: steffen.wengler@ovgu.de; arnhild.gerecke@ovgu.de

Industrial Engineering / Logistics program:
Prof. Dr.-Ing. H. Zadek, Dr.-Ing. H. Haase
Tel. +49 (0) 391 67 58604; +49 (0) 391 67 52628,
Email: zadek@ovgu.de; hartwig.haase@ovgu.de

Mechatronics program:
Prof. Dr.-Ing. R. Kasper, Dr.-Ing. H.-G. Baldauf
Tel. +49 (0) 391 67 58607; +49 (0) 391 67 52687
Email: roland.kasper@ovgu.de; hans-georg.baldauf@ovgu.de

Master's program in Integrated Design Engineering:
Prof. Dr.-Ing. Dr. h.c. Sándor Vajna, Dr.-Ing. Michael Schabacker
Tel. + 49 (0) 391 67 58794; + 49(0) 391 67 58097
Email: vajna@ovgu.de; michael.schabacker@ovgu.de

FMB Examination Office:
Silvia Fliegenschmidt, Ina Benkhardt
Building 10, Room 156; Building 10, Room 102
Tel. +49 (0) 391 67 52826; +49 (0) 391 67 58599
Email: silvia.fliegenschmidt@ovgu.de, ina.benkhardt@ovgu.de



PROGRAM INFORMATION

Faculty of Mechanical Engineering

MB FACULTY OF MECHANICAL ENGINEERING

OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG