



Summer Semester 2026

courses taught in English

at the

Otto von Guericke University Magdeburg

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General Information

Key:

Level: B = Bachelor; M = Master

Hours: 1 SWS = 45 minutes;

L = Lecture, T = Tutorial, U=Exercise, S = Seminar, P=Training

BS = Compact Course, HS=Advanced Seminar, PS=Undergraduate Seminar, KO = colloquium, FOPJ = research project, EXK = field trip

Underlined parts contain a link that takes you to the corresponding webpage

ECTS:

ECTS = all-European credit transfer system (not relevant for non-European students)

If more than one number for ECTS is given, you can choose between different options to conclude the seminar (for example exam or oral presentation).

Some course descriptions include no credit (ECTS) information. Please consult the lecturer for this information. The LSF lists the responsible lecturer(s) under relevant course details.

- This is a list of the courses offered in the summer semester 2026. It is merely an orientation for the courses offered in summer semester 2027, because most courses take place annually. However, there is no guarantee that the courses will indeed take place again.
- No warranty for the correctness of the course information provided. Courses are subject to changes and other courses might be added.
- You are enrolled in a degree program that leads to a degree awarded abroad, but you may also take courses from other programs.
- The courses you wish to take at OVGU should correspond to your study program at your home institution. All courses you wish to take at OVGU must be agreed upon in your Learning Agreement with your home coordinator and with the OVGU departmental coordinator.
- Access to specific courses hereunder cannot be guaranteed in advance. We reserve the right to check the applicant's academic qualifications for any such course.
- For each faculty, the eligible study programs with their respective module manuals are linked. A list of the module manuals of all study programs can be found here.

1 Faculty of Mechanical Engineering (FMB)

[B.Sc. Maschinenbau \(MB\)](#)

[B.Sc. Wirtschaftsingenieur Logistik \(WLO\)](#)

[M.Sc. Maschinenbau \(MB\)](#)

[M.Sc. Wirtschaftsingenieur Logistik \(WLO\)](#)

Course Name	Level	hours/ week	ECTS
Biotribological Systems	M	2L	5
CAX Basics	B	2L + 2U	5
Engineering Data Logistics based on Automation ML	M	BS	./.
Engineering Mechanics 1	B	2L + 2S + 2U	
Engineering of resilient production systems	M	2L/U	
Factory Automation and Industrial Robots	M	2L + 2U	
Finite Element Method	M	2L + 2U	5
Fundamentals of Machine Elements	M	2L + 2U	5
Handling and Logistics of Bulk Materials	M	2L + 1U	
Inelastic Structure Analysis	M	2L + 2U	5
Material Modelling	M	2L + 1U	
Materials II	B	2L + 1U + 1P	
Materials Science	M	2L + 2U	
Modeling and Simulation in Logistics Planning	M	2L + 2U	
Nonlinear Vibrations	M	2L + 2U	5
Non-local structural mechanics and peridynamics	M	2L + 2U	5
Recent Developments in Material Science	M	2L + 1U	5
Resources and Recycling	M	2L + 1U	5
Scientific work & Project work	B	2L/U	
Simulation methods of dynamical systems	M	2L + 2U	5
Supply Networks	M	4L/U	



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2 Faculty of Process and Systems Engineering (FVST)

[B.Sc. Biosystemtechnik](#)

[B.Sc. Umwelt- und Energieprozesstechnik](#)

[M.Sc. Chemical Engineering](#)

[M.Sc. Nachhaltige Energiesysteme](#)

Course Name	Level	Hours/ week	ECTS
Advanced Heat and Mass Transfer	M	2L+2U	
Air Pollution Control	M	3L+1U	4
Chemical Reaction Engineering	M	2L + 2U	
Chemistry	M	3L	5
Experimental Virology	M	2P	3
Fire Protection in Industrial Facilities	M	1P+1U +2L	4
Functional Safety in Process Operations	M	L (different appointments)	
Fundamentals of Multiphase Flows	M	2L + 2U	
Fundamentals of Sustainable Process Engineering	B	2L + 2U	10
Ignition processes and explosion protected devices	M	2L1	
Introduction to Nuclear Plant Design and Safety	M	2L + 1U	
Legal Issues in Plant Operation and Process Safety	M	2L	3
Machine Learning in Chemical Engineering	M	2L + 1U	4
Methods of Risk Analysis	M	2L + 1U	4
Modern organic synthesis	M	2L	3
MRA I - Introduction to the approval process of medical devices	M	3L/U	5
Plant Design Preparation		L (1 single appointment)	
Relevant soft skills for academics	B/M	BS	No ECTS, certificate
Thermodynamics	B	2L + 2S	5
Tissue Engineering Lab	M	S / P (1 single appointment)	5



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(Biosystems Engineering only)

3 Faculty of Electrical Engineering and Information Technology (FEIT)

[B.Sc. Medizintechnik](#)

[B.Sc. Elektrotechnik und Informationstechnik](#)

[M.Sc. Electrical Engineering and Information Technology](#)

[M.Sc. Medical System Engineering](#)

Course Name	Level	Hours/ week	ECTS
Advanced Linear Control	M	2L + 2U	5
Advanced MR Image Reconstruction	M	2L + 1U	5
Advances in Radiation and Medical Physics	M	P	
Applications of microsystems engineering	M	2S	
Applications of Microsystems in Medical Engineering	M	2S	
Applied microsystems engineering innovation laboratory	M	4 FOPJ	
Basics of Medical Image Science	M	2L + 1U	5
Chatbot-Challenge		2S/U	12/10
Digital Communication Systems	M	3L/U	5
Digital Information Processing Lab	M	2P	5
Digital Protection of Power Networks	M	2L/U	
Electrical Engineering II	B	2L + 2U	5
Electric Energy, Power Electronics and Drives	B	2L + 2U	
Electromagnetic Compatibility	M	2L + 2U	
Experimental neuroscience – from study design in motor research to brain-computer-interfaces	M	S	
Heterogeneous Computing	M	3L/U	5
Introduction to AI in engineering	B	2L + 1U	5
Introduction to Systems Theory	B	2L + 2U	
Medical Measurement Technology	M	4L/U	
Microsystems Processes and Technologies	M	3L	5

Model Predictive Control for Three-Phase Converters	M	3BS	
Nonlinear Control	M	2L + 1U	
Non-technical Project - Systems Theory and Control Engineering	M	2FOPJ	
Nuclear Medicine	M	2L + 1U	
Pharmacokinetic and pharmacodynamic modeling	M	2L + 1U	
Photovoltaic Systems	M	3BS	
Positron Emission Tomography	M	3L	5
Principles in clinical trials, market introduction and market surveillance of medical devices	M	2L + 2S	5
Process Control	M	2L + 1U	
Project "Electrical Actuators"	M	3FPOJ	5
Project "Power Electronics"	M	3FPOJ	5
Renewable Energy Sources	M	2L + 1U	
Research Track	M	S	15
Scientific Working	M	4S	5
Solution Design in Medical Engineering	M	2S	5

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4 Faculty of Computer Sciences (FIN)

[B.Sc. Informatik](#)

[B.Sc. Wirtschaftsinformatik](#)

[B.Sc. Wirtschaftsingenieur](#)

[M.Sc. Digital Engineering](#)

[M.Sc. Informatik](#)

Course Name	Level	Hours/ week	ECTS
Advanced Database Models	M	2L + 2U	6
Advanced Topics in Databases	M	2L + 2U	
Advanced Topics of KMD	M	2S	6
Algorithms and Data Structures	M	2L + 2U	10
Bachelorseminar KMD	B	2S	5
Cloud School	B	2L + 3U	5
Data and Knowledge Engineering	M	2S	6
Data Mining I - Introduction to Data Mining	B/M	2L + 2U	6
Database Concepts	B/M	2L + 2U	5
Deep Learning for Weather and Climate	B/M	4BS	5(B)/6(M)
DE Project: SwarmLab	M	2FOPJ	12
DE Project: Visualization of Process Engineering Applications	M	1FOPJ	12/3
Digital Engineering Projekt (different topics)	M	2FOPJ	12
Embodied Interfaces in Immersive Spaces	M	2L	6
Flow Visualization	M	2L	6
Geometric Data Structures	M	4L/U	6
Hot Topics in Computational Intelligence in Games	B/M	4S	
Hot Topics in Evolutionary Multi-Objective Optimization	B/M	4S	
Human-Centred Artificial Intelligence	M	2L + 2U	6
Human-Centred Manufacturing and Usability		BS	6

Introduction to Deep Learning	M	2L + 2U	6
Introduction to Distributed Sensor Data Fusion	B/M	2L + 2U	5(B)/6(M)
Introduction to the Theory of Computation II	B	2L + 2U	5
Logic	B	2L + 2U	5
Management of Global Large IT-Systems in International Companies	M	2L/U	6
Medical Visualization	M	2L + 2U	6
Mesh Processing	B/M	2L + 2U	5
Mobile Robotics	B/M	2L + 2U	5
Narrative Visualization	B/M	2S	3
Parallel Programming (for Engineers)	M	2L + 2U	5
Parallel Storage System	M	2L + 2U	6
Predictive Maintenance Seminar	B/M	2S	5/6
Principles and Practices of Scientific Work	M	2L + 2U	6
Recent Topics in Business Informatics (SMK)	M	4S	6
Recommenders	B/M	2L + 2U	5(B)/6(M)
Simulation Project	B/M	2L + 2U	6
Software Defined Networking	B/M	2L + 2U	6
Virtual and Augmented Reality	B/M	2L + 2U	
Visual Analytics	M	2L + 2U	6
Wissenschaftliches Seminar Wirtschaftsinformatik (neue SPO)	B	4S	5
Wissenschaftliches Seminar Wirtschaftsinformatik (alte SPO)	B	4S	3

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5 Faculty of Mathematics (FMA)

B.Sc. Mathematik

B.Sc. Mathematikingenieur

M.Sc. Mathematik

Course Name	Level	Hours/ week	ECTS
Introduction to Algebraic Analysis	B/M	4V/U	6
Mathematical Methods II	B	2L + 3U	5
Mathematics M2	B	3L + 2U + 1T	
Mathematics M4	B	3L + 2U + 1T	
Mathematics M5	B	3L + 2U + 1T	
Model Reduction for Dynamical Systems	M	4L/U	6
Seminar Ausgewählte Themen der Optimierung /des maschinellen Lernens	B/M	2S	
Statistical Methods I (former Introduction to Probability and Statistics)	B/M	2L + 2U	5

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6 Faculty of Natural Sciences (FNW)

[B.Sc. Psychologie](#)

[B.Sc. Physik](#)

[M.Sc. Integrative Neuroscience](#)

[M.Sc. Psychologie](#)

Course Name	Level	Hours/ week	ECTS
111 Molecular & Cellular Neurobiology	M	2L + 2S + 2P	3
112 Development & Plasticity	M	2L + 2S/U	3
113 Systems Neurophysiology	M	3L + 2P	3/4
114 Learning & Memory	M	3L	0/0/4
115 Theoretical Neuroscience II	M	3L+ 2U	
116 Advanced Statistics for Neuroscience	M	2L +2U	3 + 2
180 Journal Club	M	2S	
Advanced Semiconductor Characterization	M	3L	5
Book Club	B	2S	
Cell Physiology	B	3L + + 2S + 2U	
Cleanroom Lab Course	M	3P	5
Development and Evolution	B	3L + + 2S + 2U	
Electron Microscopy	M	2L + 1U	5
Forschungsseminar: Nichtlineare Physik	M	2S	
Forschungsseminar: Systembiologie	M	3S	
Lab Rotation II (Caliskan)	M	4P	6
Laser Diodes	M	2L + 1U	5
Masteranden- und Doktorandenseminar in Entwicklungs-, Kognitions- und Handlungspsychologie	M	2S	
Mikrofluidik: Theorie und Anwendungen, Teilmodul / Microfluidics: Theory & Applications	B/M	2L + 1U	4(B)/5(M)
Pädagogische Psychologie I - M	B	2L	4



Physics II	B	2L + 2U	5
Physikalisches Kolloquium	B/M	2KO	
Quantitative Applications		L + U	
Quantitative Extensions	B	2L + 2U	
Semiconductor Devices I	M	2L + 1U	5
Semiconductor Process Technologies	M	2BS	5
Semiconductor Quantum Structures	M	2L + 1U	5
Seminar über Nichtlinearität und Unordnung in komplexen Systemen	M	2S	
Soft Matter and Microfluids Lab Course	M	2P	4/5
Solid State Physics	M	2L + 1U	5
X2: Human-Technology Interaction	M	2L/U	

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7 Faculty of Humanities, Social Sciences and Education (FHW)

[B.A. European Studies](#)

[B.A. Germanistik mit interdisziplinären Profil](#)

[B.A. Sportwissenschaft](#)

[B.A. Bildungswissenschaft](#)

[M.A. European Studies](#)

[M.A. Peace and Conflict Studies](#)

[M.A. Mediengermanistik](#)

[M.Sc. Performance Analysis of Sport \(IMPAS\)](#)

Course Name	Level	Hours/ week	ECTS
Afropeans: Remapping Europe (PNR 920933)	B/M	2S	4/5/6/10
Australian War Film (PNR 921093)	B/M	2S	4/5/6
Biomechanics in Sports	M	2L + 1U (+1P)	
Climate Change and Environmental Justice: A Path to Equitable Sustainability (920832)	M	2S	4-6
Culture and Capitalism (921066)	B	2S	4/5/6
(De)Recognizing Statehood in Europe	B	2S	4-6
Didactics of Sustainable Development	M	2BS	6
Einführung in die Sicherheits- und Außenpolitik (PNR: 908894)	B/M	2L	4/5/6
Introduction to Image Analysis (PNR: 921000)	B	2S	2
Introduction to Text Analysis (PNR: 921001)	M	2S	4/5/6
Ethics of Medicine in Fiction and Film (PNR 921104)	B/M	2S	2/4/6
Gender Histories of Nazi Germany (921074)	M	2S	4/5/6
Governing Migration: Regional Dynamics and Global Frameworks (921166)	M	2S	4/5/6
'Governing through Funding' - The EU's Budget as a Steering Tool (PNR 921094)	M	2S	4/5/6
History and Theory of Literature and Culture I: 16th to 18 Century (904952)	B/M	2L	4/5

Intercultural Communication, Mobility and Internationalization in EU Education Policy (920853)	B	2BS	4/5/6
International Vocational Education I	M	2S	4
International Vocational Education II	M	2S	6
Introduction to Research and Academic Writing	M	2BS	6
KI Forschung für Sozialwissenschaften/ AI research for social sciences (PNR: 921129)	B	2S	6
Mediation: Practical Skills	M	2BS	10
Methods of Vocational Training	M	2BS	6
Natural Resource Governance and the Contested Geographies of Sustainability (PNR: 921107)	M	2S	4-6
Not Just Talking Machines: Human, Environmental, and Political Dimensions of AI (921073)	M	2S	4-6
Peace and Conflict Simulation - The Republic of Katanesia	M	2BS	4
„Political Technology” and Russian Information Warfare: Historical Myths, Images and Metanarratives (PNR 921158)	M	4S	4/5/6
Pop Culture and World Politics (PNR: 921149)	M	2S	4/5/6
Qualitative Research Methods	M	2BS	4
Quality Management	M	2BS	6
Securing Peace after War: International Statebuilding and Peace Intervention in Flux	M	2S	10
Simulation Game: Conflict Analysis, Management and Conflict Transformation	B/M	2BS	4/5
Soccer Analytics (PNR-920895)	B/M	2S	5
Terrorism/Terrorismus: A bilingual seminar (PNR: 921138)	B	2S	5
The EU and Gender Equality (920088)	B	2S	4-6
The EU Governance System: Polity, Politics and Policies	B/M	2L	4/5/6
The EU Policy Cycle	M	2S	4/5/6/10
The Troubles: From Bloody Sunday to Good Friday	B	2S	4/5/6
Transcultural Studies (PNR 921110)	M	2L	4/5/6/10
Transitional Justice (PNR: 908864)	M	2BS	4/6
Vocational Education for Sustainable Development	M	2BS	4

Vocational Education Management	M	2S	4
Workshops for Methods of In-Company Training	M	2BS	4

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Examination office:

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Bachelor: Sports Science, Sports and Engineering

Master: International Performance Analysis of Sport, Sports Science, Sport and Engineering (expiring), Company Training and Vocational Education Management Development)

Ina Pietrulla

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Bachelor: European Studies, German with Interdisciplinary Profile, Educational Science, Cultural Engineering, Cultural Science, Science Management

Master: European Studies, Peace & Conflict Studies, Educational Science, German Language & Literature: Culture, Transfer and Intermediality, International Vocational Education, Media Literacy: Visual Culture and Communication

Nancy Bunge

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Bachelor: Philosophy - Neurosciences – Cognition, Social Sciences

Master: Philosophy - Neurosciences - Cognition (expiring), Social Sciences

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Master: Teacher Training for Vocational Schools, Teacher Training for Grammar Schools, Teacher Training for Secondary Schools, European Studies

8 Faculty of Economics and Management (FWW)

[Bachelor Module Manual](#)

[Master Module Manual](#)

Course Name	Level	Hours/ week	ECTS
Advanced Computational Transportation	M	2L+2U	5
AI and Business Taxation (23961)	M	2L	5
AI-based Decision Support II (23102)	M	2L+2U	5/6
Bargaining, Arbitration, Mediation (20812)	B/M	4L/U	5
Behavioral Finance (20043)	B/M	3L/U	5
Behavioral Taxation (23713)	B/M	2L/U	5
BIP: Sustainable Food Marketing and Local Chains (23977)	B/M	2L	6
Blended Intensive Programme (BIP): Sustainability, Finance and Taxation (23962)	M	2L	5
Business Decision Analysis (41057)	B	3L/U	5
Business Planning (20624)	B/M	2L + 2U	5
Collective Decision-Making in Organizations (20623)	B/M	4L/U	5
Company Valuation (22373)	B/M	4L/U	5
Decision & Strategy (41105)	B	4L/U	5
Econometric Analysis of Experimental Data (21948)	B/M	3L/U	5
Economic Policy (41071)	B/M	2L + 1U	5
Economics of International Business (21682)	B/M	4L/U	5
Evidence-Based Policy Analysis (50004)	B/M	4L/U	5
Financial Engineering (50760)	B/M	4L/U	5
Financial Institutions (50009)	B/M	4L/U	5
Financial Markets (23975)	B/M	2L	5
IBE Project Seminar: Applied Economic Research (23818)	B	4S	15
IBE Project Seminar: Public Economics in Practice: Contemporary Policy Issues (23957)	B	4S	15
IFRS Group Accounting (23971)	B/M	2L + 1U	5

Information Economics (23960)	B/M	4L/U	5
International Corporate Strategy (50114)	B/M	2L+2U	5
International MBA (iMBA)	M	4L	
Introduction to Dynamic Decision Making (23358)	B/M	4L/U	5
Introduction to International Economics (41038)	B/M	2L+2U	5
Management Accounting (41066)	B	4L/U	5
Managing Cultural Differences (41104)	B	2L+2U	5
Marketing Performance Management (41058)	B/M	2L+2U	5
Multicultural and Interactive Marketing Communication (22034)	B/M	3L/U	5
My IBE Elective Curriculum (4. semester)	B	ES (1 appointment)	
My IBE Study Program – Academic Introduction (2. semester)	B	ES (1 appointment)	
Optimization Implementation in Production and Transportation (23833)	M	4L/U	5
Population and Family Economics (22036)	B/M	2L	5
Production, Logistics and Management Science (41106)	B	2L + 2U	5
Scientific Project: Applications of Artificial Intelligence (22902)	M	4PS	15
Scientific Project: Biodiversity Risk in Financial Markets (23969)	M	4PS	15
Scientific Project: FinTech & AI in Banking and Finance (23967)	M	4PS	15
Scientific Project: Operations Management (23834)	M	4PS	15
Scientific Project: Sustainable (HR) Practices in Small and Medium Enterprises (23976)	M	4PS	15
Scientific Project: Tax Avoidance Strategies and Firm Responses (23963)	M	4PS	15
Seminar: Applied Economic Research (23819)	B	4S	10
Seminar: Behavioral Business Economics (23827)	M	2S	10
Seminar: Computational Finance and Financial Management (22047)	B/M	4S	10
Seminar: Displaced Workers: Effects on Wages, employment, and socio-economic outcomes (23974)	B/M	2S	10

Seminar: Environmental Economics & Management (23966)	B/M	4S	10
Seminar: Firm Behavior and Tax Avoidance (23964)	B/M	4S	10
Seminar: Machine Learning in Economics and Finance (23105)	B/M	3S	10
Seminar: Management Science (23544)	B/M	4S	10
Seminar: Media Economics (23968)	B/M	3S	10
Seminar: Methods of Entrepreneurship and Management Research (23958)	B	4S	10
Seminar: New Insights in Behavioral Economics (23838)	B	4S	10
Seminar: Online Consumer Research (22229)	B/M	4S	10
Seminar: Public Economics in Practice: Contemporary Policy Issues (23956)	B	4S	10
Seminar: Qualitative Research in International Business (23732)	B/M	4S	10
Seminar: Using Surveys and Experiments to Assess the Impact of HRM Practices (23545)	B/M	3S	10
Simulation in Production and Logistics (23835)	M	2L + 2U	5
Social and Sustainable Entrepreneurship (23419)	B	2L+ 2U	5
Statistical Methods III (41109) (former: Introduction to Econometrics (41092))	B	4L/U	5
VWS: Applied Economic Research (23817)	B	4S	10
What can I expect from the master study program in International Taxation and Public Finance (M-ITPF)?	M	ES (1 appointment)	
WWS: Methods of Entrepreneurship and Management Research (23959)	B	4S	10

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