

Winter semester 2023/24

English-taught courses

at the Otto von Guericke University Magdeburg, Germany

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General Information

Explanations: *Level* B = Bachelor M = Master

Hours 1 SWS = 45 minutes

L = Lecture, T = Tutorial/Exercise, S = Seminar, P = Training, BS = Compact Course, PS = Proseminar

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

If there are more options for the credit points available you can choose them yourself by the workload of the course. The lecturer will explain different workloads at the beginning and you can choose the amount of credit points.

Some course descriptions don't include information on the credits (ECTS). In this case you can contact the lecturer and ask them about further details. The contact information can be found on the Isf platform (under relevant course details)

<https://lsf.ovgu.de/qislsf/rds?state=user&type=0>

Important information:

This is a preliminary list, based on course offerings of the previous year. No responsibility is taken for the correctness of the course information. Courses are subject to change and other courses might be added.

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 cannot be guaranteed in advance. We reserve the right to check the applicants academic qualification for any such course.

1. Faculty of Humanities, Social Sciences and Education (FHW)

Course Name	Level	Hours per Week	ECTS
Advances in Sports Coaching	M	2 L	4/6
Advances in Sports Coaching	M	2 S	6/9
Applied Policy Analysis	M	2 S	4/6/15
Armaments, Disarmament and Military Polics (offered by Hochschule Magdeburg-Stendal)	M	2 S	4/6
Artificial Friends in Fiction		2BS	4/6
Basics on Didactics for Specialisation	M	2S	6
Conflict Analysis	M	2 S	5/6
Cultural Memory	B/M	2 S	4/5/6
Development of Learning and Teaching Media in Vocational Education	M	2 BS	4
Didactics and Learning Theories in Vocational Education and Training	M	2 BS	4
Didactics for Sustainable Development	M	2 BS	4
Einführung in die soziologische Textanalyse mit einfach zu bedienender Software	M	4 S	4
Focus Seminar for Vocational Education	M	2 S	6
Gender and War	M	2 S	4/6
Global Sustainability Governance	M	2S	4/5/6/10
History and Theory of Literature and Culture II: 19th Century to the Present	B/M	2 L	4
International Governance and Cooperation for Peace through a Human Rights-Based Approach	M	2 S	10
Introduction in Research and Academic Writing	M	2 S	6
Introduction to Cultural Studies	B/M	2 L	4/6
Introduction to Peace and Conflict Studies	M	2 L	4/5/6
Introduction to the political system of the European Union	M	2 S	4/5/6/10
Journalists as Actors in War and Armed Conflict	M	2 S	4/6
Learning and Teaching Technologies in Practice	M	2 BS	4

Media, Culture and Politics: Key Concepts and Theories of Cultural Analysis	B/M	4 S	4-10
Methods in Peace and Conflict Studies & European Studies: An Overview	M	2S	4/6/10
Motor Control and Motion Analysis	M	2 S	
Motor Control and Statistics	M	2 S	
Narratives of Identity	B	2 S	4
Philosophical Aspects of Psychedelics in Psychotherapy	B/M	2 S	2/4/6
Philosophy of Computation and Neurocognition	B/M	2 L	
Protracted Social Conflicts in the Middle East beyond Democracy vs. Autocracy	M	2 BS	4/6
Qualitative Research Methods	M	2 S	4
Quantitative Research Methods	M	2 BS	4/5/6
Ringvorlesung: Next Generation EU-Research Series: New Insights into the Policies of the European Union	B/M	2 L	5
Structures and Theories of Vocational Education	M	2 BS	4
Tutorium: Methods in Peace and Conflict studies (Schr)	M	2T	
Tutorium: Methods in Peace and conflict studies (sp)	M	2T	
Urban Conflicts	B/M	2 S	4/5/6/10
Visuality and World Politics	M	BS	4/6
Vocational Education for Sustainable Development	M	2 BS	4
War and Society (offered by Hochschule Magdeburg-Stendal)	M	BS	4/6
Workshop of Vocational Training	M	2 BS	4

2. Faculty of Economics and Management (FWW)

only permanent courses, electives are to be found at

https://www.isp.ovgu.de/Documents/Exchange_Incomings-p-748.html

Course Name	Component Code	Level	Hours per Week	ECTS
Business Decision Making	50115	B/M	2 L/2 T	5
Econometrics	50308	B/M	2 L/2 T	5
Financial Accounting	41087	B	2 L/2 T	5
Financial Management	41065	B	2 L/1 T	5
Foundations for Finance	50006	B/M	2 L/2 T	5
International Corporate Strategy	50114	B/M	2 L/2 T	5
Macroeconomic Analysis	50306	B/M	2 L/2 T	5
Macroeconomics	41063	B	4 L/2 T	10
Marketing Performance Management	41058	B	2 L/2 T	5
Mathematical Methods I	41009	B	2 L/3 T	
Microeconomic Analysis	50024	B/M	2 L/2 T	5
Microeconomics	41062	B	4L/2T	10
Principles of Management	41079	B	2 L/ 1 T	5
Statistical Methods	41084	B	2 L/2 T	5
Stochastic Processes	50027	B/M	2 L/ 2T	5

3. Faculty of Process and Systems Engineering (FVST)

Course Name	Level	Hours per week	ECTS
Advanced Process Systems Engineering	M	2 L/2 T	
Biochemistry/Biomedicine	M	2 L / 1S	5
Brennstoffzellen/Fuel Cell Technology	M	2BS	
Computational Fluid Dynamics (CFD)	B/M	1 L	
Dispersion of Hazardous Materials	M	2L / 1T	4
Environmental Science Research Project	M	2 S	2
Environmental Biotechnology	B/M	2L	
Hazardous Materials and Safety Characteristics	M	2 L	3
Industrial Explosion Protection	M	2 L	3
Introduction in Tissue Engineering	M	2L	5

Molecular Modelling/Computational Biology and Chemistry	M	2 L	
Numerical simulation in explosion protection	M	2 L&T	
Plant Design (and Process Safety)	M	2 L/1 T	
Simulation Lab	M	2 S	2
Virology for Biomedical Engineers	M	2L	3
Wastewater and sludge treatment	M	2 L&1T	

4. Faculty of Computer Sciences (FIN)

Course Name	Level	Hours per Week	ECTS
Advanced Interactive Information Organization	M	2 S	6
Advanced Topics in Networking	B/M	2 L / 2T	6
Algorithm Engineering	M	4 L&T	6
Applied Discrete Modelling	M	2 L/2 T	6
Ausgewählte Algorithmen in der Computergrafik (Englisch)	M	4 L&T	6
Clean Code Development	B/M	2 L/2 T	6
Computer-Assisted Surgery	B/M	4 L&T	
Data Management for Engineering Applications	B/M	2 L/ 2T	6
Data Mining 2 – Advanced Topics in Data Mining	M	2T/2L	6
Data-Warehouse-Technologien	M	2T/2L	6
Digital Engineering Projekt NetSys	M	2 P	
Distributed Data Management	M	2T/2L	6
Estimation for Autonomous Mobile Robots	M	2 L/2 T	6
Eudiamonic Interaction Design	M	4 BS	6
Functional Programming – Advanced Concept and Applications	B/M	2 L/2 T	
Geometric data Structures	M	4 L&T	6
Hot Topics in Machine Learning Safety	M	S	6
Human-Centred Approaches and Technologies	M	4S	6
Human-Centred Natural Language Processing	M	4BS	6
Information Retrieval	B/M	2L/2T	5
Interactive Information Organization (Seminar)	B	2S	3
Introduction to Computer Graphics	M	4 L&T	6
Introduction to Computer Science for Engineers	M	3 L/2 T	
Introduction to Deep Learning	B/M	2L	10
Introduction to Simulation	B/M	2 L/2 T	5

Machine Learning	B/M	2L/2T	5
Machine Learning for Medical Systems	M	2S	
Neural-symbolic Integration	B/M	2L/2T	6
Recent Topics in Business Informatics	M	S	6
Scientific Writing	M	S	
Software Development for Industrial Robotics	B/M	2 L/2 T	6
Startup Engineering II - Building a Minimum Viable Product	M	4 S	6
Swarm Intelligence	M	2L / 2T	6
Three-dimensional & Advanced Interaction	M	4 L&T	6
Transaction Processing	M	2L/2T	6
Visual Analytics in Health Care	M	2 S	3
Visualization	B/M	2 L/2 T	5
VLBA - Cloud DevOps Technologies	M	2L/2T	6
Wiss. Teamproject: Virtual and Augmented Reality	M	4P	6

5. Faculty of Electrical Engineering and Information Technology (FEIT)

Course Name	Level	Hours per Week	ECTS
Advanced Security Issues in Medical Systems	M	4S	5
Automation Lab	M	2 P	5
Clinical Aspects in Imaging and Radiology Therapy	M	2L/1T	5
Computational Biomechanics	M	2L/1T	5
Computed Tomography I - Methods on CT	M	2L/1T	5
Computer Assisted Surgery	M	2L/2S	6
Control of AC Drives	M	2 L/1T	5
Digital Automation Systems	M	2L/1T	5
Digital Information Processing	M	2L/1T	5
Electromagnetic Compatibility	M	2 L/2 T	5
Electromagnetic Field Theory	M	2 L/1 T	5
Electronic Circuits	M	2 L/1 T	5
Electronic System Level Modeling	M	2L/1T	5
Finite Element Method	M	2L/2T	5
Hybrid Imaging	M	2L/1S	5
Image Coding	M	2 L/1 T	5
Introduction in Tissue Engineering	M	2L/2T	5
Introduction to Deep Learning	M	2L/4T	10
Introduction to the pre- market phase in the approval process of medical	M	2L/2T	5

devices			
Mathematical Foundations	M	2L/2T	6
Mathematical Modeling of Physiological Systems	M	2L/1T	5
Machine Learning for Medical Systems	M	2L/2S	5
Methods of MRI	M	2L/1T	5
Microwave Measurement Techniques (μ WMT) / Mikrowellenmesstechnik	M	2L/1T/1P	6
Mini Research Project	M	S	5
Power Electronic Components and Systems	M	2 L/1 T	5
Power Electronics	M	2 L/1 T	5
Power System Economics and Special Topics	M	2L/1T	5
Power Network Planning and Operation	M	2 L/1 T	5
Planar Medical Imaging Techniques	M	2L/1T	5
Principles in clinical trials, market introduction and market surveillance of medical devices	M	2L/1T	5
Seminar 'System-on-Chip'	M	3S	
Statistical Methods	M	2L/2T	5
System-on-Chip	M	2 L/1 T	5
Systems and Control	M	2L/1T	5
Theoretical Neuroscience I	M	3L/2T	5
Three Dimensional and Advanced Interaction	M	2L/2T	6
Visual Analytics in Healthcare	M	2S	3

6. Faculty of Natural Sciences (FNW)

Course Name	Level	Hours per Week	ECTS
Academic skills development	M	4 L	
Basic Molecular & Cell Biology	M	3 L/1 S/1 P	5
Behavioural Pharmacology	M	2 L/1 P	4
Cellular Neurophysiology	M	2 L/1 S/2 P	6
Clinical Neuroscience	M	3 L	4
Cognitive Neurobiology	M	2 L/ 1 P	
Cognitive Neuroimaging	M	2 L	
Doktorandenseminar Neurogenetik	PhD	2 S	
Doktorandenseminar Systembiologie	PhD	3 S	
Electronic Circuits	M	2L/1T	
Epigenetic factors in neural development	M	2 S	
Einführung in die Programmierung mit Matlab / Introduction to Matlab	M	2T	2
Forschungsseminar Systembiologie	M	3 S	
Genetic Models	M	1 L/2 P	4

Integrative & Comparative Neuroanatomy	M	3 L/2 S/1 P	6
Introduction to Nervous Systems	B	2 L	4
Introduction to quantum physics	M	2L	
Introduction to quantum physics	M	1T	
Journal Club I	M	S	
Journal Club II	M	S	
Macroimaging	M	2 L/2,5 P	4
Mathematical Foundations	M	2 L/2 T	5
Microimaging	M	1 L/2 P	4
Neural Signalling	M	1 L/2 P	4
Neuroethology	B/M	2 L	3/4
Neuroendocrinology / -inflammation and CNS Infections	M	1 L/2 P	4
Quantitative Signal Transduction (INS)	M	1 L	2
Scientific Writing	M	L	
Semiconductor Epitaxy	M	2L	
Semiconductor Epitaxy	M	1 T	
Seminar über Nichtlinearität und Unordnung in komplexen Systemen		2 S	
Solid State Physics	M	2L/1T	5
Theoretical Neuroscience I	M	3 L/2 S	5

7. Faculty of Engineering (FMB)

Course Name	Level	Hours per Week	ECTS
Additive Manufacturing in Medical Engineering	M	1 T/ 2 L	5
Advanced Applications of Industry 4.0-Technologies	M	3 L/ T	5
Anatomy for Engineering Students	M	3L	
Applied Game Design	M	BS	
Applied Engineering Design	M	2L/1T	5
Biomechanical Materials	M	L/T	
Collaboration in Supply Networks		3 L/T	5
Collaborative Management in Supply Networks	M	4 L/T	5
Design, Additive Manufacturing and Powder Requirements	M		5
Design Theory 1	M	BS	
eLearning lectures/ E-Learning Kurse SEM	M	4 L/T	10
Engineering Design	M	2 L/2 T	5
Finite Element Method	M	2 L/2 T	5
History and ethics of medicine and medical engineering	M	2 L/ 2 S	
Interdisciplinary Project	M	S	5

Introduction to Digitalization and Industry-4.0-Applications	B	1T & 2L	
Logikstrategien und -methoden/ Logistics Strategies and Methods	M	2 L/ 2 S	
Material Handling Systems	M	2 L/1 T	5
Mechanics of Materials	M	2L/2T	5
Modelling and Simulation of Mechatronic Systems	M	2 L/1 T/1P	5
Numerische Methoden der Biomechanik/ Computational Biomechanics	M	2 L	5
Optimization Methods for Machine Learning	M	4L/2T	10
Orthopedic Technology	M	2L/1T	5
Polymers in Engineering Science	M	2L/1T	5
Product Design and Drafting	M	2 L/2 S	5
Python in Production System Engineering	M	BS	5
Supply Chain Practice/ Enterprise Ressource Planning Systems	M	BS	
Supply Networks	M	3 L/S	
Supply Networks and Logistics Service Provider/ Logistische Netzwerke und Logistikdienstleister	M	3 L/T	
Systementwurf/ Systems Engineering	M	2 L/ 1T	

8. Faculty of Mathematics (FMA)

Course Name	Level	Hours per Week	ECTS
Applied Discrete Modelling	M	2 L/2 T	6
Econometrics	B/M	2 L/2 T	
Machine Learning	B/M	2 L/2 T	5
Mathematical Foundations	M	2 L/2 T	5
Mathematical Methods I	B	2 L/3 T	5
Optimization Methods for Machine Learning	M	4 L / 2 T	10
Statistical Methods	B/M	2 L/2 T	5
Stochastic Processes	M	2 L/2 T	
Visualization	B/M	2 L/2 T	5