Winter semester 2022/23

English-taught courses
at the Otto von Guericke University Magdeburg, Germany

Contents:

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 is more than one number for ECTS, the lecturer can classify the Credits and decide on the workload you'll put in the seminar how many ECTS you'll gain.

Some course descriptions include no credit (ECTS) information. Please consult the lecturer for this information. The lecturers' contacts can be found in LSF, under the relevant course details: *https://lsf.ovgu.de/qislsf/rds?state=user&type=0*

- **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 hereunder cannot be guaranteed in advance. We reserve the right to check the applicant's 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
Basics on Didactics for Specialisation	M	2S	6
Conflict Analysis focusing on domestic and international conflicts	M	2 S	4/5/6/10
Discourses of Slavery and Abolition in the 17th and 18th Centuries_PNR 920196	B/M	2 S	4/5/6
European Social Integration. Towards a European Society?	M	2 S	4/5/6/10
Feminist Perspectives on War	M	2 S	4/6/10
Geschlecht und Gewalt in Krieg und Frieden	M	2S	4/5/6
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	4/5
Introduction to Cultural Studies	B/M	2 L	4/5/6
Introduction to Peace and Conflict Studies	M	2 L	4/5/6/10
Introduction to Peace and Conflict Studies - Reading Course	M	2 S	6
Introduction to the political system of the European Union	M	2 S	4/5/6/10
Material Culture Studies	B/M	2S	5/6
Language in commercial contexts	B	2 PS	4/6
Methods in PACS	M	2S	
Methods in Peace and Conflict Studies & European Studies: An Overview	M	2S	4/6/10
Motor Control and Motion Analysis	M	2 S	

Course Name	Component Code	Level	ECTS
Motor Control and Statistics	M	2 S	
Names, paragons and frames in current-day media discourse	M	2 S	4/5/6/10
Narratives of Identity	B	2 S	4
Participatory Culture: Feminism and Masculinity in Public Protests, Politics and War in Ukraine	M	2 BS	4/5/10
Peace and Conflict Simulation - The Republic of Katanesia	M	BS	4/6
Philosophy of Computation and Neurocognition	B/M	2 L	2/4
Public apologies and denials	M	2 S	4/5/6
Structures and Theories of Vocational Education	M	2 BS	4
Terrorism and Political Violence	M	2 S	4/6
The English Language Today	B	2 S	4/6
The intersection of Gender, Family and Society in Kyrgyzstan: Guided research of students	M	2S	4/6/(10 with excursion)
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

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	
Brennstoffzellen/Fuel Cell Technology	M	2BS	
Computational Fluid Dynamics (CFD)	B/M	1 L/2 T	
Dispersed Phase Systems in Chemical Engineering	M	BS	
Dispersion of Hazardous Materials	M	2L / 1T	4
Drying Technology	M	2 L/2 T	
Environmental Science Research Project	M	2 S	2
Hazardous Materials and Safety Characteristics	M	2 L	3
Industrial Explosion Protection	M	2 L	3
Molecular Modelling/Computational Biology and Chemistry	M	2 L/1 T	
Nanoparticle Technology	M	2 L/2 T	
Numerical simulation in explosion protection	M	2 L&T	
Plant Design (and Process Safety)	M	2 L/1 T	
Process Systems Engineering	M	2 L/1 T	
Simulation Lab	M	2 S	2
Simulations of Mechanical Processes	M	3 L/1 T	

Thermal Process Engineering	M	2 L/2 T	
Tissue Engineering	M	4T	5
Wastewater and sludge treatment	M	3 L&T	

4. <mark>Faculty of Computer Sciences (FIN)</mark>

Course Name	Level	Hours per Week	ECTS
Advanced Interactive Information Organization	M	2 S	6
Advanced Security Issues in Medical Systems - Hardware and Software Security for Trustworthy medical treatment	M	2 S	5
Advanced Topics in Networking	B/M	2 L/2 T	6
Applied Discrete Modelling	M	2 L/2 T	6
Bayes Networks	M	2 L/2 T	6
Biometrics and Security	M	2 L / 2 T	6
Clean Code Development	M	2 L/2 T	6
Computer Aided Geometric Design	B/M	4 L&T	5
Computer-Assisted Surgery	B/M	4 L&T	5/6
Data Management for Engineering Applications	B/M	2 L/ 2T	5/6
Data Mining 2 – Advanced Topics in Data Mining	B/M	2T/2L	5/6
Data-Warehouse-Technologien	M	2T/2L	
Digital Engineering Projekt NetSys	M	2 P	
Distributed Data Management	M	2T/2L	
Encrypted Estimation, Control and Optimisation	B	2S	3
Estimation for Autonomous Mobile Robots	M	2 L/2 T	6
Functional Programming – Advanced Concept and Applications	B/M	2 L/2 T	5/6
Hot Topics in Computer Graphics	B	2 PS	3
Hot Topics in Entertainment Software Development	B	2 PS	3
Information Retrieval	B/M	2L/2T	
Interactive Information Organization (Seminar)	B	2S	
Introduction to Computer Graphics	M	4 L&T	6
Introduction to Computer Science for Engineers	M	3 L/2 T	5/6/10
Introduction to 2D Game Development	B	2 L	
Introduction to Simulation	B/M	2 L/2 T	5
Introduction to Deep Learning	B/M	2L/2T/2T	
Machine Learning	B/M	2L/2T	
Machine Learning for Medical Systems	M	2S	

Mining the Brain: Computational Modeling and Learning in Neurosciences (CLEAN)	B/M	2S	3/6
Numerical Methods for Visual Computing	M	2L/2T	6
Scrum-in-Practice	M	4L&T	6
Software Development for Industrial Robotics	M	2 L/2 T	6
Software Testing	B/M	2L	5/6
Startup Engineering II - Building a Minimum Viable Product	M	4 S	6
Swarm Intellligence	M	2L + 2T	6
Three-dimensional & Advanced Interaction	M	4 L&T	6
Topics in Algorithmics	M	4 L&T	6
Transaction Processing	M	2L/2T	
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

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 devices	M	2L/2T	5

Course Name	Level	Hours per Week	ECTS
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 (µWMT) / 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
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 Neuroimaging	M	2 L	
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
Genetic approaches to neural function	M	2 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 chemistry	M	2L/1T	
Introduction to quantum mechanics	M	2L/1T	
Machine Learning	M	2L/2T	5

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
Neuroendrocrinology / -inflammation and CNS Infections	M	1 L/2 P	4
Quantitative Signal Transduction (INS)	M	1 L	2
Semiconductor devices II"	M	2L/1T	5
Solid State Physics	M	2L/1T	5
Spiking Networks	M	2 L	3
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 Biomechanics	M	2L/2T	5
Applied Engineering Design	M	2L/1T	5
Biomechanical Sensors	M	2l/2T	5
Computational Biomechanics	M	2L/2T	5
Collaborative Management in Supply Networks	M	4 L&T	5
Computational Fluid Dynamics	M	3L/T	5
Computed Tomography I	M	2L/2T	5
Continuum Mechanics	M	2L/2T	5
Design and Additive Manufacturing Processes	M	2 L/1 T	5
Design, Additive Manufacturing and Powder Requirements	M		5
Discreet Element Method	M	2L/2T	5
Engineering Design	M	2 L/2 T	5
Finite Element Method	M	2 L/2 T	5
FE Modelling of Thin-Walled Structures	M	2L/2T	5
Introduction to Digitalization and Industry-4.0-Applications	B	1T & 2L	
Introduction to Numerical Ordinary and Partial Differential Equations and their Applications	M	2L/2T	5
Lightweight and composite materials	M	2L/1T	5
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
Multibody Dynamics	M	2L/2T	5
Nonlinear FEM	M	2L/2T	5
Optimization Methods for Machine Learning	M	4L/2T	10
Orthopedic Technology	M	2L/1T	5
Polymers in Engineering Science – From Polymer Structure to Final Product	M	2L/1T	5
Python in Production System Engineering	M	3 weeks intensive course	5
Scientific Computing	M	2L/2T	5
Simulation of Mechanical Processes	M	2L/2T	5
Simulation methods of dynamical systems	M	2 L/2 T	5
Systems Engineering for Manufacturing Systems	M	2 L&1T	5

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