Preliminary version of Feb. 2021

Winter semester 2020/21

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

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

If there are 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 changes 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 / 2 S	6
Applied Policy Analysis	M	4 S	15
Action fields of TVET Trainers	M	2S	6
Basics on Didactics for Specialisation	M	2S	6
Coaching im Sport	M	2 L	4
Colonial Objects and Translocation	B/M	2S	4/6
Conflict Analysis	M	2S	4/6/10
Daniel Defoe and the Concept of homo economicus	B	2S	4/6
Development of Curricula	M	4S	4
Didactics for Sustainable Development	M	2S	6
Dimensions of Time and Space in the World of J.R.R. Tolkien	B	2S	4/6
European Social Integration, Towards a European Society?	B/M	2S	6/10
Explanations in Psychiatry	B/M	2S	
Fan Studies	B	2S	5
Focus Seminar for Vocational Education	M	2BS	4
Global Sustainability Governance	M	2 S	6/10
History and Theory of Literature and Culture II: 19th Century to the Present	B/M	2 L	2/4
Humour and Social Conflicts	M	2S	4/6
Intercultural Communication	M	2 S	4/6
International Human Rights Protection	M	2S	4/6
International Organizations in Sustainability Governance	M	2S	4/6
Introduction to Cultural Studies	B	2 L	4/6
Introduction to Peace and Conflict Studies	M	2 S	6
Introduction to the political system of the European Union	M	2S	10
Language in commercial contexts	B	2 S	4/6
Material Cultural Studies	B/M	2S	5
Megatrends in Germany	M	2BS	10
Motor Control and Motion Analysis	M	2 S	
Motor Control and Statistics	M	2 S	
Names, paragons and frames in current-day media discourse	M	2 S	4/6/10
Narratives of Identity	B	2S	4
Post-Human, Post-Capital, Post-Apocalypse: The world in Atwood's MaddAddam Trilogy	B	2S	4/6

Practical Studies	M	2S	2
Protracted Social conflicts in the Middle East and North Africa Region: Human Needs Approaches beyond Democracy vs. Autocracy		BS	
Public apologies and denials	M	2 S	4/6
Qualitative research methods in political science	M	2S	10
Research Methodology and Scientific Writing	M	2S	
Securing peace after war. International statebuilding and peace intervention in flux	M	2 S	10
Structures and Theories of Vocational Education	M	2BS	4
Terrorism and Political Violence	M	2S	4/6
The English Language Today	B	2 L	4
The Language of Advertising	B/M	2 S	4/6
Trilogues- how interinstitutional negotiations in EU legislative decision-making work	B	S	2-10
Urban Conflicts	M	2S	4/6/10

2. Faculty of Economics and Management (FWW)

Course Name	**Component Code**	**Level**	**Hours per Week**	**ECTS**
Academic Methods – Quantitative Approaches	50029	M	4	
Accounting Theory	20813	M	2 L/2 T	5
Advanced Business Economics	21937	B/M	2S	10
Advanced Marketing Research	21163	M	4 L/T	5
Business Decision Making	50115	B/M	3 L/T	5
Business Plan	21936	B	4 S	15
Combinatorial Optimization in Production and Logistics	22812	B/M	4L+T	5
Computational Finance and Financial Management	22047	M	2 S	10
Downside Risk	22220	B/M	4 L/T	5
Econometrics	50308	B/M	3 L/T	5

Economic Crises: Consequences of firm closure and worker Displacement	22819	B/M	2S	10
Economic of Incentives	21917	B/M	2BS	10
Entrepreneurship and Management Research	21938	B	2 S	10
Expected option returns	22810	M	4S	15
Exponential Innovation- How to develop innovative products in corporates		B/M		10
Financial Accounting	41087	B	2 L/2 T	5
Financial Management	41065	B	2 L/1 T	5
Foundations for Finance	50006	B/M	4 L/T	5
Frontiers in the Economic Analysis of Family Policy	22846	B/M	2S	
Globalisation: past, present, future	22214	B	4 L	10
International Business Plan	22203	B	2	10
International Corporate Strategy	50114	B/M	3 L/T	5
International Taxation	21007	B/M	3 L/T	5
International Tax Planning	21380	B	2L/1T	5
International Trade	50384	B/M	3 L/T	5
Introduction to Econometrics II	22213	B	4 L/T	5
Introduction to Production Management	22208	B	2 L/1T	5
Macroeconomic Analysis	50306	B/M	4 L/T	5
Macroeconomics	41063	B	4 L/2 T	10
Marketing Performance Management	41058	B	2 L/2 T	5
Microeconomic Analysis	50024	B/M	4 L/T	5
Microeconomics	41063	B	4L/2T	10
Monetary Economics	20559	B/M	3 L/T	5
New Product Development	22805	B	3	10
Online Consumer Research	22229	B/M	4 S	10
Predictive Analytics & Forecasting	22845	B/M	4L+T	5
Pricing in Global and Local Competition	21931	B/M	4 L/T	5

Principles of Management	41079	B	2 L/ 1T	5
Project in FinTech and Blockchain Innovations	22228	M	4 S	15
Quantitative Methods for Business	21950	B	5 S	15
Recent Issues in Marketing Research	21926	B/M	4 S	10
Revenue and Assortment Optimization	22844	M	2S	10
Scientific Project: Innovation, Internationalisation & Cross-Cultural Management	22037	M	4 S	15
Secrets of Innovation in Multinational Companies	22038	B/M	4 S	10
Stochastic Models in Production and Logistics	50001	B/M	4 L/T	5
Sustainability and Finance	22814	M	3 L/T	5
Topics in Financial Intermediation and Stability	22820	M	2S	10
Total Beta	22843	M	2S	15
User Centered Innovation	22809	B/M		20

3. Faculty of Process and Systems Engineering (FVST)

Course Name	**Level**	**Hours per week**	**ECTS**
Advanced Process Systems Engineering	M	2L+1T	
Brennstoffzellen/Fuel Cell Technology	M	BS	
Combustion Engineering	B/M	2L+1T	5
Computational Fluid Dynamics (CFD)	B/M	1 L	
Core Facility Tissue Engineering	M	2S	
Dispersed Phase Systems in Chemical Engineering	M	BS	
Dispersion of Hazardous Materials	M	2L / 1T	4
Drying Technology	M	2L+2T	
Environmental Biotechnology	M	2 L	
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	
Nanoparticle Technology	M	2L+2T	
Numerical simulation in explosion protection	M	2 L/T	
Plant Design (and Process Safety)	M	2L / 1T	
Process Systems Engineering	M	2L+2T	

Simulation Lab	M	2 S	2
Simulations of Mechanical Processes	M	3L+1T	
Technology and Innovation Management in the Biotech Industry	M	BS	
Thermal Process Engineering	M	2L+2T	
Tissue Engineering	M	4L	5
Wastewater and sludge treatment	M	3 L/T	

4. Faculty of Computer Sciences (FIN)

Course Name	Level	Hours per Week	ECTS
Advanced Interactive Information Organization	M	2S	6
Advanced Security Issues in Medical Systems - Hardware and Software Security for Trustworthy medical treatment	M	2S	5
Advanced Topics in Networking	B/M	2 L	6
Applications of 3D Deep Learning	M	2S	3
Applied Discrete Modelling	M	2L+2T	6
Bayes Networks	M	2L+2T	6
Biometrics and Security	M	2L+2T	6
Clean Code Development	M	2L+2T	6
Computer Aided Geometric Design	B/M	4L+T	5
Computer-Assisted Surgery	B/M	4L/T	5/6
Computer Vision and Deep Learning	M	4L/T	6
Data Management for Engineering Applications	B/M	2L+2T	6
Data Mining II- Advanced topics in Data Mining	M	2L+2T	6
Digital Engineering Project: Collective Decision Making	M	Project	12
Digital Engineering Project: Doriot DCA - Developing a light-weight database for hardware information for the IoT	M	Project	12
Distributed Data Management	M	2S+2T	6
Functional Programming-Advanced Concepts and Applications	B/M	2T	5/6
Hot Topics in Computer Graphics	B	2S	3
Human-Computer Interfaces in Medicine	B/M	BS	3
Information Retrieval	B/M	2S+2T	5
Interactive Information Organization	B	2 S	3
Introduction to Computer Science for Engineers	M	2S+3T	6
Introduction to Simulation	B/M	2L	5
Machine Learning	B/M	2S+2T	5
Machine Learning for Medical Systems	M	2S	

Mathematics and Numerics of Deep Neural Networks for Physical Simulations	M	2S	3
Principles and Practices of Scientific Work	M	2S+2T	3
Recent Topics in Business Informatics	M	2S	6
Recommenders	M	2S+2T	
Selected Chapters of IT-Security	M	2Project	3/6
Software Development for Industrial Robotics	M	2 L	6
Software Testing	M	2S+2T	6
Startup Engineering II - Building a Minimum Viable Product	M	2S	6
Swarm Intelligence	M	2S+2T	6
Three-dimensional & Advanced Interaction	M	2L + 2T	6
Transaction Processing	M	2L+2T	6
Visual Analytics in Health Care	M	2 S	3
Visualization	B/M	2L	5

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

Course Name	**Level**	**Hours per Week**	**ECTS**
Advances in Radiation and Medical Physics	M	1 T	
Anwendung stochastischer Modelle in der EMV	M	1L+1T	
Automation Lab	M	2 P	5
Complex Systems	M	3L	
Control of AC Drives	M	2 L + 1 T	5
Digital Information Processing	M	1T + 2L	
Digital Protection of Power Networks	M	2L	
Dynamics of Distributed Parameter Systems	M	2L+1T	
Electromagnetic Compatibility	M	2L+1T+2P	
Electromagnetic Field Theory	M	2L+1T	
Electronic Circuits	M	2L+1T	
Image Coding	B/M	2L+1T	
Integrative Neuroscience I	M	L+T	
Integrated Project "Electrical Actuators"	M	Project	
Integrated Project "Electric Power Networks/ Renewable Energy"	M	Project	
Integrated Project "Power Electronics"	M	Project	
Interdisciplinary Survey on Emotion Theory for Human-Computer-Interaction		1S	
Introduction to Medical Imaging Technologies	M	2L+1T	5
Introduction to Programming Techniques in Engineering	M	BS	5
Mathematical Modeling of physiological Systems	M	2 L/T	

Medical Imaging in Interventional Endovascular Therapy	B/M	1 L	
Modeling and Analysis in Systems Biology	B/M	3 L+T	
Optimal Control / Predictive Control	M	3 L/T	
Positron Emission Tomography	M	3 L	5
Power Electronic Components and Systems	M	2L+1T	
Power Electronics	M	2L+1T	
Power Network Planning and Operation	M	2L+1T	
Power System Economics and Special Topics	M	2L+1T	
Project "Electrical Actuators" (for exchange students only)	M	Project	5
Project "Power Electronics" (for exchange students only)	M	Project	5
Project Seminar "Cognitive Systems"	B/M	1S	
Project Seminar (as non-technical compulsory module, for exchange students)	M	Project	
Scientific Working	M	S	
Systems and Control	M	2L+1T	

6. Faculty of Natural Sciences (FNW)

Course Name	**Level**	**Hours per Week**	**ECTS**
Basic Molecular & Cell Biology	M	3L+1S+1P	5
Behavioural Pharmacology	M	2L+1P	4
Cellular Neurophysiology	M	2L+1S + 2P	6
Clinical Neuroscience	M	3L	4
Cognitive Neurobiology	M	2L+1P	4
Cognitive Neuroimaging	M	2 L	
Computational Neuroscience I/ Biological Neuroscience	B/M	1T+2L	
Computational Physics	M	1L+2T	4
Doktorandenseminar: Neurogenetik	M	2S	
Doktorandenseminar: Systembiologie	M	3S	
Forschungsseminar: Systembiologie	M	3S	
Genetic Models	M	1L+2P	4
Integrative & Comparative Neuroanatomy	M	3L+2S+1P	6
Introduction to Matlab	B/M	2 T	2
Introduction to Nervous Systems	B	2L	4
Journal Club	M	2 S	
Journal Club II	M	2 S	
Journal Club III	M	2 S	
Labrotation I	M	4 O	6
Labrotation III	M	3 P	4
Macroimaging	M	2L+2,5P	4
Mathematical Foundations	M	2L+2T	2
Microimaging	M	1L+2P	4

Neural Signalling	M	1L+2P	4
Neuroethology	B/M	2L	3/4
Neuroendrocrinology / -inflammation and CNS Infections	M	1L+2P	4
Philosophy of Cognition and Neural Computation	B/M	2L	2/4
Scientific Writing	M	L	
Seminar über Nichtlinearität und Unordnung in komplexen Systemen		2 S	
Spiking Networks	M	3L	3
Soft Matter	M	1T+2L	
Theoretical Neuroscience I	M	3L+2S	5

7. Faculty of Engineering (FMB)

Course Name	Level	Hours per Week	ECTS
Advanced Applications of Industry 4.0-Technologies	M	3 L/T	5
Collaborative Management in Supply Networks	M	2L+2T	5
Engineering Design I	M	2L+2T	
Finite Element Method	M	2L+2T	5
Integratd Design Engineering	M	2L+1T	5
Industrial robots	M	3 L/T	5
Logistics Strategies & Methods	M	2L + 2T	
Supply Networks and Logistics Service Provider	M	4L	
Material Handling Systems	M	2L + 1S	
Modeling and Simulation of Mechatronic Systems	M	1L+1T	5
Simulation methods of dynamical systems	M	2L+2T	5
Supply Chain Practice / Enterprise Ressource Planning Systems	M	BS	

8. Faculty of Mathematics (FMA)

Course Name	Level	Hours per Week	ECTS
Mathematical Foundations	M	2L+2T	5
Mathematical Methods I	B	2L+3T	5
Mathematics and Numerics of Deep Neural Networks for Physical Simulations	M	2S	3
Optimization Methods for Machine Learning	M	4L+2T	10
Scientific Computing 1	B/M	4L+2T	
Statistical Methods	B	2L+2T	5

Stochastic Processes	M	2L+2T	