

Faculty Electrical Engineering and Media Technology

Master Applied Research in Engineering Sciences

Selection of compulsory electives at Deggendorf Institute of Technology

Compulsory Electives FWPF 1 - 3

PO	Exam No.	Module-/ Subject	SWS	ECTS	Type of Exam	From course
84/ET/20132	4010	Harmonisation Course ENS (High-frequency electronics)	4	5	written E. 90 min.	Bachelor ET
	4310	Harmonisation Course ENS (Telecommunication 2)	4	5	written E. 90 min.	
	3110	Harmonisation Course AET (Power electronics)	4	5	written E. 90 min.	
	2710	Harmonisation Course AET (Control systems engineering 2)	4	5	written E. 120 min.	
90/MET/20121	110	Advanced Programming Techniques	4	5	written E. 90 min.	Master Electrical Engineering and Information Technology
	210	Numerical Methods	4	5	written E. 90 min.	
	310	Special Mathematical Methods	4	5	written E. 90 min.	
	960	Selected Topics in Micro- und Nano Electronics	4	5	written E. 90 min.	
	970	Selected Topics in Optoelectronics and Laser Technology	4	5	written E. 90 min.	
	980	Modern RF and Radio Systems	4	5	written E. 90 min.	
	990	Special Devices and Circuits	4	5	written E. 90 min.	
	1010	Signals and Systems in Communication Technology	4	5	written E. 90 min.	
	910	Advanced Modelling and Simulation	4	5	written E. 120 min.	
	920	Selected Chapters in Control Engineering	4	5	written E. 90 min.	
	930	Selected topics in contactless sensor technology	4	5	written E. 90 min.	
	940	Automotive and Industrial Drive Systems	4	5	written E. 90 min.	
512	Advanced Automation	4	5	written E. 90 min.		
_ /MET/0	950	Renewable Energies (Generation and Distribution)	4	5	Exam thesis	Pool Master Electrical Engineering and Information
	513	Advanced HTML-Programming	4	5	written E. 90 min.	
	515	Digital Video- and Audio-Broadcasting Technology	4	5	written E. 90 min.	
		Product Development for Engineers	4	5	written E. 90 min.	
90/MTP/20083	810	Audio Production	4	5	Exam thesis	Master Media Technology
	910	Auditory and Psychoacoustics	4	5	written E. 90 min.	
	410	Web-Engineering	4	5	written E. 60 min.	
	610	Media Interface Electronics	4	5	Exam thesis	
	510	Methods of Visualisation	4	5	Exam thesis	
	710	Controller for Media Devices	4	5	Exam thesis	
	1210	Application-oriented 3D modelling and animation	4	5	Exam thesis	
	1550	Industrial Image Processing	4	5	Exam thesis	
	1810	Multimedia Content and Streaming	4	5	written E. 60 min.	
	1410	3D-Computeranimation	4	5	Exam thesis	
	1610	IT security for media technicians	4	5	written E. 90 min.	
1710	Application Design	4	5	Exam thesis		
90/MAI/_20152	110	Module: Theoretical Computer Science *	6	8	written E. 90 min.	Master Applied Computer Sciences
	210	Module: Practical Computer Science *	6	8	written E. 90 min.	
	310	Selected Topics in Embedded Software Development 1 Subject: Embedded Safety / Embedded Connectivity	4	5	written E. 90 min.	
	410	Selected Topics in Embedded Software Development 2	4	5	written E. 90 min.	
	1110	FPGA Programming	4	5	written E. 90 min.	
	7001	IT Security	4	5	written E. 90 min.	
	Modern Internet Technology	4	5	Exam thesis		

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	1019	Java Programming	4	5	Exam thesis	
	1020	Principles of driver assistance systems	4	5	Exam thesis	
	1022	C in automotive software development	4	5	Exam thesis	
	1025	Principles of Artificial Intelligence	4	5	Exam thesis	
—/LSI/2019	LSI-01	Informatics und Biomedical Sciences (5 ECTS)	2	3	written E. 90 min.	Master Life Science Informatics
		LSI 1101 Informatics LSI 1102 Biomedical Sciences	2	2		
	LSI-02	Life Science I	4	5	written E. 90 min.	
	LSI-03	Computer Science I	4	5	written E. 90 min.	
	LSI-04	Biostatistics I	4	5	written E. 90 min.	
	LSI-05	Sequencing Technologies	4	5	written E. 90 min.	
	LSI-06	Biomedical Data Analysis	4	5	Exam thesis	
	LSI-07	Life Science II	4	5	written E. 90 min.	
	LSI-08	Computer Science II	4	5	written E. 90 min.	
	LSI-09	Biostatistics II	4	5	written E. 60 min.	
	LSI-10	Data Management, Data Analysis and Data Mining	4	5	written E. 90 min.	
	LSI-11	Bioinformatics-Algorithms and Data Structures	4	5	written E. 90 min.	
LSI-12	Data Visualization	4	5	Exam thesis		
90/MBB/20151	105	Higher Mathematics *	5	7	written E. 90 min.	Master Mechanical Engineering
	205	Technical Databases	4	5	written E. 90 min.	
	305	Fluid / Thermodynamics *	4	6	written E. 90 min.	
	405	Dynamic Systems	4	5	written E. 90 min.	
	505	FEM / MKS *	6	7	written E. 90 min.	
	605	Numerical Methods *	6	7	written E. 90 min.	
	705	Drive System Engineering	4	5	written E. 90 min.	
	805	CAD / CAM *	6	7	written E. 90 min.	
	905	Virtual Testing *	4	6	written E. 90 min.	
	1005	Innovation Management	4	5	written E. 90 min.	
90/MTE/20152	405	Engineering at Business Companies – Subjects: Tools for Development / Quality und Controlling II *	4+4	4+4	written E. 120 min.	Master Technology Management
	505	Manufacturing Engineering – Subjects: Selected topics on production / logistics *	3+2	4+2	written E. 90 min.	
	530	Manufacturing Engineering - Subject: Case study production engineering	3	5	Exam thesis	
	805	Sustained Yield – Subjects: values and strategy development / methods of process control and optimization *	2+4	2+4	written E. 90 min.	
90/MBU/20161	1710	Recycling and Disposal	4	5	written E. 60 min.	Master Civil and Environmental Engineering
	2710	Renewable Sources of Energy II	4	5	written E. 90 min.	
90/MMC/218	MCS-1	Module: Cyber Physical Systems * MCS 1101 Structure and Functions of Cyber Physical Systems (4 ECTS) MCS1102 Business Models for CPS (2 ECTS)	4	4+2	See Study Rules and Regulations MMC	Master Mechatronics and Cyber Physical Systems
	MCS-2	Cooperative and autonomous systems	4	5		
	MCS-3	Module: Advanced Simulation Systems * MCS 1106 Advanced Modelling and Simulation (4 ECTS) MCS 1107 Case Study Mechatronic System Simulation (6 ECTS)	4+4	4+6		
	MCS-4	Human Machine Interfaces	4	5		
	MCS-5	Additive Manufacturing (AM)	4	5		

Compulsory Electives FWPF 4 (Inter-university)

- see inter-university offers of the respective semester

Multidisciplinary Modules IWPF

PO	Exam No.	Module-/ Subject	SWS	ECTS	Type of Exam	From course
20121	610	Selected topics in Operational and Personnel Management	4	5	written E. 90 min.	MET
20151	1005	Innovation Management	4	5	written E. 90 min.	MMB
		Foreign language course Master (from the language catalogue of the Language Centre)	4	5		AWP
20151	310	Intercultural competence	4	5	Exam thesis	SIM
	1210	Strategic Planning	4	5	Exam thesis	
90/MTP/20083	105	Innovation in Business - Subjects: Project Management II / Business Development and Market Research - Tools for Innovation *	2+4	2+4	written E. 90 min.	Master Media Technology
	310	Media- und Innovation Management	4	5	Exam thesis	
	650	Media Art	4	5	Exam thesis	
	1010	Short Film	4	5	Exam thesis	
	1110	Storyboard	4	5	Exam thesis	
90/MTE/20152	130	Innovation in Business - Subject: Case Study Innovation (Exam thesis) *	4	6	Exam thesis	Master Technology Management
	205	Business Management - Subjects: Hot Topics in Economics / Legal Issues within a company *	4+4	4+4	written E. 90 min.	
	320	Product planning - Subject: case study specification and FMEA (Exam thesis) *	4	6	Exam thesis	

Research methods and strategies FM&S (interuniversity)

- see inter-university offers for the respective semester

Please note: Subjects marked with an * are, regardless of the ECTS information in the original examination regulations, only entered in MAR as FWP subjects with 5 ECTS. Surplus ECTS are truncated and cannot be entered as additional credit.