Course Offer Winter Semester 2023/24

Master Digital Health (DH)

(Status: 10/19/2023)

	Course Titel	Type	Lecturers Supervisors	weekly hours per semester	CP	Participants (max.)	Language	Digital Health				Scalable Computing Algorithms for Digital Health			Digitalization of Clinical Research Processes			Acquisition, Processing and Analysis of Health Data			Health Data Security			Professional Skills				Bridge moduls			
								DH				SCAD			DICR			APAD			HDAS			PSK				BM			
								Health Systems and Sciences for Digita Health	Software Architectures for Digital Health	Ethics, Law and Compliance for Digital Health	Data Science for Digital Health	Concepts and Metods	Technologies and Tools	Specialization	Concepts and Metods	Technologies and Tools	Specialization	Concepts and Metods	Technologies and Tools	Specialization	Concepts and Metods	Technologies and Tools	Specialization	Communication Skills	Management and Leadership	Design Thinking Basic	Design Thinking Advanced	Principles of IT Systems	Fundamentals of Programming	Introduction to Principles in Medicine	Fundamentals of Healthcare Systems
								MPI-DH-HS	MPI-DH-SW	MPI-DH-EC	MPI-DH-DS	MPI-SCAD-C	MPI-SCAD-T	MPI-SCAD-S	MPI-DICR-C	MPI-DICR-T	MPI-DICR-S	MPI-APAD-C	MPI-APAD-T	MPI-APAD-S	MPI-HDAS-C	MPI-HDAS-T	MPI-HDAS-S	MPI-PSK-CO	MPI-PSK-MLE	MPI-PSK-DTB	MPI-PSK-DTA	MPI-DMBM-IT	MPI-DMBM-PR	MPI-DMBM-PM	MPI-DMBM-HS
								MA Digital Health Prüfungsordnung 2021				MA Digital Health Prüfungsordnung 2021			MA Digital Health Prüfungsordnung 2021																
1	21 Century Health Care Business: Regulatory, Legal and Public Policy Aspects	S	Prof. Dr. Ariel Stern	2	3		EN			3																					
2	Advanced Competitive Programming 2	L	Prof. Dr. Tobias Friedrich, Dr. Kirill Simonov, Hans Gawendowicz	4	6		DE					6	6	6		6															
3	Advanced Machine Learning Seminar	S	Prof. Dr. Christoph Lippert	4	6		EN					6	6	6				6	6	6											
4	Advances in BPM Research	S/P	Prof. Dr. Mathias Weske, Maximilian König	4	6		EN								6	6	6														
5	AI in Practice: Implementing Real-World Solutions	PS	Prof. Dr. Gerard de Melo, Dr. Russa Biswas, Michael Mansfeld	4	6		EN								6	6	6	6	6	6											
6	Applied data science on real-world hospital data II	S	Prof. Dr. Bernhard Renard	4	6	15	EN								6	6	6	6	6	6											
7	Applied Probabilistic Machine Learning	S	Prof. Dr. Bernhard Renard, Dr. Hugues Richard	4	6	20	EN					6	6	6				6	6	6											
8	Big Data Lab (alt: Big Data Analytics)	L/E	Prof. Dr. Tilmann Rabl, Ilin Tolovski, Thomas Bodner	2	3	20	EN					3	3	3				3	3	3											
9	Big Data Systeme	L	Prof. Dr. Tilmann Rabl, Nils Straßenburg, Ricardo Salazar	4	6		EN					6	6	6	6	6	6	6	6	6											
10	Biostatistics & Epidemiological data analysis using R	L/E	Dr. Stefan Konigorski	4	6		EN				6	6	6	6	6	6	6	6	6	6											
11	Business Process Compliance	L/S	Prof. Dr. Mathias Weske, Anjo Seidel	2	3		EN								3	3	3														
12	Competitive Programming with Deep Learning 2	PS	Prof. Dr. Tobias Friedrich, Dr. Sarel Cohen, Dr. Kirill Simonov	4	6		EN				6		6	6																	
13	Cyber Security Management	L/E	Prof. Dr. Christian Dörr	4	6		DE														6	6	6								
14	Data Management for Digital Health	L/E	Dr. Ing. Matthieu-P. Schapranow	4	6		EN				6	6	6		6	6		6	6												
15	Data Processing on Modern Hardware	PS	Prof. Dr. Tilmann Rabl, Marcel Weisgut	4	6	6	EN					6	6	6				6	6	6											
16	Digital Health and Research Systems, Data Interoperability	L/S	Dr. Kai Uwe Heitmann, Prof. Dr. Fabian Prasser, Prof. Dr. Sylvia Thun	4	6		EN		6																						
17	Feature Selection and Classification for hierarchically structured feature spaces	S	Prof. Dr. Bernhard Renard, Jan Philip Sachs	4	6	3	EN					6	6	6				6	6	6											
18	Fundamentals of Programming for Digital Health	L/P	Prof. Dr. Bert Arnrich	4	6		EN																					6			
19	Global Team-Based Innovation I	P/S	Prof. Falk Uebernickel	4	6		EN								6	6	6	6	6	6					6		6				
20	Graphenalgorithmen	L/E	Prof. Dr. Tobias Friedrich, Dr. George Skretas	4	6		EN					6	6	6																	
21	HCI Project Seminar on 3D Interaction and Digital Fabrication	PS	Prof. Patrick Baudisch	4	6		EN					6	6	6																	
22	Health and Disease Core Competencies	L/E	Prof. Lothar Wieler, Dr. Henrike Heyne, Dr. Esther Antao	4	6		EN																							6	
23	Healthcare Fundamentals and Digital Health Trends	L/E	Prof. Dr. Lothar Wieler, Dr. Jasper zu Putlitz, Dr. Esther Antao	4	6		EN																								6
24	Introduction to IT Systems	L/E	Dr. Anne Kayem	4	6		EN																				6				
25	Kryptographie	L/E	Dr. Henning Seidler	4	6		DE														6	6	6								
26	Lecture Series on Database Research	L	Prof. Dr. Tilmann Rabl, Prof. Dr. Felix Naumann	2	3		EN					3	3	3				3	3	3											
27	Machine Intelligence with Deep Learning	S/P	Dr. Haojin Yang, Gregor Nickel, Jona Otholt, Weixing Wang	4	6	12	EN				6				6	6	6	6	6	6											
28	Machine Learning for Software Engineering	PS	Prof. Dr. Holger Giese, Christian Adriano, Matthias Barkowsky, Iqra Zafar	4	6	16	EN											6	6	6											
29	Mobile Security	L/E	Dr. Jiska Classen	4	6	25	EN														6	6	6								
30	Mobilkommunikation	L/E	Prof. Dr. Holger Karl	4	6		DE/EN											6	6	6											
31	Network Security in Practice	S/P	Dr. Feng Cheng, Pejman Najafi	4	6		DE EN														6	6	6								
32	NLP and Computer Vision with Deep Learning Research Seminar (alt: Recent Trends in Deep Learning and AI)	PS	Prof. Dr. Gerard de Melo, Dr. Jingyi Zhang	4	6		EN								6	6	6	6	6	6											
33	Privacy Preserving Outlier Detection	S/Ü	Dr. Anne Kayem	4	6		EN					6	6	6							6	6	6								
34	Process Mining	L/E	Prof. Dr. Henrik Leopold	2	3		EN								3	3	3														
35	Reverse Engineering for Security Analysis	S	Dr. Jiska Classen	4	6	6	EN														6	6	6								
36	Trends and Concepts in the Software Industry - Consulting the Business	S (Block)	Dr. Ralf Teusner	4	6	20	EN					6	6	6				6	6	6											
37	Trends in BPM Research	L/S	Prof. Dr. Mathias Weske, Tom Lichtenstein	2	3		EN								3	3	3														
38	Veantwortung in der Informatik - Accountability in AI (2023)	S	Prof. Dr. Andreas Polze, Kordian Gontarska, Weronika Wrazen, Felix Grzelka	2	3	12	DE EN														3	3	3	3							
39	Verlässliche Verteilte Eingebettete Systeme	L/E	Prof. Dr. Andreas Polze	4	6		DE					6	6	6																	
58	Digital Health Systems	S	Prof. Lorenzo Valle Garcilazo	4	6		EN								6	6	6														
	PSK - Professional Skills																														
40	Academic Writing for Science	S	Sharon Nemeth	2	3	15	EN																	3							
41	Advanced Track Desgin Thinking (D-School)	P/S	Dr. Claudia Nicolai, Thomas Grundnigg	6	9	30	EN																				9				
42	Basic Track Design Thinking (D-School)	P/S	Dr. Claudia Nicolai, Maria-José Juarez	6	9	60	EN																			9					
43	Communicating Technology Successfully - Developing Communication Strategies	S (Block)	Nadine Lux	2	3	20	EN																	3							
44	Communicating Technology Successfully – Developing Content and Formats	S (Block)	Nadine Lux	2	3	20	EN																	3							
45	Founder Fundamentals	S	Dr. Frank Pawlitschek, David Hahn	2	3	30	EN																		3						
46	Führungskompetenz - über die harten Auswirkungen der Soft Skills	S (Block)	Hr. Michael Heidemann, Hr. Eugen Unger	2	3	24	DE																	3	3						
47	Global Design Thinking-Workshop: From Inspiration to Ideas (D-School)	P/S	Dr. Claudia Nicolai, Sherif Osman	2	3	40	EN																			3					
48	Intrapersonelle & Interpersonelle Kompetenzen	S (Block)	Dr. Jana Leidenfrost	2	3	18	DE																	3							
49	Leading Yourself and Others in a Virtual World	S (Block)	Karsten Drath	2	3	30	EN																		3						
50	Management Essentials	V (Block)	Prof. Dr. Eric Kearney	2	3	30	EN																		3						
51	Managing Stakeholders- The psychology and neuroscience of successfully influencing others	S (Block)	Dr. Franziska Frank	2	3	25	EN																	3	3						
52	Master Thesis Class	S	Dr. Julia von Thienen	2	3		EN																	3			3				
53	Neurodesign Lecture - Fostering Human-Nature Empathy through Digital Innovation	L	Dr. Julia von Thienen, Cato Santman	2	3		EN																	3			3				
54	Power and Power Misuse in Organizations	S (Block)	Karsten Drath	2	3	32	EN																	3	3						
55	Sonic Thinking - Methods of working with sound	S	Dr. Julia von Thienen	2	3		EN																	3			3				
56	Unternehemssimulation Strategisches Management	S (Block)	Prof. Dr. Tobias Braun, Robert Dabitz	2	3	20	DE																		3						
57	Wayfinder: Self- and Leadership Development (D-School)	P/S	Dr. Claudia Nicolai, Dr. Martin Schwemmle	2	3	18	EN																		3		3				