Dresden University of Technology
Faculty of Computer Science

Curriculum for the Master's programme in Computer Science from winter semester 2026/2027

Valid on the basis of the resolutions of the Faculty Council of the Faculty of Computer Science of
21.08.2025, 18.03.2026, 22.04.2026, 20.05.2026, 24.06.2026, 19.08.2026 and 30.09.2026

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Curriculum Start in the winter semester

with the type and scope of the courses in SWS as well as required services, the scope, type and design of which can be found in the module descriptions.

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
Mandatory area						
INF-25-MA-FP	Research project			100 hours Pj 1 PL		**13**
Mandatory elective area: General qualification Selection 1 of 75 modules.						
INF-25-Ma-AQUA	Studium generale		x/x/x/x [1)] PL			**5**
INF-25-MINF	Methods of Computer Science		4 SWS Pj 1 PL			**5**
Language training: see language catalogue			4 SWS SK 1 PL			**5**
Tracks Selection of 1 from 2 tracks.						
Open Track						
Areas of specialization Selection of 3 out of 8 subject areas each with modules in the amount of 12 CP, whereby the modules can only be selected if they have not already been selected as modules of the supplement.						
Theoretical Computer Science and Symbolic Artificial Intelligence						
INF-25-Ma-FTK-AD2	Algorithms and data structures 2	4/2/0/0 1 PL				**9**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-KM	Knowledge Models	2/2/0/0 1 PL				**6**
INF-25-Ma-FTK-FLP	Foundations of Logic Programming	2/0/0/0 1 PL				**3**
INF-25-Ma-FTK-PT	Proof Theory and Sequent Systems	2/0/0/0 1 PL				**3**
INF-25-Ma-FTK-AD	Advanced data structures	2/2/0/0 1 PL				**6**
INF-25-Ma-FTK-AALAB	Advanced Algorithms Lab	0/0/0/4 1 PL				**6**
INF-25-Ma-FTK-MC	Model Checking	4/4/0/0 1 PL				**12**
INF-25-Ma-FTK-AL	Advanced Logics		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-BMOEL	Building and Maintaining Ontologies in the Description Logic EL		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-EXR	Introduction to Existential Rules		2/0/0/0 1 PL			**3**
INF-25-Ma-FTK-FCA	Introduction to Formal Concept Analysis		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-GaT	Algorithmic Game Theory		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-GrT	Algorithmic Graph Theory		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-RA	Randomized Algorithms		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-Sem	Seminar Theoretical Computer Science and Symbolic Artificial Intelligence		0/0/2/0 1 PL			**3**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-APSS	Advanced Problem Solving and Search			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-CT	Complexity Theory			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-KR	Foundations of Knowledge Representation			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-MoL	Modal Logic			2/2/0/0 1 PL		**6**
Software Technology and Programming Languages						
INF-25-Ma-FSP-CB	Compiler construction	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SESAC	Self-Adaptive Software and Cobotics	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-FCPL	Foundations of Certified Programming Language and Compiler Design	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-HICSOS	Software Engineering for Highly Configurable Software Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SAAB	Software as a Business	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SMQS	Software Management and Quality Assurance		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-CBSE	Component-Based Software Engineering		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-AutoSOFT	Automotive Software Engineering		2/0/0/0 1 PL			**3**
INF-25a-Ma-FSP-FPSS	Future-Proof Software Systems		2/2/0/0 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSP-FSWT	Advanced Software Engineering			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-RETE	Requirements and Test Management			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-DPF	Design Patterns and Frameworks			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-AutoSAFE	Automotive Software Safety			2/0/0/0 1 PL		**3**
INF-25-Ma-FSP-MOST	Model-Driven Software Development in Technical Spaces			2/2/0/0 1 PL		**6**
Secure Computing						
INF-25-Ma-FSC-CONF	Confidential Computing	2/2/0/0 1 PL				**6**
INF-25-Ma-FSC-ASec	Security in Applications	2/0/0/0 1 PL				**3**
INF-25-Ma-FSC-FCDS	Foundations of Concurrent and Distributed Systems		4/0/0/0 1 PL			**6**
INF-25-Ma-FSC-PET	Privacy-Enhancing Technologies		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-SFT	Software Fault Tolerance		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-FCDS.Lab	Concurrent and Distributed Systems Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FSC-NSec	Network and Distributed Systems Security		2/2/0/0 2 PL			**6**
INF-25-Ma-FSC-SSL	Systems Security Lab		2/2/0/0 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSC-CSec	IT Security in Cloud Computing		3/0/0/0 1 PL			**3**
INF-25-Ma-FSC-SFT.Lab	Software Fault Tolerance Lab			0/0/0/4 1 PL		**6**
Systems Architecture						
INF-25-Ma-FSA-SE	Systems Engineering	2/2/0/0 1 PL				**6**
INF-25a-Ma-FSA-SDE	Scalable Data Engineering	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SDM	Scalable Data Management	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-DS	Distributed Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SCC	Service and Cloud Computing	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-IoT	IoT Communication	2/2/0/0 2 PL				**6**
INF-25-Ma-FSA-RNA	Advanced Computer Networks	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-WSN	Wireless Sensor Networks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-IWA	Internet and Web Applications		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-Res	Resilient Systems		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-AOS	Advanced Operating Systems		3/1/0/0 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSA-OSC	Operating system construction		2/4/0/0 1 PL			**6**
INF-25-Ma-FSA-MKC	Microkernel Construction		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-STH	Scheduling theory		2/0/0/0 1 PL			**3**
INF-25-Ma-FSA-EAMA	Engineering Adaptive Mobile Applica-tions		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-MOS	Microkernel-Based Operating Systems			2/4/0/0 1 PL		**9**
INF-25-Ma-FSA-IM	Internet Measurements			2/2/0/0 2 PL		**6**
INF-25-Ma-FSA-PET	Prediction and Estimation Techniques			2/2/0/0 1 PL		**6**
INF-25a-Ma-FSA-Dec	Decentralized Systems			2/2/0/0 2 PL		**6**
INF-25-Ma-FSA-RTS	Real-Time Systems			1/1/0/0 1 PL		**3**
Cyber Physical Systems						
INF-25-Ma-FCP-CPS	Foundations of Cyber Physical Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FCP-IC	Industrial Communications		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-CMS	Cooperative Mobile Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-CPSM.Lab1	Cyber Physical Systems Modeling Lab		0/0/0/4 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FCP-C2X	Vehicular Networking		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-MA	Model-Driven Automation		3/1/0/0 1 PL			**6**
INF-25-Ma-FCP-CPSM.Lab2	Cyber Physical Systems Modeling Lab Advanced		0/0/0/4 1 PL			**6**
INF-25-Ma-FCP-IIoT	Industrial Internet of Things			2/0/0/2 1 PL		**6**
INF-25-Ma-FCP-EMIN	Engineering and Management of Industrial Networks			3/1/0/0 1 PL		**6**
INF-25-Ma-FCP-ICPS.Lab	Industrial Cyber Physical Systems Lab			0/0/0/4 1 PL		**6**
Visual Computing and Machine Learning						
INF-25-Ma-FVC-FCG	Foundations of Computer Graphics	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-FDV	Foundations of Data Visualisation	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-ML	Machine Learning	2/2/0/0 20 hours Pj 1 PL				**6**
INF-25-Ma-FVC-CV	Computer Vision	2/2/0/0 20 hours Pj 1 PL				**6**
INF-25-Ma-FVC-FVR	Foundations of Virtual Reality	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-CRC	Computer- and Robot-Assisted Surgery	2/2/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FVC-DLVFA	Deep Learning for Vision - Foundations and Applications	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-RL	Robot Learning		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-GMA	Geometric Modelling and Animation		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-IIV	Interactive Information Visualisation		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-SciVis	Scientific Visualisation		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-CC	Creative Computing		0/0/0/4 1 PL			**6**
INF-25-Ma-FVC-CRC.Lab	Computer- and Robot-Assisted Surgery Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FVC-PBG	Physics-based graphics			2/2/0/0 1 PL		**6**
INF-25a-Ma-FTK-LLM	Large Language Models			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-TSP	Touch Sensing and Processing			2/2/0 1 PL		**6**
INF-25a-Ma-FVC-SC	Spatial Computing			0/0/0/4 1 PL		**6**
Human-Computer Interaction and Interactive Media						
INF-25-Ma-FHI-UIE	User Interface Engineering	2/2/0/0 2 PL				**6**
INF-25-Ma-FHI-AUI	Advanced User Interfaces		2/0/2/0 2 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FHI-OUT.Lab	OUTPUT.DD Live		0/0/0/4 1 PL			**6**
INF-25-Ma-FHI-IMIR	Interactive Multimedia Information Retrieval		2/2/0/0 1 PL			**6**
INF-25-Ma-FHI-ART	Art and Code		2/2/0/0 1 PL			**6**
INF-25-Ma-FHI-DD	Digital Design		0/0/0/4 1 PL			**6**
INF-25a-Ma-FHI-OUT.W	OUTPUT.DD Workshop			0/0/0/4 1 PL		**6**
INF-25a-Ma-FHI-PC	Philosophy and Computing			2/0/2/0 1 PL		**6**
INF-25-Ma-FHI-XIM	Experiments in Immersive Media			0/0/0/4 1 PL		**6**
Computer Engineering and High Performance Computing						
INF-25-Ma-FTI-HPC	High Performance Computing	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-PACS	Performance Analysis of Computing Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-EPA	Efficient Parallel Algorithms	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-HPGPU	Highly Parallel Programming of GPUs	2/1/0/1 1 PL				**6**
INF-25-Ma-FTI-ADS.Lab	Adaptive Dynamic Systems Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FTI-SOP	Structure and Operation Principle of Processors		2/1/0/1 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTI-DDA	Digitization and Data Analytics		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-EMA	Design and Programming of Embedded Multicore Architectures		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-LCTP	Linux Cluster in Theory and Practice		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-ACSR	Adaptive Computing Systems for Robotics		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-VirTe	Virtualization Techniques		3/1/0/0 1 PL			**6**
INF-25-Ma-FTI-ETI	Introduction to Computer Engineering			4/2/0/2 1 PL		**12**
INF-25-Ma-FTI-HMS	Hardware Modeling and Simulation			2/2/0/0 1 PL		**6**
Supplement Modules Selection of modules with a total of 36 credit points, which can only be selected if they have not already been selected as modules of the subject areas.						
INF-25-Ma-FTK-AD2	Algorithms and data structures 2	4/2/0/0 1 PL				**9**
INF-25-Ma-FTK-KM	Knowledge Models	2/2/0/0 1 PL				**6**
INF-25-Ma-FTK-FLP	Foundations of Logic Programming	2/0/0/0 1 PL				**3**
INF-25-Ma-FTK-PT	Proof Theory and Sequent Systems	2/0/0/0 1 PL				**3**
INF-25-Ma-FTK-AD	Advanced data structures	2/2/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-AALAB	Advanced Algorithms Lab	0/0/0/4 1 PL				**6**
INF-25-Ma-FTK-MC	Model Checking	4/4/0/0 1 PL				**12**
INF-25-Ma-FTK-AL	Advanced Logics		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-BMOEL	Building and Maintaining Ontologies in the Description Logic EL		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-EXR	Introduction to Existential Rules		2/0/0/0 1 PL			**3**
INF-25-Ma-FTK-FCA	Introduction to Formal Concept Analysis		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-GaT	Algorithmic Game Theory		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-GrT	Algorithmic Graph Theory		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-RA	Randomized Algorithms		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-Sem	Seminar Theoretical Computer Science and Symbolic Artificial Intelligence		0/0/2/0 1 PL			**3**
INF-25-Ma-FTK-APSS	Advanced Problem Solving and Search			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-CT	Complexity Theory			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-KR	Foundations of Knowledge Representation			2/2/0/0 1 PL		**6**
INF-25a-Ma-FTK-LLM	Large Language Models			2/2/0/0 1 PL		**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-MoL	Modal Logic			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-CB	Compiler construction	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SESAC	Self-Adaptive Software and Cobotics	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-FCPL	Foundations of Certified Programming Language and Compiler Design	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-HICSOS	Software Engineering for Highly Configurable Software Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SAAB	Software as a Business	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SMQS	Software Management and Quality Assurance		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-CBSE	Component-Based Software Engineering		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-AutoSOFT	Automotive Software Engineering		2/0/0/0 1 PL			**3**
INF-25a-Ma-FSP-FPSS	Future-Proof Software Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-FSWT	Advanced Software Engineering			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-RETE	Requirements and Test Management			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-AutoSAFE	Automotive Software Safety			2/0/0/0 1 PL		**3**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSP-DPF	Design Patterns and Frameworks			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-AutoSAFE	Automotive Software Safety			2/0/0/0 1 PL		**3**
INF-25-Ma-FSP-MOST	Model-Driven Software Development in Technical Spaces			2/2/0/0 1 PL		**6**
INF-25-Ma-FSC-CONF	Confidential Computing	2/2/0/0 1 PL				**6**
INF-25-Ma-FSC-ASec	Security in Applications	2/0/0/0 1 PL				**3**
INF-25-Ma-FSC-FCDS	Foundations of Concurrent and Distributed Systems		4/0/0/0 1 PL			**6**
INF-25-Ma-FSC-PET	Privacy-Enhancing Technologies		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-SFT	Software Fault Tolerance		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-FCDS.Lab	Concurrent and Distributed Systems Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FSC-NSec	Network and Distributed Systems Security		2/2/0/0 2 PL			**6**
INF-25-Ma-FSC-SSL	Systems Security Lab		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-CSec	IT Security in Cloud Computing		3/0/0/0 1 PL			**3**
INF-25-Ma-FSC-SFT.Lab	Software Fault Tolerance Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FSA-SE	Systems Engineering	2/2/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25a-Ma-FSA-SDE	Scalable Data Engineering	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SDM	Scalable Data Management	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-DS	Distributed Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SCC	Service and Cloud Computing	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-IoT	IoT Communication	2/2/0/0 2 PL				**6**
INF-25-Ma-FSA-RNA	Advanced Computer Networks	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-WSN	Wireless Sensor Networks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-IWA	Internet and Web Applications		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-Res	Resilient Systems		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-AOS	Advanced Operating Systems		3/1/0/0 1 PL			**6**
INF-25-Ma-FSA-OSC	Operating-system construction		2/4/0/0 1 PL			**6**
INF-25-Ma-FSA-MKC	Microkernel Construction		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-STH	Scheduling theory		2/0/0/0 1 PL			**3**
INF-25-Ma-FSA-EAMA	Engineering Adaptive Mobile Applications		2/2/0/0 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSA-MOS	Microkernel-Based Operating Systems			2/4/0/0 1 PL		**9**
INF-25-Ma-FSA-IM	Internet Measurements			2/2/0/0 2 PL		**6**
INF-25-Ma-FSA-PET	Prediction and Estimation Techniques			2/2/0/0 1 PL		**6**
INF-25a-Ma-FSA-Dec	Decentralized Systems			2/2/0/0 2 PL		**6**
INF-25-Ma-FSA-RTS	Real-Time Systems			1/1/0/0 1 PL		**3**
INF-25-Ma-FCP-CPS	Cyber Physical Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FCP-IC	Industrial Communications		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-CMS	Cooperative Mobile Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-CPSM.Lab1	Cyber Physical Systems Modeling Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FCP-C2X	Vehicular Networking		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-MA	Model-Driven Automation		3/1/0/0 1 PL			**6**
INF-25-Ma-FCP-CPSM.Lab2	Cyber Physical Systems Modeling Lab Advanced		0/0/0/4 1 PL			**6**
INF-25-Ma-FCP-IIoT	Industrial Internet of Things			2/0/0/2 1 PL		**6**
INF-25-Ma-FCP-EMIN	Engineering and Management of Industrial Networks			3/1/0/0 1 PL		**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FCP-ICPS.Lab	Industrial Cyber Physical Systems Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FVC-FCG	Foundations of Computer Graphics	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-FDV	Foundations of Data Visualisation	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-ML	Machine Learning	2/2/0/0 20 hours Pj 1 PL				**6**
INF-25-Ma-FVC-CV	Computer Vision	2/2/0/0 20 hours Pj 1 PL				**6**
INF-25-Ma-FVC-FVR	Foundations of Virtual Reality	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-CRC	Computer- and Robot-Assisted Surgery	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-DLVFA	Deep Learning for Vision - Foundations and Applications	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-CRC.Lab	Computer- and Robot-Assisted Surgery Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FVC-RL	Robot Learning		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-GMA	Geometric Modelling and Animation		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-IIV	Interactive Information Visualisation		2/2/0/0 1 PL			**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FVC-SciVis	Scientific Visualisation		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-CC	Creative Computing		0/0/0/4 1 PL			**6**
INF-25-Ma-FVC-TSP	Touch Sensing and Processing			2/2/0 1 PL		**6**
INF-25-Ma-FVC-PBG	Physics-based graphics			2/2/0/0 1 PL		**6**
INF-25a-Ma-FVC-SC	Spatial Computing			0/0/0/4 1 PL		**6**
INF-25-Ma-FHI-UIE	User Interface Engineering	2/2/0/0 2 PL				**6**
INF-25-Ma-FHI-AUI	Advanced User Interfaces		2/0/2/0 2 PL			**6**
INF-25-Ma-FHI-ART	Art and Code		2/2/0/0 1 PL			**6**
INF-25-Ma-FHI-OUT.Lab	OUTPUT.DD Live		0/0/0/4 1 PL			**6**
INF-25-Ma-FHI-IMIR	Interactive Multimedia Information Retrieval		2/2/0/0 1 PL			**6**
INF-25a-Ma-FHI-OUT.W	OUTPUT.DD Workshop			0/0/0/4 1 PL		**6**
INF-25a-Ma-FHI-PC	Philosophy and Computing			2/0/2/0 1 PL		**6**
INF-25-Ma-FHI-XIM	Experiments in Immersive Media			0/0/0/4 1 PL		**6**
INF-25-Ma-FTI-HPC	High Performance Computing	2/2/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTI-PACS	Performance Analysis of Computing Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-EPA	Efficient Parallel Algorithms	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-HPGPU	Highly Parallel Programming of GPUs	2/1/0/1 1 PL				**6**
INF-25-Ma-FTI-ADS.Lab	Adaptive Dynamic Systems Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FTI-SOP	Structure and Operation Principle of Processors		2/1/0/1 1 PL			**6**
INF-25-Ma-FTI-DDA	Digitization and Data Analytics		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-EMA	Design and Programming of Embedded Multicore Architectures		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-LCTP	Linux Cluster in Theory and Practice		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-ETI	Introduction to Computer Engineering			4/2/0/2 1 PL		**12**
INF-25-Ma-FTI-HMS	Hardware Modeling and Simulation			2/2/0/0 1 PL		**6**
INF-25-Ma-FTI-ACSR	Adaptive Computing Systems for Robotics		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-VirTe	Virtualization Techniques		3/1/0/0 1 PL			**6**
INF-25-Ma-ERS	Exploration of a Research Subject			40 hours Pj 1 PL		**6**
INF-25-Ma-NGR-AKU	Acoustics basics [2)]	2/1/0/1 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-NVE-AKU	Acoustics Deepening − Virtual Reality [2)]		2/0/0/0 30 hours Pj 1 PL			**6**
INF-25-Ma-NGR-CLM	Computational Laser Metrology basics [2)]	2/1/0/1 2 PL				**6**
INF-25-Ma-NVE-CLM	Computational Laser Metrology deepening [2)]		2/1/0/1 2 PL			**6**
INF-25-Ma-NGR-GEO	Geoinformatics basics [2)]	2/2/0/0 2 PL				**6**
INF-25-Ma-NVE-GEO	Geoinformatics deepening [2)]		0,5/1,5/0/0 1 PL			**6**
INF-25-Ma-NGR-MAT	Mathematics basics [2)]	4/2/0/0 1 PL				**6**
INF-25-Ma-NVE-MAT	Mathematics specialization [2)]		4/2/0/0 1 PL			**6**
INF-25-Ma-NGR-PGB	Photogrammetry basics [2)]	2/2/0/0 1 PL				**6**
INF-25-Ma-NVE-PGB	Photogrammetry deepening [2)]		2/2/0/0 1 PL			**6**
INF-25-Ma-NGR-PROD	Production Engineering Basics Production Engineering and Production Planning [2)]	4/1/0/0 2 PL				**6**
INF-25-Ma-NVE-PROD	Production Technology Deepening Manufacturing Technology and Automated Parts Production [2)]		1/1/0/3 2 PL			**6**
INF-25-Ma-NGR-PSY	Psychology basics [2)]	4/0/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-NVE-PSY	Psychology deepening [2)]		4/0/0/0 1 PL			**6**
INF-25-Ma-NGR-VWL	Economics basics [2)]	2/1/0/0 1 PL				**6**
INF-25-Ma-NVE-VWL	Economics Deepening - Microeconomics [2)]		2/1/0/0 1 SWS T 1 PL			**6**
INF-25-Ma-NGR-BWL	Business administration Basics [2)]	3/1/0/0 1 SWS T 1 PL				**6**
INF-25-Ma-NVE-BWL	Business administration specialisation [2)]		3/0/0/0 1 PL			**6**
INF-25-Ma-NGR-BMT	Biomedical engineering basics [2)]	2/0/1/0 1 PL				**6**
INF-25-Ma-NVE-BMT	Biomedical Engineering − Clinical Deepening [(2)]		4/0/0/1 1 PL			**6**
Distributed Systems Engineering Track						
Mandatory area						
INF-25-Ma-FSA-DS	Distributed Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SE	Systems Engineering	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SDM	Scalable Data Management	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-DPF	Design Patterns and Frameworks	2/2/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSC-NSec	Network and Distributed Systems Security		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-AOS	Advanced Operating Systems		3/1/0/0 1 PL			**6**
Mandatory elective area Selection of modules in the amount of 36 credit points.						
INF-25-Ma-FSA-IoT	IoT Communication	2/2/0/0 2 PL				**6**
INF-25-Ma-FSA-RNA	Advanced Computer Networks	2/2/0/0 1 PL				**6**
INF-25-Ma-FSP-SESAC	Self-Adaptive Software and Cobotics	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-OSC	Operating system construction		2/4/0/0 1 PL			**6**
INF-25-Ma-FCP-CMS	Cooperative Mobile Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-C2X	Vehicular Networking		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-CBSE	Component-Based Software Engineering		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSP-FPSS	Future-Proof Software Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-IWA	Internet and Web Applications		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-WSN	Wireless Sensor Networks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-CONF	Confidential Computing	2/2/0/0 1 PL				**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSC-FCDS	Foundations of Concurrent and Distributed Systems		4/0/0/0 1 PL			**6**
INF-25-Ma-FSC-FCDS.Lab	Concurrent and Distributed Systems Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FSC-SFT	Software Fault Tolerance		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-EMA	Design and Programming of Embedded Multicore Architectures		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-LCTP	Linux Cluster in Theory and Practice		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-Res	Resilient Systems		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-MKC	Microkernel Construction		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-STH	Scheduling theory		2/0/0/0 1 PL			**3**
INF-25-Ma-FSA-EAMA	Engineering Adaptive Mobile Applications		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSA-Dec	Decentralized Systems			2/2/0/0 2 PL		**6**
INF-25-Ma-FSA-RTS	Real-Time Systems			1/1/0/0 1 PL		**3**
INF-25-Ma-FSA-MOS	Microkernel-Based Operating Systems			2/4/0/0 1 PL		**9**
INF-25-Ma-FSA-IM	Internet Measurements			2/2/0/0 2 PL		**6**
INF-25-Ma-FSA-PET	Prediction and Estimation Techniques			2/2/0/0 1 PL		**6**

Module number	Module name	WiSe 1. semesters	SoSe 2. semesters	WiSe 3. Semester (M)	SoSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSC-SFT.Lab	Software Fault Tolerance Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FTI-ACSR	Adaptive Computing Systems for Robotics		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-HMS	Hardware Modeling and Simulation			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-MOST	Model-Driven Software Development in Technical Spaces			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-RETE	Requirements and Test Management			2/2/0/0 1 PL		**6**
Thesis [3)]				1 LP	28 LP	**29**
Colloquium					1 LP	**1**
LP		**30**	**29**	**32**	**29**	**120**

[1)] Alternatively, at the choice of the student, courses in the amount of 4 SWS including the specified examinations according to the catalogue studium general.

[2)] The modules can only be selected in combination according to Appendix 2 of the examination regulations, whereby only one combination option can be selected.

[3)] The issue of the topic of the thesis takes place at the end of the third semester.

WiSe	Winter semester	SoSe	Summer semester
SWS	Semester week hours	LP	Credits
M	Mobility windows pursuant to Section 6(1), third sentence	PL	Test performance(s)
V	lectures	Ü	exercises
S	seminars	Pj	projects
P	internships	T	tutorials
SK	courses		

Curriculum Start in the summer semester

with the type and scope of the courses in SWS as well as required services, the scope, type and design of which can be found in the module descriptions.

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
Mandatory area						
INF-25-MA-FP	Research project			100 hours Pj 1 PL		**13**
Mandatory elective area: General qualification Selection 1 of 75 modules.						
Language training: see language catalogue			4 SWS SK 1 PL			**5**
INF-25-MINF	Methods of Computer Science		4 SWS Pj 1 PL			**5**
INF-25-Ma-AQUA	Studium generale		x/x/x/x [1)] PL			**5**
Tracks Selection of 1 from 2 tracks.						
Open Track						
Mandatory elective area: Areas of specialization Selection of 3 out of 8 subject areas each with modules in the amount of 12 CP, whereby the modules can only be selected if they have not already been selected as modules of the supplement.						
Theoretical Computer Science and Symbolic Artificial Intelligence						
INF-25-Ma-FTK-BMOEL	Building and Maintaining Ontologies in the Description Logic EL	2/2/0/0 1 PL				**6**
INF-25-Ma-FTK-AD2	Algorithms and data structures 2		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-KM	Knowledge Models		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-FLP	Foundations of Logic Programming		2/0/0/0 1 PL			**3**
INF-25-Ma-FTK-PT	Proof Theory and Sequent Systems		2/0/0/0 1 PL			**3**
INF-25-Ma-FTK-AD	Advanced data structures		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-AALAB	Advanced Algorithms Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FTK-MC	Model Checking		4/4/0/0 1 PL			**12**
INF-25-Ma-FTK-APSS	Advanced Problem Solving and Search		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-CT	Complexity Theory		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-KR	Foundations of Knowledge Representation		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-MoL	Modal Logic		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-AL	Advanced Logics			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-EXR	Introduction to Existential Rules			2/0/0/0 1 PL		**3**
INF-25-Ma-FTK-FCA	Introduction to Formal Concept Analysis			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-GaT	Algorithmic Game Theory			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-GrT	Algorithmic Graph Theory			4/2/0/0 1 PL		**9**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-RA	Randomized Algorithms			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-Sem	Seminar Theoretical Computer Science and Symbolic Artificial Intelligence			0/0/2/0 1 PL		**3**
Software Technology and Programming Languages						
INF-25-Ma-FSP-CB	Compiler construction		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-SESAC	Self-Adaptive Software and Cobotics		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-FCPL	Foundations of Certified Programming Language and Compiler Design		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-HICSOS	Software Engineering for Highly Configurable Software Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-SAAB	Software as a Business		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-SMQS	Software Management and Quality Assurance			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-CBSE	Component-Based Software Engineering			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-AutoSOFT	Automotive Software Engineering			2/0/0/0 1 PL		**3**
INF-25-Ma-FSP-FSWT	Advanced Software Engineering		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-RETE	Requirements and Test Management		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSP-DPF	Design Patterns and Frameworks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-AutoSAFE	Automotive Software Safety		2/0/0/0 1 PL			**3**
INF-25-Ma-FSP-MOST	Model-Driven Software Development in Technical Spaces		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSP-FPSS	Future-Proof Software Systems			2/2/0/0 1 PL		**6**
Secure Computing						
INF-25-Ma-FSC-PET	Privacy-Enhancing Technologies	2/2/0/0 1 PL				**6**
INF-25-Ma-FSC-NSec	Network and Distributed Systems Security	2/2/0/0 2 PL				**6**
INF-25-Ma-FSC-CONF	Confidential Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-SFT.Lab	Software Fault Tolerance Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FSC-ASec	Security in Applications		2/0/0/0 1 PL			**3**
INF-25-Ma-FSC-FCDS	Foundations of Concurrent and Distributed Systems			4/0/0/0 1 PL		**6**
INF-25-Ma-FSC-SFT	Software Fault Tolerance			2/2/0/0 1 PL		**6**
INF-25-Ma-FSC-FCDS.Lab	Concurrent and Distributed Systems Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FSC-SSL	Systems Security Lab			2/2/0/0 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSC-CSec	IT Security in Cloud Computing			3/0/0/0 1 PL		**3**
Systems Architecture						
INF-25-Ma-FSA-WSN	Wireless Sensor Networks	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-IWA	Internet and Web Applications	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-Res	Resilient Systems	2/2/0/0 2 PL				**6**
INF-25-Ma-FSA-EAMA	Engineering Adaptive Mobile Applica-tions	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SE	Systems Engineering		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSA-SDE	Scalable Data Engineering		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-SDM	Scalable Data Management		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-DS	Distributed Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-SCC	Service and Cloud Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-IoT	IoT Communication		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-RNA	Advanced Computer Networks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-MOS	Microkernel-Based Operating Systems		2/4/0/0 1 PL			**9**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSA-IM	Internet Measurements		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-PET	Prediction and Estimation Techniques		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSA-Dec	Decentralized Systems		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-RTS	Real-Time Systems		1/1/0/0 1 PL			**3**
INF-25-Ma-FSA-AOS	Advanced Operating Systems			3/1/0/0 1 PL		**6**
INF-25-Ma-FSA-OSC	Operating system construction			2/4/0/0 1 PL		**6**
INF-25-Ma-FSA-MKC	Microkernel Construction			2/2/0/0 1 PL		**6**
INF-25-Ma-FSA-STH	Scheduling theory			2/0/0/0 1 PL		**3**
Cyber Physical Systems						
INF-25-Ma-FCP-CMS	Cooperative Mobile Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FCP-CPS	Foundations of Cyber Physical Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-IIoT	Industrial Internet of Things		2/0/0/2 1 PL			**6**
INF-25-Ma-FCP-EMIN	Engineering and Management of Industrial Networks		3/1/0/0 1 PL			**6**
INF-25-Ma-FCP-ICPS.Lab	Industrial Cyber Physical Systems Lab		0/0/0/4 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FCP-IC	Industrial Communications			2/2/0/0 1 PL		**6**
INF-25-Ma-FCP-CPSM.Lab1	Cyber Physical Systems Modeling Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FCP-C2X	Vehicular Networking			2/2/0/0 1 PL		**6**
INF-25-Ma-FCP-MA	Model-Driven Automation			3/1/0/0 1 PL		**6**
INF-25-Ma-FCP-CPSM.Lab2	Cyber Physical Systems Modeling Lab Advanced			0/0/0/4 1 PL		**6**
Visual Computing and Machine Learning						
INF-25-Ma-FVC-RL	Robot Learning	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-FCG	Foundations of Computer Graphics		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-FDV	Foundations of Data Visualisation		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-ML	Machine Learning		2/2/0/0 20 hours Pj 1 PL			**6**
INF-25-Ma-FVC-CV	Computer Vision		2/2/0/0 20 hours Pj 1 PL			**6**
INF-25a-Ma-FTK-LLM	Large Language Models		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-TSP	Touch Sensing and Processing		2/2/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FVC-PBG	Physics-based graphics		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-FVR	Foundations of Virtual Reality		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-CRC	Computer- and Robot-Assisted Surgery		2/2/0/0 1 PL			**6**
INF-25a-Ma-FVC-SC	Spatial Computing		0/0/0/4 1 PL			**6**
INF-25-Ma-FVC-DLVFA	Deep Learning for Vision - Foundations and Applications		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-GMA	Geometric Modelling and Animation			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-IIV	Interactive Information Visualisation			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-SciVis	Scientific Visualisation			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-CC	Creative Computing			0/0/0/4 1 PL		**6**
INF-25-Ma-FHI-ART	Art and Code			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-CRC.Lab	Computer- and Robot-Assisted Surgery Lab			0/0/0/4 1 PL		**6**
Human-Computer Interaction and Interactive Media						
INF-25-Ma-FHI-OUT.Lab	OUTPUT.DD Live	0/0/0/4 1 PL				**6**
INF-25-Ma-FHI-IMIR	Interactive Multimedia Information Retrieval	2/2/0/0 1 PL				**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FHI-UIE	User Interface Engineering		2/2/0/0 2 PL			**6**
INF-25a-Ma-FHI-OUT.W	OUTPUT.DD Workshop		0/0/0/4 1 PL			**6**
INF-25a-Ma-FHI-PC	Philosophy and Computing		2/0/2/0 1 PL			**6**
INF-25-Ma-FHI-XIM	Experiments in Immersive Media		0/0/0/4 1 PL			**6**
INF-25-Ma-FHI-AUI	Advanced User Interfaces			2/0/2/0 2 PL		**6**
Computer Engineering and High Performance Computing						
INF-25-Ma-FTI-ADS.Lab	Adaptive Dynamic Systems Lab	0/0/0/4 1 PL				**6**
INF-25-Ma-FTI-SOP	Structure and Operation Principle of Processors	2/1/0/1 1 PL				**6**
INF-25-Ma-FTI-DDA	Digitization and Data Analytics	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-EMA	Design and Programming of Embedded Multicore Architectures	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-LCTP	Linux Cluster in Theory and Practice	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-HPC	High Performance Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-PACS	Performance Analysis of Computing Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-EPA	Efficient Parallel Algorithms		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTI-HPGPU	Highly Parallel Programming of GPUs		2/1/0/1 1 PL			**6**
INF-25-Ma-FTI-ETI	Introduction to Computer Engineering		4/2/0/2 1 PL			**12**
INF-25-Ma-FTI-HMS	Hardware Modeling and Simulation		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-ACSR	Adaptive Computing Systems for Robotics			2/2/0/0 1 PL		**6**
INF-25-Ma-FTI-VirTe	Virtualization Techniques			3/1/0/0 1 PL		**6**
Supplement Modules Selection of modules with a total of 36 credit points, which can only be selected if they have not already been selected as modules of the subject areas.						
INF-25-Ma-FTK-BMOEL	Building and Maintaining Ontologies in the Description Logic EL	2/2/0/0 1 PL				**6**
INF-25-Ma-FTK-AD2	Algorithms and data structures 2		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-KM	Knowledge Models		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-FLP	Foundations of Logic Programming		2/0/0/0 1 PL			**3**
INF-25-Ma-FTK-PT	Proof Theory and Sequent Systems		2/0/0/0 1 PL			**3**
INF-25-Ma-FTK-AD	Advanced data structures		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-AALAB	Advanced Algorithms Lab		0/0/0/4 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTK-MC	Model Checking		4/4/0/0 1 PL			**12**
INF-25-Ma-FTK-APSS	Advanced Problem Solving and Search		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-CT	Complexity Theory		4/2/0/0 1 PL			**9**
INF-25-Ma-FTK-KR	Foundations of Knowledge Representation		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-MoL	Modal Logic		2/2/0/0 1 PL			**6**
INF-25-Ma-FTK-AL	Advanced Logics			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-EXR	Introduction to Existential Rules			2/0/0/0 1 PL		**3**
INF-25-Ma-FTK-FCA	Introduction to Formal Concept Analysis			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-GaT	Algorithmic Game Theory			2/2/0/0 1 PL		**6**
INF-25-Ma-FTK-GrT	Algorithmic Graph Theory			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-RA	Randomized Algorithms			4/2/0/0 1 PL		**9**
INF-25-Ma-FTK-Sem	Seminar Theoretical Computer Science and Symbolic Artificial Intelligence			0/0/2/0 1 PL		**3**
INF-25-Ma-FSP-CB	Compiler construction		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSP-SESAC	Self-Adaptive Software and Cobotics		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-FCPL	Foundations of Certified Programming Language and Compiler Design		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-HICSOS	Software Engineering for Highly Configurable Software Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-SAAB	Software as a Business		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-FSWT	Advanced Software Engineering		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-RETE	Requirements and Test Management		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-DPF	Design Patterns and Frameworks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-AutoSAFE	Automotive Software Safety		2/0/0/0 1 PL			**3**
INF-25-Ma-FSP-MOST	Model-Driven Software Development in Technical Spaces		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-SMQS	Software Management and Quality Assurance			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-CBSE	Component-Based Software Engineering			2/2/0/0 1 PL		**6**
INF-25-Ma-FSP-AutoSOFT	Automotive Software Engineering			2/0/0/0 1 PL		**3**
INF-25a-Ma-FSP-FPSS	Future-Proof Software Systems			2/2/0/0 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSC-PET	Privacy-Enhancing Technologies	2/2/0/0 1 PL				**6**
INF-25-Ma-FSC-NSec	Network and Distributed Systems Security	2/2/0/0 2 PL				**6**
INF-25-Ma-FSC-CONF	Confidential Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-SFT.Lab	Software Fault Tolerance Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FSC-FCDS	Foundations of Concurrent and Distributed Systems			4/0/0/0 1 PL		**6**
INF-25-Ma-FSC-SFT	Software Fault Tolerance			2/2/0/0 1 PL		**6**
INF-25-Ma-FSC-FCDS.Lab	Concurrent and Distributed Systems Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FSC-SSL	Systems Security Lab			2/2/0/0 1 PL		**6**
INF-25-Ma-FSA-WSN	Wireless Sensor Networks	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-IWA	Internet and Web Applications	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-Res	Resilient Systems	2/2/0/0 2 PL				**6**
INF-25-Ma-FSA-EAMA	Engineering Adaptive Mobile Applications	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-SE	Systems Engineering		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSA-SDE	Scalable Data Engineering		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSA-SDM	Scalable Data Management		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-DS	Distributed Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-SCC	Service and Cloud Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-IoT	IoT Communication		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-RNA	Advanced Computer Networks		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-MOS	Microkernel-Based Operating Systems		2/4/0/0 1 PL			**9**
INF-25-Ma-FSA-IM	Internet Measurements		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-PET	Prediction and Estimation Techniques		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSA-Dec	Decentralized Systems		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-RTS	Real-Time Systems		1/1/0/0 1 PL			**3**
INF-25-Ma-FSA-AOS	Advanced Operating Systems			3/1/0/0 1 PL		**6**
INF-25-Ma-FSA-OSC	Operating-system construction			2/4/0/0 1 PL		**6**
INF-25-Ma-FSA-MKC	Microkernel Construction			2/2/0/0 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSA-STH	Scheduling theory			2/0/0/0 1 PL		**3**
INF-25-Ma-FCP-CMS	Cooperative Mobile Systems	2/2/0/0 1 PL				**6**
INF-25-Ma-FCP-CPS	Foundations of Cyber Physical Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FCP-IIoT	Industrial Internet of Things		2/0/0/2 1 PL			**6**
INF-25-Ma-FCP-EMIN	Engineering and Management of Industrial Networks		3/1/0/0 1 PL			**6**
INF-25-Ma-FCP-ICPS.Lab	Industrial Cyber Physical Systems Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FCP-IC	Industrial Communications			2/2/0/0 1 PL		**6**
INF-25-Ma-FCP-CPSM.Lab1	Cyber Physical Systems Modeling Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FCP-C2X	Vehicular Networking			2/2/0/0 1 PL		**6**
INF-25-Ma-FCP-MA	Model-Driven Automation			3/1/0/0 1 PL		**6**
INF-25-Ma-FCP-CPSM.Lab2	Cyber Physical Systems Modeling Lab Advanced			0/0/0/4 1 PL		**6**
INF-25-Ma-FVC-RL	Robot Learning	2/2/0/0 1 PL				**6**
INF-25-Ma-FVC-FCG	Foundations of Computer Graphics		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-FDV	Foundations of Data Visualisation		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FVC-ML	Machine Learning		2/2/0/0 20 hours Pj 1 PL			**6**
INF-25-Ma-FVC-CV	Computer Vision		2/2/0/0 20 hours Pj 1 PL			**6**
INF-25a-Ma-FTK-LLM	Large Language Models		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-TSP	Touch Sensing and Processing		2/2/0 1 PL			**6**
INF-25-Ma-FVC-PBG	Physics-based graphics		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-FVR	Foundations of Virtual Reality		2/2/0/0 1 PL			**6**
INF-25a-Ma-FVC-SC	Spatial Computing		0/0/0/4 1 PL			**6**
INF-25-Ma-FVC-CRC	Computer- and Robot-Assisted Surgery		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-DLVFA	Deep Learning for Vision - Foundations and Applications		2/2/0/0 1 PL			**6**
INF-25-Ma-FVC-CRC.Lab	Computer- and Robot-Assisted Surgery Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FVC-GMA	Geometric Modelling and Animation			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-IIV	Interactive Information Visualisation			2/2/0/0 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FVC-SciVis	Scientific Visualisation			2/2/0/0 1 PL		**6**
INF-25-Ma-FVC-CC	Creative Computing			0/0/0/4 1 PL		**6**
INF-25-Ma-FHI-OUT.Lab	OUTPUT.DD Live	0/0/0/4 1 PL				**6**
INF-25-Ma-FHI-IMIR	Interactive Multimedia Information Retrieval	2/2/0/0 1 PL				**6**
INF-25-Ma-FHI-UIE	User Interface Engineering		2/2/0/0 2 PL			**6**
INF-25a-Ma-FHI-OUT.W	OUTPUT.DD Workshop		0/0/0/4 1 PL			**6**
INF-25a-Ma-FHI-PC	Philosophy and Computing		2/0/2/0 1 PL			**6**
INF-25-Ma-FHI-XIM	Experiments in Immersive Media		0/0/0/4 1 PL			**6**
INF-25-Ma-FHI-ART	Art and Code			2/2/0/0 1 PL		**6**
INF-25-Ma-FHI-AUI	Advanced User Interfaces			2/0/2/0 2 PL		**6**
INF-25-Ma-FTI-ADS.Lab	Adaptive Dynamic Systems Lab	0/0/0/4 1 PL				**6**
INF-25-Ma-FTI-SOP	Structure and Operation Principle of Processors	2/1/0/1 1 PL				**6**
INF-25-Ma-FTI-DDA	Digitization and Data Analytics	2/2/0/0 1 PL				**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FTI-EMA	Design and Programming of Embedded Multicore Architectures	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-LCTP	Linux Cluster in Theory and Practice	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-HPC	High Performance Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-PACS	Performance Analysis of Computing Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-EPA	Efficient Parallel Algorithms		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-HPGPU	Highly Parallel Programming of GPUs		2/1/0/1 1 PL			**6**
INF-25-Ma-FTI-ETI	Introduction to Computer Engineering		4/2/0/2 1 PL			**12**
INF-25-Ma-FTI-HMS	Hardware Modeling and Simulation		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-ACSR	Adaptive Computing Systems for Robotics			2/2/0/0 1 PL		**6**
INF-25-Ma-FTI-VirTe	Virtualization Techniques			3/1/0/0 1 PL		**6**
INF-25-Ma-ERS	Exploration of a Research Subject			40 hours Pj 1 PL		**6**
INF-25-Ma-NGR-AKU	Acoustics basics [2)]		2/1/0/1 1 PL			**6**
INF-25-Ma-NVE-AKU	× Acoustics Deepening − Virtual Reality [2)]			2/0/0/0 30 hours Pj 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-NGR-CLM	Computational Laser Metrology basics [2)]		2/1/0/1 2 PL			**6**
INF-25-Ma-NVE-CLM	Computational Laser Metrology deepening [2)]			2/1/0/1 2 PL		**6**
INF-25-Ma-NGR-GEO	Geoinformatics basics [2)]		2/2/0/0 2 PL			**6**
INF-25-Ma-NVE-GEO	Geoinformatics deepening [2)]			0,5/1,5/0/0 1 PL		**6**
INF-25-Ma-NGR-MAT	Mathematics basics [2)]		4/2/0/0 1 PL			**6**
INF-25-Ma-NVE-MAT	Mathematics specialization [2)]			4/2/0/0 1 PL		**6**
INF-25-Ma-NGR-PROD	− Production Engineering Basics Production Engineering and Production Planning [2)]		4/1/0/0 2 PL			**6**
INF-25-Ma-NVE-PROD	− Production Technology Deepening Manufacturing Technology and Automated Parts Production [2)]			1/1/0/3 2 PL		**6**
INF-25-Ma-NGR-PSY	Psychology basics [2)]		4/0/0/0 1 PL			**6**
INF-25-Ma-NVE-PSY	Psychology deepening [2)]			4/0/0/0 1 PL		**6**
INF-25-Ma-NGR-VWL	Economics basics [2)]		2/1/0/0 1 PL			**6**
INF-25-Ma-NVE-VWL	Economics Deepening - Microeconomics [2)]			2/1/0/0 1 SWS T 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-NGR-BWL	Business administration Basics [2)]		3/1/0/0 1 SWS T 1 PL			**6**
INF-25-Ma-NVE-BWL	Business administration specialisation [2)]			3/0/0/0 1 PL		**6**
INF-25-Ma-NGR-BMT	Biomedical engineering basics [2)]		2/0/1/0 1 PL			**6**
INF-25-Ma-NVE-BMT	^ Biomedical Engineering − Clinical Deepening [(2)]			4/0/0/1 1 PL		**6**
INF-25-Ma-NGR-PGB	Photogrammetry basics [2)]		2/2/0/0 1 PL			**6**
INF-25-Ma-NVE-PGB	Photogrammetry deepening [2)]			2/2/0/0 1 PL		**6**
Distributed Systems Engineering Track						
Mandatory area						
INF-25-Ma-FSC-NSec	Network and Distributed Systems Security	2/2/0/0 2 PL				6
INF-25-Ma-FSA-AOS	Advanced Operating Systems	3/1/0/0 1 PL				6
INF-25-Ma-FSA-DS	Distributed Systems		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-SE	Systems Engineering		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-SDM	Scalable Data Management		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-DPF	Design Patterns and Frameworks		2/2/0/0 1 PL			**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
Mandatory elective area Selection of modules in the amount of 36 credit points.						
INF-25-Ma-FSA-IWA	Internet and Web Applications	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-WSN	Wireless Sensor Networks	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-Res	Resilient Systems	2/2/0/0 2 PL				**6**
INF-25-Ma-FSA-EAMA	Engineering Adaptive Mobile Applica-tions	2/2/0/0 1 PL				**6**
INF-25-Ma-FSA-IoT	IoT Communication		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-RNA	Advanced Computer Networks		2/2/0/0 1 PL			**6**
INF-25a-Ma-FSA-Dec	Decentralized Systems		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-RTS	Real-Time Systems		1/1/0/0 1 PL			**3**
INF-25-Ma-FSA-MOS	Microkernel-Based Operating Systems		2/4/0/0 1 PL			**9**
INF-25-Ma-FSA-IM	Internet Measurements		2/2/0/0 2 PL			**6**
INF-25-Ma-FSA-PET	Prediction and Estimation Techniques		2/2/0/0 1 PL			**6**
INF-25-Ma-FSA-OSC	Operating system construction			2/4/0/0 1 PL		**6**
INF-25-Ma-FSA-MKC	Microkernel Construction			2/2/0/0 1 PL		**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FSA-STH	Scheduling theory			2/0/0/0 1 PL		**3**
INF-25-Ma-FSC-ASec	Security in Applications		2/0/0/0 1 PL			**3**
INF-25-Ma-FSC-CONF	Confidential Computing		2/2/0/0 1 PL			**6**
INF-25-Ma-FSC-SFT.Lab	Software Fault Tolerance Lab		0/0/0/4 1 PL			**6**
INF-25-Ma-FSC-FCDS	Foundations of Concurrent and Distributed Systems			4/0/0/0 1 PL		**6**
INF-25-Ma-FSC-FCDS.Lab	Concurrent and Distributed Systems Lab			0/0/0/4 1 PL		**6**
INF-25-Ma-FSC-SFT	Software Fault Tolerance			2/2/0/0 1 PL		**6**
INF-25-Ma-FSC-CSec	IT Security in Cloud Computing			3/0/0/0 1 PL		**3**
INF-25-Ma-FSP-SESAC	Self-Adaptive Software and Cobotics		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-MOST	Model-Driven Software Development in Technical Spaces		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-RETE	Requirements and Test Management		2/2/0/0 1 PL			**6**
INF-25-Ma-FSP-CBSE	Component-Based Software Engineering			2/2/0/0 1 PL		**6**
INF-25a-Ma-FSP-FPSS	Future-Proof Software Systems			2/2/0/0 1 PL		**6**
INF-25-Ma-FCP-CMS	Cooperative Mobile Systems	2/2/0/0 1 PL				**6**

Module number	Module name	SoSe 1. semesters	WiSe 2. semesters	SoSe 3. Semester (M)	WiSe 4. semesters	LP
		V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	V/Ü/S/P	
INF-25-Ma-FCP-C2X	Vehicular Networking			2/2/0/0 1 PL		**6**
INF-25-Ma-FTI-EMA	Design and Programming of Embedded Multicore Architectures	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-LCTP	Linux Cluster in Theory and Practice	2/2/0/0 1 PL				**6**
INF-25-Ma-FTI-HMS	Hardware Modeling and Simulation		2/2/0/0 1 PL			**6**
INF-25-Ma-FTI-ACSR	Adaptive Computing Systems for Robotics			2/2/0/0 1 PL		**6**
Thesis [3)]				1 LP	28 LP	**29**
Colloquium					1 LP	**1**
LP		**30**	**29**	**32**	**29**	**120**

[1)] Alternatively, at the choice of the student, courses in the amount of 4 SWS including the specified examinations according to the catalogue studium general.

[2)] The modules can only be selected in combination according to Appendix 2 of the examination regulations, whereby only one combination option can be selected.

[3)] The issue of the topic of the thesis takes place at the end of the third semester.

WiSe	Winter semester	SoSe	Summer semester
SWS	Semester week hours	LP	Credits
M	Mobility windows pursuant to Section 6(1), third sentence	PL	Test performance(s)
V	lectures	Ü	exercises
S	seminars	Pj	projects
P	internships	T	tutorials
SK	courses		