

Summer Semester 2025

Module ID	Module Title	Teacher	Group	Descriptions
1231552	Optimization and Uncertainty	Hoefler	Algorithms and Complexity (Computer Science 1)	Link
1231551	Theory of Distributed Systems	Hoefler	Algorithms and Complexity (Computer Science 1)	Link
1212711	Modeling and Verification of Probabilistic Systems	Katoen/Quatmann	Software Modeling and Verification (Computer Science 2)	Link
1211978	Compiler Construction	Noll	Software Modeling and Verification (Computer Science 2)	Link
1212343	Foundations of Logic Programming	Giesl	Programming Languages and Verification	Link
1216957	Software Language Engineering	Rumpe	Software Engineering (Computer Science 3)	Link
1212355	Software Project Management	Lichter	Software Construction	Link
1215688	Advanced Internet Technology	Wehrle	Communication and Distributed Systems (Computer Science 4)	Link
1212346	Mobile Internet Technology	Thißen	Study Center Computer Science / COMSYS	Link
1229308	Linux Kernel Programming	Gouicem	Operating Systems	Link
1231539	Industrial Data Security	Henze	Security and Privacy in Industrial Cooperation	Link
1212677	Privacy Enhancing Technologies for Data Science	Decker/Matzutt	Information Systems and Databases (Computer Science 5)	Link
1226146	Data Stream Management and Analysis	Geisler	Data Stream Management and Analysis	Link
1228568	Actions and Planning in AI: Learning, Models, and Algorithms	Geffner	Machine Learning and Reasoning (Computer Science 6)	Link
1222468	Uncertainty in Robotics	Hofmann	Machine Learning and Reasoning (Computer Science 6)	Link
1230105	Automatic Speech Recognition Search	Schlüter	Machine Learning and Human Language Technology	Link
1216860	Algorithmic Foundations of Datascience	Morris	Machine learning on graphs	Link
1226911	Fixpoints and Induction in Logic and Computer Science	Löding	Logic and Theory of Discrete Systems (Computer Science 7)	Link
8014214	Discrete and Combinatorial Optimization	Büsing	Combinatorial Optimization	Link
1231097	Mathematical heuristics for discrete optimization problems	Büsing	Combinatorial Optimization	Link
1215696	Geometry Processing	Kobbelt	Computer Graphics, Geometry and Multimedia (Computer Science 8)	Link
1223639	Shape Analysis and 3D Deep Learning	Kobbelt	Computer Graphics, Geometry and Multimedia (Computer Science 8)	Link
1212692	Physics Simulation in Visual Computing	Bender	Computer Animation	Link
1220136	Advanced Process Mining	van der Aalst	Process and Data Science (Computer Science 9)	Link
1215751	Learning Technologies	Schroeder	Learning Technologies	Link
1216958	Business Process Intelligence	Leemans	Business Process Management Foundations and Engineering	Link
1215699	Designing Interactive Systems II	Borchers	Media Computing Group (Computer Science 10)	Link
1211908	Current Topics in Media Computing and HCI	Borchers	Media Computing Group (Computer Science 10)	Link
1212353	Functional Safety and System Dependability	Kowalewski	Embedded Software (Computer Science 11)	Link
1220524	Advanced Microcontroller Programming and Debugging	Stollenwerk	Embedded Software (Computer Science 11)	Link
1215690	Embedded Systems	Kowalewski	Embedded Software (Computer Science 11)	Link
1212666	Formal Methods for Logic Control Software	Völker	Embedded Software (Computer Science 11)	Link
1215722	Performance Analysis and Correctness Checking of Parallel Applications	Müller	High Performance Computing (Computer Science 12)	Link
1216838	Concepts and Models for Parallel and Data-centric Programming	Terboven	High Performance Computing (Computer Science 12)	Link
1229154	Introduction to Numerical Methods and Software with C++	Naumann	Software and Tools for Computational Engineering	Link
1221328	Advanced Algorithmic Differentiation	Naumann	Software and Tools for Computational Engineering	Link
1212688	Advanced Topics of Virtual Reality (VR II)	Kuhlen	Virtual Reality and Immersive Visualization	Link
1211912	Advanced Machine Learning	Leibe	Computer Vision (Computer Science 13)	Link
1215724	Computer Vision	Leibe	Computer Vision (Computer Science 13)	Link
1230246	Introduction to Quantum Computing	Unruh	Quantum Information Systems (Computer Science 15)	Link
1230345	Near-term Quantum Computation	Unruh	Quantum Information Systems (Computer Science 15)	Link
4026526	Reinforcement Learning and Learning-based Control	Trimpe	Data Science in Mechanical Engineering (DSME)	Link