

Courses offered in the summer term 2025 for M.Sc. Computer Science

Course	hours per week	Lecturer	Profile AUT	Profile STE	Profile VC
Lecture + Exercise 3D Scanner - Algorithmen und Systeme	4	S. Simon	Ex, E	B, E	B, E
Lecture + Exercise Acquisition and Analysis of Eye-Tracking Data	4	B. Ehinger	B, E	B, E	C, Ex, E
Lecture + Exercise Advanced Information Management	4	H. Schwarz	B, E	C, Ex, E	B, E
Lecture + Exercise Algorithmische Geometrie	4	S. Funke	E	E	E
Lecture + Exercise Automotive and Assistive Computer Vision	4	A. Roitberg	E	E	Ex, E
Lecture + Exercise Correspondence Problems in Computer Vision	4	A. Bruhn	B, E	B, E	C, Ex, E
Lecture + Exercise Data Compression - Algorithms and Systems	4	S. Simon	E	B, E	B, E
Lecture + Exercise Deep Learning	4	B. Yang	E	E	E
Lecture + Exercise Detection and Pattern Recognition	4	B. Yang	E	E	E
Lecture + Exercise Ghardware-oriented Security	4	I. Polian	E	E	E
Lecture + Exercise Grundlagen der Quanteninformatik	4	F. Leymann	E	E	E
Lecture + Exercise High Performance Computing	4	M. Bernreuther	E	E	E
Lecture + Exercise High-dimensional data approximation and learning	4	D. Pflüger	B, E	Ex, E	B, E
Lecture + Exercise IT Service Management	4	J. Jähnert	E	Ex, E	E
Lecture + Exercise Knowledge Graphs	4	S. Staab	C, Ex, E	B, E	B, E
Lecture + Exercise Mobile Computing (Lab)	4	F. Dürr	Ex, E	B, E	B, E
Lecture + Exercise Modellbildung und Simulation	4	D. Pflüger	E	E	E
Lecture + Exercise Post-Quantum sichere Kryptographie	4	R. Küsters	B, E	B, E	B, E
Lecture + Exercise Program Verification	4	M. Heizmann	E	E	E
Lecture + Exercise Real-Time Graphics	4	D. Schmalstieg	E	E	E
Lecture + Exercise Reinforcement Learning	4	M. Niepert	C, Ex, E	B, E	Ex, E
Lecture + Exercise Robust System Design	4	I. Polian	Ex, E	B, E	B, E
Lecture + Exercise Scientific Visualization	4	G. Reina	B, E	B, E	C, Ex, E
Lecture + Exercise Security and Privacy	4	R. Küsters	B, E	B, E	B, E
Lecture + Exercise Selected Topics in Algorithms: Algorithmic Engineering	4	S. Funke	E	E	E
Lecture + Exercise Smart Cities and Internet of Things	4	M. Aiello	E	E	E
Lecture + Exercise System und Web Sicherheit	4	R. Küsters	B, E	B, E	B, E
Lecture + Exercise Text Technology	4	K. Jung	E	E	E
Lecture + Exercise Virtual and Augmented Reality	4	M. Sedlmair	B, E	B, E	C, Ex, E
Lecture Distributed Systems 2: Algorithms (2nd lecture in winter)	2	C. Becker	C, Ex, E	B, E	B, E

C = Core; B = Breadth; Ex = Extended; E = Elective

Advanced seminars (you have to attend ONE in your program = compulsory)	hours per week	Lecturer
Advanced Route Planning	2	S. Funke
AI Planning for Ubiquitous Computing	2	I. Georgievski, M. Aiello
Ausgewählte Themen der Quanteninformatik	2	F. Leymann, A. Mandl
Deep Learning for Image Processing	2	S. Simon
Deep Learning for the Sciences	2	M. Niepert, M. Kalimuthu
Human-AI Interaction and Visual Explanation of AI	2	S. Koch
Informationssicherheit und Kryptographie	2	R. Küsters
Music Vsualization and New Musical Interfaces	2	M. Sedlmair
Privacy-aware Eye Tracking	2	A. Bulling, Y. Wang
Recent Advances in Computer Vision	2	A. Bruhn
Research Topics for Intelligent Interactive Robots	2	K. Arras
Scientific Machine Learning	2	S. Staab, A. Totounferoush
Strategies of Modern High-Performance Computing	2	D. Pflüger, M. Breyer, A. Strack
Trends in Distributed and Context-Aware Systems	2	C. Becker, L. Eppele

Practical courses (you are allowed to attend at most 2 in your program)	hours per week	Lecturer	Profile AUT	Profile STE	Profile VC
Fachpraktikum Algorithms for OpenStreetMap data	4	S. Funke	B, E	B, E	B, E
Fachpraktikum Theoretische Informatik: Logic App Development	4	M. Kufleitner	B, E	B, E	B, E
Fachpraktikum VS: Software Defined Networking	4	F. Dürr	B, E	B, E	B, E
Fachpraktikum Wissenschaftliches Rechnen	4	D. Pflüger	B, E	B, E	B, E
Lab Course Artificial Intelligence	4	S. Staab	C, Ex, E	B, E	B, E
Lab Course High Performance Programming with Graphic Cards	4	S. Simon	Ex, E	B, E	Ex, E
Practical Course Implementing Tools for Digital Art and Content Creation	4	A. Fender	E	E	E
Practical Course Information Systems: Data- intensive Computing	4	B. Mitschang, H. Schwarz	B, E	C, Ex, E	B, E
Practical Course Information Visualization	4	T. Blascheck	B, E	B, E	C, Ex
Practical Course Interactive Systems	4	A. Bulling, C. Jiao	B, E	B, E	Ex, E

Not mentioned here are: the Master thesis and, if you are interested in, the Research project.