Minors

Computer Graphics

AS

252-0546-00L	Physically-Based Simulation in Computer Graphics	5 ECTS
252-0543-01L	Computer Graphics	8 ECTS
263-5905-00L	Mixed Reality	5 ECTS

SS

252-0538-00L	Shape Modeling and Geometry Processing	8 ECTS
263-5704-00L	Artificial Intelligence for Digital Characters	4 ECTS
252-5706-00L	Mathematical Foundations of Computer Graphics and Vision	5 ECTS
263-5806-00L	Digital Humans	8 ECTS

Computer Vision

AS

227-0560-00L	Computer Vision and Artificial Intelligence for Autonomous Cars	6 ECTS
263-3210-00L	Deep Learning	8 ECTS
263-5902-00L	Computer Vision	8 ECTS
263-5905-00L	Mixed Reality	5 ECTS

SS

252-0579-00L	3D Vision	5 ECTS
263-3710-00L	Machine Perception	8 ECTS
263-5052-00L	Interactive Machine Learning: Visualization & Explainability	5 ECTS

Data Management

AS

252-0535-00L	Advanced Machine Learning	10 ECTS
263-2800-00L	Design of Parallel and High-Performance Computing	9 ECTS
263-3010-00L	Big Data	10 ECTS
263-3210-00L	Deep Learning	8 ECTS
263-3850-00L	Informal Methods	5 ECTS

SS

227-0558-00L	Principles of Distributed Computing	7 ECTS
263-3855-00L	Cloud Computing Architecture	9 ECTS
263-5354-00L	Large Language Models	8 ECTS

Information Security

AS
252-0463-00L	Security Engineering	7 ECTS
252-1411-00L	Security of Wireless Networks	6 ECTS
252-1414-00L	System Security	7 ECTS
263-4640-00L	Network Security	8 ECTS
263-4657-00L	Advanced Encryption Schemes	5 ECTS
263-4665-00L	Zero-Knowledge Proofs	5 ECTS
227-0579-00L	Hardware Security	7 ECTS

SS
252-0408-00L	Cryptographic Protocols	6 ECTS
263-4600-00L	Formal Methods for Information Security	5 ECTS
263-4656-00L	Digital Signatures	5 ECTS
263-4660-00L	Applied Cryptography	8 ECTS

Machine Learning

AS
252-0535-00L	Advanced Machine Learning	10 ECTS
252-3005-00L	Natural Language Processing	7 ECTS
263-2400-00L	Reliable and Trustworthy Artificial Intelligence	6 ECTS
263-3210-00L	Deep Learning	8 ECTS
263-5056-00L	Applications of Deep Learning on Graphs	4 ECTS
263-5210-00L	Probabilistic Artificial Intelligence	8 ECTS
263-5300-00L	Guarantees for Machine Learning	7 ECTS

SS
252-0526-00L	Statistical Learning Theory	8 ECTS
261-5120-00L	Machine Learning for Health Care	5 ECTS
263-3710-00L	Machine Perception	8 ECTS
263-5000-00L	Computational Semantics for Natural Language Processing	6 ECTS
263-5052-00L	Interactive Machine Learning: Visualization & Explainability	5 ECTS
263-5255-00L	Foundations of Reinforcement Learning	7 ECTS
263-5351-00L	Machine Learning for Genomics	5 ECTS
263-5352-00L	Advanced Formal Language Theory	6 ECTS

263-5353-00L	Philosophy of Language and Computation I	3 ECTS
263-5354-00L	Large Language Models	8 ECTS
263-5704-00L	Artificial Intelligence for Digital Characters	4 ECTS

Networking

AS

252-1411-00L	Security of Wireless Networks	6 ECTS
263-4640-00L	Network Security	8 ECTS
227-0575-00L	Advanced Topics in Communication Networks	6 ECTS

SS

227-0558-00L	Principles of Distributed Computing	7 ECTS

Programming Languages and Software Engineering

AS

252-0237-00L	Concepts of Object-Oriented Programming	8 ECTS
263-2400-00L	Reliable and Trustworthy Artificial Intelligence	6 ECTS
263-2520-00	Formal Foundations of Programming Languages	5 ECTS
263-2800-00L	Design of Parallel and High-Performance Computing	9 ECTS

SS

263-2812-00L	Program Verification	5 ECTS
263-2815-00L	Automated Software Testing	7 ECTS
263-4600-00L	Formal Methods for Information Security	5 ECTS

Systems Software

AS

252-1414-00L	System Security	7 ECTS
263-2800-00L	Design of Parallel and High-Performance Computing	9 ECTS
263-3850-00L	Informal Methods	5 ECTS

SS

227-0128-00L	Synthesis of Digital Circuits	6 ECTS
263-3800-00L	Advanced Operating Systems	7 ECTS
227-0558-00L	Principles of Distributed Computing	7 ECTS

Theoretical Computer Science

AS

227-0417-00L	Information Theory I	6 ECTS
252-0535-00L	Advanced Machine Learning	10 ECTS
252-1425-00L	Geometry: Combinatorics and Algorithms	8 ECTS
263-4500-00L	Advanced Algorithms	9 ECTS
263-5300-00L	Guarantees for Machine Learning	7 ECTS
401-3054-14L	Probabilistic Methods in Combinatorics	6 ECTS
401-3055-64L	Algebraic Methods in Combinatorics	6 ECTS
401-3901-00L	Linear & Combinatorial Optimization	11 ECTS
402-0448-01L	Quantum Information Processing I: Concepts	5 ECTS

SS

252-0408-00L	Cryptographic Protocols	6 ECTS
252-1424-00L	Models of Computation	6 ECTS
261-5110-00L	Optimization for Data Science	10 ECTS
263-4400-00L	Advanced Graph Algorithms and Optimzation	10 ECTS
263-4508-00L	Algorithmic Foundations of Data Science	10 ECTS
263-4509-00L	Complex Network Models	5 ECTS
263-4510-00L	Introduction to Topological Data Analysis	8 ECTS
263-4656-00L	Digital Signatures	5 ECTS
272-0300-00L	Algorithmik für schwere Probleme	5 ECTS
272-0302-00L	Approximations- und Online-Algorithmen	5 ECTS
401-3052-10L	Graph Theory	9 ECTS
401-3902-21L	Network & Integer Optimization: From Theory to Applications	6 ECTS

29.11.2023