

Master Program Computer Science (new > old)

Last update / Stand: 26.04.2018

This list is relevant for all students, who **stay** under the old regulations. One can see, how the new classes can be used within the old regulation (i.e. which area and which module).

If nothing is listed for a class, it means that we have not yet received the information from the teacher.

Diese Liste ist für Studierende relevant, die in der alten Studienordnung **bleiben**. Man kann ablesen, wie die neuen Wahlpflichtveranstaltungen in der alten Studienordnung (welches Gebiet und welche Module) eingesetzt werden können.

Falls zu einer Veranstaltung nichts angegeben ist, warten wir noch auf die Information von der/dem Dozentin/en.

New classes / Neue Wahlpflichtveranstaltungen	Old areas / Alte Gebiete	Modules under the old regulations / Module alte Studienordnung
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Focus Area: Algorithm Design		
Advanced Algorithms	Modelle und Algorithmen	III.2.1, III.2.2, III.2.3
Advanced Complexity Theory	Modelle und Algorithmen	III.2.3
Advanced Distributed Algorithms and Data Structures	Modelle und Algorithmen	III.2.1, III.2.2, III.2.4
Algorithmic Game Theory	Modelle und Algorithmen	III.2.1, III.2.2
Algorithms for Highly Complex Virtual Scenes	Modelle und Algorithmen	III.2.1, III.2.2
Clustering Algorithms	Modelle und Algorithmen	III.2.1, III.2.2
Computational Geometry	Modelle und Algorithmen	III.2.1, III.2.2
Foundations of Cryptography	Modelle und Algorithmen	III.2.2, III.2.3
Linear and Integer Optimization	Modelle und Algorithmen	III.2.1, III.2.2
Public-Key Cryptography	Modelle und Algorithmen	III.2.3
Routing and Data Mangement in Networks	Modelle und Algorithmen	III.2.1, III.2.2, III.2.4
Focus Area: Computer Systems		
Adaptive Hardware and Systems	Eingebettete Systeme und Systemsoftware	III.3.4, III.3.6

Advanced Computer Architecture	Eingebettete Systeme und Systemsoftware	III.3.4, III.3.5
Algorithms for Synthesis and Optimization of Integrated Circuits		
Architektur paralleler Rechnersysteme		
Empiric Performance Evaluation	Eingebettete Systeme und Systemsoftware	III.3.1, III. 3.3
Hardware / Software Codesign		
High-Performance Computing		
Intelligence in Embedded Systems		
Reconfigurable Computing	Eingebettete Systeme und Systemsoftware	III.3.4, III.3.5, III.3.6
VLSI Testing		
Focus Area: Intelligence and Data		
Clustering Algorithms		
Foundations of Knowledge Graphs	Softwaretechnik	
Intelligence in Embedded Systems		
Interactive Data Visualization	Mensch-Maschine-Wechselwirkung	III.4.1
Logic and Automated Reasoning	Softwaretechnik	III.1.4
Logic Programming for Artificial Intelligence	Softwaretechnik	III.1.2, III.1.3, III.1.4, III.1.6
Machine Learning I		
Machine Learning II		
Planning and Heuristic Search	Modelle und Algorithmen / Softwaretechnik	III.1.4, III.2.1, III.2.2
Focus Area: Networks and Communication		
Advanced Distributed Algorithms and Data Structures	Modelle und Algorithmen	III.2.1, III.2.2, III.2.4
Bitcoins, Cryptocurrencies and Privacy-Enhancing Technologies	Modelle und Algorithmen	III.2.3, III.2.4, III.3.1, III.3.3
Empirical Performance Evaluation	Eingebettete Systeme und Systemsoftware	III.3.1, III. 3.3
Future Internet	Eingebettete Systeme und Systemsoftware	III.3.1, III. 3.3

Mobile Communications	Eingebettete Systeme und Systemsoftware	III.3.1, III.3.3
Network Simulation		
Networked Embedded Systems	Eingebettete Systeme und Systemsoftware	III.3.4, III.3.6, III.3.3
Routing and Date Management in Networks	Modelle und Algorithmen	III.2.1, III.2.2, III.2.4
Vehicular Networking		
Focus Area: Software Engineering		
Advanced Software Engineering: Methods, Architectures, Industrial Applications	Softwaretechnik	III.1.1, III.1.3, III.1.6
Advances Compiler Construction		
Build It, Break It, Fix It	Softwaretechnik	III.1.5, III.1.6
Compiler Construction		
Deductive Verification	Softwaretechnik	III.1.1, III.1.5
Designing Code Analyses for Large-Scale Software Systems	Softwaretechnik	III.1.1, III.1.5
Empiric Performance Evaluation	Eingebettete Systeme und Systemsoftware	III.3.1, III. 3.3
Extra-Ordinary Human-Computer Interaction, Accessibility	Mensch-Maschine-Wechselwirkung	III.4.2, III.4.3, III.4.5
Fundamentals of Model-Driven Engineering	Softwaretechnik	III.1.1, III.1.2, III.1.5, III.1.6
High-Performance Computing		
Kontextuelle Informatik	Mensch-Maschine-Wechselwirkung	III.4.2, III.4.3, III.4.5
Language-Based Security		
Logic Programming for Artificial Intelligence	Softwaretechnik	III.1.2, III.1.3, III.1.4, III.1.6
Model Checking	Softwaretechnik	III.1.1, III.1.5
Model-Based Interface Development	Mensch-Maschine-Wechselwirkung	III.4.3, III.4.5, III.4.6
Software Analysis	Softwaretechnik	III.1.1, III.1.5
Software Quality Assurance	Softwaretechnik	III.1.1, III.1.5, III.1.6
Type Systems for Correctness and Security	Softwaretechnik	III.1.2, III.1.5, III. 1.6
Usability Engineering Practice	Mensch-Maschine-Wechselwirkung	III.4.3, III.4.5, III.4.6

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This list is relevant for students who **switch** to the new regulations. One can see, how old classes are assigned to the new focus areas.

If you are missing an old class, ask the teacher.

Diese Liste ist für Studierende relevant, die in die neue Studienordnung **wechseln**. Man kann ablesen, für welche der neuen Focus Areas die alten Vorlesungen eingesetzt werden können.

Falls Veranstaltungen fehlen, erkundigen Sie sich bitte bei der/dem entsprechenden Dozentin/en.

Old classes

New Focus Area

Old classes	New Focus Area
Adaptive Hardware and Systems	Computer Systems
Advanced Distributed Algorithms and Data Structures	Algorithm Design, Networks and Communication
Algorithmic Game Theory	Algorithm Design
Algorithms for Highly Complex Virtual Scenes	Algorithm Design
Approximation Algorithms	Algorithm Design
Assistive Technologies, Accessibility	Software Engineering
Bitcoins, Cryptocurrencies and Privacy-Enhancing Technologies	Networks and Communication
Combinatorial Optimization	Algorithm Design
Computational Geometry	Algorithm Design
Computational Models	Algorithm Design
Computersicherheit (WS 16/17)	Software Engineering / Networks and Communication / Computer Systems
Data and Information Visualization	Intelligence and Data
Databases and Information Systems	Intelligence and Data
Databases and Information Systems 2	Intelligence and Data
Deductive Verification	Software Engineering

Designing Code Analyses for Large-Scale Software Systems	Software Engineering
Einführung in Informatik und Gesellschaft	Software Engineering
Empirical Performance Evaluation	Computer Systems
Evolutionary Robotics	Intelligence and Data
Fundamentals of Model-Driven Engineering	Software Engineering
Future Internet	Computer Systems
Information Retrieval	Intelligence and Data
Interactive Data Visualization	Intelligence and Data
Konzepte digitaler Medien	Software Engineering
Kooperationsunterstützende Systeme	Software Engineering
Lecture Online Learning and Convex Optimization	Intelligence and Data
Mobile Communications	Networks and Communication
Model Checking	Software Engineering
Modelling User Interfaces	Software Engineering
Network Simulation	Networks and Communication
Networked Embedded Systems	Networks and Communication
Online Algorithms	Algorithm Design
Operating Systems	Computer Systems
Prolog with Applications in Text Understanding and Interpreter Construction	Intelligence and Data
Propositional Proof Systems	Intelligence and Data
Randomized Algorithms	Algorithm Design
Real Time Operating Systems	Computer Systems
Routing and Data Management in Networks	Algorithm Design / Networks and Communication
Software Analysis	Software Engineering
Swarm Robotics	Intelligence and Data
Usability Engineering Practice	Software Engineering
Vehicular Networking	Networks and Communication
Web Engineering	Software Engineering
Web Modelling	Software Engineering

Master Program Computer Science, Incompatibilities

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This list is relevant for all students, as the incompatibilities have to be taken into account both when **staying** in the old regulations as well as when **switching** to the new regulations. Incompatible classes have a strong overlap in their contents that they can not be combined. This must be taken into account when planning the study program.

If nothing is listed for a class, it means that we have not yet received the information from the teacher.

Diese Liste ist für alle Studierenden relevant, da sowohl beim **Bleiben** in der alten Ordnung als auch beim **Wechsel** in die neue Ordnung die Inkompatibilitäten beachten werden müssen. Inkompatible Veranstaltungen überlappen sich inhaltlich so stark, dass sie nicht beide belegt werden können. Dies muss bei der Studienplanung berücksichtigt werden.

Falls zu einer Veranstaltung nichts angegeben ist, warten wir noch auf die Information von der/dem Dozentin/en.

New classes	Incompatibel with which old classes
Focus Area: Algorithm Design	
Advanced Algorithms	Approximation Algorithms / Randomized Algorithms
Advanced Complexity Theory	Computational Models
Advanced Distributed Algorithms and Data Structures	<i>No incompatibilities</i>
Algorithmic Game Theory	Algorithmic Game Theory
Algorithms for Highly Complex Virtual Scenes	<i>No incompatibilities</i>
Clustering Algorithms	Clustering Algorithms
Computational Geometry	<i>No incompatibilities</i>
Foundations of Cryptography	Provable Security, Cryptographic Protocols
Linear and Integer Optimization	Combinatorial Optimization
Public-Key Cryptography	<i>No incompatibilities</i>
Routing and Data Mangement in Networks	<i>No incompatibilities</i>
Focus Area: Computer Systems	
Adaptive Hardware and Systems	Adaptive Hardware and Systems
Advanced Computer Architecture	Advanced Computer Architecture

Algorithms for Synthesis and Optimization of Integrated Circuits	
Architektur paralleler Rechnersysteme	
Empiric Performance Evaluation	
Hardware / Software Codesign	
High-Performance Computing	
Intelligence in Embedded Systems	
Reconfigurable Computing	Reconfigurable Computing
VLSI Testing	
Focus Area: Intelligence and Data	
Clustering Algorithms	
Foundations of Knowledge Graphs	
Intelligence in Embedded Systems	
Interactive Data Visualization	Advanced Rendering
Logic and Automated Reasoning	Propositional Proof Systems
Logic Programming for Artificial Intelligence	Prolog with Applications in Text Understanding and Interpreter Construction
Machine Learning I	
Machine Learning II	
Planning and Heuristic Search	Heuristic Search Algorithms
Focus Area: Networks and Communication	
Advanced Distributed Algorithms and Data Structures	
Bitcoins, Cryptocurrencies and Privacy-Enhancing Technologies	<i>No incompatibilities</i>
Empirical Performance Evaluation	Empirical Performance Evaluation
Future Internet	Future Internet
Mobile Communications	Mobile Communications
Network Simulation	
Networked Embedded Systems	
Routing and Data Management in Networks	
Vehicular Networking	
Focus Area: Software Engineering	
Advanced Distributed Algorithms and Data Structures	Advanced Distributed Algorithms and Data Structures

Advanced Software Engineering: Methods, Architectures, Industrial Applications	
Advances Compiler Construction	
Build It, Break It, Fix It	Build It, Break It, Fix It
Compiler Construction	
Deductive Verification	Deductive Verification
Designing Code Analyses for Large-Scale Software Systems	Designing Code Analyses for Large-Scale Software Systems
Empiric Performance Evaluation	
Extra-Ordinary Human-Computer Interaction, Accessibility	Assistive Technologies, Accessibility
Fundamentals of Model-Driven Engineering	<i>No incompatibilities</i>
High-Performance Computing	
Kontextuelle Informatik	Konzepte digitaler Medien, Einführung in Informatik und Gesellschaft
Language-Based Security	
Logic Programming for Artificial Intelligence	Prolog with Applications in Text Understanding and Interpreter Construction
Model Checking	Model Checking
Model-Based Interface Development	Modelling User Interfaces, Web Modelling
Software Analysis	Software Analysis
Software Quality Assurance	
Type Systems for Correctness and Security	<i>No incompatibilities</i>
Usability Engineering Practice	Usability Engineering Practice