

Courses Master Computer Science (October 2021)

Title of course	UNISONO ID	Type of course	WS	SS	Credit Points	Lecture Format(*)	Exam Type	Module recommended for specialization		
						Presence, hybrid, online		Core / Mandatory	Visual Computing	Embedded Systems
Algorithmics I	43THI0021V 43THI0023V	Lecture Exercise			6	Presence / Online	Oral			
Communication and Information Security II	43DCS1319V 43DCS1320V	Lecture Exercise			6	Presence / Online	Oral			
Communications Engineering	43NTS1000V 43NTS1100V	Lecture Exercise			6	Presence / Online	Written			
Computer Architecture II	43MIM2110V	Lecture Exercise			6	Presence / Online	Oral			
Modeling and Animation	TBA	Lecture Lab			6	Presence / Online	Written			
Rendering	43CGM1134V 43CGM1135V	Lecture Exercise			6	Presence / Online	Oral			
GPU Programming	43CGM1132V 43CGM1133V	Lecture Exercise			6	Presence / Online	Oral			
Computer Networks II (German)	43BVS0401V 43BVS0402V	Lecture Exercise			6	Presence / Online	Oral			
Convex Optimization for Computer Vision	43VSA0111V 43VSA0112V	Lecture Exercise			6	Presence / Online	Oral			
Cutting Edge Research	43CGM1130V	Lecture			6	Presence / Online	Term Paper			
Data Base Systems II (Deutsch)	43MBE1011V 43MBE1012V	Lecture Exercise			6	Presence / Online	Written or oral			
Deep Learning	43VSA0131V 43VSA0132V	Lecture Exercise		Self-study only!	6	Presence / Online	Written			
Development of Embedded Systems with FPGAs	43EMS0070V 43EMS0071V	Lecture Lab			6	Presence / Online	Written			
Embedded Systems	43EMS0040V 43EMS0041V	Lecture Exercise			6	Presence / Online	Written			
Estimation Theory / Compressed Sensing	43NTS5020V	Lecture Lab			6	Presence / Online	Oral			
Higher Level Computer Vision	TBA	Lecture			6	Presence / Online	Oral			
Advanced Logic	TBA	Lecture Exercise			6	Presence / Online	Oral			
Machine Vision	43Mi12000V 43Mi12100V	Lecture Exercise			6	Presence / Online	Oral			
Microsystem Fabrication & Test (from winter 22/23)	TBA	Lecture Exercise			6	Presence / Online	Oral			
Digital IC Design (from summer 23)	TBA	Lecture Exercise			6	Presence / Online	Oral			
Numerical Methods for Visual Computing	43VSA0121V 43VSA0122V	Lecture Exercise			6	Presence / Online	Oral			
Operations Research (German)	4MAB74100V	Lecture Exercise			6	Presence / Online	Written			
Parallel Processing	43BVS0501V 43BVS0502V	Lecture Exercise			6	Presence / Online	Written			
Project Work (offered by various groups)	various	Project Work			15	Presence / Online				
Recent Advances in Machine Learning	43VSA0141V 43VSA0142V	Lecture Exercise			6	Presence / Online	Written report			
Recommender Systems	43ISG3101V	Lecture Exercise			6	Presence / Online	Written			

Kommentiert [AK1]: Important note: This information is preliminary, as we are still collecting the individual course information. Please check UNISONO or contact the lecturer.

Kommentiert [AK2]: Held in WiSe 21/22, from SoSe 22 in summer only

Kommentiert [AK3]: Deprecated. This will be replaced by "Selected Ingredients for Compressive Sensing" (43NTS2100V + 43NTS2120V).

Scientific Visualization	43CGM1114V 43CGM1115V	Lecture Exercise			6	Presence / Online	Oral			
Scientific Working (incl. seminar, which are offered by various groups)	43CGM1140V	Lecture Seminar			9	Presence / Online				
Software Engineering II (German)	43MBE1009V 43MBE1010V	Lecture Exercise			6	Presence / Online	Written or oral			
Statistical Learning Theory	TBA	Lecture Exercise			6	Presence / Online	Oral			
Stochastic Models	43NTS5000V	Lecture Exercise			6	Presence / Online	Oral			
Storage Technologies	43MIM2310V 43MIM2311V	Lecture Exercise			6	Presence / Online	Oral			
Telematics – Multimedia	43MIM3110V	Lecture Exercise			6	Presence / Online	Oral			
Telematics – Technologies & Applications	43MIM3210V 43MIM3211V	Lecture Exercise			6	Presence / Online	Oral			
Ubiquitous Computing	43UCO1111V 43UCO1112V	Lecture Exercise			6	Presence / Online	Written			
Ubiquitous Systems Lab	43UCO1113V	Lab			6	Presence / Online	Project Report			
Unsupervised Learning	TBA	Lecture	Irregular			Presence / Online	Oral			
Virtual Reality	43CGM1121V 43CGM1121V	Lecture Exercise			6	Presence / Online	Oral			

Kommentiert [AK4]: Deprecated. This will be replaced by "Introduction to Compressive Sensing" (43NTS2200V + 43NTS2220V)

(*) The following lecture formats are planned for winterer term 2021

- **Online:** The course will be given online only. All course material will be available in online digital format.
- **Hybrid:** The course will comprise parts held in physical presence in combination with online material (e.g. video recordings). The course can be attended remotely, i.e. physical presence in Siegen is not required.
- **Presence:** The course requires physical presence in Siegen and cannot be attended remotely.

Important note: We are currently planning the winter semester 2021/22 to be held in presence, but the lecturers will offer online material for the courses in the winter term 2021/22. Moreover, in case new corona measure prevent lectures in presence, we will most likely go back to online teaching.