

MSc Computational Sciences - Course Offers

Elective Mathematics and Computer Science Area

last updated: 05.02.2024

Module Code	Module Name	Course Title	SS24	WS24	SS25	WS25
5725 CFuncA	Functional Analysis	Functional analysis	x		tbc	
5725 CAppIA	Selected Topics of Applied Analysis	Introduction to partial differential equations	x		x	
5871 CGeoPh	Geometry in Physics			(x)	tbc	tbc
5871 CMThPh	Mathematics in Theoretical Physics		tbc	tbc	tbc	tbc
5725 CNumME	Einführung in die Numerische Mathematik	Introduction to Numerical Methods for Partial Differential Equations		(x)		tbc
		Numerische Mathematik	x		(x)	
5725 CNumMS	Numerical Mathematics Seminar	Seminar on methods of mathematical modeling in life sciences	tbc	tbc	tbc	tbc
5871 CNumMT	Selected Topics of Numerical Mathematics	Performance-Engineering		tbc	tbc	tbc
		Scientific Computing: Introduction to Atmospheric Flow Simulation	x		tbc	
		Numerische Strömungsmechanik		tbc		tbc
		Introduction in Climate Modeling	tbc	tbc	tbc	tbc
5751 CHighP	High Performance Computing	Introduction to High-Performance Computing		tbc		tbc
		Advanced High-Performance Computing	x		tbc	

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		Compute Continuum	x		tbc	
		Heterogeneous and parallel computing		tbc		tbc
5871 CConvO	Convex Optimization	Convex Optimization		tbc		
5871 CDiscr	Methods and problems in discrete mathematics	Methods and problems in discrete mathematics				
5871 CProba	Probability Theory	Probability Theory II	x	x		
5871 CStcha	Selected Topics of Stochastics	Random graphs			(x)	
		Statistics				
		Probability Theory I	x		(x)	
		Gaussian random fields				
5751 CStat0	Statistics	Statistics				
5871 CStoch	Probability Theory, Stochastic Processes and Network Science	Probability Theory and Stochastic Pocesses for Physicists		x		
		Introduction to Network Science	tbc	tbc	tbc	tbc
		Complex Networks and Energy Grids	x	tbc	tbc	tbc
5871 CInfTh	Information Theory and Statistical Physics		tbc	tbc	tbc	tbc
5871 CEffiA	Efficient Algorithms	Efficient Algorithms		tbc		tbc

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5871 CQComp	Quantum Computing	Quantum Information Theory	x	x		x
5751 CEmpSE	Empirical Software Engineering		tbc	tbc	tbc	tbc
5751 ReqEng	Requirements Engineering	Requirements Engineering			x	
5751 VisAna	Visual Analytics	Visual Analytics	x		x	
5751 CDInfS	Data and Information Science	Machine Learning	x		tbc	
		Advanced Machine Learning		tbc		
		Deep Learning				
5871 CDAnFT	Data Analysis and Fourier Transform		tbc		tbc	
5904 InvMod	Inverse Modelling	Inverse Modelling (IM) - Lecture	tbc		tbc	
5871 CProgr	Programming in a Scientific Environment with C++		x		(x)	
5871 CQMeth	Qualitative Methods in Theoretical Physics		tbc	tbc	tbc	tbc
5871 CMathS	Mathematics Seminar	various				
5871 CCompS	Computer Science Seminar	various				

Legend:	x	(x)	tbc
	confirmed	planned	to be confirmed

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