

## MasterMath courses per specialisation, version 04-07-2018

Key:

<b>AS</b> Applied Stochastics
<b>A&amp;T</b> Algebra and Topology
<b>MFoCS</b> Mathematical Foundations of Computing Science
<b>MPhys</b> Mathematical Physics
<b>(n)</b> Course taught in Nijmegen

### Semester 1

Course Name	EC	AS	A&T	MFoCS	MPhys
Advanced Algebraic Geometry: Abelian Varieties	8		X		X
Algebraic Geometry 1	8		X		
Algebraic Number Theory	8				
Algebraic Topology 1	8		X		
Analytic Number Theory	8		X		X
Asymptotic Statistics	8	X			
Continuous Optimization	6	X			
Cryptology	6		X	X	
Commutative Algebra	8		X		
Differential Geometry	8		X		X
Discrete Optimization	6				
Dynamical Systems	8				X
Ergodic Theory	8				X
Forensic probability and Statistics	8	X			
Functional Analysis	8				X
Heuristic Methods in Operations Research	6	X			
Interacting Particle Systems: Theory and Applications	8	X			X
Machine Learning Theory	8	X		X	
Measure Theoretic Probability	8	X			
Numerical Linear Algebra	8				
p-Adic numbers	8		X		
Parallel Algorithms	8			X	
Partial Differential Equations	8				X
Probabilistic and Extremal Combinatorics	8	X	X		
Set Theory	8		X	X	
Symmetries and conservation laws of nonlinear PDE	8				X
Systems and Control	6	X			
Topos Theory	8		X	X	X

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## Semester 2

Course Name	EC	AS	A&T	MFoCS	MPhys
Additive Combinatorics	8		X	X	
Advanced Complex Analysis	8				X
Advanced Linear Programming	6	X	X	X	
Algebraic Geometry 2	8		X		X
Algebraic Methods in Combinatorics	8	X			
Algebraic Topology 2	8		X		
Algebraic Topology in Dynamical Systems	8				
Applied Finite Elements	6	X	X		
Applied Statistics	6	X			
Bayesian Statistics	8	X			
Coding Theory	8	X	X	X	
Elliptic Curves	8		X		X
Geometric Functional Analysis and its Applications	8				X
Geometric PDEs	8				X
History and Philosophy of Mathematics	6				
Inverse Problems in Imaging	6	X			
Lie Groups and Lie Algebras	8		X		X
Model Theory	8		X	X	
Multiple Zeta Functions <b>(n)</b>	8		X		
Numerical Bifurcation Analysis of Large-scale Systems	8				
Numerical Methods for Time-dependent PDEs	8				X
Operator Algebras	8		X		X
Quantum Computing	8		X		
Quantum Information Theory	8			X	X
Queueing Theory	6	X			
Riemann Surfaces <b>(n)</b>	8		X		X
Scheduling	6	X			
Selected Areas in Cryptology	8		X	X	
Statistical Theory for High- and Infinite- Dim. Models	8	X			
Stochastic Differential Equations	6	X			
Stochastic Processes	8	X			
Symplectic Geometry Topology in Physics	8				X