

Master Courses Applied Mathematics					
AM Courses	Quarter 1A	Quarter 1B	Quarter 2A	Quarter 2B	
		Continuous Optimization (Mastermath 6)		Scientific Computing (6)	
				Pioneers of Applied Mathematics (5 EC)	
MOR Courses	Discrete Optimization (Mastermath 6)		Queueing Theory (6)		
	Game Theory (5)	Markov Decision Theory (5)	Applied Queueing models (5)		
	Measure & Probability (5)	Stochastic Processes (5)			
	Complex Networks (5)		Scheduling (Mastermath 6)		
	Limits to Computing (5)		Information Theory and Statistics (5)	Spatial Statistics (5)	
			Applied Statistics (Mastermath 6)		
				Reinforcement learning (5)	
MAGNUS Courses	Applied Functional Analysis (6)		Finite Element Methods: theory and applications (6)		
		Optimal Control (5)			
	Systems & Control (6)		Introduction to Partial Differential Equations (4)	Time Series Analysis (5)	
	Nonlinear Dynamics (5)	Numerical Techniques for PDE (5)		Robust Control (5)	
	Measure & Probability (5)		Partial Differential Equations (6)		
			Inverse problems in imaging (Mastermath 6)		
MDS Courses	Complex Networks (5)	Deep Learning (5)*	Uncertainty quantification and data-driven modeling (5)	Graphical Models and causality (5)	
	Measure & Probability (5)*	Markov Decision theory (5)*		Spatial Statistics (5)	
	Statistical Learning (5)*			Reinforcement learning (5)	
	Data Science (5)	Data Science (5)	Data Science (5)	Time Series Analysis (5)	
		Discrete Optimization (6)			
AI4Health Courses	Statistical Learning (5)**	Deep Learning (5)**	Mixed-Integer Optimization (5) ***	Graphical Models and causality (5) ***	
	Applied Statistical Learning (5)	Markov Decision theory (5)**	Uncertainty quantification and data-driven modeling (5) ***	Reinforcement learning (5) ***	
	Complex Networks (5)	Optimal Control (5)	Deep learning medical image analysis (5) ***		
		Optimization of Healthcare processes (5)	Information Theory and statistics (5)		
				Inverse problems in imaging (Mastermath 6)	
		Case studies in Data Science and AI (6-10 EC in total)			

Note that the course load for semester courses might not be split 50/50 over both quartiles. Check the timetable or mastermath site for more specific scheduling information.

Mandatory for all AM students	MOR Three out of eight	Mandatory for MAGNUS	MDS four out of nine, including one out of the four marked *	Mandatory for AI4Health ** and also two out of five marked ***
recommended electives	MOR electives	MAGNUS electives	MDS electives	AI4Health electives

Capita Selecta AM: all tracks

To explore a specific topic within the field of Applied Mathematics one can contact a specific AM research chair and formulate an assignment with a studyload of 2-5 EC further details to be found on capita selecta registration form: <https://www.utwente.nl/en/am/rules/form-capita-selecta.pdf>