	Master Courses Applied Mathematics - According to EER 2026/2027			
	Quarter 1A	**Quarter 1B**	**Quarter 2A**	**Quarter 2B**
AM courses	Continuous Optimization (Mastermath 6)		Scientific Computing (6)	
				Pioneers of Applied Mathematics (5 EC)
MOR Courses	Discrete Optimization (Mastermath 6)		Queueing Theory (6)	Applied Queueing Models (5)
	Game Theory (5)	Markov Decision Theory (5)	Mixed-Integer Optimization (5)	Reinforcement Learning (5)
	Measure & Probability (5)	Stochastic Processes (5)	Information Theory and Statistics (5)	Spatial Statistics (5)
	Scheduling Theory and Algorithms (Mastermath 6)		Advanced Discrete Optimization (Mastermath 6)	
	Complex Networks (5)		Applied Statistics (Mastermath 6)	
	Limits to Computing (5)			
MAGNUS Courses	Applied Functional Analysis (6)		Finite Element Methods: Theory and Applications (6)	
	Measure & Probability (5)	Optimal Control (5)	Inverse Problems in Imaging (Mastermath 6)	
	Systems & Control (6)		Introduction to Partial Differential Equations (4)	Time Series Analysis (5)
	Nonlinear Dynamics (5)	Numerical Techniques for PDE (5)	Partial Differential Equations (6)	Robust Control (5)
MDS&AI Courses	Statistical Learning (5)	Managing Big Data (5)	Uncertainty Quantification and DD Modeling (5)	Graphical Models and Causality (5)
	Hardware & Information (4)	Deep Learning: From Theory to Practice (5)*	Mixed-Integer Optimization (5)	Spatial Statistics (5)
	Complex Networks (5)	Markov Decision Theory (5)*	Deep Learning for 3D Medical Image Analysis (5)	Foundation Models (5)
	Measure & Probability (5)*		Data Science for All (5)	Reinforcement Learning (5)
	Data Science for All (5)	Topics in Data Science (5)	Topics in Data Science (5)	Time Series Analysis (5)
	Discrete Optimization (Mastermath 6)			
AI4Health Courses	Case Studies in Data Science and AI (6-10 EC in total)			
	Statistical Learning (5)	Deep Learning: From Theory to Practice (5)	Mixed-Integer Optimization (5)	Graphical Models and Causality (5)
	Applied Statistical Learning (5)	Markov Decision Theory (5)	Uncertainty Quantification and DD Modeling (5)	Reinforcement Learning (5)
	Complex Networks (5)	Optimal Control (5)	Deep Learning for 3D Medical Image Analysis (5)	
		Optimization of Healthcare Processes (5)	Information Theory and Statistics (5)	
			Inverse Problems in Imaging (Mastermath 6)	

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 as assignment with a studyload of 2-5 EC
further details to be found on capita selecta proposal form: https://www.utwente.nl/en/am/rules

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 3 out of 8**	**Mandatory for MAGNUS**	**Mandatory for MDS&AI**	**Mandatory for AI4Health**
			MDS&AI 3 out of 9, incl at least one marked *	**AI4Health 2 out of 5**
recommended electives	**MOR electives**	**MAGNUS electives**	**MDS&AI electives**	**AI4Health electives**

MDS&AI homologation	Optimisation Basics (1 EC)			
	Linear Structures 1 (5 EC)			
	Introduction to Mathematical Analysis (4 EC)	Introduction to Mathematical Analysis (4 EC)	Introduction to Mathematical Analysis (4 EC)	