Curriculum Master Computational Science 2023-2024

	Semester 1					Semester 2				
	block 1		**block 2**		**block 3**	**block 4**		**block 5**		**block 6**
	September	**October**	**November**	**December**	**January**	**February**	**March**	**April**	**May**	**June**
Compulsory Core Courses (year 1) **30 EC**	Introduction to Computational Science (UvA) 6EC		Numerical Algorithms (UvA) 6EC		Complex System Simulation (UvA) 6EC					Agent-Based Modelling (UvA) 6EC
	Academic Skills Computational Science (UvA) 6EC									
Restricted-Choice Elective Courses (year 1 and 2) **24 EC**	Evolutionary Computing (VU) 6EC		Performance of Networked Systems (VU) 6EC		Biosystems Data Analysis (UvA) 6EC	Computational Finance (UvA) 6EC		Computational Biology (UvA) 6EC		
	Programming Large-scale Parallel Systems (VU) 6EC		Stochastic Simulation (UvA) 6EC			Experimental Design and Data Analysis (VU) 6EC		Data Mining Techniques (VU) 6EC		
						Scientific Computing (UvA) 6EC		Distributed Algorithms (VU) 6EC		
Free-Choice Elective Courses (year 1 and 2) **24 EC**	Bioinformatics I (UvA) 6EC		Advanced Computer Networks (VU) 6EC		Non-equilibrium Statistical Physics (UvA) 3EC	CED 2: Optimal Control and Environmental Tipping (UvA) 5EC		Bioinformatics for Translational Medicine (VU) 6EC		Advanced Computational Condensed Matter (UvA) 3EC
	From Physics to Physiology (VU) 6EC		Advanced Topics in Computational Finance (UvA) 6EC		Parallel Programming Practical (VU) 6EC	Parameter Estimation Applied to Medical & Biological Science (VU) 6EC		Bioinformatics II (UvA) 6EC		Machine Learning for the Quantified Self (VU) 6EC
	Fundamentals of Bioinformatics (VU) 6EC		Algorithms in Sequence Analysis (VU) 6EC		Understanding Molecular Simulation (UvA) 6EC			Biomolecular Simulations (UvA) 6EC		
	Machine Learning 1 (UvA) 6EC		CED 1: Learning, Stability and Chaos (UvA) 5EC					Game Theory (UvA) 6EC		
	Non-equilibrium Statistical Physics (UvA) 3EC		Computational Social Choice (UvA) 6 EC					Theory of Complex Systems (UvA) 6EC		
			Distributed Systems (VU) 6EC							
	Numerical Linear Algebra (UvA) 8EC									
	Physics of Complex Systems: Dynamics and Chaos (UvA) 3EC		Scientific Visualization and Virtual Reality (UvA) 6EC							
			Statistical Theory of Complex Molecular Systems (UvA) 6EC							
			The Social Web (VU) 6EC							
	Uncertainty Quantification (UvA) 6EC									
Mandatory Courses (year 2) **42 EC**			Master Thesis Computational Science (UvA) 42 EC							