

## Curriculum Materials Science & Engineering 2023-2024

Legend	Compulsory courses CSE-MSE	Compulsory courses shared	Electives CSE CPE	Broading Electives
	Deficiency courses	Electives CSE MME	Electives CSE General	

Year 1				
	Quarter 1A	Quarter 1B	Quarter 2A	Quarter 2B
Core modules	AMM Characterization (5 EC, Huijser)	AMM Organic Materials & Polymer Science (5 EC, Wurm)	AMM Inorganic Materials Science (5EC, Baeumer)	Phase Transformation in Manufacturing (5EC, Bor)
		Statistical Thermo (2.5 EC, de Beer)	AMM Project Organic Materials (5 EC, Hempenius)	
			Surfaces and Thin Layers (5EC, Wormeester)	
	AMM Project Inorg. Materials & Mol. CT (5 EC, ten Elshof)			

Year 2				
	Quarter 1A	Quarter 1B	Quarter 2A	Quarter 2B
Core modules	Internship & Job Orientation Project (20 EC; Velthuis)		Final Master Project (40 EC)	

Electives scheduled	Advanced Colloids and Interfaces (5 EC, Wood)	Electrochemistry: fundamentals and techniques (5 EC, Altomare)	Polymer Physics (5 EC, de Beer)	Polymer Synthesis (5 EC, Wurm)
		Lab on a chip (5 EC, Eijkel)	Advanced Organic Chemistry (5 EC, Jonkheijm)	Advanced Ceramics (5 EC, Pizzoccaro-Zilmay)
			Elastomeric Science & Engineering (5 EC, Blume)	
				Electrocatalysis: Materials and Spectroscopy (5 EC; Katsoukis)
				X-ray Characterisation for S&T (5 EC, Makhotkin)

Compulsory courses	37,5 EC
Broading Elective	12,5 EC
Free Elective	10 EC
Internship	20 EC
Final Master's Project	40 EC

2.5 EC Topics	Systems Chemistry (Wong)	Fabri. of Nanostr. - Bottom-Up (Huskens)	Chemical Process Analysis (Gardeniers)	Molecular Modeling (de Beer)
		Design and simulation of chemical batch processes (Franke)	Physical Organic Chemistry (Huskens)	
			Nanochemistry (Wong)	
			Electrochemical Engineering (Banerjee)	
			Advanced Reaction Kinetics (Faria)	

Electives n.s.	Theory of Phase Equilibria (5 EC; van der Hoef)
	Polymers & Material Science Practice (3 EC; Hempenius)
	Capita Selecta Research Group (5 EC)
	Contract Research (5 EC)

Def.	Workshop Aca. Skills (0,5 EC)
	Matlab for pre-masters ET (2 EC)
	Math for Engineers (0 EC, optional)