

ADVANCED TECHNOLOGY CURRICULUM 2024 2025



Category (year 1 only) / subject
 A / Mathematics
 B / Core courses
 C / Lab courses + Instrumentation
 D / Projects
 E / Organic Chemistry + Quantum Mechanics

	M1:	M2:	M3:	M4:
First year (cohort 2024)	Mechanics 202000610	Thermodynamics 202000614	Fundamentals of Materials 202000618	Dynamics 202000622
	K Raju	C Vreman-de Olde	G Koster	H Wormeester
	Calculus 1 * (202001212) (4.0 EC)	Calculus 2 * (202200179) (4.0 EC)	Vector Calculus * (202200189) (2.0 EC)	Linear Algebra * (202001208) (3.0 EC)
	Mechanics * (202000611) (4.5 EC)	Thermodynamics * (202200185) (4.0 EC)	Structure and Properties of Materials * 202200188 (3,0 EC)	Dynamical Systems * (202000623) (4.0 EC)
	Lab Practice (202300117) (2,0 EC)	Lab Practice (202300117) (1,5 EC)	Quantum Matter * (202000620) (3.0 EC)	Basic Electronics and Instrumentation * (202000624) (4.0 EC)
	Error analysis and programming skills (202300118) (1,5 EC)	Error analysis and programming skills (202300118) (1,5 EC)	Organic Chemistry * (202000621) (3.0 EC)	Project Accelerometer * (202000625) (4.0 EC)
	Project Mechanics (202000613) (3.0 EC)	Project Thermodynamics (202000617) (4.0 EC)	Project Materials (202200193) (4.0 EC)	

* Open to students from other educational programmes.

	M5:	M6	M7:	M8:
Second year (cohort 2023)	Signals, Models & Systems 202000690	Elective Module**	Fields & waves 202000651	Business & Society 202000655
	C Vreman-de Olde		W van den Beld	C Baibarac
	Signals * (202000627) (4.0 EC)	Materials Science and Engineering	Finite Element Methods * (202000652) (3.0 EC)	Entrepreneurship & Innovation Management * (202000656) (6.0 EC)
	Models * (202000628) (4.0 EC)	Transport Phenomena	Electro- and Magnetostatics * (202000653) (9.0 EC)	Data, Statistics & Probability for Engineers * (202000657) (5.0 EC)
	Elective * (4.0 EC): - Engineering Solid Mechanics (202000695) - Computational Thinking (202400546) - Classical Mechanics (202000694) - Electronics (202000644)	Systems and Control		
Project SMS * (202000693) (3.0 EC)	Software Systems	Project Antenna * (202000654) (3.0 EC)	Socio-technical Futures * (202000658) (4.0 EC)	

* Open to students from other educational programmes.

** Detailed information can be found on the next page.

	M9	M10	M11	M12
Third year (cohort 2022)	Master Preparation	Master Preparation	Master Preparation	BSc Assignment (202000670)
	Choice: Check master admission requirements on AT webpage Offered by the AT Programme: Condensed Matter Physics for AT (202000659)	Choice: Check master admission requirements on AT webpage	Choice: Check master admission requirements on AT webpage Offered by the AT programme: Micro System Design & Realization (202000664)	Scientific/Design Communication Work process
			Preparation Bachelor Assignment (202000668) (4.0 EC)	

Module 6 choices	M6a:	M6b	M6c	M6d
	Materials Science and Engineering 202000633	Physical Transport 202000736	Physical Transport 202001139	Software Systems 20201023
	M Hijben	W Brilman	G Krijnen	T Van Dijk
	Advanced Materials * (202000634) (3.5 EC)	Physical Transport Phenomena (202000737) (7.5 EC)	Engineering System Dynamics (202001141) (5.0 EC)	Software Systems Core (20201024) (12 EC)
	Fundamentals of Solids * (202000635) (3.5 EC)	Numerical Methods (202000739) (3.5 EC)	Control Engineering (202001140) (5.0 EC)	Introduction to Mathematical Analysis (201400385) (3.0 EC)
Chemistry and Technology of Materials * (202000636) (4.0 EC)	Project Transport Phenomena (202000738) (4.0 EC)	Project Systems and Control (202001142) (5.0 EC)		
Elective * (4.0 EC): -Semiconductor Devices (202000637) - Physical Chemistry of Interfaces (202000638)				