

Curriculum B-CSE 2020-2021

YEAR 1

1	EC	2	EC	3	EC	4	EC
Chemistry		Process Technology		Materials Science		Physical & Analytical Chemistry	
Jonkheijm		Benes		Koster		Gardeniers	
Introduction to Mathematics & Calculus 1A	4	Mathematics: Calculus 1B	3	Mathematics: Linear Algebra	3	Mathematics: Calculus 2	3
Fundamentals of chemistry - (in)organ. structures - reaction categories - reaction mechanisms - polymers (synthesis) - project	8.5	Thermodynamics & Process technology - phases - laws - cycles - Maxwell relations - project	9.5	Materials Science - quantum phenomena - inorg. mat. Science - polymers (physical prop.) - project	9.5	Equilibria - chemical equilibria - phase equilibria - phase equilibrium experiment	5
Lab course 1: Basic skills & Synthesis	2.5	Lab course 2: Energy & Process technology	2.5	Lab course 3: Materials	2.5	Electrochemistry - electrochemistry (theory) - practicum & project	7

YEAR 2

5		6		7		8A		8B	
Industrial processes	EC	Transport Phenomena	EC	Molecules & Materials	EC	Process design	EC	Materials Science & Technology	EC
Faría Albanese		Brilman		TBA		Elective module: choose 8A or 8B			
						Van der Ham		Houwman	
Vector calculus	2	Numerical Methods	3.5	Organic and Bio-organic chemistry	6	Introduction Chemical Reactor Engineering (incl. process control)	4	Chemistry & Techn. of Inorganic Materials	3
Kinetics & Catalysis	4.5	Physical Transport Phenomena - fluid dynamics - heat transfer - mass transfer	7.5						
Industrial Chemistry & Processes; Project Sustainable Industrial Chemistry	8.5			Project Transport Phenomena	4	Lab Course: Organic and Bio-organic Chemistry	2	Project process design	7

YEAR 3

9 Minor 1	EC	10 Minor 2	EC	11 Intro Bachelor assignment	EC	12 Bachelor assignment	EC
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<p>Minor module - at the UT - exchange semester - getting teacher qualification</p>	15	<p>Minor module - at the UT - exchange semester - getting teacher qualification</p>	15	Research	2.5	<p>Bachelor assignment -lab work - interpreting results - report writing - final presentation</p>	15
				Statistics	3		
				Ethics	2.5		
				Preparation bachelor assignm.	2		
				<p>Elective: Biochemistry / Bionanotechnol. / Polymer Physics / Process Equipment Design / Study Tour prep. / Other (Board of Examiners)</p>	5		