Profiles and Thematic Learning Areas at Chemical Engineering & Chemistry

TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY

Content and composition

The elective courses offered by the Chemical Engineering & Chemistry (CE&C) department are categorized in two profiles, namely, (i) Molecular Systems and Materials Chemistry (MSMC) and (ii) Chemical Process Technology (CPT), in which courses are offered for deepening and broadening the theoretical knowledge in the field of molecules and materials, and process technology, respectively. In Table 1, it is indicated to which profile the elective courses offered by the CE&C department belong to. Note that the elective courses within the CPT profile are compulsory elective courses for the IChemE track. More information on the individual courses can be found in the Osiris Course Catalogue.
At TU/e, there are five Thematic Learning Areas (TLA's), namely Energy, Materials, Sustainability, Artificial Intelligence, and Entrepreneurship. Most of the electives offered by the CE&C department are part of one of the former three TLA's, which are indicated in Table 1 as well.

Table 1 – Overview of elective courses offered by the CE&C department, including the categorization into Profiles and Thematic Learning Areas.

Course code	Course name	Level	Quartile	Profile		Thematic Learning Area		
				Molecular Systems and Materials Chemistry	Chemical Process Technology (IChemE)	Energy	Materials	Sustainability
6BER01	Nanomaterials: Fabrication and Chemistry	1	1	X			X	X
6BER02	Macro Organic Chemistry	3	2	X			X	
6BER03	Numerical Methods	2	3		X			
6BER04	Topics in Molecules and Materials	3	3	X			X	X
6BER05	Physical Chemistry 2	3	4	X			X	
6BER06	Electrochemical Energy Conversion and Storage*	3	1	X	X	X	X	X
6BER07	Process Dynamics and Control*	3	1		X	X		
6BER08	Polymer Chemistry and Technology 2*	3	2	X			X	X
6BER09	CBL Process Design*	3	2		X	X		X
6BER10	Molecular Simulations in CE&C*	3	3	X			X	

*This course will be taught for the first time in academic year 2025/2026.