

Outline of the Study Program Chemical Engineer BSc

Course title	Prerequisite	Semester							Credits ECTS
		1	2	3	4	5	6	7	
<i>Intoduction module</i>									
Introduction course		010A							0
Mathematical and scientific foundations									51
<i>Mathematics module</i>									12
1. Mathematics I. TMBE0606 TMBG0606		430gk							5 2
2. Mathematics II. TMBE0607 TMBG0607	TMBE606 TMBG607		230gk						3 2
<i>Physics module</i>									6
3. Physics for Engineers I. TFBE2111		210k							3
4. Physics for Engineers II. TFBE2113	TFBE2111		210k						3
<i>Chemistry module</i>									34
5. General Chemistry TKBE0101 TKBG0101 TKBL0101		323gk							8
6. Inorganic Chemistry TKBE0212 TKBL0212	TKBE0101 TKBL0101		306gk						8
7. Organic Chemistry I. TKBE0301	TKBE0101		400g						6
8. Organic Chemistry II. TKBE0312 TKBL0312	TKBE0301 TKBL0101			403gk					8
11. Biochemistry TBBE0302	TKBE0312				200g				3
Economic and Human Sciences									20
<i>Micro- and macroeconomic module</i>									3
13. Introduction to economics.		200k							3
<i>Management and Business module</i>									8
14. Management TTBEVVM-KT2		200k							3

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		1	2	3	4	5	6	7	
15. Basics of civil law I. TTBEBVVM-JA1			200k						2
15. Basics of civil law II. TTBEBVVM-JA2	TTBEBVVM-JA1					200k			2
EU ismeretek TTBE0030				100k					1
<i>Economic and Human Sciences (obligatory module)</i>									9
16. Macroeconomics II. TTBEBVM-KT3	TTBEBVVM-KT1			200k					3
17. Engineering Ethics TTBEVEM-MK1		200f							3
18. Management of value creating processes TTBEBVM-KT4	TTBEBVVM-KT2		200						3
Basics of Professional knowledge									130
<i>Physical-, Analytical-Chemistry and Materials Science</i>									
Analytical module									8
19. Analytical chemistry I. TKBE0513	TKBE0212 TFBE2111					310gk			4
TKBL0513	TKBL0212 TKBE0513						003g		2
20. Analytical Chemistry II TKBL0514	TKBL0212 TKBE0513						003g		2
Physical Chemistry and Materials Science module									21
21. Physical Chemistry I. TKBE0401	TKBE0101 TMBE0606 TFBE2111			220k					4
22. Physical Chemistry II. TKBE0403 TKBL0403	TKBE0401 TKBL0101				202gkz				3 1
9. Macromolecular Chemistry TKBE0611	TKBE0312				200k				3
10. Colloid Chemistry TKBE0404	TKBE0401				200k				3
23. Materials of Construction TKBE1211	TKBE0611					200g			3

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24. Plastics and Processing I. TKBE1212 TKBL1212	TKBE0611						202gk		2 2
<i>Measurement and Processing module</i>									8
25. Informatics for Engineers TKBG0911				002g					2
26. Process Control I. TKBG0612	TKBG0911				220f				4
27. Process Control II. TKBG0613	TKBG0612					020k			2
<i>Mechanics and Unit Operation module</i>									24
Mechanics									
28. Mechanics for Chemical Engineers I. MFVGE31V03				210f					3
29. Mechanics for Chemical Engineers II. MFVGE32V03	MFVGE31V03				210f				3
30. Mechanics for Chemical Engineers III. MFVGE33V04	MFVGE32V03					210k			3
Chemical Unit Operation									
31. Unit Operations I. TKBG0614	TKBE0401			240f					5
32. Unit Operations II TKBG0615	TKBG0614				240f				5
33. Unit Operations III TKBG0616	TKBG0615					240kz			5
<i>Technology module</i>									27
Planning									
34. Computer modeling of Chemical Technology Systems I. TKBG0912	TKBG0911						020g		2
35. Computer modeling of Chemical Technology Systems II. TKBG0913	TKBG0912							020g	2
Chemical Technologies									
36. Chemical Technology I. TKBE1111 TKBL1111	TKBE0401				224gk				4 3

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		1	2	3	4	5	6	7	
37. Chemical Technology II. TKBE1112 TKBL1112	TKBE1111 TKBL1111					224gkz			4 3
38. Environmental Technology TKBE1114 TKBL1114	TKBE1111 TKBL1111						212gk		3 2
39. Pilot Plant Work TKBL1115	TKBE1111						015g		4
Safety Field									3
40. Safety TKBE0711								200g	3
Special Courses									39
41. Basics of Petrochemistry	TKBE1113					200g			3
42. Radioisotopes TKBG0412	TKBE0403							102g	3
43. Waste management TKBE1116 TKBG1116	TKBE1111						220gk		3 2
44. Spectroscopy TKBE0503	TKBE0312 TFBE2113						200k		3
45. Structure of Matter I. TKBL0513	TKBE0312						002g		2
46. Structure of Matter II. TKBL0514	TKBL0513							004g	2
47. Quality Management TTBEBVM-KT6	TTBEBVM-KT4							200k	3
48. Design of experiments TKBE0617	TKBE0403						200f		3
49. BSc Thesis TKBG2011	TKBE0403 177 credits								15
Obligatory courses									8
50. Chemical Technology III. TKBE1117	TKBE1112 TKBL1112							200g	3
51. Modeling of Chemical Reactors MFVRE31V03	TKBE0403					200f			3
52. Plastics and Processing II. TKBE1213	TKBE0611						100g		2
53. Plastics and Processing III. TKBE1214	TKBE0611							200g	3

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Additional requirements									
54. Visits at Chemical Companies (five days) TKBG1118	TKBE1111				002a				
55. Industrial Placement TKBG1119	TKBE1111 TKBL1111						a		
56. Physical Education		002a	002a						

Symbols: a – acceptance (no grade), g – practical, f – mid semester grades (practical)
k – examination (written, or oral), z – Subjects of the Final Exam.