

Model Curriculum of Chemical Engineering BSc Program – University of Debrecen

	semesters								ECTS credit points	evaluation
	1.	2.	3.	4.	5.	6.	7.			
	contact hours, types of teaching (l – lecture, p – practice), credit points									
Science subject group										
<i>Mathematics modul</i>										
1. Mathematics I. <i>Zoltán Muzsnay</i>	56 l / 5cr 42 p / 2cr								7	exam
2. Mathematics II. <i>Zoltán Muzsnay</i>		28 l / 3cr 42 p / 2cr							5	exam
<i>Physics modul</i>										
1. Physics for Engineers I. <i>Balázs Ujvári</i>	42 l / 3cr								3	exam
2. Physics for Engineers II <i>Balázs Ujvári</i>		42 l / 3cr							3	exam
<i>Chemistry modul</i>										
1. General Chemistry I (lect and sem) <i>József Kalmár, Linda Bíró-Földi</i>	42 l / 4cr. 42 p / 3cr								7	exam
2. General Chemistry (lab) II. <i>Linda Bíró-Földi</i>		42 p / 3cr.							3	mid-semester grade
3. Inorganic Chemistry I. <i>István Lázár</i>		28 l / 3cr.							3	exam
4. Inorganic Chemistry II. <i>Péter Buglyó</i>			28 l / 3cr.						3	exam

5. Organic Chemistry I. (lect and sem) <i>Tibor Kurtán</i>		28 1/3cr. 14 p /1cr.							4	exam
6. Organic Chemistry II. <i>Tibor Kurtán, Marietta Vágvölgyiné Tóth</i>			42 1/4cr. 42 p/2cr.						6	exam
7. Organic Chemistry III. <i>László Somsák</i>				28 1/3cr./					3	exam
8. Biochemistry I. <i>János Kerékgyártó</i>					28 1/3cr				3	exam
Economic and Human Sciences subject group										
<i>Micro- and Macroeconomic modul</i>										
1. Introduction to Economics <i>Levente Sándor Nádasdi</i>	28 1/3cr.		.						3	exam
<i>Management and Business modul</i>										
1. Introduction to Business <i>András Nábrádi</i>	28 1/3cr								3	exam
<i>Business Law modul</i>										
1. Basics of Civil Law I. <i>Tamás Fézer</i>		28 1/2cr.							2	exam
2. Basics of Civil Law II. <i>Tamás Fézer</i>		.	28 1/2cr						2	exam
3. History and Structure of European Union <i>Károly Teperics</i>	14 1/1cr		.						1	exam
<i>Economic and Human Sciences module</i>										
1. Engineering Ethics <i>Zsolt Tiba</i>	28 1/3cr.								3	mid-semester grade
2. Management of Value Creating Processes <i>Miklós Pakurár</i>		28 1/3cr.							3	exam
Basics of Professional Knowledge subject group										
<i>Physical, Analytical Chemistry and Material Science modul</i>										
<i>Analytical Field</i>										

1. Analytical Chemistry I. <i>Péter Buglyó</i>			28 1/3cr		.				3	exam
2. Inorganic and Qualitative Analytical Chemistry <i>Csilla Kállay</i>			56 p /4cr.						4	mid-semester exam
3. Application of Instrumental Analysis (lect.) <i>István Lázár</i>					14 1/1cr.				1	exam
4 Application of Instrumental Analysis (lab.) <i>Attila Gáspár</i>						42 p /3cr.			1	mid-semester exam
Physical Chemistry and Material Science Field										
1.Physical Chemistry I. (lect. and sem.) <i>Attila Bényei</i>			28 1/3cr. 28 p/2cr.						5	exam, mid-semester grade
2. Physical Chemistry II. (lect. and sem.) <i>Attila Bényei</i>			28 1/3cr. 28 p/2cr		.				5	exam, mid-semester grade
3. Physical Chemistry II. (lab.) <i>Ferenc KrisztiánKálmán</i>					28 p /2cr.				2	mid-semester grade
4 Physical Chemistry III. <i>Noémi Nagy</i>					28 1/3cr	.			3	exam
5.Macromolecular Chemistry <i>Sándor Kéki</i>					28 1/3cr				3	exam
6.Materials of Construction <i>Sándor Kéki</i>						28 1/3cr			3	exam
7.Plastics and Processing I <i>SándorKéki</i>							28 1/2cr 28 p/2cr.		4	exam, mid-semester grade
Measurement and Processing modul										
Informatics Field										
1. Informatics for Engineers <i>Ákos Kuki</i>			28 p /2cr						2	mid-semester grade

Processing Field										
1. Process Control I. <i>Lajos Nagy</i>				28 1/42pr.					4	mid-semester grade
2. Process Control II. <i>Lajos Nagy</i>					28 1/42pr.				3	mid-semester grade
Mechanics and Unit Operation modul										
Mechanics Field										
1. Mechanics for Chemical Engineers I. <i>Zsolt Tiba</i>			28 1/14pr.						3	mid-semester grade
2. Mechanics for Chemical Engineers II. <i>Sándor Pálincás</i>				28 1/14pr.					3	mid-semester grade
3. Mechanics for Chemical Engineers III. <i>Gábor Balogh</i>					28 1/14pr.				3	mid-semester grade
Unit Operation Field										
1. Unit Operation I. <i>Sándor Kéki</i>			70 1/6cr.						6	mid-semester grade
2. Unit Operation II <i>Katalin Margit Illlyésné Czifrák</i>				70 1/6cr.					6	mid-semester grade
3. Unit Operation III. <i>Katalin Margit Illlyésné Czifrák</i>					70 1/6cr.				6	mid-semester grade
Technology Module										
Planing Field										
1. Computer Modeling of Chemical Technology Systems I <i>Ákos Kuki</i>						28 p/ 2cr.			2	mid-semester grade
2. Computer Modeling of Chemical Technology Systems II <i>Ákos Kuki</i>							28 p/2cr.		2	mid-semester grade
Chemical Technology Field										

1. Chemical Technology I. <i>Lajos Nagy</i>				28 1/3cr. 56 p/4cr.	.				7	exam, mid-semester grade
2. Chemical Technology II. <i>Lajos Nagy.</i>					28 1/3cr. 56 p/4cr.	r			7	exam, mid-semester grade
3. Environmental Technology <i>Katalin Margit IllyésnéCzifrák</i>						28 1/3cr 28 1/2cr.			5	exam, mid-semester grade
4. Pilot Plant Work <i>Tibor Nagy</i>						70 p/5c			5	mid-semester grade
Safety Field										
1.Safety <i>SándorKéki</i>							28 1/3cr.		3	exam
Special Courses										
1.Basics of Petrolchemistry <i>Tibor Nagy</i>					28 1/3cr.				3	exam
2.Waste Management <i>Sándor Kéki</i>						28 1/3cr			3	exam
3.Spectroscopic Methods I. <i>Gyula Batta</i>						28 1/3cr.			3	exam
4.Quality Management <i>Ágnes Kotsis</i>							28 1/3cr.		3	exam
5.Design of Experiments <i>Ákos Kuki</i>						28 1/3cr.			3	mid-semester grade
BSc Thesis I.					.	2cr.			2	mid-semester grade
BSc Thesis II.							13cr.		13	mid-semester grade

Optional chemistry courses (10cr.)

1.Crystallography <i>Gábor Dobosi</i>				28 1/3cr. fall semester					3	exam
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2. Basics of Environmental Science <i>István Gyulai</i>								14 1/1cr. fall semester	1	exam
3. History of Chemistry <i>Ágnes Dávid</i>								28 1/3cr. spring semester	3	exam
4. Macroeconomics <i>Pál Czeglédi</i>								28 1/3cr fall semester	3	exam
5. Applied Radiochemistry <i>Noémi Nagy</i>								28 1/3cr. spring semester	3	exam
6. Plastics and Processing II. <i>Sándor Kéki</i>								28 p/2cr.	2	mid-semester grade
7. Basic Chemical Informatics <i>Attila Mándi</i>	2 cr, 0+2p+0									-
8. Colloid Chemistry <i>Levente Novák</i>								28 1/3cr.	3	exam
9. Biochemistry III. <i>Teréz Barna</i>								28 1/3cr.	3	exam
10. Biocolloids <i>Levente Novák</i>								28 1/3cr. spring semester	3	exam
11. NMR Operator Training I. <i>Gyulya Batta</i>								28 p/2cr.	2	mid-semester grade
12. Plastics and Processing III. <i>Sándor Kéki</i>								42 p/3cr.	3	mid-semester grade
13. Chemical Technology III. <i>Lajos Nagy</i>								28 1/3cr	3	exam
14. Organic Chemistry Seminar I. <i>László Juhász</i>		14 p/1cr.							1	mid-semester grade
15. Organic Chemistry Seminar II. <i>László Juhász</i>			14 p/1cr						1	mid-semester grade

Other requirement

Visitsat Chemical Companies <i>Ákos Kuki</i>				28p				Paralel egistrationto TTKBE11 11_EN	<i>5 days</i>	signature
Industrial Placement <i>Inthernship</i> <i>Ákos Kuki</i>									<i>6 weeks</i>	signature

