

# University "Prof. Dr. Assen Zlatarov"-Burgas

Approved by  
Rector  
(Prof. Dr. M. Mitkova)

## Bachelor Degree CURRICULUM "Chemical Technology"

Area of education	5.0. Technical Sciences
Professional direction	5.10. Chemical Technologies
Professional qualification	Chemical engineer
Term of education	4 years (8 semesters)
Type of education	Part time

Adopted by the FC FT FTS Minutes N  
Adopted by the Academic Council Minutes N

### I. Period of study

C o u r s	Period of audience engagement  weeks	Educational  weeks	Practices			Professional Practice Examination  weeks	Vacation time  weeks	Sum  weeks
			Educational	Professional Practice	Specialization Practice			
			weeks	weeks	weeks			
I.	8	29				15	52	
II.	8	29				15	52	
III.	8	29		2		13	52	
IV.	8	29			9	6	52	

### II. Parameters of the curriculum

1. Academic hours, h		(A)	1237	%
Lectures	(L)	659	53,3	
Seminars	(S)	92	7,4	
Lab exercises	(P)	486	39,3	
Physical training		0	hours	

Practices		боя	часа
Educational	(e)	0	0
Professional practice	(pp)	1	20
Specialization practice	(sp)	0	0

2. Course type		number	hours	%
Obligatory	(o)	41	1138	92,0
Electives	(e)	3	62	5,0
Facultative	(f)	2	37	3,0

Extracurricular hours, E	5963	ч.
Academic/Extracurricular =	20,7	%

		боя	часа
Cours projects	(cp)	1	8
Cours works	(cw)	0	0

3. Forms of control	Exams (E)	46	Current valuations (cv)	0	Certifications (c)	0
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4. Form of Completion	A Professional Practice Examination				
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5. Teaching schedule program:	Annually by the Academic Council				
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### III. Plan of learning process

First Semester													
№	Subject	Type	L		S		P		A	E	A/E	FC	Credits
			h	type	h	type	h	h	h	%			
1.	Mathematics - I	o	15		15				30	180	16,7	E	7

2.	Inorganic Chemistry (including Stoichiometry)	o	22		8		15	45	255	17,6	E	10
3.	Engineering Graphics	o	8				7	15	105	14,3	E	4
4.	Foreign language elective in list 1	e			23			23	127	18,1	E	5
5.	Microbiology	o	8				7	15	105	14,3	E	4
6.												
7.												
SUM			53		46		29	128	772	16,6		30
<b>Second Semester</b>												
№	Дисциплина	Type	h	type	h	type	h	h	h	A/E %	FC	Credits
1.	Mathematics - II	o	15		15			30	150	20,0	E	6
2.	Physics	o	15				15	30	150	20,0	E	6
3.	Organic Chemistry	o	23				22	45	165	27,3	E	7
4.	Informatics	o	15				15	30	150	20,0	E	6
5.	Foreign language elective in list 1	e			23			23	127	18,1	E	5
6.	Facultative subject in list 3	f									E	
7.												
8.												
9.												
10.												
11.												
SUM			68		38		52	158	742	21,3		30
<b>Third Semester</b>												
№	Subject	Type	h	Type	h	Type	h	h	h	A/E %	FC	Credits
1.	Analytical Chemistry	o	15				15	30	120	25,0	E	5
2.	Mechanical Engineering	o	15				15	30	120	25,0	E	5
3.	Physical Chemistry - I	o	15				15	30	120	25,0	E	5
4.	Electrical and Electronics Engineering	o	15				7	22	98	22,4	E	4
5.	Reaction Kinetics and Catalysis	o	30				15	45	195	23,1	E	8
6.	Introduction AUTOCAD	o					15	15	75	20,0	E	3
7.	Virtual and Augmented Reality	f									E	
8.												
SUM			90				82	172	728	23,6		30
<b>Fourth Semester</b>												
№	Subject	Type	h	Type	h	Type	h	h	h	A/E %	FC	Credits
1.	Modern Methods of Analysis	o	15				15	30	120	25,0	E	5
2.	Processes and Equipment in the Chemical Industry - I	o	15				15	30	150	20,0	E	6
3.	Chemistry and Physics of Polymers	o	22				15	37	173	21,4	E	7
4.	Physical Chemistry - II	o	15				15	30	120	25,0	E	5
5.	Chemistry and Technology of Ceramics	o	22				15	37	173	21,4	E	7
SUM			89				75	164	736	22,3		30
<b>Fifth Semester</b>												
№	Subject	Type	h	Type	h	Type	h	h	h	A/E %	FC	Credits
1.	Engineering Thermodynamics	o	15				15	30	150	20,0	E	6
2.	Processes and Equipment in the Chemical Industry-II including Cours Project	o	15	cp	8		7	30	150	20,0	E	6
3.	Modeling of Process Systems	o	15				15	30	150	20,0	E	6
4.	Ammonia Technology	o	22				15	37	203	18,2	E	8
5.	Rubber Technology	o	15				7	22	98	22,4	E	4
11.												
SUM			82		8		59	149	751	19,8		30
<b>Sixth Semester</b>												
№	Subject	Type	h	Type	h	Type	h	h	h	A/I %	FC	Credits
1.	Process Control	o	15				7	22	98	22,4	E	4
2.	Chemistry and Technology of Binders	o	15				15	30	150	20,0	E	6
3.	Chemistry and Technology of Oil and Gas	o	30				15	45	225	20,0	E	9
4.	Desalination	o	22				15	37	173	21,4	E	7
5.	Professional Practice	o		pp			20	20	100	20,0	E	4
6.												
7.												
8.												
9.												
10.												
11.												
SUM			82				72	154	746	20,6		30
<b>Seventh Semester</b>												
			L		S		P	A	E	A/E	FC	Credits

No	Subject	Type	h	Type	h	Type	h	h	h	%	FC	Credits
1.	Risk and Safety Management in Process Industries	o	15				7	22	98	22,4	E	4
2.	Organic Synthesis and Technology	o	30				15	45	195	23,1	E	8
3.	Lubricants	o	15				7	22	98	22,4	E	4
4.	Chemistry and Technology of Glass	o	15				7	22	98	22,4	E	4
5.	Polymer Materials Technology	o	15				15	30	150	20,0	E	6
6.	Soda Ash Technology	o	15				7	22	98	22,4	E	4
11.												
SUM			105				58	163	737	22,1		30
<b>Eight Semester</b>				L	S	P	A	E	A/E		FC	Credits
No	Subject	Type	h	Type	h	Type	h	h	h	%	FC	Credits
1.	Environmental Pollution	o	15				7	22	68	32,4	E	3
2.	Economics	o	15				7	22	68	32,4	E	3
3.	Acids and Fertilizers Technology	o	15				15	30	90	33,3	E	4
4.	Wastewater Treatment Technologies	o	22				15	37	113	32,7	E	5
5.	Engineering and Thechnological Calculations in Organic Chemicals Technology	o	15				7	22	68	32,4	E	3
6.	Foreign language elective in list 2	e	8				8	16	44	36,4	E	2
7.												
8.												
9.												
10.												
11.	A Professional Practice Examination	o							300		E	10
SUM			90				59	149	751	19,8		30

**List of elective subject**

List 1	
1.	English Language
2.	German Language
3.	French Language
4.	Russian Language
5.	

List 2	
1.	Applied Electrochemistry and Corrosion
2.	Polymer Materials Recycling and Recovery
3.	Biomaterials in Medicine
4.	Renewable Raw Materials in Chemical Technology
5.	

List 3	
1.	English Language
2.	German Language
3.	French Language
4.	Russian Language
5.	

List 4	
1.	
2.	
3.	
4.	
5.	

List 5	
1.	
2.	
3.	
4.	
5.	

List 6	
1.	
2.	
3.	
4.	
5.	

**Note 1:** The Bulgarian language exam for foreign students will be considered equal to foreign language.

**Note 2:** The facultative subjects in list 3 ads 3 credits and include 22 hours seminars and lab exercises which are above the required numbers.

**Note 3:** The facultative subject "Virtual and Augmented Reality" studied in the 3rd semester includes 8 hours lectures and 7 hours seminars and lab exercises. It ads 3 credits and 15 hours which are above the required numbers.

Adopted by the FC FTS Minutes №  
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Adopted by the AC Minutes № 42/20.05.2022  
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