NULES of Ukraine **Form № H-3.01**

CABINET OF MINISTERS OF UKRAINE

National university of life and environmental science of Ukraine

Bachelorl's Program Curricblum in Speciality «Food Technologies and Engineering»

Education and qualification level	«Bachelor»
Field of knowledge	0517 «Food industry and agricultural production processing»
Training direction	6.051701 «Food Technologies and Engineering»
Term of training	4 years
Form of training	Full-time study
Qualification	Process Engineer

Training of bachelors performed by

Ukrainian Education and Research Institute of Bioresources Quality and Life Safety

Faculty of food technologies and quality management of products of agricultural products

Department of technology of meat, fish and marine products

II. EDUCATIONAL PROCESS PLAN

№	Educational discipline	General amount		Form of knowledge control by semesters			Classroom training				Self study	Practical training		Distribution of weekly hours for courses and semesters							
		Hours	Credits	Exam	Offset	Course work (project)	Total	including				Educational practice	Manufacturing practice	the 1st year		the 2st year		the 3st year		the 4st year	
								Lections	Laboratories	Practices and seminars				semesters							
														1	2	3	4	5	6	7	8
														Amount of weeks in a semester							
														18	18	18	18	18	18	15	10
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. REGULATORY ACADEMIC DISCIPLINES																					
1.1. Cycle of humanitarian and socio - economic training																					
1.	History of Ukraine	108	3	1	-	-	54	18	-	36	54	-	-	3							
2.	Business Ukrainian (for professional purposes)	108	3	1	-	-	36		-	36	72	-	-	2							
3.	History of Ukrainian culture	72	2	1	-	-	36	18	-	18	36	-	-	2							
4.	Philosophy	108	3	2			54	18		36	54		-		3						
5.	Foreign Language	180	5	2	1		90			90	90		-	3	2						
6.	Political science	72	2		3		36	18		18	36		-			2					
The total sum of cycle		**648**	**18**	**5**	**2**		**306**	**72**		**234**	**342**		**-**	**10**	**5**	**2**					
1.2. Cycle of mathematical and natural-scientific training																					
1.	Higher Mathematics	252	7	2	1		144	72		72	108			4	4						
2.	Physics	198	5,5	3	2		144	72	72		108				4	4					
3.	Chemical fundamentals of food technology, including:	1044	29				576	270	306		468			7	9	11	5				
3.1.	General and Inorganic Chemistry	216	6	1			126	54	72		90		-	7							
3.2.	Organic Chemistry	216	6	2			108	54	54		108		-		6						
3.3.	Analytical Chemistry	180	5		3		108	54	54		72		-		3	3					
3.4.	Physical and Colloid Chemistry	216	6	4	3		108	54	54		108		-			4	2				

3.5.	Biochemistry	216	6	4	3		126	54	72		90		-			4	3				
4.	Informatic Sciences and Technology	162	4,5	2	1		90	54	54		72		-	2	3						
5.	Technical Microbiology	144	4	4			72	36	36		72		-				4				
The total number by cycles		**1800**	**50**	**8**	**6**		**1026**	**504**	**522**		**774**		**-**	**13**	**20**	**15**	**9**				
1.3.Cycle of professional and practical training																					
1.	Engineering and Computer Graphics	162	4,5		1,2		90	36	54		72			2	3						
2.	Heating engineering	72	2	4			36	18	18		36						2				
3.	Electrical Engineering	72	2	4			36	18	18		36						2				
4.	Overall food industry technology, including:	720	20		5,6	6						216						12	8		
5.	Sugar manufacturing technology	72	2		5		36	18	18		36							2			
6.	Grain storage and processing technology	72	2		5		36	18	18		36							2			
7.	The bread, pasta, confectionery products and food concentrates technology	108	3		5		54	18	36		54							3			
8.	Milk and milk products technology	108	3		5		54	18	36		54							3			
9.	Fish, meat and meat products technology	108	3		6		54	36	18		54								3		
10.	Fermentation Technology	108	3		6		54	36	18		54								3		
11.	The technology of fats and fat mimetics	72	2		6		36	18	18		36								2		
12.	Canning fruits and vegetables technology	72	2		5		36	18	18		36							2			
13.	Standardization, metrology, certification and quality management	108	3		8		60	36	24		48										5
14.	Food industries processes and apparatuses	360	10	5	4	5	180	72	108		144						5	5			
15.	Production processes automatization	108	3	6			54	36	18										3		
16.	Student's research work	72	2		8		36	12	24		36										3
17.	Food for health processing	90	2,5		7		42	14	28		48									3	
18.	Food Chemistry	72	2		4		36	18	18		36						2				
19.	Safety of Vital Activity	54	1,5		4		36	18		18	9						2				
20.	Polysaccharides technology and their applications in food industry	54	1,5		6		36	18	18		18								2		
21.	Fundamentals of labor protection	54	1,5	7			28	14		14										2	
The total number by cycles		**1998**	**55,5**	**5**	**17**	**–**	**1012**	**472**	**508**	**32**	**950**	**216**		**2**	**3**	**-**	**13**	**17**	**13**	**5**	**8**
2. ELECTIVE COURSES																					
2.1. University Elective Courses																					
2.1.1. Cycle of humanitarian and socio - economic training																					
1.	Psychology and basics of sociology	72	2		3		36	18		18	36					2					
2.	Ecology	72	2		3		36	18		18	36					2					

The total number by cycles		**144**	**4**		**2**		**72**	**36**		**36**	**72**					**4**					
2.1.2. Cycle of mathematical and natural-scientific training																					
1.	Fundamentals of physiology and nutrition hygiene	72	2		6		54	36	18		18								3		
2.	Food enterprises hygiene and sanitation	72	2		6		36	18	18		36								2		
The total number by cycles		**144**	**4**		**2**		**90**	**54**	**36**		**54**								**5**		
2.1.3. Cycle of professional and practical training																					
1.	Industrial construction fundamentals	72	2		6		36	18	18		36								2		
2.	University education	72	2		1		36	18		18	36	108		2							
3.	Processing agricultural enterprises industrial ecology	126	3,5	8			60	24	36		66										5
4.	Food raw materials physico-chemical and biochemical processing fundamentals	117	3,25		4		54	18	36		63						3				
5.	Food production technology theoretical fundamentals	81	2,25		3		54	18	36		27					3					
6.	Mechanics of industry equipment and their reliability fundaments	108	3	3			72	36	36		36					4					
The total number by cycles		**576**	**16**	**2**	**4**		**312**	**132**	**162**	**18**	**264**	**108**		**2**		**7**	**3**		**2**		**5**
2.2. Disciplines chosen by student																					
2.2.1. Cycle of humanitarian and socio - economic training																					
1.	Legal Science	72	2		1		36	18		18	36			2							
2.	Physical education	216	6		1-4		132				132			2	2	2	2				
The total number by cycles		**72**	**2**		**1**		**36**	**18**		**18**	**36**			**2**							
2.2.2. Cycle of mathematical and natural-scientific training																					
1.	Information technology in engineering calculations industrial field of	90	2,5		5		54	18	36		36							3			
2.	Refrigeration processes physico-chemical and technological fundamentals	72	2	7			28	14	14		44									2	
The total number by cycles		**162**	**4,5**	**1**	**1**		**82**	**32**	**50**		**80**							**3**		**2**	
2.2.3. Cycle of professional and practical training																					
1.	The industry branch technology	576	16	5,6,8	7	8	334	154	180		216		216					6	4	5	7
2.	The industry branch technological equipment	180	5	7	6	7	96	50	46		48								3	3	
3.	The industry branch enterprises design	90	2,5		7	7	42	28	14		12									3	

4.	Process calculations, accounting and reporting	72	2		7		42	14	28		30									3	
5.	The industry branch products quality and safety control	126	3,5		8		72	24	48		54										6
6.	The industry branch microbiology	90	2,5		7		42	14	28		48									3	
7.	The industry branch enterprises management with entrepreneurship fundamentals	72	2		6		36	18	18		36								2		
8.	The industry branch economics	90	2,5		7		42	28		14	48									3	
9.	The industry branch products commodity and packaging	72	2		8		36	12	24		36										3
The total sum by the cycle		**1368**	**38**	**4**	**9**	**3**	**742**	**342**	**386**	**14**	**518**	**324**	**216**					**1**	**3**	**6**	**3**
Total		**6912**	**192,0**	**33**	**45**	**5**	**3750**	**1662**	**1664**	**424**	**3162**	**324**	**216**	**28**	**28**	**29**	**26**	**27**	**29**	**27**	**29**
Practical training		540	15,0																		
State certification		486	13,5																		
Exam session		702	19,5																		
Amount of course works (projects)						5															
Amount of offsets					45																
Amount of exams				33																	
Total number at the training direction		**8640**	**240**	**33**	**45**	**5**	**3750**	**1662**	**1664**	**424**	**3162**	**324**	**216**	**30**	**28**	**28**	**25**	**26**	**29**	**27**	**29**

III. STRUCTURE OF THE CURRICULUM

Cycle of disciplines	Hours	Credits	%
1. REGULATORY ACADEMIC DISCIPLINES	**4446**	**123,5**	**51,5**
1.1. Cycle of humanitarian and socio - economic training	648	18,0	7,5
1.2. Cycle of mathematical and natural-scientific training	1800	50	20,8
1.3.Cycle of professional and practical training	1998	55,5	23,1
2. ELECTIVE COURSES	**2466**	**68,5**	**28,5**
2.1. University Elective Courses	864	24,0	10,0
2.1.1. Cycle of humanitarian and socio - economic training	144	4,0	1,7
2.1.2. Cycle of mathematical and natural-scientific training	144	4,0	1,7
2.1.3. Cycle of professional and practical training	576	16,0	6,7
2.2. Disciplines chosen by student	1602	44,5	18,5
2.2.1. Cycle of humanitarian and socio - economic training	72	2,0	0,8
2.2.2. Cycle of mathematical and natural-scientific training	162	4,5	1,9
2.2.3. Cycle of professional and practical training	1368	38,0	15,8
Other kinds of academic load	**1728**	**48**	**20,0**
Total number at the training direction	**8640**	**240**	**100**

IV. GENERAL TIME BUDGET (weeks)

Training year	Theoretical training	Examination session	Practical Training	Master's thesis preparation	State validation	Vacations	Total
1	36	4	2			10	52
2	36	4	4			8	52
3	36	4	4			8	52
4	26	4	2	9	2	2	45
Total	**134**	**16**	**12**	**9**	**2**	**28**	201

V. PRACTICAL TRAINING

№	Type of practice	Semester	Hours	Credits	Number of weeks
1.	Training practice	2	108	3	2
2.	Training practice	4	216	6	4
3.	Manufacturing Practice	6	144	4	4
4.	Pre-diploma practice	8	72	2	2

VI. COURSE WORK AND PROJECTS

№	Educational discipline	Hours	Credits	Course work	Course project
1.	Food industries processes and apparatuses	36	1	-	1
2.	The industry branch technology	36	1	-	1
3.	The industry branch enterprises design	36	1	-	1
4.	Overall food industry technology, including	36	1	-	1
5.	The industry branch technological equipment	36	1	-	1

VII. STATE VALIDATION

№	Validation	Hours	Credits	Number of weeks
1.	Defence degree project	486	13,5	9