

Ministry of Education and Science of Ukraine  
State higher education institution  
«Ukrainian State University of Chemical Technology»

Rector of SHEI USUCT

\_\_\_\_\_ O.A. Pivovarov  
«\_\_\_\_» \_\_\_\_\_ 2017 p.

## EDUCATION PROFESSIONAL PROGRAM

**Engineering**

(Name of educational program)

**Second ( Master 's) level**

(name of higher education level)

**MSc**

(name of degree awarded)

**BRANCH OF KNOWLEDGE** **13 Mechanical**  
**Engineering**

(code and domain name)

**SPECIALTY** **133 G Aluminum Engineering**

(code and specialty name)

Approved at the meeting of the  
Academic Council of the State  
Pedagogical University of  
Ukraine

from \_\_\_\_\_  
2017 Protocol No. \_\_\_\_\_

Dnipro  
2017

Letter of approval

**EDUCATIONAL PROFESSIONAL PROGRAM**

Education level	MSc
Branch of knowledge	13 Mechanical Engineering
Specialty	133 Sectoral Engineering
Specialization	
<b>"AGREED"</b>	<b>"DEVELOPERS"</b>
First Vice-Rector, Chairman of the Scientific and Methodological Council of the State University of chemical technology _____ <small>(signature) (surname and initials)</small> <u>Goleus VI</u> " _____ " _____ 2017 years	Head of the Department of OTVH _____ <small>(signature) (surname and initials)</small> <u>Naumenko OP</u> " _____ " _____ 2017 r.
Head of NSC _____ <small>(signature) (surname and initials)</small> <u>Smotraev RV</u> " _____ " _____ 2017 years	Head of the Department of OHV _____ <small>(signature) (surname and initials)</small> <u>Vinogradov BV .</u> " _____ " _____ 2017 r.
Scientific and methodical department _____ <small>(signature) (surname and initials)</small> <u>Fomenko GV</u> " _____ " _____ 2017 years	Head of the department M and IM _____ <small>(signature) (surname and initials)</small> <u>Sitar VI</u> " _____ " _____ 2017 Years
Dean of the Faculty of Mechanics _____ <small>(signature) (surname and initials)</small> <u>Nachovny II</u> " _____ " _____ 2017 years	
Dean of the Faculty of Glass and Ceramics, Building Materials and Food Engineering _____ <small>(signature) (surname and initials)</small> <u>Zaychuk OV</u> " _____ " _____ 2017 years	

## EXPLANATORY FROM THE LIST

Educational and professional program compiled to fulfill the order of the Ministry of Education and Science of Ukraine from 06.11.2015. No. 1151 "On peculiarities of introduction of the list of branches of knowledge and specialties by which preparation of higher education applicants" is carried out and the resolution of the Cabinet of Ministers of Ukraine dated December 30, 2015 No. 1187 on approval of "Licensing conditions for conducting educational activities of educational institutions" and the current constituent standards of higher education. The program determines the duration of training, its total volume in ECTS credits, the list and amount of compulsory and selective courses listed in Table 1 and Table 2.

Higher education level	Second (Master's)
Branch of knowledge	13 Mechanical Engineering
Specialty	133 Sectoral Engineering
Specialization	
Form of training	Full time
Total loans in the European Credit Transfer and Accumulation System and term of study	90 credits, 1 year 6 months
Compliance with Higher Education Standard (if applicable)	Higher education standard, approved by the Rector of SHEI USUCT from 17 .10.201 6 p. № 248 .
Professional Standard Compliance (if applicable)	Not available

**I. PROFILE OF THE MASTER'S EDUCATION PROFESSIONAL PROGRAM**  
**and in the specialty " Industry Mechanical Engineering "**

<b>Program Profile (General Information)</b>	
<b>Full name of the qualification in the original language</b>	Higher Education Degree - Master, Specialty - Industry Engineering
<b>The official name of the educational program</b>	Educational and professional program "Industry mechanical engineering" of master's degree in specialty 133 Industry mechanical engineering
<b>Type of diploma and scope of the educational program</b>	Diploma 's degree in mechanical engineering industry , single (double, shared with the relevant agreements, training programs ) ; 90 ECTS credits
<b>Full name of higher education institution awarding the qualification</b>	State Higher Educational Institution "Ukrainian State University of Chemical Technology"
<b>Accrediting organization</b>	Accreditation Commission of Ukraine (State Educational and Training Center for Educational Quality) . LEFT.
<b>Accreditation period</b>	Certificate validity after initial accreditation - 5 years, after repeated - 10 years.
<b>Cycle / level</b>	NQF of Ukraine - Level 7, FQ-EHEA - Second Cycle, EQF-LLL - Level 7
<b>Prerequisites</b>	The first (bachelor) level
<b>Language (s) of teaching</b>	Ukrainian language
<b>AND</b>	
	<b>The purpose of the educational program</b>
<b>The purpose of the educational program</b>	Provide students with the acquisition of knowledge, skills and understanding in the field of mechanical engineering that will enable them to perform original scientific research or work independently in production.
<b>IN</b>	
	<b>Characteristics of the educational program</b>
<b>Subject area (field of knowledge, specialty)</b>	Knowledge Area <i>13 Mechanical Engineering</i> : specialty <i>133 Industry Engineering</i>
<b>The main focus of the program and specialization</b>	About the world in the field of mechanical engineering.
<b>Orientation of the program</b>	The research line is scientifically oriented, the teaching and application lines are practically oriented.

<b>Features and differences</b>	The program is scientifically or practically oriented, defining the type of practice (module 1 or module 2 in the cycle of vocational training courses is selected).
<b>WITH</b>	<b>Ability to find employment and further education</b>
<b>Employment ability</b>	Jobs in high-tech companies of chemical and technological profile, enterprises of the chemical production sector, machine building and related industries; teachers of educational establishments of different levels of education, scientists in research organizations, scientific centers, laboratories.
<b>Further training</b>	Third-level education in doctoral programs in mechanical engineering.
<b>D</b>	<b>Teaching style and teaching methodology</b>
<b>Approaches to teaching and learning</b>	A combination of lectures, practicals and seminars, experimental research in laboratories, writing course projects or papers, self-study, preparation of qualification work.
<b>Assessment methods</b>	Written examinations, tests, presentations, defense of master's qualification work.
<b>IS</b>	<b>Software competencies</b>
<b>Integrated Competence (INT)</b>	<i>Master's Degree (Level 7): The ability to solve complex problems and problems in a particular area of professional activity or in a learning process that involves research and / or innovation and is characterized by uncertain conditions and requirements</i>
<b>General Competencies (GC)</b>	ZK-1. Ability to think abstractly, analyze and synthesize. ZK-2. Ability to apply knowledge in practical situations. ZK-3. Knowledge and understanding of the subject area and understanding of the profession. CL 4. Ability to communicate in their native language both verbally and in writing. ZK-5. Ability to speak a second language. ZK-6. Use of information and communication technologies . ZK-7. Ability to conduct research at the appropriate level . ZK-8. Ability to search, process and analyze information from various sources. ZK-9. Ability to identify, set and solve problems. ZK-10. Ability to work in an international context. ZK-11. Ability to develop and manage projects. ZK-12. Determination and perseverance about the tasks and responsibilities. ZK-13. The desire to preserve the environment. ZK-14. Ability to organize the work of the production unit in accordance with the requirements of safety and health .
<b>Special (professional) competencies (IC)</b>	<i>SK-1. Ability to apply knowledge and understanding of mechanical engineering to solve qualitative and quantitative problems in other</i>

	<p>fields of knowledge.</p> <p><i>SK-2.</i> Ability to identify and analyze new problems and formulate a strategic plan for solving them.</p> <p><i>SK-3.</i> Ability to use the knowledge, skills and competences in the disciplines of the general cycle of preparation for the theoretical development of the disciplines of professional direction and solving practical problems of mechanical engineering</p> <p><i>SK-4 .</i> Competence in planning, designing and executing research work, from the stage of problem recognition to evaluation of results and formulation of conclusions; this includes choosing the right methods and procedures.</p> <p><i>SK-5.</i> Skills in the safe handling of process equipment, taking into account their design features and properties of work environments, including any specific hazards associated with their use</p> <p><i>SK-6.</i> Ability to assess risks associated with the operation of process equipment and the use of recyclable media.</p> <p><i>SK-7.</i> Ability to interpret data from laboratory observations and measurements in terms of their significance and to correlate them with relevant theory.</p> <p><i>SK-8.</i> Calculation skills, including aspects such as error analysis, order of validity, and correct use of units of measurement.</p> <p><i>SK-9.</i> Ability and use of modern computer and communication methods in mechanical engineering</p> <p><i>SK-10.</i> Ability to use professionally profiled knowledge in mathematics (mathematical statistics) for the statistical processing of experimental data and mathematical modeling of chemical-technological processes and technological equipment.</p> <p><i>SK-11.</i> The skills of presenting scientific materials and arguments in writing and orally to a competent audience.</p> <p><i>SK-12.</i> Ability to business communication in the professional sphere, knowledge of the basics of business communication, teamwork skills.</p> <p><i>SK-13.</i> Monitoring skills, assessing the impact of technological equipment on the environment.</p> <p><i>SK-14.</i> Knowledge of legal bases of industrial activity and legislation of Ukraine in the field of nature protection and nature management.</p> <p><i>SK-15.</i> Ability to plan environmental activities for production with subsequent implementation of appropriate safety measures .</p> <p><i>SK-16.</i> Ability to use automated process control systems in the industry.</p>
<b>F</b>	<b>Program learning outcomes</b>
<b>Learning outcomes in the cognitive (cognitive) field</b>	<i>RKS-1.</i> To select and apply knowledge and understanding of mechanical engineering to solve qualitative and quantitative problems in technological industries

	<p><i>RKS-2.</i> To classify and analyze problems of different nature and formulate a strategic plan for solving them</p> <p><i>RKS-3.</i> To evaluate the impact of technological parameters on the design of machines and apparatus and on the composition of the final product.</p> <p><i>RKS-4.</i> To evaluate the risks associated with the use of process equipment, taking into account the design features and properties of the work environments</p> <p><i>RKS- 5.</i> To summarize the data obtained from laboratory observations and measurements in terms of their significance and correlate them with the relevant theory</p> <p><i>RKS-6.</i> To establish connection of the obtained data with the results of mathematical modeling of chemical-technological processes and technological equipment.</p> <p><i>RKS-7.</i> To explain the causes of risks associated with the operation of process equipment and the use of recyclable media.</p> <p><i>RKS-8.</i> To develop safety measures at the production with their further implementation.</p> <p><i>RKS-9.</i> To investigate the influence of physical-chemical factors and mechanical characteristics of materials on the properties of the object of study or design.</p> <p><i>RKS-10.</i> To use modern information and communication technologies for search, calculations, creation of graphic and text documents, for mathematical analysis and statistical processing in research and design .</p> <p><i>RKS-11.</i> To make general conclusions about the results of the study of the properties of the object of study or design.</p> <p><i>RKS-12.</i> To find engineering solutions to design and build high-performance devices and machines in line with resource-saving technologies.</p> <p><i>RKS-13.</i> To develop design drawings of equipment, structural elements and parts.</p>
<p><b>Results of training in the value-motivational sphere</b></p>	<p><i>RCMS -1.</i> To meet the requirements of professional ethics in the workplace.</p> <p><i>RCMS -2.</i> To participate in discussing the results of different types of work (pilot, search, project, etc.).</p> <p><i>RCMS -3.</i> To desire to work independently .</p> <p><i>RCMS -4.</i> To ask questions in discussions with colleagues, teachers .</p> <p><i>RCMS -5.</i> To demonstrate acquired professional skills in creating scientific and project documentation.</p> <p><i>RCMS -6.</i> To organize workplace safety measures and develop technical solutions for the safe operation of process equipment.</p> <p><i>RCMS -7.</i> To collaborate with colleagues in related fields to achieve research or project objectives.</p>
<p><b>Learning outcomes in the psychomotor field</b></p>	<p><i>RPS-1.</i> To work out the experiment technique</p> <p><i>RPS-2.</i> Repeatedly reproduce the results of the experiments to obtain</p>

	reliable values and calculate the error of the experiment.
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	<i>RPS-3.</i> To combine different research methods and methods to determine the values of the studied parameters.
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	<i>RPS-4.</i> To comply with workplace safety.
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**II. DEFINITION OF EDUCATIONAL DISCIPLINES / MODULES,  
ensuring the achievement of the planned learning outcomes and forms of certification of higher education applicants in  
accordance with the higher education standard**

**Table 1. Distribution of the content of educational and professional program by cycles of preparation and form of final control**

№ p / n	Subjects	Loans	Hours	Semester	Tetramester	Final control
<b>1. A REQUIRED PART</b>						
1.1. General training cycle (generates competencies) (block 1,2,3,4 , 5 )						
1.1	Fundamentals of Production Management(Block 1,2,3,4)	3 , 0	9 0	1	2	credit
1.2	Physical education (extra-credit)					
1.3	Intellectual Property	2.0	60	2	4	credit
1.4	Civil Protection	1.5	45	1	1	credit
1.5	Occupational Health in	2	60	1	1	copies
1.6	Psychology and methods of teaching professional disciplines in higher education	2.0	60	2	3	credit
1.7	Foreign language for professional purposes	4.0	120	2	3, 4	credit
1.8	Methodology and organization of scientific research	2 , 0	6 0	2	3	copies

	<b>TOTAL TOTAL 1 (Block 1,2,3,4)</b>	<b>16,5</b>	<b>495</b>			
	<b>TOTAL TOGETHER 1 (Unit 5)</b>	<b>13.5</b>	<b>405</b>			
Training cycle (forms special (professional) competences)						
1.9	One of the disciplines	4.5	135	1	1,2	copies
1.9.1	Automation and process control systems (Blocks 1,2, 5)					
1.9.2	Control and management of machinery and equipment for chemical industries (Blocks 3,4)					
1.10	Preparation of master's qualification work and State certification	19.5	585			YES
	<b>TOGETHER</b>	<b>24,0</b>	<b>720</b>			
	<b>MANDATORY PART TOTAL (Block 1,2,3,4)</b>	<b>40,5</b>	<b>1215</b>			
	<b>MANDATORY PART TOGETHER (Block 5)</b>	<b>37,5</b>	<b>1125</b>			
<b>2. SELECTIVE PART</b>						
<b>2.1. Training cycle (forms special (professional) competences)</b>						
<b>2.1 Block 1</b>						
2.1.1	Appendix to point 1.8	1.0	30	2	4	
2.1.2	Corrosion protection of equipment	16.0	480	1,2	1,2,3,4	copies., CP, CP
2.1.3	Testing technique for materials and coatings	4.0	120	1,2	1,2,3	credit , credit
2.1.4	Special protective coatings in industry	4.0	120	1,2	1, 2,3	credit , credit

2.1.5	Equipment for performance of anticorrosion works	3,0	90	1,2	1,2,3	credit, credit
2.1.6	Electrochemical methods of protection of metals from corrosion	5.0	150	1,2	1, 2,3	copies,credit
2.1.7	One of the modules					
	<b>Module 1</b>					
2.1.7.1	Research practice	6.0	180	3	5	credit
2.1.7.2	Assistant practice	4.5	135	3	5	credit
	<b>Module 2</b>					
2.1.7.3	Research practice	6.0	180	3	5	credit
2.1.7.4	Undergraduatemanufacturing practice	4.5	135	3	5	credit
2.1.8	Additional credits for the preparation of master's qualification work	6.0	180			
	<b>TOGETHER</b>	<b>49,5</b>	<b>1485</b>			
<b>2.2 Block 2</b>						
2.2.1	Appendix to point 1.8	7.0	210	1,2	2,3,4	KR, credit
2.2.2	Engineering and technological business	4,0	120	1	1,2	credit
2.2.3	Design and Energy Engineering (optional)	10,0	300	1,2	1,2,3,4	credit, copies, KP
2.2.3.1	Group 1 (chemical and oil refineries)					
2.2.3.2	Group 2 (biotechnological and pharmaceutical industries)					
2.2.4	Designing of chemical enterprises	9	270	1,2	1,2,3,4	copies,credit KP
2.2.5	Technical Supervision	3.0	90	1	1	credit
2.2.6	One of the modules					

	<b>Module 1</b>					
2.2.6 . 1	Research practice	6.0	180	3	5	credit
2.2 . 6 . 2	Assistant practice	4.5	135	3	5	credit
	<b>Module 2</b>					
2.2.6. 3	Research practice	6.0	180	3	5	credit
2.2.6. 4	Undergraduatemanufacturing practice	4.5	135	3	5	credit
2.2.7	Additional credits for the preparation of master's qualification work	6.0	180			
	<b>TOGETHER</b>	<b>49, 5</b>	<b>1 48 5</b>			
<b>2. 3 Block 3</b>						
2.3.1	Appendix to point 1.8	3.0	90	2	3	KR
2.3.2	Automated systems of engineering modeling and calculation	8.0	240	2	3.4	copies, CP
2.3.3	Modern materials in mechanical engineering	3.0	90	2	4	copies
2.3.4	Reliability and durability of machines	3.0	90	1	1	credit
2.3.5	Computer-aided 3D modeling of chemical equipment	5.0	150	1	1,2	copies
2.3.6	Methodological basis of calculation and design of machines	11,0	330	1	1,2	copies, CP
2.3 . 7	One of the modules					
	<b>Module 1</b>					
2.3.7 .1	Research practice	6.0	180	3	5	credit
2.3.7 .2	Assistant practice	4.5	135	3	5	credit
	<b>Module 2</b>					
2.3.7 .3	Research practice	6.0	180	3	5	credit
2.3.7 .4	Undergraduatemanufacturing practice	4.5	135	3	5	credit
2.3. 8.	Additional credits for the preparation of master's qualification work	6.0	180			
	<b>TOGETHER</b>	<b>49, 5</b>	<b>1 48 5</b>			

<b>2. 4 Block 4</b>						
2.4.1	Appendix to point 1.8	3.0	90	2	3	KR
2.4.2	Automated systems of engineering modeling and calculation	8.0	240	2	3,4	copies., CP
2.4.3	Modern materials in mechanical engineering	3.0	90	2	4	copies
2.4.4	Reliability and durability of machines	3.0	90	1	1	credit
2.4.5	Design of Plastics Processing Plants	2.0	60	1	1	credit
2.4.6	Modeling of plastic processing equipment	3.0	90	1	2	copies
2.4.7	Methodological bases of design of machines for processing of polymeric materials	11,0	330	1	1,2	copies., CP
2.4 . 8	One of the modules					
	<b>Module 1</b>					
2.4 . 8.1	Research practice	6.0	180	3	5	credit
2.4 . 8.2	Assistant practice	4.5	135	3	5	credit
	<b>Module 2</b>					
2.4 . 8.3	Research practice	6.0	180	3	5	credit
2.4 . 8.4	Undergraduate manufacturing practice	4.5	135	3	5	credit
2.4 . 9	Additional credits for the preparation of master's qualification work	6.0	180			
	<b>TOGETHER</b>	<b>49, 5</b>	<b>1 48 5</b>			
<b>2. 5 Block 5</b>						
2.5.1	Appendix to point 1.8	1.0	30	2	4	
2. 5 . 2	Corrosion protection of equipment	1 5 , 0	4 5 0	1, 2	1,2,3,4	copies., CP, CP
2. 5 . 3	Testing technique for materials and coatings	4.0	120	1,2	1,2,3	d. test
2.5 . 4	Special protective coatings in industry	3 , 0	90	1, 2	2.3	credit

2.5 . 5	Special food technology and equipment	9.0	2 7 0	1,2	1,2,3	copies
2.5 . 6	The latest materials	4 , 0	1 2 0	1	1, 2	credit
2.5.7	One of the modules					
<b>Module 1</b>						
2.5.7.1	Research practice	6.0	180			credit
2.5. 7 .2	Assistant practice	4.5	135			credit
<b>Module 2</b>						
2.5.7.3	Research practice	6.0	180			credit
2.5.7.4	Pre-diploma practice	4.5	135			credit
2.5.8	Additional credits for the preparation of master's qualification work	6.0	180	2	3.4	
	<b>TOGETHER</b>	<b>52 , 5</b>	<b>1 57 5</b>			
	<b>THE TOTAL AMOUNT</b>					
	<b>Unit 1</b>	<b>90,0</b>	<b>2700</b>			
	<b>Unit 2</b>	<b>90,0</b>	<b>2700</b>			
	<b>Unit 3</b>	<b>90,0</b>	<b>2700</b>			
	<b>Block 4</b>	<b>90,0</b>	<b>2700</b>			
	<b>Block 5</b>	<b>90,0</b>	<b>2700</b>			

**Table 2. Generalized distribution of the content of the educational and professional program by component groups (disciplines) and training cycles**

№ p / n	Preparation cycle	Higher education student load (credits /%)		
		Compulsory components of educational and professional program	Selective components of a professional education program	Total for the whole term of study
1.	General training cycle (generates	1 6 , 5/18 , 3	-	16.5 / 18 , 3

	competencies)			
2.	Training cycle (forms specific (professional) competencies for each unit)	24 , 0 / 26 , 7	49 5 / 5 5	7 3 , 5/8 1 , 7
In this for the whole period of study		40 5 / 4 5	49 5 / 5 5	90/100

**Table 3. List of disciplines of the educational and professional training program for second-level (master's) level students, training time in ECTS credits in the preparation cycles, and list of competences and learning outcomes formed**

Training cycles	Competency Codes	Learning outcomes codes	List of disciplines	ECTS credits
1	2	3	4	5
1. The mandatory part 1.a. General training cycle (generates competencies)	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, SK-1, SK-2, SK-9, SK-11, SK-12, SK-14, SK-15.	RKS-1, RKS-2, RCMS-2, RCMS-3, RCMS-4, RCMS-7	1.1. Fundamentals of production management	3.0
			1.2. Physical education (outside credit)	
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-8, ZK-9, ZK-10, ZK-12, SK-1, SK-4, SK-9, SK-11, SK-12, SK-14.	RKS-1, RKS-2, RKS-5, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-7	1.3. Intellectual Property	2.0
	ZK-2, ZK-3, ZK-4, ZK-9, ZK-12, ZK-13, ZK-14, SK-1, SK-2, SK-4, SK-6, SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS-4, RKS-7, RKS-8, RCMS-4, RCMS-6	1.4. Civil Protection	1.5
	ZK-2, ZK-3, ZK-4, ZK-9, ZK-12, ZK-13, ZK-14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS-4, RKS-7, RKS-8, RKS-12, RKS-13, RCMS-4, RCMS-6	1.5. Occupational Health in	2.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-14, SK-1, SK-2, SK-12	RKS-2, RKS-3, RCMS-1, RCMS-2, RCMS-3, RCMS-4	1.6. Psychology and methods of teaching professional disciplines in higher education	2.0
	ZK-1, ZK-2, ZK-3, ZK-5, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, SK-9, SK-11	RCMS-2, RCMS-3, RCMS-4, RCMS-7	1.7. Foreign language for professional purposes	4.0
	ZK-1, ZK-2, ZK-3, ZK-	RKS-1, RKS-2, RKS-	1.8. Methodology and	2, 0



	4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, SK-2, SK-3, SK-4, SK-5, SK-7, SK-11, SK-12	3, RKS-4, RKS-5, RKS-6, RKS-8, RKS-9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RPS-1, RPS-2, RPS-3	organization of scientific research	
	<b>TOGETHER 1. a</b>			<b>16,5</b>
1.b. Training cycle (forms special (professional) competences)	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK-2, SK-3, SK-4, SK-6, SK-7, SK-8, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-4, RKS-7, RKS-8, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS-5, RCMS-6, RCMS-7, RPS-4	1.9. One of the disciplines 1.9.1. Automation and process control systems (units 1 and 2) 1.9.1. Control b and control of machines and equipment for chemical production (units 3 and 4)	4.5
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, SK-1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12, SK-14	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	1.10. Preparation of master's qualification work and state certification	19.5
2. Selective part Training cycle (forms special (professional) competences)	<b>TOTAL 1. b</b>			<b>24,0</b>
	<b>TOTAL 1</b>			<b>40.5</b>
	<b>2.1. Unit 1</b>			
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10,	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-8, RKS-	2.1.1. Appendix to point 1.8	1.0

	ZK-12, SK-2, SK- 3, SK-4, SK-5, SK-7, SK-11, SK-12	9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RPS-1, RPS-2, RPS-3		
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.1.2. Corrosion protection of equipment	16.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.1.3. Testing technique for materials and coatings	4.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.1.4. Special protective coatings in industry	4.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.1.5. Equipment for performance of anticorrosion works	3 , 0

	5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4		
	ZK-1, ZK-2, ZK-3, ZK-5, ZK-7, ZK-8, ZK-9, ZK-13, SK-2, SK-4, SK-5, SK-8, SK- 9, SK-11	RKS-2, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RPS-1;RPS-2, RPS-3	2.1.6. Electrochemical methods of protection of metals from corrosion	5.0
			2.1.7 . One of the modules	
			Module 1	
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK- 14, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.1.7 . 1 . Research practice	6.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-12, SK-9, SK-11, SK-12	RKS-2, RKS-10, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-4	2.1.7 . 2 . Assistant practice	4.5
			Module 2	
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK- 14,, SK-2, SK-4, SK-5, SK-	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1,	2.1.7 . 3 . Research practice	6.0

	6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4		
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK- 2, SK-4, SK-5, SK-6, SK-8, SK-9, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS- 5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.1.7 . 4 . Undergraduate manufacturing practice	4.5
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK- 13, SK -14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK-9, SK-10, SK-11, SK-12 , SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.1.8. Additional credits for the preparation of master's qualification work	6.0
<b>TOTAL 2.1</b>				<b>49,5</b>
<b>2. 2. Block 2</b>				
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, SK-2, SK- 3, SK-4, SK-5, SK-7, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-8, RKS-9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RPS-1,	2.2.1. Appendix to point 1.8	7.0

		RPS-2, RPS-3		
ZK-1, ZK-3, ZK-4, ZK-5, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-14, SK-1, SK-2, SK-3, SK-6, SK-12	RKS-1, RKS-2, RKS-4, RCMS-1, RCMS-2, RCMS-4, RCMS-6, RCMS-7	2.2.2. Engineering and technological business	4,0	
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, SK-1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-7, RKS-8, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.2.3. Design and energy engineering (optional) : 2.2.3.1. Group 1 (chemical and oil refineries) 2.2.3.2. Group 2 (biotechnological and pharmaceutical industries)	10,0	
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-14, SK-1, SK-2, SK-3, SK-5, SK-6, SK-9, SK-11	RKS-1, RKS-2, RKS-7, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-7	2.2.4. Designing of chemical enterprises	9,0	
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-8, ZK-12, SK-1, SK-2, SK-6, SK-8	RKS-1, RKS-2, RKS-4, RKS-6, RKS-11, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-7, RPS-4	2.2.5. Technical Supervision	3.0	
		2.2.6. One of the modules		
		Module 1		
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10,	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10,	2.2.6.1. Research practice	6.0	

ZK-12, ZK-13, ZK- 14, SK-2, SK-4, SK-5, SK- 6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS- 3, RPS-4		
ZK-1, ZK-2, ZK-3, ZK- 4, ZK-5, ZK-6, ZK-12, SK-9, SK-11, SK-12	RKS-2, RKS-10, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-4	2.2 . 6 . 2 . Assistant practice	4.5
		Module 2	
ZK-1, ZK-2, ZK-3, ZK- 4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK- 14,, SK-2, SK-4, SK-5, SK- 6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS- 12, RKS-13, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS- 1, RPS-2, RPS-3, RPS-4	2.2 . 6 . 3 . Research practice	6.0
ZK-1, ZK-2, ZK-3, ZK- 6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK- 2, SK-4, SK-5, SK-6, SK- 8, SK-9, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS- 1, RCMS-2, RCMS-3, RCMS-4, RCMS- 5, RCMS-6, RCMS-7, RPS- 1, RPS-2, RPS-3, RPS-4	2.2 . 6 . 4 . Undergraduate manufacturing practice	4.5
ZK-1, ZK-2, ZK-3, ZK- 4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10,ZK- 11, ZK-12, ZK- 13,SK - 14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK-	RKS-1, RKS-2, RKS- 3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13,RCMS-1, RCMS-2, RCMS- 3,	2.2.7. Additional credits for the preparation of master's qualification work	6.0

	9, SK-10, SK-11, SK-12, SK-13, SK-14, SK-15	RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4		
<b>TOTAL 2.2</b>				<b>49,5</b>
<b>2.3 . Block 3</b>				
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, SK-2, SK-3, SK-4, SK-5, SK-7, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-8, RKS-9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RPS-1, RPS-2, RPS-3	2.3.1. Appendix to point 1.8	3.0
	ZK-1, ZK-3, ZK-4, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, SK-1, SK-2, SK-6, SK-9, SK-11	RKS-2, RKS-3, RKS-6, RKS-10, RKS-12, RKS-13, RCMS-1, RCMS-3, RCMS-4, RCMS-5, RCMS-7, RPS-4	2.3.2. Automated systems of engineering modeling and calculation	8.0
	ZK-2, ZK-3, ZK-4, ZK-6, ZK-9, SK-2, SK-3, SK-11,	RKS-2, RKS-5, RKS-9, RKS-11, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RPS-1, RPS-2, RPS-3, RPS-4	2.3.3. Modern materials in mechanical engineering	3.0
	ZK-2, ZK-3, ZK-4, ZK-5, ZK-7, ZK-8, ZK-9, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-	RKS-1, RKS-2, RKS-3, RKS-4, RKS-7, RKS-8, RKS-9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-3, RPS-	2.3.4 . Reliability and durability of machines	3.0

	12 , SK-13, SK-14, SK-15	4		
	ZK-1, ZK-2 , ZK-3, ZK-4, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, SK-1, SK- 2, SK-3 , SK-6, SK-9,SK-10 , SK-11, SK-1 6	RKS-2, RKS-3, RKS-6, RKS-10, RKS-12, RKS-13, RCMS-1, RCMS-3, RCMS-4, RCMS-5, RCMS-7, RPS-4	2.3.5. Computer 3-D modeling of chemical equipment	5.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK- 13, SK-1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-7, RKS-8, RKS-9, RKS-10, RKS-11, RKS-12, RKS- 13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.3.6. Methodological basis of calculation and design of machines	11,0
			2.3.7. One of the modules	
			Module 1	
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK- 14, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13,RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.3 . 7 . 1 . Research practice	6.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-12, SK-9, SK-11,	RKS-2, RKS-10, RCMS-1, RCMS-2, RCMS-3, RCMS-4,	2.3 . 7 . 2 . Assistant practice	4.5



	SK-12	RCMS-5, RCMS-6, RCMS-7, RPS-4		
			Module 2	
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK- 13, ZK- 14,, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS- 12, RKS-13, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS- 1, RPS-2, RPS-3, RPS-4	2.3 . 7 . 3 . Research practice	6.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK- 12, ZK-13, ZK-14, SK-1, SK- 2, SK-4, SK-5, SK-6, SK-8, SK-9, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS- 1, RCMS-2, RCMS-3, RCMS-4, RCMS- 5, RCMS-6, RCMS-7, RPS- 1, RPS-2, RPS-3, RPS-4	2.3 . 7 . 4. Undergraduate manufacturing practice	4.5
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10,ZK-11, ZK-12, ZK- 13,SK -14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK- 9, SK-10, SK-11, SK- 12 , SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS- 3,RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13,RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RCMS-6, RCMS- 7,RPS-1, RPS-2, RPS- 3, RPS-4	2.3.8. Additional credits for the preparation of master's qualification work	6.0
<b>TOTAL 2.3</b>				<b>49,5</b>
<b>2.4 . Block 4</b>				
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6,	RKS-1, RKS-2, RKS- 3, RKS-4, RKS-5,	2.4.1. Appendix to point 1.8	3.0

	ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, SK-2, SK- 3, SK-4, SK-5, SK-7, SK-11, SK-12	RKS-6, RKS-8, RKS-9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS- 3, RCMS-4, RCMS-5, RPS-1, RPS-2, RPS-3		
	ZK-1, ZK-3, ZK-4, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, SK-1, SK-2, SK-6, SK- 9,SK-11	RKS-2, RKS-3, RKS-6, RKS-10, RKS-12, RKS-13, RCMS-1, RCMS-3, RCMS-4, RCMS-5, RCMS-7, RPS-4	2.4 .2. Automated systems of engineering modeling and calculation	8.0
	ZK-2, ZK-3, ZK-4, ZK-6, ZK-9, SK -2, SK-3, SK-11	RKS-2, RKS-5, RKS-9, RKS-11, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RPS-1, RPS-2, RPS-3, RPS- 4	2.4 .3. Modern materials in mechanical engineering	3.0
	ZK-2, ZK-3, ZK-4, ZK-5, ZK-7, ZK-8, ZK-9, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK- 2, SK-4, SK-5, SK-6, SK-7 , SK-8, SK-9, SK-10, SK-12 , SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS-3, RKS-4 ,RKS-7, RKS-8,RKS-9 , RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS-5, RCMS- 6, RCMS-7, RPS-1, RPS-3, RPS-4	2.4 .4 . Reliability and durability of machines	3.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10,ZK-11 , ZK-12, ZK- 14, SK-1, SK-2, SK-3, SK-5, SK-6, SK-9, SK-11 ,	RKS-1, RKS-2, RKS-7, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-7	2.4.5. Design of Plastics Processing Plants	2.0

	SK-12			
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, SK-1, SK-2, SK-3, SK-6, SK-8, SK-9, SK-10, SK-11, SK-13, SK-14	RKS-2, RKS-3, RKS-6, RKS-10, RKS-12, RKS-13, RCMS-1, RCMS-3, RCMS-4, RCMS-5, RCMS-7, RPS-4	2.4.6. Modeling of plastic processing equipment	3.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, SK-1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-7, RKS-8, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.4.7. Methodological bases of design of machines for processing of polymeric materials	11,0
			2.4.8. One of the modules	
			Module 1	
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK-14, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.4.8.1 . Research practice	6.0
	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-12, SK-9, SK-11, SK-12	RKS-2, RKS-10, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6,	2.4.8.2 . Assistant practice	4.5

	RCMS-7, RPS-4		
		Module 2	
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK-14, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.4.8.3 . Research practice	6.0
ZK-1, ZK-2, ZK-3, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK-9, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.4.8.4. Undergraduate manufacturing practice	4.5
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, SK-14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK-9, SK-10, SK-11, SK-12, SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.4.9. Additional credits for the preparation of master's qualification work	6.0
		<b>TOTAL 2.4</b>	<b>49,5</b>
<b>2.5 . Block 5</b>			
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9,	RKS-1, RKS-2, RKS-3, RKS-4, RKS-5, RKS-6, RKS-8, RKS-	2.5.1. Appendix to point 1.8	1

	ZK-10, ZK-12, SK-2, SK- 3, SK-4, SK-5, SK-7, SK-11, SK-12	9, RKS-10, RKS-12, RCMS-1, RCMS-2, RCMS- 3, RCMS- 4, RCMS-5, RPS-1, RPS-2, RPS-3		
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.5 . 2 Corrosion protection of equipment	15.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.5 . 3 Testing technique for materials and coatings	4.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.5 . 4 Special protective coatings in industry	3.0
	ZK-1, ZK-2, ZK-3, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK- 1, SK-2, SK-3, SK-4, SK-5, SK-6, SK-7, SK-9, SK-12, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-5, RKS-8, RKS-9, RKS-10, RKS-11, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS- 5, RCMS-7, RPC-3, RPC-4	2.5 . 5 Special food technology and equipment	9.0
	ZK-1, ZK-2, ZK-3, ZK-5, ZK-7, ZK-8, ZK-9, ZK-13, SK-2, SK-4, SK-5, SK-8, SK- 9, SK-11	RKS-2, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RPS-1; RPS-2,	2.5 . 6 Newest materials	4.0

	RPS-3		
		2.5.7 One module	
		Module 1	
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK-14, SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.5.7.1 . Research practice	6.0
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-12, SK-9, SK-11, SK-12	RKS-2, RKS-10, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-4	2.5.7.2 . Assistant practice	4.5
		Module 2	
ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-12, ZK-13, ZK-14., SK-2, SK-4, SK-5, SK-6, SK-7, SK-8, SK-9, SK-10, SK-11, SK-12	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.5.7.3 . Research practice	6.0
ZK-1, ZK-2, ZK-3, ZK-6, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, ZK-14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK-9, SK-12, SK-13, SK-14, SK-15, SK-16	RKS-1, RKS-2, RKS-3, RKS-9, RKS-10, RKS-11, RKS-12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS-1, RPS-2, RPS-3, RPS-4	2.5.7.4. Undergraduate manufacturing practice	4.5

	ZK-1, ZK-2, ZK-3, ZK-4, ZK-5, ZK-6, ZK-7, ZK-8, ZK-9, ZK-10, ZK-11, ZK-12, ZK-13, SK-14, SK-1, SK-2, SK-4, SK-5, SK-6, SK-8, SK- 9, SK-10, SK-11, SK- 12, SK-13, SK-14, SK-15	RKS-1, RKS-2, RKS-3, RKS-5, RKS-6, RKS-9, RKS-10, RKS-11, RKS- 12, RKS-13, RCMS-1, RCMS-2, RCMS-3, RCMS-4, RCMS-5, RCMS-6, RCMS-7, RPS- 1, RPS-2, RPS-3, RPS-4	2.5.8. Additional credits for the preparation of master's qualification work	6.0
	<b>THE TOTAL AMOUNT</b>			
			<b>B lok 1</b>	<b>90</b>
			<b>B lok 2</b>	<b>90</b>
			<b>B Lock 3</b>	<b>90</b>
			<b>B lok 4</b>	<b>90</b>
			<b>B lok 5</b>	<b>90</b>

**Table 4 .1 . Matrix of correspondence of program competences to educational components  
for the mandatory part**

Code of discipline according to the curriculum	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1. 10
INT	+	+	+	+	+	+	+	+	+
ZK-1	+	+			+	+	+	+	+
ZK-2	+	+	+	+	+	+	+	+	+
ZK-3	+	+	+	+	+	+	+	+	+
ZK-4	+	+	+	+	+		+	+	+
ZK-5	+	+			+	+	+	+	+
ZK-6	+	+			+	+	+	+	+
ZK-7							+		+
ZK-8	+	+			+	+	+	+	+
ZK-9	+	+	+	+	+	+	+	+	+
ZK-10	+	+			+	+	+	+	+
ZK-11	+				+	+		+	+
ZK-12	+	+	+	+	+	+	+	+	+
ZK-13			+	+				+	
ZK-14			+	+	+			+	
SK-1	+	+	+	+	+			+	+



SK-2	+		+	+	+		+	+	+
SK-3							+	+	+
SK-4		+	+	+			+	+	+
SK-5				+			+		+
SK-6			+	+				+	+
SK-7							+	+	+
SK-8								+	+
SK-9	+	+				+			+
SK-10									+
SK-11	+	+				+	+		+
SK-12	+	+			+		+		+
SK-13			+	+					
SK-14	+	+	+	+					+
SK-15	+		+	+				+	
SK-16								+	

**Table 4 .2 . Matrix of correspondence of program competences to educational components for the sample part (blocks 2.1 and 2.2)**

1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7.1	2.1.7.2	2.1.7.3	2.1.7.4	2.1.8	2.2.1	2.2.2.	2.2.3	2.2.4	2.2.5	2.2.6.1	2.2.6.2	2.2.
-----	-------	-------	-------	-------	---------	---------	---------	---------	-------	-------	--------	-------	-------	-------	---------	---------	------

	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
					+	+	+		+	+	+	+	+	+	+	+	
				+	+	+	+		+	+	+	+	+	+	+	+	
+	+	+	+		+	+	+	+	+	+		+	+		+	+	
+	+	+	+	+	+		+		+	+	+	+	+		+		
+	+	+	+	+	+		+	+	+	+	+	+	+	+		+	
+	+	+	+	+	+		+	+	+	+	+	+	+		+		
+	+	+	+		+		+	+	+	+	+	+	+		+		
+	+	+	+		+		+	+	+	+	+	+	+		+		
+	+	+	+	+	+		+	+	+	+		+	+		+		
+	+	+	+	+	+		+	+	+	+		+	+		+		
+	+	+	+		+		+	+	+		+	+	+	+	+	+	
+	+	+	+		+		+			+		+			+		

				+	+		+	+	+			+		+	+		
+	+	+	+	+	+	+	+	+	+			+	+		+	+	
					+		+		+			+			+		
				+	+	+	+		+	+		+	+		+	+	
+	+	+	+		+	+	+	+	+	+	+	+			+	+	
								+	+			+					
								+	+			+			+		
+	+	+	+					+	+			+					
+	+	+	+					+				+					

**Table 4 .3 . Matrix of correspondence of program competences to educational components  
for the sample part (blocks 2.3 and 2 .4 )**

3.3	2.3.4	2.3.5	2.3.6	2.3.7.1	2.3.7.2	2.3.7.3	2.3.7.4	2.3.8	2.4.1	2.4.2.	2.4.3	2.4.4	2.4.5	2.4.6	2.4.7	2.4.8.1	2.4.8.2
	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		+	+	+	+	+	+	+	+	+			+	+	+	+	+
+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+
	+		+	+	+	+		+	+			+	+	+	+	+	+
+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+

	+		+	+		+		+	+			+	+	+	+	+	
	+	+	+	+		+	+	+	+	+		+	+	+	+	+	
+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	
		+	+	+		+	+	+	+	+			+	+	+	+	
	+	+	+				+	+		+		+	+	+	+		
	+	+	+	+		+	+	+	+	+		+	+	+	+	+	+
	+	+	+	+		+	+	+				+			+	+	
	+			+		+	+	+				+	+			+	
	+	+	+				+	+		+		+	+	+	+		
+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	
+		+	+						+		+		+	+	+		
	+		+	+		+	+	+	+			+			+	+	
	+		+	+		+	+	+	+			+	+		+	+	
	+	+	+	+	+	+	+	+		+		+	+	+	+	+	+
	+	+	+	+		+		+				+		+	+	+	
+		+	+	+	+	+		+	+	+	+		+	+	+	+	+
	+		+	+	+	+	+	+	+			+	+		+	+	+
	+		+				+	+				+		+	+		
	+		+					+	+			+		+	+		

	+		+				+	+				+			+		
		+	+				+								+		

**Table 4.4. Matrix of correspondence of program competences to educational components for the sample part (block 2.5)**

Code of discipline according to the curriculum	2.5.1	2.5.2	2.5.3	2.5.4	2.5.5	2.5.6	2.5.7.1 , 2.5.7.3	2.5.7.2	2.5.7.4	2.5.8
INT	+	+	+	+	+	+	+	+	+	+
ZK-1	+	+	+	+	+	+	+	+	+	+
ZK-2	+	+	+	+	+	+	+	+	+	+
ZK-3	+	+	+	+	+	+	+	+	+	+
ZK-4	+						+	+		+
ZK-5	+					+	+	+		+
ZK-6	+	+	+	+	+		+	+	+	+
ZK-7	+	+	+	+	+	+	+			+
ZK-8	+	+	+	+	+	+	+		+	+
ZK-9	+	+	+	+	+	+	+		+	+
ZK-10	+	+	+	+	+		+		+	+
ZK-11		+	+	+	+				+	+
ZK-12	+	+	+	+	+		+	+	+	+
ZK-13		+	+	+	+	+	+		+	+
ZK-14		+	+	+	+		+		+	+
SK-1		+	+	+	+				+	+



**Table 5 .1 . Matrix software software learning outcomes relevant components  
Educational and professional program for the obligatory part**

Code of discipline according to the curriculum	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10
RKS-1	+	+	+	+			+	+	+
RKS-2	+	+	+	+	+		+	+	+
RKS-3					+		+	+	+
RKS-4			+	+			+	+	
RKS-5		+					+		+
RKS-6							+		+
RKS-7			+	+				+	
RKS-8			+	+			+	+	
RKS-9							+		+
RKS-10							+	+	+
RKS-11									+
RKS-12				+			+	+	+

RKS-13				+					+
RCMS-1					+		+	+	+
RCMS-2	+	+			+	+	+	+	+
RCMS-3	+	+			+	+	+		+
RCMS-4	+	+	+	+	+	+	+		+
RCMS-5		+					+	+	+
RCMS-6			+	+				+	+
RCMS-7	+	+				+		+	+
RPS-1							+		+
RPS-2							+		+
RPS-3							+		+
RPS-4								+	+

**Table 5 .2 . Matrix software software learning outcomes relevant components  
Educational and professional program for the sample part (blocks 2.1 and 2.2)**





+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	
				+	+	+	+	+	+	+	+	+	+	+	+	+	
+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	
					+	+	+	+	+		+	+			+	+	
+	+	+	+		+	+	+	+	+		+	+	+	+	+	+	
				+	+		+	+	+	+		+			+		
				+	+		+	+	+	+		+			+		
+	+	+	+	+	+		+	+	+	+		+			+		
+	+	+	+		+	+	+	+	+			+		+	+	+	

**Table 5.3 . Matrix software software learning outcomes relevant components  
Educational and professional program for the sample part (blocks 2.3 and 2.4)**

2.3.3	2.3.4	2.3.5	2.3.6	2.3.7.1	2.3.7.2	2.3.7.3	2.3.7.4	2.3.8	2.4.1	2.4.2	2.4.3	2.4.4	2.4.5	2.4.6	2.4.7	2.4.8.1	2.4.8.2
	+		+	+		+	+	+	+			+	+		+	+	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	+	+	+	+		+	+	+	+	+		+		+	+	+	
	+		+						+			+			+		
+			+	+		+		+	+		+				+	+	
		+	+	+		+		+	+	+				+	+	+	
	+		+									+	+		+		
	+		+						+			+			+		
+	+		+	+		+	+	+	+		+	+			+	+	
	+	+	+	+	+	+	+	+	+	+		+		+	+	+	+
+			+	+		+	+	+			+				+	+	
	+	+	+	+		+	+	+	+	+		+	+	+	+	+	
		+	+	+		+	+	+		+			+	+	+	+	

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+	+		+	+	+	+	+	+	+		+	+	+		+	+	
+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	
+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	+		+	+	+	+	+	+				+			+	+	
	+	+	+	+	+	+	+	+		+		+	+	+	+	+	
+	+		+	+		+	+	+	+		+	+			+	+	
+			+	+		+	+	+	+		+				+	+	
+	+		+	+		+	+	+	+		+	+			+	+	
+	+	+	+	+	+	+	+	+		+	+	+		+	+	+	

**Table 5.4 . Matrix software software learning outcomes relevant components  
Educational and professional program for the sample part (block 2.5)**

Code of discipline according to the curriculum	2.5.1	2.5.2	2.5.3	2.5.4	2.5.5	2.5.6	2.5.7.1, 2.5.7.3	2.5.7.2	2.5.7.4	2.5.8
RKS-1		+	+	+	+		+		+	+
RKS-2	+	+	+	+	+	+	+	+	+	+
RKS-3	+	+	+	+	+		+		+	+
RKS-4										
RKS-5	+	+	+	+	+	+	+			+
RKS-6	+					+	+			+
RKS-7										
RKS-8		+	+	+	+					
RKS-9	+	+	+	+	+	+	+		+	+
RKS-10	+	+	+	+	+	+	+	+	+	+
RKS-11		+	+	+	+	+	+		+	+
RKS-12						+	+		+	+

RKS-13		+	+	+	+		+		+	+
RCMS-1	+	+	+	+	+	+	+	+	+	+
RCMS-2	+	+	+	+	+	+	+	+	+	+
RCMS-3	+	+	+	+	+	+	+	+	+	+
RCMS-4	+					+	+	+	+	+
RCMS-5	+	+	+	+	+		+	+	+	+
RCMS-6							+	+	+	+
RCMS-7		+	+	+	+		+	+	+	+
RPS-1	+					+	+		+	+
RPS-2	+					+	+		+	+
RPS-3	+	+	+	+	+	+	+		+	+
RPS-4		+	+	+	+		+	+	+	+

### III - FORMS OF CERTIFICATES FOR HIGHER EDUCATION PROVIDERS

<p><b>Forms of attestation of applicants for higher education</b></p>	<p>The mandatory form of state certification is the implementation and protection of qualification (diploma) works (projects).</p> <p>The system of competencies and learning outcomes specified in Chapters IV and V. are subject to state certification.</p> <p>The main means of objective control of the degree of achievement of the final goals of education and professional training of masters is the technology of implementation and protection of qualification (diploma) works (projects), which is defined in the following documents: Regulations on EC, Guidelines for the implementation of qualification (diploma) projects (works) ).</p>
<p><b>Requirements for final qualification work (in the presence)</b></p>	<p>Requirements for the final qualification work are set out in the Guidelines for the implementation of qualification (diploma) projects (works).</p> <p>The final qualification work is accompanied by the review of the scientific supervisor and the reviewer's review, which are responsible for checking the completeness of the tasks, the quality of the work as a whole and checking it for plagiarism.</p>
<p><b>Certification / Uniform Qualification Exam Requirements (exams) (in the presence)</b></p>	
<p><b>Requirements for public protection (demonstration) (in the presence)</b></p>	<p>Requirements for public protection are formulated in the Regulations on the EC and guidelines for the implementation of qualification (diploma) projects (works).</p>

#### **IV - Requirements for having an internal quality assurance system for higher education**

Determined in accordance with European Standards and Recommendations for Quality Assurance in Higher Education (ESG) and Article 16 of the Law of Ukraine "On Higher Education"

<b>Components of the internal quality assurance system of higher education</b>	<b>Definitions, references and related documents</b>
<b>Principles and procedures for quality assurance in education</b>	<ul style="list-style-type: none"> <li>- Law of Ukraine "On Higher Education" dated 01.07.2014, № 1556-VII;</li> <li>- Provisional Regulation on the Organization of the Educational Process at the State Higher Educational Institution of the State University of Chemical Technology</li> <li>- Regulations on diploma with honors of the State University of Chemical Technology (Order of the Rector of SHEI USUCT from February 25, 2016 No. 55);</li> <li>- Regulations on the procedure for setting up and organizing the work of the examination commission at the State Higher Educational Institution of USUCT (Order of the Rector No. 68 of 01.04.2015, No. 68);</li> <li>- Regulations on the development of approval and revision of work programs of educational disciplines (Order of the Rector of the State Higher Educational Institution of USUCT № 291 of 01.12.15)</li> </ul>
<b>Monitoring and periodic review of educational programs</b>	Annual monitoring of requirements of industry and labor market, review of educational programs, work curricula, work programs of educational disciplines. On approval of the composition of project teams for the development of educational programs (Order of the Rector of the State University of Chemical Technology from 10.03.2016 No. 74)
<b>Annual evaluation of higher education applicants</b>	Regulations on the organization of the rectorial control of the quality of education (Order of the Rector of March 17, 2014 №78)
<b>Annual evaluation of scientific-pedagogical and</b>	Regulations on the Rector's Control Commission of pedagogical skills of scientific and pedagogical workers of the University (Order of the Rector of the



<b>pedagogical staff of higher education institution</b>	State University of Chemical Technology 04.04.2016. №85), Procedure of application of the rating system of evaluation of the activity of scientific and pedagogical workers of the State University of Chemical Technology (Ordinance of the Rector of 04.06.2010, № 209 with changes of 06.06 to 09.06.2010 .2011 № 147), Procedure of application of rating system of evaluation of activity of departments and faculties of SHEI USUCT (Rector's Order dated 04.06.2010 № 209). The regular publication of the results of such assessments on the official website of the institution of higher education, on information stands and in any other way
<b>Upgrading of scientific-pedagogical, pedagogical and scientific staff</b>	Improvement of qualification of scientific and pedagogical staff is carried out according to the provision approved by the order of MESU from 24.01.2013. No. 48 and the Regulations on professional development and training of pedagogical and scientific-pedagogical employees of SHEI USUCT
<b>Availability of necessary resources to organize the educational process</b>	Educational and methodological, logistical and personnel support of the licensed conditions (Resolution of the CM dated December 30, 2015 No. 1187) of educational activity. License Series AE No. 636496. Certificates in areas of training and specialties.
<b>Availability of information systems for effective management of the educational process</b>	The Temporary Provision on the Organization of the Educational Process at SHEI USUCT (Order of the Rector of the State Higher Educational Institution of Ukrainian State University of Chemical Technology № 290) is supported by the Information-analytical system of control of the educational process, which consists of subsystems: Applicant, Educational process.
<b>Publicity of information on educational programs, degrees of higher education and qualification</b>	Information about educational programs, degrees of higher education and qualification is publicly and fully published on the official web-portal of the University <a href="http://udhtu.com.ua">http://udhtu.com.ua</a>
<b>Preventing and detecting academic plagiarism</b>	Verification of completeness of tasks, quality of work in general and its verification for plagiarism is carried out by the teacher - the leader of course or diploma work (project) in the established order using the appropriate software.