

The Ministry of Education and Science of Ukraine  
State Higher Educational Institution  
"Ukrainian State Chemical Technology University"

Rector UDHTU

\_\_\_\_\_ OA. Pivovarov  
" \_\_\_\_ " \_\_\_\_\_ 2017

**Educational and professional programs**

**ECOLOGY**

\_\_\_\_\_  
(Name of the educational program)

**The first (bachelor) level**

\_\_\_\_\_  
(Name of higher education)

**Bachelor**

\_\_\_\_\_  
(Name of the degree that is assigned)

**BRANCH OF  
KNOWLEDGE**

**10 Science**

\_\_\_\_\_  
(Code name and area of expertise)

**SPECIALTY**

**101 Ecology**

\_\_\_\_\_  
(Code and specialty)

Adopted by the Scientific Council  
SHEE UDHTU  
from " \_\_\_\_ " \_\_\_\_\_ 2017.  
Protocol № \_\_\_\_

Dnipro

Letter of approval

The level of higher education	The first (bachelor) level
Branch of knowledge	10 Science
Specialty	101Ekolohiya

**I. PROFILE educational and vocational programs  
for bachelors  
specialty 101 *Ecology***

<b>Profile program (general information)</b>	
<b>Full title in the original language skills</b>	The degree of higher education - bachelor, specialty - Ecology
<b>The official name of the educational program</b>	Educational and professional program "Ecology" Bachelor specialty Ecology 101
<b>Type diploma and scope of the educational program</b>	Diploma BA in ecology, single (double, shared with the relevant agreements, training programs); 240 ECTS credits
<b>Full name of the institution of higher education that award qualifications</b>	State Higher Educational Institution "Ukrainian State Chemical Technology University"
<b>The sending organization</b>	Accreditation Commission of Ukraine (POC "Training Center for Quality Education"). NAZYAVO.
<b>The period of accreditation</b>	The certificate on initial accreditation - 5 years after re - 10 years.
<b>Cycle / level</b>	Ukraine NLC - 6 level, FQ-EHEA - second cycle, EQF-LLL - 6 level
<b>Background</b>	Complete secondary education
<b>Language (s) teaching</b>	Ukrainian language
<b>AND</b>	
<b>AND</b>	<b>The purpose of the educational program</b>
<b>The purpose of the educational program</b>	Provide education in science with broad access to employment, prepare students who have fundamental and professionally oriented knowledge and skills in the field of ecology and environmental protection.
<b>B</b>	
<b>B</b>	<b>Characteristics of the educational program</b>
<b>Subject area (discipline, specialty)</b>	Industry knowledge 10 - Natural sciences: Specialty 101 - Ecology
<b>The main focus of the program and specialization</b>	Total higher education in science.
<b>Orientation program</b>	The program focuses on current scientific results related sciences complex environment within which possible future professional and academic career specialist in natural sciences.
<b>Features and Differences</b>	The program is aimed at practical environmental conservation and modern technology, regularly updated and meet the trend of progressive environmental technologies

<b>WITH</b>	<b>Ability to employment and further education</b>
<b>Ability to employment</b>	Jobs organizer of nature; inspector of nature protection; State Inspector of manmade and environmental monitoring; Protection Supervisor natural reserve fund; Inspector water resources; machinery ecologist; State inspector; trainee researcher.
<b>Further training</b>	Education at the second level educational program in the field of science.
<b>D</b>	<b>The style of teaching and learning methods</b>
<b>Approaches to teaching and learning</b>	A combination of lectures, practical seminars, experimental studies in laboratories, projects or writing term papers, learning, training qualifying work.
<b>evaluation methods</b>	Written and oral exams, tests, presentation of diploma qualification work.
<b>IS</b>	<b>Software competence</b>
Integral competence	<i>Bachelor (level 6):</i> The ability to solve complex problems and specialized practical problems of ecology, environment and sustainable nature of the learning process, which involves the use of certain theories and methods of environmental technology and is characterized by complexity and uncertainty conditions.
General competence (ZK)	ZK-1 The ability to apply knowledge in practical situations. ZK-2 The ability to plan and manage time. ZK-3 Knowledge and understanding of the subject area and understanding of the profession. ZK-4 Ability to written and oral communication in Ukrainian (professional orientation). ZK-5. The ability to communicate in a foreign language. ZK-6. Skills use of information and communication technologies. ZK-7. The ability to learn and be trained modern. ZK -8. The ability to be critical and self-critical. ZK-9. The skills of interpersonal interaction. ZK -10. Knowledge of national history, culture, economics and law, sufficient for understanding the causation of social development and the ability to use them in professional and social activities. ZK -11. Appreciation and respect for diversity and multiculturalism. ZK -12. Commitment to safety. ZK -13. Certainty and persistence on tasks and responsibilities taken. HCC-14. The desire to preserve the environment. ZK -15. The ability to use basic knowledge from basic science to the extent necessary for the theoretical development of professionally-oriented disciplines and solve practical problems of chemical

<p style="text-align: center;">Special (Professional, subject) competence (SC)</p>	<p>technology and engineering.</p> <p><i>SC-1.</i> The ability to have the knowledge and skills of application of environmental protection to minimize the negative impact of anthropogenic activities.</p> <p><i>SC-2.</i> The ability to use knowledge, skills and abilities in the disciplines of general training cycle for the theoretical development of disciplines and professional direction solving practical problems of environmental technologies.</p> <p><i>SC-3.</i> The ability to use the knowledge and practical skills to protect air quality.</p> <p><i>SC-4.</i> The ability to use knowledge and practical skills to ensure the quality of natural water (water reservoirs).</p> <p><i>SC-5.</i> The ability to use the knowledge and practical skills to protect soil (land resources) and the geological environment (subsoil).</p> <p><i>SK-6.</i> The ability to use the knowledge and practical skills in the management and treatment of waste production and consumption to limit the negative man-made effects on the environment;</p> <p><i>SC-7.</i> The ability to use knowledge for the conservation of biological and landscape diversity, rational use of natural resources and environment to preserve the stability of natural ecosystems.</p> <p><i>SK-8.</i> The ability to use knowledge to reduce the negative impact of technologically-altered landscapes.</p> <p><i>IC-9.</i> The ability to use calculation methods for environmental risk assessment of anthropogenic impact on the environment.</p> <p><i>SC-10</i> The ability to use the basic knowledge of chemistry, biochemistry biology to the extent necessary to study professional courses and for use in their chosen profession</p> <p><i>Insurance.-11.</i> The ability to use the principles of sustainable environmental management to ensure the implementation of preventive measures to protect the environment and conserve natural resources.</p> <p><i>SC-12.</i> The ability to use the basic knowledge of geology and geomorphology to the extent necessary to study professional courses and for use in their chosen profession.</p> <p><i>SC-13.</i> The ability to use modern methods of experimental work on technological objects in industrial and laboratory</p>
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	<p>conditions, skills with modern instrumentation.</p> <p><i>IC-14.</i> The ability to provide the required level of safety of life and safety in solving professional problems.</p> <p><i>SC-15.</i> The ability to use the basic knowledge of morphological characteristics of the soil, the impact of environmental factors on soil formation processes.</p> <p><i>SC-16.</i> The ability to use the basic knowledge of hydrology for sustainable and integrated water management, water management solutions to environmental problems.</p> <p><i>SC-17.</i> The ability to use basic knowledge about the structure i composition of the atmosphere, weather patterns forming i climate, their impact on the environment</p> <p><i>SC-18.</i> The ability to use the principles of sustainable environmental management to ensure the implementation of preventive measures to protect the environment and conserve natural resources.</p> <p><i>SC-19.</i> The ability to use knowledge of the principles of formation of environmental economics and business management procedures that make environmental management functions, tasks of environmental management.</p> <p><i>SC-20.</i> The ability to use knowledge of technology, economic and regulatory instruments of protection and restoration of the environment and natural resources.</p> <p><i>SC-21.</i> Skills for working with the most common software packages and use them to solve practical problems in the field of environmental protection.</p> <p><i>SC-22.</i> The ability to use knowledge of basic factors, trends and consequences of urbanization prospects and principles of urban systems;</p> <p><i>SC-23.</i> Skills presentation of scientific material and arguments in writing and orally.</p> <p><i>SC-24.</i> The ability to use knowledge of methodological, legal and methodological principles of environmental assessments.</p>
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<b>F</b>	<b>Program Learning Outcomes</b>
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<p>Results of studies in cognitive (cognitive) sphere</p>	<p><i>SW-1.</i> AProvodyty analysis, synthesis, creative thinking, evaluation and systematization of various Information sources for comprehensive environmental studies.</p> <p><i>SW-2.</i> APredstavlyaty results comprehensive environmental studies as scientific reports and presentations, using modern mapping and graphical methods.</p> <p><i>SW-3.</i> Cooking results integrated environmental Research to be published.</p> <p><i>SW-4.</i> Possess modern methods of mathematical modeling and forecasting of the environment;</p> <p><i>SW-5.</i> WITHusefulness of use and for use in professional activities the provisions of national and international legislation in the field of environmental protection;</p> <p><i>SW-6.</i> Evaluate human impact on objects protected areas, providing recommendations for their protection organization based on their environmentally-oriented forms of recreation and rehabilitation.</p> <p><i>SW-7.</i> Assess the condition and the water quality of water bodies and analyze the dynamics of change depending on the conditions of water use and wastewater purification efficiency return water to provide recommendations to improve the ecological status of water bodies.</p> <p><i>RCS-8.</i> ATsinyuvaty level of anthropogenic load on the air and analyze the dynamics of air quality depending on the level of technical equipment pylohazoochysnyh facilities and equipment, weather-meteorological factors make recommendations for improvement.</p> <p><i>SW-9.</i> Evaluate the impact of waste production and consumption to environmental quality, efficiency of their treatment and provide recommendations for improving environmental safety.</p> <p><i>SW-10.</i> Evaluate dangerous geological processes (events) to determine the ecological and geological condition of territories and living conditions of the population, provide recommendations for improvement.</p> <p><i>SW-11.</i> Evaluate the status and quality of soil, depending on the technologies of land use, climatic and landscape conditions provide suggestions for improving agroecological zoning and state</p> <p><i>SW-12.</i> Assess the situation that may arise as a result of natural and man-made and provide recommendations for its stabilization.</p> <p><i>SW-13.</i> Evaluate the environmental and economic</p>
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efficiency of design solutions from the standpoint of sustainable development, develop recommendations for optimal environmental management.

*SW-14.* Develop programs to ensure environmental safety, staff training methods of storing energy and natural raw materials, safe working methods.

*SW-15.* Develop comprehensive measures of environmental protection from excessive anthropogenic pressures.

*SW-16.* To be able to assess the need for a comprehensive approach to improve environmental safety, Environment and natural resources.

*SW-17.* You can search the latest technical and technological and organizational solutions to implementation in production of promising environmental, resource and energy-saving developments and modern equipment.

*SW-18.* Distribute responsibilities in the field of environmental activities between structural divisions of the company.

*SW-19.* To draft orders, regulations on environmental protection and natural resources.

*SW-20.* Make a plan of subdivision and current environmental reports to address environmental issues.

*SW-21.* Draw up terms of reference for the development of scientific and technical products and execute according to regulatory requirements.

*SW-22.* Carry out an environmental audit operation manmade object (enterprise) and territory.

*SW-23.* Develop an environmental management system framework, taking into account industry specifics and scale of enterprises, organizations and territories.

*SW-24.* Following the technical, regulatory, legal and organizational bases of management of environmental safety design measures to minimize the negative effects of emergencies.

*SW-25.* Execute applications on regional, national and international grants and tender documents for professional research projects, provide them with support and passage;

*SW-26.* Organize interaction with state agencies of environmental control, public and other stakeholders in the environmental activities of enterprises, organizations and enterprises to ensure the timely exchange of information and improve the planning system.



	<p><i>SW-27.</i> Organize training sessions and checks the results of student learning.</p> <p><i>SW-28.</i> <i>WITH</i> usefulness identify environmental violations.</p> <p><i>SW-29.</i> Know methods and evaluate the environmental impact of economic activities.</p>
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<p>Learning outcomes of value-motivational sphere</p>	<p><i>RTSMS-1.</i> Meet the requirements of professional ethics in the workplace</p> <p><i>RTSMS-2.</i> Participate in the discussion of the results of different types of work (research, search, design, etc.)</p> <p><i>RTSMS-3.</i> Identify desire to work independently</p> <p><i>RTSMS-4.</i> Asking questions in discussions with colleagues, teachers</p> <p><i>RTSMS-5.</i> To form the equal treatment of students with different abilities in the group</p> <p><i>RTSMS-6.</i> To demonstrate the acquired skills in a foreign language in the creation of scientific and project documentation</p> <p><i>RTSMS-7.</i> Results represent different types of work (research, search, design, etc.) mother and one of the major European languages</p> <p><i>RTSMS-8.</i> Organize safety measures in the workplace</p> <p><i>RTSMS-9.</i> Understand the scientific and technical texts in native and one of the major European languages</p>
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Results of studies in the field of psychomotor	<i>RPS-1.</i> Experimental off repeatedly reproduce experimental results to obtain reliable values and calculation error experiment <i>RPS-2.</i> Observe safety in the workplace
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**II. DEFINITIONS academic disciplines / modules  
that will ensure achievement of planned learning outcomes and forms of  
certification candidates for higher education educational program according to the  
standard of higher education**

**Table 1. Distribution content of educational and professional training program  
cycles and the shape of the final control**

number by / n	Subjects	Credits required	additional Credits	Hours	Semester	Tetramestr	Final control
<b>1. Compulsory subjects</b>							
<i>1.1 The cycle of general training (forming general competence)</i>							
1.1.1	History of Ukraine	3	0	90	1	1.2	copies.
1.1.2	Philosophy	3	1	120	4	7.8	copies.
1.1.3	History of Ukrainian Culture	2	0	60	1	2	copies.
1.1.4	Politology	2	0	60	2	3	credit
1.1.5	Foreign Language (for professional purposes)	5	3	240	1.2	1,2,3,4	credit / copies.
1.1.6	Ukrainian language (for professional purposes)	3	0	90	5	9,10	copies.
1.1.7	Higher mathematics	6	3	270	1.2	1,2,3,4	d.zalik / copies.
1.1.8	Physics	4.5	3.5	240	2.3	3,4,5,6	credit / copies.
1.1.9	Geology with bases of geomorphology	3	0	90	2	4	copies.
1.1.10	Hydrology	3	0	90	8	15	copies.

1.1.11	Meteorology and klimatolohiyahrafiya	3	1	120	5	9,10	ind
1.1.12	Information and Systemology	3	3	180	3	5.6	ind
1.1.13	Pedology	3	1	120	4	7.8	credit
1.1.14	Chemical fundamentals of biogeochemistry	4.5	2.5	210	1	1.2	ind
1.1.15	Physical education (out loans)			256	1,2,3,4	1,2,3,4,5,6,7,8	credit
<b>Total for Cycle</b>		<b>48.0</b>	<b>18.0</b>	<b>1980</b>			
<b>1.2 Cycle training</b>							
1.2.1	Entry to the profession	3	0	90	2	4	credit
1.2.2	Biology	6	0	180	1	1.2	ind
1.2.3	General ecology (and Neo)	6	1	210	3	5.6	ind
1.2.4	Landscape ecology	3	0	90	2	3.4	credit
1.2.5	human Ecology	3	2	150	7	13,14	credit
1.2.6	environmental monitoring	6	0	180	6	11,12	ind
1.2.7	Modeling and prediction of the environment	4.5	1.5	180	6	11,12	ind
1.2.8	Technical Ecology	4.5	0.5	150	6	11,12	ind
1.2.9	urboecology	4.5	0.5	150	7.8	13,14,15	credit / ind
1.2.10	Rationing anthropogenic load	4.5	0.5	150	5	9,10	ind
1.2.11	Ecological safety	4.5	0.5	150	6	11,12	d.zalik
1.2.12	Environmental impact assessment	3	0	90	8	15	ind
1.2.13	Environmental zakonodavstvo and environmental law	4.5	0.5	150	7	13,14	ind
1.2.14	Company management in environmental activities	3	0	90	7	13,14	ind
1.2.15	Environmental Economics	3	0	90	7.8	14,15	credit
02/01/16	Reserve business	3	0	90	3	5	credit
02/01/17	Life Safety	2	0	60	1	1	credit

02/01/18	Basics of labor protection	1.5	1.5	90	7	14	copies.
1.2.19	Internship	6	0	180	8	16	d.zalik
	<b>Total for Cycle</b>	<b>75.5</b>	<b>8.5</b>	<b>2520</b>			
	<b>Required parts together</b>	<b>123.5</b>	<b>26.5</b>	<b>4500</b>			
<b>2.VYBIRKOVI academic disciplines</b>							
<b>2.1 The cycle of general training</b>							
2.1.1	Sociology	0	2	60	5	9	credit
2.1.2	Psychology	0	2	60	3	6	credit
2.1.3	Foundations of economic theory	0	3	90	4	8	ind
2.1.4	science of law	0	2	60	4	7	credit
	<b>Total for Cycle</b>	<b>0</b>	<b>9</b>	<b>270</b>			
<b>2.2 Cycle training</b>							
2.2.1	Engineering graphics	0	2	60	1	1.2	d.zalik
2.2.2	Materials	0	2	60	3	5.6	credit
2.2.3	Analytical Chemistry in ecology	0	6	180	3	5.6	ind
2.2.4	Physical chemistry ecology	0	6	180	4	7.8	copies
2.2.5	Organic chemistry ecology	0	6	180	2	3.4	ind
2.2.6	Processes and equipment Environmental Technologies	0	9	270	5.6	9,10,11,12	d.zalik / copies.
2.2.7	Fundamentals of environmental technologies	0	4	120	8	15	copies
2.2.8	Mathematical modeling and computer applications in chemical technology	0	3	90	7	13,14	d.zalik
2.2.9	equipment industry	0	4	120	7	13,14	copies
2.2.10	Chemistry and technology of water conditioning	0	5	150	4	7.8	d.zalik

2.2.11	Radioecology	0	4	120	5	9,10	credit
2.2.12	Methods of measuring environmental parameters	0	4	120	5	9,10	credit
2.2.13	Recycling and recovery of waste	0	3	90	7	13	credit
2.2.14	Wastewater Treatment Technology	0	4	120	5	9,10	ind
2.2.15	Gas emissions purification technology	0	4	120	6	11,12	d.zalik
02/02/16	The theoretical basis of environmental protection	0	6	180	4	7.8	ind
02/02/17	Training and Qualifications Bachelor of State certification (DA)	0	9	270			
	<i>Total for Cycle</i>	<b>0</b>	<b>81</b>	<b>2430</b>			
	<b>SELECTIVE pieces together</b>	<b>0</b>	<b>90</b>	<b>2700</b>			
	<b>TOTAL LOANS duties</b>	<b>123.5</b>		<b>3705</b>			
	<b>LOANS TOTAL SAMPLE</b>	<b>116.5</b>		<b>3495</b>			
	<b>TOTAL VOLUME</b>	<b>240</b>		<b>7200</b>			

**Table 2.** Generalized distribution of educational content professional groups proqramyza components (subjects) and cycle training

№ p / p	Cycle training	Workload applicant Higher Education (loans /%)		
		Required components of educational and professional program	Selected components of educational and professional program	Total for the entire period of study
1.	The cycle of general training (forming general competence)	48	27	75 / 31.25
2.	Cycle training (forming special (professional) competence)	75.5	89.5	165 / 68.75
Total for the entire period of study		123.5 / 51	116.5 / 49	240/100

**Table 3. List of subjects educational and professional training programs competitors education first (bachelor) level, learning time ECTS credits for cycle training and a list of existing competencies and learning outcomes**

Training cycles	Ciphers competencies	Ciphers learning outcomes	The list of disciplines	ECTS credits
1	2	3	4	5
<b>1. Compulsory subjects</b>				
1.1. The cycle of general training	LC-1, LC-2 LC-8, 9- HCC, LC-10, LC-11	RTSMS-4, 5-RTSMS	1.1.1 History of Ukraine	3.0
	LC-1, LC-3, ZK-4, ZK-9, HCC-11	RTSMS-4 RTSMS-6 RTSMS- 7 RTSMS-8 RTSMS-9, SW-9	1.1.2 Philosophy	4.0
	LC-1, LC-2 LC-7, HCC-8, ZK-9, HCC- 11	RTSMS-1 RTSMS-3 RTSMS- 4, 5-RTSMS	1.1.3 History of Ukrainian Culture	2.0
	LC-1, LC-8	RTSMS-1 RTSMS-3 RTSMS- 4, 5-RTSMS	1.1.4 Politics	2.0
	LC-1, LC-3 LC-5, LC- 6 LC-9, LC-11, SC-4	RTSMS-6 RTSMS-7 RTSMS- 9, SW-9	1.1.5 Foreign Language (for professional purposes)	8.0
	LC-1, LC-3 LC-8, LC- 15, SC-1, SC-2, IC-13	SW-6, SW-9, RPS-1	1.1.6 Ukrainian Language (for professional purposes)	3.0
	LC-1, LC-2 LC-3 LC- 6 LC-8, LC-13, LC- 15, SC-1, SC-2, SK-5	SW-6, SW 9, SW-8 RPS-1	1.1.7 Higher Mathematics	9.0
	LC-1, LC-2 LC-3 LC- 6 LC-8, LC-12, LC- 13, LC-15, TC1, IC 2, IC-13	SW-6, SW 9, SW-8 RPS-1	1.1.8 Physics	8.0
	LC-1, LC-3 LC-8, LC- 12, LC-13, LC-15, SC-1, SC-2, SC 3, SC- 10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	1.1.9 Geology with bases of geomorphology	3.0

1.2. Cycle training	LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	1.1.9 Hydrology	3.0
	LC-1, LC-3 LC-8, LC-12, LC-13, LC-14, LC-15, SC-2	SW-1, SW 3, SW 4, SW 8, SW-10 RTSMS-4 RTSMS-8 PSD-1, PSD-2	1.1.10 Meteorology and klimatolohiyahrafiya	4.0
	LC-1, LC-2 LC-3 LC-6 LC-8, LC-13, LC-15, SC-1, SC-2, SK-5	SW-6, SW 9, SW-8 RPS-1	1.1.11 Information and Systemology	6.0
	LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	1.1.12 Soil	4.0
	LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	1.1.13 chemistry with the fundamentals of biogeochemistry	7.0
			<b>TOTAL 1.1</b>	<b>66</b>
	LC-1, LC-3, ZK-4, ZK-7, LC-12, LC-14, LC-15, SC-1, SC-3 SC 4, SC-6 SC-7 SK- 8, SC-10, SC-11, SC-13, SC-14	SW-1, SW-2, SW 9, SW-11 RTSMS-3-9 RTSMS	1.2.1 Introduction to the profession	3.0
	LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.2 Biology	6.0



LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.3 General Ecology (and Neo)	7.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.4 Landscape Ecology	3.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.5 Human Ecology	5.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.6 Environmental Monitoring	6.0

LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.7 Modeling and prediction of the environment	6.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.8 Technical Ecology	5.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.9 urboecology	5.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-12, LC-13, LC-14, ZK- 15, SC-1, SC-2, IC-3, IC-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS- 7 RTSMS-8 PSD-1, PSD-2	1.2.10 The standardization of anthropogenic load	5.0
LC-1, LC-10	RTSMS-1 RTSMS-3 RTSMS-4 RTSMS-5 RTSMS-8, SW-10, PSD-2	1.2.11 Environmental Safety	5.0

	LC-1, LC-10	RTSMS-1 RTSMS-3 RTSMS-4 RTSMS-5 RTSMS-8, SW-10, PSD-2	1.2.12 Environmental impact assessment	3.0
	LC-1, LC-10	RTSMS-1 RTSMS-3 RTSMS-4 RTSMS-5 RTSMS-8, SW-10, PSD-2	1.2.13 Environmental zakonodavstvo and environmental law	5.0
	LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 SW-10 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	1.2.14 Management Organization in environmental activities	3.0
	LC-1, LC-2 LC-3, ZK-4, ZK-6 LC-7, HCC-8, LC-9, LC-10, LC-11, LC-13, LC-15, SK- 3 SC 4, SC-6 SC-7 SC-8, SC-11, SC-13	RTSMS-1 RTSMS-3 RTSMS-4 RTSMS-5, SW-10	1.2.15 Environmental Economics	3.0
	LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 SW-10 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	02/01/16 Reserve business	3.0
	LC-1, LC-4, ZK-7, HCC-8, LC-12, LC-13, SC-10	SW-2, SW 4, SW-7 RTSMS-1 RTSMS-8 RTSMS-9, RPS-2	02/01/17 Safety	2.0
	LC-1, LC-2, ZK-4, ZK-7, HCC-8, LC-9, LC-12, LC-14, SC-10, SC-12	SW-2, SW 4, SW-7 RTSMS-1 RTSMS-8 RTSMS-9, RPS-2	02.01.18 Essentials safety	3.0

2.1 The cycle of general training	LC-1, LC-2 LC-3, ZK-4, ZK-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-10, SC-11, SC-13	SW-1, SW-2, SW 3, SW 4, SW 5, SW-7 SW-8, SW-10, SW-11 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS- 4 RTSMS-5 RTSMS-6 RTSMS-8 RTSMS-9, RPS-2	1.2.19 Manufacturing Practice	6.0
			<b>TOTAL 1.2</b>	<b>84</b>
			<b>Required parts together</b>	<b>150</b>
	<b>2. Selective Courses</b>			
	LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 SW-10 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	2.1.1 Sociology	2.0
LC-1, LC-2 LC-3 ZK-4, ZK-5, LC-6 ZK-7, HCC-8, ZK-9, LC-10, LC-12, LC-13, LC-15 SC-1, SC-2, SC-12, SC-15, SC-17	SW-1, SW-2, SW 3, SW-4, RKS-26, RKS-27 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS-5 RTSMS-6 RTSMS-7, 9 RTSMS-	2.1.2 Psychology	2.0	
LC-1, LC-8, HCC-10	RTSMS-1 RTSMS-3 RTSMS-4 RTSMS-5, SW-10	2.1.3 Principles of Economic Theory	3.0	

2.2 Cycle training	LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 SW-10 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	2.1.4 Law	2.0
			<b>TOTAL 2.1</b>	<b>9.0</b>
	LC-1, LC-2, ZK-7, HCC-13, SC-11, SC-12	RTSMS-2 RTSMS-3, 4-RTSMS	2.2.1 Engineering Graphics	2.0
	LC-1, LC-2 LC-3, ZK-4, ZK-6 LC-7, LC-12, LC-14, LC-15, CS-1, SC-3, -4 SC, SC - 6 UK -7, -8 SC, SC-10, SC 11, SC -14	SW-1, SW-2, SW 3, SW 4, SW-7, SW 9, SW 10, SW 11, RTSMS-2 RTSMS-3 RTSMS-6 RTSMS-7 RTSMS- 9	2.2.2 Material	2.0
	LC-1, LC-2 LC-3, ZK-4, ZK-6 LC-7, HCC-8, LC-9, LC-11, LC-12, LC-13, LC-14, SK- 1, IC-2, IC-3, IC-5, 6-IC, IC-7, IC-8 SC 9, SC-10, SC-11, SC-12, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.3 Analytical Chemistry in ecology	6.0
	LC-1, LC-2 LC-3, ZK-4, ZK-6 LC-7, HCC-8, LC-9, LC-11, LC-12, LC-13, LC-14, SK- 1, IC-2, IC-3, IC-5, 6-IC, IC-7, IC-8 SC 9, SC-10, SC-11, SC-12, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.4 Physical Chemistry in ecology	6.0

LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.5 Organic Chemistry in ecology	6.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	2.2.6 processes and equipment Environmental Technologies	9.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	2.2.7 Basics of environmental technologies	4.0
LC-1, LC-2 LC-3 LC-5 LC-6 LC-7, HCC-8, ZK-9, SC-1, SC-2, IC-3, IC 4, SK-5 IC-6 IC-7, IC-8, SC-11	SW-1, SW-6, SW-9 RTSMS-2 RTSMS-3 RTSMS-4 RTSMS-5, 6-RTSMS	2.2.8 Mathematical modeling and computer applications in chemical technology	3.0
LC-1, LC-2 LC-3 LC-6 LC-7, HCC-8, LC-12, LC-13, LC-14, LC-15, SC-1, SC-2, SK- 3, SK-5, SK-6 SK-7, SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-1, SW-2, SW 3, SW-7 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-8 PSD-1, PSD-2	2.2.9 Equipment industry	4.0

LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.10 chemicals and water conditioning technology	5.0
LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.11 Radioecology	4.0
LC-1, LC-2 LC-3, ZK-4, ZK-6 LC-7, HCC-8, LC-9, LC-11, LC-12, LC-13, LC-14, SK- 1, IC-2, IC-3, IC-5, 6-IC, IC-7, IC-8 SC 9, SC-10, SC-11, SC-12, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.12 Methods of measuring environmental parameters	4.0
LC-1, LC-3, ZK-4, ZK-12, LC-14, LC-15, SC-1, SC-4, SC-6 SC-8, SC-10, SC-11, SK- 14	SW-1, SW-2, SW 9, SW-11 RTSMS-1 RTSMS-3 RTSMS-6 RTSMS 9	2.2.13 Disposal and recovery of waste	3.0
LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	2.2.14 Wastewater Treatment Technology	4.0
LC-1, LC-3, ZK-4, ZK-7, HCC-15, SC-1, SC-2, IC-3, IC 4 IC-5, SK-6 SK-9 SK- 11, SC-14	SW-1, SW-2, SW-5, SW 8, SW 9, SW-11 RTSMS-1 RTSMS-2 RTSMS-3 RTSMS-7, 9-RTSMS, RPS-1	2.2.15 gas emissions purification technology	4.0
LC-1, LC-3 LC-8, LC-12, LC-13, LC-15, SC-1, SC-2, SC 3, SC-10, SC-13	SW-1, SW 3, SW 8, SW-10 RTSMS-4, PSD-1, PSD-2	02.02.16 Theoretical Foundations of Environmental Protection	6.0

	LC-1, LC-3, ZK-4, ZK-7, HCC-8, LC-12, LC-14, LC-15, SC-1, SC-2, IC-3, IC 4, SK- 5 SC-6 SC-7 SC-8, SC 9, SC-10, SC-11, SC-12, SC-13, SC-14	SW-2, SW 3, SW 4, SW 5, SW-6, SW-7 SW-8, SW 9, SW 10, SW 11, RTSMS-2 RTSMS-3 RTSMS- 4 RTSMS-6 RTSMS-7, 9- RTSMS, PSD-1, PSD-2	2.2.17 Training and Qualifications Bachelor of State certification (DA)	9.0
			<i>Total for Cycle</i>	81.0
			<b>SELECTIVE pieces together</b>	90.0
			<b>TOTAL VOLUME</b>	<b>240</b>



**Table 4.1. Matrix matching software competencies training component disciplines of general training**

Code of discipline curriculum	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.1.9	1.1.10	1.1.11	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5
<b>IK</b>	+															
<b>TSP-1</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<b>LC-2</b>	+		+				+	+							+	+
<b>LC-3</b>		+			+	+	+	+	+	+	+				+	+
<b>ZK-4</b>		+														
<b>LC-5</b>					+											
<b>LC-6</b>					+		+	+							+	+
<b>LC-7</b>			+	+											+	+
<b>LC-8</b>	+		+			+	+	+	+	+	+	+	+		+	+
<b>LC-9</b>	+	+	+		+										+	+
<b>HCC-10</b>	+			+									+	+	+	+
<b>HCC-11</b>	+	+	+	+	+										+	+
<b>HCC-12</b>									+	+	+				+	+
<b>HCC-13</b>							+	+	+	+	+				+	+
<b>HCC-14</b>															+	+
<b>HCC-15</b>						+	+	+	+	+	+				+	+
<b>SC-1</b>						+	+	+	+	+					+	+
<b>SC-2</b>						+	+	+	+	+	+				+	+
<b>SC-3</b>									+	+					+	+
<b>SC-4</b>					+											
<b>SK-5</b>							+	+							+	+
<b>SC-6</b>															+	+
<b>SC-7</b>															+	+
<b>SK-8</b>															+	+
<b>SC-9</b>															+	+
<b>SC-10</b>									+	+						+
<b>SC-11</b>															+	+
<b>SC-12</b>																+
<b>SC-13</b>						+			+						+	+
<b>SC-14</b>															+	+

**Table 4.2. Matrix matching software components competences educational disciplines cycle training**

Code of discipline curriculum	1.2.1	1.2.2	1.2.3	1.2.4	1.2.5	1.2.6	1.2.7	1.2.8	1.2.9	1.2.10	1.2.11	1.2.12	1.2.13	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5	2.2.6	2.2.7	2.2.8	2.2.9	2.2.10	2.2.11	1.2.14	1.2.15	
	+																										
<b>INT</b>	+																										
<b>TSP-1</b>	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	
<b>LC-2</b>	+	+	+	+	+	+	+	+	+	+		+	+								+	+		+	+	+	+
<b>LC-3</b>		+	+	+	+	+	+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<b>ZK-4</b>						+	+	+	+	+	+	+	+	+	+	+	+	+	+			+	+	+	+	+	+
<b>LC-5</b>				+																							
<b>LC-6</b>		+	+	+	+	+	+	+	+	+			+	+		+					+	+					
<b>LC-7</b>	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+		+	+	+	+
<b>LC-8</b>		+	+	+	+	+	+	+	+	+	+	+									+	+		+	+	+	+
<b>LC-9</b>				+		+	+	+	+	+	+	+									+	+					
<b>HCC-10</b>						+															+	+					
<b>HCC-11</b>						+	+	+	+	+				+							+	+					
<b>HCC-12</b>		+	+		+		+	+	+	+	+	+	+						+	+	+	+	+	+	+	+	+
<b>HCC-13</b>	+	+	+		+	+	+	+	+	+	+									+	+		+	+	+	+	+
<b>HCC-14</b>		+	+		+		+	+	+	+		+	+	+					+	+	+	+	+			+	+
<b>HCC-15</b>		+	+		+	+							+		+	+	+	+	+	+	+	+	+	+	+	+	+
<b>SC-1</b>		+	+	+	+		+	+	+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

<b>SC-2</b>		+	+	+	+		+	+	+	+						+	+			+	+		+	+	+	+
<b>SC-3</b>		+	+	+	+		+	+	+	+			+				+	+	+	+	+		+	+	+	+
<b>SC-4</b>				+									+		+		+	+	+			+	+	+		
<b>SK-5</b>		+	+	+	+		+	+	+	+							+			+	+		+	+	+	+
<b>SC-6</b>		+	+	+	+		+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+
<b>SC-7</b>		+	+	+	+		+	+	+	+			+			+	+	+	+	+	+		+	+	+	+
<b>SK-8</b>		+	+	+	+		+	+	+	+			+				+	+	+	+	+	+				+
<b>SC-9</b>		+	+		+		+	+	+	+										+	+		+	+		+
<b>SC-10</b>		+	+		+		+	+	+	+	+	+	+		+		+	+	+	+	+	+	+	+	+	+
<b>SC-11</b>	+	+	+	+	+		+	+	+	+			+		+	+	+	+	+	+	+	+	+	+	+	+
<b>SC-12</b>	+	+	+		+		+	+	+	+		+								+	+		+	+		+
<b>SC-13</b>		+	+		+		+	+	+	+					+	+		+	+	+	+	+	+	+	+	+
<b>SC-14</b>		+	+		+								+		+		+	+	+	+	+					+

**Table 5.1. Matrix Software learning outcomes associated components disciplines of general training**

Code of discipline curriculum	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.1.9	1.1.10	1.1.11	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5
<i>SW-1.</i>									+	+	+				+	+
<i>SW-2.</i>																
<i>SW-3.</i>									+	+	+					
<i>SW-4.</i>											+					+
<i>SW-5.</i>																
<i>SW-6.</i>						+	+	+								
<i>SW-7.</i>															+	
<i>RCS-8.</i>							+	+	+	+	+			+		
<i>SW-9.</i>		+			+	+	+	+							+	+
<i>SW-10.</i>									+	+	+		+	+	+	
<i>SW-11.</i>																
<i>RTSMS-1.</i>			+	+								+	+	+	+	+
<i>RTSMS-2.</i>															+	+
<i>RTSMS-3.</i>			+	+								+	+	+	+	+
<i>RTSMS-4.</i>	+	+	+	+					+	+	+	+	+	+	+	
<i>RTSMS-5.</i>	+	+	+	+								+	+	+		
<i>RTSMS-6.</i>		+			+											
<i>RTSMS-7.</i>		+			+											
<i>RTSMS-8</i>		+			+						+					
<i>RTSMS 9</i>																
<i>RPS-1.</i>						+	+	+	+	+	+					
<i>RPS-2.</i>									+	+	+					

**Table 5.2. Matrix Software learning outcomes associated components disciplinesgeneral training cycle**

Code of discipline curriculum	1.2.1	1.2.2	1.2.3	1.2.4	1.2.5	1.2.6	1.2.7	1.2.8	1.2.9	1.2.10	1.2.11	1.2.12	1.2.13	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5	2.2.6	2.2.7	2.2.8	2.2.9	2.2.10	2.2.11	1.2.14	1.2.15
<i>SW-1.</i>		+	+	+	+		+	+	+	+			+	+	+		+	+	+	+	+	+			+	
<i>SW-2.</i>		+	+		+						+	+	+	+		+	+	+	+	+	+	+	+	+	+	+
<i>SW-3.</i>		+	+		+		+	+	+	+			+				+				+		+	+	+	+
<i>SW-4.</i>											+	+	+									+		+	+	+
<i>SW-5.</i>																	+		+	+	+		+	+	+	+
<i>SW-6.</i>				+													+			+	+		+	+		+
<i>SW-7.</i>		+	+		+						+	+	+							+	+				+	+
<i>RCS-8.</i>							+	+	+	+									+		+		+	+	+	+
<i>SW-9.</i>				+									+	+	+	+	+	+	+	+	+	+	+	+		+
<i>SW-10.</i>					+	+	+	+	+	+			+												+	+
<i>SW-11.</i>													+	+	+	+	+	+	+			+			+	+
<i>RTSMS-1.</i>		+	+		+	+					+	+							+			+	+	+	+	
<i>RTSMS-2.</i>	+	+	+	+	+								+						+	+	+		+	+	+	+
<i>RTSMS-3.</i>	+	+	+	+	+	+							+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>RTSMS-4.</i>	+			+		+	+	+	+	+										+	+		+	+	+	+
<i>RTSMS-5.</i>				+		+																			+	
<i>RTSMS-6.</i>				+									+										+	+	+	+

<i>RTSMS-7.</i>														+						+	+	+		+	+		+
<i>RTSMS-8</i>		+	+		+							+	+								+	+				+	
<i>RTSMS 9</i>												+	+	+			+	+	+	+			+	+	+	+	+
<i>RPS-1.</i>		+	+		+		+	+	+	+									+	+	+		+	+		+	
<i>RPS-2.</i>		+	+		+		+	+	+	+	+	+				+					+		+	+	+	+	+

### III - FORMS CERTIFICATION applicants HIGHER EDUCATION

<p><b>Forms certification candidates Higher Education</b></p>	<p>Mandatory state certification form set performance and protection qualification (diploma) papers (projects).</p> <p>In the state certification system submitted competencies and learning outcomes listed in Sections IV and V.</p> <p>The main means of objective control the degree of achievement of the ultimate goals of education and training are the masters and protection technology of qualification (diploma) papers (projects), which is defined in the following documents: Regulation on the SEC, Guidance for qualification (degree) projects (work ).</p>
<p><b>Requirements for qualifying work (in the presence)</b></p>	<p>Requirements for final qualifying work outlined in the Guidance for qualification (degree) project (work). Final qualifying works accompanied by a supervisor review and review reviewer on which rests the completeness tasks, work quality and its overall check for plagiarism.</p>
<p><b>Requirements for public protection (demonstration) (in the presence)</b></p>	<p>Requirements for public protection set out in the Regulation on the EC and Guidance for qualification (degree) project (work).</p>

#### IV - Requirements presence of internal quality assurance

Determined in accordance with European standards and guidelines on quality assurance (ESG) and Article 16 of the Law of Ukraine "On Higher Education"

<b>The system of internal quality assurance</b>	<b>Definitions, links and documents</b>
<b>The principles and procedures for quality assurance</b>	<ul style="list-style-type: none"> <li>- Law of Ukraine "On education" from 07.01.2014 g. Number 1556-VII;</li> <li>- Temporary regulations on the organization of educational process in SHEE UDHTU (Rector UDHTU Order of 30.11.2015 number 290);</li> <li>- Regulations on honors degree SHEE UDHTU (Rector UDHTU Order of 25.02.2016 number 55);</li> <li>- The provisions on the establishment and organization of the examination commission SHEE UDHTU (Order of 01.04.2015, the rector. Number 68);</li> <li>- The provisions of the development approval and review of work programs of disciplines (Order of Rector UDHTU 01.12.15 №291)</li> </ul>
<b>Monitoring and periodic review of education programs</b>	Annual monitoring requirements of industry and the labor market, watching educational programs, curricula, working programs of disciplines. On approval of the project groups to develop educational programs (Rector UDHTU Order of 10.03.2016 number 74)
<b>The annual evaluation of higher education applicants</b>	Statement On Rector quality control training (Order of 03.17.2014, the rector. №78)
<b>The annual evaluation of science teaching and teaching staff of higher educational institution</b>	<p>Regulations of the Rector control pedagogical skills of teaching staff of the University (Order of the Rector UDHTU 04.04.2016r. №85), The application rating system performance evaluation of teaching staff SHEE UDHTU (Order of 04.06.2010, the rector. Number 209 amended the order dated 09.06.2011 g. Number 147) , The application rating system of evaluation of departments and faculties SHEE UDHTU (Order of 04.06.2010, the rector. number 209).</p> <p>Regular publication of the results of such assessments to the official website of the university, on notice boards and in any other way</p>



<b>Advanced training of scientific and pedagogical, educational and scientific workers</b>	Advanced training of teaching staff is under provisions approved by Mona of 24.01.2013r. Number 48 and the Regulations on training and teaching and training of teaching staff SHEE UDHTU (Order UDHTU Rector of 28.05.2016r. №105)
<b>Having the necessary resources to the educational process</b>	Educational and methodical, logistical and staffing meets licensing requirements (Decree km from 30.12.2015r. Number 1187) educational activities. License series AE №636496. Certificates in the areas of specialties.
<b>Availability of information systems for the efficient management of the educational process</b>	Temporary regulations on the organization of educational process in SHEE UDHTU (Rector UDHTU Order of 30.11.2015 number 290) is supported by information-analytical system of control of the educational process, which consists of subsystems: Applicants educational process.
<b>Publicity of information on educational programs, higher education degrees and qualifications</b>	Information about educational programs, higher education degrees and qualifications is fully public and published on the official web-portal of the University <a href="http://udhtu.com.ua">http://udhtu.com.ua</a>
<b>Prevention and detection of academic plagiarism</b>	Check completeness of tasks, work quality and its overall check for plagiarism carried teacher - supervisor course or thesis (project) in the prescribed manner using appropriate software.