

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

The rector of
«Ukrainian State University of
Chemical Technology»

_____ K.M. Sukhyy
« ____ » _____ 2019 p.

EDUCATION-PROFESSIONAL PROGRAM

Protection and quarantine of plant

The first (bachelor) level

Bachelor

BRANCH OF KNOWLEDGE 20 Agrarian sciences and food

SPECIALTY 202 Protection and quarantine of plant

Approved at a meeting of the
Academic council of
« ____ » _____ 2019 p.
Order № _____

Dnipro
2019

Letter of approval

EDUCATIONAL-PROFESSIONAL PROGRAM

Higher education degree	Bachelor
Branch of knowledge	20 Agrarian sciences and food
Specialty	202 Protection and quarantine of plant
«AGREED»	"DEVELOPERS»
First Vice-Rector, Chairman of the Scientific and Methodological Council _____ <u>Zaychuk O.V.</u> „_____” _____ 2019 .	Project team leader, docent _____ <u>Garmash S.M.</u> „_____” _____ 2019 .
Head of the Scientific-research Center _____ <u>Smotraev R.V</u> „_____” _____ 2019 .	Member of the project team, docent _____ <u>Kuznetsova O.V.</u> „_____” _____ 2019 .
Scientific and methodical department _____ <u>Fomenko G.V.</u> „_____” _____ 2019 .	Member of the project team, docent _____ <u>Bersenina O.V.</u> „_____” _____ 2019 .
Dean of the Faculty _____ <u>Lebid O.S.</u> „_____” _____ 2019 .	
Head of Department _____ <u>Prosyanyk O.V.</u> „_____” _____ 2019 .	

I. PROFILE OF THE BACHELOR EDUCATION-PROFESSIONAL PROGRAM

202 «Protection and quarantine of plant»

Program Profile (General Information)	
Full name of the qualification in the original language	Higher education degree - bachelor, specialty - 202 Protection and quarantine of plant
The official name of the educational program	Educational and professional program "Protection and quarantine of plants" preparation of the bachelor in a specialty 202 Protection and quarantine of plant
Type of diploma and scope of educational program	Bachelor's Degree in Plant Protection and Quarantine, single (double, joint with relevant contracts, training programs); 240 ECTS credits;
Full name of higher education institution awarding the qualification	State higher educational institution "Ukrainian State University of Chemical Technology"
Accrediting organization	Accreditation Commission of Ukraine (State Educational and Training Center for Educational Quality) NAWQOE
Accreditation period	Certificate validity after initial accreditation - 5 years, after repeated - 10 years.
Cycle / level	HPK Ukrain – 6 level, FQ-EHEA – second circle, EQF-LLL – 6 level
Prerequisites	Complete secondary education
Language (s) of teaching	Ukrainian language
A	
	The purpose of the educational program
The purpose of the educational program	To provide education in the field of agricultural sciences and food with wide access to employment, to prepare students who have basic and vocational knowledge and skills in the field of agricultural sciences and food.
B	
	Characteristics of the educational program
Subject area (branch of knowledge, specialty)	Branch of knowledge 20– <i>Agrarian Sciences and Food</i> Specialty 202 – <i>Protection and quarantine of plant</i>
The main focus of the program and specialization	General higher education in agrarian sciences and food
Orientation of the program	The program focuses on the current scientific results of a complex of sciences related to plant protection and quarantine, within which further professional and scientific career of a specialist in plant protection and quarantine is possible.
Features and differences	Regular updates to keep track of trends

C	Ability to find employment and further education
Ability to find employment	Jobs in agricultural, food production, research organizations, research centers, laboratories
Further education	Studying at the second (master's) educational level in master's programs.
D	Teaching style and teaching methodology
Approaches to teaching and learning	Combination of lectures, laboratory, practical and seminar classes, writing of course projects or papers, self-study, preparation of the diploma project.
Assessment methods	Written and oral examinations, tests, differentiated tests, module control, testing, defense of the diploma (bachelor) project.
E	Program competence
Integrated Competence (INT)	Bachelor's Degree (Level 6): The ability to solve complex specialized problems and practical problems in a particular area of professional activity or in the learning process, which involves the application of certain theories and methods of the relevant science and is characterized by the complexity and uncertainty of the conditions
General Competencies (GC)	<p>GC -1. Ability to think abstractly, analyze and synthesize.</p> <p>GC-2. Ability to apply knowledge in practical situations.</p> <p>GC-3. Knowledge and understanding of the subject area and understanding of professional activity.</p> <p>GC-4. Ability to communicate in the state language both verbally and in writing.</p> <p>GC-5. Ability to speak a foreign language, ability to work in a foreign language environment.</p> <p>GC-6. Skills of using information and communication technologies for professional activity.</p> <p>GC-7. Ability to learn and master modern knowledge and search.</p> <p>GC-8. Ability to generate new ideas (creativity).</p> <p>GC-9. Ability to make informed decisions.</p> <p>GC-10. The ability to work as a team.</p> <p>GC-11. Ability to work in an international context.</p> <p>GC-12. Safe Practice Skills.</p> <p>GC-13. The ability to realize their rights and responsibilities as a member of society, to realize the values of civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of man and citizen in Ukraine.</p> <p>GC-14. Ability to preserve and enhance moral, cultural, scientific values and achievements of the society on the basis of understanding of history and patterns of development of the subject</p>

	<p>area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use different types and forms of motor activity for active rest and healthy living.</p> <p>GC-1. Ability to carry out phytosanitary diagnostics of diseases of plants, insects, ticks, nematodes, rodents and weeds according to modern principles and methods.</p> <p>GC-2. Ability to inspect regulated objects to ensure compliance with phytosanitary measures in the process of production, storage, transportation, sale, export, import, transit of plant products.</p> <p>GC-3. Ability to predict the development and spread of harmful organisms.</p> <p>GC-4. Ability to identify, localize and eliminate regulated pests by inspection and phytosanitary expertise.</p> <p>GC-5. Ability to develop and apply plant protection technologies to agricultural and other facilities.</p> <p>GC-6. Ability to assess phytosanitary risks (biological, environmental, economic) due to the introduction or spread of regulated pests.</p> <p>GC-7. Ability to carry out phytosanitary monitoring on identification, identification and identification of peculiarities of biology and ecology of harmful organisms in Ukraine and in accordance with WTO, SPS agreements, European requirements.</p> <p>SK-8. Ability to apply agrotechnical, biological, organizational and economic methods for long-term regulation of the development and spread of harmful organisms to economically insensitive level on the basis of forecast, economic thresholds of harmful organisms, energy-saving and environmental technologies that provide environmental and environmental protection.</p> <p>GC-9. Ability to organize measures for the protection and quarantine of plants by enterprises, institutions, organizations of all forms of ownership and citizens whose activities are related to the use of land, water objects, cultivation of agricultural and other purposes, their implementation, processing, storage and use in accordance with WTO agreements, SPS, European requirements.</p> <p>GC-10. The ability to organize works on the storage, transportation, trade and use of plant protection products aimed at adapting European requirements.</p>
<p>Special (professional) competencies (SC)</p>	<p>SC-1. Ability to carry out phytosanitary diagnostics of diseases of plants, insects, ticks, nematodes, rodents and weeds according to modern principles and methods.</p> <p>SC-2. Ability to inspect regulated objects to ensure compliance with phytosanitary measures in the process of production, storage, transportation, sale, export, import, transit of plant products.</p> <p>SC-3. Ability to predict the development and spread of harmful organisms.</p>

	<p>SC-4. Ability to identify, localize and eliminate regulated pests by inspection and phytosanitary expertise.</p> <p>SC-5. Ability to develop and apply plant protection technologies to agricultural and other facilities.</p> <p>SC-6. Ability to assess phytosanitary risks (biological, environmental, economic) due to the introduction or spread of regulated pests.</p> <p>SC-7. Ability to carry out phytosanitary monitoring on identification, identification and identification of peculiarities of biology and ecology of harmful organisms in Ukraine and in accordance with WTO, SPS agreements, European requirements.</p> <p>SC-8. Ability to apply agrotechnical, biological, organizational and economic methods for long-term regulation of the development and spread of harmful organisms to economically insensitive level on the basis of forecast, economic thresholds of harmful organisms, energy-saving and environmental technologies that provide environmental and environmental protection.</p> <p>SC-9. Ability to organize measures for the protection and quarantine of plants by enterprises, institutions, organizations of all forms of ownership and citizens whose activities are related to the use of land, water objects, cultivation of agricultural and other purposes, their implementation, processing, storage and use in accordance with WTO agreements, SPS, European requirements.</p> <p>SC-10. The ability to organize works on the storage, transportation, trade and use of plant protection products aimed at adapting European requirements.</p>
F	Program learning outcomes
Learning outcomes in the cognitive sphere (RCS)	<p>RCS-1. Apply the basic principles and methods of the humanities and socio-economic sciences in solving social and professional problems.</p> <p>RCS-2. Apply knowledge of basic economic laws to analyze the efficiency of individual industries.</p> <p>RCS-3. Have communication skills, be able to speak clearly and verbally and in writing, communicate freely in a social and professional environment.</p> <p>RCS-4. Know the basic vocabulary of one of the foreign languages, be able to read general and professional texts and convey their essence.</p> <p>RCS-5. Apply methods and cognition tools for self-education for intellectual development and for enhancing one's professional level</p> <p>RCS-6. Use information technology, including state-of-the-art computer graphics tools in your subject area.</p> <p>RCS-7. Perform research and testing of biotechnological equipment of biotechnological industries, laboratories and scientific</p>

	<p>institutions in the process of development, installation, adjustment and operation.</p> <p>RCS-8. Use normative legal documents in their professional activity.</p>
Results of training in the value-motivational sphere	<p>RCMS-1. Analyze social and personality issues, set goals, and choose ways to achieve them.</p> <p>RCMS-2. To be aware of the role and place of science and technology in the history of mankind, with respect for cultural and religious traditions.</p> <p>RCMS-3. To argue your own point of view based on the laws of logic and basic philosophical principles.</p> <p>RCMS-4. Demonstrate and apply basic knowledge in the field of natural sciences, use the basic laws in professional activity, apply methods of mathematical analysis and modeling, theoretical and experimental research.</p> <p>RCMS-5. Ability to demonstrate and use knowledge of theoretical bases of biotechnological processes in biotechnological equipment, apparatus and installations in their design for production and technological activity.</p>
Learning outcomes in the psychomotor sphere	<p>RPS-1. Understand the essence of the problem arising in the course of professional activity, find its solution through appropriate biotechnological process and equipment.</p> <p>RPS-2. To possess basic methods of protection of production personnel and the population from the consequences of possible accidents and catastrophes.</p> <p>RPS-3. Analyze scientific and technical information, study domestic and foreign experience on the subject of research.</p> <p>RPS-4. Formulate the decisions taken, summarize the results obtained and present the work performed in the form of a report.</p> <p>RPS-5. Estimate the production and non-production costs of ensuring the required quality of products.</p> <p>RPS-6. To control the quantitative characteristics of processes that take place in specific technical systems based on existing techniques.</p> <p>RPS-7. Conduct biological and numerical experiments, and develop appropriate experimental stands for this purpose.</p> <p>RPS-8. To develop designs of units of devices of new equipment taking into account necessary requirements.</p> <p>RPS-9. Develop technical documentation in accordance with ESCD requirements.</p> <p>RPS-10. Participate in the design of basic equipment for biotechnological industries and biotechnological processes, taking into account environmental and safety requirements.</p> <p>PIIC-1. RPS-11. Practice safety, industrial sanitation, fire safety and occupational safety standards.</p>

**II. DEFINITIONS 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**

No	Subject	ECTS	Hours	semester	tetramest	Total control
1. Obligatory part						
1.1. Cycle of general training (forms special (professional) competencies)						
1.1.1	History of Ukraine	3,0	90	1	1	Exam
1.1.2	Ukrainian language (by professional direction)	3,0	90	1	2	Exam
1.1.3	Philosophy	5,0	150	2	3,4	Exam
1.1.4	Ukrainian culture history	2,0	60	2	4	Offset
1.1.5	Foreign language (by professional direction)	8,0	240	1,2	1,2, 3,4	Offset exam
1.1.6	Higher Mathematics	8,0	240	1,2	1,2, 3,4	Exam
1.1.7	Computer science and information technology	6,0	180	4	7, 8	Exam
1.1.8	Physics	8,0	240	2,3	3,4, 5,6	Exam
1.1.9	General and inorganic chemistry	10, 0	300	1	1,2	exam.
1.1.10	Organic chemistry	6,0	180	2	3,4	Exam
1.1.11	Analytical chemistry	6,0	180	3	5,6	Exam
1.1.12	Physical and colloidal chemistry	6,0	180	4	7,8	Exam
1.1.13	Biochemistry	8,0	240	3,4	5,6, 7,8	offse, exam
1.1.14	Engineering and computer graphics	4,0	120	1,2	1,2, 3,4	Offset
1.1.15	Ecology	2,0	60	1	1	Offset
1.1.16	Physical education (without credits)	0,0		1,2 3,4	1-8	Offset

		<i>Together per cycle 1.1</i>		<i>81</i>	<i>2430</i>		
1.2. Cycle of professional training (forms special (professional) competencies)							
1.2.1	General entomology	6,0	180	3	5,6	Offset	
1.2.2.	General microbiology	7	210	4,5	7,8, 9,1 0	offset, exam	
1.2.3.	Plant immunity	4	120	4	8	Offset	
1.2.4	Plant genetic resources	5,0	150	3,4	5,6, 7,8	offset, exam	
1.2.5	Safety of life	2,0	60	1	2	Offset	
1.2.6	Basics of labor protection	3,0	90	7	14	Exam	
1.2.7	Chemical protection of plants with the basics of agrotexicology	7,0	210	5,6	9,1 011 , 12	offse, exam	
1.2.8	Agrochemistry	4,0	120	7	13, 14	Exam	
1.2.9	Cytology	4,0	120	4	7	Offset	
1.2.10	Integrated plant protection	4,0	120	6	11, 12	Offset	
1.2.11	General phytopathology	8	240	5, 6	9,1 0,1 1,1 2	offset, exam	
1.2.12	Basics of plant quarantine	5,0	150	6	11, 12	Offset	
1.2.13	Biological basis of plant growing	3,0	90	3	5,6	Exam	
1.2.14	Mathematical modeling and application of EOM	4	120	6	11, 12	Offset	
1.2.15	Phytosanitary monitoring and prognosis for plant protection	6	180	7,8	14, 15	Offset	
1.2.16	Production practice	6,0	180		16	Offset	
1.2.17	Bachelor qualification work and state certification	9,0	270				
	Total per cycle 1.2	87	2610				
	Total	168	5040				

2. Selective Part

2.1. General training cycle (generates competencies)

2.1.1	Plant physiology	5	150	5	9, 10	Exam
2.1.2	Economic theory	2,0	60	4	7	Offset
2.1.3	Law	3,0	90	2	3	Offset
2.1.4	Agropharmacology	7,0	210	6	11, 12	Exam
2.1.5	Plant growing with the basics of feed production	10,0	300	5, 6	9, 10, 11, 12	offset, exam.
2.1.6	Plant quarantine	4,0	120	3	5,6	Exam
2.1.7	Pesticide toxicology	6,0	180	7, 8	13, 15	offset, exam.
2.1.8	Plant protection test methods	6,0	180	5	9, 10	Offset
Total per cycle 2.1		43	1290			
2.2. Cycle of professional training (forms special (professional) competencies)						
2.2.1	Integrated systems for the protection of agricultural crops	4,0	120	8	15	Offset
2.2.2	Modern problems of agroecology	6,0	180	7, 8	13-15	Offset
2.2.3	Plant protection biotechnology	6,0	180	7,8	14-15	Exam
2.2.4	Soil science and plant nutrition	6,0	180	7, 8	13-15	offset, exam
2.2.5	Quarantine disinfection	7,0	2100	7	13-14	Offset
Total per cycle 2.2		29	870			
SELECTIVE PART TOTAL		72	2160			
TOTAL VOLUME		240	7200			

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

№ п/п	Preparation cycle	Higher education student load (credits /%)		
		Compulsory components of a professional education program	Selective components of a professional education program	Total for the whole term of study
1.	General training cycle (generates competencies)	81 / 34	43 / 19	124 / 53
2.	Training cycle (forms special (professional) competences)	87 / 35	29 / 11	116 / 46
Total for the whole term of study		1687 / 69	72 / 29	240 / 99

Table 3. The list of disciplines of the educational and professional training program for first-time (bachelor) level students, the teaching time in ECTS credits by training cycles, and the list of competences and learning outcomes formed

Training cycles	Competency Codes	Learning outcomes codes	List of disciplines	ECTS credits
1	2	3	4	5
1.1. Required part General training cycle (generates competencies)	GC-1, GC-2, GC-3, GC-4, GC-5, GC-7, GC-8, GC-9, GC-11, GC-12, GC-13	RCS-1, RCS-3	<u>1.1.1History of Ukraine</u>	3,0
	GC-1, GC-2, GC-4, GC-5, GC-7, GC-8, GC-9, GC-11, GC-12	RCS-1, RCS-3	1.1.2. Ukrainian language (by professional direction)	3,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-7, GC-8, GC-9, GC-11, GC-12	RCS-1, RCS-3, RCS-5, RCMS-1, RCMS-2, RCMS-3	1.1.3. Philosophy	4,0
	GC-1, GC-2, GC-4, GC-5, GC-7, GC-8, GC-9, GC-11, GC-12, GC-13	RCS-1, RCS-3, RCMS-1, RCMS-2	1.1.4.Ukrainian culture history	2,0
	GC-2, GC-3, GC-4, GC-5, GC-7, GC-9, GC-10, GC-11, GC-12	RCS-3, RCS-4	1.1.5. Foreign language (by professional direction)	5,0
			1.1.6. Higher	

	GC-1, GC-2, GC-3, GC-4, GC-5, GC-7, GC-9, GC-11, SC-1, SC-2, SC-3, SC-6, SC-9	RCMS-4, RPS-5	mathematics	8,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-7, GC-9, GC-11, SC-1, SC-2, SC-3, SC-4, SC-6, SC-9	RCMS-4, RPS-5	1.1.7. Informatics and information technologies	6,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, SC-1, SC-3	RCMS-4	1.1.8. Physics	8,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, SC-1, SC-3	RCMS-4	1.1.9. General and inorganic chemistry	10,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, SC-1, SC-3	RCMS-4	1.1.10. Organic chemistry	6,0

	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, SC-1, SC-3	RCMS-4	1.1.11. Analytical chemistry	6,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, SC-1, SC-3	RCMS-4	1.1.12. Physical and colloidal chemistry	6,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, SC-1, SC-3, SC-5, SC-6	RCMS-4	1.1.13. Biochemistry	8,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-7, GC-9, GC-10, GC-11, SC-1, SC-3, SC-7, SC-9	RCS-6, RCMS-4	1.1.14. Engineering and computer graphics	4,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9,	RCMS-4, RPS-2	1.1.15. Ecology	2,0

	GC-10, GC-11, GC-12, GC-13, SC-1, SC-3			
	GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-11, GC-12, GC-13, SC-1, SC-3	RCMS-4	1.1.16. Physical Education (Off Credit)	0,0
			ALL 1.1	81
	GC-3, GC-5, GC-7, GC-9, GC-13, SC-1, SC-5, SC-8	RCMS-4, RCMS-5	2.1.1. Plant physiology	6,0
	GC-1, GC-5, GC-7,	RCS-1, RCS-2, RCMS-1	2.1.2 Economic theory	2,0
	GC-5, GC-7, GC-8, GC-12, GC-13	RCS-1, RCS-8, RCMS-1	2.1.3 Jurisprudence	3,0
	GC-3, GC-5, GC-7, GC-10, GC-13, SC-1, SC-3, SC-5, SC-9	RCMS-4, RPS-7	2.1.4 Agropharmacology	6,0
	GC-3, GC-5, GC-7, SC-1, SC-2, SC-4, SC-6	RCS-6, RPS-7	2.1.5 Plant growing with the basics of feed production	10,0
	GC-3, GC-5, GC-7,	RCMS-4, RCMS-5	2.1.6 Plant quarantine	5,0

	GC-9, GC-13, SC-1, SC-5, SC-8			
	GC-3, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, SC-1, SC-3, SC-5, SC-8, SC-9, SC-10, SC-11	RCMS-4, RCMS-5, RPS-7	2.1.7 Pesticide toxicology	6,0
	GC-3, GC-5, GC-7, GC-9, GC-10, SC-1, SC-4, SC-5, SC-8, SC-9	RCS-7, RCMS-4, RCMS-5, RPS-6, RPS-7	2.1.11 Plant protection test methods	7,0
			ALL 2.1	43
	TOTAL FOR THE CYCLE OF GENERAL TRAINING			124
1.2 Required part	GC-5, GC-7, GC-13, SC-1, SC-3	RCS-3, RCS-4, RCS-5, RCS-6, RCMS-2, RCMS-3, RCMS-4, RPS-3, RPS-7	1.2.1 General Entomology	6,0
Training cycle (forms special (professional) competences)	GC-5, GC-7, SC-1, SC-3, SC-5	RCS-3, RCS-4, RCS-5, RCS-6, RCMS-2, RCMS-3, RCMS-4, RPS-3, RPS-7	1.2.2. General microbiology	7,0
	GC-5, GC-7, SC-1, SC-3, SC-5	RCS-3, RCS-4, RCS-5, RCS-6, RCS-7, RCMS-2,	1.2.3. Plants immunity	4,0

		RCMS-3, RCMS-4, RPS-3, RPS-7		
	GC-5, GC-7, SC-1, SC-3	RCS-3, RCS-4, RCS-5, RCS-6, RCMS-2, RCMS-3, RCMS-4, RPS-3, RPS-7	1.2.4 Plant genetic resources	5,0
	GC-5, GC-6, GC-7, GC-13, SC-1, SC- 14,SC-16	RPS-2, RPS-11	1.2.5 Safety of life	2,0
	GC-5, GC-6, GC-7, GC-13, SC-1, SC- 14,SC-16	RPS-2, RPS-11	1.2.6 Fundamentals of Occupational Safety	3,0
	GC-3, GC-5, GC-7, SC-1, SC-5, SC-10, SC-12, SC-15, SC- 17	RCS-7, RCMS-5, RPS-8, RPS-10	1.2.7 Chemical protection of plants with the basics of agro- toxicology	7,0
	GC-3, GC-5, GC-7, SC-1, SC-5, SC-10, SC-12, SC-15, SC- 17	RCS-7, RCMS-5, RPS-8, RPS-10	1.2.8 8 Agrochemistry	4,0
	GC-3, GC-5, GC-7, SC-1	RCS-6	1.2.9 Cytology	4,0
	GC-3, GC-5, GC-7, SC-1, SC-5, SC-15	RCS-7, RCMS-5, RPS-4	1.2.10 Integrated plant protection	4,0
	GC-3, GC-5, GC-7, SC-1, SC-5, SC-7,	RCS-7, RCS-8, RPS-9	1.2.11 General phytopathology	8,0

2.2 Selective part Training cycle (forms special (professional) competences)	SC-13			
	GC-3, GC-5, GC-7, SC-1, SC-5, SC-8, SC-11, SC-12, SC- 14, SC-15, SC-17	RCS-7, RCMS-5, RPS-1, RPS-4, RPS-8, RPS-10	1.2.12 Quarantine Basics	5,0
	GC-5, GC-7, GC- 11, SC-1, SC-5, SC-8, SC-15	RCS-1, RCS- 2, RCMS-5, RPS-8	1.2.13 The biological basis of plant production	5,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-7, GC-9, GC-11, SC-1, SC-2, SC-3, SC-4, SC-6, SC-9	RCMS-4, RPS-5	1.2.14. Mathematical modeling and application of EOM	4,0
	GC-5, GC-7, SC-1, SC-3, SC-5	RCS-3, RCS-4, RCS-5, RCS-6, RCMS-2, RCMS-3, RCMS-4, RPS-3, RPS-7	1.2.15. Phytosanitary monitoring and prognosis for plant protection	5
	GC-3, GC-5, GC-7, GC-9, GC-10, SC-1, SC-5, SC-8, SC-9, SC- 11, SC-17	RCS-7, RCMS-4, RCMS-5, RPS-3, RPS-4, RPS-5, RPS-6, RPS-7, RPS-11	1.2.16. Production practice	6
	GC-3, GC-5, GC-7, GC-9, GC-10, SC-1, SC-5, SC-8, SC-9, SC- 11, SC-17	RCS-7, RCMS-4, RCMS-5, RPS-3, RPS-4, RPS-5, RPS-6, RPS-7, RPS-11	1.2.17. Bachelor qualification work and state certification	9,0
			ALL 1.2	87

GC-3, GC-5, GC-7, GC-9, GC-13, SC-1, SC-3, SC-5, SC-15, SC-17	RCS-7, RCMS-4, RCMS-5, RPS-1	2.2.1. Integrated systems for the protection of agricultural crops	3,0
GC-3, GC-5, GC-7, GC-9, GC-13, SC-1, SC-3, SC-5, SC-15, SC-17	RCS-7, RCMS-4, RCMS-5, RPS-1	2.2.2. Modern problems of agroecology	6,0
GC-3, GC-5, GC-7, GC-9, SC-1, SC-3, SC-5	RCS-7, RCMS-4, RCMS-5	2.2.3. Plant protection biotechnology	5,0
GC-3, GC-5, GC-7, GC-9, SC-1, SC-3, SC-5, SC-15, SC-17	RCS-7, RCMS-4, RCMS-5, RPS-1, RPS-4, RPS-5	2.2.4. Soil science and plant nutrition	6,0
GC-3, GC-5, GC-7, GC-9, GC-13, SC-1, SC-3, SC-5, SC-6, SC-15, SC-17	RCS-7, RCMS-4, RCMS-5, RPS-1, RPS-5, RPS-7	2.2.5. Quarantine disinfection	4,0
		ALL 2.2	29
ALL FOR THE WHOLE OF PROFESIONAL TRAINING			116
TOTAL VOLUME			240,0

Table 4. Matrix of correspondence competences to educational program components

Code of subject for the 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	1.1.12	1.1.13	1.1.14	1.1.15	1.1.16
INT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-1	+	+	+	+		+	+	+	+	+	+	+	+	+	+	
GC-2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-3	+		+		+	+	+	+	+	+	+	+	+	+	+	+
GC-4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-6								+	+	+	+	+	+		+	+
GC-7	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-8	+	+	+	+											+	+
GC-9	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-10					+			+	+	+	+	+	+	+	+	+
GC-11	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-12	+	+	+	+	+										+	+
GC-13	+			+				+	+	+	+	+	+		+	+
SC-1						+	+	+	+	+	+	+	+	+	+	
SC-2						+	+									
SC-3						+	+	+	+	+	+	+	+	+	+	

SC-4							+									
SC-5														+		
SC-6						+	+							+		
SC-7															+	
SC-8																
SC-9						+	+									
SC-10															+	
SC-11																
SC-12																
SC-13																
SC-14																
SC-15																
SC-16																
SC-17																

Table 5. Matrix of ensuring the results of the training program with the relevant components of the Educational - professional program

Code of subject for the 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	1.1.12	1.1.13	1.1.14	1.1.15	1.1.16
RCS-1.	+	+	+	+												
RCS-2.																
RCS-3.	+	+	+	+	+											
RCS-4.					+											
RCS-5.			+													
RCS-6.														+		
RCS-7.																
RCS-8.																
RCMS-1.			+	+												
RCMS-2.			+	+												
RCMS-3.			+													
RCMS-4.						+	+	+	+	+	+	+	+	+	+	+
RCMS-5.																
RPS-1.																
RPS-2.															+	
RPS-3.																

<i>RPS-4.</i>																	
<i>RPS-5.</i>						+	+										
<i>RPS-6.</i>																	
<i>RPS-7.</i>																	
<i>RPS-8.</i>																	
<i>RPS-9.</i>																	
<i>RPS-10.</i>																	
<i>RPS-11.</i>																	

Table 6. Matrix of correspondence program competences to the educational components

Code of subject for the curriculum	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	2.1.8	2.1.9	2.1.10	2.1.11	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5
IHT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-1	+	+								+						
GC-2									+							
GC-3				+	+	+	+	+	+		+	+	+	+	+	+
GC-4																
GC-5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-6							+	+								
GC-7	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-8	+		+													
GC-9						+	+	+	+	+	+	+	+	+	+	+
GC-10				+			+	+			+					
GC-11							+	+		+						
GC-12			+													
GC-13			+	+		+	+	+		+		+	+			+
SC-1				+	+	+	+	+	+	+	+	+	+	+	+	+
SC-2					+				+							

SC-3				+			+	+		+		+	+	+	+	+
SC-4					+				+		+					
SC-5				+		+	+	+		+	+	+	+	+	+	+
SC-6					+			+								+
SC-7																
SC-8						+	+	+		+	+					
SC-9				+			+	+	+		+					
SC-10							+	+								
SC-11							+									
SC-12								+								
SC-13																
SC-14								+								
SC-15								+				+	+		+	+
SC-16																
SC-17								+				+	+		+	+

Table 7. Matrix of ensuring the results of the training program with the relevant components of the Educational - professional program

Code of subject for the curriculum	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5	2.1.6	2.1.7	2.1.8	2.1.9	2.1.10	2.1.11	2.2.1	2.2.2	2.2.3	2.2.4	2.2.5
<i>RCS-1.</i>	+	+	+													
<i>RCS-2.</i>		+														
<i>RCS-3.</i>	+															
<i>RCS-4.</i>																
<i>RCS-5.</i>										+						
<i>RCS-6.</i>					+											
<i>RCS-7.</i>								+			+	+	+	+	+	+
<i>RCS-8.</i>			+													
<i>RCMS-1.</i>	+	+	+													
<i>RCMS-2.</i>										+						
<i>RCMS-3.</i>																
<i>RCMS-4.</i>				+		+	+	+			+	+	+	+	+	+
<i>RCMS-5.</i>						+	+	+			+	+	+	+	+	+
<i>RPS-1.</i>								+				+	+		+	+

<i>RPS-2.</i>																
<i>RPS-3.</i>									+							
<i>RPS-4.</i>									+						+	
<i>RPS-5.</i>									+						+	+
<i>RPS-6.</i>									+			+				
<i>RPS-7.</i>				+	+		+	+	+	+	+					+
<i>RPS-8.</i>																
<i>RPS-9.</i>																
<i>RPS-10.</i>																
<i>RPS-11.</i>																

Table 8. Matrix of correspondence of program competences to educational components

Code of subject for the 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	1.2.14	1.2.15
IHT	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-1															
GC-2															+
GC-3							+	+	+	+	+	+		+	+
GC-4															
GC-5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-6					+	+									
GC-7	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-8															+
GC-9														+	+
GC-10														+	+
GC-11													+		
GC-12															
GC-13	+				+	+									+
SC-1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SC-2															

SC-3	+	+	+	+											
SC-4															
SC-5		+	+				+	+		+	+	+	+	+	+
SC-6															
SC-7											+				
SC-8												+	+	+	+
SC-9															+
SC-10							+	+							
SC-11												+			+
SC-12							+	+				+			
SC-13											+				
SC-14					+	+						+			
SC-15							+	+		+		+	+	+	
SC-16					+	+									
SC-17							+	+				+			+

Table 9. Matrix of ensuring the results of the training program with the relevant components of the Educational - professional program

Code of subject for the 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	1.2.14	1.2.15
<i>RCS-1.</i>													+		
<i>RCS-2.</i>													+		
<i>RCS-3.</i>	+	+	+	+											
<i>RCS-4.</i>	+	+	+	+											
<i>RCS-5.</i>	+	+	+	+											
<i>RCS-6.</i>	+	+	+	+					+						
<i>RCS-7.</i>			+				+	+		+	+	+		+	+
<i>RCS-8.</i>											+				
<i>RCMS-1.</i>															
<i>RCMS-2.</i>	+	+	+	+											
<i>RCMS-3.</i>	+	+	+	+											
<i>RCMS-4.</i>	+	+	+	+										+	+
<i>RCMS-5.</i>							+	+		+		+	+	+	+
<i>RPS-1.</i>												+			

<i>RPS-2.</i>					+	+									
<i>RPS-3.</i>	+	+	+	+										+	+
<i>RPS-4.</i>										+		+		+	+
<i>RPS-5.</i>														+	+
<i>RPS-6.</i>														+	+
<i>RPS-7.</i>	+	+	+	+										+	+
<i>RPS-8.</i>							+	+				+	+		
<i>RPS-9.</i>											+				
<i>RPS-10.</i>							+	+				+			
<i>RPS-11.</i>					+	+								+	+

III - FORMS OF CERTIFICATES FOR HIGHER EDUCATION APPLICANTS

<p>Forms of certificates for higher education applicants</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 bachelors is the technology of execution and protection of qualification (diploma) works (projects), which is defined in the following documents: Decree on NEC, Methodological instructions for the completion of diploma projects (works)</p>
<p>Requirements for final qualification work (in the presence)</p>	<p>The requirements for the final qualification work are set out in the Guidelines for the completion of diploma projects (works).</p> <p>It is not allowed to regulate the volume (number of pages) and structure of work.</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>Certification / Uniform Qualification Exam Requirements (exams) (in the presence)</p>	
<p>Requirements for public protection (demonstration) (in the presence)</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

Components of the internal quality assurance system of higher education	Definitions, references and related documents
Principles and procedures for quality assurance of education	<ul style="list-style-type: none"> - Law of Ukraine "On Higher Education" of 01.07.2014 № 1556-VII; - - Provisional Regulation on the Organization of the Educational Process at university (Order of the rector № 290 of 30.11.2015); - - Regulations on diploma with honors of university (Order from February 25, 2016 No. 55); - - Regulations on the procedure for setting up and organizing the work of the examination commission at the university (Order of the Rector № 68 of 01.04.2015); - Regulations on the development of approval and revision of work programs of educational disciplines (order of the rector of 01.12.15 №291)
Monitoring and periodic review of educational programs	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 the project teams for the development of educational programs (Order of the Rector from 10.03.2016 № 74)
Annual evaluation of higher education applicants	Regulations on the organization of the rectorial control of the quality of training (Order of the rector of March 17, 2014 № 78)
Annual evaluation of scientific-pedagogical and pedagogical staff of higher education institution	<p>Regulations on the Rector's Control Commission of pedagogical skills of scientific and pedagogical workers of the university (Order of the Rector of 04.04.2016, №85), Procedure of application of the rating system of evaluation of the activity of scientific and pedagogical workers, Procedure for applying the rating system for evaluating the activities of the departments and departments (Order of the Rector of 20.06.2010, № 209).</p> <p>Regular publication of the results of such assessments on the official website of the institution of higher</p>

	education, on information stands and in any other way
Improvement of qualification of scientific-pedagogical, pedagogical and scientific workers	Improvement of qualification of scientific and pedagogical staff is carried out in accordance with the provision approved by the order of the Ministry of Education and Science of Ukraine dated 24.01.2013 № 48 and the Regulations on the Training and Internship of Pedagogical and Research workers (order of rector of 28.05.2016. №105)
Availability of necessary resources to organize the educational process	Educational and methodological, logistical and personnel support of the licensed conditions (Resolution of the CM dated December 30, 2015 № 1187) of educational activity. License Series AE No. 636496. Certificates in areas of training and specialties.
Availability of information systems for effective management of the educational process	The Temporary Provision on the Organization of the Educational Process (Order of the Rector № 290) is supported by the Information-analytical system of control of the educational process, which consists of subsystems: Entrant, Educational process.
Publicity of information on educational programs, degrees of higher education and qualification	Information about educational programs, degrees of higher education and qualification is publicly and fully published on the official web-portal of the University http://udhtu.com.ua
Preventing and detecting academic plagiarism	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 with the use of appropriate software of the program.