MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
STATE BIOTECHNOLOGICAL UNIVERSITY

EDUCATIONAL AND PROFESSIONAL PROGRAM
«AGRONOMY»

LEVEL OF HIGHER EDUCATION – First (Bachelor)

DEGREE OF HIGHER EDUCATION – Bachelor

SPECIALITY – H1 Agronomy

FIELD OF KNOWLEDGE – H "Agriculture, Forestry, Fisheries and Veterinary Medicine"

EDUCATIONAL QUALIFICATION – Bachelor in Agronomy

APPROVED by the Scientific Council of
The State Biotechnological University
protocol №__ «__»_____2025
та вводиться в дію з «01» September 2025

Acting Rector

_____/Andrii Kudryashov /

Kharkiv – 2025

INTRODUCTION

Developed by the project team consisting of:

The head of the project group (the guarantor of the educational and professional program):	***Romanov Oleksii Vasylovych*** **–** Dean of the Faculty of Agronomy and Plant Protection, PhD in Agricultural Sciences, Associate Professor.
Members of the group:	***Dehtiarov Vasyl Volodymyrovych*** – Head of the Department of Soil Science, Doctor of Agricultural Sciences, Professor ***Kuts Oleksandr Volodymyrovych*** – Associate Professor of the Department of Crop Production, Doctor of Agricultural Sciences, Senior Research Fellow ***Mulenok Yana Oleksandrivna*** – Senior Lecturer of the Department of Horticulture and Storage of Crop Products, PhD in Agricultural Sciences ***Havva Dmytro Viktorovych*** – Associate Professor of the Department of Soil Science, PhD in Agricultural Sciences, Associate Professor

External Stakeholders' Reviews and Feedback:

Borovyk Serhii Oleksandrovych **–** Head of the Alumni Council of the Faculty of Agronomy and Plant Protection at DBTU, Chief Agronomist of STOV "Kolos 2000", Ternova village, Chuhuiv district, Kharkiv region;
Skoromnyi Serhii Vasylovych **–** Director of the Micronutrient Department at LLC "Spektr-Agro", PhD in Agricultural Sciences, Associate Professor;
Oliinyk Viktoriia Serhiivna **–** Agrochemist at the agricultural holding "Astarta-Kyiv".

1. Profile of the educational and professional program «Agronomy» speciality 201 «Agronomy»

1. General Information	
1.1. The full name of the institution of higher education and structural department	State Biotechnological University. Faculty of Agronomy and Plant Protection. Department of Agrochemistry. Department of Genetics, Breeding, and Seed Production. Department of Soil Science. Department of Agriculture and Herbology named after O.M. Mozheyko. Department of Horticulture and Storage of Plant Products. Department of Crop Production.
1.2. Degree of higher education and educational qualification	Bachelor Bachelor in Agronomy
1.3. Official name of the Educational and Professional Program	Educational and Professional Program "Agronomy" of the First (Bachelor's) Level of Higher Education Specialty: H1 "Agronomy" Field of Knowledge: H "Agriculture, Forestry, Fisheries, and Veterinary Medicine"
1.4. Type of diploma and the volume of the Educational and Professional Program	Bachelor's Degree, single diploma; 240 ECTS credits; Duration of study – 3 years and 10 months
1.5. Availability of Accreditation	Accreditation Certificate Series UD No. 21000703, in accordance with the decision of the Accreditation Commission dated June 30, 2015, Protocol No. 117 (Order of the Ministry of Education and Science of Ukraine dated July 3, 2015 No. 1683л) (based on the Order of the Ministry of Education and Science of Ukraine dated December 19, 2016 No. 1565)
1.6. Cycle/level	First (Bachelor's) Level of Higher Education; Ukrainian National Qualifications Framework (NQF) – Level 6; QF-EHEA – First Cycle; EQF-LLL – Level 6
1.7. Admission Requirements:	Completion of full general secondary education Possession of a "Junior Bachelor" degree or an educational-qualification level of "Junior Specialist"
1.8. Language of teaching	Ukrainian
1.9. Expire date of the Educational and Professional Program	
1.10. Internet address of the location of the description of the Educational and Professional Program	
2. . Purpose of the Educational and Professional Program	
Training of highly qualified specialists in the field of agrarian sciences and food production by developing in higher education applicants a set of knowledge, skills, and competencies to be applied in professional activities in the field of agronomy. The focus is on solving complex tasks related to the organization and technology of high-quality and environmentally safe agricultural production, as well as balanced use of natural resources through theoretical and practical training. The program ensures elite education that fosters conditions for creative development, academic mobility, international recognition, and compliance with the high demands of the labor market for	

a new generation of specialists capable of working in a rapidly changing, multifunctional environment. It also aims to prepare intellectual resources capable of addressing national, European, and global challenges.	
3. Characteristic of the educational and professional program	
3.1. Field of subject (field of knowledge, speciality, spacialization)	**Field of Knowledge** – H "Agriculture, Forestry, Fisheries, and Veterinary Medicine" **Specialty** – H1 "Agronomy" **Object of Study and Professional Activity:** Technological processes for cultivating agricultural crops. **Educational Goals:** To develop in higher education students a set of knowledge, skills, and competencies applicable to professional activities in the field of agronomy. The program is aimed at solving complex tasks related to the organization and technology of producing high-quality, environmentally safe agricultural products and promoting sustainable use of natural resources through both theoretical and practical training. **Objects of Professional Activity for Bachelors Include:** Agricultural crops and their varieties (hybrids) Breeding processes Agro-landscapes Natural forage lands Soil and the preservation and enhancement of its fertility Fertilizers Harmful organisms and means of plant protection Technologies for production, storage, and primary processing of plant products **Methods, Techniques, and Technologies:** General scientific methods (hypothesis, experiment, analysis, induction, deduction, modeling, generalization) Specialized methods used in agronomy research (laboratory, vegetation, lysimetric, vegetation-field, field methods) Statistical data analysis methods Agronomic techniques General crop cultivation technologies **Tools and Equipment:** Equipment, machinery, and software required for laboratory, laboratory-field, and field research in agronomy
3.2. Nature of the Educational and Professional Program	Educational and applied. It focuses on the concepts, principles, and ideas of natural sciences and their application to achieve high and sustainable yields of agricultural crops. It covers technological processes of crop cultivation.
3.3. Main Focus of the Educational and Professional Program and Specialization	**General:** Study of the principles, practical foundations, methods, and approaches related to: Processes occurring in agricultural crop stands and soils; Fundamental and applied issues of the creation, functioning, selection, environmental impact of agricultural crops, technologies for their cultivation, crop rotations, fertilizers, agricultural machinery, etc.; Organization of multifunctional agricultural production, complex agricultural crop systems and their ecosystem functions, rational land use, and fertility forecasting; Use of remote sensing methods in agriculture;

	Technologies for growing crops, rational soil tillage, and crop care; Increasing productivity and improving the quality of agricultural products. **Special:** Zonal and localized features of arable land use and key components of farming systems; Measures to preserve and enhance soil fertility, improve crop rotation productivity with consideration of production ecologization; Development of weed vegetation in agrocenoses and integrated systems for weed control in crop stands; Crop norming and rational crop/agro-background load in sowing area structure, crop rotation, evaluation of predecessors, ecological and economic assessment of crop rotations; Soil tillage systems aimed at resource conservation and soil erosion control, considering adaptation of mechanical tillage to natural and production conditions; Qualitative and quantitative indicators of soil fertility, biological activity, and nutrient conditions depending on methods of intensifying agricultural production; Energy analysis of production processes and the efficiency of farming systems; Biological characteristics and patterns of crop growth, development, and yield formation depending on cultivation technologies, reclamation, and anti-erosion measures; Use of reclaimed and low-productivity lands with the broad implementation of alternative and biological methods to restore soil fertility, environmentally-oriented production, land conservation, and sustainable land use; Theoretical and practical foundations of fertilizer use, considering soil-climatic, agro-technical, agrochemical, and varietal-genetic features of crops; Fertilizer transformation processes in the soil, mobilization and immobilization of nutrients, quantitative and qualitative forecasting of fertilizer efficiency to optimize crop nutrition; Express methods for diagnosing plant nutrition and assessing agricultural product quality; Modern principles of breeding, evaluation of the integral breeding value of initial and breeding material; Theoretical and practical foundations of open-field and greenhouse vegetable production; Influence of environmental conditions on vegetable crops and methods for their optimization in open and protected ground; Vegetable production, quality improvement, and diversification of vegetable crop assortments; Energy-saving technologies using high-yielding, disease- and pest-resistant varieties and hybrids; Theoretical and practical foundations of standardization and quality management in vegetable production; Theoretical and practical foundations of ecological-biological crop production; Organization of different forms and systems of crop production on an ecological-biological basis;

	Technologies for cultivating crops of varying intensification levels under different natural conditions; Agro-measures for pest and disease prevention and control; Organization of crop production based on landscape-oriented land management. **Keywords:** agricultural crops, natural forage lands, vegetables, seeds, fertilizers, yield programming, soil, fertility, reclamation, agro-landscapes, breeding process, varieties, hybrids, seed production, pests, diseases, weeds, plant protection, crop rotation, predecessor, soil tillage, yield, cultivation technologies, storage and primary processing of crop production.
3.4. Specifics of the Educational and Professional Program	The program is implemented within academic groups of students. It includes 156 ECTS credits allocated for mandatory academic disciplines, of which 45 ECTS credits are for general training courses. Additionally, the block of elective disciplines includes another 9 ECTS credits of general training subjects. A total of 165 ECTS credits are allocated for professional training disciplines, including 54 ECTS credits for elective courses. 15 ECTS credits are assigned to industrial internship, and 3 ECTS credits each are provided for the preparation and defense of the qualification thesis. The practical component of the program ensures the development of hands-on agronomic skills through training in production facilities, research and production institutions, the experimental field, and the departmental laboratories of DBTU. The industrial internship component accounts for 15 ECTS credits. The program also allows students to acquire practical skills through elements of the dual form of education, which involves on-the-job training at enterprises, institutions, and organizations aimed at obtaining a certain qualification. This can constitute 15% to 60% of the total program volume, based on a contractual agreement. On-the-job training includes performing official duties as specified in the employment contract. Dual education is conducted based on a contract between the higher education institution and the employer (enterprise, institution, organization, etc.) with the support of the European Bank for Reconstruction and Development (EBRD), and includes: - procedures for the employment and remuneration of the higher education student; - the volume and expected learning outcomes at the workplace; - obligations of the educational institution and employer regarding the student's individual learning plan at the workplace; - the procedure for assessing learning outcomes acquired at the workplace. The list of elective disciplines offered to students to shape their individual learning trajectory includes educational components aimed at strengthening competencies in the fields of: *Agronomy, Breeding and Genetics of Agricultural Crops, Horticulture and Vegetable Growing, Agrochemistry and Soil Science*
4. Employability and Further Education Opportunities of Graduates	
4.1. Employability	Graduates are qualified for administrative and managerial positions in the field of agricultural production, as well as in environmental protection.

	Job Titles According to the Ukrainian Occupational Classification: According to the current version of the National Classifier of Ukraine (Classifier of Occupations DK 003:2010) and the International Standard Classification of Occupations 2008 (ISCO-08), a graduate may be employed in the following professional roles: (1221.1) Chief Agronomist (1221.1) Chief Agronomist in Plant Protection (1221.1) Chief Agrochemist (1221.2) Head of Subsidiary Agricultural Farm (1221.2) Branch Manager (1221.2) Area Manager (Agricultural) (2213.2) Agronomist (2213.2) Airfield Agronomist (2213.2) Seed Production Agronomist (2213.2) Plant Protection Agronomist (2213.2) Agronomist Inspector (2213.2) Agrochemist (2213.2) Soil Scientist (2213.2) Specialist in Agrochemistry and Soil Science (2213.2) Specialist in Breeding and Genetics of Agricultural Crops (3212) Department Agronomist (Brigade, Agricultural Area, Farm, Workshop) (3212) Agrotechnician (3212) Agrochemical Technician (3212) Soil Science Technician (3212) Agronomy Technologist (3212) Specialist in Horticulture and Viticulture (3213) Specialist in Organization and Management of a Farming Enterprise (3491) Research Laboratory Technician (Other Fields of Research) (6111) Essential Oil Plant Grower (6111) Vegetable Grower (6111) Fruit and Vegetable Grower (6111) Rice Grower (6111) Tobacco Grower (6112) Viticulturist (6112) Gardener (6112) Hops Grower (6113) Mushroom Grower (6113) Florist (6113) Landscaper (6113) Horticulturist (6131) Farm Worker (6131) Farmer *Places of Employment:* Agricultural enterprises of various ownership forms, Research institutions of the National Academy of Agrarian Sciences of Ukraine (NAASU), Soil Protection Institutes (regional branches) of Ukraine, Scientific research institutes, stations, laboratories, Municipal enterprises for green space maintenance, State forestry and hunting enterprises

4.2. Further education	Continuation of studies to obtain the second (Master's) level of higher education. Acquisition of additional qualifications within the system of postgraduate education.
5. Teaching and Assessment	
5.1. Teaching and Learning	**Student-Centered Learning and Teaching Methods:** The educational process incorporates a variety of modern teaching technologies, including: Problem-based and differentiated learning, Intensified and individualized learning, Programmed learning technology, Information and digital technologies, Developmental (formative) learning, Credit-transfer system of education, Distance learning via platforms such as *Moodle, Zoom*, or *Google Meet,* Self-directed learning, Research-based learning **Forms of Instruction:** Teaching is conducted through various formats, including: Traditional lectures, Multimedia and interactive lectures, Seminars, Practical and laboratory classes, Independent study using textbooks and lecture notes, Consultations with instructors
5.2. Assessment System	Knowledge assessment within the educational-professional program includes both **continuous (ongoing)** and **final control**. **Continuous assessment** is conducted orally through questioning based on the studied material. **Final assessment** takes the form of a **written exam**, followed by an **oral interview**, or a **pass/fail test** based on continuous assessment results. Exams, tests, and differentiated tests are conducted in accordance with the regulations of the State Biotechnological University (DBTU). A **rating-based assessment system** is also used after the completion of a logically finished part of lectures and practical classes (a module) in a specific subject. These results are factored into the final grade. The rating system does not replace the traditional grading system but complements it, making the evaluation more flexible and objective. It encourages consistent and active independent work by students throughout their studies, promotes healthy academic competition, and helps identify and develop students' creative abilities. **Grading Systems Used:** 100-point (rating) ECTS scale National 4-point scale ("excellent," "good," "satisfactory," "unsatisfactory") Verbal grading system ("pass," "fail") **Additional Assessment Methods:** These may include computer-based tests, submission and defense of laboratory/practical work, independent research papers, participation in discussions, seminars, and module exams. **State Certification (Final Attestation):** Conducted in the form of a **public defense (presentation)** of a qualification project. The form of attestation may be modified by decision of the university's academic council.
6. Program Competencies	
6.1. Integral Competency (IC)	
IC.01	Ability to solve complex specialized tasks and practical problems in agronomy**,** which involves the application of theories and methods of the relevant science and is characterized by complexity and uncertainty of conditions.
6.2. General Competencies (GC):	

GC.01	Ability to exercise one's rights and responsibilities as a member of society, to be aware of the values of a civil (free democratic) society and the necessity of its sustainable development, the rule of law, and the rights and freedoms of individuals and citizens in Ukraine.
GC.02	Ability to preserve and enhance moral, cultural, and scientific values and achievements of societybased on an understanding of history and the regularities of the development of the field of study, its place in the general system of knowledge about nature and society, as well as its role in the development of society, technology, and innovation; to engage in various forms of physical activity for recreation and a healthy lifestyle.
GC.03	Ability for abstract thinking, analysis, and synthesis.
GC.04	Ability to communicate in the state language, both orally and in writing.
GC.05	Ability to communicate in a foreign language.
GC.06	Knowledge and understanding of the subject area and professional activity.
GC.07	Ability to apply knowledge in practical situations.
GC.08	Skills for safe professional activity.
GC.09	Ability to search for, process, and analyze information from various sources.
GC.10	Ability to work in a team.
GC.11	Commitment to environmental protection.
GC.12*	Formation of knowledge, skills, and abilities necessary to fulfill the constitutional duty to defend the Motherland, independence, and territorial integrity of Ukraine.
* Is applied to higher education applicants in accordance with the requirements of the legislation, as defined by Cabinet of Ministers Resolution No. 734 dated June 21, 2024, and Article 101 of the Law of Ukraine "On Military Duty and Military Service." This general competency (GC) is developed through the elective discipline "Theoretical Training for Basic Military Training."	
6.3. Special (professional) Competencies (SC)	
SC.01	Ability to use basic knowledge of the main branches of agricultural science (crop production, farming, plant breeding and seed production, agrochemistry, pomology, vegetable growing, soil science, forage production, mechanization in crop production, plant protection).
SC.02	Ability to grow and propagate agricultural crops and to perform technological operations related to primary processing and storage of products.
SC..03	Knowledge and understanding of key biological and agrotechnological concepts, rules, and theories related to the cultivation of agricultural and other plants.
SC.04	Ability to apply knowledge and understanding of physiological processes in agricultural plants to solve production and technological problems.
SC.05	Ability to evaluate, interpret, and synthesize theoretical information and practical, production, and research data in the fields of agricultural production.
SC.06	Ability to apply statistical methods for processing experimental data, particularly in technological and breeding processes in agronomy.
SC.07	Ability to scientifically substantiate the use of fertilizers and plant protection products considering their chemical and physical properties and their environmental impact.
SC.08	Ability to solve a wide range of problems in crop cultivation by understanding plant biological characteristics and using both theoretical and practical methods.
SC.09	Ability to manage complex actions or projects, and to take responsibility for decision-making under specific production conditions.
SC.10	Ability to apply knowledge of soil genesis, properties, and characteristics to develop approaches for rational soil use.
SC.11	Ability to diagnose soil degradation processes, forecast their development, and develop systems of measures to restore soil fertility.
SC.12	Ability to apply agrochemical knowledge to manage the quality of agricultural production.

SC.13	Ability to assess the phytosanitary condition of fields and plan control measures for undesirable biological entities based on field monitoring.
SC.14	Ability to design arable land structure, develop and implement crop rotations, tillage systems, and other components of the farming system.
SC.15	Ability to apply knowledge of morphological and biological characteristics of field and forage crops in planning and organizing agrotechnical measures to grow high-quality crop products under various soil and climatic conditions.
SC.16	Ability to select field and forage crops and adapt their cultivation technologies on soils damaged as a result of military actions.
SC.17	Ability to apply a comprehensive and systematic approach in analyzing research results in plant breeding and seed production.
SC.18	Ability to apply methods of identifying genetically modified varieties during the creation of source and breeding material.
SC.19	Knowledge and understanding of the biological characteristics of vegetable crop growth and development, as well as the technology for obtaining high and high-quality yields.
SC.20	Ability to develop and implement innovative, environmentally safe technologies for fruit and grape production.
7. Program Learning Outcomes	
7.1. General (Universal) Program Learning Outcomes (GPLO)	
GPLO.01	Analyze the main stages and patterns of historical development to form a civic stance.
GPLO.02	Strive for self-organization and self-education.
GPLO.03	Discuss and explain the fundamentals that contribute to the development of general political culture and activism, the formation of national dignity and patriotism, socialization of the individual, commitment to ethical values, and knowledge of economics and law. Analyze the main stages and patterns of historical development to form a civic stance. Form intolerance toward corruption in all its forms, understanding the inadmissibility of tolerating inequality and dishonesty, and a readiness to abandon dishonest practices when solving problems.
GPLO.04	Compare and evaluate modern scientific and technological achievements in the field of agronomy.
GPLO.05	Conduct literature reviews in Ukrainian and foreign languages and analyze the obtained information.
7.2. Special (Professional) Program Learning Outcomes (SPLO)	
SPLO.01	Demonstrate knowledge and understanding of fundamental disciplines to the extent necessary for acquiring relevant skills in the field of agronomy.
SPLO.02	Demonstrate knowledge and understanding of the principles of plant physiological processes sufficient for mastering both fundamental and professional disciplines.
SPLO.03	Master statistical methods for data processing in agronomy.
SPLO.04	Operate at an applied level with methods of observation, description, identification, classification, as well as cultivation of objects and maintenance of agrocenosis stability while preserving natural biodiversity.
SPLO.05	Analyze and integrate knowledge from general and specialized professional training to the extent necessary for specialized professional work in agronomy.
SPLO.06	Initiate prompt and appropriate solutions to production problems in accordance with zonal conditions.
SPLO.07	Design and organize technological processes for the cultivation of seed material of agricultural crops in accordance with established requirements.
SPLO.08	Design and organize measures for growing high-quality agricultural products in

	accordance with current standards.
SPLO.09	Integrate and improve production processes for growing agricultural products in accordance with regulatory requirements.
SPLO.10	Plan economically viable production of agricultural products.
SPLO.11	Organize effective and safe working conditions.
SPLO.12	Demonstrate knowledge of soil regime characteristics and their behavior in specific types of soil cover; develop methods for rational soil use and fertility enhancement.
SPLO.13	Diagnose certain types of soil degradation processes based on research results, forecast soil formation processes, and develop systems of measures for soil fertility restoration.
SPLO.14	Initiate prompt solutions to production problems related to agricultural product quality management.
SPLO.15	Possess methodologies for determining and forecasting field weed infestation and develop measures to control unwanted vegetation.
SPLO.16	Design and assess elements of the farming system considering zonal and environmental features, as well as anti-erosion and reclamation measures.
SPLO.17	Organize the selection and cultivation of field and forage crops on soils damaged by military actions, taking into account soil and climatic conditions.
SPLO.18	Assess breeding material based on the genetic value of parental forms in the 'parent-offspring' system and reaction norms.
SPLO.19	Apply methods for identifying foreign DNA to verify crop varieties for transgenic traits.
SPLO.20	Make effective decisions in the field of horticulture and viticulture, define goals and objectives, generate and compare alternatives, analyze scenarios and risks.
SPLO.21	Carry out business planning and marketing analysis for vegetable production.
7.3. Practical Training Program Learning Outcomes	
GPLO.03	Discuss and explain the foundations that promote the development of general political culture and activity, formation of national dignity and patriotism, socialization of the individual, inclination toward ethical values, and knowledge of economics and law.
GPLO.04	Compare and evaluate modern scientific and technological achievements in the field of agronomy.
GPLO.05	Conduct literature search in Ukrainian and foreign languages and analyze the obtained information.
SPLO.01	Demonstrate knowledge and understanding of fundamental disciplines to the extent necessary for acquiring appropriate skills in agronomy.
SPLO.02	Demonstrate knowledge and understanding of the principles of plant physiological processes to the extent necessary for mastering fundamental and professional disciplines.
SPLO.03	Master statistical methods for data processing in agronomy.
SPLO.04	Operate methods of observation, description, identification, classification, as well as cultivation of objects and maintenance of agrocenosis stability while preserving natural diversity.
SPLO.05	Analyze and integrate knowledge from general and specialized professional training necessary for specialized professional work in agronomy.
SPLO.06	Initiate prompt and appropriate solutions to production problems according to zonal conditions.
SPLO.07	Design and organize activities for cultivating high-quality agricultural products in accordance with current requirements.
SPLO.08	Design and organize technological processes for cultivating seed material of agricultural crops in accordance with established requirements.

SPLO.09	Integrate and improve production processes for agricultural product cultivation in line with current requirements.
SPLO.10	Plan economically viable production of agricultural products.
SPLO.11	Organize effective and safe working conditions.

8. Resource Support for Program Implementation	
8.1. Academic staff	The main scope of academic work in the training of bachelor's students under the educational and professional program in the specialty 201 "Agronomy" is carried out by academic staff of the graduating departments of the Faculty of Agronomy and Plant Protection (Departments of Crop Production, Land Management and Herbology named after O.M. Mozheiko, Genetics, Plant Breeding and Seed Production, Horticulture and Crop Storage, Soil Science, and Agrochemistry). These departments are involved in the development of educational and methodological support, scientific research, and the preparation of textbooks and teaching materials. All academic staff involved in the implementation of the educational component of the educational and professional program hold academic degrees and/or academic titles and are full-time employees of DBTU. All teaching staff have a confirmed level of scientific and professional activity.
8.2. Material and Technical Base:	The implementation of the educational and professional program in the specialty 201 ‘Agronomy’ is fully supported by facilities for conducting educational classes and control activities; computer workstations; multimedia equipment; laboratories; and equipment and instruments necessary for carrying out the curriculum and scientific research. The structure of the university includes the Educational and Scientific Production Center ‘Experimental Field,’ which serves as a site for practical training and scientific research of students. The university's social and living infrastructure includes a library with reading rooms, dining facilities, an assembly hall, a sports hall, a stadium and sports grounds, and a medical center. Students are provided with dormitory accommodation.
8.3. Library and Information Support:	The official website of DBTU (http://btu.kharkov.ua) contains information on founding documents, educational programs, academic, scientific, and extracurricular activities, structural units, admission rules, and contact information. The scientific library fund of DBTU contains 610,233 copies of educational, scientific, and reference literature. All DBTU library resources are available through the university website and the DBTU library website. The regular and electronic reading rooms of the DBTU library are equipped with wireless Internet access. Students also have unrestricted access to the DBTU repository. All components of this educational program are supported by educational and methodological publications and developments of the departments that train students in the specialty 201 "Agronomy" at the bachelor's level, and are freely available as resources of the DBTU library.
9. Academic Mobility	
9.1. National credit mobility	Based on bilateral agreements, leading specialists from agricultural enterprises, higher education institutions, and research institutions in Ukraine may be involved in conducting academic classes and supervising students’ industrial practices. The transfer of credits obtained at other Ukrainian higher education

	institutions is permitted, provided that the acquired competencies correspond to those of the educational program.
9.2. International credit mobility	As part of international programs and on the basis of agreements between DBTU and partner institutions abroad, scientific and informational exchange is carried out with: LLP 'Kazakh Research Institute of Soil Science and Agrochemistry named after U.U. Uspanov' Institute of Viticulture and Enology (Pleven, Bulgaria) Institute of Mountain Livestock and Farming (Troyan, Bulgaria) Institute of Forage Crops (Pleven, Bulgaria) Technical University of Varna (Varna, Bulgaria) Qinghai Academy of Agriculture and Forestry Sciences (Qinghai, China) University of Warmia and Mazury (Olsztyn, Poland) AgroSup Dijon – National Institute of Agronomy, Food Technology, and Environment (France) National School of Agricultural Sciences (Bordeaux, France) University of Saints Cyril and Methodius (Skopje, Republic of North Macedonia) Heilongjiang Bayi Agricultural University (Daqing, Heilongjiang Province, China) Technological University of Tajikistan (Dushanbe, Republic of Tajikistan) "Southern Scientists" Association (Be'er Sheva, Israel) Royal Institute of Technology (Stockholm, Sweden) At the Faculty of Agronomy and Plant Protection, students have the opportunity to undertake introductory and scientific-agronomic internships, as well as training programs in the USA, Portugal, Switzerland, Poland, Finland, Germany, the Netherlands, Sweden, and Denmark. These programs allow students to become familiar with modern technologies in crop production, varietal resources, and the specifics of seed production considering the soil and climatic conditions of the respective countries.
9.3. Teaching foreign students	International students are enrolled on the same conditions as domestic students, with additional language preparation provided if necessary.

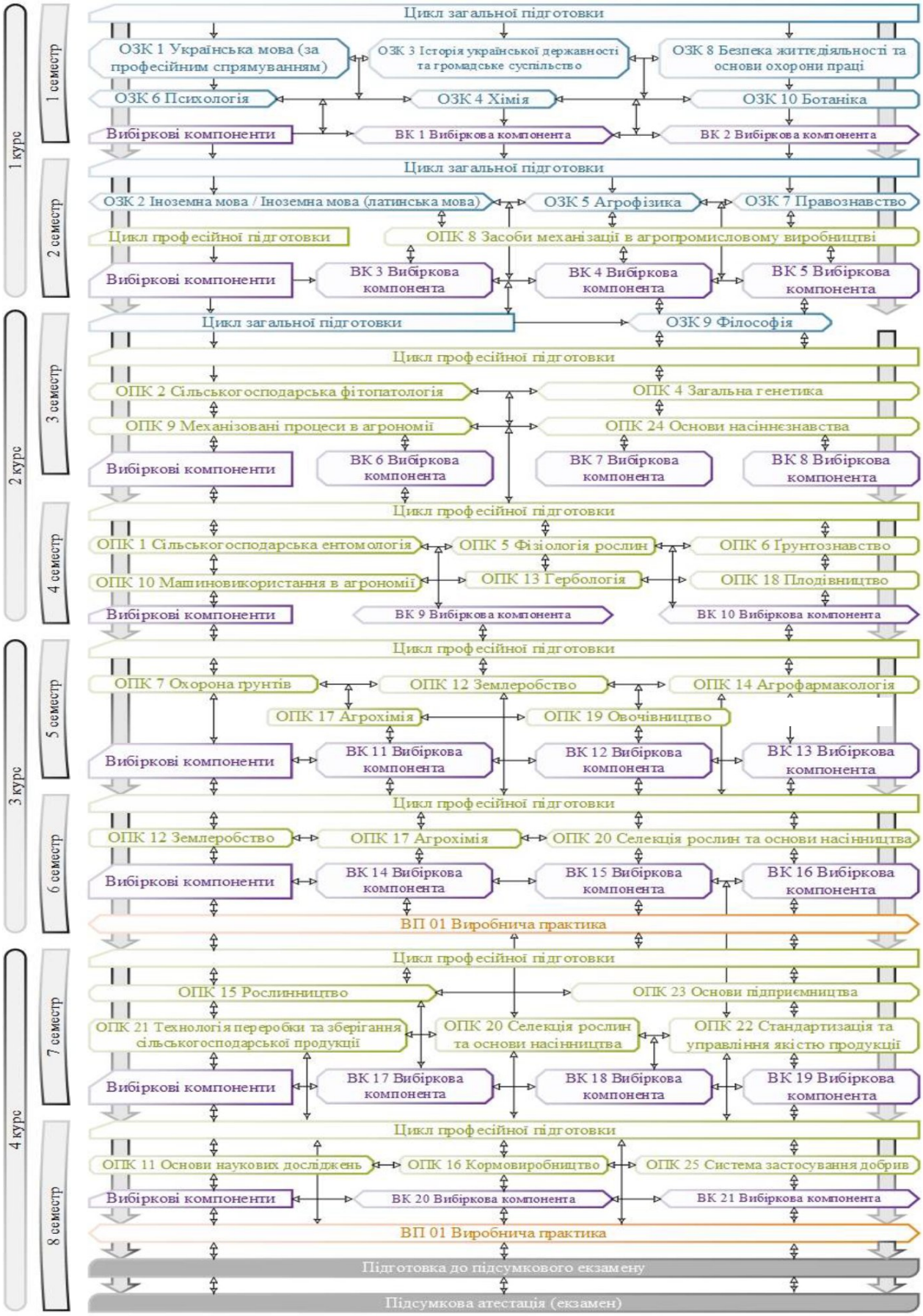
2. List of Components of the Educational and Professional Program and Their Logical Sequence

2.1. List of Components of the Educational and Professional Program

Code	Components of the Educational and Professional Program (academic disciplines, course projects (works), internships, qualification work)	credits ECTS	Form of Final Assessment
1. Mandatory Educational Components of the Educational and Professional Program			
1.1. General Training Components			
GTC 1	Ukrainian Language (for Professional Purposes)	4	exam
GTC 2	Foreign Language	7	exam
	Foreign Language (Latin Language)	3	pass/fail test
GTC 3	History of Ukrainian Statehood and Civil Society	4	exam
GTC 4	Chemistry	8	exam
GTC 5	Agrophysics	3	pass/fail test
GTC 6	Psychology	3	pass/fail test
GTC 7	Law	3	pass/fail test
GTC 8	Life Safety and Fundamentals of Occupational Health and Safety	3	pass/fail test
GTC 9	Philosophy	4	exam
GTC 10	Botany	3	pass/fail test
Total in 1.1		**45**	
1.2. Professional Training Components			
PTC1	Agricultural Entomology	3	exam
PTC 2	Agricultural Phytopathology	3	pass/fail test
PTC 3	General Genetics	5	exam
PTC 4	Plant Physiology	4	exam
PTC 5	Soil Science	8	exam
PTC 6	Soil Conservation	5	exam
PTC 7	Mechanization Tools in Agro-Industrial Production	3	exam
PTC 8	Mechanized Processes in Agronomy	4	exam
PTC 9	Machinery Use in Agronomy	3	pass/fail test
PTC 10	Fundamentals of Scientific Research in Agronomy	3	exam
PTC 11	Arable Farming	8	pass/fail test, exam
PTC 12	Herbology	5	pass/fail test
PTC 13	Agropharmacology	3	exam
PTC 14	Crop Production	8	exam
PTC 15	Forage Production	3	pass/fail test
PTC 16	Agrochemistry	8	pass/fail test, exam
PTC 17	Pomology (Fruit Growing)	4	exam
PTC 18	Vegetable Growing	5	exam
PTC 19	Plant Breeding and Basics of Seed Production	8	pass/fail test, exam
PTC 20	Technology of Processing and Storage of	4	exam

	Agricultural Products		
PTC 21	Standardization and Quality Management of Products	3	pass/fail test
PTC 22	Fundamentals of Entrepreneurship	3	pass/fail test
PTC 23	Basics of Seed Science	3	exam
PTC 24	Fertilizer Application System	5	exam
Total in 1.2		***111***	
Total volume of Mandatory Educational Components:		**156 credits**	
2. Elective Educational Components of the Educational and Professional Program			
2.1. Components of general training			
Elective Components		9	pass/fail test
2.2. Components of professional training			
Elective Component		54	pass/fail test
General volume of Elective Components:		**63 credits**	
II 01	Industrial Internship	15	pass/fail test
	Preparation of Qualification Work	3	qualification work
	Final Certification	3	defense of the qualification work
General volume of the Educational Program		**240 credits**	

2.2. Structural and logical scheme of the Educational and professional program



3. Form of attestation of students

Forms of attestation of students	The certification is conducted in the form of a certification exam or a public defense (presentation) of the qualification work.
Requirements to the qualification work	The qualification work should involve solving a complex specialized task or practical problem in agronomy, characterized by complexity and uncertainty of conditions, using principles and methods of agricultural sciences. The qualification work must not contain academic plagiarism, falsification, or copying. The qualification work must be published on the official website of the higher education institution or its structural unit, or in the institutional repository.
Requirements to the attestation exam	The certification exam is a comprehensive assessment of the graduates' level of competency in accordance with the higher education standard and the educational program.

4. Requirements for the Internal Quality Assurance System in Higher Education

The university operates a quality assurance system for educational activities and higher education (internal quality assurance system), which includes the implementation of the following procedures and measures:

1) Defining principles and procedures for ensuring the quality of higher education;
2) Monitoring and periodically reviewing educational programs;
3) Annual evaluation of higher education students, scientific-pedagogical, and pedagogical staff of the higher education institution, as well as regular publication of evaluation results on the official website of the institution, on information boards, and in any other appropriate way;
4) Providing opportunities for professional development of teaching, scientific, and scientific-pedagogical staff;
5) Ensuring the availability of necessary resources for organizing the educational process, including students' independent work, for each educational program;
6) Ensuring the availability of information systems for effective management of the educational process;
7) Ensuring public access to information about educational programs, higher education degrees, and qualifications;
8) Ensuring academic integrity among both staff and students of the institution, including the creation and maintenance of an effective system to prevent and detect academic plagiarism.

5. Matrix of Correspondence Between Program Competencies and the Components of the Educational Program

	IC.01	GC.01	GC.02	GC.03	GC.04	GC.05	GC.06	GC.07	GC.08	GC.09	GC.10	GC.11	SC.01	SC.02	SC.03	SC.04	SC.05	SC.06	SC.07	SC.08	SC.09	SC.10	SC.11	SC.12	SC.13	SC.14	SC.15	SC.16	SC.17	SC.18	SC.19	SC.20
OGC 1		+			+																											
OGC 2						+																										
OGC 3		+	+																													
OGC 4								+									+		+													
OGC 5													+		+		+		+		+											
OGC 6											+																					
OGC 7		+	+	+																												
OGC 8									+																							
OGC 9		+	+	+																												
OGC10							+	+				+			+	+																
PTC 1								+					+						+													
PTC 2	+														+	+				+												
PTC 3	+							+					+		+															+		
PTC 4	+						+	+							+	+				+												
PTC 5	+									+			+	+	+							+	+									
PTC 6	+									+		+	+		+				+			+	+									
PTC 7	+													+						+												
PTC 8	+													+				+														
PTC 9	+													+						+												
PTC10	+						+	+						+	+			+														
PTC11	+						+	+		+			+	+			+				+					+						
PTC12	+							+				+							+	+					+							
PTC13	+																		+													
PTC14	+						+	+				+	+	+	+					+							+	+				

	IC.01	GC.01	GC.02	GC.03	GC.04	GC.05	GC.06	GC.07	GC.08	GC.09	GC.10	GC.11	SC.01	SC.02	SC.03	SC.04	SC.05	SC.06	SC.07	SC.08	SC.09	SC.10	SC.11	SC.12	SC.13	SC.14	SC.15	SC.16	SC.17	SC.18	SC.19	SC.20
PTC15	+						+	+				+		+	+					+							+	+				
PTC16	+									+			+	+	+				+					+								
PTC17	+									+					+	+				+												+
PTC18	+						+	+		+			+	+	+																+	
PTC19	+									+				+	+														+	+		
PTC20	+									+				+																		
PTC21	+													+	+	+			+													
PTC22	+	+															+				+											
PTC23	+						+	+				+		+	+					+												
PTC24	+									+			+	+	+				+					+								
II 01	+												+	+					+	+												

6. Matrix of Ensuring the Program Learning Outcomes with the Corresponding Components of the Educational Program

	GPLO.01	GPLO.02	GPLO.03	GPLO.04	GPLO.05	SPLO.01	SPLO.02	SPLO.03	SPLO.04	SPLO.05	SPLO.06	SPLO.07	SPLO.08	SPLO.09	SPLO.10	SPLO.11	SPLO.12	SPLO.13	SPLO.14	SPLO.15	SPLO.16	SPLO.17	SPLO.18	SPLO.19	SPLO.20	SPLO.21
OGC 1	+	+		+																						
OGC 2		+		+	+																					
OGC 3	+	+	+																							
OGC 4						+	+		+					+												
OGC 5				+		+	+	+	+	+	+		+	+	+	+										
OGC 6		+													+	+										
OGC 7	+	+	+													+										
OGC 8											+	+				+										
OGC 9	+	+	+																							
OGC 10						+	+	+	+	+	+															
PTC 1						+		+	+	+				+												
PTC 2					+		+		+	+	+			+		+										
PTC 3				+	+	+	+	+	+	+	+		+	+	+	+								+		
PTC 4					+	+	+	+	+					+		+										
PTC 5			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+								
PTC 6				+		+	+	+	+	+	+		+	+	+	+	+	+								
PTC 7						+				+	+	+	+	+		+										
PTC 8						+				+	+	+	+	+		+										
PTC 9						+				+	+	+	+	+		+										
PTC 10				+	+	+	+	+	+		+		+													
PTC 11				+		+	+		+	+	+		+	+		+					+					
PTC 12				+	+				+	+	+		+	+						+						
PTC 13				+		+	+		+	+	+			+	+	+										

	GPLO.01	GPLO.02	GPLO.03	GPLO.04	GPLO.05	SPLO.01	SPLO.02	SPLO.03	SPLO.04	SPLO.05	SPLO.06	SPLO.07	SPLO.08	SPLO.09	SPLO.10	SPLO.11	SPLO.12	SPLO.13	SPLO.14	SPLO.15	SPLO.16	SPLO.17	SPLO.18	SPLO.19	SPLO.20	SPLO.21
PTC 14				+		+	+		+	+	+	+	+	+		+						+				
PTC 15				+		+		+	+		+	+		+		+						+				
PTC 16				+		+	+		+	+	+		+	+		+			+							
PTC 17				+		+	+		+	+	+		+	+	+	+									+	
PTC 18				+		+			+	+	+	+	+	+	+	+										+
PTC 19				+		+	+		+	+	+	+				+							+	+		
PTC 20				+	+	+		+	+	+					+	+										
PTC 21					+	+	+	+	+			+	+	+		+										
PTC 22	+	+					+	+		+			+		+											
PTC 23				+		+		+	+		+	+		+		+										
PTC 24				+		+	+		+	+	+		+	+		+			+							
II 01			+	+	+	+	+	+	+	+	+	+	+	+	+	+										

7. List of Regulatory Documents Underpinning the Educational and Professional Program

1. Стандарт вищої освіти України для першого (бакалаврського) рівня галузі знань 20 «Аграрні науки та продовольство» спеціальності 201 «Агрономія» затверджений Наказом МОН України 05 грудня 2018 р. № 1339. URL: https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/12/21/201-Agronomiya-bakalavr.21.10.2022.pdf

2. Закон України «Про вищу освіту» в редакції від 05.02.2021 р. URL: https://zakon.rada.gov.ua/laws/show/1556-18#Text.

3. Закон «Про освіту» в редакції від 01.01.2021 р. URL: https://zakon.rada.gov.ua/laws/show/2145-19#Text.

4. Закон України «Про ліцензування видів господарської діяльності» в редакції від 21.03.2021 р. URL: https://zakon.rada.gov.ua/laws/show/222-19#Text.

5. Постанова Кабінету Міністрів від 29.04.2015 № 266 «Про затвердження переліку галузей знань і спеціальностей, за якими здійснюється підготовка здобувачів вищої освіти» (зі змінами). URL: https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#Text.

6. Наказ МОН від 19.02.2015 № 166 «Деякі питання оприлюднення інформації про діяльність вищих навчальних закладів». URL: https://zakon.rada.gov.ua/rada/show/v0166729-15#Text.

7. Наказ МОН від 06.11.2015 № 1151 «Про особливості запровадження переліку галузей знань і спеціальностей, за якими здійснюється підготовка здобувачів вищої освіти, затвердженого постановою Кабінету Міністрів України від 29 квітня 2015 року № 266». URL: https://zakon.rada.gov.ua/laws/show/z1460-15#Text.

8. Національний класифікатор України: «Класифікатор професій» ДК 003:2010 в редакції від 18.08.2020 URL: https://zakon.rada.gov.ua/rada/show/va327609-10#Text.

9. Лист Міністерства освіти і науки України від 28.04.2017 р. № 1/9-239 URL: https://udhtu.edu.ua/wp-content/uploads/2018/11/List-MON-1-9-239-vid-28-04-2017-zrazok-OP-bakalavr.pdf .

10. Національна рамка кваліфікацій зі змінами від 25.06.2020 р. URL: https://zakon.rada.gov.ua/laws/show/519-2020-%D0%BF#n2 .

12. Постанова Кабінету Міністрів України від 24.03.2021 р. № 365 «Про внесення змін до постанови Кабінету Міністрів України від 30.12.2015 р. № 1187 «Про затвердження Ліцензійних умов провадження освітньої діяльності». URL: https://zakononline.com.ua/documents/show/495373___672017

13. Положення про акредитацію освітніх програм, за якими здійснюється підготовка здобувачів вищої освіти, затвердженого наказом Міністерства освіти і науки від 11 липня 2019 року № 977. URL: https://zakon.rada.gov.ua/laws/show/z0880-19#Text.

14. Рекомендації щодо застосування критеріїв оцінювання якості освітньої програми (затверджено Національним агентством із забезпечення якості вищої освіти 17 листопада 2020 року). URL: https://naqa.gov.ua/%d0%b0%d0%ba%d1%80%d0%b5%d0%b4%d0%b8%d1%82%d0%b0%d1%86%d1%96%d1%8f/.

15. Tuning Educational Structures in Europe. URL: http://www.unideusto.org/tuningeu/subject-areas.html.

16. Положення «Про освітні програми Державного біотехнологічного університету», ухвалено рішенням вченої ради ДБТУ протокол № 3 від 25.11.2021 р. 31 с. URL: https://btu.kharkov.ua/pro-universitet/publichna-informatsiya/normatyvna-baza/

17. Постанова КМУ від 29 квітня 2015 р. № 266 «Про затвердження переліку галузей знань і спеціальностей, за якими здійснюється підготовка здобувачів вищої та фахової передвищої освіти» (зі змінами реакції від 21.02.2025 року).
https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#n11

18. Постанова КМУ № 734 від 21 червня 2024 року «Порядок проведення базової загальновійськової підготовки громадян України, які здобувають вищу освіту, та поліцейських». https://zakon.rada.gov.ua/laws/show/734-2024-%D0%BF#Text

19. Наказ МОН України № 842 від 13.06.2024 "Про внесення змін до деяких стандартів вищої освіти"
https://mon.gov.ua/npa/pro-vnesennia-zmin-do-deiakykh-standartiv-vyshchoi-osvity842