



**MINISTRY OF EDUCATION AND SCIENCE OF
UKRAINE**

STATE BIOTECHNOLOGICAL UNIVERSITY

**EDUCATIONAL AND SCIENTIFIC PROGRAM
"FOOD TECHNOLOGIES"**

LEVEL OF HIGHER EDUCATION - Third (educational and scientific)

HIGHER EDUCATION DEGREE - Doctor of Philosophy

SPECIALITY - G13 Food Technology

BRANCH OF KNOWLEDGE - G Engineering, production and construction

EDUCATIONAL QUALIFICATION - Doctor of Philosophy in Food Technology

APPROVED BY ACADEMIC COUNCIL

State Biotechnological University

Protocol No. 9 dated April 24, 2025)

**and put into operation from September 01,
2025.**

Acting Rector

_____/Andriy Kudryashov/

Kharkiv-2025

PREFACE

The educational and scientific program (ONP) “Food Technologies” for the preparation of applicants for higher education of the third (educational and scientific) level in the speciality G13 Food technologies of the field of knowledge G Engineering, production and construction is a document that defines the goals of educational and scientific training, the content of training, the place of a specialist in the structure of the state economy, the requirements for its competencies and other socially important properties and qualities.

The educational and scientific program was developed on the basis of higher education standard in the specialty 181 “Food Technologies” of the field of knowledge 18 “Production and Technologies” for the third (educational and scientific) level of higher education, approved by the Order of the Ministry of Education and Science of Ukraine No. 1429 dated 23.12.2021.

Developed by a project team consisting of:

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Serik M.L., Ph.D., Associate Professor, Associate Professor of the Department of Food Technologies in the Restaurant Industry, Vice-Rector for Scientific and Pedagogical Work in SBTU

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Reviews of external stakeholders:

Kravchenko M.F., Doctor of Technical Sciences, Professor of the Department of Technology and Organization of Restaurant Business of the State University of Trade and Economics

Nekrasov P.O., Doctor of Technical Sciences, Professor, Head of the Department of Technology of Fats and Fermentation Products of the National Technical University “KhPI”

External stakeholder reviews are attached

1. General information	
Full name of higher education institution and structural unit	State Biotechnological University Faculty of Processing and Food Production
Higher education degree and qualification name in original language	Doctor of Philosophy in Food Technology
Official name of the educational program	Food Technology
Type of diploma and scope of educational program	60 ECTS credits
Availability of accreditation	Certificate of accreditation No. 6230 dated 24.11.2023
Cycle/Level	Second level of higher education, NRC of Ukraine - 8 level, QF-LLL - 8 level, QF-EHEA - third cycle
Preconditions	Availability of master's degree The program of professional entrance examinations for persons who have received a preliminary level of higher education in other specialties should include verification of a person's acquisition of competencies and learning results, which are determined by the standard of higher education in the specialty G13 Food technologies for the second (master) level of higher education
Language(s) of training	Ukrainian
Duration of the educational program	4 years
Internet address of the permanent placement of the educational program description	http://btu.kharkov.ua/pro-universitet/osvitnya-diyalnist/osvitni-programi/
1. The aim of the educational programme	
Training of modern, internationally recognized, creatively developed, competitive scientific personnel capable of producing new ideas, solving complex scientific problems, carrying out research and innovation activities, conducting fundamental and applied research in the field of food technologies that have scientific novelty, theoretical and practical significance, carry out scientific and pedagogical activities	
2. Characteristics of the educational programme	
Subject area (field of knowledge, specialty, specialization (if any))	G Engineering, production and construction G13 Food technologies
Subject area description	Object of activity: technological processes and food products. Theoretical content of the subject area: concepts, theories and principles of development and/or improvement of food technologies. Methods, methodics and technologies: food industry technologies, analytical methods, methods of computer modelling of technological processes, statistical methods of data analysis, modern digital technologies. Tools and equipment: specialized laboratory and technological equipment, modern information systems and specialized software
Orientation of the educational program	Educational and scientific
The main focus of the educational and professional program, and specialization	The educational and scientific program is focused on the training of scientific personnel who are ready for modern challenges in the field of food technologies, have modern theoretical and applied base for conducting scientific research and obtaining new knowledge in the field of food technologies, a modern methodology of pedagogical activity

Features of the program	The educational component of the program provides 60 ECTS credits, out of which 45 credits - for compulsory academic disciplines for the development of general education competencies, for obtaining professional competencies, including universal researcher skills and deep knowledge of the specialty. 15 ECTS credits are provided for elective academic disciplines that strengthen and deepen the cycle of normative disciplines. <i>The scientific component of the program</i> covers 180 ECTS credits and is drawn up in the form of a graduate student's individual plan of scientific work. Scientific and educational components are implemented during scientific research with the subsequent registration of the results in the form of a dissertation
1. Graduates' suitability for employment and further training	
Suitability for employment	Positions of scientific and scientific-pedagogical workers in scientific and higher education institutions, engineering, expert, analytical, etc. Positions in research, construction and design institutions and departments of food industry enterprises
Further studies	Obtaining the degree of Doctor of Science and additional qualifications in the adult education system
5. Teaching and learning	
Teaching and learning	Student-centred and problem-oriented training, which is conducted in the form of lectures, seminars, workshops, consultations, independent study of the material provided in textbooks, manuals, lecture notes, periodicals, use of the Internet, training in the Moodle system, self-study, trainings, preparation of qualification work (dissertations)
Assessment	The assessment is carried out according to the 100-point (rating) ECTS scale, the national 4-point scale ("excellent", "good", "satisfactory", "unsatisfactory") and oral ("credited", "not credited") systems. Types of control: current and final (exam, test, practice report, defence of the doctoral project)
6. Program competencies	
Integral Competencies	Ability to produce new ideas, solve complex problems of professional and/or research and innovation activities in the field of food production, apply the methodology of scientific and pedagogical activity, as well as conduct own scientific research, the results of which have scientific novelty, theoretical and practical significance
General Competencies (GC)	GC 1. Ability to abstract thinking, analysis and synthesis GC 2. Ability to work in an international context GC 3. Ability to solve complex problems in food technologies based on a systemic scientific and general cultural worldview in compliance with the principles of professional ethics and academic integrity
Special (professional, subject) competencies (SC)	SC 1. The ability to perform original research, achieve scientific results forming new knowledge in the field of food technology and/or related interdisciplinary areas. SC 2. The ability to initiate, develop and implement complex

	innovative products in the field of food production and related interdisciplinary projects, to show leadership during its implementation. SC 3. The ability to apply modern methodologies, methods and tools of experimental and theoretical research, digital technologies, computer modelling methods, databases and other electronic resources, specialized software in scientific and educational activities in the field of food technology. SC 4. The ability to critically analyse and evaluate the current state and trends in the development of food technologies. SC 5. The ability to identify, set and solve research tasks, evaluate and ensure the quality of work performed in food industry. SC 6. The ability to carry out scientific and pedagogical activities in institutions of higher education
7. Programmatic learning outcomes	
LO1. Freely present and discuss with experts and non-experts the results of research, scientific and applied problems in the field of food technologies in the native and foreign languages, skilfully reflect the results of research in scientific publications in compliance with the principles of professional ethics and academic integrity. LO2. Formulate and test hypotheses; use appropriate evidence to justify the conclusions, in particular, the results of theoretical analysis, experimental studies and mathematical and/or computer modelling, available literary data. LO3. Use modern tools and technologies for searching, processing and analysing information on food technology problems, in particular, statistical methods for analysing data of large volume and/or complex structure, specialized databases and information systems. LO4. Plan, organize and carry out experimental and/or theoretical research in the field of food technology using modern tools and equipment, information technology and software. LO5. Have advanced conceptual and methodological knowledge, demonstrate research skills in the field of food technology and on the verge of subject areas, sufficient to conduct scientific and applied research in order to obtain new knowledge and/or innovation at the level of modern world achievements of science and technology. LO6. Develop and implement scientific and/or innovative engineering projects that enable solving significant scientific and applied problems in the field of food production, taking into account social, economic, environmental and legal aspects. LO7. Critically analyse the results of their own research in the field of food technologies and the results of other researchers in the context of the entire complex of modern knowledge about the problem under study, ensure the protection of intellectual property. LO8. Develop and teach special disciplines on food technologies in higher education institutions, carry out educational and methodological provision of the educational process.	
8. Resource support for program implementation	
Human resources	The staffing of the educational and scientific program meets the licensing requirements. The percentage of teachers with academic titles and degrees is 100%. The teaching staff undergoes advanced training every 5 years with a total volume of at least 6 ECTS credits (180 hours)
Logistical support	To ensure the educational process, specialized and research laboratories of the departments of the faculty of processing and food production of SBTU are used, it is possible to use the existing technical capabilities of all departments and scientific laboratories (SBTU single research base is formed),

	material and technical base of the Cluster partners. The level of the facilities of multimedia technical equipment is sufficient for the educational process. Computer classes are equipped with modern technology, combined into a local network and connected to the Internet. The provision of applicants for higher education with a hostel is 100%.
Information, educational and methodological support	Information support is implemented through free access to the Internet; use of the official website (http://btu.kharkov.ua/); official pages of departments, department of doctoral and postgraduate studies on the official website and in social networks; information resources of the SBTU Scientific Library (http://btu.kharkov.ua/nauka/naukova-biblioteka/), in particular the institutional repository with the content of materials from four repositories (Open Archive KhNTUA, irH DUHT, eKhNAUIR, repoHDZVA) and free access to scientometric databases Scopus and Web of Science; educational and methodical packages of the educational process in the Moodle learning environment.
9. Academic mobility	
National Credit Mobility	On the basis of bilateral agreements between the State Biotechnological University and higher education institutions and scientific institutions of Ukraine.
International credit mobility	Within the framework of international programs on the basis of bilateral agreements between the State Biotechnological University and partner higher education institutions and scientific institutions of other countries.
Training of foreign applicants for higher education	It is possible, after studying the course of the Ukrainian language, with the teaching of disciplines in English and Ukrainian

2. List of components of the educational and scientific program “Food Technologies” and their logical sequence

Code of the discipline	Components of the educational program (academic disciplines, course projects (works), practices, qualification work)	Number of credits	Form of final control
1. Mandatory ESP components			
EC 1	Scientific Foreign Language	8	Exam, test
EC 2	Philosophy of Science	4	Exam
EC 3	Higher Education Pedagogics	3	Test
EC 4	Methodology and Organization of Research	4	Exam
EC 5	Methods of Processing and Analysis of Experimental Data	6	Test
EC 6	Modern Instrumental Research Methods	4	Test
EC 7	Competitiveness and Commercialization of Scientific Developments	4	Exam
EC 8	Professional Colloquium	4	Test
EC 9	Doctoral Project	4	Project defence

EC 10	Scientific and pedagogical practice	4	Test
Total required components:		45	
2. Elective ESP components *			
B1-B5	Disciplines 1-5 **	15	Test
Total volume of sample components:		15	
TOTAL EDUCATIONAL PROGRAM		60	

**applicants for higher education have the opportunity to choose disciplines from the list of disciplines of this ESP, other ESP and in other HEIs*

**Catalogue of elective components*

<https://biotechuniv.edu.ua/fakulteti-instituti/fakultet-pererobnih-i-harchovih-virobnitstv/osvitno-profesijni-programy/onp-xt-phd/>

Structural and logical scheme of the educational and scientific program

Studied EC	Preceding or following EC									
	EC 1	EC 2	EC 3	EC 4	EC 5	EC 6	EC 7	EC 8	EC 9	EC 10
EC 1										
EC 2										
EC 3	•	•								
EC 4	•	•								
EC 5		•		•						
EC 6				•	•					
EC 7	•	•		•	•					
EC 8	•	•		•	•	•	•			
EC 9	•	•		•	•	•	•	•		
EC 10			•							

3. Form of certification of applicants for higher education

Certification of graduates of the educational and scientific program “Food Technologies” of the specialty G13 Food Technologies is carried out on the basis of public protection of scientific achievements in the form of a dissertation in the specialty and ends with the issuance of a document of the established sample on the award of the degree of Doctor of Philosophy with the assignment of qualification: Doctor of Philosophy in Food Technologies. Certification is carried out openly and publicly.

Forms of certification of applicants for higher education	Certification of applicants for the educational degree of Doctor of Philosophy is carried out in the form of a public defence of the dissertation.
Requirements for the dissertation for the degree of Doctor of Philosophy	The dissertation for the degree of Doctor of Philosophy is an independent detailed study offering solution to a complex problem in the field of food technologies or on its border with other specialities, which involves a deep rethinking of existing and the creation of new holistic knowledge and/or professional practice and published in scientific publications in peer-reviewed scientific

	publications. The dissertation should not contain academic plagiarism, falsification, fabrication. The dissertation should be posted on the official website of a higher education institution (scientific institution).
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4. Requirements for the system of internal quality assurance of higher education

State Biotechnological University has a system for ensuring the quality of educational activities and the quality of higher education (internal quality assurance system), which provides for the implementation of the following procedures and measures:

1. Definition of principles and procedures for quality assurance in higher education;
2. Monitoring and periodic review of educational programs;
3. Annual evaluation of applicants for higher education, scientific-pedagogical, pedagogical and scientific workers, and regular publication of the assessment results on the official website of the university;
4. Providing advanced training of scientific, pedagogical, pedagogical-scientific workers;
5. Ensuring availability of the necessary resources for the organization of the educational process, including independent work of students, for each educational program;
6. Ensuring the availability of information systems for effective management of the educational process;
7. Ensuring the information publicity regarding educational programs, degrees of higher education and qualifications;
8. Ensuring an effective system for preventing and detecting academic plagiarism in the scientific works of employees of higher educational institutions and applicants for higher education;

The system of providing higher education institutions with the quality of educational activities and the quality of higher education (internal quality assurance system), upon submission of a higher education institution, is evaluated by the National Agency for Quality Assurance in Higher Education or independent institutions accredited by it to assess and ensure the quality of higher education for its compliance with the requirements for the quality assurance system of higher education approved by the National Agency for Quality Assurance in Higher Education, and international standards and recommendations for quality assurance in higher education.

5. Перелік нормативних документів, на яких базується стандарт вищої освіти

1. Law of Ukraine of 01.07.2014 No. 1556-УП «On Higher Education» [Access Mode: <http://zakon5.rada.gov.ua/laws/show/2145-19>];
2. Law of Ukraine of 05.09.2017 «About Education» [Access Mode:

<http://zakon5.rada.gov.ua/laws/show/2145-19>];

3. List of areas of knowledge and specialties for applicants of higher education on which training is carried out» [Access mode: <http://zakon4.rada.gov.ua/laws/show/266-2015-п>];

4. «National Qualifications Framework». [Access mode: <http://zakon4.rada.gov.ua/laws/show/1341-2011-п>];

5. Національний класифікатор України: «Класифікація видів економічної діяльності» ДК 009: 2010. [Access mode: <https://zakon.rada.gov.ua/rada/show/vb457609-10#Text>];

6. National Classifier of Ukraine: «Classifier of professions» ДК 003: 2010ДК 003:2010. [Access mode: <http://www.dk003.com>];

7. Guidelines for the development of standards of higher education. Approved by the Order of the Ministry of Education and Science of Ukraine of 01.06.2017 No. 600 (in the wording of the order of the Ministry of Education and Science of Ukraine of 30.04.2020 №584 [Access mode: <https://mon.gov.ua/storage/app/media/vishcha-osvita/rekomendatsii-1648.pdf>];

8. Resolution of the Cabinet of Ministers of Ukraine On Approval of the Procedure for the Preparation of Applicants for Higher Education of the Degree of Doctor of Philosophy and Doctor of Sciences in Higher Educational Institutions (Scientific Institutions) No. 261 dated March 23, 2016. [Access mode: <https://zakon.rada.gov.ua/laws/show/261-2016-%D0%BF#Text>];

9. Standard of higher education in specialty 181 «Food Technologies» for the first (bachelor) level of higher education [Access mode: <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2021/11/29/181-Kharch.Tekhn-bakalavr-VO-zatv.Stand.01.11.pdf>];

10. Standard of higher education in specialty 181 «Food Technologies» for the second (master) level of higher education [Access mode: <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2020/10/23/181-Kharchov.tekhn.mahistr.1.pdf>];

11. Standard of higher education in specialty 181 "Food Technologies" for the third (educational and scientific) level of higher education [Access mode: <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2021/12/24/181-Kharch.tekhnolohiyi-dokt.filos.pdf>];

12. Resolution of the Cabinet of Ministers of Ukraine «On Amendments to the List of Branches of Knowledge and Specialties for which Training of Applicants for Higher and Professional Pre-Higher Education is Carried Out» No. 1021 dated August 30, 2024 [Access mode: <https://zakon.rada.gov.ua/laws/show/1021-2024-%D0%BF#Text>].

6. Matrix of program competencies compliance with the educational program components

Learning outcomes	Competencies								
	General competencies			Special (professional) competencies					
	3K1	3K2	3K3	CK1	CK2	CK3	CK4	CK5	CK6
PLO1		+	+						+
PLO2	+							+	
PLO3		+					+		
PLO4				+		+		+	
PLO5		+		+			+	+	
PLO6			+		+				
PLO7	+	+					+		
PLO8						+			+

7. Matrix of program competencies compliance with the educational program components

Components	Competencies								
	General competencies			Special (professional) competencies					
	3K1	3K2	3K3	CK1	CK2	CK3	CK4	CK5	CK6
EC1		+				+			+
EC2	+	+	+					+	+
EC3						+			+
EC4	+	+	+	+	+	+	+	+	
EC5				+		+		+	
EC6		+		+		+	+	+	
EC7	+	+	+		+		+		
EC8	+	+	+	+	+		+	+	+
EC9	+	+	+	+	+		+	+	+
EC10		+	+			+			+

8. Matrix of learning outcomes (LO) compliance with the corresponding components of the educational program

Components	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8
EC1	+							
EC2	+	+						
EC3								+
EC4		+	+	+			+	
EC5				+				
EC6				+	+			
EC7			+			+	+	
EC8	+				+	+	+	
EC9	+	+	+		+	+	+	

EC10	+							+
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