

**PROJECT**

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**  
**SUMY NATIONAL AGRARIAN UNIVERSITY**

**EDUCATIONAL AND PROFESSIONAL PROGRAM**  
**"FOOD TECHNOLOGIES"**

**HIGHER EDUCATION LEVEL** \_\_ Second (Master's) level  
(name of higher education level)

**HIGHER EDUCATION DEGREE** \_\_\_\_ Master \_\_\_\_\_  
(name of higher education degree)

**BRANCH OF KNOWLEDGE** G Engineering, Manufacturing, and Construction  
(code and name of the field of knowledge)

**SPECIALTY** G13 Food Technology  
(code and name of specialty)

**"APPROVED"**

Academic Council of Sumy NAU

" \_\_\_\_ " \_\_\_\_\_ 2026

(Protocol No. \_\_\_\_\_)

**Chairman of the Academic Council** \_\_\_\_\_ **Volodymyr LADYKA**

The educational and professional program is implemented from  
" \_\_\_\_ " \_\_\_\_\_ 2026.

**Rector** \_\_\_\_\_ **Igor KOVALENKO**

(order No. \_\_\_\_\_ dated " \_\_\_\_ " \_\_\_\_\_ 2026)

**Sumy 2026**

**LETTER OF AGREEMENT**  
EPP "Food Technologies" HED "Master"

**Educational program**

**guarantor:** Cand. of Tech. Sci.,  
Assoc. Prof., Food Technology  
Department

Maryna SAVCHENKO

**Project team members:**

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Vasyl TYSCHCHENKO

Second (master's) level higher  
education student

Kateryna VLIZKO

Reviewed and approved at an extended meeting of the Food Technology Department of student actives and stakeholders (protocol No. 4 dated 26.02.2026).

Approved at the meeting of the Academic Council of the Food Technology Faculty (protocol No.10 dated .03.2026).

Head of the Academic Council of  
Food Technology Faculty,  
Cand. of Sci., Assoc. Prof.

Natalia BOLGOVA

**AGREE:**

Head of the Education Quality Department,  
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Natalia KOLODNENKO

Vice-Rector for Scientific,  
Pedagogical and Educational Work of SNAU

Margarita LYSHENKO

## **FOREWORD**

The educational and professional program in the specialty G13 "Food Technologies" of the second (master's) level has been developed in accordance with the Law of Ukraine "On Higher Education" dated 01.07.2014, as amended, the Standard of Higher Education in the specialty 181 "Food Technologies" of the field of knowledge 18 "Production and Technologies" for the second (master's) level of higher education dated 22.10.2020 No. 1295, as amended in accordance with the Order of the Ministry of Education and Science of Ukraine dated 20.03.2023 No. 308, Resolutions of the Cabinet of Ministers of Ukraine dated 23.11.2011. "On Approval of the National Qualifications Framework" with amendments, "On Approval of the Licensing Conditions for the Conduct of Educational Activities of Educational Institutions" dated 12/30/2015 No. 1187 and the project group of the Faculty of Food Technologies of Sumy National Agrarian University.

## 1. Profile of the educational and professional program "Food Technologies" in the specialty G13 Food Technologies

<b>1 - General information</b>	
Full name of higher education institution and structural unit	Sumy National Agrarian University Faculty of Food Technology
Higher education degree	Master
Field of knowledge	G "Food technologies"
Specialty	G13 "Food technologies"
Forms of study	full-time and part-time
Educational qualification	Master in food technologies
Qualification in the diploma	Higher education degree - Master Specialty - Food technologies Educational and professional program - Food technologies
Type of diploma and scope of educational and professional program	Master's degree, single, 90 ECTS credits, study period 1 year 4 months
Availability of accreditation	Accredited NAQA in Higher Education No. 19532. Date of issue 23.12.2025 Valid until 01.07.2031.
Cycle/level	NQF of Ukraine - level 7, FQ-EHEA - second cycle, QF-LLL - level 7
Prerequisites	Possession of a bachelor's degree or specialist's educational qualification level, master's degree (in another specialty), without age restrictions
Language of instruction	Ukrainian, English
Internet address for permanent posting of the description of the educational and professional program	<a href="https://surl.li/irevxu">https://surl.li/irevxu</a>
<b>2 – Purpose of the educational and professional program</b>	
<p>The program aims to train Master's degree holders capable of scientifically grounded design, improvement, and implementation of technological processes for food product manufacturing using waste-free, resource-efficient, and environmentally safe technologies. The educational and professional program is oriented towards developing competencies in conducting applied and experimental research, managing the quality and safety of food products, as well as solving complex professional tasks at food industry enterprises and in hospitality and restaurant establishments in accordance with the principles of sustainable development.</p>	

<b>3 – Characteristics of the educational and professional program</b>	
Subject area (field of knowledge, specialty, specialization (if any))	G Engineering, Manufacturing, and Construction G13 Food technology
Orientation of the educational and professional program	Educational and professional
Description of the subject area	<p>The object of study and professional activity of the Master of Food Technology is: technological processes and food products.</p> <p>The objectives of training are to develop in higher education students the ability to solve complex tasks and problems of food technology, which involves conducting research and/or implementing innovations and is characterized by the uncertainty of conditions and requirements. The theoretical content of the subject area consists of scientific concepts, categories, principles, methods, food technologies.</p> <p>Methods, techniques and technologies: methods of ensuring the quality and safety of food products, methods of planning and conducting experimental research and processing their results, food production technologies, information and computer technologies.</p> <p>Tools and equipment: specialized laboratory and technological equipment and devices (in accordance with the requirements of the educational program), computer equipment and software.</p>
The main focus of the educational and professional program and specialization	Formation of special skills and knowledge that involve obtaining skills in scientific and research work of the applicant using a complex of research and innovation, organizational and technological and marketing methods, techniques and technologies to increase the efficiency of the functioning and development of food enterprises, restaurant establishments, and industry organizations.
Program features	<p>Formation of professional competencies through theoretical, methodological, and applied issues of the food industry;</p> <p>Possession of skills in choosing research methods, modifying existing ones, and developing new ones, based on the tasks set;</p> <p>Ability to build models of systems and processes and use modern optimization programs in a specific field of knowledge;</p>

	<p>Ability to apply modern methods of experimental research, ability to plan an experiment and process the obtained results, analyze and interpret them, draw conclusions. Ability to formalize the obtained results in the form of reports, abstracts, articles, and presentations. Some experience in conducting patent research and drafting application materials for intellectual property objects;</p> <p>Possession of methods for organizing and controlling the appropriate level of quality and safety of food products, environmental safety, and resource conservation of technological production processes;</p> <p>Teaching skills and methods;</p> <p>Carrying out design and research work related to the study of technological processes, the implementation of new and improvement of existing technologies for the production of food and culinary products at food enterprises and restaurant establishments.</p>
<b>4 – Graduates’ employability and further education</b>	
Eligibility for employment	<p>Scientific, educational, analytical, expert, advisory, and managerial activities in the field of food technology.</p> <p>Graduates can perform professional work in various linear and functional divisions of organizations of all forms of ownership and organizational and legal forms, as well as educational, scientific, consulting, engineering and design organizations and institutions; divisions of state and municipal administration bodies by the National Classifier of Ukraine "Classification of Professions" DK 003:2010:</p> <p>1222.1 Chief specialists - managers and technical directors of production units in industry</p> <p>1222.2 Supervisors (other managers) and foremen of production sections (subdivisions) in industry</p> <p>2149 Other engineering professionals</p> <p>2471 Quality Control Professionals</p> <p>2482 Hotel and restaurant professionals</p> <p>In addition, the master's level provides for the professional activity of graduates in the positions of head of a technological laboratory, head of a sanitary-technological laboratory, laboratory engineer, design engineer, chief project technologist, chief administrator, and head of a research unit.</p>
Academic rights of graduates	Continuing education at the third (educational and scientific) level of higher education. Acquiring additional qualifications in the adult education system.
<b>5 – Teaching and assessment</b>	

Teaching and learning	-student-centered learning, self-study, problem-oriented learning, individual-creative and competency-based, systemic-functional approach; -lectures, laboratory work, seminars, practical classes in small groups, independent work based on textbooks and notes, consultations with teachers, preparation of qualification work (on the recommendation of the head of the educational and professional program)
Evaluation	The system of assessing the achieved learning outcomes in the disciplines of the educational and professional program consists of summative, formative assessment. The assessment of the quality of mastering the educational and professional program includes a cumulative point-rating system, which provides for the assessment of applicants for all types of classroom and extracurricular educational activities aimed at obtaining program learning outcomes: entrance, current, phased, modular, final control, exams, testing, credit for professional practice, final certification - public defense of qualification work.
<b>6 – Software competencies</b>	
Integral Competence (IC)	Ability to solve research and/or innovation problems in the field of food technology.
General competence (GC)	GC 1. Ability to search, process and analyze information from various sources. GC 2. Ability to conduct research at the appropriate level. GC 3. Ability to generate new ideas (creativity). GC 4. Ability to act socially responsible and conscious. GC 5. Ability to work in an international context.
Special (professional, subject-specific competencies) (SC)	<b>Mandatory professional competencies</b> SC 1. Ability to select and apply specialized laboratory and technological equipment and devices, scientifically sound methods and software for conducting scientific research in the field of food technology SC 2. Ability to plan and carry out scientific research taking into account global trends in scientific and technological development of the industry SC 3. Ability to protect intellectual property in the field of food technology SC 4. Ability to develop programs for the effective functioning of food industry enterprises and/or restaurant establishments in accordance with industry development forecasts in the context of globalization. SC 5. Ability to present and discuss the results of scientific research and projects.

	<p>SC 6. Ability to ensure the quality and safety of food products during the implementation of technological innovations at industry enterprises.</p> <p style="text-align: center;"><b>Additional professional competencies</b></p> <p>SC 7. Ability to develop new generation food products, ability to innovative scientific activities, which contributes to the development of new knowledge in the field of food technology.</p> <p>SC 8. Ability to apply mathematical methods and models in applied research and optimize technological processes for the development of innovative technological solutions in food production.</p> <p>SC 9. Ability to organize production and practically implement scientific developments, taking into account energy efficiency and resource conservation and improving the quality indicators of food products.</p> <p>SC 10. Ability to develop and implement commercial, scientific, and technical projects in the field of food technology, taking into account technical, commercial, and environmental issues.</p>
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**7 — Program Learning Outcomes (PLOs)**

**Mandatory program learning outcomes**

PLOs 1. Search, systematize, and analyze scientific and technical information from various sources to solve professional and scientific tasks in the field of food technology.

PLOs 2. Make effective decisions, evaluate and compare alternatives in the field of food technology, including in uncertain situations and the presence of risks, as well as in interdisciplinary contexts.

PLOs 3. Apply special equipment, modern methods, and tools, including mathematical and computer modeling, to solve complex problems in food technology.

PLOs 4. Apply statistical methods for processing experimental data in the field of food technology and use specialized software for processing experimental data.

PLOs 5. Select and implement effective technologies, equipment, and rational production management methods into practical production activities, taking into account global trends in the development of food technologies.

PLOs 6. Develop and implement short- and long-term development programs for industry enterprises, analyze and evaluate their effectiveness, environmental and social impacts.

PLOs 7. Have specialized conceptual knowledge that includes modern scientific achievements in the field of food technology, and be able to clearly and unambiguously convey one's knowledge, conclusions, and reasoning to specialists and non-specialists.

PLOs 8. To protect intellectual property in the field of food technology, perform relevant patent research, and prepare documents for obtaining patents for inventions and utility models.

PLOs 9. Be fluent in state and foreign languages to discuss professional activities, research results, and innovations in the field of food technology.

PLOs 10. Plan and carry out scientific research in the field of food technology, analyze their results, and justify conclusions.

PLOs 11. Assess and eliminate risks and uncertainties when making technological and organizational decisions in production conditions to ensure the quality and safety of food products.

#### **Additional program results**

PLOs 12. Develop and implement innovative food products and technologies using various types of raw materials, applying information and communication resources as well as principles of economics, marketing, and management, while taking into account social and economic efficiency and the principles of sustainable development.

PLOs 13. Apply waste-free, resource-efficient, and environmentally safe technologies at operating food industry enterprises and in restaurant and hospitality establishments, including new methods of preservation and storage, the use of bioplastics for packaging, as well as the organization of work in compliance with occupational safety requirements, resource conservation, and environmental safety standards.

Forms of certification of higher education applicants	Certification is carried out in the form of a public defense of the qualification work
Requirements for qualification work	The qualification work must be aimed at solving a complex, difficult task or problem in the field of food technology, which involves conducting research and/or implementing innovations and is characterized by uncertainty of conditions and requirements. The qualification work must not contain academic plagiarism, fabrication, falsification. The qualification work must be published on the official website of the higher education institution or its division, or in the repository of the higher education institution.
<b>8 - Resource provision for program implementation</b>	
Human resources	Availability of a support group, advanced training of scientific and pedagogical workers, ensuring compliance with the scientific degree or academic title of a scientific and pedagogical worker.
Logistics and technical support	Availability of a library, educational and scientific laboratories, classrooms, sports complex, food processing plant, computer classes, dormitory, and medical center.
Information and educational and	Availability of methodological support for practical, seminar, laboratory work, practice programs, tasks for

methodological support	independent work of students, and questions for current and final control. Availability of reading rooms, textbooks, study guides, periodicals.
<b>9 — Academic mobility</b>	
National credit mobility	Agreement on cooperation in the scientific and educational sphere between Sumy National Agrarian University and the State Biotechnological University dated 04.07.2022.
	Agreement on cooperation in the scientific and educational sphere between Sumy National Agrarian University and the National University of Food Technologies dated 05/07/2024.
International credit mobility	Framework Agreement between Guizhou University, China, and Sumy National Agrarian University dated 25.11.2020 Agreement No. R-DOP.0161.6.19.2016 on cooperation between Sumy National Agrarian University and Wroclaw University of Economics
Education of foreign higher education applicants	According to the "Rules for Admission to Sumy NAU", education of higher education applicants from other countries of the world is carried out in Ukrainian and English.

## 2. List of components of the educational and professional program and their logical sequence

### 2.1. List of EPP components

Code n/a	Components of the educational and professional program (academic disciplines, practice, qualification work)	Number of credits	Final control form
1	2	3	4
<b>Mandatory EPP components</b>			
MC1	Business professional language	5.0	Exam
MC1.1	Business foreign language	2,5	
MC1.2	Business Ukrainian language	2.5	
MC2	Personnel management and innovative development of enterprises	5.0	Differential credit
MC3	Innovative engineering	5.0	Exam
MC4	Food quality and safety management	5.0	Exam
MC5	Professional practice	10.0	Differential credit

MC6	Qualification work	10.0	Public defense
MC7	Research work	5.0	Exam
MC8	Innovative technologies in industry enterprises	10.0	Exam
MC9	Scientific foundations of waste-free technologies in the food industry	5.0	Differential credit
1	2	3	4
MC10	Information technologies and optimization of technical and technological facilities in the processing industry	5.0	Exam
<b>Total Mandatory components:</b>		<b>65 ECTS credits</b>	
<b>Selective EPP components*</b>			
SC1	Selective discipline	5.0	Differential credit
SC2	Selective discipline	5.0	Differential credit
SC3	Selective discipline	5.0	Differential credit
SC4	Selective discipline	5.0	Differential credit
SC5	Selective discipline	5.0	Differential credit
<b>Total volume of sample components:</b>		<b>25 ECTS credits</b>	
<b>TOTAL VOLUME OF OP</b>		<b>90ECTS credits</b>	

\*according to the faculty catalog

## 2.2. Structural and logical scheme of master's degree training

	General training (competence) block			Professional training (competence) block	
	General	Research	Communicative	Professional in-depth knowledge and skills	
1 semester	Personnel management and innovative development of enterprises	Research work		Innovative technologies in industry enterprises	
		Business foreign language		Innovative engineering	
2 semester		Information technologies and optimization of technical and technological facilities in the processing industry		Food quality and safety management	
				Innovative technologies in industry enterprises	
				Professional practice	
				Selective discipline SC 1	
				Selective discipline SC 2	
3 semester				Scientific foundations of waste-free technologies in the food industry	
	Qualification work				
				Selective discipline SC3	
				Selective discipline SC 4	
			Selective discipline SC 5		

### 3. Form of certification Selection of higher education applicants

Certification of graduates of the educational and professional program "Food Technologies" of the second (master's) level is carried out in the form of defense of a qualifying thesis and is completed by issuing a document of the established sample on awarding him a master's degree with the assignment of the qualification: master of food technologies. Certification is carried out openly and publicly in a meeting of the Examination Commission for the certification of higher education applicants.

### 4. Matrix of correspondence of program competencies to components of the educational and professional program

	MC1.1	MC1.2	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
IC	+		+	+	+	+	+	+	+	+	+
GC1	+			+			+	+			+
GC2				+			+	+			
GC3				+		+	+	+	+	+	
GC4			+	+	+	+	+		+	+	
GC5	+			+			+	+	+	+	
SC1				+			+	+			+
SC2				+			+	+		+	
SC3							+	+			
SC4			+	+	+	+	+		+	+	
SC5	+			+	+	+	+	+	+	+	
SC6					+	+	+		+		
SC7				+			+		+	+	+
SC8							+	+			+
SC9				+	+	+			+	+	
SC10			+	+			+		+	+	

**5. Matrix of ensuring program learning outcomes (PLN) by the corresponding components of the educational and professional program**

	MC1.1	MC1.2	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9	MC10
PLOs 1	+			+			+	+	+		+
PLOs 2			+		+	+	+		+		
PLOs 3						+	+				+
PLOs 4							+	+			+
PLOs 5			+	+		+	+		+	+	
PLOs 6					+	+	+		+	+	
PLOs 7	+			+		+	+		+		
PLOs 8							+	+			
PLOs 9	+						+				
PLOs 10				+			+	+			
PLOs 11					+	+	+				
PLOs 12			+	+			+				
PLOs 13				+			+		+		

## List of regulatory documents on which the EPP is based

1. Standard of Higher Education of Ukraine: second (master's) level, field of knowledge 18 Production and Technology, specialty 181 Food Technology. Approved and put into effect by order of the Ministry of Education and Science of Ukraine dated October 22, 2020, No. 1295. URL: [https://osvita.ua/doc/files/news/771/77190/181\\_Kharchovi\\_tekhnolohiyi\\_mahistr.pdf](https://osvita.ua/doc/files/news/771/77190/181_Kharchovi_tekhnolohiyi_mahistr.pdf)
2. Regulations on the organization of the study of free choice academic disciplines by higher education applicants. URL: [https://drive.google.com/file/d/1-C13Awct\\_7IDA8GNFRxhGyne3SlSJS6G/view](https://drive.google.com/file/d/1-C13Awct_7IDA8GNFRxhGyne3SlSJS6G/view)
3. National Classifier of Ukraine: "Classifier of Professions DK 003:2010. URL: <https://zakon.rada.gov.ua/rada/show/va327609-10#Text>
4. Regulations on educational programs at Sumy National Agrarian University. URL: <https://surl.li/pkztpx>.
5. Standards and recommendations for quality assurance in the European Higher Education Area (ESG) URL: <https://surl.li/aaltlt>
6. Methodological recommendations for the development of higher education standards. URL: <https://surl.li/penvcf>
7. Development of the system of quality assurance of higher education in Ukraine: information and analytical review. URL: <https://surl.li/tfqnyf>.
8. European Credit Transfer and Accumulation System: User's Guide. URL: <https://surl.li/xllrfg>.
9. Rashkevych Yu.M. Bologna Process: History, Status and Prospects. Educational Analytics of Ukraine". 2018, No. 3 (4), pp. 5–16. URL: <https://surl.li/zpwiki>
10. National Educational Glossary: Higher Education (4th ed., revised and supplemented) / Authors-compilers: V.E. Bakhrushin, M.I. Vynnytskyi, V.M. Zakharchenko, I.O. Zolotareva, S.A. Kalashnikova, V.I. Lugovyi, M.R. Mruga, Y.M. Rashkevych, I.M. Sikorska, A.V. Stavytskyi, Zh.V. Talanova, S.P. Shitikova / Edited by V.G. Kremenya, V.E. Bakhrushin, Y.M. Rashkevych. 2024. – 114 p. URL: <https://surl.li/zgqkmo>
11. Bakhrushin V.E. Standardization of Requirements for higher education as a tool for ensuring the quality of higher education: levels of higher education and subject areas. Educational Analytics of Ukraine. 2020. No. 2(9). P. 50–66.: URL: <https://surl.lu/czupwd>
12. Digital Competence Framework for Citizens of Ukraine. URL: <https://surl.li/daxzcz>
13. Competence Framework for a Culture of Democracy. URL: <https://rm.coe.int/rf-cdc-vol-2-/168097ec96>
14. SDGS IN ACTION. URL: <https://www.undp.org/uk/ukraine/tsili-staloho-rozvytku>
15. Resolution of the Cabinet of Ministers of Ukraine dated 23.11.2011 No. 1341 "On Approval of the National Qualifications Framework" URL: <http://zakon4.rada.gov.ua/laws/show/1341-2011-п> .

16. Law of Ukraine dated 01.07.2014 No. 1556-VII “On Higher Education” URL: <https://zakon.rada.gov.ua/laws/show/1556-18> .

17. Resolution of the Cabinet of Ministers of Ukraine dated 29.04.2015 No. 266 “On Approval of the List of Fields of Knowledge and Specialties in Which Applicants for Higher Education are Trained” URL: <https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#Text>.

18. Resolution of the Cabinet of Ministers of Ukraine dated 30.12.2015 No. 1187 “On Approval of the Licensing Conditions for the Conduct of Educational Activities of Educational Institutions” URL: <http://zakon4.rada.gov.ua/laws/show/1187-2015-п/page> .

19. Law of Ukraine dated 05.09.2017 “On Education” URL: <http://zakon5.rada.gov.ua/laws/show/2145-19> .

20. Council Recommendation of 22 May 2018 on key competences for lifelong learning (Text with EEA relevance.). URL: <https://surl.li/umysjr>

21. Law of Ukraine No. 3642-IX dated 23.04.2024 “On Amendments to Certain Laws of Ukraine Regarding the Development of Individual Educational Trajectories and Improvement of the Educational Process” URL: <https://zakon.rada.gov.ua/laws/show/3642-20#Text>

22. International Standard Classification of Education (ISCED 2011): UNESCO Institute for Statistics URL: <https://surl.li/koyxcm>

23. ISCED Fields of Education and Training 2013 (ISCED-F 2013): UNESCO Institute for Statistics. URL: <https://surl.li/jrvlun>.

24. The European Qualifications Framework: Supporting Learning, Work and CrossBorder Mobility. URL: <https://ehea.info/>

25. QF-EHEA – Qualification Framework of the European Higher Education Area URL: <http://www.ehea.info/article-details.aspx?ArticleId=67>.

26. TUNING Educational Structures in Europe (European Commission Project “Tuning Educational Systems in Europe” (for examples of standards and competence requirements for different subject areas). URL: <https://ehea.info/>