

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SUMY NATIONAL AGRICULTURAL UNIVERSITY

EDUCATIONAL PROFESSIONAL PROGRAM

" FOOD SAFETY AND QUALITY "

LEVEL OF HIGHER EDUCATION First (bachelor's) level
(name of higher education level)

DEGREE OF HIGHER EDUCATION Bachelor
(name of higher education degree)

FIELD OF KNOWLEDGE 18 "Production and technology"
(code and name of the field of knowledge)

SPECIALTY 181 Food technologies
(code and name of the specialty)

"APPROVED"

Academic Council of Sumy NAU

"28" 03. 2022

(Protocol №11)



Chairman of the Academic Council

Rector

Academician of NAAS of Ukraine

V.I.Ladyka

The educational program is implemented from

01.09.2022

Rector

Academician of NAAS of Ukraine

V.I.Ladyka

(order № 77K from " 1 " 04 2022)

Sumy 2022

LETTER OF AGREEMENT

Educational and professional program

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PREFACE

The educational and professional program "Food Safety and Quality" for the preparation of higher education at the first (bachelor's) level in the specialty "Food Technology" contains 240 ECTS credits required for obtaining the appropriate degree of higher education; list of graduate competencies; normative content of training of higher education seekers, formulated in terms of learning outcomes; forms of certification of applicants for higher education.

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1. Profile of the educational program " Food Technology " in specialty 181 " Food Technology "

1 - General information	
Full name of the higher educational institution and structural unit	Sumy National Agrarian University Faculty of Food Technology
Degree of higher education and title of qualification in the original language	Degree of higher education - bachelor Qualification - Bachelor of Food Technology
The official name of the educational program	Food safety and quality
Type of diploma and volume educational program	Bachelor's degree, single, 240 ECTS credits, term of study 3 years 10 months Bachelor's degree, single, 120 ECTS credits, term of study 1 year 10 months on the basis of a bachelor's degree (EQL junior specialist) The uniqueness of the EP is 50 ECTS credits
Availability of accreditation	Accredited for the first time
Cycle / level	HPK of Ukraine - level 6, FQ-EHEA - the first cycle, EQF-LLL - level 6
Prerequisites	Availability of a complete general secondary education, a bachelor's degree
Language of instruction	Ukrainian
Term of educational programs	until 2025
Internet address of the permanent post of the description of the educational program	http://docs.snau.edu.ua/documents/education/programm/s/food/181_Harchovi_tehnology_Bakalavr.pdf
2 - The purpose of the educational program	
Training of highly qualified specialists for the production of safe and high-quality food products capable of solving complex specialized problems and practical problems, to develop and implement management systems for food safety and quality; be creative in solving specialized problems of technical and technological nature in the field of production and management of food safety and quality.	
3 - Characteristics of the educational program	
Description of the subject area	Object: technological processes and food products. The purpose of training: the formation of higher education students' competencies required for professional activities in the field of production, safety and quality management of food products. Theoretical content of the subject area : basic

	<p>concepts and principles of design and operation of food enterprises and restaurants, management system of food quality and safety, essence and parameters of technological processes of safe and quality food production, principles of development of new and improvement of existing food technologies, rules of application current legal and regulatory framework and system of analysis of marketing activities in production conditions; study of patterns of formation of the range of food products. Methods, techniques and technologies to be mastered by the higher education applicant for practical application: a set of organizational and technological measures to improve the efficiency of food enterprises and restaurants, methods and techniques of food safety and quality control, planning and calculating material and financial needs and manpower.</p> <p>Tools and equipment: modern technological and laboratory equipment and devices, computer hardware and software.</p>
Orientation of the educational program	Educational and professional. Based on modern scientific and practical knowledge in the field of food technology. The program is aimed at training a competitive specialist to improve the efficiency of enterprises and institutions of the food industry, which have a methodology for monitoring the safety and quality of food, planning and calculating the need for material, financial and labor resources, application software
The main focus of the educational program and specialization	<p>Special education in the field of safe and quality food production; acquisition of theoretical knowledge and practical skills at enterprises and institutions of the food industry; practical training at the leading enterprises for food production; dual education.</p> <p>Key words: safe products, quality products, general technologies, innovative technologies, competitiveness.</p>
Features of the program	The bachelor's degree program provides in-depth knowledge and a critical approach to the organization and control of food production, by making effective professional decisions, solving current problems and problems of the industry.
4 - Suitability of graduates for employment and beyond teaching	
Suitability for employment	Bachelor of Food Technology has a high level of practical training, special knowledge, deepened specialized professional training and can hold the positions of spe-

	<p>cialist and manager in the fields of restaurant business, food and processing industry, tourism; manager in restaurants, cafes, bars, canteens, enterprises that prepare and deliver ready meals; professional in the field of sanatorium business</p>
Further training	<p>Graduates have the right to continue their studies to obtain higher education at the second (master's) level of higher education, to acquire additional qualifications in the system of postgraduate education</p>
5 - Teaching and assessment	
Teaching and learning	<p>Student-centered problem-oriented learning. Classes are held in the form of lectures, laboratory, practical classes, consultations, self-study. Lectures have an interactive scientific and cognitive nature. Practical and laboratory classes are conducted using common methods (situational tasks, business games, preparation of presentations on the use of modern professional software). Educational and methodological support and counseling of independent work is carried out through the university information and educational environment Moodle.</p>
Evaluation	<p>Assessment of the quality of development within the educational-professional program includes current and final control of knowledge and final certification. Current assessment in lectures, seminars, practical, laboratory classes (oral examination or written express control). Students' speeches when discussing issues, reports on laboratory work, tests, test control, practice reports, presentations, essays, etc. Final control - exam, test (assessment based on the results of current control). Final certification - performance and defense of qualification work.</p>
6 - Program competencies	
Integral competence	<p>Ability to solve complex specialized problems and practical problems of technical and technological nature, characterized by complex and uncertain conditions in the production conditions of food and restaurant enterprises and in the learning process, which involves the application of theoretical foundations and methods of food technology.</p>
General Competences (GQ)	<p>Q 01. Knowledge and understanding of the subject area and professional activity Q 02. Ability to learn and master modern knowledge Q 03. Ability to show initiative and entrepreneurship. Q 04. Skills in the use of information and communication technologies</p>

	<p>Q 05. Ability to search and analyze information from various sources</p> <p>Q 06. Ability to evaluate and ensure the quality of work performed.</p> <p>Q 07. Ability to work in a team.</p> <p>Q 08. Ability to work autonomously.</p> <p>Q 09. Safe skills.</p> <p>Q 10. The desire to preserve the environment.</p> <p>Q 11. Ability to communicate in the state language both orally and in writing</p> <p>Q 12. Ability to communicate in a foreign language</p> <p>Q 13. Ability to exercise their rights and responsibilities as a member of society, to realize the values of civil society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.</p> <p>Q 14. Ability to preserve and increase moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies. ensuring a healthy lifestyle</p>
Professional competencies of the specialty	<p>Q15. Ability to implement in the production of technology safe and high-quality food products based on understanding the essence of the transformation of the main components of food raw materials during the technological process.</p> <p>Q 16. Ability to manage technological processes using technical, informational and software.</p> <p>Q 17. Ability to organize and control the quality and safety of raw materials, semi-finished products and food products using modern methods.</p> <p>Q 18. Ability to ensure product safety and quality based on relevant standards and within food safety management systems during their production and sale.</p> <p>Q 19. Ability to develop new and improve existing food technologies taking into account the principles of nutrition, resource saving and intensification of technological processes.</p> <p>Q 20. Ability to compile business documentation and perform technological and economic calculations.</p> <p>Q 21. Ability to choose and operate technological equipment, to compile hardware-technological schemes for the production of safe and high-quality food products.</p>

	<p>Q 22. Ability to conduct research in specialized laboratories to solve applied problems.</p> <p>Q 23. Ability to design new or upgrade existing production (production sites).</p> <p>Q 24. Ability to develop draft regulations using current legislation and reference materials.</p> <p>Q 25. Ability to develop and implement effective methods of work organization, to be responsible for the professional development of individuals and / or groups of people.</p> <p>Q 26. Ability to form a communication strategy in the field of food technology, to lead a professional discussion.</p> <p>Q 27. Ability to increase production efficiency, implement modern management systems.</p> <p>Q 28. Ability to perform professional activities in accordance with quality standards and requirements of the food safety management system (HACCP).</p> <p>Q 29. Ability to analyze and effectively apply domestic and European approaches to quality and safety management at various stages of food production, to carry out production expertise, harmonize regulations and assess the compliance of systems.</p> <p>Q 30. Ability to analyze the effectiveness of customer service.</p>
7 - Program Learning Outcomes (PLO)	
	<p>PLO 1. Know and understand the basic concepts, theoretical and practical problems in the field.</p> <p>PLO 2. Show creative initiative and improve your professional level by continuing education and self-education.</p> <p>PLO 3. Be able to use information and communication technologies for information support of professional activities and research of applied nature.</p> <p>PLO 4. Search and process scientific and technical information from various sources and use it to solve specific technical and technological problems.</p> <p>PLO 5. Know the scientific basis of technological processes of safe and high-quality food production and the laws of physical-chemical, biochemical and microbiological transformations of the main components of food raw materials during technological processing.</p> <p>PLO 6. Know and understand the main factors influencing the synthesis and metabolism of food components and the role of nutrients in human</p>

	<p>nutrition.</p> <p>PLO 7. Organize, control and manage the technological processes of processing food raw materials into food products, including the use of technical means of automation and control systems.</p> <p>PLO 8. Be able to develop or improve existing food safety management systems taking into account global trends / norms.</p> <p>PLO 9. Be able to develop projects of technical conditions and technological instructions for food products.</p> <p>PLO 10. Implement food safety management systems.</p> <p>PLO 11. To determine the compliance of quality indicators of raw materials, semi-finished products and finished products with regulatory requirements using modern methods of analysis (or control).</p> <p>PLO 12. Be able to design new and modernize existing enterprises, shops, production sites using computer-aided design systems and software.</p> <p>PLO 13. To choose modern equipment for technical equipment of new or reconstructed enterprises (shops), to know the principles of its work and rules of operation, to make hardware-technological schemes of food production of the designed assortment.</p> <p>PLO 14. Improve production efficiency by introducing resource-saving and competitive technologies, analyze the state and dynamics of demand for food products.</p> <p>PLO 15. Implement modern enterprise management systems.</p> <p>PLO 16. Adhere to safety rules and take technical and organizational measures to organize safe working conditions during production activities.</p> <p>PLO 17. Organize the process of waste disposal and ensure environmental cleanliness of production.</p> <p>PLO 18. Have basic skills in conducting theoretical and / or experimental research performed individually and / or as part of a research team.</p> <p>PLO 19. Improve work efficiency by combining independent and team work.</p> <p>PLO 20. Be able to compile business documents in the state language.</p> <p>PLO 21. Be able to communicate the results of activities to a professional audience and the general public in order to convey ideas, problems, solutions and personal experience in the field of food technology.</p> <p>PLO 22. Carry out business communications in the</p>
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	<p>professional sphere in Ukrainian and foreign languages.</p> <p>PLO 23. Have the skills to organize the work of individual production units of the enterprise and coordinate their activities.</p> <p>PLO 24. Carry out technological, technical, economic calculations in the development and introduction of food products to the consumer market, keep records of material resource costs.</p> <p>PLO 25. Identify a creative initiative on market transformation of the economy.</p> <p>PLO 26. To form and defend one's own worldview and public position, to act socially responsibly and consciously.</p> <p>PLO 27. Preserve and increase the achievements and values of society, lead a healthy lifestyle.</p> <p>PLO 28. Be able to implement food safety management systems (HACCP) in enterprises and institutions of the food industry.</p> <p>PLO 29. Identify, identify, analyze, assess risks, develop measures to manage them and develop documentation of quality and safety management systems in accordance with international standards.</p> <p>PLO 30. Carry out sanitary and hygienic control and be able to use these titles for the design or reconstruction of enterprises and institutions of the food industry.</p>
Form of certification	<p>Certification is carried out in the form of public defense of the qualification work, which involves independent solution of a specialized task of design or research nature. There can be no academic plagiarism, falsification or writing off in the qualification work. Qualification work should be posted on the website of the higher education institution or its structural unit, or in the repository of the higher education institution</p>
8 - Resource support for program implementation	
Staffing	<p>Staffing of the Faculty of Food Technologies of Sumy NAU allows for training of higher education and meets regulatory requirements</p>
Logistics	<p>Material and technical support of the Faculty of Food Technologies of Sumy NAU allows training of higher education and meets regulatory requirements. To ensure the educational process are used: library; Laboratories: "Interdepartmental Scientific and Practical Laboratory of Chemical and Microbiological Research of Food", "Educational and Scientific Laboratory of Innovative Technologies and Safety and Quality of Food Products", "Educational and Scientific Laboratory of</p>

	Food Production Equipment", "Educational and Scientific Laboratory of New Food Design products ", " Training Laboratory of Food Technology ", which are equipped with technical means and specialized equipment, research and industrial installations and devices, production equipment, inventory and utensils; offices; sports complex; food factory; computer classes; hostel; medical point
Information and educational and methodological support	The educational process of training higher education is provided with methodological and informational materials of lectures, practical, seminar, laboratory work, course projects (works), tasks for independent work of students, questions for current and final control, programs and bases for internships in full , as well as the availability of reading rooms, textbooks, manuals, periodicals.
9 - Academic mobility	
National credit mobility	National credit mobility of students, graduate students, doctoral students, research and teaching staff of the University, including training, internships, training and internships, research, teaching and training is organized on the basis of partnership agreements between the University and universities of Ukraine in accordance with Regulations on the realization of the right of students of Sumy National Agrarian University to academic mobility
International credit mobility	The University has concluded agreements on international academic mobility with the following universities: Weinstefan University of Applied Sciences (Germany), Warsaw University of Natural Sciences (Poland), Xi'an University of Technology, Hezhou University, Guizhou University, Zhejiang University of Agriculture and Forestry, Henan Institute of Science and Technology, Agricultural University.
Training of foreign applicants for higher education	It is possible to study foreign citizens with the prior study of the Ukrainian language by a student.

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

2.1. List of EP components

Code n / a	Components of the educational program (academic disciplines, course projects (works), practices, qualification work)	Number of loans	Form the result. control
Mandatory components of the EP			
I. Cycle of disciplines of general training			
EC1.	Historical and philosophical studies	5.0	Exam
EC 2.	Business Ukrainian	5.0	Exam
EC 3.	Foreign language of professional communication	10.0	Exam
EC 4.	Higher mathematics	5.0	Exam
EC 5.	Modern multimedia technologies	5.0	Exam
EC 6.	civil education	5.0	Differential credit
II. Cycle of disciplines of professional training			
EC 7.	Standardization, metrology, certification and quality management	5.0	Exam
EC 8.	Theoretical foundations of food production	5.0	Exam
EC 9.	Food microbiology	5.0	Exam
EC 10.	Methods of food control	5.0	Exam
EC 11.	Fundamentals of physiology and food hygiene	5.0	Exam
EC 12.	Chemistry	5.0	Exam
EC 13.	Biochemistry	5.0	Exam
EC 14.	Processes and apparatus of food production	5.0	Exam
EC 15.	Economics and management of food production	5.0	Exam
EC 16.	Technological equipment and equipment for food production (with course project)	10.0	Exam, execution and delivery of CP
EC 17.	Technologies of meat, meat products and fish	10.0	Exam
EC 18.	Food technology	10.0	Exam
EC 19.	Milk and dairy products technologies	10.0	Exam
EC 20.	Technologies of grain, bread, pasta, confectionery and food concentrates	5.0	Exam
EC	Technologies of vegetable raw materials	5.0	Differential

21.	processing		credit
EC 22.	Water, soft, low-alcohol and alcoholic beverage technologies	5.0	Differential credit
EC 23.	Occupational safety	5.0	Exam
EC 24.	Engineering and computer graphics	5.0	Differential credit
EC 25.	Food production engineering (with course project)	5.0	Exam, execution and delivery of CP
EC 26.	Technological examination of food production	5.0	Differential credit
EC 27.	Food safety management according to the principles of the HACCP system	5.0	Exam
EC 28.	Practice		
	- educational	5	Differential credit
	- production	5	Differential credit
	- undergraduate	5	Differential credit
EC 29.	State certification: performance and defense of qualification work	5.0	Certification examination commission
Total amount of mandatory components:		180 ECTS credits	
Selective components of the EP			
SK1.	Physical education / Classes in sections	5.0	Test
SK 2.	General university discipline 2 *	5.0	Test
SK 3.	General university discipline 3 *	5.0	Test
SK 4.	General university discipline 4 *	5.0	Test
SK 5.	Elective discipline 1	5.0	Differential credit
SK 6.	Elective discipline 2	5.0	Differential credit
SK 7.	Elective discipline 3	5.0	Differential credit
SK 8.	Elective discipline 4	5.0	Differential credit
SK 9.	Elective discipline 5	5.0	Differential credit
SK 10.	Elective discipline 6	5.0	Differential credit
SK 11.	Elective discipline 7	5.0	Differential credit

SK 12	Elective discipline 8	5.0	Differential credit
The total amount of sample components:		60 ECTS credits	
TOTAL AMOUNT OF EDUCATIONAL PROGRAMS		240 ECTS credits	

* According to the Law of Ukraine "On Higher Education", students have the right to choose disciplines within the limits provided by the relevant educational program and work curriculum, in the amount of not less than 25 percent of the total ECTS credits provided for this level of higher education. education. At the same time, applicants of a certain level of higher education have the right to choose disciplines offered for other levels of higher education, in agreement with the head of the relevant faculty or department. "Higher education institutions
 Elective disciplines can be formed into blocks, then the student chooses a block of disciplines, after which all disciplines of the block become mandatory for study. It is recommended to use both block forms of choice and completely free choice of disciplines by students.

2.2. Structural and logical scheme of EP

A brief description of the logical sequence of studying the components of the EP

I course	I. Cycle of disciplines of general training		II. Cycle of disciplines of professional training	Selective components of the EP
	1 semester	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Business Ukrainian</div> <div style="border: 1px solid black; padding: 2px;">Higher mathematics</div> </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">Foreign language of professional communication</div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">Modern multimedia technologies</div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">Historical and philosophical studies</div>	<div style="border: 1px solid black; padding: 5px; width: 100px; margin: 0 auto;">Chemistry</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">Physical education / Classes in sections</div>
2 semester	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Foreign language of professional communication</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Civil education</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Historical and philosophical studies</div>	<div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="border: 1px solid black; padding: 2px;">Biochemistry</div> <div style="border: 1px solid black; padding: 2px;">Food microbiology</div> </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Occupational safety</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Educational practice</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">Physical education / Classes in sections</div>	
II course	3 semester	<div style="border: 1px solid black; padding: 2px;">Foreign language of professional communication</div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Theoretical foundations of food production</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Fundamentals of physiology and food hygiene</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Engineering and computer graphics</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">Physical education / Classes in sections</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">General university discipline 2</div>
	4 semester	<div style="border: 1px solid black; padding: 2px;">Foreign language of professional communication</div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Gastronomic innovations</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Processes and apparatus of food production</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Methods of food control</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">Physical education / Classes in sections</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">General university discipline 3</div>
III course	5 semester		<div style="display: flex; justify-content: space-between; font-size: 8px; margin-bottom: 5px;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Craft technology of meat products and fish processing</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Craft technology of meat products and fish processing</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Craft technology of bread and bakery and confectionery</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Food technology</div> </div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Craft technologies of alcoholic and soft drinks</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px; width: 100px;">Technological equipment and craft food production equipment (with course project)</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">General university discipline 4</div>
	6 semester		<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Craft technologies of vegetable oils, canned vegetables and fruits</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Eco technologies in food production</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Production practice</div>	
IV course	7 semester		<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Economics and management of food production</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Design of craft food enterprises (with course project)</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Undergraduate practice</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">Elective discipline 4</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">Elective discipline 5</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">Elective discipline 6</div>
	8 semester	<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <div style="display: flex; justify-content: space-between; font-size: 8px; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; border: 1px solid black; background-color: white;"></div> <div>Mandatory components of the EP</div> </div> <div style="display: flex; justify-content: space-between; font-size: 8px; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; border: 1px solid black; background-color: #e0e0e0;"></div> <div>Selective components of the EP</div> </div> <div style="display: flex; justify-content: space-between; font-size: 8px;"> <div style="width: 20px; height: 10px; border: 1px solid black; background: repeating-linear-gradient(45deg, transparent, transparent 2px, #ccc 2px, #ccc 4px);"></div> <div>Practice</div> </div> </div>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">Food safety management according to the principles of the HACCP system</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px; margin-left: 40px;">State certification: performance and defense of qualification work</div>	<div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto;">Elective discipline 1</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">Elective discipline 2</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">Elective discipline 3</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">Elective discipline 7</div> <div style="border: 1px solid black; padding: 5px; width: 150px; margin: 0 auto; margin-top: 10px;">Elective discipline 8</div>

3. Form of certification of applicants for higher education

Certification Applicants of the first (bachelor's) level in the educational program "Food Safety and Quality" is carried out in the form of public defense of qualifying work and ends with the issuance of a standard document on awarding a bachelor's degree with a qualification: Bachelor of Food Technology.

Approximate list of selective components of the EP

Selective components of the EP			
SC 1.	Physical education / Classes in sections	5.0	Test
SC 2.	General university discipline 2 *	5.0	Test
SC 3.	General university discipline 3 *	5.0	Test
SC 4.	General university discipline 4 *	5.0	Test
SC 5.	Foreign Language	5.0	Differential credit
SC 6.	Commodity science of food products	5.0	Differential credit
	Food and dietary supplements		
SC 7.	Chemistry of taste, smell, color	5.0	Differential credit
	Eco technologies in food production		
SC 8.	Food toxicology	5.0	Differential credit
	Inspection of technological processes of food production		
SC 9.	Special food technology	5.0	Differential credit
	Innovative food ingredients		
SC 10.	Basics of catering	5.0	Differential credit
	Organization of sommelier's work		
SC 11.	Methodology for detecting food adulteration	5.0	Differential credit
	Methodology of development of technological normative documentation		
SC 12	Innovative technologies in the restaurant industry	5.0	Differential credit
	Nutrition		
The total amount of sample components:		60 ECTS credits	

4. Matrix of correspondence of program competencies to the components of the educational program

	EC1	EC2	EC3	EC4	EC5	EC6	EC7	EC8	EC9	EC10	EC11	EC12	EC13	EC14	EC15	EC16	EC17	EC18	EC19	EC20	EC21	EC22	EC23	EC24	EC25	EC26	EC27	EC28	EC29	
Q01	+																+	+	+	+	+	+			+	+	+	+	+	
Q 02	+	+	+		+		+																+							
Q 03															+											+			+	+
Q 04	+				+																									
Q 05				+	+		+																						+	+
Q 06																		+	+	+	+	+	+						+	+
Q 07						+		+	+	+		+	+											+					+	+
Q 08		+	+	+																					+				+	+
Q 09														+		+								+		+				
Q 10																	+	+	+	+	+	+	+			+		+		
Q 11	+	+																											+	+
Q 12			+																											
Q 13		+				+																		+						
Q 14	+					+					+																			
Q 15								+			+	+	+				+	+	+	+	+	+	+							+
Q 16														+		+									+					
Q 17								+	+	+																			+	
Q 18																												+	+	
Q 19																	+	+	+	+	+	+	+							+
Q 20							+								+															+
Q 21														+		+												+		+
Q 22									+		+	+	+																	
Q 23																+									+	+				+
Q 24							+																					+		
Q 25															+									+				+		
Q 26		+	+														+	+	+	+	+	+	+							
Q 27				+										+																
Q 28							+																						+	
Q 29																										+	+	+		+
Q 30															+												+	+		

5. Matrix of providing program learning outcomes (PLO) with the relevant components of the educational program

	EC1	EC2	EC3	EC4	EC5	EC6	EC7	EC8	EC9	EC10	EC11	EC12	EC13	EC14	EC15	EC16	EC17	EC18	EC19	EC20	EC21	EC22	EC23	EC24	EC25	EC26	EC27	EC28	EC29	
PLO1								+									+	+	+	+	+	+					+	+		
PLO2	+	+	+		+	+													+	+	+	+						+	+	
PLO3		+	+	+	+																									
PLO4					+																							+	+	
PLO5								+	+	+		+	+														+			
PLO6											+	+	+																	
PLO7														+		+											+			
PLO8																												+		
PLO9							+																					+		
PLO10						+																				+		+		
PLO11									+	+																	+			
PLO12																									+	+				
PLO13														+		+										+				+
PLO14																+		+	+	+	+	+	+							
PLO15															+														+	
PLO16																								+				+	+	
PLO17						+												+	+	+	+	+	+					+		
PLO18								+			+	+																	+	+
PLO19																									+			+		
PLO20		+																											+	+
PLO21	+																												+	+
PLO22		+	+				+																	+					+	+
PLO23																	+							+	+				+	
PLO24				+											+										+					
PLO25															+															
PLO26						+																							+	
PLO27						+					+																			
PLO28																										+		+	+	+
PLO29																											+	+	+	
PLO30																										+				+

The list of normative documents on which the EPP is based

1. Law of Ukraine of July 1, 2014 № 1556-VII "On Higher Education" [Access mode: <https://zakon.rada.gov.ua/laws/show/1556-18>];
2. Law of Ukraine of September 5, 2017 "On Education" - [Access mode: <http://zakon5.rada.gov.ua/laws/show/2145-19>];
3. Resolution of the Cabinet of Ministers of Ukraine of April 29, 2015 № 266 "On approval of the list of branches of knowledge and specialties for which training of higher education is carried out" [Access mode: <http://zakon4.rada.gov.ua/laws/show/266-2015-n>];
4. Resolution of the Cabinet of Ministers of Ukraine of 30.12.2015 № 1187 "On approval of the License conditions for educational activities of educational institutions" [Access mode: <http://zakon4.rada.gov.ua/laws/show/1187-2015-p/page>]
5. Resolution of the Cabinet of Ministers of Ukraine of 23.11.2011 № 1341 "On approval of the National Qualifications Framework" [Access mode: <http://zakon4.rada.gov.ua/laws/show/1341-2011-p>];
6. National Classifier of Ukraine: «Classifier of professions DK 003: 2010DK 003: 2010 [Access mode: <http://www.dk003.com>];
7. Standard of higher education in specialty 181 "Food Technology" in the field of knowledge 18 "Production and Technology" for the first (bachelor's) level of higher education. Approved and put into effect by the order of the Ministry of Education and Science of Ukraine dated 18.10. 2018 № 1125 [Access mode: <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/12/21/181-kharchovi-tekhnologii-bakalavr.pdf>];
8. Regulations on educational programs at Sumy National Agrarian University of October 15, 2019 [Access mode: <https://snau.edu.ua/wp-content/uploads/2019/12/%D0%9F%D0%BE%D0%BB%D0%BE%D0%B6%D0%B5%D0%BD%D0%BD%D1%8F-%D0%BF%D1%80%D0%BE-%D0%9E%D1%81%D0%B2%D1%96%D1%82%D0%BD%D1%96-%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%B8-%D0%A1%D0%9D%D0%90%D0%A3-1.pdf>];
9. Standards and recommendations for quality assurance in the European Higher Education Area (ESG) [Access mode: http://ihed.org.ua/images/doc/04_2016_ESG_2015.pdf];
10. - International Standard Classification of Education (ISCED 2011): UNESCO Institute for Statistics [Access mode: <http://www.uis.unesco.org/education/documents/isced-2011-en.pdf>];
11. - ISCED Fields of Education and Training 2013 (ISCED-F 2013): UNESCO Institute for Statistics [Access mode: <http://www.uis.unesco.org/Education/Documents/isced-fields-of-education-training-2013.pdf>].
12. - Methodical recommendations for the development of standards of higher education, approved by the order of the Ministry of Education and Science of Ukraine from 01.06.2017 № 600 (as amended by the order of the Ministry of Education and Science of Ukraine from 21.12.2017 № 1648), approved by the higher education sector Council of the Ministry of Education and Science of Ukraine (Minutes of March 29, 2016 № 3);

13. - Development of educational programs. Methodical recommendations [Access mode: http://ihed.org.ua/images/doc/04_2016_rozroblennya_osv_program_2014_tempus-office.pdf];
14. - National Education Glossary: Higher Education [Access mode: http://ihed.org.ua/images/doc/04_2016_glossariy_Visha_osvita_2014_tempus-office.pdf];
15. - Development of the quality assurance system of higher education in Ukraine: information-analytical review [Access mode: http://ihed.org.ua/images/doc/04_2016_Rozvitok_sisitemi_zabesp_yakosti_VO_UA_2015.pdf];
16. - European credit transfer savings system: User's Guide [Access mode: http://ihed.org.ua/images/doc/04_2016_ECTS_Users_Guide-2015_Ukrainian.pdf].
17. - EQF-LLL - European Qualifications Framework for Lifelong Learning [Access mode: https://ec.europa.eu/ploteus/sites/eac-efq/files/brochexp_en.pdf];
18. - QF-EHEA - Qualification Framework of the European Higher Education Area [Access mode: <http://www.ehea.info/article-details.aspx?ArticleId=67>];
19. - Rashkevich Yu. M. Bologna process and new paradigm of higher education [Access mode: [file:///D:/Users/Dell/Downloads/Bolonskyi Process New Paradigm HE.pdf](file:///D:/Users/Dell/Downloads/Bolonskyi%20Process%20New%20Paradigm%20HE.pdf)];
20. - TUNING (for acquaintance with special (professional) competencies and examples of standards [Access mode: <http://www.unideusto.org/tuningeu/>]).