Ministry of Agriculture of the Republic of Kazakhstan
NCJSC S.Seifullin Kazakh AgroTechnical University.

Considered
at the meeting of the University
Academic Council
Report № 19
Dated from 31.08.2022.

APPROVE
Chairman of the Board of
NCJSC "S.Seifullin Kazakh
Agrotechnical University"
"____" _____ 2022

EDUCATIONAL PROGRAM

8D07201- "Food Technology"

Code and classification of educational area: 8D07 - Engineering, processing and construction industries

Code and classification of field of study: 8D072 - Production and processing industries

Code in International Standard Education Classification: 0720

Awarded degree/qualification: PhD in the educational program 8D07201- "Food Technology"

Duration of study: 3 year

Nur-Sultan 2022

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The team of authors approved by the order of NCJSC "S.Seifullin Kazakh Agrotechnical University"№ 964-H 28.12.2018 г.

Educational programme "Food Technology" Considered at the meeting of department Food Technology and Processing products
report № 10 from 28 of June 2022,
approved by the Faculty Council
report № 10(E) from 29 of June 2022

Content

1Pasport of the educational program

1.1 Purpose of the educational program

The purpose of the educational program (EP) "Food Technology" is the fundamental educational, methodological and research training and in-depth study of subjects in the respective fields of sciences for students.

Objectives of program:

the study- to form students' skills in working with primary sources of scientific literature, with particular attention to be paid to the ability to analyze the information received together, the ability to highlight problematic aspects in the practical application of this knowledge;

- to form the ability to competently choose and apply various methodological approaches in studying the problem posed based on modern research methods;
- to form the ability to contribute to the development of the latest trends in science in the food industry with a holistic multidisciplinary approach by conducting original research;
- to form the ability to develop, conceptualize and introduce new technologies of significant scientific importance for the development of the food industry in the country;
- training specialists with a high level of professional culture, including a culture of professional communication, with an active citizenship, able to formulate and solve modern scientific and practical problems at the intersection of science, successfully carry out research and management activities in various research organizations and industries;
- obtaining the necessary knowledge and experience in the field of university pedagogy and psychology.

1.2 Training outcomes (codes):

ON1-Offers methodological approaches to improving food technology;

ON2-Able to conduct research activities in the field of food technology using information and communication technologies;

ON3-Knows the current trends and patterns of development of domestic science in the context of globalization of knowledge-intensive technologies;

ON4-Able to analyze and evaluate the socio-economic consequences of new phenomena in science, technology and technology, professional sphere;

ON5-Applies professional knowledge and skills in the implementation of innovative educational policy objectives;

ON6-Able to manage with technology, scientific research and commercialization of ideas in solving problems in professional sphere of activity ;

ON7-Can use scientific communication technologies in Kazakh, Russian and foreign languages

ON8-Can make a conclusion and give recommendations on the results of scientific research in the field of food products;

ON9-Analyze and applyes the most reasonable innovative solutions to improve the safety and efficiency of food production.

2 General characteristics of the educational program (relevance, characteristics, competitive advantages, uniqueness, stakeholders, etc.)

The food industry has enormous socio-economic importance, as it meets the needs of the population in a number of essential food products and reflects the standard of living in the country. Food production is a kind of indicator of the economic situation in the country. In this regard, the training of competitive specialists who have successfully mastered modern educational programs on food production technologies that are able to independently develop technologies of new types of food products is one of the urgent tasks in the Republic of Kazakhstan.

The EP "Food Technology" was developed in accordance with the National Qualifications Framework and professional standards, consistent with the Dublin descriptors and the European Qualifications Framework, based on the State Compulsory Standard of Higher Education, a doctorate approved by the order of the Minister of Education and Science of the Republic of Kazakhstan dated October 31, 2018 (No. 604) and the Model Curriculum for the field of preparation 8D072 - Production and processing industries.

EP is designed on the basis of a modular system for the study of disciplines and includes theoretical and practical training, teaching and research practice, the implementation of a doctoral dissertation, in general, the doctoral student must master 180 ECTS. Training is conducted in three languages (state, Russian and English).

A feature of the EP is the possibility of consolidating theoretical knowledge and practical skills on the basis of its own scientific and experimental platform for the production and processing of agricultural products, created in the framework of the State Program of Industrial and Innovative Development of the Republic of Kazakhstan for 2015-2019, together with professors of the University of California in Davis (USA) , taking into account the recommendations of leading industry experts. The platform consists of 4 experimental production workshops for the processing of meat, milk, oilseeds and public catering, allowing online monitoring of technological processes in the workshops. What is unique is that the doctoral student has the opportunity to implement their experimentally-grounded developments in the production cycle of the workshops.

The competitive advantages of this educational program are the following:

- highly qualified teaching staff (degree of over 70%, average age 47 years);
- high material and technical equipment of the educational program (the department has 4 operating experimental production workshops and 2 laboratories of physico-chemical research of food products);
- training is conducted in three languages (state, Russian and English);
- regular passage of scientific internships of doctoral students at leading foreign universities using modern material and technical base: UC Davis (California), Northwest Agricultural and Forestry University (China) and others;
- the provision of apartment-type office accommodation for living during training is 100%.

The main stakeholders of the study program are the Ministry of Agriculture of the Republic of Kazakhstan, the Scientific and Production Enterprise RK "Atameken", research institutes and research and production centers; industry institutes, expert

institutions; state and non-state specialized educational organizations; higher education institutions; training and production centers.

3 Competency model (pattern) of a graduate student

3.1 Professional activity areas of the EP

Food Technology in the direction of training 8D072 - Production and processing industries include the following areas of professional activity: research, education, communication, organizational and managerial, expert-analytical, methodical, ideological, consulting, social engineering, educational activities in higher vocational schools, in science and technology industrial centers, research institutes, food industry enterprises, in various types of farms, in organizations, firms, ministries and departments.

Doctoral students must demonstrate the ability to create and interpret new knowledge, are able to conduct the organization and control over the observance of the technological process; improve technological operations to create new products; make management decisions; be able to independently carry out further theoretical and applied research and development at a high level, making a significant contribution to the creation of new ideas, approaches and methods for solving actual problems of the food industry.

3.2 Types of professional activity:

The subjects of professional activity of doctoral students in EP "Food Technology", the direction of training 8D072 - Production and processing industries are government organizations, educational institutions and research centers, enterprises of food and processing industries.

The main types of professional activity are:

- scientific activities by performing theoretical or experimental research in accordance with scientific methodology, providing systematic and reliable knowledge in the food industry;
- educational activities of higher vocational schools of technological profile using innovative methods and means;
- organization and management of research teams in research institutes, research and production centers, higher educational institutions;
- management activities in structural divisions in ministries and departments, financial formations of various forms of ownership;
- professional and comprehensive analysis of problems in the food industry.

3.3 General educational competences:

- own the methodology of a systematic approach to the organization, modern approaches to management and analytical methods of management, methods of diagnostics, analysis and problem solving;
- skillfully solve practical problems of management and implement these solutions, be prepared for the implementation of management functions and solve professional problems;

- have the knowledge, skills and abilities necessary to occupy the relevant managerial position and based on a deep understanding of the characteristics of the market economy and its capabilities, functions and economic role of the state,

- be able to assess current problems and prospects for the socio-economic development of Kazakhstan, understand current trends in the development of the world economy and globalization, navigate issues of international competition;

- know the methods of scientific research and academic writing and apply them in the field of study;

- understand the importance of the principles and culture of academic integrity.

3.4 Basic competences:

- demonstrate a systematic understanding of the field of study, mastering the skills and methods of research used in this field;

- demonstrate the ability to think, design, implement and adapt a substantial research process with a scientific approach;

- to contribute with their own original research to the expansion of the boundaries of the scientific field, which deserves publication at the national or international level;

- critically analyze, evaluate and synthesize new and complex ideas;

- communicate their knowledge and achievements to colleagues, the scientific community and the general public;

- contribute to the advancement, in an academic and professional context, of the technological, social or cultural development of a society based on knowledge

3.5 Professional competencies:

The main professional competencies for doctoral students of OP are:

- to possess the methodology and methods of research;

- the ability to interpret the results of scientific research, assess the limits of their applicability, the possible risks of their implementation, the prospects for further research;

- willingness to organize the work of the research team in the field of food technology;

- choose the necessary methods of analysis of production processes, modify existing and develop new technologies, based on the objectives of scientific research;

- the ability to model new technological processes, analyze taking into account the available literature data;

- the ability to produce the main types of technological observations and work, perform processing of materials, observations and preparing them for publication;

- the ability to use new technologies in food production (nanotechnology, membrane, chromatographic, etc.);

- the use of mathematical modeling of experimental results, statistical methods for processing and analyzing data;

- the ability to set research goals and objectives, select adequate scientific methods to achieve them, including experimental ones, meaningfully interpret the results of scientific research; innovative approaches and technologies for implementation in production.

4 Base of professional practice (all types of practice)

The passage of research and teaching practices provided in the EP, is mandatory for the doctoral student.

The bases of research and educational practices in the EP are: department, laboratories and experimental manufactories of the department of JSC “S.Seifullin Kazakh Agrotechnical University”, LLP “Rodina enterprises”, LLP “Astana Onim”, LLP “Gormolzavod”, LLP “Bakara”, JSC “Concern Tsesna-Astyk”, LLP “Garant”, LLP “Kazakh Research Institute of Agricultural Products Processing”, scientific laboratories of foreign collaborators, etc.

Pedagogical practice is aimed at the formation of professional competencies for doctoral students, ensuring readiness for pedagogical activity in universities, designing the educational process in accordance with the profile of training and conducting certain types of training sessions using innovative educational technologies; consolidation of psychological and pedagogical knowledge in the field of professional pedagogy and the acquisition of creative skills in solving scientific and pedagogical problems; the introduction of doctoral students to real problems solved in the educational process of the institution of higher professional education; the study of modern educational technologies, methods, techniques, technologies of pedagogical activity in higher education institutions; mastering the skills of diagnosing, monitoring and evaluating the effectiveness of educational activities; acquisition of teaching experience in high school.

5 Structure of the educational program of doctoral studies in the scientific and pedagogical direction

No.	Name of cycles of disciplines and types of activities	Totall aborintensity	
		In academic hours	In academic credits
1	2	3	4
1.	Educational component	1350	45
1.1	Cycle of basic disciplines (DB)		
1	Academic component	300	10
	Academic writing	150	5
	Methods of scientific researches	150	5
2	Component of choice	600	16
	Theory of food technology /The advanced technologies of obtaining of biologically active substances and nutraceuticals of animal and vegetable raw materials	90	3
	Scientific aspects of processing plant products / Scientific basis of combined products creation / International, regional and national certification systems	90	3
3)	Teaching practice	300	10
1.2	Cycle of majors discipline (MD)	330	22
1)	Component of choice		
	Nanotechnology in food and processing industries / Digital technologies in science and industry / Genetic engineering in the food industry	90	3
	Methodology of mathematical processing of scientific results / Commercialization of innovative technologies	90	3
	Modern physical and electrophysical methods of food processing / Resource-saving technologies for food and processing industries / Modern instrumental methods of food analysis	90	3
3)	Research Practice	300	10
20	Research work	3690	123
1)	Research work doctoral, including passage of		

	placement and fulfillment doctoral dissertation		
4	Final attestation	360	12
1)	Design and defense of doctoral dissertation	360	12
	Total	5400	180

Appendix 1. Academic calendar

Approved
Deputy Chairman of the Board for
Academic Affairs - Rector
A.Abdyrov
"__" _____ 2022

ACADEMIC CALENDAR
for 2022-2023 academic year
in areas of Doctoral training

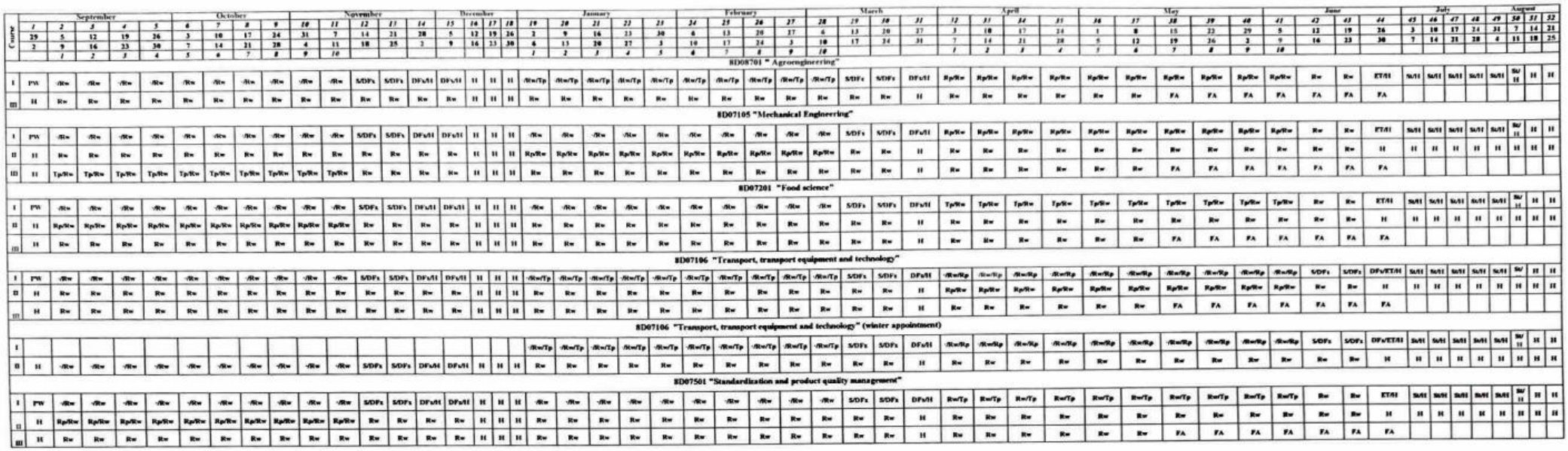
Beginning of 1st trimester		**1 September**
1	Presentation week	from 1 September to September 2 **(from August 29 to September 2 for 1 course)**
2	***Constitution day***	***30 August***
3	***The day of knowledge***	***1 September***
4	Examination session	from 14 to 25 November
5	***The day of the First President***	***of 1 December***
6	FX delivery	from 14 November to 9 December
7	***Independence day***	***16 December***
8	Holidays	from 28 November to 31 December
9	***The New year's holiday***	***January 1,2,3***
Beginning of 2nd trimester		**1 January**
10	***Christmas***	***7 January***
11	***International Women's Day***	***on 8 March***
12	***Nauryz holiday***	***21,22,23 March***
13	Examination session	from March 13 to 24 March
14	FX delivery	from March 13 to 31 March
15	Holidays	from March 27 to March 31
Beginning of 3rd trimester		***1 April***
16	***Holiday of Unity of Nations of Kazakhstan***	***1 May***
17	***Defender is day***	***7 may***
18	***Victory Day***	***9 may***
19	Examination session	from 12 June to 23 June
20	Holidays	from 26 June to 31 August
21	FX delivery	from 12 June to 30 June
22	Enrollment for a trimester	from 26 June to 30 June
23	Final examination	until June 30
24	Summer trimester	from 3 June to 11 August
25	***Capital Day***	***6 July***

Note: If it concurs with a weekend or a holiday, study begins on the next working day.

Deputy Director of the Department
of Academic Affairs _____ A.Sh.Imasheva

Appendix 1 to the Academic Calendar
Approved by the Academic Council of the NAO 'S.Seifullin KATU',Protocol No. 14 of 13.05 2022.

Schedule of the educational process for 2022-2023 academic year for the educational doctoral's programs of the Technical faculty



PW - presentation week
\- - theoretical training
DFx - FX delivery
S - examination session
ET - enrollment for a trimester

St - summer trimester
Rw - research work of a doctoral, including the implementation of a doctoral's thesis
Rp - research practice
Tp - teaching practice

H - holidays
FA - Final attestation

Public holidays: 30 August - Constitution day
1 September - The day of knowledge
of 1 December - The day of the First President
16 December - Independence day
January 1, 2, 3 - The New year's holiday
7 January - Christmas

on 8 March - International Women's Day
21, 22, 23 March - Nauryz holiday
1 May -Holiday of Unity of Nations of Kazakhstan
7 May -Defender is day
9 May- Victory Day
6 July - Capital Day

In total weeks: theoretical training - 20-30 weeks
examination session - 4-6 weeks
winter holidays - 3 weeks
spring holidays - 1 week
summer trimester - 6 weeks

Appendix 2 Working curriculum

№	Subject name	Discipline cycle BS/AS component US/ES	Academic credits / Volume of hours	I- course			II- course			II- course		
				semesters								
				1	2	3	4	5	6	7	8	9
1.	**Theory and practice of food production**		**45/1350**									
1.1	Cycle of basic disciplines (DB)	*BS*	*23/690*									
1.1.1	Academic writing	BS/US	5/90	5								
1.1.2	Methods of scientific researches	BS/US	5/90	5								
1.1.3	Theory of food technology/The advanced technologies of obtaining of biologically active substances and nutraceuticals of animal and vegetable raw materials	BS/ES	3/120		3							
1.1.4	Scientific aspects of processing plant products/ Scientific basis of combined products creation/ International, regional and national certification systems	BS/ES	3/90		3							
1.1.5	Teaching practice	BS	10/300			10						
1.2	Cycle of majors discipline (MD)	*AS*	*22/660*									
1.2.1	Nanotechnology in food and processing industries/Digital technologies in science and industry/Genetic engineering in the food industry	AS/ES	3/90	3								
1.2.2	Methodology of mathematical processing of scientific results/Commercialization of innovative technologies	AS/ES	3/90		3							
1.2.3	Modern physical and electrophysical methods of food processing/Resource-saving technologies for food and processing industries/Modern instrumental methods of food analysis	AS/ES	3/90		3							
1.2.4	Research Practice	AS	10/300				10					
2.	**Research work**		**123/3690**									
2.1	Research work doctoral, including passage of placement and fulfillment doctoral dissertation	-	123/3690	7	8	10	10	20	20	20	20	8
3.	**Additional courses**		**12/360**									
3.1	Final attestation	-	12/360									12
Total		-	***180/5400***	***20***	***20***	***20***	***20***	***20***	***20***	***20***	***20***	***20***

Annex 3. Matrix of achievability of the formed learning outcomes in the educational program with the help of academic disciplines.

№	Name of the discipline	Brief description of the discipline	Amount of credits	Formed learning outcomes								
				ON1	ON2	ON3	ON4	ON5	ON6	ON7	ON8	ON9
Cycle of basic disciplines. Academic component												
1	Academic writing	Using of preparation techniques for writing (free writing, brainstorming), drawing up a plan. The basic principles of writing an essay. Work with scientific texts: review. Work with scientific texts: annotation. Bibliography basics: links, description. Review of a scientific publication. Writing a abstract of a scientific article. Academic text editing. Presentation development of own project.	5							+	+	
2	Methods of scientific researches	The formulation of scientific problems on the basis of existing contradictions between the currently available data on research objects and the knowledge necessary for practical solutions to problems demanded by the society. The topics choice and the scientific justification of its relevance for practical application. Hypothesis formulation, research plan development. Methods of theoretical, experimental research and scientific results presentation.	5				+	+				
Cycle of basic disciplines. Component of choice												
3	Theory of food technology	A methodological approach to developing food technology appropriate for modern aspects of functional product design. Innovative high-tech technologies developed in the last decade. Modern concepts of the theory of mechanical, hydro-mechanical, heat and mass transfer and biotechnological	3	+								

		processes of food production. Generalized and systematized ideal models of leading food technology processes										
4	The advanced technologies of obtaining of biologically active substances and nutraceuticals of animal and vegetable raw materials	Biotechnology for the production of food additives and biologically active substances. Methods for obtaining food biologically active substances (from raw materials of plant, animal and microbiological origin) that based on organic synthesis. Classification and properties of nutraceuticals, BAS. Physical and chemical properties and biological functions of nutraceutical. Food protein preparations of plant and animal origin.	3									+
5	Scientific aspects of processing plant products	The main priority scientific directions of processing industries that considers theoretical issues. The justification of the technological basis for the effective processing of crop products for the production of food and starch products and alcohol.	3								+	
6	Scientific basis of combined products creation	The study, research and development of technology for complex multi-component products with a set of qualitative and quantitative indicators. The main regularities are: biochemical, enzyme-microbiological processes and their influence on the quality characteristics of food products, biotechnological potential of raw materials of animal and plant origin, and ways of its directed regulation to obtain products with the specified properties and composition.	3								+	
7	International, regional and national certification systems	Theoretical bases of international, regional and national standardization and certification of products. Technical regulations of the Customs Union. Tasks of the International	3								+	+

		organization for standardization (ISO). The organizational structure of ISO. Activities of ISO committees. Algorithm for developing an international standard. The main goals and activities of the International organization of Legal Metrology (IOLM), the General agreement on tariffs and Trade (GATT), the European Organization for Quality (EOQ), ILAC, SEN, SENELEC, and others. The scope of the Alimentarius Code.										
Cycle of major disciplines. Component of choice												
8	Nanotechnology in food and processing industries	Basics of nanotechnology for processing raw materials and using them in food production, including historical aspects of the development of nanotechnology, basic terms and definitions, basics of nanotechnology, nano effects and types of nanostructures, methods of their production, directions, examples of use, scientific developments on the use of nanostructured materials in food.	3			+						
9	Digital technologies in science and industry	Digital technologies for the raw material-consumer system using information and communication technologies. Development and implementation of big data collection, processing, and analysis tools. Development and implementation of a single distributed database based on blockchain technology for the integration of scientific research.	3		+							
10	Genetic engineering in the food industry	Current trends in the development of genetic engineering; Technology for obtaining genetically modified organisms; Problems and prospects of genetic engineering. The main methods and equipment used for setting up genetic engineering experiments; The	3			+						+

		formation of skills for analyzing modern data on the use of genetic engineering methods in the food industry; the Specifics of obtaining and processing genetically modified sources and its biological safety.										
11	Methodology of mathematical processing of scientific results	Original models of mathematical management of scientific results, which carry out planning and conducting research using modern methods of processing scientific results, allowing you to effectively solve scientific and technical problems in the field of food technology.	3						+			
12	Commercialization of innovative technologies	Concept of commercialization of innovative projects, assessment of potential demand. Fundamentals of commercialization of research and development results. Methods and technological techniques for the professional commercialization of innovative technologies. Methods of marketing communications in the commercialization of innovative technologies. Organization of intellectual property protection in the process of commercialization of innovative solutions. Organization of security in the process of commercialization of innovative developments.	3						+			
13	Modern physical and electrophysical methods of food processing	Physical and electrophysical methods of processing crop products, modes, parameters of raw material processing. Innovative technological schemes for processing crop products. Innovative technologies for reducing grain losses as a result of the use of electrophysical methods of processing it in elevators and grain processing enterprises	3									+

14	Resource-saving technologies for food and processing industries	Study of modern methods and technologies that ensure resource conservation in food processing and production. The analysis and system approach to resource-saving with the use of waste-free and low-waste technologies is carried out. The issues of recycling food and processing industry wastes are considered.	3			+						+
15	Modern instrumental methods of food analysis	Development of advanced methods of research of food raw materials and products in modern devices and equipment. Providing analytical training that helps students develop professional thinking for solving problems in food analysis. A modern approach to instrumental methods for determining the quality and safety of food systems (definition, including an in-depth study of methods for analyzing contaminants of various origins.	3								+	+

MAP of methodological support

8D07201 FOOD TECHNOLOGY

Total disciplines of the educational program ___15___

Of these, how many disciplines are taught at the graduating department __15___

Of these, how many in other departments __0___

MAP №1.
Information on the availability of a fund of educational and scientific literature
Kazakh agrotechnical university named after S.Seifullin
(05/10/2022)
8D07201-"Technology of food products"

№ пп	Academic discipline by profession, specialty, type of activity, section of the education and training program	The number of students studying the discipline (estimated enrollment) Kaz/rus	Educational literature (title, year of publication, authors) textbooks, manuals	Educational and methodical, scientific literature (title, year of publication, authors)	Number of copies / person
1	2	3	4	5	6
1	Academic writing	23	Академическое письмо: принципы структурирования и написания научного текста / сост. А. Г. Ибраева. - Петропавловск : Северо-Казахстанский государственный университет им. М.Козыбаева, 2015.		1
				Рустемова С.К. Академическое письмо: особенности развития параграфа Iscience Актуальные научные исследования в современном мире. Выпуск 7(72) Часть 8.Переяслав, апрель, 2021., pp 174-179	1
2	Methods of scientific researches	23	Научные исследования в животноводстве: учеб. пособие / С. К. Бостанова ; рец.: К. Н. Баязитова, Б. С. Майканов ; М-во сельского хоз-ва РК, Каз. агротехн. ун-т им. С.Сейфуллина. - Астана : КазАТУ им. С.Сейфуллина, 2018. - 111 с.		20
			Методология научного исследовани: учеб. пособие / Б. С. Утибаев, К. Т. Аленова, Г. Б. Утибаева ; рец.: М. К. Алиев, С. М. Егембердиева, Б. Е. Рустембаев ; М-во сельского хоз-ва РК. - Астана : КазАТУ им.С.Сейфуллина, 2016. - 220 с.		59
			Методология научных исследований : учебник / Б. А. Кентбаева ; М-во образования и науки Респ. Казахстан, КазНАУ. - Алматы: Айтұмар, 2014.-206 с.		5

3	Theory of food technology	23	Научные основы пищевых производств Учебное пособие: Г.Н. Жакупова, Н.С.Машанова, К. Мақанғали /КазАТУ им. С. Сейфуллина, 2021, -164 стр.		20
			Тағам өндірісінің ғылыми негіздері Учебное пособие. Г.Н. Жакупова, Н.С.Машанова, К. Мақанғали КазАТУ им. С. Сейфуллина, 2021, -164 стр.		20
			Теоретические основы технологии хранения и переработки продукции растениеводства. Учебное пособие, Изтаев А.И., Увакасова Г.Т., Изтаев Б.А/. Алматы, 2015.		1
4	The advanced technologies of obtaining of biologically active substances and nutraceuticals of animal and vegetable raw materials	23	Пищевые и биологически активные добавки к пище: учеб. пособие / И. Р. Смирнова, Л. П. Сатюкова, М. И. Шопинская. - СПб.: Квадро, 2017. - 112 с.		5
				Современное состояние и перспективы развития производства мясных продуктов функционального назначения: Монография. Амирханов К.Ж., Асенова Б.К. и др. – Алматы, 2013.- 127с.	1
				Инкапсулирование биологически активных добавок и их использование при производстве пищевых продуктов. Монография./ А.К.Какимов, Ж.Х. Какимова, К.С. Жарыкбасова, А.Е. Бепеева, Г.О. Мирашева, М.М. Джумажанова, Г.А. Жумадилова. РГП на ПВХ Государственный университет имени Шакарима города Семей. -Алматы, 2017. - 218с	1
5	Scientific basis of combined products creation	23	Азық-түлік өндірісінің ғылыми негіздері: оқу құралы / Д. Р. Даутканова, С. Ж. Мұсаева, Қ. М. Муратбекова. - Алматы : Альманах, 2016		3

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10	Resource-saving technologies for food and processing industries	23		Современные аспекты научно-технологического обеспечения переработки сельскохозяйственного сырья и отходов: сб. докладов междунар. науч.-практ. конференции, 9-10 окт. 2014 г. / М-во сельского хоз-ва Респ. Казахстан ; ред. Д. А. Шаймерденова, Б. К. Булашев, Г. Т. Дюсенова. - Астана : КазАгроИнновация, 2014. - 299 с.	1
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MAP № 2.
Information about the availability of educational and scientific literature on digital media
Kazakh Agrotechnical University named after S.Seifullin
(01.09.2022)
8D07201 - "Technology of food products"

№ п/п	Academic discipline by profession, direction of personnel training, by specialty qualifications being prepared	Name, year of creation	The authors	Information about the presence of a subscription to international, national databases
1	Academic writing	Академическое письмо. Язык и стиль академического письма : Учебное пособие. . - Костанай: КГУ им. А. Байтурсынова, 2019. - 106 с.	Баяхметова, А.А., Дусенбина, М.Ж.	http://rmebrk.kz/book/1174395
		Основы научно-исследовательской деятельности : учеб. пособие (курс лекций) /; Кубан. гос. аграр. ун-т. – Краснодар, 2015. – 145 с.	Бурда А. Г.	https://kubsau.ru/upload/iblock/40f/40f35535e069a955ca6fc10d13d484b7.pdf
		Академическое письмо: принципы структурирования и написания научного текста : Методическое пособие. - Петропавловск: СКГУ им. М. Козыбаева, 2015. - 106 с.	Ибраева А.Г., Ипполитова Т.В.	http://rmebrk.kz/book/1174395
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2	Methods of scientific researches	Методы исследований в частной зоотехнии - краткий курс лекций, 2015	М.В. Забелина	http://www.sgau.ru/files/pages/14691/143279596812.pdf
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		Учебное пособие. Луговое и пастбищное кормопроизводство.	Можаев Н.И. Серикпаев Н. А.	http://portal.kazatu.kz/e-books/content/X3DZ8KLPymL2PB1Y5DfE/
3	Theory of food technology	Моделирование рецептур пищевых продуктов и технологий их производства: теория и практика : Учебное пособие. / - СПб.: ИОРД, 2015. - 320 с.	О. Н. Красуля, С. В. Николаева, А. В. Токарев и др..	http://rmebrk.kz/book/1176582
		Общая технология пищевых производств : Учебное пособие. / КЭУК. - Караганда: КЭУК, 2017. - 162 с.	Малдыбаева, М.Н.	http://rmebrk.kz/book/1166631
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5	Scientific basis of combined products creation	Теоретические и практические аспекты создания комбинированных пищевых продуктов специального назначения: монография, Павлодар, 2017. - 141 стр.	Темербаева М.В., Ребезов М.Б.	https://elibrary.ru/item.asp?id=29653413
		Физиологически активные вещества растительного сырья, 2011, 105 с.	Аверьянова Е.В., Школьникова М.Н., Егорова Е.Ю.	https://www.studmed.ru/averyanova-e-v-shkolnikova-m-n-egorova-e-yu-fiziologicheski-aktivnye-veschestva-rastitelnogo-syrya_fe7ea8f4d53.html
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6	International, regional and national certification systems	Стандартизация, подтверждение соответствия и метрология : учебное пособие / — Кемерово : КемГУ, 2016. — 115 с.	Устинова Ю. В., Рубан Н. Ю., Попова Д. Г., Ермолаева Е. О..	https://reader.lanbook.com/book/102655#58
		Системы менеджмента безопасности пищевых продуктов: уч. Пособие, -Алматы, 2019. - 252 стр.	Вайскробова Е.С., Ребезов М.Б.	https://elibrary.ru/item.asp?id=41432624
7	Nanotechnology in food and processing industries	Инновационные технологии глубокой переработки зернового сырья в новые продукты: монография, 2015	Изтаев А.И. и др.	http://ecatalog.kazatu.kz/jirbis2/components/com_irbis/pdf_view/?774628
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		Технология крахмала, крахмалопродуктов и глюкозно-фруктозных сиропов. Учебное пособие (книга), 2013	Голыбин В.А., Ефремов А.А.	https://www.iprbookshop.ru/47461.html
8	Digital technologies in science and industry	История, современное состояние и путь к открытой науке: Издательство "Лань", 2020, 168 с.	Вахрушев М. В., Гончаров М. В., и др	https://e.lanbook.com/reader/book/139247/#9
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