NON-COMMERCIAL JOINT-STOCK COMPANY

«KAZAKH NATIONAL AGRARIAN UNIVERSITY»

EDUCATIONAL PROGRAM

«7M07210 FOOD SAFETY»

CATALOG OF ELECTIVE DISCIPLINES

2020-2022

ALMATY, 2020

EDUCATIONAL PROGRAM «7M07210 FOOD SAFETY»

Awarded degree: Master of Natural Sciences the educational program

7M07210-«Food safety» (scientific-pedagogical direction)

Discipline code and name	**IFN 60201 History and philosophy of science**
Discipline Facilitator/tutor	Facilitator: candidate of philosophy, Associate professor Zaurbekova L.R.
Discipline cycle	Base discipline
Learning level	Master
Learning program	7M07210-«Food safety»
Number of academic credits	4
Learning form	Full-time
Semester	Year 1, 1st semester
Discipline prerequisites	Philosophy
Discipline post-requisites	All general and major disciplines of departments' specialties
Goal of learning the discipline	The goal is to learn laws and tendencies of the development of special activity of knowledge production in context of historic dynamics and changing socio-cultural norms.
Discipline content	The course «History and philosophy of science» is compulsory for all specialties of the magistracy. It forms undergraduates ' culture of scientific thinking, develops analytical skills and research activities, gives theoretical and practical knowledge necessary for the future scientist. The study of the discipline is important in an era of increasing urgent need for science and scientists. «History and philosophy of science» introduces the problem of the phenomenon of science as a subject of special philosophical analysis, forms knowledge about the history and theory of science; on the laws of science and the structure of scientific knowledge; on science as a profession and social Institute; on the methods of scientific research; on the role of science in the development of society.
Discipline competencies	**After mastering the discipline, the master student must:** **know and understand:** the nature, structure, principles of organization and functioning of science; genesis and history of science; the conceptual apparatus of the history and philosophy of science, the laws governing the formation and development of scientific disciplines; **be able to:** formulate and solve problems arising in the course of research activities; choose the necessary research methods; apply methodological and methodological knowledge in scientific research, pedagogical work; **possess the skills:** conducting independent research and scientific-pedagogical activities; writing scientific articles, speaking at conferences, symposia.
Final form	Examen
Discipline duration	1 academic period (15 weeks)

Literature	1.История и философия науки. Под ред. Крянева Ю.В., Мотириной Л.Е. - М.: ИНФРА-М, 2011. – 426 с. 2.Мырзалы С.К. Ғылымның тарихы мен философиясы. — Алматы: Бастау, 2014. 3.Степин В. С. История и философия науки. - М.: Академический Проект, 2011.- 423 с. 4.Хасанов М. Ш., Петрова В. Ф. История и философия науки. - Ллксты: Казак университеті. 2013. - 150 с.

Code and name of the module (Russian, English)	**FSRA 60205 – Food safety risk assessment**
Teaching staff of the discipline	Tatybaev Mukhtarbek Kalmurzaevich-Ph. D. Associate Professor
Discipline cycle	BE/OC
Training level	Master's Degree program
Educational program	7M07210-Food safety
Number of academic credits	5
Form of training	full-time
Semester/ Trimester	1 semester
Prerequisite of the discipline	- Risk management ; - Food safety control; - Physico-chemical, biological, microbiological studies of food products
Post-requirements of the discipline	Master's thesis
The purpose of studying the discipline	Characteristics of risks and the basics of the principles of their identification. Physical and chemical risk of products. Biological risk of products. The study of modern methods of food production. Possess an assessment of the risk associated with the impact of the external environment. Stastic processing of risk assessment results
Content of the discipline	The main task of the discipline "food safety risk assessment" is to fully ensure the methodological, technical and practical implementation of all conducted laboratory tests.
Competencies of the discipline	After mastering the discipline, the student must: - **know**-legalized and regulatory legal acts ; - methods of food risk assessment; - risk assessment methods; - **understand**-assessment of the danger of the main technological processes, the risk in the selection and rational placement of equipment on technological lines. - **apply-**distinguish and assess the types of risks in food production. - **be competent**-quality and safety risk assessment of products when conducting experimental experiments on food products and identifying risks in food products using special approaches..
Final control form	Exam
Duration	1 academic period (15 weeks)
References	**Main** 1. M. Zh. Erkebayev.Azyk-tulik shikzaty zhane tagam onimderinin kauipsizdigi Almaty., 2013. 2. R. Z. Grigorieva Safety of food raw materials and food products 2004. 3. On risk analysis in the food industry. World Health

	Organization/Food and Agriculture Organization of the United Nations. Available online. Accessed 06.07.2010. 4. Joint FAO/WHO Food Standards Programme. Codex Alimentarius Commission. Procedural Guide. 12th ed. Rome: Food and Agriculture Organization of the United Nations: World Health Organization, 2001. Available online. Accessed 11/12/03. 5. Food Safety Risk Analysis: A Guide for National Food safety Authorities. Food and Agriculture Organization of the United Nations. Available online. Accessed 06.07.2010. **Additional information** 6. Poznyakovsky V. M. Hygienic bases of nutrition, safety and expertise of food products. Novosibirsk, 1999 7. Guidelines for the meta-analysis of the quality and safety of food products / ed. Skurikhina I. M., Tutelyana V. A. 1998/ 8. Antonov V. I. et al. Laboratory research in veterinary medicine: biochemical and mycological. Handbook. M., "Agropromizdat", 1991, p. 287. 9. Bagieva M. N. Complex risk assessment of a commercial enterprise: Dis. Candidate of Economics: 08.00.05. - St. Petersburg, 2000. - 170s. 10. Granaturov V. M. Economic risk: essence, measurement methods, ways of reduction. - M.: Publishing House "Delo i Service", 2000. - 112s 11. Gryadov S. I. Risk and the choice of strategy in entrepreneurship. - M.: MSHA, 2004. - 42s. productions. Textbook. - M.: - Informagrotech, 2015.

Code and name of the course	**MMAFRMP 60206- "Modern methods of analysis of food raw materials and products»**
Teaching Staff	Askarbekov E. B
Course type	basic cycle (profiling cycle)
Level	Master's Degree program
Educational Programm	7M07210 – "Food safety»
Credit number	5
Form of tution	Full-time
Semester/trimester	I
Course prerequisites	Integrated use of raw materials in the food industry
Course postrequisites	Master's thesis (project)
Aim of the course	The purpose of the discipline is to acquire knowledge about new express methods and tools used in laboratory practice to study the composition and properties of food, in-depth development of new methods of food analysis, as well as the basics of organizing and conducting laboratory control, the formation of skills for determining the chemical composition and properties of food, raw materials and semi-finished products.
Course content	Classification of research methods for food raw materials and products. Comprehensive assessment of the quality and safety of food raw materials and products. Basic concepts and terms. General principles of analysis and sample preparation Organoleptic methods of food quality assessment. Instrumental methods for

	studying the rheological properties of food products. Physical and chemical methods for studying the composition and properties of food raw materials and products. Spectroscopy. Use of spectra to determine the chemical composition and safety of raw materials and finished products.
Course competencies	After mastering the discipline, the master's student must: - know: - methods of qualitative and quantitative analysis of food quality and safety indicators, regulatory and technical documents in the field of food analysis; - modern methods of food analysis; - theoretical regularities between the composition and properties of substances. - understand - fundamentals of modern physical and chemical methods of analysis, such as chromatography, spectrometry, optical, luminescent, etc. - rules for the organization of metrological support for laboratory analysis, organization of workplaces and their technical equipment - apply - measurement methods depending on the properties of the substance, its quantity and the purpose of the study; - analytical research on the proposed methods. - be competent - terminology, definitions and provisions of the studied discipline; - methods for determining the composition and properties of raw materials, semi-finished products and animal products; - modern methods for determining the content of substances in various samples, - skills in the development and implementation of new methods of analysis of raw materials, semi-finished products and food products, modern technologies of laboratory analysis
Form of final control	Exam
Course duration	1 academic period (15 weeks)
References	*Basic literature:* 1. Лурье, И. С. Технохимический и микробиологический контроль в кондитерском производстве: Справочник / И. С. Лурье, Л. Е. Скокан, А. П. Цитович. – М.: Колос, 2003. – 416 с. 2. Максимов, А. С. Лабораторный практикум по реологии сырья, полуфабрикатов и готовых изделий хлебопекарного, макаронного и кондитерских производств / А. С. Максимов, В. Я. Черных. – М.: Издательский комплекс МГУПП, 2004. – 163 с. 3. Подлегаева, Т. В. Методы исследования свойств сырья и продуктов питания: учебное пособие / Т. В. Подлегаева, А. Ю. Просеков. – Кемерово: изд-во КемТИПП, 2004. – 82 с 4. Гигиенические требования безопасности и пищевой ценности пищевых продуктов. Санитарно-

	эпидемиологические правила и нормативы» (СанПиН 2.3.2.1078 — 01). Приложение. Список пищевых добавок, разрешенных к применению при производстве пищевых продуктов. Приложение. Список пищевых добавок, запрещенных к применению при производстве пищевых продуктов. 5. А.Қ.Смағулов, Қ.А. Сағындыков. Ауыл шаруашылық өнімдерін сапасын сараптау және бағалау. Изд-во КазНАУ. Алматы, 2005 г. 390. *Additional literature:* 6. Экспертиза хлеба и хлебобулочных изделий. Качество и безопасность / под общ. ред. В. М. Позняковского. – Новосибирск: Сиб. унив. изд-во, 2005. – 278 с. 7. ГОСТ Р ИСО 3972-2005 - Органолептический анализ. Методология исследования вкусовой чувствительности. 8. ГОСТ Р ИСО 5496-2005 - Органолептический анализ. Методология обучение испытателей обнаружению и распознаванию запахов.

Code and name of the discipline	**HSMDI 60332 -Hygiene and sanitation in the meat and dairy industry**
Facilitator / tutor of the discipline	Tutor: Ph. D., Associate Professor Sakiyeva Z. Zh.
Discipline cycle	BD//OC
Training level	Magsitratura
Educational program	7M07210-Food safety
Number of academic credits	5
Form of training	full-time
Semester/trimester	I semester
Prerequisites of the discipline	Food safety
Special requirements of the discipline	Identification of chemical contaminants in food
The purpose of studying the discipline	The purpose of the discipline is to provide undergraduates with in-depth theoretical knowledge and practical skills in the field of sanitation and hygiene of meat and dairy products.
Content of the discipline	In the course of mastering the course, the master's student studies the technology of food production using physical, chemical, microbiological and other methods of influencing raw materials, progressive directions, improving the quality and range of products, fundamental ways of developing meat and dairy production, taking into account modern requirements of sanitation and hygiene.
The competence of the discipline	After mastering the discipline, the master's student must: - know - classification and characterization of the main types of livestock products for the production of food products based on meat and dairy raw materials;

	- modern technologies and their sanitation and hygiene; - requirements for the quality of meat and dairy raw materials and control of the finished product; - understand - choose technological modes related to the processes occurring during processing in food products (biochemical, microbiological and colloidal processes, vacuum processing, drying, hydrothermal and heat treatment); - work with technological maps and their control for the provision of food products; apply on the basis of scientifically - based requirements for the composition and quality of this type of product to analyze and develop prescription compositions; - be competent in the principles of regulating the technological modes of production in the field of food production, depending on the quality and control.
Final control form	Exam
Duration of the discipline	1 academic period (15 weeks)
List of literature	1. Et onimderin ondirudin fizika-khimiyalyk zhane biokhimiyalyk negizderi [Matin]: oku kuraly / B. K. Asenova, M. B. Rebezov, A. N. Nurgazezova, L. S. Bakirova.- Almaty: SSK, 2019. - 160 b. 2. Muratova, B. A. Tamaktanu physiologiyasy, sanitariya zhane hygiene [Matin]: okulyk / B. A. Muratova; KR Bilim zhane gylym m-trligi.- Almaty: Almanac, 2019. - 224 b. 3. Quality control of milk and dairy products [Text]: textbook. manual / B. K. Asenova, M. B. Rebezov, G. M. Topuria [et al.]. - Almaty: SSK, 2019. - 236 p. 4. Technology of meat and meat products [Text]: textbook. manual / S. K. Kasymov, B. K. Asenova, A. N. Nurgazezova [et al.]; MES RK.- Almaty: SSK, 2019. - 328 p. 5. Isabaeva, G. M. Et zhane et onimderi [Matin] = Meat and meat products / G. M. Isabaeva.- case. - Almaty: SSK, 2018. - 96 b. 6. Li, M. V. Food hygiene [Text]: textbook.- method. manual / M. V. Li, A. B. Buzhikeeva, E. Yu. Ushanskaya.- Almaty: SSK, 2018. - 220 p.

Code and name of the discipline	**NILFFP 60207«National and international legislation in the field of food production»**
Facilitator / tutor of the discipline	facilitator: Candidate of Agricultural Sciences, Associate Professor Zhamurova V. S.
Thecycleofdisciplines	BD/OC
Levelofeducation	degree
Educationalprogram	7M07210 - "Food safety"
Numberofacademiccredits	5
Formoftraining	daytime
Semester/Trimester	1
Prerequisitesofthediscipline	methodology of scientific research in food safety, monitoring of environmental indicators of food safety
Post-requirements of the	writing a dissertation

discipline	
The purpose of studying the discipline	undergraduates acquire in-depth theoretical knowledge and practical skills in the field of food production at the level of national and international legislation.
Contentofthediscipline	In the course of mastering the course, the master's student studies the laws and regulations in this area, all types of standards, technical regulations for all food products approved by the Customs Union.
The competence of the discipline	As a result of studying the discipline, the student should know: - regulatory documents in the field of food production; - approved technical regulations of the Vehicle; - **understand:** - the significance of regulatory and legal documents in this area; - international and modern requirements for food products; - **apply:** - Knowledge in the field of food quality control; **- be competent:** - in the application of regulatory documents of the Republic of Kazakhstan and international requirements for the production and consumption of food products.
Finalcontrolform	exam
Durationofthediscipline	15 weeks
References	**List of basic literature** **Main** 1 Тамақ өндірістерінің жалпы технологиясы [Мәтін]: оқу құралы / Л.М.Сарлыбаева, Ш.К.Асқарова, Н.К.Ахметова, С.Т.Абимульдина.- Алматы: ССК, 2018.- 216 б. 2 Маликтаева, П.М. Ұлттық сусын өнімдерінің сапасын талдау [Мәтін]: оқу құралы / П.М. Маликтаева.- Алматы: Эверо, 2015.- 196 б. 3 Technical regulations of the Customs Union 4 Laws of the Republic of Kazakhstan **Additional** ДиМаттео, Л.А. Халықаралық бизнес құқығы және заңнамалық орта [Мәтін]: транзакциялық тұрғыдан зерделеу / Л.А. ДиМаттео; ауд. К.М.Абишова, Г.С.Жолдасбаева, Е.Н.Искаков [ж.т.б.]; "Ұлттық аударма бюросы" қоғамдық қоры.- 3-бас.- Алматы: Ұлттық аударма бюросы, 2019.- 680 б.- (Рухани жаңғыру. Жаңа гуманитарлық білім. Қазақ тіліндегі 100 жаңа оқулық)

Module code and name	**KRR 60208 Food Contamination**
Facilitator / module tutor	Tatybaev M. K. K. P. N., assoc.Professor
Module type	BD/OC
Training level	Master's degree
Specialty	5
Number of credits	7M07210-Food Safety
Form of training	Full-time

Semester	1
Module prerequisites	Food safety risk assessment
Post-requirements of the module	Dissertation work
The purpose of studying the module	To form a clear understanding of the main chemical pollutants of food products due to the widespread use of pesticides, nitrates, heavy metals, mycotoxins, as well as methods for determining the residual amounts of foreign substances in food raw materials and food products.
Module content	Confirmation of compliance with the regulatory requirements of the system in the food industry; product evaluation or certification of the product quality system, testing of equipment samples in an accredited industry; (including technical documentation, quality documents, conclusions, certificates and test reports) submitted by the manufacturer or an authorized representative (seller) to determine whether compliance with the regulatory requirements can be recognized; analysis of the results obtained and the possibility of issuing a certificate. application of the legal framework, maintenance of official documents in the field of conformity assessment, in-depth study and revision After completing the module, the student must: - Be able to: the regulatory framework for industry compliance, the system of conformity assessment of agricultural production and the food industry, Know - National and international food safety programs; Have skills-an understanding of methods and means of reducing the negative impact of the use of pesticides in agricultural production; Be competent: in the field of conformity assessment in the food industry.
Module competencies	After mastering the module, the master's student must: - Be able to: the regulatory framework for industry compliance, the system of conformity assessment of agricultural production and the food industry, Know - National and international food safety programs; Have skills-an understanding of methods and means of reducing the negative impact of the use of pesticides in agricultural production; Be competent: in the field of conformity assessment in the food industry.
Final control form	exam
Duration of the module	1 academic period (15 weeks)
List of literature	**1.** General technology of food production [text]: textbook / L. M. Sarlybayeva, Sh.K.Askarova, N. K. Akhmetova, S. T. Abimuldina.- Almaty: Sok, 2018. - 216 P. **2.** Dautkanova D. R. scientific foundations of food production [text]: textbook / D. R. Dautkanova, S. zh.Musayeva, K. M. Muratbekova. Almaty: Almanac, 2017. - 116 P. **3.** General technology of food production [text]: textbook / L. M. Sarlybayeva, Sh.K.Askarova, N. K. Akhmetova, S. T. Abimuldina.- Almaty: Evero, 2017. - 216 P.

Code and name of the discipline (rus, ang)	**FA 60206 Food Analysis**
Facilitator / tutor of the discipline	Tutor: Ph. D., Associate Professor Sakiyeva Z. Zh.
Discipline cycle	BD/OC
Training level	Magsitratura
Educational program	7M07210-Food safety
Number of academic credits	5
Form of training	full-time
Semester/trimester	I semester
Prerequisites of the discipline	Food safety
Special requirements of the discipline	Identification of chemical contaminants in food
The purpose of studying the discipline	The purpose of the discipline is to provide undergraduates with in-depth theoretical knowledge and practical skills in the field of sanitation and hygiene of meat and dairy products.
Content of the discipline	The discipline includes the classification of food products, food additives, nutrients and xenobiotics, the main ways of food contamination, toxicological and hygienic characteristics of contaminants, genetically modified products, biologically active substances and packaging materials, methods for the quantitative determination of a number of contaminants, the organization of a certification system for food products and food raw materials, regulatory documents regulating the quality and safety of food products
The competence of the discipline	After mastering the discipline, the master's student must: know - classification and characterization of the main types of livestock products for food production based on the analysis; - modern technology and analysis of food products; - requirements for the quality of meat and dairy raw materials and control of the finished product; - understand - choose technological modes related to the processes occurring during processing in food products (biochemical, microbiological and colloidal processes, vacuum processing, drying, hydrothermal and heat treatment); - work with technological maps and their control for the provision of food products; apply on the basis of scientifically - based requirements for the composition and quality of this type of product to analyze and develop prescription compositions; - be competent in the principles of regulating the technological modes of production in the field of food production, depending on the quality analysis and control.
Final control form	Exam

Duration of the discipline	1 academic period (15 weeks)
List of literature	1. Et onimderin ondirudin fizika-khimiyalyk zhane biokhimiyalyk negizderi [Matin]: oku kuraly / B. K. Asenova, M. B. Rebezov, A. N. Nurgazezova, L. S. Bakirova.- Almaty: SSK, 2019. - 160 b. 2. Muratova, B. A. Tamaktanu physiologiyasy, sanitariya zhane hygiene [Matin]: okulyk / B. A. Muratova; KR Bilim zhane gylym m-trligi.- Almaty: Almanac, 2019. - 224 b. 3. Quality control of milk and dairy products [Text]: textbook. manual / B. K. Asenova, M. B. Rebezov, G. M. Topuria [et al.]. - Almaty: SSK, 2019. - 236 p. 4. Technology of meat and meat products [Text]: textbook. manual / S. K. Kasymov, B. K. Asenova, A. N. Nurgazezova [et al.]; MES RK.- Almaty: SSK, 2019. - 328 p. 5. Isabaeva, G. M. Et zhane et onimderi [Matin] = Meat and meat products / G. M. Isabaeva.- case. - Almaty: SSK, 2018. - 96 b. 6. Li, M. V. Food hygiene [Text]: textbook.- method. manual / M. V. Li, A. B. Buzhikeeva, E. Yu. Ushanskaya.- Almaty: SSK, 2018. - 220 p.

Code and name of the discipline (Rus, ang)	**MNIPB 60303 - Methodology of scientific research in food safety»**
Facilitator / tutor of the discipline	Facilitator: candidate of technical sciences, associate professor Kaimbaeva L. A.
The cycle of disciplines	BD/OC
Level of education	master's degree program
Educational program	7M07210 - Food safety
Number of academic credits	5
Form of training	daytime
Semester/Trimester	II
Prerequisites of the discipline	food safety, resource-saving technologies of food production
Post-requirements of the discipline	writing a dissertation work
The purpose of studying the discipline	"Methodology of scientific research in food safety" is a discipline that forms students ' professional skills in quality control and food safety and readiness to learn disciplines that study the features of scientific research of products from animal and vegetable raw materials.
Content of the discipline	- the ability to set research objectives, choose experimental methods, interpret and present the results of scientific research; - the ability to independently perform research to solve research and production tasks using modern equipment and methods for studying the properties of raw materials, semi-finished products and finished products.
The competence of the discipline	As a result of studying the discipline, the student **should know:** - classification and characteristics of the main types of livestock products for the production of food products based on meat raw

	materials; - modern technologies for the cultivation of environmentally safe livestock raw materials for the production of functional products; - requirements for the quality of raw meat and finished products; **- understand:** - determination of the social necessity and economic feasibility of the production of certain products; - basic human needs for nutrients and their biological role in the body; - food and technological requirements for the production of food products based on meat raw materials of functional orientation; **- apply:** basic principles of modeling multicomponent food products to ensure a rational and balanced diet of various population groups: - technological modes depending on the processes occurring during processing in food products (biochemical, microbiological and colloidal processes, vacuum processing, drying, hydrothermal and heat treatment); - work with technological maps and technological schemes of food production; - analysis and development of prescription compositions based on scientifically-based requirements for the composition and quality of this type of product; - innovative technological solutions in the production of new types of products for functional nutrition; **- be competent:** - in the principles of regulation of technological modes of production in the field of food production, depending on the location of production.
Final control form	exam
Duration of the discipline	15 weeks
References	**List of basic literature** **Main** 1 Алимарданова, М. Технохимический контроль мясных продуктов [Текст]: практикум / М. Алимарданова.- Астана: Фолиант, 2010.- 224 с. 2 Alimardanova, M.K. Theory of food technology [Текст]: textbook / M.K. Alimardanova, V.L. Petchenko, N. Zhexenbay.- Almaty: Almanah, 2017.- 245 p. 3 Баранов, Б.А. Методы контроля микроколичества пестицидов в продуктах питания и объектах окружающей среды [Текст]: учеб. пособие / Б.А. Баранов, А.Д. Серикбаева, Л.К. Бупебаева.- Алматы: Эпиграф, 2015.- 244 с. 4 Дунченко, Н.И. Управление качеством в отраслях пищевой промышленности [Текст]: учеб. пособие / Н.И. Дунченко, М.Д. Магомедов, А.В. Рыбин.- 4-е изд.- М.: Дашков и К*, 2014.- 211 с. 5 Темербаева, М.В. Безопасность пищевых продуктов [Текст]: учеб. пособие / М.В. Темербаева. - Алматы: Эверо, 2017.- 312 с. 6 Тасмағамбет, А.Т. "Ет және сүт өнімдерінің биохимиясы" пәнінің магистранттерге арналған оқу-әдістемелік кешені

	[Мәтін]: 5В120200-Ветеринариялық санитария; 5В080200-Мал шаруашылығы өнімдерін өндіру технологиясы / А.Т. Тасмағамбет, С.Н. Сәрімбекова.- Алматы: Айтұмар, 2015.- 107 б. 7 Узаков, Я.М. Белки и пищевые волокна в мясных технологиях [Текст]: моногр. / Я.М. Узаков, В.В. Прянишников, А.В. Ильтяков; Алматинский технологический университет РУМС МОН РК.- Алматы: Эверо, 2014.- 212 с. **Additional information** 8 Алимарданова, М. Технология переработки мяса и мясных продуктов [Текст]: учеб. пособие / М. Алимарданова, Р. Хакимова.- Астана: Фолиант, 2009.- 368 с. 9 Рогов, И.А. Технология мяса и мясных продуктов [Текст]. Кн.2. Технология мясных продуктов / И.А. Рогов.- М.: Колос, 2009.- 711 с. 10 Хамитова, Б.М. Азық-түлік өнімдерінің тауарларын тану [Мәтін]: оқу құралы / Б.М. Хамитова, Ш.Б. Тасыбаева.- Алматы: Эверо, 2015.- 164 б.

Discipline code and name	**MEPPB 70306“Monitoring of environmental indicators of food safety”**
Facilitator/Tutor of Disciplie	Facilitator: Tutor. Marat Kozhakhmetov, Doctor of agriculture sciences, Professor
Discipline Cycle	PD/OC
Training Level	masters programme
Education Program	7MO7210 Food Safety
Number of academic credits	6
training form	Full-time
Semester/trimester	II
Pre-requisites of the discipline	food chemistry course, biochemistry,ecology
PostPre-requisites of the discipline	Safety of food raw materials and food products, processing and storage of crop products
The purpose of the study of the discipline	to provide undergraduates with an idea of the theory and methodology of environmental monitoring of food safety indicators
Discipline Content	Lecture; Practical lessons; RBM; RBM (D)
Discipline competence	**After mastering the discipline, the undergraduate should**: - **to know** - basic scientific concepts and theoretical foundations of environmental monitoring - **to understand** the main applied directions of environmental monitoring of food safety - **to assess** the state of ecosystems and the natural environment - **be competent** to search for information on pollution rationing and methods for assessing the ecological effect of food through biological mechanisms

Form of final control	Exam
Duration of discipline	2 academic period (15 weeks)
List of literature	**Basic** 1. Shmarova I.N. Basic concepts, principles and system of environmental monitoring. Almaty: Atameken, 2002-139 p. 2. Golitsin A.N. Industrial ecology and monitoring of pollution of the natural environment. M.:ONIKS,2007 - 331 s. 3. Ivanov N.I., Fadin I.M. Engineering ecology and environmental management. M.: Logos, 2004 - 520 s. 4. Environmental Code of the Republic of Kazakhstan - 2007 **Optional**: 5. Gorbyleva A.I. Soil science with the basics of geology. Minsk: New knowledge, 2002-304 p. 6. Collection of normative acts "Environmental Protection." Almaty: JURIST.2005, 220 p. 7.https://thepresentation.ru/ekologiya/ekologicheskiy-monitoring-10

Code and name of the module (Russian, English)	**IHZPP 70307 "Identification of chemical pollutants in food products»**
Teaching staff of the discipline	Tatybaev Mukhtarbek Kalmurzaevich-Ph. D. Associate Professor
Discipline cycle	PD/OC
Training level	Master's Degree program
Educational program	7M07210-Food safety
Number of academic credits	5
Form of training	full-time
Semester/ Trimester	3 semester
Prerequisite of the discipline	Standardization
Post-requirements of the discipline	Food safety management system
The purpose of studying the discipline	Acquisition of undergraduates of deep scientific knowledge, as well as skills in the application of research methods, general rules for constructing product names, quality control and food safety, to master the methods of determining the qualitative and quantitative composition of products, to get acquainted with the methods and methods of identification and their rules of construction.
Content of the discipline	The study of theoretical issues of assessing the quality of raw materials and finished products, methods and methods of identification, general rules for constructing product names, criteria for assessing food safety, general principles of analysis and sample preparation, organoleptic methods for assessing food quality, physical and chemical methods of identification, luminescent analysis of food products and food safety.

Competencies of the discipline	After mastering the discipline, the student must: **- know;** general principles of the analysis of the main components of food; basic methods and methods of identification, methods of sampling and preparation of samples; comprehensive assessment of the quality and safety of food; physical, chemical and physico-chemical methods of research and sensory analysis of products. **- understand-**understanding of the methodology for identifying food product quality assessment, requirements for controlling the production process, providing processes with regulatory documents: - **apply**-use the theoretical foundations of identification and competently form the purpose of research, control and determination of the chemical composition of the product; scientifically justify the choice of the analysis method to determine promising technological solutions, depending on the specifics of food production. **- competent;** conducting standard studies to determine the physical and chemical parameters of food products.
Final control form	Exam
Duration	1 academic period (15 weeks)
References	**Main** 1. Kosheev A. K., Livshits O. D., Dobroserdova I. I. Luminescent analysis of food products. Perm: Perm Book Publishing House, 2000. 2. Paramonova T. N. Express-methods for assessing the quality of food products. Moscow: Ekonomika, 2008. 3. Pitulin P. I. The state and prospects of applying luminescent analysis in veterinary medicine. the meeting. on the application of lum methods. analiza v sel. khoz., AN SSSR, L., 2011. 4. Belanovsky A. Fundamentals of Biophysics and Veterinary Medicine. Moscow: Bustard, 2007. 5. Kozhanov T. S., Rysmende S. S. Course of physics. T. 1, 2. - Almaty, 2000. 6. Trofimova T. I. Course of physics. M.: Higher School, 2009. 7. Volkenstein V. S. Collection of problems on the general course of physics. St. Petersburg: Profession, 2007. 8. Gacula M. C. Jr., Sing H. J. Statistical Methods in Food and Consumer Research. – Academic Press: NY, 2007. 9. Franz V. Authenticity of fats on oils / V. Franz, B. Manuela // European Joun. Of Lipid Science and Tech. -2000. P. 68-694. **Additional information** 10. Lovacheva G. N., Uspenskaya N. R. New methods of research of products in public nutrition. Moscow: Ekonomika, 2008. 11. Zorin V. P., Cherenkevich S. N. Research with the help of luminescent methods of pathological changes in milk in mastitis. Tez. doc. Sun. nauch. the meeting. "Luminescent research methods in agriculture and processing industry", Minsk, 2012. 12. Methodological guidelines for laboratory quality control of public catering products. Moscow: Vs. In. Pitaniya, 2009. 13. V. N. Girenko, M. I. Holland. Luminescent analysis of

	potatoes, vegetables, fruits and other goods. G. I. Trade literature. M. 2011. 14. Methodical instructions: Sakipova Sh. E., Zhukina A. B., Izenbaeva S. B., Nurkamyt A. B. Fundamentals of biophysics. Almaty, 2012 15. Musabekov O. Problems in biophysics. KazNAU, 2003. 16. Precht D. Analysis and seasonal variation of conjugated linoleic acid and further cis-/trans-isomers of Ci8:i and Cig:2 in bovine milk fat / D. Precht, J. Molkentin // Kiel. Milchwirt. Forschungsber. 2009. - V. 51, № 1. - P. 6378. 17.Precht D. Analysis and seasonal variation of conjugated linoleic acid and further cis-/trans-isomers of Ci8:i and Cig:2 in bovine

Code and name of the discipline (Rus, ang)	**RTPPP 70309 «Resource-saving technologies of food production»**
Facilitator / tutor of the discipline	facilitator: candidate of technical sciences, associate professor Kaimbaeva L. A.
The cycle of disciplines	basic (professional) Master's
Level of education	BC/OC
Educational program	7M073500 - "Food safety"
Number of academic credits	6
Form of training	daytime
Semester/Trimester	3
Prerequisites of the discipline	methodology of scientific research in food safety, monitoring of environmental indicators of food safety
Post-requirements of the discipline	writing a dissertation
The purpose of studying the discipline	the purpose of the discipline is to provide undergraduates with in-depth theoretical knowledge and practical skills in the field of non-waste, low-waste, resource-saving technologies in the food industry.
Content of the discipline	in the course of mastering the course, the master's student studies the technology of production of products using physical, chemical, microbiological and other methods of influencing raw materials, progressive directions, improving the quality and range of products, fundamental ways of developing waste-free technologies taking into account modern environmental requirements.
The competence of the discipline	As a result of studying the discipline, the student should know: - classification and characteristics of the main types of livestock products for the production of food products based on meat raw materials; - modern technologies for the cultivation of environmentally safe livestock raw materials for the production of functional products; - requirements for the quality of raw meat and finished products; - understand: - determination of the social necessity and economic feasibility of

	the production of certain products; - basic human needs for nutrients and their biological role in the body; - food and technological requirements for the production of food products based on meat raw materials of functional orientation; - apply: basic principles of modeling multicomponent food products to ensure a rational and balanced diet of various population groups: - technological modes depending on the processes occurring during processing in food products (biochemical, microbiological and colloidal processes, vacuum processing, drying, hydrothermal and heat treatment); - work with technological maps and technological schemes of food production; - analysis and development of prescription compositions based on scientifically-based requirements for the composition and quality of this type of product; - innovative technological solutions in the production of new types of products for functional nutrition; - be competent: - in the principles of regulation of technological modes of production in the field of food production, depending on the location of production.
Final control form	exam
Duration of the discipline	15 weeks
References	**List of basic literature** **Main** 1. Даутканова, Д.Р. Азық-түлік өндірісінің ғылыми негіздері [Мәтін]: оқу құралы / Д.Р. Даутканова, С.Ж. Мұсаева, Қ.М. Муратбекова.- Алматы: Альманах, 2017. - 116 б. 2. Сарлыбаева, Л.М. Теоретические основы обработки пищевого сырья [Текст]: учеб. пособие / Л.М. Сарлыбаева, А.Н. Аралбаева.- Алматы: TechSmith, 2018. - 288 с. 3. Тамақ өндірістерінің жалпы технологиясы [Мәтін]: оқу құралы / Л.М.Сарлыбаева, Ш.К.Асқарова, Н.К.Ахметова, С.Т.Абимульдина.- Алматы: ССК, 2018. - 216 б. 4. Alimardanova, M.K. Theory of food technology [Текст]: textbook / M.K. Alimardanova, V.L. Petchenko, N. Zhexenbay.- Almaty: Almanah, 2017. - 245 p. 5. Таукебаева, К.С. Тамақ әзірлеу технологиясы [Текст]: оқулық / К.С. Таукебаева, С.Ж. Баубеков, Т.Ж. Таукебаева.- Алматы: Эпиграф, 2016. - 244 б. 6. Баубеков, С.Ж. Ет өнімдерін өңдеу тәсілдері [Мәтін]: оқулық / С.Ж. Баубеков, А.У. Тайчибеков.- Алматы: Эверо, 2015. - 228 б. **Additional** 7. Хамитова, Б.М. Азық-түлік өнімдерінің тауарларын тану [Мәтін]: оқу құралы / Б.М. Хамитова, Ш.Б. Тасыбаева.- Алматы: Эверо, 2015. - 164 б. 8. Рогов, И.А. Технология мяса и мясных продуктов [Текст].

	Кн.2. Технология мясных продуктов / И.А. Рогов.- М.: Колос, 2009. - 711 с. 9. Алимарданова, М. Технология переработки мяса и мясных продуктов [Текст]: учеб. пособие / М. Алимарданова, Р. Хакимова. - Астана: Фолиант, 2009. - 368 с.

Code and name of the module (Russian, English)	**RMC 70308 "Risk management and communication»**
Teaching staff of the discipline	Tatybaev Mukhtarbek Kalmurzaevich-Ph. D. Associate Professor
Discipline cycle	BD
Training level	Master's Degree program
Educational program	7M07210-Food safety
Number of academic credits	5
Form of training	full-time
Semester/ Trimester	3 semester
Prerequisite of the discipline	- Food safety control; - Physico-chemical, biological, microbiological studies of food products
Post-requirements of the discipline	Master's thesis
The purpose of studying the discipline	formation of basic knowledge in the field of production risk management of an individual business entity, development of skills in the identification, analysis and assessment of risks in the market economy and the choice of informed decisions and methods of risk management based on the basic concepts of risk management. Obtaining practical skills in the application of risk management methods, methods of their calculation, evaluation of the effectiveness of measures taken to minimize risks by undergraduates;
Content of the discipline	"Risk management and Communication" is a complete provision of methodological, technical and practical implementation of all conducted research. Critically evaluate the proposed options for management decisions and develop and justify proposals for their improvement, taking into account the criteria of socio-economic efficiency, risks and possible socio-economic consequences
Competencies of the discipline	After mastering the discipline, the student must: - **know**-- the nature and types of risks; - methods of risk analysis of various variants of management decisions;; - methods of risk assessment;; - effective risk management tools; - **understand**- assessment of the danger of the main technological processes, the risk in the selection and rational placement of equipment on the production lines. - **apply**-- conduct a risk analysis of various management decisions; - assess the risks of management decisions; - choose effective risk management tools; - **be competent**- the ability to analyze and assess the risks of the proposed management solutions and choose effective risk management tools.
Final control form	Exam
Duration	1 academic period (15 weeks)
References	**Main** 1. Risk management: a textbook / L. P. Goncharenko, S. A. Filin :

	Plekhanov Russian Academy of Economics ; Ed. by E. A. Oleynikov . - 3rd ed., ster . - Moscow: KNORUS, 2010, 2009 .— 215 p. 2. R. Z. Grigorieva Safety of food raw materials and food products 2004. 3. About Risk Analysis in Food. World Health Organization/Food and Agriculture Organization of the United Nations. Available online. Accessed 06/07/2010. 4. Joint FAO/WHO Food Standards Programme. Codex Alimentarius Commission. Procedural Manual. 12th ed. Rome: Food and Agriculture Organization of the United Nations: World Health Organization, 2001. Available online. Accessed 11/12/03. 5. Food Safety Risk Analysis: A Guide for National Food Safety Authorities. Food and Agriculture Organization of the United Nations. Available online. Accessed 06/07/2010. **Additional information** 6. Analysis and risk management of the organization: a textbook for universities / N. A. Rykhtikova .- 2nd ed .- Moscow: FORUM, 2010 .— 239 p. 7. Guidelines for the meta-analysis of the quality and safety of food products / ed. Skurikhina I. M., Tutelyana V. A. 1998 / 8. Risk management of an industrial enterprise: experience and recommendations / R. N. Fedosova, O. G. Kryukova : experience and recommendations / R. N. Fedosova, O. G. Kryukova .- Moscow: Ekonomika, 2008 .- 125 p. 9. Bagieva M. N. Complex risk assessment of a commercial enterprise: Dis. Candidate of Economics: 08.00.05. - St. Petersburg, 2000. - 170s. 10. Granaturov V. M. Economic risk: essence, measurement methods, ways of reduction. - M.: Publishing House "Delo i Service", 2000 – - 112s 11. Gryadov S. I. Risk and the choice of strategy in entrepreneurship. - M.: MSHA, 2004. - 42s. productions. Textbook. - M.: - Informagrotech, 2015.

Code and name of the module (Russian, English)	**MCFP 70310 "Microbiological control of food products»**
Teaching staff of the discipline	Tatybaev Mukhtarbek Kalmurzaevich-Ph. D. Associate Professor
Discipline cycle	PD/OC
Training level	Master's Degree program
Educational program	7M07210-Food safety
Number of academic credits	5
Form of training	full-time
Semester/ Trimester	2 semester
Prerequisite of the discipline	Biotechnology.
Post-requirements of the discipline	Quality management system.
The purpose of studying the discipline	The aim is to study the systematics, morphology (form and structure) and physiology (vital activity) of microorganisms, methods of their isolation and recognition, as well as to find out their significance in nature and the possibilities of application in

	various fields of activity.
Content of the discipline	in food production, it represents all methods of research and control related to determining the degree of bacterial contamination of the controlled object, as well as methods of quantitative accounting of microflora.
Competencies of the discipline	After mastering the discipline the student must: **- to know;** the main problems in the field of microbiological quality control and safety of food products and the ways of their solving; – classic and modern methods of analysis of the content of microorganisms and evaluation of their viability; methods of microbial identification and analysis of their species composition; the procedure for the development of new methods of microbiological analysis; organization microbiological control at the enterprises of food and processing industry; **- understand-**knowledge of the principles of formation and management of microbiological quality and safety of food products in the HACCP and ISO systems. methods and techniques for studying microorganisms and evaluating the quality of microbiological measurements; **- apply; -** apply the acquired knowledge to solve theoretical and practical problems in production, research, training and management activities in the field of food quality and safety assessment; **- be competent -** conduct microbiological analysis of food products and determine the content of the total number and sanitary-indicative microorganisms; - determine the presence of pathogenic microorganisms (salmonella, protea, staphylococci, sulfate-reducing clostridium, etc.) in food products;
Final control form	Exam
Duration	2 academic period (15 weeks)
References	**Main** 1 Petrovsky K. S. Food hygiene. Meditsina Publishing House, Moscow, 2012 with changes-527 p. 2. Terekhin S. P., Khan A.V., Tileubaev I. A., Halyktyn artyurli toptarynyn tamaktanuyn zertteu zhane bagalau. Karagandy, 2013.35 b. 3. Handbook of chemical composition. ed. Skurikhina V. P. 1,2 vol 4. Malakhov G. P. Healthy food. - Saint-Petersburg: IK "Kit", 2016 – - 495 p. 5 . Malakhov G. P. Healing forces. - Saint-Petersburg: IK "Kit", 2014. - 553 p. 6. Gavrilova N. B. Hygienic bases of nutrition and food quality control. Training manual. - Semipalatinsk, 2008-182 p. 7. Pozdnyakovsky V. M. Hygienic bases of nutrition, safety and expertise of food products: Novosibirsk: Publishing house "Novosibirsk. university", 2010 – - 448 p. **Additional information** 1. Joint FAO/WHO Food Standards Programme. Codex Alimentarius Commission. Procedural Manual. 12th ed. Rome: Food and Agriculture Organization of the United Nations: World Health Organization, 2001. Available online. Accessed 11/12/03. 2. Food Safety Risk Analysis: A Guide for National Food Safety Authorities. Food and Agriculture Organization of the United Nations. Available online. Accessed 06/07/2010. 3. Agulnik M. A., Korneev I. P. Microbiology of meat, meat products and poultry products. - M.: Food industry, 2017. 4. Azarov V. N. Fundamentals of microbiology and food hygiene. -

	Moscow: Ekonomika,2001. 5. Vorobyova E. V. Sanitation and hygiene in trade. - M.: Ekonomika, 2013. 6. Gurova A. I., Gorlova O. E. Practicum on general hygiene. - M.: Publishing House of the Peoples ' Friendship University, 2000. 7. Private vetsanexpertiza of animal products: Reference manual / Ed. by N. F. Shuklin. - Alma-Ata: Kainar, 2011.

Code and name of the discipline (Rus, ang)	**GOOBM70311 Genetically Modified Foods and Biosafety Issues**
Facilitator / tutor of the discipline	facilitator: candidate of biological sciences, associate professor Suleimenova Zh.M.
The cycle of disciplines	PD/OC
Level of education	degree
Educational program	7M07210 - "Food safety"
Number of academic credits	5
Form of training	daytime
Semester/Trimester	3
Prerequisites of the discipline	methodology of scientific research in food safety, monitoring of environmental indicators of food safety
Post-requirements of the discipline	Master thesis
The purpose of studying the discipline	study the creation and use of GMOs, risks and biosafety in connection with the spread of GMOs in the world.
Content of the discipline	In the course of mastering the course, the master's student studies the achievements of modern biotechnology, methods for obtaining genetically engineered microorganisms and their differences from those created with the help of traditional selection. The potential risks to human health and the environment associated with the use of genetically engineered organisms are considered.
The competence of the discipline	As a result of studying this discipline, the master's student must: have an idea of: - traditional selection; - methods of genetic engineering; - biotechnology as a component of biosafety; - legal regulation of biosafety; know: - what is biosecurity?; - methods of genetic engineering of microorganisms; - achievements and prospects of plant genetic engineering; - about transgenic plants in agriculture; - main directions and achievements of animal genetic engineering; - ways to create transgenic animals; - what is bioterrorism?; be able to: - establish compositional equivalence; - evaluate the safety of genetically modified microorganisms in food production;

	- evaluate food safety; - determine the biological safety of biotechnological industries; acquire practical skills: - in microbiological and molecular genetic assessment of food products obtained using genetically modified microorganisms; be competent: - in assessing the risk of possible adverse effects of genetically engineered organisms on human health.
Final control form	exam
Duration of the discipline	15 weeks
References	**List of basic literature** **Main** - Глик Б., Пастернак Дж. Молекулярная биотехнология. Принципы и применение. Пер. с англ. М.: Мир, 2002. 589 с. - Кузнецов Вл.В., Куликов А.М., Митрохин И.А., Цыдендамбаев В.Д. Генетически модифицированные организмы и биологическая безопасность // Федеральный вестник экологического права ЭКОСинформ. 2004 г. № 10. С.1-64. 2. **Additional** Руководство по оценке влияния генетически модифицированных организмов на окружающую среду и здоровье: Пер. с английского (В 2-х частях. Ч.1. Вводная информация. Сопроводительные тексты к блок-схемам. Ч.2. Блок-схемы и рабочие ведомости) М. МСоЭС, 2005. 200 с. - ГМО: Контроль над обществом или общественный контроль (под ред. В.Б. Копейкиной). М. ГЕОС. 2005. 198 с. - Зоны, свободные от ГМО. /Под ред. В.Б. Копейкиной. М. ГЕОС. 2007 - 106 с. - Генетически модифицированные организмы и обеспечение биологической безопасности. Кишинев: Экоспектр-Бендеры, 2007. 60 с. 3. **Recommended Internet Sites** - http://www.biosafety.ru - http://www.biengi.ac.ru/ - http://www.iacgea.ru - http://www.depart.drugreg.ru/CNIS/TXT/REESTR/gena.htm - http://www.IUCN.org - http://www.foe.org/safefood/ - http://www.twnside.org.sg/bio.htm - http://www.groundup.org/ - http://www.biotech-info.net - http://www.gene.ch

Code and name of the discipline (Rus, ang)	**TKHASSPZH70312 HACCP system at food enterprises**

Facilitator / tutor of the discipline	facilitator: candidate of biological sciences, associate professor Suleimenova Zh.M.
The cycle of disciplines	PD/OC
Level of education	degree
Educational program	7M07210 - "Food safety"
Number of academic credits	5
Form of training	daytime
Semester/Trimester	3
Prerequisites of the discipline	Chemistry, Introduction to Food Technology, Food Microbiology, Food Chemistry
Post-requirements of the discipline	Master thesis
The purpose of studying the discipline	formation of knowledge about the production control system based on the principles of HACCP, the basic principles of the system, quality management and food safety on the basis of systematic identification, assessment and management of dangerous factors that affect product safety; training in the technology of implementing the system in the food enterprise, as well as the technology of conducting internal audit of HACCP.
Content of the discipline	During the study of this course, the principles of quality management and food safety based on the international standards ISO 9000, ISO 22000, theoretical and practical issues on the stages of development and implementation of the HACCP system are considered. The main aspects of food quality and safety systems based on HACCP.
The competence of the discipline	As a result of studying the discipline, the master's student must To know: - Basic principles of the HACCP system, - stages of implementation of production control of food safety based on the principles of HACCP; c) the main aspects of food quality and safety systems based on HACCP and GMR. Be able to: - apply in practice the control of food products for the analysis of risks and management of dangerous factors that significantly affect the safety of products; - develop, design and implement measures to improve the efficiency of the HACCP system and conduct an internal audit of the HACCP system of food production. Possess: a) a complete understanding of the organization of work on the development and implementation of the HACCP risk analysis system in the food and processing industry
Final control form	exam
Duration of the discipline	15 weeks
References	**List of basic literature** **Main** 1. Donchenko, L. V. The concept of HACCP in small and medium-sized enterprises / Donchenko, L. V., Olkhovatov, E. A.- Moscow: "Lan", 2016. 2. Mathison, Valery Arvidovich. The HACCP system in the food

	industry: a monograph / V. A. Mathison; Moscow State University of Food Production. - M.: Izvestiya, 2015 .— 290, s **Additional** 1. HACCP principles. Safety of food products and medical equipment / per. s engl. O. V. Zamyatina. - M.: Standards and quality, 2006. - 231 p.: ill. — (Practical management) . 2. Gunkova P. I. Fundamentals of sanitary and hygienic control in the food industry [Electronic resource]: educational and methodological manual / P. I. Gunkova, L. V. Krasnikova. - Electron. text data. - St. Petersburg : ITMO University, 2016. - 97 p. - 2227-8397. 3. Krasnikova L. V. Microbiological safety of food raw materials and finished products [Electronic resource]: educational and methodological manual / L. V. Krasnikova, P. I. Gunkova. - Electron. text data. - St. Petersburg : ITMO University, Institute of Cold and Biotechnology, 2014. - 89 p. - 2227-8397. 4. Microbiological bases of HACCP in the production of food products [Electronic resource]: textbook / V. A. Galynkin [et al.]. - Electron. text data. - St. Petersburg: Prospect Nauki, 2016. - 288 p. - 978-5-903090-08- 5. Dotsenko, V. A. Practical guide to sanitary supervision of enterprises of the food and processing industry, public catering and trade [Electronic resource]: textbook. manual — Electron. dan. - St. Petersburg: GIORD, 2012. - 832 p.

Code and name of the discipline (Rus, ang)	**IFSS 70313 «International Food Safety Systems»**
Facilitator / tutor of the discipline	facilitator: Candidate of Agricultural Sciences, Associate Professor Zhamurova V. S.
Thecycleofdisciplines	BD/OC
Levelofeducation	degree
Educationalprogram	7M07210 - "Food safety"
Numberofacademiccredits	6
Formoftraining	daytime
Semester/Trimester	3
Prerequisitesofthediscipline	methodology of scientific research in food safety
Post-requirements of the discipline	writing a dissertation
The purpose of studying the discipline	undergraduates acquire in-depth theoretical knowledge and practical skills in the field of food production at the level of national and international legislation.
Contentofthediscipline	In the course of mastering the course, the master's student studies the laws and regulations in this area, all types of standards, technical regulations for all food products approved by the Customs Union, international requirements of food standards.
The competence of the discipline	As a result of studying the discipline, the student should know: - regulatory documents in the field of food production; - approved technical regulations of the Vehicle;

	- **understand:** - the significance of regulatory and legal documents in this area; - international and modern requirements for food products; - **apply:** - Knowledge in the field of food quality control; **- be competent:** - in the application of regulatory documents of the Republic of Kazakhstan and international requirements for the production and consumption of food products.
Finalcontrolform	exam
Durationofthediscipline	15 weeks
References	**List of basic literature** **Main** 1 Тамақ өндірістерінің жалпы технологиясы [Мәтін]: оқу құралы / Л.М.Сарлыбаева, Ш.К.Асқарова, Н.К.Ахметова, С.Т.Абимульдина.- Алматы: ССК, 2018.- 216 б. 2 Маликтаева, П.М. Ұлттық сусын өнімдерінің сапасын талдау [Мәтін]: оқу құралы / П.М. Маликтаева.- Алматы: Эверо, 2015.- 196 б. 3 Technical regulations of the Customs Union 4 Laws of the Republic of Kazakhstan **Additional** ДиМаттео, Л.А. Халықаралық бизнес құқығы және заңнамалық орта [Мәтін]: транзакциялық тұрғыдан зерделеу / Л.А. ДиМаттео; ауд. К.М.Абишова, Г.С.Жолдасбаева, Е.Н.Искаков [ж.т.б.]; "Ұлттық аударма бюросы" қоғамдық қоры.- 3-бас.- Алматы: Ұлттық аударма бюросы, 2019.- 680 б.- (Рухани жаңғыру. Жаңа гуманитарлық білім. Қазақ тіліндегі 100 жаңа оқулық)