Non-Commercial Joint-Stock Company
«Kazakh National Agrarian Research University»

AGREED
Chairman of the Management Board
«Kazakh Scientific Research Institute
of Animal Husbandry and Feed
Production» LLP
_____ A.Torekhanov
«05» 04 2023

APPROVED
Chairman of the Board – Rector
_____ A.Kurishbaev
«02» _____ 2023

EDUCATIONAL PROGRAM

7M08201- «Technology production of livestock products»

Awarded degree: Master of Science in Agriculture under the educational programme 7M08201- «Technology of production of livestock products»

(scientific and pedagogical direction)

Almaty, 2023

Approved at the meeting of the Department «Zooengineering»
Protocol №08, «17» 03 2023

Head of the department _____ Sh. Adylkanova

Considered at meetings Academic Committee of the Faculty of «Zooengineering and food production technology»
Protocol № 04 «24» 03 2023

Chairman of the AC of the faculty _____ Ye.Baimazhi

Reviewed by the Educational Methodological Council of the University and recommended to the Academic Council
Protocol № 03 «28» 03 2023

Chairman of the EMC of the University _____ A.Kaiyrbaeva

The educational program was approved at the meeting of the Academic Council of KazNARU
Protocol №11, «05» 04 2023

Developers:

Dean of the Faculty _____ B. Yerenova

Head of Department _____ Sh. Adylkanova

Teacher:
Candidate of Agricultural Sciences., Assoc. professor _____ Ye. Baimazhi

Undergraduate _____ A. Isaev

Graduate _____ Z.Minahmenova

Workaday:

Chairman of the Management Board
«Kazakh Scientific Research Institute
of Animal Husbandry and Feed Production» LLP _____ A. Torekhanov

Agreed:

Head of the Educational Programs Design Office _____ Zh. Kussainova

Application

It is intended for the training of masters in the modular educational program «7M08201-Technology production of livestock products» in NAO " Kazakh National Agrarian Research University»

Regulatory documents:

«On Education» The Law of the Republic of Kazakhstan dated 27 July, 2007 No. 319-III;

Order of the Minister of Science and Higher Education of the Republic of Kazakhstan dated July 20, 2022 №2;

Classifier of training programs for personnel with higher and post-graduate education. Order of the Minister of Education and Science of the Republic of Kazakhstan of October 13, 2018 No. 569;

Standard Rules for the activities of educational organizations implementing educational programs of higher and (or) postgraduate education. Order of the Minister of Education and Science of the Republic of Kazakhstan of October 30, 2018 No. 595;

Rules of the organization of the educational process on credit technology of training. Order of the Minister of Education and Science of the Republic of Kazakhstan dated October 12, 2018 No. 563;

Algorithm of inclusion and exclusion of educational programs in the Register of educational programs of higher and postgraduate education. Order of the Minister of Education and Science of the Republic of Kazakhstan No. 665 dated December 4, 2018;

Order No. 106 of the Minister of Science and Higher Education of the Republic of Kazakhstan dated October 12, 2022. Rules for keeping the register of educational programs, implemented by the organizations of higher and (or) postgraduate education, as well as the grounds for inclusion in the register of educational programs and exclusion from it.

The website of NCE Atameken http://atameken.kz/

1. Passport of modular educational program «Technology of production of animal products»

Education area code and classification	**7M08 Agriculture and bioresources**
Code and classification of training areas	**7M082 – Farming**
Code and name of the educational program	**7M08201- Technology production of livestock products**
Type of educational program	Active
The purpose of the educational program	The goal is to prepare highly qualified, competitive specialists with high professional qualifications, who are in demand in the agro-industrial complex and in the domestic, global scientific and educational space.
A-level ISCED	7
The level on the NQF	7
Level by ORC	7
Number of the application to the license for the direction of training	KZ89LAA00031870, №002 05.08.2021
Accreditation The name of the accreditation body The period of validity of accreditation	Сертификат №AB3904 APTA 22.04.2022 -21.04.2027
Degree awarded	Master of Science in Agriculture under the educational programme 7M08201-«Technology production of livestock products»
Learning outcome	Table 2
List of qualifications and positions	The graduate can carry out professional activities in the following areas: - head of the artificial insemination center; - zootechnician; - specialist in animal husbandry; - specialist in keeping and feeding of farm animals; - Teacher in animal husbandry, breeding of agricultural animals, feeding of agricultural animals in secondary special and higher educational institutions - Researcher in research organizations
Field of professional activity	Educational organizations, including universities, research organizations, all branches of animal husbandry, organizational and management activities, experimental research, research, educational activities on the technology of production of animal products.
Sphere and object of professional activity	- research institutes and educational organizations of any profile; - state institutions of the Ministry of agriculture, animal husbandry forms of ownership, poultry farms, racetracks, breeding farms and breeding plants, zoos, scientific laboratories, reserves, livestock companies, and vocational schools
Functions of professional activity	**Educational program 7M08201- Technology production of livestock products includes 2 (two) educational trajectories:**

	№1 «Technology of production of cattle breeding and horse breeding». Undergraduates study milk production technology, beef production technology, horse breeding technology, horse breeding training and racetrack testing.**№2 « Production technology of sheep breeding and poultry farming ».** Undergraduates study the technology of breeding chickens of farm animals, the technology of production of poultry products, sheep technology, sheep wool production technology. Master's degree in General technology for all educational trajectories, foreign language (professional), management, psychology, project management, business decision modeling, innovative animal production technology, animal feeding technology and feeding, animal behavior, theoretical foundations of breeding, animal breeding studies subjects.
Types of professional activity	**Masters courses 7M082 – Farming** can perform the following types of professional activities:**1. Project-technological:** - organizational, technological services, management activities, management and marketing at production facilities in various sectors of animal husbandry and biotechnology; conducting research on the design, implementation of organizational activities in various fields of animal husbandry. **2. Organizational and management:** higher and postgraduate educational institutions, research institutes, various agricultural organizations (firms, enterprises, farms), social and entrepreneurial complexes (SEC), local and national agricultural management bodies, livestock and poultry farms; Agriculture; management institutes; enterprises for processing animal feed; Zoo; racetrack; industry laboratories, departments, departments; departments in the structures of the local managements **3. Research:** - carrying out research work to increase the productivity of animals; - research and development of measures for the conservation of local animal breeds; - organization of works and seasonal activities in livestock facilities **4. Scientific-pedagogical:** - study of modern methods of teaching disciplines technology of production of animal products; - development of scientifically-based methods of

	professional development of employees at all levels; - the use of innovative teaching technologies in the process of pedagogical activity.
To be competent	- on the scientific organization of work, computer methods of collection, storage and processing of information used in the field of his professional activity; - in legal matters to resolve disputes in the collective and other economic entities.

2. Learning outcomes on OP

Codes	Learning outcome
PO1	Demonstrate knowledge and interpret information to form judgments taking into account social, ethical, pedagogical considerations in the state and foreign languages.
PO2	To choose the most effective methods of managing genetic resources in animal husbandry, as well as to argue and develop modern developments of innovative technologies for the production of livestock products.
PO3	To use the principles and methods of project management in entrepreneurship, analyze the construction and solution of mathematical models, recommend current research methodologies in animal husbandry, modeling business solutions and conflictology.
PO4	To conduct an experiment, apply knowledge and understanding of modern domestic and world technologies for the production of animal products in various industries (cattle breeding, horse breeding, sheep breeding, poultry farming) and solve problems at a professional level in the studied field of animal husbandry.
PO5	To argue the methods of scientific research in animal husbandry, including the production of milk, beef, horse breeding products, to defend their point of view in the formulation of training and racetrack tests of riding and trotting breeds of horses and apply them in the studied area.
PO6	To develop new modern technologies and apply theoretical and practical knowledge to solve problems at a professional level in the field of production and processing of sheep products, industrial poultry farming and intensive breeding of poultry.

3. Content of the modular educational program «Technology production of livestock products»

№PP	UC/ OC	Code of discipline	The name of the discipline forming the competence	Total in academic credits	Volume in hours							Distribution of credits by courses and semesters				Department	Form of control
					Total academic hours	Classroom				Extracurricular		1 course		2 course			
						Lectures	Practical class	Laboratory research	Other (practice)	**CPMP**	**CPM**	1	2	3	4		
1	**TO**		**Theoretical training**	**84**	**2520**	**213**	**537**	**0**	**270**	**375**	**1125**						
CBD: UC/ OC			**Cycle of basic disciplines: University component / Optional Component**	**35**	**1050**	**84**	**236**	**0**	**0**	**160**	**480**						
1.1	**CBD**		**Cycle of basic disciplines**														
1)	**UC**		**High school component**	**20**	**600**	**39**	**131**	**0**	**0**	**85**	**255**						
including:																	
1.1.1	**UC**	IFN 60201	History and philosophy of science	**4**	120	12	28	0	0	20	60	4				29	exam
1.1.2	**UC**	IYa 60202	Foreign language (professional)	**4**	120	12	28	0	0	20	60	4				14	exam
1.1.3	**UC**	PVSh 60203	Pedagogy of higher education	**5**	150	15	35	0	0	25	75	5				6	exam
1.1.4	**UC**	PU	**Management psychology**	**4**	120	12	28	0	0	20	60		4			6	exam

		60204															
1.1.5	UC	PP	**Pedagogical practice**	**3**	90								3				report
2)	**OC**		**Optional component**	**15**	**450**	**45**	**105**	**0**	**0**	**75**	**225**						
1.1.6	OC	UTPP Zh 60205	Innovative technologies of production of animal products	**5**	150	15	35	0	0	25	75	5				27	exam
1.1.7	OC	DNA A 60206	Detailed nutrition of agricultural animals	**5**	150	15	35	0	0	25	75	5				27	exam
1.1.8	OC	UGR Zh 60207	Genetic resources management in animal husbandry	**5**	150	15	35	0	0	25	75	5				27	exam
CBD: UC/OC			**Cycle of specialized disciplines: University component / Optional Component**	**49**	**1290**	**129**	**301**	**0**	**0**	**215**	**645**						
1.2	**CBD**		**Cycle of specialized disciplines**														
1)	**UC**		**High school component**	**20**	**600**	**60**	**140**	**0**	**0**	**100**	**300**						
1.2.1	UC	PMFE 60208	Project management in the field of entrepreneurship	**7**	210	21	49	0	0	35	105		7			2	exam
1.2.2	UC	MNIT PPZh 60303	Methodology of scientific research in the technology of production of livestock products	**5**	150	15	35	0	0	25	75		5			27	exam
1.2.3	UC	MBS 70301	Modeling business solutions	4	120	12	28	0	0	20	60			4		9	exam
1.2.4	UC	Con 70302	Conflictology	4	120	12	28	0	0	20	60			4		6	exam
2)	**OC**	**Optional component**		**23**	**690**	**69**	**161**	**0**	**0**	**115**	**345**						
		Educational trajectory №1 Technology of production of cattle and horse breeding															
1.2.6	OC	TPPK 60210	Technology of production of horse breeding	**6**	180	18	42	0	0	30	90		6			27	exam
1.2.7	OC	TPM 70303	The technology of milk production	**6**	180	18	42	0	0	30	90			6		27	exam

1.2.8	**OC**	TPG 70304	Beef production technology	**6**	180	18	42	0	0	30	90			6		27	exam
1.2.9	**OC**	TTIIV RPL 70305	Training technology and racetrack testing of riding and trotting breeds of horses	**5**	150	15	35	0	0	25	75			5		27	exam
		Educational trajectory №2 Technology of production of sheep breeding and poultry farming																	
1.2.10	**OC**	TPPShO 60211	Technology of production and processing of sheep wool	**6**	180	18	42	0	0	30	90		6			27	exam
1.2.11	**OC**	IPPP 70306	Industrial production of poultry products	**5**	150	15	35	0	0	25	75			5		26	exam
1.2.12	**OC**	IBP 70307	Intensive breeding of poultry	**6**	180	18	42	0	0	30	90			6		26	exam
1.2.13	**OC**	TPPMO 70308	Technology of production and processing of sheep meat	**6**	180	18	42	0	0	30	90			6		27	exam
3)			**Research practice**	**6**	**180**				**180**				3	**3**		27	exam
2	**RWU**		**Research work of a graduate student, including internship and execution of a master's thesis**	**24**	**720**				**720**			2	2	2	18		report
3	**ATT**	**Additional types of training**		**12**	360				360								
1)		Registration and defense of the master's thesis (Oizmd)		**12**	360										12		Master's thesis defense
			TOTAL:	**120**	**3600**	**213**	**537**	**0**	**1350**	**375**	**1125**	**30**	**30**	**30**	**30**		

Competence of scientific and pedagogical magistracy in
Direction of preparation 7M08201- «**Technology production of livestock products»**

Description of competence, rus.	Type competence	№ competence
Knowledge of history and philosophy of science development	TC	1
Ability to conduct reasoned conversation on a wide range of scientific issues	TC	2
Ability to demonstrate broad-mindedness in matters of philosophy of science, psychology and pedagogy	TC	3
Ability to conduct a professional conversation in an international environment in English	TC	4
Be competent in matters of innovative technology of production of animal products;	TC	5
Be competent: in questions of application of various methodological approaches for the zootechnical and chemical analysis of forages, receptions and technology of production of forages and fodder means; abilities independently to organize and carry out scientific researches with use of modern methods of technology of production of forages, the analysis of soil and vegetative samples.	TC	6
The master's student must be competent in the performance of production, organizational and managerial and experimental research activities at enterprises and organizations of the agro-industrial complex.	TC	7
in matters of genetics, breeding and breeding and reproduction of farm animals	TC	8
be competent to generalize and critically evaluate the results obtained by domestic and foreign researchers, to identify promising directions, experiments of biometric processing of experimental data, writing of experimental methodology, registration of patent rights and rights of authors of inventions of other intellectual property objects.	TC	9
In matters of cow's milk production technology	TC	10
In matters of beef production technology	TC	11
- test horses at montirovka riding and trotting horse breeds in the definition rating of racehorses and trotting horses, determination of prize-winning places in equestrian sport; when montirovka riding and trotting horses.	TC	12

in conducting research and the use of modern methods in meat and dairy horse breeding	TC	13
conduct zootechnical and breeding accounting and reporting using genetic-mathematical and statistical analysis using computers and personal computers;	TC	14
to conduct breeding work with birds of different species in a specific technology; to manage the work of shops, teams, laboratories; to conduct zootechnical and breeding accounting and reporting using genetic, mathematical and statistical analysis using computers and personal computers; to make decisions independently	TC	15
to be competent: skills of cultivation, intensive cultivation and the organization of the correct feeding and fattening, technologies of complex scientific researches of slaughter, pre-slaughter and slaughter weight, slaughter output, structure and cuts, weight and size of carcass, difference of weight of steam and in the cooled carcasses, chemical composition of meat of sheep of various directions of productivity for production of mutton	TC	16
in questions of methodology of search and application of classifications of standards of wool, wool of the processing industry, skills of identification, methods of an assessment of quality and safety, a semi-finished product for diagnostics of defects, skills of the organization of acceptance of wool raw materials on quality and quantity, rules of technology of primary processing, sorting and washing, its storage, transportation and marking of wool.	TC	17
Knowledge of the basics of scientific research, management of scientific projects, business solutions	TC	18
Ability to control the psychological climate in the production team	TC	19
The ability to select personnel for professional suitability	TC	20
Ability to form in collective psychology of safe thinking	TC	21
Ability to work with scientific and special literature in search of solutions to scientific problems.	TC	22
Understanding the special social, scientific and technical significance of their profession	TC	23
The desire to continue scientific education in the chosen specialty and to develop as a scientist in demand by the labor market	TC	24
Ability to professional growth and professional mobility	TC	25

4. Map of competence modules

Core competencies	Learning outcome
Module 1.	
Scientific communication and management Ability to apply modern technologies - communication technologies in everyday life and professional field; the use of common and General professional foreign language's	to know the main trends and principles in the field of information and communication technologies, the basic concepts of computer systems development, structure and stylistic features of scientific articles in Kazakh (Russian) and foreign languages. fundamentals of physical, chemical and physico-chemical analysis, chemical thermodynamics, formation and properties of colloidal micelle particles, their molecular kinetic, optical and electrochemical properties. - to use information resources; to work in various operating systems, with spreadsheets, databases; to apply methods and means of information protection; to design and create websites; to use various social platforms for communication to carry out thermochemical calculations, to define a surface tension, to make the micelle formula formed at mixing of solutions of different concentration. -to have skills of use of information and communication technologies; language communicative communication and its application for communication on subjects of educational, General scientific and professional communication nature, structure, principles of organization and functioning of science; interrelation of scientific and philosophical thought
Module2. Productive animal husbandry Innovative technologies of livestock production and food safety. Technology of cultivation of young growth of agricultural animals and birds, preparation of certain types of feed and fodder.	***Know:*** - the main directions of the livestock industry in Kazakhstan and abroad, the best experience of domestic and foreign rational innovative technologies of production of livestock products, standards of breeds of farm animals in Kazakhstan and abroad, depending on the direction of productivity, issues of formation, accounting and sales of products. ***Can:*** - perform independent calculations of technological parameters in the organization of agricultural enterprises, plan on the basis of innovative technologies for the production of environmentally friendly, resource-saving products of livestock and poultry; - to be guided in situations arising at not foreseen technological processes providing production of high-quality and environmentally friendly production;
Module 3. Methods of improvement of farm animals The current state of genetic resources of the main species of domestic animals in the world and in Kazakhstan. The importance of genetic resources in society. Use of world genetic resources in further breed formation and improvement of breeding and productive qualities of animals. Genetic and	***Know:*** problems of conservation of species and breeds of farm animals; negative consequences of depletion of genetic resources of farm animals; methods of improvement of productive and breeding qualities of agricultural animals. - biological and genetic bases of selection; problems of adaptation and stress resistance of agricultural animals; methods of determination of stress resistance; influence of stress on productivity of agricultural animals. - ***Can:*** - to study the structure of the gene pool of populations by qualitative characteristics using methods of genetic and statistical analysis; to analyze the variability of quantitative characteristics in the population in order to use them in breeding; to analyze the reliability of the origin of animals using biochemical systems;

population bases of selection; Ways of preservation, improvement and improvement of gene pool of existing and creation of new breeds of animals; use of resources of gene pool in the conditions of intensification of animal husbandry.	
Module 4. Organization of the learning process in higher education. Pedagogical science and its place in the system of human Sciences. Modern paradigm of higher education. Professional and communicative competence of the teacher of the higher school. The theory of teaching in higher education. Content of higher education. Organization of the learning process on the basis of the credit system of higher education. Traditional and innovative methods and forms of training organization. New educational technologies in higher education.	***Know:*** - actual problems of modern higher education and pedagogical science; - social and psychological nature of pedagogical activity; - ways of conflict resolution, strong emotional feelings, origin, development and ways of conflict resolution; ***Can:*** -to create a creative and developing environment in the process of training and education; use the necessary psychological and methodological resources for the preparation and conduct of classes (lectures, seminars, CPMP and exams); -to solve the actions opposing conflicts, to resist negative actions, to understand the motives of the conflict; -to understand motives of the conflict, to apply the knowledge on pedagogical practice.
Module 5. Breeding The main directions of intensification of dairy and meat animal husbandry. Technological scheme. Equipment shops. The purpose of the workshops and the organization of production groups. Feeding and milking cows at the PCC milk production.Factors influencing the formation of meat productivity, methods of increasing meat productivity, quality and nutrition of meat. Evaluation of the quality	***Know:*** design methodology using methods and models of operations research; use of gene pool for qualitative transformation of dairy and dairy-meat breeds; ***Can:*** to use the basic laws of natural science disciplines in professional activity, to apply methods of zootechnical analysis and modeling, theoretical and experimental research in the system of cattle breeding; to apply methods of the zootechnical analysis and modeling, theoretical and experimental research in system of cattle breeding;

of the offspring, testing on their own productivity, industrial crossing-a method of creating highly productive meat animals.	
Module **6. Horse breeding** Biological and physiological features of sports horses, assessment and selection on the exterior and Constitution of riding and trotting breeds, physiological basis of training, modern technology of Hippodrome training and testing of horses	***Know:*** - value of productive horse breeding, directions, modern requirements, production technology; high-value breeds of horses of productive direction and their biological features; -breeds of horses used for racing and trotting races, exterior and constitutional features, principles and methods of training of riding and trotting breeds, bases of preparation for races and races, work carried out on hippodromes, regularities of growth and development of young horses, technology of feeding and the contents, methods of an assessment and selection of horses for equestrian sport;. ***Can:*** to distinguish between riding and trotting breeds, to evaluate and select the exterior and Constitution, to conduct training and racetrack tests of riding and trotting horses, to prepare horses for competitions, to use the training equipment correctly, to fill in the cards and forms in breeding horse breeding.
Module **7. Poultry** State and prospects of development of industrial poultry in the world in the Republic of Kazakhstan. Biological features of young farm birds. Organization of breeding work with the bird. Exterior, interior and Constitution of young birds. Breeding work with young animals of different types of poultry. Methods of estimation of daily young growth. Features of cultivation of repair young growth for acquisition of breeding and parent herd. Broiler meat production technology	***Know:*** intensive methods of keeping poultry with the use of energy and resource-saving techniques; industry standards for all technological processes of growing young birds; modern methods and means of planning and organization of research and development, experiments and observations, generalization and processing of information, including the use of computer programs; theoretical foundations of breeding, genetics and reproduction of poultry; organization of breeding work with poultry at breeding ***Can:*** select a bird for exterior signs;assess the young egg and meat production;to determine the deviation from the norm in industrial conditions of poultry breeding density planting, feeding level and other technological parameters;to determine the capacity of the enterprise, its need for repair young growth
Module **8. Sheep breeding** Efficient use of intensive sheep meat and wool production technology in sheep farming. Development of technologies of the company in sheep breeding with intensive use of	***Know:*** maximum use of intensive technology of production of sheep meat in sheep breeding, with the improvement of quality and its improvement in this regard, the production of environmentally friendly products of lamb and lamb; technology of production of wool of sheep and definition of their quality, improvement, preparation and realization. ***Can:*** in a market economy to be able to manage farms of different ownership in

reproduction of a flock of sheep. Maximum use of reproduction methods. Production of low-cost, environmentally friendly, lamb and lamb, resource-saving technology of production of sheep products in a market economy. Intensive rearing of young sheep. Industrial technology of production of mutton.	this regard to be able to produce high-quality and profitable products sheep meat; to determine the quality indicators of productivity of sheep wool and correctly note their features, organization of exhibitions and auctions.

5. Summary table, reflecting the volume of loans disbursed in the context of the educational program:

Training course	Semester	Number of disciplines studied		Number of academic credits						Total in academic hours	Quantity	
		UC	OC	Theoretical training	Educational practice	Manufacturing practice	Pre-graduation practice	Total certification	Total		exam	Deeth. credit
I	1	3	3	28			2		30	900	6	1
	2	3	1	22	3	3	2		30	900	4	3
II	3	2	3	25		3	2		30	900	5	2
	4	-	-	-			18	12	30	900		1
Total		**8**	**7**	**78**	**3**	**6**	**24**	**12**	**120**	**11130**	**3600**	**15**

Application 1

Appendix to OP

Competence of scientific and pedagogical magistracy in
Direction of preparation 7M08201 – « Technology production of livestock products »

Application 2

Description of competence, rus.	Type competence	№ competence
Knowledge of history and philosophy of science development	ПК	1
Ability to conduct reasoned conversation on a wide range of scientific issues	ПК	2
Ability to demonstrate broad-mindedness in matters of philosophy of science, psychology and pedagogy	ПК	3
Ability to conduct a professional conversation in an international environment in English	ПК	4
Be competent in matters of innovative technology of production of animal products;	ПК	5
Be competent: in questions of application of various methodological approaches for the zootechnical and chemical analysis of forages, receptions and technology of production of forages and fodder means; abilities independently to organize and carry out scientific researches with use of modern methods of technology of production of forages, the analysis of soil and vegetative samples.	ПК	6
The master's student must be competent in the performance of production, organizational and managerial and experimental research activities at enterprises and organizations of the agro-industrial complex.	ПК	7
in matters of genetics, breeding and breeding and reproduction of farm animals;	ПК	8
be competent to generalize and critically evaluate the results obtained by domestic and foreign researchers, to identify promising areas, experiments of biometric processing of experimental data, writing of experimental methodology, registration of patent rights and rights of authors of inventions of other intellectual property objects.	ПК	9
In matters of cow's milk production technology	ПК	10
In matters of beef production technology	ПК	11
- test horses at the evaluation of the riding and trotting horse breeds, in the definition of rating racehorses and trotting horses, the determination of prizes in equestrian sport; when montirovka riding and trotting horses.	ПК	12
in conducting research and the use of modern methods in meat and dairy horse breeding	ПК	13
conduct zootechnical and breeding accounting and reporting using	ПК	14

genetic-mathematical and statistical analysis using computers and personal computers;		
to conduct breeding work with birds of different species in a specific technology; to manage the work of shops, teams, laboratories; to conduct zootechnical and breeding accounting and reporting using genetic, mathematical and statistical analysis using computers and personal computers; to make decisions independently	ПК	15
to be competent: skills of cultivation, intensive cultivation and the organization of the correct feeding and fattening, technologies of complex scientific researches of slaughter, pre-slaughter and slaughter weight, slaughter output, structure and cuts, weight and size of carcass, difference of weight of steam and in the cooled carcasses, chemical composition of meat of sheep of various directions of productivity for production of mutton	ПК	16
in matters of methodology search and use classifications standards wool sherstopererabatyvayuschee industry, skills identification, methods of assessing the quality and safety of semi-finished product for the diagnosis of defects, skills, the organisation of acceptance of woolen raw material quality and quantity, rules of the technology for primary processing, grading and cleaning, storage, transportation and labelling of wool.	ПК	17
Knowledge of the basics of scientific research, management of scientific projects, business solutions	ПК	18
Ability to control the psychological climate in the production team	ПК	19
The ability to select personnel for professional suitability	ПК	20
Ability to form in collective psychology of safe thinking	ПК	21
Ability to work with scientific and special literature in search of solutions to scientific problems.	ПК	22
Understanding the special social, scientific and technical significance of their profession	ПК	23
The desire to continue scientific education in the chosen specialty and to develop as a scientist in demand by the labor market	ПК	24
Ability to professional growth and professional mobility	ПК	25

Information about disciplines

№	Name of discipline	Brief description of the discipline (30-50 words)	Number of credits	Semester	Emerging competencies (code)
1	**Theoretical training**		**78**		
	Cycle of basic disciplines University component / Optional Component				
1.1	**Cycle of basic disciplines (CBD)**		**35**		
1)	**High school component (HSC БД):**		**20**		
	including:				
1.1.1	History and philosophy of science	It forms a culture of scientific thinking, develops analytical skills and research activities, gives theoretical and practical knowledge necessary for future scientists. I am important in an age of increasing urgency in science and in scientists. Introduces the issues of the phenomenon of science as a special subject of philosophical analysis generates knowledge about the history and theory of science; the laws of development of science and structure of scientific knowledge; science as a profession and social institution; on methods of conducting research; on the role of science in the development of society.	4	1	**Competences:** - in the nature, structure, principles of organization and functioning of science; - in the production of knowledge, patterns of formation and development of scientific disciplines; - in the formulation and solutions of problems arising in the course of research activities; - in application of methodological and methodical knowledge, carrying out scientific research, pedagogical and educational work. - in writing scientific articles, abstracts, speaking at conferences, symposiums.
1.1.2	Foreign language (professional)	The main purpose of the discipline is a systematic deepening of communicative competence in the framework of international standards of foreign language education on the basis of further development of skills and abilities of active English language proficiency in the professional activity of the future master of science. Development of undergraduate skills: - reading literature in English in the specialty for receiving and transmitting scientific information; - processing of extracted information in the form of	4	1	***Competences:*** - work with lexicographic sources in a foreign language (traditional and on-line).

		translations, annotations, abstracts; - conducting conversations in English on topics related to the specialty and scientific work of the undergraduate.			
1.1.3	Pedagogy of higher education	The course examines pedagogical science and its place in the system of human Sciences, the modern paradigm of education, the system of higher education in Kazakhstan, education and formation of the personality of a specialist, management in education. The idea of methodology of pedagogical science, methods and forms of training is given. Contributes to the disclosure of professional and communicative competence of the teacher. It forms knowledge about the theory of education, the content of education, the organization of the learning process, the organization of SRS, ideas about new educational technologies, technology of preparation of educational materials. Develops ideas about the theory of scientific activity, NIRS.	5	1	**Competences:** - in solving the problems of higher pedagogical education and prospects for its further development; - in the application of effective University teaching technologies; - in the main types of pedagogical communicative interaction; - in solving topical psychological and pedagogical problems, assessing the results achieved; - in the organization and management of students.
1.1.4	Management psychology	Examines the subject, essence, objectives and structure of management psychology, methods of psychological research and the main approaches to its study. Examines the psychology of the subject of management, the psychology of cognitive activity, perceptual, MNEMIC, thought processes in management. The course forms ideas about etiquette in the activities of a modern business person, communicative competence of the head, emotional and volitional States in management activities and the ability to manage.	4	2	**Competences:** - in the formation of students ' needs for knowledge and skills of a managerial nature and professionally important qualities of future specialists; - in the formation of students ' ideas about the basics of management; - в развитии самостоятельности в поиске информации; - in the application of adequate methods of personality research; - in practical use of the acquired psychological knowledge in various conditions of administrative activity.
1.1.5	**Pedagogical practice**		**3**	2	**Competences:** - in actual problems of modern higher education and pedagogical science;

					- in the socio-psychological nature of pedagogical activity;
2)	**Component of choice (CCh)**		**15***		
	Educational trajectory №1 «Technology of production of cattle breeding and horse breeding»/ in both English №1				
1.1.6	Innovative technologies of production of animal products	A master's student who has completed the course masters innovative technologies used in advanced domestic and foreign experience in the production of livestock products. The course studies effective innovative technologies of breeding and breeding of farm animals, genomic selection, feeding and care, targeted rearing of young farm animals.	**5**	1	**Competences:** *Be competent* in matters of innovative technology of production of animal products;
1.1.7	Detailed nutrition of agricultural animals	The course forms undergraduates' skills in organizing full-fledged detailed feeding of farm animals using digital technologies; compiling detailed diets using elements of digitalization; applying rational solutions in foraging and using a green conveyor	**5**	1	**Competences:** *Be competent*: in questions of application of various methodological approaches for the zootechnical and chemical analysis of forages, receptions and technology of production of forages and fodder means; abilities independently to organize and carry out scientific researches with use of modern methods of technology of production of forages, the analysis of soil and vegetative samples.
1.1.8	Genetic resources management in animal husbandry	The content of the discipline is highlighted the current state of genetic resources of the main species of agricultural animals in the world and in Kazakhstan. Use of world genetic resources in breed formation and improved breeds of farm animals. Genetic and population bases of selection; Ways of improvement of the gene pool of existing and creation of new breeds of animals; use of resources of the gene pool in the conditions of intensification of animal husbandry.	**5**	1	**Competences:** The master's student must be competent in the performance of production, organizational and managerial and experimental research activities at enterprises and organizations of the agro-industrial complex.
	Cycle of profile disciplines University component / optional Component				

	Cycle of profile disciplines (CPD)		**43**		
	High school component (HSC ПД):		**20**		
1.2.1	Project management in the field of entrepreneurship	The essence and methods of project management in entrepreneurship. Pre-investment phase of the project. Organizational structure of project management in entrepreneurship. Planning project. Project cost management. Monitoring and control of the project. Managing project activities. Management of the project resources. Project risk management. Quality management of the project. Managing the project team. Managing project communication in the field of entrepreneurship.	7	2	**Competences:** - professional analysis of project goals, objectives, and conditions; - design of a change project; - evaluation of the project team's performance in implementing project management functions.
1.2.2	Methodology of scientific research in animal husbandry	Methodology and techniques of scientific and economic, biotechnological, biochemical, zootechnical and physiological experiments, experiments on animal feeding, selection and genetic nature and the study of the impact, the issues of their organization, accounting results, mathematical analysis of experimental data, the experiment in animal husbandry, mastering the mathematical base of experiment planning and processing of digital experimental material with the use of computer technology, literary design of research results, coverage of the basics of patenting.	5	2	**Competences: be competent to generalize and critically evaluate the results obtained by domestic and foreign researchers, to identify promising areas,** experiments of biometric processing of experimental data, writing of experimental methodology, registration of patent rights and rights of authors of inventions of other intellectual property objects.
1.2.3	Managing business solutions	Familiarization with the decision-making process, starting from the formalization of the initial problem, through the construction and solution of a mathematical model on a computer to the analysis of the solution and the formation of a management decision. Formation of skills for building and solving mathematical models and analyzing these solutions on the computer. Consideration of production, transport and financial models of tasks for choosing management solutions.	**4**	3	***Competences:*** in organizing and conducting scientific research using modern methods of mathematical modeling and analysis of technological systems.
1.2.4	Conflictology	Considers the main categories of conflictology, typology of conflicts, technologies of conflict management. Theory of personality behavior in conflict, technologies of effective communication and rational behavior in conflict. Forms an idea of the psychology of the negotiation process on conflict	4	3	***Competences:*** - in diagnosing and preventing conflicts; - in the application of basic methods and technology, conflict prevention and resolution;

		resolution, mediation as a technology of conflict regulation. Conflicts in society, conflicts in organizations, conflicts and stress.			- in using the principles of analysis and management of organizational conflicts; - in possession of various ways to resolve conflict situations on the basis of modern technology of personnel management.
2)	**Component of choice (CCh)**		**23***		
Educational trajectory №1 «Technology of production of cattle breeding and horse breeding»					
1.2.5	Technology of production of horse breeding	Biological and productive characteristics of horses produktivnogo definition. Optimal structure of the herd of meat direction. Growing young horses meat direction. Fattening and feeding the horses. Dairy productivity of horses. Accuracy and selection of mares for seasonal and stationary koumiss farms. Today the technology of production of koumiss. Feeding and maintenance of milk mares and their foals. Economic efficiency of production of horse meat, Mare's milk and koumiss.	6	2	**Competences:** in conducting research and the use of modern methods in meat and dairy horse breeding - -
1.2.6	The technology of milk production	Technology of cow's milk production. Technological scheme of milk production. The equipment used for the production of milk. The purpose of the workshops and the organization of production groups. Organization of feeding and milking cows at the pcsf milk production. Reproduction of the herd. The right choice of seed of bulls-producers for increase of productivity of cows. Selection and breeding work in dairy and dairy-meat cattle breeding. Use of gene pool for qualitative transformation of dairy breeds. Creation of highly productive herds.	6	3	**Competences:** In matters of cow's milk production technology
1.2.7	Beef production technology	The course forms the knowledge of undergraduates about the modern world unified technologies of purposeful cultivation and fattening of young dairy and specialized breeds of cattle, about the urgent and most effective technologies for the maintenance of beef cattle, the actual mechanization of production processes.	6	3	**Competences:** In matters of beef production technology

1.2.8	Training technology and racetrack testing of riding and trotting breeds of horses	Breeds of horses used in racing and trotting races. Biological and physiological features of sports horses, assessment and selection by the exterior and Constitution of riding and trotting breeds, physiological basis of training, modern technology of racetrack training and testing of horses, registration of results, analysis and filling in documentation of the competition, control scale of growth and development of young horses.	5	3	**Competences:** - test horses at montirovka riding and trotting horse breeds, in the definition of rating racehorses and trotting horses, the determination of prizes in equestrian sport; when montirovka riding and trotting horses.
Educational trajectory №2 «Technology of production of poultry and sheep»					
1.2.9	Technology of production and processing of sheep wool	Technology of production and processing of sheep wool is a set of methods, techniques and methods of obtaining products and processing, in particular high-quality wool, and includes issues of composition, types and technical properties, organization and methods of sheep shearing, classification techniques, sorting and washing wool. The share of sheep wool in the gross production of all types of wool is 96%	6	**2**	***Competences*:**. in matters of methodology search and use classifications standards wool sherstopererabatyvayuschee industry, skills identification, methods of assessing the quality and safety of semi-finished product for the diagnosis of defects, skills, the organisation of acceptance of woolen raw material quality and quantity, rules of the technology for primary processing, grading and cleaning, storage, transportation and labelling of wool
1..2.10	Industrial production of poultry products	The course examines the national economic significance of industrial poultry farming. The state and prospects of development of industrial poultry farming. Biological features of farm birds. Breeding methods. Selection methods. Selection and selection. Breeding work with a bird. Egg and meat productivity. Methods for evaluating food eggs. Evaluation of hatching eggs. Technology of production of edible eggs and broiler meat.	6	3	***Competences*:** conduct zootechnical and breeding accounting and reporting using genetic-mathematical and statistical analysis using computers and personal computers;
1..2.11	Intensive breeding of poultry	As a result of mastering the course, undergraduates have the opportunity to study the relationship of productivity of birds with genotype, age, conditions of their maintenance and feeding. Organize breeding work, plan and argue for the prospects of genetic engineering in poultry farming. Organize breeding records, process and evaluate breeding data using	6	3	**Competences:** to conduct breeding work with birds of different species in a specific technology; to manage the work of shops, teams, laboratories; to conduct zootechnical and breeding accounting and reporting using genetic, mathematical and statistical analysis

		digital technologies.			using computers and personal computers; to make decisions independently
1..2.12	Technology of production and processing of sheep meat	Indicators of meat productivity of sheep allow to develop and implement rational technology of production and processing of products sheep meat, increase in production of lamb and lamb, indicators of lifetime evaluation of meat productivity of sheep, implementation, quantitative and qualitative indicators, biological maturity of the organism, morphological patterns, slaughter quality, the formation of meat, processing technology and economic efficiency of growing sheep for meat.	5	3	***Competences*: to be competent**: skills of cultivation, intensive cultivation and the organization of the correct feeding and fattening, technology of complex scientific researches of slaughter, pre-slaughter and slaughter weight, slaughter output, structure and cuts, weight and size of carcass, difference of weight of steam and in the cooled carcasses, chemical composition of meat of sheep of various directions of productivity for production of mutton.
1.2.9					
3)	**Research practice**		**6**	2,3	
2	**Research work**		**24**		
1)	Research work of the undergraduate, including the passage of training and the implementation of the master's thesis (RWU)		24	1, 2, 3, 4	
3	**Additional types of training (ATT)**				
1)	Preparation and defense of master's thesis (PDMTh)		12	4	
	Total:		**120**		

Practice bases

№	Name of companies, enterprises, organizations	Contacts, E-mail
1	Bayserke-Agro LLP	8777368936
2	Dinara-Ranch Agrofirm LLP	87773075520
3	Masakpay LLP	87784504088 trsultan230595@gmail.com
4	LLP "Elim-ai"	87772125024
5	KH "Bereke"	87774670870
6	SPK "Azamat 2"	87773243007 Akzhol_77@mail.ru
7	SPK "Almaty"	8701722 90 78
8	Halyk Trans-1 LLP	87012220982
9	CC "MM"	87010924948
10	KH "Intykpay"	87022514377
11	Birlik LLP	87077970007
12	JSC "Tribal Plant Zhenis"	Zhenis@ mail.ru 87076680063
13	Adil Ranch	87015336797
14	KH "Olzha"	87779469966
15	KH "Alisher"	87103351333
16	KH "Aidarbaev"	terlikbaeva_s@mail.ru 87051594050 87273867919, 87273913191 rh_saimasai@mail.ru
17	Sarybulak Company LLP	
18	Madi Farm	87029448899 akterek@mail.ru
19	Farm "Kumtekey"	87025293470
20	Farm "Batay-Shu"	87017457575, 87017208240
21	Farm "Bakey"	87233941442, 87017789911 bakei_agro@mail.ru
22	Zhaksylyk Farm	87273036526
23	Republican Center for Livestock Breeding "Asyl-Tulik", JSC	871651738150 ao.asyl-tulik@mail.ru
24	Livestock complex "Karoy"	+77474267401
25	SEC "Plemzavod " Almaty"	+7 727 394-30-10, info@dinaragroup.kz

«Қазақ ұлттық аграрлық зерттеу университеті»
КЕАҚ «7М08201-Мал шаруашылығы өнімдерін өндіру технологиясы» білім беру бағдарламасына

ПІКІР

Қазақ ұлттық аграрлық зерттеу университетінің «7М08201-Мал шаруашылығы өнімдерін өндіру технологиясы» білім беру бағдарламасы бойынша ауыл шаруашылығы ғылымдарының магистрін даярлауды жүзеге асыруға арналған бұл білім беру бағдарламасының негізгі мақсаты - Агроөнеркәсіптік кешеніне және отандық, әлемдік ғылым мен білім беру кеңістігінде сұранысқа ие, бәсекеге қабілетті, жоғары кәсіби білікті мамандарды даярлау болып табылады. Аталған бұл білім беру бағдарламасы жоғарыдан кейінгі кәсіптік білім берудің тиісті бағыты бойынша мемлекеттік білім беру стандарты негізінде және еңбек нарығына қарай жұмыс беруші органдардың талаптарын ескере отырып әзірленген және бекітілген, сондай-ақ ұсынылған бағдарламаның мазмұны Қазақстан Республикасының заңнамасына сәйкес келеді, қазіргі заманғы білім беру сипаттамаларына жауап береді.

Бұл, «7М08201-Мал шаруашылығы өнімдерін өндіру технологиясы» білім беру бағдарламасының курсын толық аяқтаған білі алушы, келесідей жұмыстарды жасауға қабілетті болады: - ауылшаруашылығы малдары мен құстарын селекциялық-асылдандыруда мал өсірудің заманауи әдістерін қолдана біледі; әртүрлі жеке меншіктік қосалқы шаруашылықтарда өсірілетін ауыл шаруашылығы малдарының өнімділік және тұқымдық сапасын арттыру, сондай-ақ өсімталдығы мен сапасын жоғарылату жөніндегі ғылыми негізделген нәтижелерді өндірісте пайдалана алады; ауыл шаруашылығы малдары мен құстарының асыл тұқымдық есебін жүргізу мен оларды қалыпты азықтандыруды пайдалана отырып, шаруашылық жағдайында ғылыми-зерттеу әдістерін пайдаланып эксперимент жүргізуге қабілетті болады.

Білім алушылар білім беру бағдарламасын толық игеру барысында, жалпы мәдени, кәсіптік құзыреттерді игере отырып, алған білімдері мен жеке қасиеттерін іс жүзінде қолдануға қабілетті болады.

Қорытындылай келе, «Қазақ ұлттық аграрлық зерттеу университетінің» КЕАҚ «Зооинженерия» кафедрасы әзірлеген білім беру бағдарламасы ҚР жоғарыдан кейінгі білім берудің мемлекеттік жалпы білім беру стандартының негізгі талаптарына толық жауап береді, ендше «7М08201-Мал шаруашылығы өнімдерін өндіру технологиясы» білім беру бағдарламасы бітірушілердің жалпы мәдени және кәсіби құзыреттіліктерін қалыптастыруға ықпал етеді деп санаймын.

«Қазақ мал шаруашылығы
және жемшөп өндірісі ғылыми-зерттеу
институты» ЖШС Басқарма Төрағасы А.Тореханов

«Зооинженерия және тағам өндірісінің технологиясы» факультеті
АКАДЕМИЯЛЫҚ КОМИТЕТІНІҢ МӘЖІЛІСІНІҢ

№ 4 ХАТТАМАСЫНАН КӨШІРМЕ

Төраға – Баймәжі Е.
Хатшы – Г.А. Валиева

Алматы қ. «24» наурыз 2023 ж.

ҚАТЫСҚАНДАР: 40

КҮН ТӘРТІБІ:

1. 2023-2027 оқу жылдарына арналған факультеттің білім беру бағдарламаларын бекіту туралы

ТЫҢДАЛДЫ: 1. АК Төрағасы Е. Баймәжі 2023-2027 оқу жылдарына арналған «Зооинженерия және тағам өндірісінің технологиясы» факультетінің «Зооинженерия» кафедрасы және «Тағам өнімдерінің технологиясы және қауіпсіздігі» кафедрасының білім беру бағдарламалары кафедраларда талқыланып бекітілді, бүгін Академиялық комитетте талқылап, шешімшығаруымыз керек. АК мүшелері және кафедраның профессор-оқытушылар құрамы жиналған екенбіз. Әр білім беру бағдарламалары бойынша кафедра меңгерушілеріне сөз берсек.

СӨЗ АЛҒАНДАР: АК мүшесі Адылканова Ш.Р., а.ш.ғ.д., профессор осы уақытқа дейін барлық білім беру бағдарламаларын бекітуге өте көп жұмыстар атқырылды, әр кафедра өз кафедрасының бағдарламаны жасаған комитет мүшелерімен және профессор оқытушы құрамымен талқылап, кафедра хаттасымен бекітілді.

ТЫҢДАЛДЫ: «Зооинженерия» кафедрасының меңгерушісі, а.ш.ғ.к., қауымдастырылған профессор Г.И. Шайкамал 2023-2027 оқу жылдарына арналған «Зооинженерия» кафедрасының комитет мүшелерімен мемлекеттік жалпыға міндетті білім беру стандарттары негізінде әзірленген білім беру бағдарламаларымен таныстырды. Білім беру бағдарламалары жұмыс берушілердің талаптарына сәйкес, ғылым мен техниканың қазіргі даму тенденциялары мен саладағы жаңа жетістіктерді ескере отырып әзірленгендігін айтты.

7М08201 - «Мал шаруашылығы өнімдерін өндіру технологиясы» магистранттарды даярлауды жүзеге асыруға арналған білім беру бағдарламасы бойынша а.ш.ғ.д., профессор Адылканова Ш.Р. сөз алып: білім беру бағдарламасының артықшылықтарының бірі – міндетті пәндерді қалыптастыру кезінде жұмыс берушілердің талаптары ескерілген. Бұл оның мазмұны бойынша түлектің құзыреттілігін қамтамасыз етуге мүмкіндік береді. Мазмұнды компоненттің сапасы күмән тудырмайды. Оқу жоспарының құрылымы тұтастай алғанда қисынды және дәйекті. Пәндердің мазмұны түлек моделінің құзыреттілігіне сәйкес келеді. Әзірленген білім беру бағдарламасы мәлімделген дайындық деңгейіне толық сәйкес келетіндігін жеткізді. Сонымен қатар 7М08201 - «Мал шаруашылығы өнімдерін өндіру технологиясы» білім беру бағдарламасы кәсіби құзыреттіліктер мен практикалық дағдыларды игеру кәсіби және жалпы білім беру циклінің пәндерімен тығыз байланысты болатындай етіп жасалған. Кәсіптік модульдің өндірістік практика бағдарламасының құрылымы мен мазмұны магистранттардың жалпы және кәсіби құзыреттіліктерін толық игеруге арналғандығын айтты.

СӨЗ АЛҒАНДАР: а.ш.ғ.к., қауым. профессор Бупебаева Л. 2023-2025 оқу жылдарына арналған 7М08201 - «Мал шаруашылығы өнімдерін өндіру технологиясы» білім беру бағдарламасы еңбек нарығының талаптары мен жұмыс берушілердің сұраныстарын ескере отырып, ұлттық біліктілік шеңбері негізінде әзірленген. Білім беру бағдарламасы болашақ мамандардың еңбек нарығына қажетті құзыреттіліктер мен дағдыларды игеруге мүмкіндік беретінін айтты.

ТАЛҚЫҒА ҚАТЫСҚАНДАР: АК мүшелері және факультет ПОҚ Мамаева Л.А., Шайкамал Г.И., Адылканова Ш.А., Тимурбекова А.К., Оспанов А.А., Искакова К.М., Серікбаева А.Д., Кожахметов М.К., Қожабергенов А.Т., Жамурова В.С., Исматуллаев С.Л., Қозыкан С., Муратбекова К.М., Молдалимова Г., Кадыкен Р., Бупебаева Л., Қойшыбаев А.М., Махатов Б.М., Габит Г. және жұмыс берушілер келісіп, барлық білім беру бағдарламаларын ҚазҰАЗУ Ғылыми Кеңесінде қарастырылуға ұсынуды дұрыс деп таныды.

ҚАУЛЫ ЕТТІ:

1. 2023-2025 оқу жылдарына арналған 7М08201 - «Мал шаруашылығы өнімдерін өндіру технологиясы» магистранттарды даярлауды жүзеге асыруға арналған білім беру бағдарламасы ҚазҰАЗУ Ғылыми Кеңесінде қарастыруға ұсынылсын.

ДАУЫС БЕРІЛДІ: Бірауыздан мақұлданды.

Академиялық комитет төрағасы Е.Бәймәжі

Хаттама жүргізген Г.А. Валиева