

**CABINET OF MINISTERS OF UKRAINE
NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES UKRAINE**

MASTER'S PROGRAM CURRICULUM

Training specialists since 2013 year

Education and qualification level	“Master”
Field of knowledge	0901 “Agriculture and forestry”
Training direction	8.09010201 “Technologies of production and processing of livestock products”
Specialization	Production
Master's Degree Programs	“Animal Feeding”, “Dairy cattle breeding”, “Production and processing of pig breeding products”, “Poultry breeding”, “Equine husbandry and breeding”, “Animal Genetic Resources”, “Apiculture”, “Methods of biochemical research”
Specialization	Research
Master's Degree Program	“Animal Nutrition and Feed Technology”
Term of training	1,5 years
Form of training	Full-time study
Qualification	Livestock products research engineer

Training of master's performed by

Education and Research Institute	of Animal Science and Water Bioresources
Faculty	of Production and Processing of Animal products
M.A. Kravchenko	Department of Animal Genetics, Breeding and Reproductive Biotechnology; Department of Milk, Beef and Pork Production Technology; Professor P.D. Pshenichniy
Department of Animal Nutrition and Feed Technology;	Department of Horse Breeding, Livestock and Animal Breeding Economics; Department of Poultry and Small Livestock;
V.A. Nestervodsky	Department of Apiculture; Animal Biochemistry, Production Quality and Safety of Agricultural Products named after Academician M.F. Gulyy.

II. EDUCATIONAL PROCESS PLAN

№	Educational discipline	General amount		Form of knowledge control by semesters			Classroom training				Self study	Practical training		Distribution of weekly hours for courses and semesters		
		hours	credits	Exam	Offset	Course work (project)	Total	including				Manufacturing practice	Research practice	First year		Second year
								Lectons	Laboratories	Practices and seminars				semesters		
														1 s.	2 s.	3 s.
														Amount of weeks in a semester		
18	17	10														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. NORMATIVE ACADEMIC DISCIPLINES																
1.1. Cycle of disciplines related to natural science training*																
1	Macro-and Microeconomics	108	3	-	2	-	34	17	-	17	74	-	-	-	2	-
2	Organization of agribusiness	108	3	-	1	-	36	18	-	18	72	-	-	2	-	-
3	Processing of livestock products	180	5	1	-	1	54	18	36	-	126	-	-	3	-	-
4	Research methods in animal husbandry	108	3	-	1	-	36	18	18	-	72	-	-	2	-	-
5	Biological productivity of farm animals	180	5	2	-	-	51	17	34	-	129	-	-	-	3	-
6	Modeling of technological processes in animal husbandry	108	3	-	2	2	51	17	34	-	57	-	-	-	3	-
7	Management of technological processes in animal husbandry	144	4	-	3	3	30	10	20	-	114	-	-	-	-	3
8	Modern trends of selection in animal husbandry	108	3	3	-	-	40	20	20	-	68	-	-	-	-	4
9	Feed resources in animal husbandry	144	4	3	-	-	50	20	30	-	94	-	-	-	-	5
10	Labor safety in animal husbandry	36	1	1	-	-	18	18	-	-	18	-	-	1	-	-
11	Civil protection	36	1	-	1	-	18	18	-	-	18	-	-	1	-	-
Total		1260	35	5	5	3	418	191	192	35	842	-	-	9	8	12
2. ELECTIVE COURSES																
2.1. University elective courses																
2.1.1. Cycle of professional and practical training*																
1	Animal nutrition	216	6	1			72	18	54		144	-	-	4	-	-

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	Physiology of lactation	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
3	Pigs biology	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
4	Poultry biology	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
5	Animal ethology	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
6	Honeybee biology	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
7	Population genetics	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
8	Horse biology	216	6	1	-	-	72	18	54	-	144	-	-	4	-	-
9	Quantitative methods of decision making	144	4	-	1	-	36	18	18	-	108	-	-	2	-	-
10	Information technology in animal husbandry	144	4	-	1	-	36	18	18	-	108	-	-	2	-	-
11	Agricultural policy	144	4	-	1	-	36	18	18	-	108	-	-	2	-	-
12	Foreign language	144	4	-	1	-	36	-	36	-	108	-	-	2	-	-
13	HR management	144	4	-	1	-	36	18	18	-	108	-	-	2	-	-
Total for this training cycle		360	10	1	1	-	108	36	72	-	252	-	-	6	-	-
2.1. Student elective courses																
Production specialization																
Master's Degree Program "Animal Genetic Resources"																
1	Special genetics	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Animal genetic resources	216	6	2	-	-	68	34	34	-	148	-	-	-	4	-
3	Biotechnology of animal reproduction	180	5	2	-	-	68	34	34	-	112	-	-	-	4	-
4	Information systems in animal breeding	72	2	-	2	-	34	17	17	-	38	-	-	-	2	-
5	Special breeding	72	2	3	-	3	30	10	20	-	42	-	-	-	-	3
6	Organization of livestock breeding	72	2	-	3	-	30	10	20	-	42	-	-	-	-	3
Total for this training cycle		720	20	4	2	1	284	123	161	-	436	-	-	3	10	6
Master's Degree Program "Animal Feeding"																
1	Experiment planning	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Feeding of ruminant animals	252	7	2	-	-	85	34	51	-	167	-	-	-	5	-
3	Management of bulky fodder	216	6	2	-	-	85	34	51	-	131	-	-	-	5	-
4	Feeding of monogastric animals	144	4	3	-	3	60	20	40	-	84	-	-	-	-	6
Total for this training cycle		720	20	4	-	1	284	106	178	-	436	-	-	3	10	6
Master's Degree Program "Dairy cattle breeding"																
1	Maintenance of dairy cattle stock	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Feeding of high producing cows	216	6	2	-	-	68	34	34	-	148	-	-	-	4	-
3	Management of milk production	180	5	2	-	-	68	34	34	-	112	-	-	-	4	-
4	Production equipment in dairies	72	2	-	2	-	34	17	17	-	38	-	-	-	2	-
5	Intensive technologies of rearing young cattle stock	72	2	3	-	3	30	10	20	-	42	-	-	-	-	3
6	Management and marketing in dairy farming	72	2	-	3	-	30	10	20	-	42	-	-	-	-	3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Total for this training cycle		720	20	4	2	1	284	123	161	-	436	-	-	3	10	6
Master's Degree Program "Production and processing of pig breeding products"																
1	Production equipment in pig breeding enterprises	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Reproduction and breeding of pigs	252	7	2	-	-	85	34	51	-	167	-	-	-	5	-
3	Slaughtering of pigs and processing of pig products	216	6	2	-	-	85	34	51	-	131	-	-	-	5	-
4	Production of pig products	72	2	3	-	3	30	10	20	-	42	-	-	-	-	3
5	Management and marketing in pig breeding	72	2	-	3	-	30	10	20	-	42	-	-	-	-	3
Total for this training cycle		720	20	4	1	1	284	106	178	-	436	-	-	3	10	6
Master's Degree Program "Poultry breeding"																
1	Incubation of eggs and embryology basics	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Production of food eggs	216	6	2	-	-	68	34	34	-	148	-	-	-	4	-
3	Pure-strain stock-breeding in poultry farming	180	5	2	-	-	68	34	34	-	112	-	-	-	4	-
4	Feeding of agricultural poultry	72	2	-	2	-	34	17	17	-	38	-	-	-	2	-
5	Production of agricultural poultry meat	72	2	3	-	3	30	10	20	-	42	-	-	-	-	3
6	Management and marketing in poultry farming	72	2	-	3	-	30	10	20	-	42	-	-	-	-	3
Total for this training cycle		720	20	4	2	1	284	123	161	-	436	-	-	3	10	6
Master's Degree Program "Equine and horse husbandry"																
1	Horse breeds	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Racetrack and sports training in horse breeding	216	6	2	-	-	68	34	34	-	148	-	-	-	4	-
3	World genetic horse breeding resources	180	5	2	-	-	68	34	34	-	112	-	-	-	4	-
4	Reproduction of horses	72	2	-	2	-	34	17	17	-	38	-	-	-	2	-
5	Pure-strain stock-breeding of horses	72	2	3	-	3	30	10	20	-	42	-	-	-	-	3
6	Stud farming	72	2	-	3	-	30	10	20	-	42	-	-	-	-	3
Total for this training cycle		720	20	4	2	1	284	123	161	-	436	-	-	3	10	6
Master's Degree Program "Apiculture"																
1	Technological equipment in apiculture	108	3	1	-	-	54	18	36	-	54	-	-	3	-	-
2	Breeding and keeping of bees	216	6	2	-	-	68	34	34	-	148	-	-	-	4	-
3	Bees' pathology	180	5	2	-	-	68	34	34	-	112	-	-	-	4	-
4	Honey resources and pollination of plants	72	2	-	2	-	34	17	17	-	38	-	-	-	2	-
5	Production, storage and processing of bee products	72	2	3	-	3	30	10	20	-	42	-	-	-	-	3
6	Management and marketing in apiculture	72	2	-	3	-	30	10	20	-	42	-	-	-	-	3
Total for this training cycle		720	20	4	2	1	284	123	161	-	436	-	-	3	10	6
Master's Degree Program "Methods of biochemical research"																
1	Special genetics	108	3	-	1	-	54	18	36	-	54	-	-	3	-	-
2	Current methods and devices of biochemical studies	216	6	3	-	-	102	51	51	-	114	-	-	-	6	-
3	Special biochemistry	252	7	3	2	-	88	44	44	-	164	-	-	-	4	2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
4	Quality management in laboratories	144	4	3	-	3	40	10	30	-	104	-	-	-	-	4
Total for this training cycle		720	20	4	2	1	284	123	161	-	436	-	-	3	10	6
Research Specialization																
Master's Degree Program "Animal Nutrition and Feed Technology"																
1	Research on animal nutrition	108	3	1	-		54	18	36	-	54	-	-	3	-	-
2	Physiology of digestion	252	7	2	-		85	34	51	-	167	-	-	-	5	-
3	Evaluation of forage	216	6	2	-		85	34	51	-	131	-	-	-	5	-
4	Animal Feed	144	4	3	-	3	60	20	40	-	84	-	-	-	-	6
Total for this training cycle		720	20	4	-	1	284	106	178	-	436	-	-	3	10	6
Total		1080	30	10	1	4	810	-	-	-	1530	-	-	18	18	18
Practical training		360	10	-	-	-	-	-	-	-	-	-	-	-	-	-
State certification		540	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Amount of course works (projects)		-	-	-	-	15	-	-	-	-	-	-	-	-	-	-
Amount of offsets		-	-	-	8	-	-	-	-	-	-	-	-	-	-	-
Amount of exams		-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Total number at the training direction		3240	90	-	-	15	810	-	-	-	-	-	-	-	-	-

* Names of disciplines cycles in accordance with the requirements of higher education industry standards, ratified after 2007 year, EQH and EPP.

III. STRUCTURE OF THE CURRICULUM

Cycle of disciplines	Hours	Credits	%
1. Normative academic disciplines	-	-	-
1.1. Cycle of disciplines related to natural science training	1260	35	39
2. Elective courses	-	-	-
2.1.1. Cycle of professional and practical training	1080	30	33
2.1. University elective courses	360	10	11
2.1. Student elective courses	720	20	22
3. Other kinds of academic load	900	25	28
Total number at the training direction	3240	90	100

* Names of disciplines cycles in accordance with the requirements of higher education industry standards, ratified after 2007 year, EQH at EPP.

IV. GENERAL TIME BUDGET (weeks)

Training year	Theoretical training	Examination session	Practical Training	Master's thesis preparation	State validation	Vacations	Training year
1	35	4	10	-	-	7	56
2	10	2	-	2	2	1	17
Total	45	6	10	2	2	8	73

V. PRACTICAL TRAINING

№	Type of practice	Semester	Hours	Credits	Number of weeks
1	Manufacturing Practice	1	144	4	4
2	Pre-diploma practice	2	216	6	6

VI. COURSE WORK AND PROJECTS

№	Educational discipline	Hours	Credits	Course work	Course project
1	Modeling of technological processes in animal husbandry	36	1	-	1
2	Processing of livestock products Processing of livestock products	36	1	-	1
3	University and student elective courses	36	1	-	1

VII. STATE VALIDATION

№	Validation	Hours	Credits	Number of weeks
1	Defence degree project	540	15	4