Form number N-3.01

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

PLAN LEARNING PROCESS
training in 2013 income

Educational-qualification of	"Master"
Knowledge Area	1001 "Technology and Energy agricultural production"
Specialty	8.10010203 "Mechanization of Agricultural"
Specialty	manufacturing and research
Master programs	"Technology and Techniques in Planting", "Technology and equipment in livestock", "Technology and Techniques of Processing AgroIndustries", "Technology and Equipment of Service Enterprises", "Technology and Techniques in Biological Systems", "Safety Principles of AgroBioEngineering", "Mechatronic Systems and Technology of AgroIndustrial Complex", "Technical Service of Machinery and Equipment", "Optimization of Parameters and Exploitaion Regimes of Agricultural Machinery", "Optimize Conveying Processes in Agriculture"
Training period of	1,5 years
Qualification	engineer-researcher for agricultural mechanization

Implement the master's program

SEI	Technical
Faculty	of Engineering Agrobiosistem
Departments	the mechanization of livestock and biotechnology systems, quipment reliability, safety and environment engineering

I. SCHEDULE OF EDUCATIONAL PROCESS

a) training “Master” 2013 entry

specialty 8.10010203 “Mechanization of Agricultural”

Year of study	2013 year																		2014 year																																				
	September				30	October			28	November				December				30	January			27	February			24	March				31	April			28	May				June				30	July			28	August			
	2 7	9 14	16 21	23 28	IX 5 X	7 12	14 19	21 26	X 2 XI	4 9	11 16	18 23	25 30	2 7	9 14	16 21	23 28	XII 4 I	6 11	13 18	20 25	I 1 II	3 8	10 15	17 22	II 1 III	3 8	10 15	17 22	24 29	III 5 IV	7 12	14 19	21 26	IV 3 V	5 10	12 17	19 24	26 31	2 7	9 14	16 21	23 28	VI 5 VII	7 12	14 19	21 26	VII 2 VIII	4 9	11 16	18 23	25 30
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
I																																																	X	X	X	X
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	–	–	:	:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	:	:	X	X	X	X	X	X	–	–	–	–	–	–

Year of study	2014 год																	
	September				29	October			27	November				December				29
	1 6	8 13	15 20	22 27	IX 4 X	6 11	13 18	20 25	X 1 XI	3 8	10 15	17 22	24 29	1 6	8 13	15 20	22 27	XII 3 I
	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
II	1	2	3	4	5	6	7	8	9	10	:	:	II	II	II	II	//	

б) training “Master” 2013 entry

specialty 8.10010203 “Mechanization of Agricultural”

Year of study	2013 year																		2014 year																																				
	September				30	October			28	November				December				30	January			27	February			24	March				31	April			28	May				June				30	July			28	August			
	2 7	9 14	16 21	23 28	IX 5 X	7 12	14 19	21 26	X 2 XI	4 9	11 16	18 23	25 30	2 7	9 14	16 21	23 28	XII 4 I	6 11	13 18	20 25	I 1 II	3 8	10 15	17 22	II 1 III	3 8	10 15	17 22	24 29	III 5 IV	7 12	14 19	21 26	IV 3 V	5 10	12 17	19 24	26 31	2 7	9 14	16 21	23 28	VI 5 VII	7 12	14 19	21 26	VII 2 VIII	4 9	11 16	18 23	25 30
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
II	1	2	3	4	5	6	7	8	9	10	:	:	II	II	II	II	//																																			

Legend:

	-	theoretical training	X	-	manufacturing practice
:	-	exams	O	-	educational practice
-	-	vacation	II		master's work writing
			//	-	state certification (state examination and defense of master's work)

II. PLAN LEARNING PROCESS
specialty 8.10010203 “Mechanization of Agricultural”

№	Course Title	Total amount		Forms of knowledge control Semester			Class hours				Self-dependent work	Practical Training		Distribution weekly hours for courses and semesters		
								including						1 year courses		2 year courses
		hours	credits	exam	test	course work	Total	lecture	laboratory	practical		Practical Training	Practical industrial	1 Sem.	2 Sem.	3 Sem.
														Number of weeks in semesters		
														17	17	10
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. REGULATORY DISCIPLINES																
1.1. Cycle of humanitarian and socio-economic disciplines*																
1	Legislation and Law in Agriculture	180	5,0	e			64	32		32	96			4		
2	Business Foreign Language	180	5,0	e			66	33		33	95			2	2	
3	Pedagogy	90	2,5		t		34	17	17		50				2	
4	Economic of IT Systems	90	2,5		t		20	10		10	70					2
Total		**540**	**15**	**2**	**2**		**184**	**92**	**17**	**75**	**331**	**0**	**0**	**6**	**4**	**2**
1.2. Cycle professional and practical training*																
1	Theory and Methods of Research	162	4,5	e			64	32		32	88			4		
2	Mechatronic Systems Technology	216	6,0	e		36	64	32	32		114			4		
3	Design of Technical Process	252	7,0	e		36	68	34		34	112	144			4	2
4	Design of Means and Facilities Services	180	5,0	e		36	68	34		34	94				4	
5	Logistics of Agricultural Mechanization	90	2,5		t		34	17		17	56				2	
6	Innovative Engineering Technology	90	2,5		t		34	17		17	56				2	
7	Occupational Health in Agriculture	90	2,5	e			20	10	10		80					2
8	Engineering Management	180	5,0	e			40	20	20		140					4
Total		**1260**	**35**	**6**	**2**	**108**	**392**	**196**	**62**	**134**	**650**	**144**		**8**	**12**	**8**
2. SELECTED DISCIPLINE																
2.1. Cycle professional and practical training*																
Master's program “Technology and Techniques in Planting”																
2.1.1. Electives University																
1	Engineering and Design of Process Plant Systems	270	7,5	e			98	49		49	86	86		4	2	
2	Management of Machines in Plant	180	5,0	e			40	20		20	70	70				4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.1.2. Electives student																
1	Plant Process Safety	90	2,5		t		20	10	10		34	36				2
2	Environmental Security Processes in Plant	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program "Technology and equipment in livestock"																
2.2.1. Electives University																
1	Design and Calculation Technologic Process in Livestock	270	7,5	e			98	49		49	86	86		4	2	
2	Management of Machines in Livestock	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.2.2. Electives student																
1	Livestock Process Safety	90	2,5		t		20	10	10		34	36				2
2	Environmental Security Processes in Livestock	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program "Technology and Techniques of Processing AgroIndustries"																
2.3.1. Electives University																
1	Engineering and Design of Technological Systems Processing Industries	270	7,5	e			98	49		49	86	86		4	2	
2	Management of Machines in Processing Agroindustries	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.3.2.Electives student																
1	Processing Agroindustries Process Safety	90	2,5		t		20	10	10		34	36				2
2	Environmental Security Processes in Processing Agroindustries	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program "Technology and Equipment of Service Enterprises"																
2.4.1. Electives University																
1	Engineering and Design of Technological Systems of Service Enterprises	270	7,5	e			98	49		49	86	86		4	2	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	Systems Management in Service Enterprises	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.4.2.Electives student																
1	Process Safety in Service Enterprises	90	2,5		t		20	10	10		34	36				2
2	Environmental Security Processes in Service Enterprises	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program “Technology and Techniques in Biological Systems”																
2.5.1. Electives University																
1	Biotechnological Processes and Equipment Manufactures	270	7,5	e			98	49		49	86	86		4	2	
2	Technology Bioenergetics Convertion	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.5.2.Electives student																
1	Process Safety Biosystems	90	2,5		**t**		20	10	10		34	36				2
2	Environmental Security Processes Biosystems	90	2,5		**t**		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program “Safety Principles of AgroBioEngineering”																
2.6.1. Electives University																
1	Organization of Labor AgroBioEngineering	270	7,5	e			98	49		49	86	86		4	2	
2	Theory AgroBioEngineering Security	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.6.2.Electives student																
1	Process Safety AgroBioEngineering	90	2,5		**t**		20	10	10		34	36				2
2	Environmental Security Processes in AgroBioEngineering	90	2,5		**t**		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program “Mechatronic Systems and Technology of AgroIndustrial Complex”																
2.7.1. Electives University																
1	Designing Mechatronic Systems	270	7,5	e			98	49		49	86	86		4	2	
2	Fundamentals of Mechatronics	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2.7.2.Electives student																
1	Computer Control of Mechatronic Systems	90	2,5		t		20	10	10		34	36				2
2	Mechatronic Systems for Agriculture	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program “Technical Service of Machinery and Equipment”																
2.8.1. Electives University																
1	Design Process Service	270	7,5	e			98	49		49	86	86		4	2	
2	Planning and Organization of Enterprise Technical Services	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.8.2.Electives student																
1	Diagnosis and Prediction of Technical Condition of Machines	90	2,5		t		20	10	10		34	36				2
2	Testing Agricultural Machinery	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program “Optimization of Parameters and Exploitaion Regimes of Agricultural Machinery”																
2.9.1. Electives University																
1	Design regimes, Processes and Technology in agroindustrion Complex	270	7,5	e			98	49		49	86	86		4	2	
2	Modeling of Exploitation Processes and Machines	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.9.2.Electives student																
1	Mechanics of Agricultural Materials	90	2,5		t		20	10	10		34	36				2
2	Test Agricultural Machinery	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Master's program “Optimize Conveying Processes in Agriculture”																
2.10.1. Electives University																
1	Optimization of Parameters and Regimes of Motion	270	7,5	e			98	49		49	86	86		4	2	
2	Conveying Processes and Machines in Agriculture	180	5,0	e			40	20		20	70	70				4
Total		**450**	**12,5**	**2**	**0**	**0**	**138**	**69**	**0**	**69**	**156**	**156**	**0**	**4**	**2**	**4**
2.10.2.Electives student																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Dynamics of Conveying Machines	90	2,5		t		20	10	10		34	36				2
2	Tests Conveying Machines	90	2,5		t		20	10	10	0	34	36				2
Total		**180**	**5,0**	**0**	**2**		**40**	**20**	**20**	**0**	**64**	**72**	**0**	**0**	**0**	**4**
Total		**630**	**17,5**	**2**	**2**		**148**	**89**	**20**	**69**	**220**	**228**	**0**	**4**	**2**	**8**
Preparation and defense of master's thesis		**252**	**7**													
Practical Training		**558**	**15,5**								**342**	**216**				
Amount of coursework (projects)						**3**										
Number tests					**15**											
Number exams				**12**												
Total specialty		**3240**	**90**	**12**	**15**	**108**	**791**	**395**	**345**	**51**	**1801**	**216**	**144**	**18**	**18**	**18**

* 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

Disciplines	Hours	Credits	%
1. Regulatory disciplines	1800	50	55
1.1. Cycle of humanitarian and socio-economic disciplines*	540	15	
1.2. Cycle professional disciplines and practical training*	1260	35	
2. Selected disciplines	630	17,5	19
2.1. Electives University	450	12,5	
2.1.1. Cycle professional disciplines and practical training*	450	12,5	
2.2. Electives student	180	5	
2.2.1. Cycle professional disciplines and practical training*	180	5	
3. Other load	846	22,5	26
Total	**3240**	**90**	**100**

* Names cycles disciplines in accordance with the state of the industry standards for higher education approved since 2007, the OKH and PPOs

IV. SUMMARY OF BUDGET TIME WEEK

Year of study	Theoretical study	Exams	Practical Training	Preparation of Master work	State certification	Vacation	Total
1	34	4	10	-	-	8	56
2	10	2	-	4	1	-	17
Total	**44**	**6**	**10**	**4**	**1**	**8**	**73**

V. PRACTICAL TRAINING

№	Type of practice	Semester	Hours	Credits	Number of weeks
1	Design practice	1	216	6,0	4
2	Manufacturing practice	2	342	9,5	6

VI. COURSE WORK AND PROJECTS

№	Name of discipline	Hours	Credits	Course work	Course projects
1	Mechatronic systems technology APC	36	1	-	1
2	Design tools and service facilities	36	1	-	1
3	Design Process	36	1	-	1

VII. STATE CERTIFICATION

№	Component certification	Hours	Credits	Number of weeks
1	Preparation of the master's work	216	6	4
2	Protection of the master's work	36	1	1