Form № H- 3.01

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

EDUCATION PLANE
training specialists since 2013 year

Educational and qualification level	"Master"
Branch of knowledge	0901 "Agriculture and forestry"
Specialty	8.09010105 "Selection and Genetics of Agricultural Crops"
Specialization	Production oriented disciplines
Master program	"Methods for genetic control of plant"
Specialization	Research oriented disciplines
Master program	"The use of biological variety as sources economic valuable signs and creation of new donors for the selection of modern sorts and hybrids"
Form of training	full-time
Term of study	1,5 years
Qualification of graduates	selection and crop genetics researcher

Implement a master's program

SRI	institute of plant sciences, ecology and biotechnologies
Faculty	agrobiology
Departments	Selection and Genetics

I. TRAINING PROCESS SCHEDULE

a) training specialists EQL “Master” since 2013 year
specialty 8.09010105 “Selection and Genetics of Agricultural Crops”

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**
																		–	**–**	**:**	**:**																		**:**	**:**	**X**	**X**	**X**	**X**	**X**	**X**	**–**	**–**	**–**	**–**	**–**	**–**

Year of study	2014 year																	
	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											**:**	**:**	**II**	**II**	**II**	**//**		

б) training specialists EQL “Master” since 2012 year
specialty 8.09010105 “Selection and Genetics of Agricultural Crops”

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											**:**	**:**	**II**	**II**	**II**	**//**																																				

Legend:

	-	theoretical training	**X**	-	industrial practice
:	-	examination period	**II**	-	writing of master's thesis
-	-	vacation	**//**	-	state certification (defense of master's thesis)

II. PLAN OF THE EDUCATIONAL PROCESS

№	Subjects	The total volume		Forms of knowledge control (by semester)			Audience lessons (hours)				Independent work	The work experience		The distribution of hours per week on courses and semesters		
		The total number of hours	The number of credits	Exam	Test	Coursework (project)	Total	including				Industrial practice	Research practice	And year of study		2 year study
								Lectures	Lab works	Practical lessons				Semester		
														1 s.	2 s.	3 s.
														Number of weeks per semester		
														17	17	10
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. REGULATORY ACADEMIC DISCIPLINES																
1. 1. The cycle of professionally oriented, humanitarian and socio-economic training*																
1	Business foreign language	54	1.5	e			34		34		20			2		
2	Philosophy of science	54	1.5	e			17	17			37			1		
3	Civil protection	36	1		t		10	10			26					1
Total number		**144**	**4**	**2**	**1**	**0**	**61**	**27**	**34**	**0**	**83**			**3**	**0**	**1**
1.2. The cycle of natural-scientific, professional and practical training*																
1	Special crop genetics	162	4.5	e		CW	68	34	34		94				4	
2	Labor protection in industry	54	1.5	e			17	17			37			1		
3	Genetic engineering and biotechnology	90	2.5		t		34	17	17		56			2		
4	Post harvest handling, storage and certification of seeds and propagating material	108	3		t		51	17	34		57			3		
5	Plant genetic resources	90	2.5		t		34	17	17		56			2		
6	Modern breeding methods and techniques	144	4	e		CW	51	17	34		93			3		
7	Genetics of plant immune system	90	2.5		t		34	17	17		56			2		
8	Special breeding and seed production of field crops	252	7	e			102	51	51		150				6	
9	Special breeding and seed production of vegetables and fruits	90	2.5	e			34	17	17		56				2	
10	Environmental and adaptive breeding of field crops	90	2.5	e			34	17	17		56				2	
11	Genetics of quantitative traits	90	2.5		t		34	17	17		56				2	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Total number		**1260**	**35**	**6**	**5**	**2**	**493**	**238**	**255**	**0**	**767**			**13**	**16**	**0**
Total according to regulatory part		**1404**	**39**	**8**	**6**	**2**	**554**	**265**	**289**	**0**	**850**			**16**	**16**	**1**
2. ELECTIVE ACADEMIC DISCIPLINES																
Production oriented disciplines																
2.1. Disciplines chosen by University																
2.1.1. The cycle of professionally oriented, humanitarian and socio-economic training*																
1	Information technology in plant breeding	108	3		t		34	17	17		74			2		
2	Legal protection of plant varieties	108	3		t		34	17	17		74				2	
Total number		**216**	**6**	**0**	**2**		**68**	**34**	**34**	**0**	**148**			**2**	**2**	**0**
2.1.2. The cycle of natural-scientific, professional and practical training*																
1	Ecological genetics and special plant genetics	162	4.5	e		CW	40	20	20		122					4
2	Laboratory work	162	4.5	e			40	20	20		122					4
3	Methodology and technical support modern genetic research	72	2		t		20	10	10		162					2
Total		**396**	**11**	**2**	**1**	**0**	**100**	**50**	**50**	**0**	**406**	**0**	**0**	**0**	**0**	**10**
2.2. Disciplines chosen by students																
2.2.1. The cycle of natural-scientific, professional and practical training*																
Master program "Methods for genetic control of plant"																
1	Molecular diagnostics in crop production and environmental management	180	5		t		20	10	10		160					2
2	Systems analysis as objects of the environment and plant production	180	5	e			20	10	10		160					2
3	Transgenic technology, DNA technology of plant	216	6	e			30	20	10		186					3
Total selected by the students		**576**	**16**	**4**	**2**	**1**	**70**	**40**	**30**	**0**	**506**	**0**	**0**	**0**	**0**	**7**
Research oriented disciplines																
2.1. Disciplines chosen by University																
2.1.1. The cycle of professionally oriented, humanitarian and socio-economic training*																
1	Information technology in plant breeding	108	3		t		34	17	17		74			2		
2	Legal protection of plant varieties	108	3		t		34	17	17		74				2	
Total number		**216**	**6**	**0**	**2**		**68**	**34**	**34**	**0**	**148**			**2**	**2**	**0**
2.1.2. The cycle of natural-scientific, professional and practical training*																
1	Selection and seed-growing of hybrids agricultural cultures	216	6	e		CW	50	20	30		166					5
2	Examination of plant varieties for patentability	180	5	e			30	20	10		150					3
Total number		**396**	**11**	**2**		**1**	**80**	**40**	**40**	**0**	**316**	**0**	**0**	**0**	**0**	**8**
2.2. Disciplines chosen by students																
2.2.1. The cycle of natural-scientific, professional and practical training*																
Master program "The use of biological variety as sources economic valuable signs and creation of new donors for the selection of modern sorts and hybrids"																
1	Applied genetics	180	5		t		30	10	20		150					3
2	Examination grades for suitability for distribution in Ukraine	180	5		t		20	10	10		160					2
3	Modern methods of identifying varieties and hybrids	216	6	e			40	20	20		176					4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Total selected by the students		**576**	**16**	**1**	**2**	**0**	**90**	**40**	**50**	**0**	**486**	**0**	**0**	**0**	**0**	**9**
Total selected by the students		**1188**	**33**	**4**	**4**	**1**	**238**	**114**	**124**	**0**	**950**	**0**	**0**	**2**	**2**	**17**
Practical training		**468**	**13**													
Writing and defense of master's thesis		**180**	**5**													
Number of coursework						**3**										
Number of tests					**10**											
Number of examinations				**12**												
TOTAL FOR SPECIALTY		**3240**	**90**	**12**	**10**	**3**	**792**	**379**	**413**	**0**	**1800**	**0**	**0**	**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 A TRAINING PLAN

The disciplines	Hours	Credits	%
1. Regulatory academic disciplines	1404	39.0	43.0
1.1. The cycle of professionally oriented, humanitarian and socio-economic training*	144	4.0	4.0
1.2. The cycle of natural-scientific, professional and practical training*	1260	35.0	39.0
2. Elective academic disciplines	1188	33.0	37.0
2.1. Disciplines chosen by University	612	17.0	19.0
2.1.1. The cycle of professionally oriented, humanitarian and socio-economic training*	216	6.0	7.0
2.1.2. The cycle of natural-scientific, professional and practical training*	396	11.0	12.0
2.2. Disciplines chosen by students	576	16.0	18.0
2.2.1. The cycle of natural-scientific, professional and practical training*	576	16.0	18.0
3. Other load	648	18.0	20.0
Together for EQL	**3240**	**90.0**	**100**

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

IV. SUMMARY THE BUDGET ON TIME, WEEKS

Year of study	Theoretical study	Examination period	Practical training	Writing of master's thesis	State certification	Vacation	Total
1	34	4	10	-	-	8	56
2	10	2		3	1	-	16
Together for EQL	**44**	**6**	**10**	**3**	**1**	**8**	**72**

V. PRACTICAL TRAINING

№	Type of practice	Semester	Hours	Credits	Number of weeks
1	Production (scientific- research) practice	1, 2	468	13	10

VI. COURSE WORK

№	Subjects	Hours	Credits	Coursework	Course project
1	Special crop genetics	18	0.5	CW	
2	Modern breeding methods and techniques	18	0.5	CW	
3	Ecological genetics and special plant genetics	18	0.5	CW	
4	Selection and seed-growing of hybrids agricultural cultures	18	0.5	CW	

VII. STATE CERTIFICATION

№	Component certification	Hours	Credits	Number of weeks
1	Writing and defense of master's thesis	180	5	4