Form № H- 3.01

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

EDUCATION PLANE
training specialists since 2013 year

Level of qualification	"Master"
Branch of knowledge	0901 "Agricultural and forestry"
Specialty	8.09010501 "Plant Protection"
Specialization	production
Master's programs	"Phytomedicine", "Phytosanitary monitoring and forecasting", "Plant quarantine", "Methods of entomological control in crop farming and environmental management"
Specialization	research
Master's programs	"Management of insect amount in the crop agrocenosises", "Biological justification of obligate and facultative pathogens control"
Mode of study	Full-time
Term of study	1,5 years
Qualification of graduates	Plant Protection Scientists

Implement the program

Education and Research Institute	Plant Science, Environment and Biotechnology
Education and Research Center	Phytomedicine, Phytosanitary and Plant Quarantine
Faculty	Plant Protection
Departments	Phytopathology named after V.F. Peresypkin, Entomology named after prof. M.P. Dadechko, Integrated Protection and Plant Quarantine

I. CURRICULUM

a) Training of specialists educational and qualification level “Master” since 2013
Specialty 8.09010501 “Plant Protection”

Year study	2013																	2014																																			
	September				**October**					**November**				**December**				**January**					**February**				**March**				**April**					**May**				**June**				**July**					**August**			
	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	3	10	17	24	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25
	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	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**
1																		-	-	:	:													:	:	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-

Year study	2014																	2015								
	September				**October**					**November**				**December**				**January**					**February**			
	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	3	10	17	24
	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	1
	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**
2																		-	-	:	:	**II**	**II**	**II**	//	//

b) Training of specialists educational and qualification level “Master” since 2012
Specialty 8.09010501 “Plant Protection”

Year study	2 013																	2 014																																			
	September				**October**					**November**				**December**				**January**					**February**				**March**				**April**					**May**				**June**				**July**					**August**			
	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	3	10	17	24	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25
	7	14	21	28	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	1	8	15	22	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	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**
2											:	:	**II**	**II**	**II**	**II**	//																																			

Key:

	-	theoretical education
:	-	examination period
-	-	vacation
X	-	training at the enterprise
II	-	preparation of Master’s thesis
//	-	state certification (defense of Master’s thesis)

II. MASTERS' PROGRAM CURRICULUM IN SPECIALTY "PLANT PROTECTION"

№ п/п	Academic Discipline and practical training	Volume		Knowledge control (by semester)			Classroom training (hours)				Independent work of students	Training		Distribution of hours per week		
								including:						1 course		2 course
														1s	2s	3s
														weeks		
		Hours	Credits	Examinations	Written tests	Term paper (project)	Total	Lectures	Laboratories Studies	Practical Studies		Training practice	Training at the enterprise	18	12	16
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 humanitarian and socio-economic training*															
1	Business foreign language	72	2	Ex			36		36		36			2		
2	Methodology and organization of scientific researches	108	3		Wt		36	18	18		72			2		
3	Logistic and communications in Plant Protection	108	3		Wt		24	12		12	84				2	
Totally for the cycle		**288**	**8**	**1**	**2**	**0**	**96**	**30**	**54**	**12**	**192**	**0**	**0**	**4**	**2**	**0**
	1.2. Cycle of professional and practical training*															
1	Managing the number of weeds in agrophytocenoses	108	3		Wt		36	18	18		72			2		
2	Complex systems of crop plant protection from diseases	108	3		Wt		36	18	18		72			2		
3	Phytofagous insect management	108	3	Ex		Tp	36	12	24		72				3	
4	Civil Defence	108	3		Wt	Tp	18	9	9		90			1		
5	Labour protection in plant protection	36	1	Ex			16	8	8		20					2
6	Toxicology of Pesticides	144	4	Ex			36	12	24		108				3	
7	Technology of mass rearing of beneficial insects	216	6	Ex	Wt		54	18	36		162			3		
8	Epiphytotiology	144	4	Ex			36	18	18		108			2		
9	Crop Seed pathology	144	4		Wt		36	12	24		108				3	
10	Standardization and jurisprudence in plant protection	108	3		Wt		36	18		18	192	0	0	2		0
Totally for the cycle		**1224**	**34**	**9**	**9**	**2**	**340**	**143**	**179**	**18**	**1004**	**0**	**0**	**12**	**9**	**2**
Totally for the normative constituent		**1512**	**42**	**10**	**11**	**2**	**436**	**173**	**233**	**30**	**1196**	**0**	**0**	**16**	**11**	**2**
	2. SELECTIVE ACADEMIC DISCIPLINES															
	2.1. Disciplines at the choice of the University															
	2.1.1.Cycle of humanitarian and socio-economic training*															

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Economic and organization of agricultural service	72	2		Wt		12	12			60				1	
Totally for the cycle		**144**	**4**	**0**	**5**	**0**	**28**	**28**	**0**	**0**	**116**	**0**	**0**	**0**	**1**	**1**
	2.1.2. Cycle of professional and practical training *															
1	Biosafety in Plant Protection	108	3		Wt		36	12	24		72				3	
2	Disinfection of Management objects	108	3	Ex			36	18	18		72			2		
3	Methods of plant protection testing	108	3	Ex			36	12	24		72				3	
Totally for the cycle		**324**	**9**	**2**	**1**	**0**	**108**	**42**	**66**	**0**	**216**	**0**	**0**	**2**	**6**	**0**
	Production-Oriented Specialty															
	Master's program “Phytomedicine”															
1	Ecology of plant pathogens	108	3	Ex			48	16	32		60					3
2	Diagnostics of plants diseases	126	3,5	Ex			64	32	32		62					3
3	Mycological and phytopathological research methods	126	3,5	Ex			48	16	32		78					3
Totally for the cycle		**360**	**10**	**3**	**0**	**0**	**160**	**64**	**96**	**0**	**200**	**0**	**0**	**0**	**0**	**9**
	Master's program “Phytosanitary monitoring and forecasting”															
1	Experimental research methods in entomology	144	4	Ex			48	16	32		96					3
2	Insect pathology	108	3	Ex			64	32	32		44					4
3	Insects ecology	108	3	Ex			64	32	32		44					4
Totally for the cycle		**360**	**10**	**3**	**0**	**0**	**176**	**80**	**96**	**0**	**184**	**0**	**0**	**0**	**0**	**11**
Master's program “Plant quarantine”																
1	International phytosanitarian standards	144	4	Ex			64	32	32		80					4
2	Introductive pests	144	4	Ex			64	32	32		80					4
3	Quarantine pest risk evaluation	72	2	Ex			48	16	32		24					3
Totally for the cycle		**360**	**10**	**3**	**0**	**0**	**176**	**80**	**96**	**0**	**184**	**0**	**0**	**0**	**0**	**11**
	Master’s program “Methods of entomological control in crop farming and environmental management”															
1	Insect Biocenology	144	4	Ex			64	32	32		80				4	4
2	Methods and technical supply of modern entomological researches	108	3		Wt		48	16	32		60				3	3
3	Photo-sanitary and environmental assessment of project	108	3		Wt		64	32	32		44					4
Totally for the cycle		**360**	**10**	**1**	**2**	**0**	**176**	**80**	**96**	**0**	**184**	**0**	**0**	**0**	**7**	**11**
	Master's program “Management of insect amount in the crop agrocenosises”															
1	Experimental research methods in entomology	144	4	Ex			64	32	32		80					4
2	Insect physiology	108	3	Ex			64	32	32		44					4
3	Technical entomology	108	3	Ex			48	16	32		60					3
Totally for the cycle		**360**	**10**	**3**	**0**	**0**	**176**	**80**	**96**	**0**	**184**	**0**	**0**	**0**	**0**	**11**
	Master's program “Biological justification of obligate and facultative pathogens control”															
1	Actinomitsetes diseases of plant	108	3	Ex			64	32	32		44					4
2	Physiological and biochemical aspects of plant resistance to disease	126	3,5	Ex			48	16	32		78					3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3	Mycotoxicology	126	3,5	Ex			64	32	32		62					4
Totally for the cycle		**360**	**10**	**3**	**0**	**0**	**176**	**80**	**96**	**0**	**184**	**0**	**0**	**0**	**0**	**11**
Totally at the choice of the University		**828**	**23**	**5**	**6**	**0**	**296**	**134**	**162**	**0**	**532**	**0**	**0**	**2**	**7**	**10**
	2.2. Disciplines at the student's choice															
	2.2.1. Cycle of Professional and Practical Training*															
	Production-Oriented Specialty															
	Master's program "Phytomedicine"															
1	Bacterioses of plants	108	3		Wt		32	16	16		76					2
2	Use the antagonistic organisms against agents that cause plant diseases	108	3		Wt		32	16	16		76					2
3	Methods of identification of plant disease agents	108	3		Wt		32	16	16		76					2
Totally for the cycle		**324**	**9**	**0**	**3**	**0**	**96**	**48**	**48**	**0**	**228**	**0**	**0**	**0**	**0**	**6**
	Master's program "Phytosanitary monitoring and forecasting"															
1	Technical entomology	162	4,5		Wt		32	16	16		130					2
2	Insect physiology	162	4,5		Wt		32	16	16		130					2
Totally for the cycle		**324**	**9**	**0**	**2**	**0**	**64**	**32**	**32**	**0**	**260**	**0**	**0**	**0**	**0**	**4**
	Master's program"Plant quarantine"															
1	Geography of quarantine organisms	162	4,5		Wt		32	16	16		130					2
2	Ukrainian pests in international phytosanitary	162	4,5		Wt		32	16	16		130					2
Totally for the cycle		**324**	**9**	**0**	**2**	**0**	**64**	**32**	**32**	**0**	**260**	**0**	**0**	**0**	**0**	**4**
	Master's program "Methods of entomological control in crop farming and environmental management"															
1	Systematic Quality Analysis of environment Objects and Plant Production	162	4,5		Wt		32	16	16		130					2
2	Entomological biotechnology	162	4,5		Wt		32	16	16		130					2
Totally for the cycle		**324**	**9**	**0**	**2**	**0**	**64**	**32**	**32**	**0**	**260**	**0**	**0**	**0**	**0**	**4**
	Master's program "Pest management in agrocenosises"															
1	Theoretical background of technical entomology	162	4,5		Wt		32	16	16		130					2
2	Epizooties of pests	162	4,5		Wt		32	16	16		130					2
Totally for the cycle		**324**	**9**	**0**	**2**	**0**	**64**	**32**	**32**	**0**	**260**	**0**	**0**	**0**	**0**	**4**
	Master's program "Biological justification of obligate and facultative pathogens control"															
1	Methods for infectious backgrounds forming in phythopathology	108	3		Wt		32	16	16		76					2
2	Pathogenesis in plant production	108	3		Wt		32	16	16		76					2
3	Pathological process of plants' root system	108	3		Wt		32	16	16		76					2
Totally for the cycle		**324**	**9**	**0**	**3**	**0**	**96**	**48**	**48**	**0**	**228**	**0**	**0**	**0**	**0**	**6**
Totally at the choice of the student		**1152**	**32**	**4**	**12**	**0**	**378**	**186**	**192**	**0**	**750**	**0**	**0**	**6**	**5**	**18**
Totally at the selective constituent		**2664**	**74**	**11**	**14**	**2**	**828**	**357**	**471**	**0**	**1416**	**0**	**0**	**18**	**18**	**18**
Practical training		**396**	**11**													
Preparation and defense of Master's thesis		**180**	**5**													

Totally for the specialty	**3240**	**90**	**11**	**14**	**2**	**964**	**425**	**509**	**30**	**2288**			**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

Courses title	Hours	Credits	%
1. NORMATIVE Academic Disciplines	1512	42,0	47,0
1.1. Cycle of Humanities and Social-Economic training	288	8,0	
1.2. Cycle of Natural-Scientific training	1224	34,0	
2. Selective Academic Disciplines			
2.1. Disciplines at the choice of the University	828	23,0	26,0
2.1.1. Cycle of Humanities and Social-Economic training	144	4	
2.1.2. Cycle of Professional and Practical training	684	19	
2.2. Disciplines at the student's choice	324	9,0	10,0
2.2.1. Cycle of Professional and Practical training	324	9,0	
4. Other	576	16,0	17,0
Totally for the specialty	**3240**	**90,0**	**100,0**

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

IV. SUMMARY THE BUDGET ON TIME, WEEKS

Year study	Theoretical studies	Examination period	Practical studies	Preparation and defense of Master's thesis	Vacation	Total
1	29	4	11	-	8	52
2	17	2	-	5	2	26
Total	**46**	**6**	**11**	**5**	**10**	**78**

V. PRACTICAL STUDIES

№	Name	Semester	Hours	Credits	Weeks
1	Scientific and research practical	2	180	5	5
2	Training at the enterprise	2	216	6	6
Total			**396**	**11**	**11**

VI. ACADEMIC YEAR PAPERS (PROJECT)

№	Name	Hours	Credits	Coursework	Course project
1	Toxicology of Pesticides	36	1,0	1	
2	Technology of mass rearing of beneficial insects	36	1,0	1	
Total		**72**	**2,0**	**2**	

VII. FINAL STATE CERTIFICATION

№	Name	Hours	Credits	Weeks
1	Preparation and defense of Master's thesis	180	5	5