

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

CURRICULUM
for 2013/2014 academic years

Educational qualification level	“Master”
Branch of knowledge	0901 “Agriculture and forestry”
Specialty	8.09010301 “Forestry”
Specialization	industrial
Master programmes	“Silvics and practical silviculture”, “Forest amelioration”, “Reforestation and afforestation”, “Forest protection”, “Forest resources management and forestry business”, “Forest inventory”, “Methods entomological control in crop production and environmental management”
Specialization	research
Master programmes	“Management of forest fires”, “Forest-agricultural landscape”, “Biological and energy efficiency of forest plant communities”
Form of study	full-time
Study term	1 year 6 months
Qualification	Master of Forestry

Master programs is realized by

ERI	Forestry and Park Gardening
Faculty	Forestry
Department	Silviculture, forest biology and wildlife management, forest amelioration and forest-agricultural landscape optimization, reforestation and afforestation, forest mensuration and forest inventory, forest management

I. SCHEDULE OF EDUCATIONAL PROCESS
a) training specialists EQL “Master” of 2013 entry year
on specialty “Forestry”

Course	2013																		2014																																							
	September				30	October				28	November				December				30	January				27	February				24	March				31	April				28	May				June				30	July				28	August				
	2	9	16	23	IX	7	14	21	X	4	11	18	25	2	9	16	23	XII	6	13	20	1	3	10	17	II	3	10	17	24	III	7	14	21	IV	5	12	19	26	2	9	16	23	VI	7	14	21	VII	4	11	18	25						
	7	14	21	28	X	12	19	26	XI	9	16	23	30	7	14	21	28	I	11	18	25	II	8	15	22	III	8	15	22	29	IV	12	19	26	V	10	17	24	31	7	14	21	28	VII	12	19	26	VIII	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						
I																		-	-	:	:																									:	:	-	-	-	-	-	-	X	X	X	X	-
Course	2014																																																									
	September				29	October				27	November				December				29																																							
	1	8	15	22	IX	6	13	20	X	3	10	17	24	1	8	15	22	XII																																								
	6	13	20	27	X	11	18	25	XI	8	15	22	29	6	13	20	27	I																																								
	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70																																								
II										:	:	II	II	II	//																																											

Table legend:

	- theoretical study
:	- exam session
-	- vacation
A	- intermediate attestation

X	- industrial practice
II	- master's work writing
//	- state exam and defending of master's work

II. PLAN OF EDUCATIONAL PROCESS

№	Name of discipline	Total number		Forms of knowledges control on semesters			Audience employments, hours				Self study	Practical training		Distribution of classroom hours per week by courses and semesters		
		hours	credits	exams	tests	course papers (projects)	Total	including:				industrial practice	research practice	I course		II course
								lectures	laboratory research	practical				1 sem.	2 sem.	3 sem.
														Number of weeks in semester		
17	18	10														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. COMPULSORY DISCIPLINES																
1.1. Cycle of socio-humanitarian disciplines*																
1	Psychology of management	54	1,5		3		20	10		10	34					2
2	Philosophy of science	54	1,5	1			34	17		17	20			2		
3	Forest policy	72	2,0		1		34	17		17	38			2		
4	Business foreign language	54	1,5	1			34			34	20			2		
Total for the cycle		234	6,5	2	2		122	44		78	112	0	0	6	0	2
1.2. Cycle of fundamental training disciplines*																
1	Scientific researches methodology	90	2,5		2		36	18		18	54				2	
2	Intellectual property	72	2,0		3		20	10		10	52					2
Total for the cycle		162	4,5	0	2	0	56	28		28	106	0	0	0	2	2
1.3. Cycle of professional training disciplines*																
1	Management of forestry manufacturing	90	2,5		1		34	17	17		56			2		
2	Planning of forestry production	216	6,0	2	1	36	70	35	35		110			2	2	
3	Regulation of forest productivity	162	4,5	1		36	51	17	34		75			3		
4	Safety in Forestry	90	2,5	1			34	17	17		56			2		
5	Information technologies in Forestry	90	2,5		1		34	17	17		56			2		
Total for the cycle		648	18,0	3	3	72	223	103	120		353	0	0	11	2	0
2. OPTIONAL DISCIPLINES																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Civil protection	54	1,5		1		17	17			37			1		
Total for the cycle		54	1,5	0	1	0	17	17	0	0	37	0	0	1	0	0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Production specialization																
Master program “Silvics and practical silviculture”																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Forest harvesting	216	6,0	3	2		66	28	10	28	150				2	3
2	Forest roads and forest transportation	144	4,0	2			36	18		18	108				2	
3	Forest merchandising	144	4,0		2		36	18	18		108				2	
4	Wood processing	126	3,5		2		36	18		18	90				2	
5	Hunting knowledge	126	3,5		2		36	18		18	90				2	
6	Forest tapping	126	3,5		2		36	18		18	90				2	
7	Forest ecology and typology	126	3,5		3		30	20		10	96					3
8	Forest productivity increasing with silvicultural methods	180	5,0	3		36	40	20		20	104					4
9	Industrial methods of forest growing	90	2,5	3			20	10		10	70					2
Total for the cycle		1278	35,5	4	6	36	336	168	28	140	906	0	0	0	12	12
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Non-wood forest products and forest side uses	108	3,0		2		36	18		18	72				2	
2	Biological bases of thinnings	108	3,0		3		20	10		10	88					2
Total for the cycle		216	6,0	0	2	0	56	28	0	28	160	0	0	0	2	2
Master program “Forest amelioration”																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Protective forest management	108	3,0		2		36	18		18	72				2	
2	Erosions	162	4,5	2			36	18		18	126				2	
3	Forest land reclamation	162	4,5		2		36	18		18	126				2	
4	Forest-agricultural landscapes	144	4,0		2		36	18		18	108				2	
5	Systems for soil erosion protection	252	7,0	3	2	36	66	28		38	150				2	3
6	Protective afforestation	162	4,5		3		40	20		20	122					4
7	Optimization of agroforestry spaces	162	4,5	3			40	20		20	122					4
8	Zonal erosion protection systems	126	3,5		3		30	20		10	96					3
Total for the cycle		1278	35,5	3	6	36	320	160	0	160	922	0	0	0	10	14
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Protective plantations along a transport ways	108	3,0	2			36	18		18	72				2	
2	Hydrotechnic amelioration	108	3,0		2		36	18		18	72				2	
Total for the cycle		216	6,0	1	1	0	72	36	0	36	144	0	0	0	4	0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Master program "Forest protection"																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Forest pathology	180	5,0	2			54	36		18	126				3	
2	Mathematical modeling of pests and pathogens population	144	4,0		3		20	10		10	124					2
3	Forest nematodes	162	4,5		2		36	18		18	126				2	
4	Forest protection integrated technologies	288	8,0	3	2	36	86	48		38	166				2	5
5	Pests and pathogens diagnosing	144	4,0		2		36	18		18	108				2	
6	Immunity of woody plants to pathogens	180	5,0	2			54	36		18	126				3	
7	Patogens and pests prediction	180	5,0	3			40	20		20	140					4
Total for the cycle		1278	35,5	4	4	36	326	186	0	140	916	0	0	0	12	11
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Bacterioses of forest woody plants	108	3,0		2		36	18		18	72				2	
2	Woody plants mycotrophy	108	3,0		3		30	20		10	78					3
Total for the cycle		216	6,0	0	2		66	38	0	28	150	0	0	0	2	3
Master program "Reforestation and afforestation"																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Modern nursery technologies	198	5,5	2			72	36	18	18	126				4	
2	Myroclonal reproduction of woody plants	180	5,0		2		54	18	18	18	126				3	
3	Forest cultivation methods for rehabilitation of disturbed lands	180	5,0		3		30	20		10	150					3
4	Industrial methods of forest cultivation	180	5,0	3			40	20		20	140					4
5	Ecological basis of reforestation and afforestation	180	5,0	2			54	18		36	126				3	
6	Forest productivity increasing with forest planting methods	216	6,0	3		36	40	20		20	140					4
7	Varietal forest seed	144	4,0		2		36	18	18		108				2	
Total for the cycle		1278	35,5	4	3	36	326	150	54	122	916	0	0	0	12	11
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Urban forest plantations	108	3,0		2		36	18		18	72				2	
2	Fertilizers in forestry	108	3,0		3		30	10	20		78					3
Total for the cycle		216	6,0	0	2	0	66	28	20	18	150	0	0	0	2	3
Master program "Forest resources management and forestry business"																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Forest resources management	198	5,5	3	2		56	28		28	142				2	2
2	Forest merchandising	144	4,0		2		36	18	18		108				2	
3	Informational systems in forestry	162	4,5	2			54	18	36		108				3	
4	Finance and crediting	144	4,0		2		36	18		18	108				2	
5	Environmental economics	144	4,0		2		36	18		18	108				2	
6	External trade in forestry	162	4,5	3	2		38	28		10	124				1	2
7	GIS in forestry	180	5,0		3	36	40	20		20	104					4
8	Forest productivity modelling	144	4,0	3			40	20		20	104					4
Total for the cycle		1278	35,5	4	6	36	336	168	54	114	906	0	0	0	12	12
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Marketing in forestry	108	3,0		2		36	18		18	72				2	
2	Computer technology in forestry	108	3,0		3		20	10		10	88					2
Total for the cycle		216	6,0	0	2	0	56	28	0	28	160	0	0	0	2	2
Master program «Forest inventory»																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Special types of forest measurements	216	6,0		2		54	36	18		162				3	
2	Forest monitoring	162	4,5		2		54	36	18		108				3	
3	Special types of forest inventory	324	9,0	3	2		94	56	38		230				3	4
4	Informational systems in forestry	180	5,0	2			54	18	36		126				3	
5	GIS in forestry	216	6,0		3	36	40	20		20	140					4
6	Forest productivity modelling	180	5,0	3			40	20		20	140					4
Total for the cycle		1278	35,5	3	4	36	336	186	110	40	906	0	0	0	12	12
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Environmental economics	108	3,0		2		36	18		18	72				2	
2	Computer technology in forestry	108	3,0		3		20	10		10	88					2
Total for the cycle		216	6,0	0	2	0	56	28	0	28	160	0	0	0	2	2
Master program “Methods entomological control in crop production and environmental management”																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Insects biocenology	162	4,5	2			72	36	36		90				4	
2	Methodology and technical providing of modern entomology researches	108	3,0	2			54	18	36		54				3	
3	Phytosanitary and ecological examination	126	3,5	3			40	20	20		86					4
4	System analysis of quality of environment and plant-grower products	108	3,0	3			40	20	20		68					4

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
5	Management of quality of laboratories activity	90	2,5		3		20	10		10	70					2
6	Monitoring of entomopathology complex	288	8,0	3	2	36	76	38		38	176				2	4
7	Adjusting of entomopathology complex quantity	180	5,0		2		54	36		18	126				3	
Total for the cycle		1062	29,5	5	3	36	356	178	112	66	670	0	0	0	12	14
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Prognosis of pests and infecting agent	144	4,0		2		36	18		18	108				2	
2	Laboratory researches in entomology	144	4,0		2		36	18		18	108				2	
3	Entopathofitologycal examination	144	4,0		2		36	18		18	108				2	
Total for the cycle		432	12,00	0	3	0	108	54	0	54	324	0	0	0	6	0
Research specialization																
Master program "Management of forest fires"																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	GIS in fire predicting and modelling	162	4,5	3			40	20	20		122					4
2	Behavior of forest fires	144	4,0		2		36	18		18	108				2	
3	Forest fuel	198	5,5	2			54	36		18	144				3	
4	Impact of weather on fire hazard in the forest	144	4,0		2		36	18		18	108				2	
5	Wildfire management	180	5,0	2			54	36		18	126				3	
6	Fire supression technologies	126	3,5	3			30	20		10	96					3
7	Forest fire management at the regional and global levels	198	5,5		3	36	40	20		20	122					4
8	Prescribed fires management	126	3,5		3		30	20		10	96					3
Total for the cycle		1278	35,5	4	4	36	320	188	20	112	922	0	0	0	10	14
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Forest fire ecology	108	3,0		2		36	18		18	72				2	
2	Forest fires and society	108	3,0		2		36	18		18	72				2	
Total for the cycle		216	6,0	0	2	0	72	36	0	36	144	0	0	0	4	0
Master program "Forest-agricultural landscape study"																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Optimization of forest agricultural landscapes	162	4,5	3			40	20		20	122					4
2	Research fundamentals of anti-erosion systems	144	4,0	3			30	20		10	114					3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3	Erosion science	144	4,0		2		36	18		18	108				2	
4	Theoretical fundamentals of protective afforestation	162	4,5		3		40	20		20	122					4
5	Systems of erosion control soils	252	7,0	3	2		66	28		38	186				2	3
6	Hydro technical melioration	126	3,5		2		36	18		18	90				2	
7	Recultivation of technogenic landscapes	144	4,0	2			36	18		18	108				2	
8	Forest agricultural landscapes	144	4,0		2		36	18		18	108				2	
Total for the cycle		1278	35,5	4	5	0	320	160	0	160	958	0	0	0	10	14
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Forest melioration of transport routes	108	3,0	2			36	18		18	72				2	
2	Forest protective stands inventory	108	3,0		2		36	18		18	72				2	
Total for the cycle		216	6,0	1	1	0	72	36	0	36	144	0	0	0	4	0
Master program “Biological and energy efficiency of forest plant communities”																
2.1. Disciplines chosen by the university																
2.1.1. Cycle of professional training disciplines*																
1	Forest monitoring	180	5,0		2		54	36	18		126				3	
2	GIS in forestry	234	6,5		3	36	40	20		20	140					4
3	Forest productivity modelling	162	4,5	3			40	20		20	140					4
4	Forest taking of inventory and cadastre	180	5,0	3			40	20	20		140					4
5	Databank of forest information	180	5,0	2			54	18	36		126				3	
6	Informational systems in forestry	180	5,0	2			54	18	36		126				3	
7	Environmental economics	162	4,5		2		36	18		18	126				2	
Total for the cycle		1278	35,5	4	3	36	318	150	110	58	924	0	0	0	11	12
2.2. Disciplines chosen by the student																
2.2.1. Cycle of professional training disciplines*																
1	Biological productivity of the forests and its components	144	4,0		2		54	36	18		90				3	
2	Computer technology in forestry	72	2,0		3		20	10		10	52					2
Total for the cycle		216	6,0	0	2	0	74	46	18	10	142	0	0	0	3	2
TOTAL		1548	43,0											18	18	18
Practical training		324	9,0									324				
Writing and defending of master's work		324	9,0									324				
Amount of term papers (projects)						3										
Amount of tests					15											
Amount of examinations				9												
Total for EQL “Master”		3240	90,0	9	15	108	810	388	148	274	1674	648	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 CURRICULUM

Educational disciplines	Hours	Credits	%
1. Compulsory disciplines	1044	29,0	32
1.1. Cycle of socio-humanitarian disciplines*	234	6,5	7
1.2. Cycle of fundamental training disciplines*	162	4,5	5
1.3. Cycle of professional training disciplines*	648	18,0	20
2. Optional disciplines	1548	43,0	48
2.1. Disciplines chosen by the university	1332	37,0	41
2.1.1. Cycle of professional training disciplines*	1332	37,0	41
2.2. Disciplines chosen by the student	216	6,0	7
2.2.1. Cycle of professional training disciplines*	216	6,0	7
3. Other types of loading	648	18,0	20
Total for EQL	3240	90,00	100

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

IV. SUMMARY TIME BUDGET, WEEKS

Course	Theoretical study	Exams	Practical training	Writing master's work	State attestation	Vacation	Total
1	35	4	9			8	56
2	10	2		3	1		16
Total for EQL	45	6	9	3	1	8	72

V. PRACTICAL TRAINING

№	Type of practice	Semester	Hours	Credits	Amount of weeks
1	Industrial practice	1	144	4	4
2	Industrial predegree practice	2	180	5	5

VI. COURSE PAPERS AND PROJECTS

№	Discipline	Hours	Credits	Term paper	Course project
1	Regulation of forest productivity	36	1		CP
2	Planning forestry production	36	1		CP
3	Course project in the chosen master's program	36	1		CP

VII. STATE ATTESTATION

№	Component of attestation	Hours	Credits	Amount of weeks
1	Writing and defending of master's work	324	9	4