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

CURRICULUM for specialist training in 2013

Degree

Branch of knowledge

Specialty

Specialization

Master program

Specialization

Master program

Form of training

Term of study

Qualification of graduates

Education and research institute

Faculty

"Master of Science"

0505 "Mechanical engineering and processing of materials"

8.05050303 "Forest complex equipment"

production oriented master program

"Constructing machines, designing and testing of techniques

for forest complex"

research oriented master program

"Mechatronic Systems of Machines for forestry"

full-time

1,5 years

M.Sc. Mechanical engineering

Implement Master's programmes

Technical

Engineering and Design of Machinery and Systems of Environmental

Management

I. STUDY PLAN a) for specialist training Master of Science Degree in 2013 "Forest complex equipment"

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b) for specialist training Master of Science Degree in 2012 "Forest complex equipment"

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Nomenclature:

-	Auditorium classes
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: - Exams

- - Breaks

X - Practical training

II - Preparation of Master Theses

- State certification (State certification exam and Master Theses defense)

II. CURRICULUM

		Amo	ount	Form	of con	trol	Au	ditoriu hou		ses,			ctical ning		of the week tudy and pe	
									include	.	_				of study	2 st year of study
				00		ject			rk	S	Self study	inir	ctic	1	2	3
N_{2}	Name of educational discipline	S	its	ati	its	ro	-		₩0	SSE	l st	ïa	ora Ing	semester		semester
		hours	credits	nin	Credits	e p	total	re		cla	Self	al (arch prac training	Number	of weeks pe	r semester
		Ч	cr	Examination	Cı	Course project	7	lecture	Laboratory work	Practical classes	3 2	Practical training	Research practical training	17	17	10
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
			1. REC	GULATO	RY A	CADE	EMIC D	ISCIP	LINES	S				•	•	
		1.1.	Cycle	of humai	nitaria	n and	socio-e	conomi	ic train							
1	Philosophy of science	54	1,5	exam			34	17		17	20			2		
2	Foreign language for business	36	1		cr.		17	17			19			1		
Sun	n per cycle	90	2,5	1	1	0	51	34	0	17	39	0	0	3	0	0
			1.2. 0	ycle of n	aturall	y (fun	damen	tal) tra	ining*							
1	Automation of technical systems of machines for forestry	108	3		cr.		34	17	17		74			2		
2	Applied computer technologies of machines for forestry	108	3		cr.		51	17	34		57				2	
3	Measuring devices and methods of measurement	126	3,5		cr.		20	10	10		106					2
4	Reliability of machines for forestry	108	3		cr.		34	17	17		74			2		
5	Labour protection in forest complex	36	1	exam			17	17			19				1	
Sun	ı per cycle	486	13,5	1	4	0	156	78	78	0	330	0	0	4	3	2
				ycle of pr	ofessio	nal an	d prac			*						
1	Computer design of equipment for forestry	180	5	exam	cr.	36	68	34	34		76			2	2	
2	Theory and designing of machines for forestry	144	4	exam			68	34	34		76			4		
3	Mechatronic systems of machines for forestry	108	3		cr.		34	17	17		74				2	
4	Theory of the technical systems	108	3		cr.		20	10	10		88					2
Sun	n per cycle	540	15	2	3	36	190	95	95	0	314	0	0	6	4	2
				LECTIV												
				2.1. Disci												
	T			le natura	lly scie	ntific		mental) train		1		1	T -	1	
1	Foreign language	54	1,5	exam			34			34	20			2		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	Engineering to using of life resources	108	3		cr.		34	17	17		74				2	
3	Patenting and copyrights	72	2		cr.		17	17			55			1		
4	International standardization and certification to	54	1,5		044		17	17			37			1		
4	technologies, raw-materials, and end products	34	1,3		cr.		1 /	1 /			37			1		
5	History of techniques	36	1		cr.		17	17			19			1		
Sum	ı per cycle	324	9	1	4	0	119	68	17	34	205	0	0	5	2	0
				Produ												
	Master's program			ig machir	ies, des	signing	g and te			niques		st com	plex"			
1	Testing of machines for forestry	108	3	exam			20	10	10		88					2
2	Theory and designing of vehicles for forestry	108	3		cr.		20	10	10		88					2
3	Dynamics of machines for forestry	144	4	exam		36	20	10	10		88					2
4	Designing of machines for forestry	108	3	exam			34	17	17		74				2	
5	Designing of wood processing equipment	108	3	exam			51	17	34		57				3	
Sum	ı per cycle	576	16	4	1	36	145	64	81	0	395	0	0	0	5	6
							discipl									
				am "Mecl	hatron	ic Syst		Machi		forest						
1	Testing and certification of machines for forestry	108	3	exam			20	10	10		88					2
2	Experimental methods of researchers to machines for forestry	108	3		cr.		20	10	10		88					2
3	Dynamics of technical systems	108	3	exam		36	20	10	10		52					2
4	Optimization of technical systems for forestry	72	2	exam			34	17	17		38				2	
5	Reliability of technical systems for forestry	108	3	exam		36	34	17	17		38				2	
6	Optimization of designs for woodworking equipment	108	3	exam			34	17	17		74				2	
Sum	per cycle	612	17	5	1	72	162	81	81	0	378	0	0	0	6	6
		•		2.2. Disc	iplines	chose	n by st	udents	•		•				•	
		2.2.1	. Cycle	professio	onal di	sciplin	es and	practio	cal trai	ining*						
1	Theory of mechatronic systems of machines for forestry	108	3		cr.		34	17	17		74				2	
2	Nanotechnology	108	3		cr.		34	17	17		74				2	
Sum	per cycle	216	6		1	0	68	34	34	0	148	0	0	0	4	0
				Produ	ction o	riente	d discip	lines								
	Master's progran	n "Cons	structin	ng machir	ies, des	signing	g and te	esting o	of techi	niques	for fore	st com	plex"			
1	Mechanics of materials and timbers	108	3		cr.		20	10	10		88					2
2	Methods of designing machines for forestry	108	3	exam			20	10	10		88					2
3	Design of vibration machines for forestry	144	4	exam			20	10	10		124					2
4	Designing of technical systems for forestry	108	3		cr.		20	10	10		88					2
Sum	ı per cycle	468	13	2	2	0	80	40	40	0	388	0	0	0	0	8

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
				Resea	rch or	iented	discipl	lines								
	N	Iaster's	progra	am "Mecl	hatron	ic Syst	ems of	Machi	nes for	fores	try"					
1	Mathematical modeling of technical systems for forestry	108	3		cr.		20	10	10		88					2
2	Newest design methods of machines for forestry	108	3	exam			20	10	10		88					2
3	Vibration processes in machines for forestry	108	3	exam			20	10	10		88					2
4	Mechanics of contact interaction of machines with timber	108	3		cr.		20	10	10		88					2
Sum	ı per cycle	432	12	2	2	0	80	40	40	0	352	0	0	0	0	8
Sum	per selected components	2700	75	11	16	72	809	413	345	51	1819	0	0	18	18	18
Prac	ctical trainings	360	10									216	144			
Prep	paring and defense Master's thesis	180	5													
Nun	nber of course projects					3										
Nun	nber of credits				16											
Nun	nber of examinations			11												
Sum	n per program	3240	90	11	16	72	809	413	345	51	1819	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. DEGREE REQUIREMENTS

Disciplinary areas	Hours	Credits	%
1. Regulatory academic			
disciplines			
1.1. Cycle of humanitarian and	90	2,5	2,8
socio-economic training*	70	2,3	2,0
1.2. Cycle of naturally	486	13,5	15
(fundamental) training*	400	13,3	13
1.3. Cycle of professional and	540	15	16,7
practical training*	340	13	10,7
2. Elective academic disciplines			
2.1. Disciplines chosen by			
University			
2.1.1. Cycle naturally scientific			
(fundamental) training*			
Production oriented disciplines	900	25	27,7
Research oriented disciplines	936	26	28,8
2.2. Disciplines chosen by			
students			
2.2.1. Cycle professional			
disciplines and practical			
training*			
Production oriented disciplines	684	19	21,1
Research oriented disciplines	648	18	20
3. Other	540	15	16,7
Sum per program	3240	90	100

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

IV. TIME SCHEDULE, WEEKS

Year of study	Auditoriu m classes	Exams	Practical training	Preparation of Master Theses	State certificatio n	Breaks	Sum
1	34	4	10	-	-	8	56
2	10	2	-	4	1	-	17
Sum per progra m	44	6	10	4	1	8	73

V. PRACTICAL TRAINING

№	Practical training	Semester	Hours	Credits	Number of weeks
1	Design oriented practical training	1	144	4	4
2	Production oriented practical training	2	216	6	6

VI. COURSE WORK AND PROJECT

№	Name of educational discipline	Hours	Credits	Course work	Course project
1	Reliability of technical systems for forestry	36	1	-	1
2	Computer design of equipment for forestry	36	1	-	1
3	Dynamics of machines for forestry	36	1	-	1

VII. STATE CERTIFICATION

№	State certification	Hours	Credits	Number of weeks
1	Preparation and defence of Master Theses	180	5	5