

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

**CURRICULUM
Masters training since 2013**

Educational and qualification level	“Master”
field of knowledge	0501“Informatics and Computation Technics”
Speciality	8.05010101 “Information Control Systems and Technology”
Specialisation	Production
Master's Program	“Telecommunication support of information management systems”, “Information Control Systems and Technology in agro-industrial and environmental field”
Specialisation	Research
Master's Program	“Distributed Information Systems”
Mode of study	daily
Term of studying	1,5 year
Grade qualification	Analyst of computer systems

	Implement a master's program
ERI	Ukrainian Education and Research Institute of Dataware and Telecommunication Support of Agroindustrial and Nature Conservative Branches of Economy
Faculty	Computer Sciences and Economic Cybernetics
Department	Computer Sciences

II. CURRICULUM

№	Name of the discipline	Volume		Forms of knowledge control (per semester)			Lecture classes					Practical training		Distribution of weekly hours per semester courses		
		Hours	Credits	Exam	Test	Course work (project)	Total number	lecture	laboratory	practical	Individual work	Practical training	Research practice	1 year		2 year
														1sem.	2sem.	3sem.
		Number of weeks in a semester													16	18
1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18
1. COMPULSORY ACADEMIC DISCIPLINES																
1.1. The cycle of humanitarian and social-economic training*																
1	The Philosophy of Science and Innovation Development	72	2	1			32	16		16	40			2		
2	Intellectual Property and Patenting	72	2		2		32	16		16	40			2		
3	Business Foreign Language	72	2	1			32			32	40			2		
Total in the cycle		216	6				96	32	0	64	120		0	6	0	0
1.2. The cycle of mathematic and environmental-scientific training*																
1	Economic efficiency of scientific developments	108	3		3		20	10		10	88					2
2	Mathematical methods in artificial intelligence systems	108	3	2			36	18	18		72				2	
3	Decision theory	108	3		1		32	16	16		76			2		
4	Civil protection	36	1		2		18		18		18				1	
Total in the cycle		360	10	2	6	0	106	44	52	10	254	0	0	2	3	2
1.3. The cycle of professional training*																
1	Project Management	108	3	1			32	16	16		76			2		
2	Technologies of Distributed Systems and Computing	108	3	2		30	32	16	16		76			2		
3	Standardization and certification of information technology	108	3	3			20	10	10		88					2
4	Reliability of functioning computer systems	108	3	3			20	10	10		88					2
5	Design of Information Control and intellectual systems	108	3	1		30	36	18	18		72				2	
6	Modeling and forecasting in environmental management	108	3	2			32	16	16		76			2		
7	Object modeling and design of complex systems	108	3	2			36	18	18		72				2	
8	Civil Protection	72	2	3			10	10			62					1
Total in the cycle		828	23			60	218	114	104	0	610		0	6	4	5
Total in normative academic component		1404	39				66	420	190	156	74	984	0	14	7	7

1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	
2. OPTIONAL ACADEMIC DICCIPLINES																	
2.1. Chosen by the university courses																	
1	Algorithms and Data Structures	108	3		2		36	18		18	72				2		
2	Theory of computing	108	3		1		32	16	16		76			2			
3	Organization of data warehouse	108	3		1		32	16	16		76			2			
4	Intellectual analysis of data	108	3		1		36	18	18		72				2		
5	Global informational resources	72	2		1		18		18		54				1		
6	Security Information and Communication Systems	108	3		2		36	18	18		72				2		
7	Development of WEB applications	108	3		3		30	10	20		78					3	
8	Robototechnical control systems	108	3		3		20	10	10		88					2	
9	Geographic information systems and technology in environmental management	108	3	3			30	10	20		78					3	
Total selected by the university component		936	26				0	270	116	136	18	666		0	4	7	8
2.2. Chosen by students courses																	
Specialization “Distributed Information Systems” (research specialization)																	
1	Principles of Distributed and Network Programming	108	3	2			36	18	18		72				2		
2	Methods and Information Technologies of risk assessment	108	3		2		36	18	18		72				2		
3	GRID-technologies	108	3	3		30	30	10	20		78					3	
Specialization “Telecommunications for Information Control Systems” (production specialization)																	
1	Global Information Infrastructure	108	3		2		36	18	18		72				2		
2	Telecommunication and Network Technology	108	3	2			36	18	18		72				2		
3	Mobile Computer Integrated Systems	108	3	3		30	30	10	20		78					3	
Specialization “Information Control Systems and Technologies in agriculture and environmental protection spheres” (production specialization)																	
1	DataMining technologies	108	3		2		36	18	18		72				2		
2	Management of information systems in agriculture	108	3	2			36	18	18		72				2		
3	Patterns of object-oriented modeling	108	3	3		30	30	10	20		78					3	
Total selected by the student		324	9			30	102	46	56	0	222		0	0	4	3	
Total with selective component		1260	35	0	0	30	372	162	192	18	888		0	4	11	11	
Number of exams				x	13	x								4	5	4	
Number of tests				x	x	13								5	4	4	
Number of course projects and works				3	x	x								1	1	1	
Production practice		144	4				0					144					
Practice Research on the topic of master's thesis		216	6				0						216				
Preparation and master thesis		216	6														
Total in specialty		3240	90	0	0	96	792	352	348	92	1872	144	216	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

The disciplines	Hours	Credits	%
1. Compulsory academic disciplines	1404	39	43,3
1.1. The cycle of humanitarian and socio-economic training*	216	6	6,7
1.2. The cycle of mathematic and environmental-scientific training*	360	10	11,1
1.3. The cycle of professional training*	828	23	25,6
2. Optional academic disciplines	1260	35	38,9
2.1. Chosen by the university courses	936	26	28,9
2.2. Chosen by students courses	324	9	10,0
3. Other learning	576	16	17,8
Total in specialty	3240	90	100,0

IV. SUMMARY OF TIME BUDGET, WEEKS

Year of study	Theoretical study	Examination session	Practical training	Training of master's thesis	State certification	Holiday	Total
1	34	4	10			8	56
2	10	2		4	1		17
Total in specialty	44	6	10	4	1	8	73

V. PRACTICAL TRAINING

№	Type of practice	Semester	Hours	Credits	Number of weeks
1	Production of ICST	1	144	4	4
2	Research	1	216	6	6

VI. COURSE WORK & PROJECTS

№	Discipline	Hours	Credits	Course work
1	Technologies of Distributed Systems and Computing	36	1	+
2	Design of Information Control and intellectual systems	36	1	+

VII. STATE CERTIFICATION

№	Component of certification	Hours	Credits	Number of weeks
1	Protection of master's thesis	72	2	2