educational programme code	NAME OF THE COURSE	examinations	tests	projects	papers	final test paper	final paper of the course	ECTS credits	total academic hours	total	lectures	practical classes	laboratory classes	students' individual work	1	2	3	4	5	6	7	8
															15	17	15	17	15	17	15	12

1. Compulsory part

educational programme code	NAME OF THE COURSE	examinations	tests	projects	papers	final test paper	final paper of the course	ECTS credits	total academic hours	total	lectures	practical classes	laboratory classes	students' individual work	1	2	3	4	5	6	7	8
CC 1	Foreign language for professional purposes	2	1					7,0	210	96		96		114	3	3						
CC 2	Ukrainian historical and humanitarian studies		1					3,0	90	45	15	30		45	3							
CC 3	Theory and practice of law enforcement		2					3,0	90	51	17	34		39		3						
CC 4	Philosophy	4						4,0	120	51	17	34		69			3					
CC 5	Life safety and basics of labor protection		6d					4,0	120	51	17	34		69							3	
CC 6	Higher mathematics	2	1d					9,0	270	113	49	64		157	3	4						
CC 7	Physics		1d					4,0	120	45	15	15	15	75	3							
CC 8	Electronic document management systems	1					1	5,0	150	45	15	30		105	3							
CC 9	Programming	2	1d				1	9,0	270	128	64	64		142	4	4						
CC 10	Computer graphics	1					1	5,0	150	45	15	30		105	3							
CC 11	Theory of algorithms		2d				2	5,0	150	51	17	34		99		3						
CC 12	Web design	2					2	6,0	180	68	34	34		112		4						
CC 13	Electrical engineering and electronics		3d					4,0	120	60	30	15	15	60			4					
CC 14	Probability theory, probability processes and mathematical statistics	3					3	5,0	150	60	30	30		90			4					
CC 15	Optimization methods and models	3					3	5,0	150	60	15	45		90			4					
CC 16	Computer systems architecture	3					3	5,0	150	60	15	30	15	90			4					
CC 17	Object-oriented programming	3						5,0	150	60	30	30		90			4					
CC 18	Course work "Object-oriented programming"				3			2,0	60					60								
CC 19	Applied problems of discrete analysis	4					4	5,0	150	51	17	34		99				3				
CC 20	Business planning in project activities	4						5,0	150	68	34	34		82				4				
CC 21	Organization of databases and knowledge bases		4d					5,0	150	68	34	34		82				4				
CC 22	Course work "Organization of databases and knowledge bases"				4			2,0	60					60								
CC 23	Operations Research	4					4	5,0	150	68	34	34		82				4				

educational programme code	NAME OF THE COURSE	examinations	tests	projects	papers	final test paper	final paper of the course	ECTS credits	total academic hours	total	lectures	practical classes	laboratory classes	students' individual work	1 (15)	2 (17)	3 (15)	4 (17)	5 (15)	6 (17)	7 (15)	8 (12)
CC 24	Computer aided design technologies	5					5	5,0	150	60	30	30		90					4			
CC 25	IT proect management		5d					4,0	120	45	15	30		75					4			
CC 26	Computer networks		5d					4,0	120	60	30	30		60					3			
CC 27	Numerical Methods		6d					4,0	120	68	34	34		52						4		
CC 28	Methods and means of decision making	6					6	5,0	150	68	34	34		82						4		
CC 29	Design of information systems and software products		6d					4,0	120	68	34	34		52						4		
CC 30	Course work "Design of information systems and software products"				6			2,0	60					60								
CC 31	Information systems security	7						5,0	150	75	30	45		75							5	
CC 32	Course work "Information Systems Security"				7			2,0	60					60								
CC 33	Development of client and server web applications (Front-end / Back-end)	7					7	5,0	150	75	30	45		75					4		5	
CC 34	Automation of management of complex technical systems of municipal economy		7d					4,0	120	60	30	30		60							4	
CC 35	Data mining	8					8	5,0	150	72	36	36		78								6
CC 36	Educational practice		2d					4,0	120					120								
CC 37	Internship		6d					3,0	90					90								
CC 38	Pre-diploma practice		8d					3,0	90					90								
CC 39	Qualification work							9,0	270					270								
Total for compulsory part 1		19	18		4		14	180	5400	1995	817	1133	45	3405	19	18	23	15	15	15	14	6

2. Optional part

Block O1

educational programme code	NAME OF THE COURSE	examinations	tests	projects	papers	final test paper	final paper of the course	ECTS credits	total academic hours	total	lectures	practical classes	laboratory classes	students' individual work	1	2	3	4	5	6	7	8
OC 1	Business foreign language: written communication		3d					4,0	120	45		45		75			3					
OC 2	Commercial law		3d					4,0	120	45	15	30		75			3					
OC 3	The city as a social system		3d					4,0	120	45	15	30		75			3					
OC 4	Politology		3d					4,0	120	45	15	30		75			3					
OC 5	Ethics and aesthetics		3d					4,0	120	45	15	30		75			3					
OC 6	Language training (for foreign citizens)		3d					4,0	120	45		45		75			3					

educational programme code	NAME OF THE COURSE	examinations	tests	projects	papers	final test paper	final paper of the course	ECTS credits	total academic hours	total	lectures	practical classes	laboratory classes	students´ individual work	1 (15)	2 (17)	3 (15)	4 (17)	5 (15)	6 (17)	7 (15)	8 (12)
OC 7	Foreign language: oral communication		4d					4,0	120	51		51		69				3				
OC 8	Labor Law		4d					4,0	120	51	17	34		69				3				
OC 9	Logic		4d					4,0	120	51	17	34		69				3				
OC 10	Culturology		4d					4,0	120	51	17	34		69				3				
OC 11	Professional rhetoric		4d					4,0	120	51	17	34		69				3				
OC 12	Language training (for foreign citizens)		4d					4,0	120	51		51		69				3				
	Total for block O		**2**					**8,0**	**240**	**96**	**32**	**64**		**144**			**3**	**3**				
	Block C1 (Certificate program - Information systems of automated control)																					
OC C1.1	Cloud technologies and grid computing		5d					4,0	120	45	15	30		75					3			
OC C1.2	Web programming		6d					4,0	120	51	17	34		69						3		
OC C1.3	Information security technologies		7d					4,0	120	45	15	30		75							3	
	Total for block C1		**3**					**12,0**	**360**	**141**	**47**	**94**		**219**					**3**	**3**	**3**	
	Block C2 (Certificate program - Start Up Project Management)																					
OC C2.1	Project management of business processes of the Start UP company		5d					4,0	120	45	15	30		75					3			
OC C2.2	Simulation modeling of Start UP projects		6d					4,0	120	51	17	34		69						3		
OC C2.3	Designing business architecture in the Business Studio system		7d					4,0	120	45	15	30		75							3	
	Total for block C2		**3**					**12,0**	**360**	**141**	**47**	**94**		**219**					**3**	**3**	**3**	
	Block C3 (Certificate program - Foreign language)																					
OC C3.1	Foreign language (special course)		5d					4,0	120	45		45		75					3			
OC C3.2	Foreign language (special course)		6d					4,0	120	51		51		69						3		
OC C3.3	Foreign language (special course)		7d					4,0	120	45		45		75							3	
	Total for block C3		**3**					**12,0**	**360**	**141**		**141**		**219**					**3**	**3**	**3**	
	Block C4 (Certificate program - Language training for foreign citizens)																					
OC C4.1	Language training (for foreign citizens)		5d					4,0	120	45		45		75					3			
OC C4.2	Language training (for foreign citizens)		6d					4,0	120	51		51		69						3		
OC C4.3	Language training (for foreign citizens)		7d					4,0	120	45		45		75							3	

educational programme code	NAME OF THE COURSE	examinations	tests	projects	papers	final test paper	final paper of the course	ECTS credits	total academic hours	total	lectures	practical classes	laboratory classes	students' individual work	1 (15)	2 (17)	3 (15)	4 (17)	5 (15)	6 (17)	7 (15)	8 (12)
	Total for block C4							12,0	360	141				219					3	3	3	
	Block P1																					
OC P1.1	Spatial data infrastructure	5					5	5,0	150	60	30	30		90					4			
OC P1.2	Dynamic programming languages	5						6,0	180	75	30	45		105					5			
OC P1.3	Course work "Dynamic programming languages"				5			2,0	60					60								
OC P1.4	State and regional government and e-government		6d					4,0	120	68	34	34		52						4		
OC P1.5	Smart home and Internet of Things	7					7	5,0	150	45	15	30		105							3	
OC P1.6	Automated design systems	7					7	5,0	150	45	15	30		105							3	
OC P1.7	Project management		8d					4,0	120	72	36	36		48								6
OC P1.8	Software testing technologies		8д					4,0	120	60	24	36		60								5
OC P1.9	Mobile device programming	8					8	5,0	150	60	24	36		90								5
	Total for block P1	5	3		2		4	40,0	1200	485	208	277		715					9	4	6	16
	Block P2																					
OC P2.1	E-commerce information systems	5					5	5	150	60	30	30		90					4			
OC P2.2	Information support of project management		5д					6	180	75	30	45		105					5			
OC P2.3	Course work "Information support of project management"				5			2	60					60								
OC P2.4	Investment analysis of IT projects	6d						4	120	68	34	34		52						4		
OC P2.5	Economic data processing technologies	7					7	5,0	150	45	15	30		105							3	
OC P2.6	City projects and programs	8	7					8,0	240	105	39	66		165							3	5
OC P2.7	"Economics and Business"		8д				8	5	150	60	24	36		60								5
OC P2.8	Technologies of distributed systems and parallel computing	8d					8	5	150	72	36	36		48								6
	Total for block P2	5	3		2		4	40,0	1200	485	208	277		685					9	4	6	16
	Total for sample part 2	5	8		2		4	60	1800	722	287	435		1078			3	3	12	7	9	16
	Total according to the curriculum	24	26		6		18	240	7200	2717	1104	1568	45	4483	19	18	26	18	27	22	23	22
	3.Non-credit disciplines																					
	Physical Education		1-4							128		128			2	2	2	2				

educational programme code	NAME OF THE COURSE	Distribution by semesters						ECTS credits	Number of hours						classroom hours per week by semesters							
		examinations	tests	course		final test paper	final paper of the course		total academic hours	classroom hours				students' individual work	I course		II course		III course		IV course	
				projects	papers					total	including				semesters							
											lectures	practical classes	laboratory classes		1	2	3	4	5	6	7	8
															number of weeks per semesters							
															15	17	15	17	15	17	15	12
	Number of hours per week														22	21	23	21	23	22	23	22
	Number of exams														3	4	3	4	4	4	4	3
	Number of tests														4	3	3	3	2	3	2	2
	Number of course projects																					
	Number of course papers																1	1	1	1	1	
	Number of final test paper																					
	Number of final paper of the course														3	2	2	2	2	2	3	2
	Number of ECTS credits														30,0	30,0	30,0	30,0	30,0	30,0	30,0	30,0