



MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

Working CURRICULUM

for 2024/ 2025 studying year, enrollment 2021

APPROVED

vice-rector for teaching work

Anatolii MELNYCHENKO

2024 p.

Speciality **151 Automation and Computer-Integrated Technologies**
Educational Program **Automation hardware and software**
Level **Bachelor**
Graduation Department **Automation hardware and software Department**

Institute **Faculty of Chemical Engineering**
Form of study **Full-time**
Study duration **3yrs. 10mth (4 e.v.)**
Qualification **Bachelor of Automation and Computer-Integrated Technologies**

Code	Subject	Department	Number of students		Subject amount		Hours								Student's self-study hours	Control measures and their distribution by semesters							Hours distribution by week, courses and semesters									
			Budget	Contract	ECTS	Hours	Total	including						Exam		Final test	MCW	Course project	Course Work	CGW, CW, GW	HCW	Abstracts	4rd year			5th Semester			6th Semester			
								according to Study Plan	Ind. Work with student	according to Study Plan	Ind. Work with student	according to Study Plan	Ind. Work with student										according to Study Plan	Ind. Work with student	according to Study Plan	Ind. Work with student	18 weeks including			9 weeks including		
			Lectures	Practice	Lab works	Total	Lectures							Practices		Lab works	Total	Lectures	Practices	Lab works												
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	
1. NORMATIVE educational components																																
1.1. General training cycle																																
1	Foreign Language for Professional Purposes. Part 2	EE2	65	12	3	90	54							0	36	8		7								2		2				
2	Economics and Production Organization	IE	65	12	4	120	72	36							0	48		7	7							4	2	2				
3	Labor Safety and Civil Defence	LSCP	65	12	4	120	72	36			28			8	0	48		7	7							4	2	1.5	0.5			
TOTAL of General Educational Components			11	330	198	72	0	118	0	8	0	0	0	132	8	14	21	0	0	0	0	14	0	10	4	5,5	0,5	2	0	2	0	
1.2. Vocational training cycle																																
4	Automatic Control Theory. Part 2. Modern Control Theory	AH&S	65	12	5	150	72	36						0	78	7		7								4	2		2			
5	Course Work in Automatic Control Theory	AH&S	65	12	1	30	0							0	30		7			7												
6	Automation of Technological Processes and Production	AH&S	65	12	6,5	195	90	36		36				0	105	7		7								5	2	2	1			
7	Automation of Technological Processes and Production. Courswork	AH&S	65	12	1	30	0							0	30		8			8												
8	Human-Machine Systems	AH&S	65	12	3,5	105	54	18		18				0	51	8		8										3	1	1	1	
9	Industrial Practice	AH&S	65	12	6	180	0							0	180																	
10	Diploma Design	AH&S	65	12	6	180	0							0	180																	
TOTAL of Professional Educational Components			29	870	216	90	0	54	0	72	0	0	0	654											9	4	2	3	3	1	1	1
2. Elective educational components																																
11	Typical technological control objects	AH&S			4	120	54	18		36				0	66		7	7								3	1	2				
12	Operations research in control systems	AH&S			4	120	54	18		36				0	66		7	7								3	1	2				
13	Modeling of chemical and technological processes	AH&S			4	120	54	18		36				0	66		7	7								3	1	2				
14	Optimization methods and the basis of finding optimal solutions	AH&S			4	120	54	18		36				0	66		7	7								3	1	2				
15	Software for modeling control systems	AH&S			4	120	54	18		36				0	66		7	7								3	1	2				
16	computer-integrated technological complexes	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
17	Fundamentals of complex systems and automation systems reliability	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
18	Industrial Internet of Things	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
19	Methods of technological systems structures synthesis	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
20	Optimization of control systems	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
21	Neural networks in automated systems	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
22	Optimization of technological processes	AH&S			4	120	54	18		36				0	66		8	8											6	2	4	
TOTAL of Elective Educational Components			36	1080	486	162	0	324	0	0	0	0	0	594	5	5					5			15	5	10	0	18	6	12	0	
TOTAL of Educational Components			76	2280	900	324	0	496	0	80	0	0	0	1380	8	19	26	0	0	0	19	0	0	34	13	17,5	3,5	23	7	15	0	
General Military Science, Tactical and Special Training in 5 - 8 semesters according to separated study plan			Amount		Exams										4		2		2													
					Final Tests										10		5		5													
					Modular Control Works (MCW)										11		7		4													
					Course projects										2		1		1													
					Course works										0																	
					CGW, CW, GW										0																	
					Home Control Works (HCW)										8		4		4													
					Abstracts										0																	

Practices			
Practice type	Period	Total Weeks	Semester
Pre-diploma internship	from April, 17th, 2023 till May, 21th, 2023	5	8

Form of Final Graduation	Period
Graduation Examination of qualification work	from June, 19th, 2023 till June, 30th, 2023

Hours distribution for preparing and representation results of qualification work (Diploma)						
Type of work	Normative per student	Department	Students		Total hours	
			B	C	B	C
Governance	19	DFMM	39	2	741	38
Consultation	1	DIT	39	2	39	2
Consultation	1	DCDS	39	2	39	2
Side review	2	DAMT	39	2	78	4
Examination	2	DFMM	39	2	78	4
Total	25		Total hours		975	50

Approved by Faculty Academic Council, Meeting protocol № 5 from May 27, 2024

Head of the Department

Vitalii TSAPAR

Dean of FCE

Yevgen PANOV