



**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 2022

**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			Lab works according to Study Plan	Lab works with student	Lab works with student	Exam		Final test	MCW	Course project	Course Work	CGW, CW, GW	HCW	Abstracts	3rd year			5th Semester			6th Semester						
								Lectures according to Study Plan	Practice according to Study	Incl. Work with student													LA-01 (B-20, C-1); LA-02 (B-16, C-1); LA-03 (B-18, C-1)	18 weeks including			18 weeks including								
			Total	Lectures	Practices	Lab works	Total	Lectures	Practices	Lab works	Total	Lectures	Practices	Lab works		Total	Lectures	Practices	Lab works	Total	Lectures	Practices	Lab works	Total	Lectures	Practices	Lab works								
<b>1. NORMATIVE educational components</b>																																			
<b>1.1. General training cycle</b>																																			
1	Information Security	IBAR	54	4	2	60	36	18						0	24		5	5										2	1	1					
2	Foreign Language for Professional Purposes. Part 1	EE2	54	4	3	90	72							72														2		2			2		
<b>TOTAL of General Educational Components</b>			<b>5</b>	<b>150</b>	<b>108</b>	<b>18</b>	<b>0</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>11</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	
<b>1.2. Vocational training cycle</b>																																			
3	Computer Modeling of Processes and Systems	AH&S	54	4	5	150	72	36						18			0	78	5		5							4	2	1	1				
4	Design of Automation Systems. Course Project	AH&S	54	4	1.5	45	0										0	45	5			5													
5	Industrial Controllers	AH&S	54	4	6.5	195	90	36						36			18	105	6		6									5	2	2	1		
6	Industrial Controllers. Coursework	AH&S	54	4	1	30	0										0	30	6		6														
7	Automatic Control Theory. Part 1. Classical Control Theory	AH&S	54	4	5	150	72	36						36			0	78	6		6			6					4	2		2			
<b>TOTAL of Professional Educational Components</b>			<b>19</b>	<b>570</b>	<b>234</b>	<b>108</b>	<b>0</b>	<b>54</b>	<b>0</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>336</b>														<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>4</b>	<b>2</b>	<b>3</b>	
<b>2. Elective educational components</b>																																			
8	Means and methods of control system mounting	AH&S	24	1	4	120	54	18						36			0	66	6	6												3	1	2	
9	Machine vision basics	AH&S	21	1	4	120	54	18						36			0	66	6	6													3	1	2
10	Chemical production equipment	MACPP	14	1	4	120	54	18						36			0	66	6	6													3	1	2
11	Pulp and paper production equipment	MACPP	23	1	4	120	54	18						36			0	66	6	6													3	1	2
12	Algorithms and data structures	AH&S	18	1	4	120	54	18						36			0	66	6	6													3	1	2
13	Integrated automated control systems	AH&S	22	3	4	120	54	18						36			0	66	6	6													3	1	2
14	Specialized tasks of system analysis	AH&S	21	3	4	120	54	18						36			0	66	6	6													3	1	2
15	Parametric modeling of technological processes	AH&S	24	3	4	120	54	18						36			0	66	6	6													3	1	2
16	Systems and means of pneumatic automation	AH&S	24	2	4	120	54	18						36			0	66	5	5			5					3	1	2					
17	Mechanical principles of robotics	Me	20	1	4	120	54	18						36			0	66	5	5			5					3	1	2					
18	Software development technologies	AH&S	24	1	4	120	54	18						36			0	66	5	5			5					3	1	2					
19	Infographics and data visualization	AH&S	42	3	4	120	54	18						36			0	66	5	5			5					3	1	2					
20	Theoretical foundations of heating technology	CPSMB	11	2	4	120	54	18						36			0	66	5	5			5					3	1	2					
21	Control objects in plant polymers technology	ETPP	24	0	4	120	54	18						36			0	66	5	5			5					3	1	2					
22	Industrial data transmission networks	AH&S	22	2	4	120	54	18						36			0	66	5	5			5					3	1	2					
23	Control objects in chemical technology	TISW	18	1	4	120	54	18						36			0	66	5	5			5					3	1	2					
24	Special mathematical methods	AH&S	17	2	4	120	54	18						36			0	66	5	5			5					3	1	2					
25	Data exchange networks	AH&S	23	2	4	120	54	18						36			0	66	5	5			5					3	1	2					
26	Mathematical software and their application	AH&S	22	2	4	120	54	18						36			0	66	5	5			5					3	1	2					
27	Fundamentals of designing computer-integrated technological complexes	AH&S	26	2	4	120	54	18						36			0	66	6	6			6								3	1	2		
28	Information technologies of data analysis	AH&S	23	1	4	120	54	18						36			0	66	6	6			6								3	1	2		
29	Experimental studies of technological objects	AH&S	23	3	4	120	54	18						36			0	66	5	5			5					3	1	2					
<b>TOTAL of Elective Educational Components</b>			<b>36</b>	<b>1080</b>	<b>486</b>	<b>162</b>	<b>0</b>	<b>324</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>594</b>	<b>9</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>23</b>	<b>8</b>	<b>14</b>	<b>1</b>	<b>23</b>	<b>8</b>	<b>14</b>	<b>1</b>	<b>23</b>	<b>8</b>	<b>12</b>	<b>3</b>	<b>0</b>
<b>TOTAL of Educational Components</b>			<b>60</b>	<b>1800</b>	<b>828</b>	<b>288</b>	<b>0</b>	<b>468</b>	<b>0</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>972</b>	<b>0</b>	<b>20</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>23</b>	<b>8</b>	<b>14</b>	<b>1</b>	<b>23</b>	<b>8</b>	<b>14</b>	<b>1</b>	<b>23</b>	<b>8</b>	<b>12</b>	<b>3</b>	<b>0</b>
General Military Science, Tactical and Special Training in 5 - 8 semesters according to separated study plan			Amount			Exams																													
						Final Tests													3																
						Final Tests													13																
						Modular Control Works (MCW)													14																
						Course projects													1																
						Course works													1																
CGW, CW, GW													1																						
Home Control Works (HCW)													9																						
Abstracts													0																						

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

Head of the Department \_\_\_\_\_ Vitalii TSAPAR

Dean of FCE \_\_\_\_\_ Yevgen PANOVA