



**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**  
**National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"**  
**CURRICULUM**  
 (Enrolment 2021)

**APPROVED**  
 by Head of Academic Council  
 Igor Sikorsky Kyiv Polytechnic

Level Master

Form of study full-time  
 (full-time, part-time)

Specialty Automation and Computer Integrated Technologies  
 Education and Professional program  
Automation Hardware and Software

Faculty of Chemical Engineering  
 Qualification Master in Automation and Computer-Integrated Technologies

Mykhaylo ILCHENKO  
 2021

Graduation Department Automation Hardware and Software Department

Study duration 1 year 4 months  
 Base level Bachelor degree

**I. Schedule of educational process**

YEAR	September				October					November					December				January					February				March					April					May					June				July				August			
	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	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
I																																																						
II	P	P	P	P	P	P	P	P	R	R	R	R	R	R	R	R	R	R	R	A	A																																	

Symbols:   Learning period    E Examination    P Practice    R Research    A Assessment    H Holiday

**II. Summary table of time budget (Weeks)**

YEAR	Learning period	Examination	Practice	Assessment	Research	Holiday	Total
I	36	4				12	52
II			8	2	12		18

**III. Practice**

Type of practice	YEAR	Weeks
Practice	2	8

**IV. Graduates assessment**

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
Master Thesis	Graduation project	2

**V. Plan of Educational process**

Code	Educational Components	Distribution for terms (semesters)				ECTS Credits	Number of hours				
		Exams	Final tests	Individual task	Module test		Total	Lectures/practical lessons			Self-study
								Lectures	Practical	Laboratory	
1	2	3	4	5	6	7	8	9	10	11	12
<b>1. Compulsory educational components</b>											
<b>1.1. General training cycle</b>											
ZO 1	Modern automation control theory	1			1	4	120	36		18	66
ZO 2	Intellectual Property and Patent Science		1		1	3	90	36	18		36
ZO 3	Fundamentals of Sustainable Technologies and Engineering		1		1	2	60	18	18		24
ZO 4	Foreign Language Practical Course for Business Communication		2	1	1.3	3	90		72		27
ZO 5	Startup Projects Management		2		2	3	90	18	36		36
<b>Total number of part 1.1</b>		<b>1</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>15</b>	<b>450</b>	<b>108</b>	<b>144</b>	<b>18</b>	<b>189</b>

1.2. Vocational training cycle											
PO 1	Optimal Control Systems	1			1	4	120	36	18		66
PO 2	Course Project in Optimal Control System		1			1.5	45				45
PO 3	Control Systems Design		1	1	1	3.5	105	36	18		51
PO 4	Coursework in Control Systems Design		2			1	30				30
PO 5	Objects and Control Systems Research by Statistical Methods		1	1	1	3.5	105	36	18		51
PO 6	Adaptive and Intelligent Control Systems	1		1	1	5	150	36	36		78
PO 7	Mechatronic Components and Robotic Devices		2		2	3.5	105	36		18	51
<b>Total number of part 1.2</b>		<b>2</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>22</b>	<b>660</b>	<b>180</b>	<b>90</b>	<b>18</b>	<b>372</b>
I.3. Research cycle											
PO 8	Research Work		1,2			4	120	9	36		180
PO 9	Scientific and Research Practice		3			14	420				270
PO 10	Master Thesis Implementation					12	360				510
<b>Total number of part I.3</b>		<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>900</b>	<b>9</b>	<b>36</b>		<b>960</b>
<b>TOTAL IN NORMATIVE educational components</b>		<b>3</b>	<b>12</b>	<b>4</b>	<b>11</b>	<b>67</b>	<b>2010</b>	<b>297</b>	<b>270</b>	<b>36</b>	<b>1521</b>
II. VOCATIONAL TRAINING											
2.1. Vocational training cycle (Optional subjects from Faculty catalogue)											
PV 1	Educational Components #1 from Faculty catalogue	2		2	2	5	150	18	36		96
PV 2	Educational Components #2 from Faculty catalogue	2		2	2	5	150	18	36		96
PV 3	Educational Components #3 from Faculty catalogue	2		2	2	5	150	18	36		96
PV 4	Educational Components #4 from Faculty catalogue		2	2	2	4	120	18	36		66
PV 5	Educational Components #5 from Faculty catalogue		2	2	2	4	120	18	36		66
<b>Total number of part II.1</b>		<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>23</b>	<b>690</b>	<b>90</b>	<b>180</b>		<b>420</b>
<b>TOTAL IN SELECTIVE educational components</b>		<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>23</b>	<b>690</b>	<b>90</b>	<b>180</b>		<b>420</b>
<b>TOTAL</b>		<b>6</b>	<b>14</b>	<b>9</b>	<b>16</b>	<b>90</b>	<b>2700</b>	<b>387</b>	<b>450</b>	<b>36</b>	<b>1941</b>

*Approved by University Academic Council, Meeting protocol № 3 from March 15, 2021*

Head of the Department \_\_\_\_\_ / Prof. Anatoliy Zhuchenko

Dean of the Faculty \_\_\_\_\_ / Prof. Yevgen Panov