



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

(Enrolment 2017)

**APPROVED**  
 by Rector of Igor Sikorsky Kyiv  
 Polytechnic Institute

Level Master

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

Speciality Automation and Computer Integrated Technologies

Faculty of Chemical Technology

Michael Zgurovsky

Specialization Computer-Integrated Technologies of Sustainable  
 Chemical Production Complexes

Qualification Master in Automation and Computer-  
 Integrated Technologies

2017

Profile program Educational and Scientific

Study duration 1 year 9 months

Graduation Department Department of Cybernetics of Chemical Technology Processes

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	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

Symbols:  Learning period  Examination  Practice  Research  Assessment  Holiday

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

YEAR	Learning period	Examination	Practice	Assessment	Research	Holiday	Total
I	36	4			0	12	52
II	18	2	5		12	2	39

**III. Practice**

Type of practice	YEAR	Weeks
Scientific and research	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	Subjects	Distribution for terms (semesters)				ECTS Credits	Number of hours				
		Exams	Final tests	Course projects	Coursework		Total	Lectures/practical lessons			Self-study
								Lectures	Practical	Laboratory	
1	2	3	4	5	6	7	8	9	10	11	12
<b>I. GENERAL TRAINING</b>											
<b>I.1. Basic training (major courses)</b>											
1/I	Patent science and Intellectual Property		1			3	90	36	18		36
2/I	Modern Theory of Automatic Control 1. Applied Automatic Control Theory 2. Synthesis of Control Systems Software	2	1			8	240	36	36	36	132
total number of part I.1		1	2			11	330	72	54	36	168
<b>I.2. Basic training (optional courses)</b>											
3/I	Academic discipline of Sustainable Development Problems		2			2	60	18	18		24
4/I	Academic discipline of Management		2			3	90	18	36		36
5/I	Foreign Language for Specific Purposes		2,3			4,5	135		108		27
6/I	Academic discipline of Pedagogy		3			2	60	30	6		24
total number of part I.3			4			11,5	345	66	168		111
<b>I.3. Science Research (optional courses)</b>											
7/I	Scientific Research 1. Fundamentals of Scientific Research 2. Research		1,3			7,5	225	9	36		180
8/I	Scientific and Research Practice		4			9	270				270
9/I	Master Thesis Implementation					21	630				630
total number of part I.3			3			37,5	1125	9	36		1080
<b>TOTAL IN GENERAL TRAINING</b>		1	9			60	1800	147	258	36	1359
<b>II. VOCATIONAL TRAINING</b>											
<b>II.1. Vocational and practical training (major courses)</b>											
1/vm	System Analysis	1			1	8	240	36	36	36	132
2/vm	Modeling of Energy Saving and Ecological Systems	1				4	120	18	18	18	66
3/vm	Optimization of Complex Technological Systems 1. Optimization of Complex Technological Systems' Methods 2. Optimization of Complex Technological Systems' Applied Problems	2	1			9	270	54	36	45	135
4/vm	Sustainable Automated Production Complexes		2		2	4	120	36		18	66
5/vm	Computer-Integrated Systems of Automatic Control	3				5,5	165	36		36	93
6/vm	Modern Information Technologies	3		3		8	240	36	18	36	150
total number of part II.1		5	2	1	2	38,5	1155	216	108	189	642
<b>II.2. Vocational and practical training (optional courses)</b>											
1/vo	Academic discipline of Modeling Objects and Systems in Industry	1				4	120	27		27	66
2/vo	Academic discipline of Artificial Intelligence	2				5	150	36	18	18	78
3/vo	Academic discipline of Automation Systems' Standardization		2			3	90	18	27		45
4/vo	Academic discipline of Experimental Researches' Problems		3			3,5	105	36	18	18	33
5/vo	Academic discipline of Information Technologies in Scientific Research	3				6	180	36	18	18	108
total number of part II.2		3	2	0	0	21,5	645	153	81	81	330
<b>TOTAL IN VOCATIONAL TRAINING</b>		8	4	1	2	60	1800	369	189	270	972
<b>TOTAL</b>		9	13	1	2	120	3600	516	447	306	2331

Approved by Faculty Academic Council, Meeting protocol №4 from April 25, 2017

Head of the Department \_\_\_\_\_ / Dr. T. Bojko /

Dean of the Faculty \_\_\_\_\_ / Prof. I. Astrelin /