



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

Michael Zgurovsky

2017

Level Master

Speciality 124 System Analysis

Specialization System Analysis and Control

Profile program Educational and Professional

Graduation Department Mathematical Methods for System Analysis

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

Faculty (Institute) Institute for Applied System Analysis

Qualification Systems Analyst

Study duration 1 year 4 months

Base level Bachelor degree

## I. Schedule of educational process

YEAR	September				October				November				December				January				January				March				April				May				June				July				August											
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	A																															

Symbols: **P** 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	8		18

## III. Practice

Type of practice	YEAR	Weeks
Pre-diploma Practice	II	8

## IV. Graduates assessment

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
	Master's Thesis Implementation	II

## 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	Patenting and Intellectual Property		1			3	90	3618		36		
2/I	Decision-Making Support Systems and Methods	1			1	4.5	135	36		18	81	
3/I	Modern Programming Languages		2			4	120	36		18	66	
<b>total number of part I.1</b>		<b>2</b>	<b>1</b>		<b>1</b>	<b>11.5</b>	<b>345</b>	<b>108</b>	<b>18</b>	<b>36</b>	<b>183</b>	
<b>I.2. Basic training (optional courses)</b>												
1/II	Subjects on Sustainable Development Problems		1			2	60	18	18		24	
2/II	Pedagogy Subjects		2			2	60	30	6		24	
3/II	Subjects on Startup Projects Development		2			3	90	18	36		36	
4/II	Workshop on Scientific Communication in Foreign Language		2			3	90		72		18	
<b>total number of part I.3</b>			<b>4</b>			<b>10</b>	<b>300</b>	<b>66</b>	<b>132</b>		<b>102</b>	
<b>I.3. Science Research (optional courses)</b>												
1/III	Fundamentals of Scientific Research		1			2	60	9	18		33	
2/III	Scientific Work on the Topic of Master's Thesis		1			2	60		18		42	
3/III	Pre-diploma Practice		3			14	420				420	
4/III	Master's Thesis Implementation					16	480				480	
<b>total number of part I.3</b>			<b>2</b>			<b>34</b>	<b>1020</b>	<b>9</b>	<b>36</b>		<b>975</b>	
<b>TOTAL IN GENERAL TRAINING</b>		<b>2</b>	<b>7</b>		<b>1</b>	<b>55.5</b>	<b>1665</b>	<b>183</b>	<b>186</b>	<b>36</b>	<b>1260</b>	
<b>II. VOCATIONAL TRAINING</b>												
<b>II.1. Vocational and practical training (major courses)</b>												
1/c	Mathematical Programming	1				4	120	36	18		66	
2/c	Theory of Control and Forecasting in Complex Systems	2			2	6	180	54		18	108	
3/c	Risk Management		2d			3.5	105	36	18		51	
4/c	Making Decisions in Hierarchical Systems		1			2	60	18	18		24	
<b>total number of part II.1</b>		<b>2</b>	<b>2</b>		<b>1</b>	<b>15.5</b>	<b>465</b>	<b>144</b>	<b>54</b>	<b>18</b>	<b>249</b>	
<b>II.2. Vocational and practical training (optional courses)</b>												
1/cb	Introduction to System Mathematics		1d			3	90	36	18		36	
2/cb	Optimum Control Methods	1				4	120	36	18		66	
3/cb	Information Management		2			2.5	75	18	18		39	
4/cb	Dynamic Games Theory		2			3.5	105	36	18		51	
5/cb	Business-Analytics		1			2	60	18	18		24	
6/cb	Decision-Making Methods in Conflict Situations	2				4	120	36		18	66	
<b>total number of part II.2</b>		<b>2</b>	<b>4</b>			<b>19</b>	<b>570</b>	<b>180</b>	<b>90</b>	<b>18</b>	<b>282</b>	
<b>TOTAL IN VOCATIONAL TRAINING</b>		<b>4</b>	<b>6</b>		<b>1</b>	<b>34.5</b>	<b>1035</b>	<b>324</b>	<b>144</b>	<b>36</b>	<b>531</b>	
<b>TOTAL</b>		<b>6</b>	<b>13</b>		<b>2</b>	<b>90.0</b>	<b>2700</b>	<b>507</b>	<b>330</b>	<b>72</b>	<b>1791</b>	

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

Head of the Department \_\_\_\_\_ O.L.Tymoschuk

Dean of the Faculty (Director of the Institute) \_\_\_\_\_ V.D.Romanenko