



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	<u>Master</u>	Form of study	<u>full-time</u> (full-time, part-time)
Speciality	<u>131 Applied Mechanics</u>	Institute	<u>Mechanical Engineering</u>
Specialization	<u>Hydraulic and Pneumatic Machines and Drive Systems</u>	Qualification	<u>Mechanical Engineer</u>
Profile program	<u>Educational and Professional</u>	Study duration	<u>1 year 4 months</u>
Graduation Department	<u>Applied Hydro-Aeromechanics and Mechatronics</u>	Base level	<u>Bachelor degree</u>

Michael Zgurovsky

2017

**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	P	P	P	P	P	P	P	R	R	R	R	R	R	R	R	R	R	R	R	R	A																																	

Symbols: P Learning period E Examination 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		10		18

**III. Practice**

Type of practice	YEAR	Weeks
Pre-diploma Practice	2	8

**IV. Graduates assessment**

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
Master's Thesis Implementation	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	Patenting and Intellectual Property		1			3	90	36	18		36
total number of part I.1			1			3	90	36	18	0	36
<b>I.2. Basic training (optional courses)</b>											
2/I	Subject on Sustainable Development Problems		1			2	60	18	18		24
3/I	Workshop on Scientific Communication in Foreign Language		2			3	90		72		18
4/I	Management Subject		2			3	90	18	36		36
total number of part I.3			3			8	240	36	126	0	78
<b>I.3. Science Research (optional courses)</b>											
5/I	Scientific Work on the Topic of Master's Thesis		1, 2			4	120	9	36		75
6/I	Pre-diploma Practice		3			14	420				420
7/I	Master's Thesis Implementation					16	480				480
total number of part I.3			3			34	1020	9	36	0	975
<b>TOTAL IN GENERAL TRAINING</b>		<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>45</b>	<b>1350</b>	<b>81</b>	<b>180</b>	<b>0</b>	<b>1089</b>
<b>II. VOCATIONAL TRAINING</b>											
<b>II.1. Vocational and practical training (major courses)</b>											
1/c	Pneumatic Control Systems	1				4	120	36		18	66
2/c	Features of Hydraulic Control Systems Design		1			3,5	105	18	27		60
3/c	Hydraulic Control Systems	2		2		7,5	225	54		36	135
4/c	Design of Hydraulic and Pneumatic Motors		1	1		5	150	18	36		96
5/c	Impeller Hydro-Dynamic Transmissions	1				4,5	135	36	9	18	72
6/c	Production Technology of Hydro-Pneumo-Machines		2			2,5	75	18		18	39
7/c	Compressors	2				3	90	18		18	54
8/c	PLC Programming for Hydraulic and Pneumatic Drive Systems	2				4	120	18		45	57
9/c	Fundamentals of Lubrication Theory		2			3,5	105	36		18	51
total number of part II.1		<b>5</b>	<b>4</b>	<b>2</b>		<b>37,5</b>	<b>1125</b>	<b>252</b>	<b>72</b>	<b>171</b>	<b>630</b>
<b>II.2. Vocational and practical training (optional courses)</b>											
1/cb	Computer Aided Design of Hydraulic Drive Systems	1				4,5	135	18	45		72
2/cb	Re-Engineering of Hydraulic Drive for Machine Building		2			3	90	18		27	45
total number of part II.2		<b>1</b>	<b>1</b>			<b>7,5</b>	<b>225</b>	<b>36</b>	<b>45</b>	<b>27</b>	<b>117</b>
<b>TOTAL IN VOCATIONAL TRAINING</b>		<b>6</b>	<b>5</b>	<b>2</b>		<b>45</b>	<b>1350</b>	<b>288</b>	<b>117</b>	<b>198</b>	<b>747</b>
<b>TOTAL</b>		<b>6</b>	<b>12</b>	<b>2</b>		<b>90</b>	<b>2700</b>	<b>369</b>	<b>297</b>	<b>198</b>	<b>1836</b>

Approved by Faculty Academic Council, Meeting protocol № 8 from April 27, 2017

Head of the Department \_\_\_\_\_ O. F. Luhovs'ky

Director of the Institute \_\_\_\_\_ M. I. Boby