



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	<u>Master</u>	Form of study	<u>full-time</u> <small>(full-time, part-time)</small>
Speciality	<u>131 Applied Mechanics</u>	Institute	<u>Mechanical Engineering</u>
Specialization	<u>Hydraulic and Pneumatic Machines and Drive Systems</u>	Qualification	<u>Research Engineer</u>
Profile program	<u>Educational and Scientific</u>	Study duration	<u>1 year 9 months</u>
Graduation Department	<u>Applied Hydro-Aeromechanics and Mechatronics</u>	Base level	<u>Bachelor degree</u>

I. Schedule of educational process

YEAR	September				October				November				December				January				January				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																																																				

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				12	52
II	18	2	5		12	2	39

III. Practice

Type of practice	YEAR	Weeks
Pre-diploma Practice	2	5

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				
I. GENERAL TRAINING															
I.1. Basic training (major courses)															
1/I	Patenting and Intellectual Property					1				3	90	36	18		36
2/I	Mathematical Simulation of Systems and Processes					3				4	120	36	18		66
total number of part I.1						2				7	210	72	36		102
I.2. Basic training (optional courses)															
4/I	Subject on Sustainable Development Problems					1				2	60	18	18		24
5/I	Workshop on Scientific Communication in Foreign Language					2, 3				4,5	135		108		27
6/I	Management Subject					2				3	90	18	36		36
7/I	Pedagogy Subject					3				2	60	30	6		24
total number of part I.3						5				11,5	345	66	168		111
I.3. Science Research (optional courses)															
8/I	Scientific Work on the Topic of Master's Thesis					1, 3				7,5	225	9	36		180
9/I	Pre-diploma Practice					4				9	270				270
10/I	Master's Thesis Implementation									21	630				630
total number of part I.3						3				37,5	1125	9	36		1080
TOTAL IN GENERAL TRAINING						10				56	1680	147	240		1293
II. VOCATIONAL TRAINING															
II.1. Vocational and practical training (major courses)															
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				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
10/c	Mathematical Methods for Drive Systems Analysis					3				7	210	18	18	54	120
total number of part II.1						6	4	2	1	44,5	1335	270	90	225	750
II.2. Vocational and practical training (optional courses)															
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
3/cb	Production Technology and Diagnosis of Hydraulic and Pneumatic Drive Systems							3		3	90	18	18		54
4/cb	PLC in Control Systems of Production Processes					3				6	180	36		36	108
5/cb	Transfer Phenomena in Practical Fluid Mechanics					3				3	90	18	18		54
total number of part II.2						3	2	0	0	19,5	585	108	81	63	333
TOTAL IN VOCATIONAL TRAINING						9	6	2	1	64	1920	378	171	288	1083
TOTAL						9	16	2	1	120	3600	525	411	288	2376

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. Bobry