



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

Michael Zgurovsky

Specialty 152 - Metrology and information-measuring technique

Faculty (Institute) FACULTY OF INSTRUMENTATION ENGINEERING

2017

Specialization Information-measuring technologies of ecological monitoring

Qualification 2419.2 - Research Engineer

Profile program Educational and Scientific

Study duration 1 year 9 months

Graduation Department Scientific, analytical and environmental instruments and systems department

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																			E	E	H	H																															
II																			E	E	H	H	P	P	P	P	R	R	R	R	R	R	R	R	R	R	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	18	2	5	2	12	2	39

III. Practice

Type of practice	YEAR	Weeks
Scientific and Research	2	5

IV. Graduates assessment

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
	Master Thesis Defense	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)											
	Information Measuring Systems Modeling	1				4	120	36	18		66
	Optimization Methods for Information Measuring Systems		2Д			4	120	36	18		66
	Patenting and Intellectual Property		2			3	90	36	18		36
total number of part I.1		1	2			11	330	108	54		168
I.2. Basic training (optional courses)											
	Subjects on Sustainable Development Problems		2			2	60	18	18		24
	Workshop on Scientific Communication in Foreign Language		2,3			4,5	135		108		24
	Pedagogy Subjects		3			2	60	30	6		24
	Management Subjects		1			3	90	18	36		36
total number of part I.3			5			11,5	345	66	168		111
I.3. Science Research (optional courses)											
	Scientific Work on the Topic of Master's Thesis										
	1. Fundamentals of Scientific Research		1			2	60	9	18		33
	2. Scientific and research work on the topic of Master's thesis.		2,3			5,5	165		36		147
	Scientific and Research Practice		4Д			9	270				270
	Master's Thesis Implementation					21	630				630
total number of part I.3			4			37,5	1125	9	54		1080
TOTAL IN GENERAL TRAINING		1	11			60	1800	183	270		1359
II. VOCATIONAL TRAINING											
II.1. Vocational and practical training (major courses)											
	Computer-Aided Designs in Instrument Design and Engineering	2	1Д		2	9,5	285	36	72		177
	Information Measuring Systems for Charge-coupled Devices	1			1	7	210	36	36	18	120
	Quality Testing Tools for Food Products	1				5	150	36	18	18	78
	Metrological Support of Information Measuring Systems	2				4,5	135	36	36		63
	Nanomaterials and Nanotechnologies		2Д			3,5	105	18		36	51
	Nanosensors	3				6	180	36	36		108
	Information Technologies for Cloud Computing	2				4,5	135	18	36		81
total number of part II.1		6	2		2	40	1200	216	234	72	678
II.2. Vocational and practical training (optional courses)											
	Environmental Monitoring of Megapolises and Recreation Areas		1Д			3	90	18	18		54
	Environmental Monitoring of Natural Reserves and Recreation Areas										
	Technological and Ecological Monitoring of Steel Manufacturers		3Д			4,5	135	36	18		81
	Technological and Ecological Monitoring of waste incineration production										
	Geoinformational Technologies in Ecology	3			3	8	240	36	18	18	168
	Means of monitoring the atmospheric pollution										
	Cyber Security Technologies	3				4,5	135	18		18	99
	Special Measuring Technologies										
total number of part II.2		2	2		1	20	600	108	54	36	402
TOTAL IN VOCATIONAL TRAINING		8	4		3	60	1800	324	288	108	1080
TOTAL		9	15		3	120,0	3600	507	564	108	2439

Approved by Faculty Academic Council, Meeting protocol № 4/17 from April 24, 2017

Head of the Department _____ / Poryev V. A. /

Dean of the Faculty _____ / Tymchyk G. S. /