

### MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

# National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

# **CURRICULUM**

(Enrolment 2020)

by Academic Council	Level	Master	Form of study	full-time
lgor Sikorsky Kyiv Polytechnic Institute				(full-time, part-time)
	Speciality1	31 - Applied mechanics	Faculty (Institute)	Institute of Mechanical Engineering
Mykhaylo ILCHENKO	Educational and Sc	ientific program	Qualification	MASTER DEGREE in Applied Mechanic
2020	D	ynamics and strength of machines  Dynamics and strength of machines and strenght of	Study duration	1 year 9 months
	Graduation Departn		Base level	Bachelor degree

# I. Schedule of educational process

AR		Se	ptem	oer			Octob	oer			Nov	embe	er		Dec	emb	er		Jar	uary			Feb	oruary	/		Ма	rch				April				Ma	ay			Ju	ne				July	'			Au	ıgust	1
×	1	1 2	3	4	5	5 6	7	8	9	10	11	12	13 1	4 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
П																		Ε	Ε	Н	Н																			Ε	Е	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
II																		Е	Ε	Н	Н	Р	Р	Р	Р	Р	R	R	R	R	R	R	R	R	R	R	R	Α													
S۱	mb	ols:		Lea	arnin	a perio	od		Е	Exa	minati	ion		Р	Pra	actice	е		R	Res	searc	h	•	Α	Ass	essm	ent		Н	Holid	dav		•	•															•		

# II. Summary table of time budget (Weeks)

YEAR	Learning period	Examination	Practice	Assessment	Research	Holiday	Total
ı	38	4				12	52
II	18	2	5		12	2	39

#### III. Practice

Type of practice	YEAR	Weeks
Scientific and Research	4	5

#### IV. Graduates assessment

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
Master Thesis Implementation	Master's Thesis Defense	4

### V. Plan of Educational process

		Dist	ributio seme)	n for te esters)	rms	"		Num	ber of l	hours	
o o			γį	ask	test	Credits		Lect	ures/prac lessons	tical	>
Code	educational components	Exams	Final tests	Individual task	Module te	ECTS C	Total	Lectures	Practical	Laboratory	Self-study
1	2	3	4	5	6	7	8	9	10	11	12
	1. NORMATIVE e	ducat	tional	comp	onent	s					
	1.1. Gene	ral tra	ining	cycle							
GC1	Intellectual Property and Patenting		1		1	3	90	36	18		36
GC2	Fundamentals of Engineering and Sustainable Development Technologies		1		1	2	60	18	18		24
GC3	Workshop of Foreign Language Scientific Communication		2,3	1	2,3	4,5	135		108		27
GC4	Project Management in Science-intensive Mechanical Engineering		2		2	3	90	18	36		36
GS5	Modern Design Methods	3		3	3	4	120	36	18	·	66
GC6	Mathematic Methods of Optimization	3		3	3	4	120	36	18	·	66

GC7	Higher Education Pedagogy		3		3	2	60	18	18		24
	Total number of part 1.1	2	6	3	8	22,5	675	162	234		279
	1.2. Vocation	onal t	rainin	g cyc	le		-		-	•	
PC1	Information Systems and Technologies in Aircraft Engineering	1		1	1	4,5	135	18		36	81
PC2	Numerical and AnalyticalMmethods for Analyzing the Dynamics and Strength of Machines and Motion Stability		1		1	3	90	18	18	18	36
PC3	Course work on Numerical and Analytical Methods for Analyzing the Dynamics and Strength of Machines and Motion Stability		2			1	30				30
PC4	Course Project on Numerical and Analytical Methods for Analyzing the Dynamics and Strength of Machines and Motion Stability		1			1,5	45				45
PC5	Strength and Fatigue of Materials	1		1	1	4	120	36	18		66
PC6	Foundations of Experimental Methods of Research	1			1	4	120	36		18	66
PC7	Probabilistic Methods in Mechanics		1	1	1	4,5	135	45	36		54
PC8	Science's Research Methodology		3	3	3	4	120			54	66
	Research (s	cientifi	c) com	onent							
PC9	Scientific Work on the Topic of Master's Thesis		1,3	2		7,5	225	9	36		180
PC10	Scientific Research Practice		4			9	270				270
PC11	Master's Thesis Implementation					21	630				630
	Total number of part 1.2	3	8	5	6	64	1920	162	108	126	1524
	TOTAL of NORMATIVE educational components	5	14	8	14	86,5	2595	324	342	126	1803
	2. ELECTIVE ed	lucati	onal c	ompo	nents	1					
	2.1. General training cycle (Optional su	ubjetc	s fron	า Facเ	ılty ( [	Depart	ment )	catalo	ogue		
PS1	Educational component 1 F- Catalog		2	2	2	5	150	45		45	60
PS2	Educational component 2 F- Catalog	2			2	5	150	36	36		78
PS3	Educational component 3 F- Catalog	2			2	5	150	36		36	78
PS4	Educational component 4 F- Catalog		2		2	4	120	36		36	48
PS5	Educational component 5 F- Catalog	2			2	3,5	105	27	9		69
PS6	Educational component 6 F- Catalog		3		3	5	150	36		36	78
PS7	Educational component 7 F- Catalog	3			3	6	180	18		54	108
	Total number of part 2.1	4	3	1	7	33,5	1005	234	45	207	519
	TOTAL of ELECTIVE educational components	4	3	1	7	33,5	1005	234	45	207	519
	TOTAL	9	17	9	21	120	3600	558	387	333	2322

Approved by University Academic Council, Meeting protocol № 4 from 10.03. 2020

Head of the Department	/, Sergii PYSKUNOV
Dean of the Faculty	/ _ Mykola BOBYR