

# MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

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

# **CURRICULUM**

(Enrolment 2020)

by Head of Academic Council	Level	Back	nelor	Form of study	full-time
Igor Sikorsky Kyiv Polytechnic Institute	-				(full-time, part-time)
	Speciality	131 - Appl	ied mechanics	Faculty (Institute)	Institute of Mechanical Engineering
Mykhaylo ILCHENKO	<del>-</del>				Bachelor Degree in
	Educational ar	nd Profession	onal program	Qualification	Applied Mechanics
2020					
		Dynami	cs and strength of machines	Study duration	3 years 10 months
			Dynamics and strength of machines and		Complete general secondary
Gradua	Graduation De	epartment	strenght of materials	Base level	education
			·		

# I. Schedule of educational process

AR		Sep	tember			С	ctob	er			No	vemb	er		Dec	embe	er		Ja	nuar	y		Fel	bruary	/		Ma	rch				April				Ma	ay			Ju	ne		ĺ		July			l	Aug	ust	
¥	1	2	3	4	5	6	7	8	9	10	11	12	13 1	4 15	16	17	7 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																		Е	E	Н	Н																			Ε	Ε	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
II																		Е	Е	Н	Н																			Ε	Е	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
III																		Е	Е	Н	Н																			Е	Е	Н	Н	Н	Н	Н	Н	Н	Н	Н	Н
IV																		Е	Е	Н	Н										Е	Р	Р	Р	Р	Р	R	R	R	R	Α	Α									
Sym	bols	s:		Lear	rning i	period	d		Е	Exa	mina	ion		Р	Prac	ctice			R	Re	sear	ch		Α	Asse	essm	ent		Н	Holi	day																				

#### II. Summary table of time budget (Weeks)

YEAR	Learning period	Examination	Practice	Assessment	Research	Holiday	Total
1	36	4				12	52
II	36	4				12	52
Ш	36	4				12	52
I۷	27	3	5	4	2	2	43

#### III. Practice

Type of practice	YEAR	Weeks					
Pre-diploma Practice	8	5					

#### IV. Graduates assessment

Subjects	Form of graduates assessment (exam, graduation project)	YEAR
Bachelor Thesis Implementation	Bachelor's Thesis Defense	8

# V. Plan of Educational process

		Dist	ributio (seme	n for te esters)	erms	s	Number of hours						
Φ.			S	task	test	Credits		Lectures	/practical	>			
Code	Educational components	Exams	Final tests	Individual ta	Module te	ECTS Cr	Total	Lectures	Practical	Laboratory	Self-study		
1	2	3	4	5	6	7	8	9	10	11	12		
	1. NORMATIVE				onents	3							
	1.1. Gene	ral tra	ining	cycle									
GC1	Ukrainian Language for Professional Purposes		2		2	2	60	18	18		24		
GC2	Ukraine in the Context of the Historical Development of Europe		1		1	2	60	18	18		24		
GC3	Physical Education		2,4		1,3	5	150		144		6		
GC4	Foreign language		2, 4		1,3	6	180		144		36		
GC5	Economics and Production Organization		7		7	4	120	36	36		48		

GC7   Mathematics	240 153 48 51 192 102 30 51 1053
GC9   Engineering and Computer Graphics   1   1   1   4   120   36   36   GC10   Linear Algebra and Analytical Geometry   1   1   1   3,5   105   18   36   GC11   Theoretical Mechanics   2,3   4   2,3,4   2,3,4   13   390   108   90   GC12   Informatics   3   3   7   210   36   72   GC13   Course work on Informatics   3   1   30   GC14   Chemistry   1   1   1   1   3,5   105   36   18   I8   GC14   Chemistry   1   1   1   1   3,5   105   36   18   I8   I8   I2   Vocational training cycle   Fundamentals of Manufacturing Processes   1   1   4   120   36   18   18   I8   I8   I8   I8   I8   I8	48 51 192 102 30 51 1053
GC10   Linear Algebra and Analytical Geometry   1   1   1   3,5   105   18   36     GC11   Theoretical Mechanics   2,3   4   2,3,4   2,3,4   13   390   108   90     GC12   Informatics   3   3   7   210   36   72     GC13   Course work on Informatics   3   1   30     GC14   Chemistry   1   1   1   3,5   105   36   18     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134     PC3	51 192 102 30 51 1053
GC11   Theoretical Mechanics   2,3   4   2,3,4   2,3,4   13   390   108   90	192 102 30 51 1053
GC12   Informatics   3   3   7   210   36   72	102 30 51 1053 48
GC13   Course work on Informatics   1	30 51 1053 48
Company   Comp	51 1053 48
Total number of part 1.1   7   14   8   20   82,5   2475   558   730   134   1.2. Vocational training cycle	1053 48
Table   Tabl	48
PC1	
PC2   Material Science   2   2   4,5   135   36   18   18	
PC3	63
PC3	บง
PC4         Mechanics of Materials and Constructions         3,4         3,4         13         390         108         72         36           PC5         Course work on Mechanics of Materials and Structures         4         4         1         30         30         18         18           PC6         Metrology and Standardization         4         4         4         4         4         120         36         18         18           PC7         Theory of Mechanisms and Machines         4         5         4         5,5         165         36         27         18           PC8         Course work on Theory of Mechanisms and Machines         5         5         5         4         120         54         18           PC9         Hydromechanics and Hydraulics         5         5         5         4         120         54         18           PC10         Machine Parts and Design Principles         6         6         6         4         120         36         18         18           PC11         Course work on Machine Parts and Design Principles         6         6         6         6         3         90         36         18           PC12         Electrical Engine	36
PC5	174
PC7   Theory of Mechanisms and Machines   4   5   4   5,5   165   36   27   18	30
PC7         Theory of Mechanisms and Machines         4         5         4         5,5         165         36         27         18           PC8         Course work on Theory of Mechanisms and Machines         5         1         30	48
PC8         Course work on Theory of Mechanisms and Machines         5         1         30         1           PC9         Hydromechanics and Hydraulics         5         5         4         120         54         18           PC10         Machine Parts and Design Principles         6         6         4         120         36         18         18           PC11         Course work on Machine Parts and Design Principles         6         1,5         45         45         45         45         18	84
PC10         Machine Parts and Design Principles         6         6         4         120         36         18         18           PC11         Course work on Machine Parts and Design Principles         6         1,5         45         1         45         1         45         1         1         45         1         2         1         2         1         2         1         2         1         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         3         3         3         3         3         3         3         3         3         3         3         3         4         3         3         4         3         3         4         3         3         4         3         3         3         3         3         3         3         3 <td>30</td>	30
PC11         Course work on Machine Parts and Design Principles         6         1,5         45           PC12         Electrical Engineering and Electronics         6         6         6         3         90         36         18           PC13         Theory of Vibrations of Rod Systems         5,6         5,6         9,5         285         90         63           PC14         Structural Mechanics of Rod Systems         5         5,5         165         54         36           PC15         Theory of Elasticity         5,6         5,6         10,5         315         99         72           PC16         Course work on Theory of Elasticity         7         1         30         30           PC17         Theory of Plasticity and Creep         7,8         7,8         9,5         285         99         45           PC18         Course work on Theory of Plasticity and Creep         8         1         30         30           PC20         Pre-diploma practice         8         6         180         45	48
PC11         Principles         6         1,5         45           PC12         Electrical Engineering and Electronics         6         6         6         3         90         36         18           PC13         Theory of Vibrations of Rod Systems         5,6         5,6         9,5         285         90         63           PC14         Structural Mechanics of Rod Systems         5         5         5,5         165         54         36           PC15         Theory of Elasticity         5,6         5,6         10,5         315         99         72           PC16         Course work on Theory of Elasticity         7         1         30         30           PC17         Theory of Plasticity and Creep         7,8         7,8         9,5         285         99         45           PC18         Course work on Theory of Plasticity and Creep         8         1         30         30           PC20         Pre-diploma practice         8         6         180         45	48
PC13         Theory of Vibrations of Rod Systems         5,6         5,6         9,5         285         90         63           PC14         Structural Mechanics of Rod Systems         5         5,5         165         54         36           PC15         Theory of Elasticity         5,6         5,6         10,5         315         99         72           PC16         Course work on Theory of Elasticity         7         1         30         30           PC17         Theory of Plasticity and Creep         7,8         7,8         9,5         285         99         45           PC18         Course work on Theory of Plasticity and Creep         8         1         30         30           PC20         Pre-diploma practice         8         6         180         180	45
PC14         Structural Mechanics of Rod Systems         5         5,5         165         54         36           PC15         Theory of Elasticity         5,6         5,6         10,5         315         99         72           PC16         Course work on Theory of Elasticity         7         1         30	36
PC15         Theory of Elasticity         5,6         5,6         10,5         315         99         72           PC16         Course work on Theory of Elasticity         7         1         30           PC17         Theory of Plasticity and Creep         7,8         7,8         9,5         285         99         45           PC18         Course work on Theory of Plasticity and Creep         8         1         30	132
PC16         Course work on Theory of Elasticity         7         1         30           PC17         Theory of Plasticity and Creep         7,8         7,8         9,5         285         99         45           PC18         Course work on Theory of Plasticity and Creep         8         1         30	75
PC17         Theory of Plasticity and Creep         7,8         7,8         9,5         285         99         45           PC18         Course work on Theory of Plasticity and Creep         8         1         30	144
PC18 Course work on Theory of Plasticity and Creep PC20 Pre-diploma practice  8 1 30 1 30 1 1 30 1 1 30 1 1 1 30 1 1 1 1	30
PC18         Creep         8         1         30           PC20         Pre-diploma practice         8         6         180	141
	30
	180
PC21 Attestation work 6 180	180
Total number of part 1.2   11   13   2   17   98   2925   756   387   180	1602
TOTAL of NORMATIVE educational components   18   27   10   37   180   5400   1314   1117   314	2655
2. ELECTIVE educational components	
2.1. General training cycle (Optional subjetcs from University catalogue)	
3B 1 Educational component 1 GU- Catalog 3 3 2 60 18 18	24
3B 2 Educational component 2 GU- Catalog 3 3 2 60 18 18	24
3B 3 Educational component 3 GU- Catalog 4 4 2 60 18 18	24
3B 4 Educational component 4 GU- Catalog 6 6 2 60 18 18	24
3B 5 Foreign Language for Professional Purposes 8 6 5,7 6 180 126	54

	Total number of part 2.1	1	5		6	14	420	72	198		150
	2.2. Vocational training cycle (Op	tiona	l subj	etcs fr	om Fa	culty	catalo	gue)			
ПВ 1	Educational component 1 F- Catalog	4	5	4,5	4,5	9	270	54	90		126
ПВ 2	Educational component 2 F- Catalog		5;6		5,6	6	180	36	36	36	72
ПВ 3	Educational component 3 F- Catalog	6			6	5,5	165	54	36		75
ПВ 4	Educational component 4 F- Catalog	7	8		7,8	8,5	255	54	45		156
ПВ 5	Educational component 5 F- Catalog		7		7	4	120	36		36	48
ПВ 6	Educational component 6 F- Catalog	7	8		7,8	9	270	72		81	117
ПВ 7	Educational component 7 F- Catalog		8		8	4	120	36		27	57
TOTAL of	ELECTIVE Vocational training cycle educational co	4	7	2	11	46	1380	342	207	180	651
TOTAL of	ELECTIVE educational components	5	12	2	17	60	1800	414	405	180	801
	TOTAL	23	39	12	54	240	7200	1728	1522	494	3456

Approved by University Academic Council,	Meeting protocol	<b>№</b> 4	from	March 10	, 202	0

Head of the Department/_	_ Sergii PYSKUNOV
Dean of the Faculty (Director of the Institute)	/Mykola BOBYR/