

STUDY PLAN

for the 2018/2019 academic year
(Enrolment 2018)

APPROVED
by first Vice-rector of Igor Sikorsky Kyiv Polytechnic Institute

Specialty	- <u>131 - Applied mechanics</u>
Specialization	- <u>Dynamics and Strength of Machines</u>
for an educational professional program of	master's training
Level	- <u>Master</u>
Graduation Department	- <u>Department of dynamics and strength of machines and strength of materials</u>

Faculty (Institute)	Institute of Mechanical Engineering
Form of study	full-time
Study duration	1 years 4 months
Qualification	Researcher

Code	Subjects	Department	Amount		Lectures/ Practical								Self-study	Control measures and their distribution by semester										Distribution of class hours per week by courses and semesters									
			Number of credits	Number of hours	Total according to curriculum with individual lessons	Lectures according to curriculum with individual classes	Practical according to curriculum with individual classes	Laboratory according to curriculum with individual lessons	Individual lessons	Exams	Final tests	Modular, test works		Course projects	Coursework	Personal assignment	Home tests	Preparation	Total	1 Course													
																				MP-81mp(9-0)													
																				1 semester					2 semester								
																				18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks	18 weeks
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				
I. GENERAL TRAINING																																	
I.1. Basic training (major courses)																																	
1	Intellectual Property and Patented Science 1. Intellectual property rights	Department of Information Law and Intellectual Property Rights	1	30	18	12		6						12									1	0,7	0,3								
2	Intellectual Property and Patented Science 2. Patent law and acquisition of rights	Department of Design of Machine Tools and Machines	2	60	36	24		12						24	1	1							2	1,3	0,7								
total number of part 1.1.			3	90	54	36	18							36	1	1							3	2	1								
I.2. Basic training (optional courses)																																	
2	Fundamentals of Engineering and Sustainable Technology	Department of Cybernetics of chemical and technological processes	2	60	36	18		18						24	1							1	2	1	1								
3	Workshop on foreign language scientific communication	Department of the English Language of Technical Orientation № 2	3	90	72			72						18	2							1	2		2		2		2				
4	Project management in high technology engineering	Department of dynamics and strength of machines and strength of materials	3	90	54	18		36						36	2												3	1	2				
total number of part 1.2.			8	240	162	36		126						78	3								2	4	1	3		5	1	4			
I.3. Science Research (optional courses)																																	
5	Scientific work on the topic of master's thesis 1. Basics of the scientific research	Department of dynamics and strength of machines and strength of materials	2	60	27	9		18						33	1								1,5	0,5	1								
6	Scientific work on the topic of master's thesis1. Scientific work on the topic of master's thesis	Department of dynamics and strength of machines and strength of materials	2	60	18			18						42	2												1		1				
total number of part 1.3.			4	120	45	9		36						75	2								1,5	0,5	1		1		1				
TOTAL IN GENERAL TRAINING			15	450	261	81		180						189	6	1							2	9	4	5	6	1	5				
II. VOCATIONAL TRAINING																																	
II.1. Vocational and practical training (major courses)																																	
7	Statistical dynamics and reliability 1. Probability theory and stochastic processes	Department of dynamics and strength of machines and strength of materials	4,5	135	81	45		36						54	1							1	4,5	2,5	2								
8	Statistical dynamics and reliability 2. Dynamics and reliability	Department of dynamics and strength of machines and strength of materials	5,5	165	72	36		36						93	2							2					4	2	2				
9	Experimental methods of research 1. Methods of determining the mechanical characteristics of materials and test equipment	Department of dynamics and strength of machines and strength of materials	4	120	54	36			18					66	1								3	2			1						
10	Experimental methods of research 2. Methods of measurement; indicating and automation systems	Department of dynamics and strength of machines and strength of materials	5	150	72	36			36					78	2												4	2		2			
total number of part 2.1.			19	570	279	153		72		54				291	3	1							2	7,5	4,5	2	1	8	4	2	2		
II.2. Vocational and practical training (optional courses)																																	
11	The theory of oscillation and stability of motion 1.	Department of dynamics and strength of machines and strength of materials	1	30	9			9						21	1								0,5		0,5								
12	The theory of oscillation and stability of motion 2. Coursework	Department of dynamics and strength of machines and strength of materials	1,5	45										45			1																
13	Numerical methods for dynamics and strength of machines 1.	Department of dynamics and strength of machines and strength of materials	1,5	45	27	9			18					18	1								1,5	0,5		1							
14	Numerical methods for dynamics and strength of machines 2. Coursework	Department of dynamics and strength of machines and strength of materials	1	30										30				2															
15	Fatigue of materials	Department of dynamics and strength of machines and strength of materials	4	120	54	36		18						66	1								3	2	1								
16	Design and calculation of elements of aviation constructions 1. Calculation of aviation structures for durability	Department of dynamics and strength of machines and strength of materials	2	60	18				18					42	1				1				1				1						
17	Design and calculation of elements of aviation constructions 2. Basis of design of the structure of the aircraft	Department of dynamics and strength of machines and strength of materials	3	90	54	36			18					36	2					2							3	2		1			
18	Information systems and technologies in aircraft building 1. Information technologies of aviation engineering	Department of dynamics and strength of machines and strength of materials	3	90	36	18			18					54	1					1			2	1			1						
19	Information systems and technologies in aviation engineering. 2. Information systems of design and engine analysis	Department of dynamics and strength of machines and strength of materials	6	180	90	45				45				90	2						2							5	2,5		2,5		
20	Strength and destruction of structural elements	Department of dynamics and strength of machines and strength of materials	3	90	36	27		9						54	2												2	1,5	0,5				
total number of part 2.2.			26	780	324	171		36		117				456	3	5		1	1	4			8	3,5	1,5	3	10	6	0,5	4			
TOTAL IN VOCATIONAL TRAINING			45	1350	603	324		108		171				747	6	6		1	1	4	2		16	8	4	4	18	10	2,5	6			
TOTAL			60	1800	864	405		288		171				936	6	12	1	1	1	4	2	2	24	11,5	8,5	4	24	11	7,5	5	6		
Number	exams																																
	final tests																																
	modular, test works																																
	course projects																																
	number of courseworks																																
	personal assignment																																
Number	home tests																																
	Abstracts																																
1	Civil Protection	Department of labor protection of industrial and civil security	1	30	18	10		8						12	1								1	0,6	0,4								

Approved at the Meeting of the Institute's Academic Council No. 9 on 29/05/2018

Head of the Department _____ / Babenko A. / Dean of the Faculty (Director of the Institute) _____ / Bobyr M.

NOTE: compiled for each academic year separately in accordance with the curriculum.