



APPROVED
Scientific Council

Igor Sikorsky Kyiv Polytechnic Institute
" " 2021 year.
protocol №

Chairman of the Academic Council

Mikhail ILCHENKO

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
National Technical University of Ukraine "Igor SIKORSKY Kyiv Polytechnic Institute"

Enrolment 2019

Enrolment 2021

Training bachelor field of knowledge 16 Chemical and bioengineering Faculty Biomedical Engineering
(name of educational degree) (code and name of the knowledge field)

Speciality 163 Biomedical Engineering Qualification bachelor
(code and speciality name)

Form of study Medical Engineering Study duration 3 years 10 months (4 ed.year)
(name)

Graduation Department Biomedical Engineering Base level full secondary education
(full-time (day, evening), distance learning)

according to the educational and professional program

I. Schedule of educational process

YEAR	September				October				November				December				January				September				October				November				December				January				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							18												E	E	H	H																											C	C	H	H	H	H	H	H	H	H	H	H				
II							18												E	E	H	H																							C	C	H	H	H	H	H	H	H	H	H	H								
III							18												E	E	H	H																							C	C	H	H	H	H	H	H	H	H	H	H								
IV							18												E	E	H	H						9																	E	P	P	P	P	P	R	R	R	R	R	R	C	C	H	H	A	A		

Symbols: L Learning period E Examination P Practice R Research A Assessment H Holiday

II. Summary table of time budget (Weeks)

YEAR	Learning period	Examination	Practice	Research	Assessment	Holiday	Total
I	36	4				12	52
II	36	4				12	52
III	36	4				12	52
IV	27	3	5	4	2	2	43

III. Practice

Type of practice	Semester	Weeks
Pre-diploma	8	5

IV. Graduates assessment

Subjects	Form of graduates assessment	Semester
Diploma Project	Protecting the thesis project (work)	8

V. Plan of Educational process

Code	Subjects	Distribution for terms				ECTS Credits	Number of hours					Distribution of class hours per week by courses and semesters							
		Exams	Final tests	Individual task	Module control work		Total	Lectures/practical lessons			Self-study	I YEAR			II YEAR			IV YEAR	
								Total	Lectures	Practical		Laboratory	Semesters			Semesters			Semesters
		including			The number of weeks in the semester			1			2			3					
					18			18			18			18					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		

I. NORMATIVE educational components

I.1. GENERAL TRAINING

Code	Subjects	Exams	Final tests	Individual task	Module control work	ECTS Credits	Total	Lectures	Practical	Laboratory	Self-study	1	2	3	4	5	6	7	8	
GM 1	Ukrainian language for professional purposes		2		2	2	60	36	18	18	24				2					
GM 2	History of science and technic		1		1	2	60	36	18	18	24	2								
GM 3	Basics of a healthy lifestyle		2		1,2	3	90	72	18	54	18	2	2							
GM 4	Foreign language		2, 4		1,3	6	180	144		144	36	2	2	2	2					
GM 5	Economics and organization of production		7		7	4	120	72	36	36	48								4	
GM 6	Labor protection and civil protection		7		7	4	120	72	36	28	48								4	
GM 7	Higher mathematics	1,2,3			1,2,3	20,5	615	360	180	180	255	8	5	7						
GM 8	Physics	2,3			2,3	11	330	216	90	90	114		6	6						
GM 9	Fundamentals of computer science		2		2	5,5	165	90	36	54	75		5							
GM 10	Engineering and computer graphics		1		1	4	120	72	26	28	48	4								
GM 11	Introduction to philosophy		3		3	2	60	36	18	18	24				2					
GM 12	Environmental management		4		4	2	60	36	18	18	24				2					
GM 13	Business law		5		5	2	60	36	18	18	24					2				
GM 14	Foreign language for professional purposes		8		5, 7	6	180	126		126	54					2	2	2	2	
Total number of part I.1.		7	12		20	74	2220	1404	512	830	62	816	18	22	17	4	4	2	10	2

I.2. Professional training

Code	Subjects	Exams	Final tests	Individual task	Module control work	ECTS Credits	Total	Lectures	Practical	Laboratory	Self-study	1	2	3	4	5	6	7	8
PM 1	Introduction to the profession		1		1	4	120	72	28	44	48	4							
PM2	Biochemistry		1,2		1,2	8	240	144	72	72	96	4	4						
PM 3	Human anatomy and physiology		1,2		1,2	8,5	255	144	72	72	111	4	4						
PM4	Materials science and construction materials		3		3	4,5	135	72	36	36	63				4				
PM 5	Quantitative physiology		3		3	4,5	135	72	26	28	63				4				

PM 6	Fundamentals of discrete mathematics		3		3	4	120	72	36	36		48			4									
PM 7	Electrical engineering and electronics	4			4	6	180	90	36	28	26	90				5								
PM 8	Biomaterials and biocompatibility	4			4	5	150	72	36	36		78				4								
PM 9	Biophysics		4		4	4,5	135	72	36	36		63				4								
PM 10	Mechanics		4		4	4,5	135	72	36	36		63				4								
PM 11	Object-oriented programming		4		4	4,5	135	72	36	36		63				4								
PM 12	Radiation safety and dosimetry	5			5	5	150	72	36	36		78					4							
PM 13	Analog and digital circuitry	5,6			5,6	12,5	375	180	90	72	18	195					4			6				
PM 14	Biomedical devices, apparatus and complexes	6			6	4,5	135	54	18	36		81							3					
PM15	Microprocessor technic	7			7	4,5	135	54	18	18	18	81										3		
PM 16	Examination and engineering support of medical equipment	7			7	4	120	54	28	26		66										3		
PM 17	Devices for control of person's physiological parameters	8			8	4,5	135	54	18	36		81											6	
PM 18	Pre-diploma practice		8			6	180	0				180												
PM 19	Diploma design					6	180	0				180												
PM 20	Analog and digital circuitry (Course work)			6		1	30	0				30												
Total number of part I.2.		11	10	1	20	106	3180	1422	658	684	80	1758	12	8	12	21	8	9	6	6				
TOTAL NORMATIVE:		18	22	1	40	180	5400	2826	1170	1514	142	2574	30	30	29	25	12	11	16	8				

II. SELECTIVE educational components

II.1. General training (Selective educational components from the general University Catalog)

GS1	Educational component 1 of the GU-Catalog		3		3	2	60	36	18	18		24				2								
GS 2	The educational component 2 of the GU-Catalog		4		4	2	60	36	18	18		24					2							
Total number of part II.1.u			2		2	4	120	72	36	36		48				2	2							

II.2. Professional training (Selective educational components from interfaculty / faculty / department Catalogs)

PS1	Educational component 1 of the F-Catalog*		5		5	4	120	72	36	36		48						4						
PS 2	Educational component 2 of the F-Catalog*		5		5	4	120	72	26	28	18	48						4						
PS 3	Educational component 3 of the F-Catalog*		5		5	4	120	72	26	28	18	48						4						
PS 4	Educational component 4 of the F-Catalog*		5		5	4	120	72	28	44		48						4						
PS5	Educational component 5 of the F-Catalog*		6		6	4	120	72	36	36		48							4					
PS6	Educational component 6 of the F-Catalog*		6		6	4	120	72	36	36		48							4					
PS 7	Educational component 7 of the F-Catalog*		6		6	4	120	72	36	36		48							4					
PS 8	Educational component 8 of the F-Catalog*		6		6	4	120	72	36	36		48							4					
PS 9	Educational component 9 of the F-Catalog*		7		7	4	120	72	36	36		48										4		
PS 10	Educational component 10 of the F-Catalog*		7		7	4	120	72	26	28	18	48										4		
PS 11	Educational component 11 of the F-Catalog*		7		7	4	120	72	36	36		48										4		
PS12	Educational component 12 of the F-Catalog*		8		8	4	120	54	26	28		66											6	
PS13	Educational component 13 of the F-Catalog*		8		8	4	120	54	26	28		66											6	
PS14	Educational component 14 of the F-Catalog*		8		8	4	120	54	26	28		66											6	
Total number of part II.2.			14		14	56	1680	954	436	464	54	726						16	16	12	18			
TOTAL SELECTED:		0	16		16	60	1800	1026	472	500	54	774				2	2	16	16	12	18			
TOTAL:		18	38	1	56	240	7200	3852	1642	2014	196	3348	30	30	31	27	28	27	28	28	26			

Number of Exams		3	3	2	2	2	2	2	2	2	2	2	2
Number of Final tests		3	5	5	6	5	5	5	5	5	5	4	
of them: Course projects													
Course works											1		

Military training	In 5 - 8 semesters for a separate military training plan
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Head of TM Commission _____ / V. Maksymenko./

Head of the Department _____ / V. Shlykov / Dean of the Faculty _____ / V. Maksymenko./

*The distribution of classroom workload by types of classes is specified in the working curricula