

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

## **CURRICULUM**

(Enrolment 2021)

			(Emoment 2021)		
by Head of Academic Council	Level	Bachelor		Form of study	full-time
Igor Sikorsky Kyiv Polytechnic Institute		(name of the level)		Faculty (Institute)	Institute for Energy Saving and Energy Management
	Speciality	184 Mining		Qualification	Bachelor Degree in Mining
Mykhaylo ILCHENKO	Educational and	d Professional program	(cipher and specialty name)	Study duration	3 years 10 months
2021			Geoengineering	Base level	Full secondary education
	Gradi	uation Department	Department of Geoengineering		
		I. Schedule of e	ducational process		

		i. Schedule of educational process																																																	
П	¥	Sep	temi	ber		C	octob	er			No	vem	ber			Dec	ember			J	lanu	ary			Ja	nuary			Ma	ırch			Apr	il	Т		May			Jı	ıne				July	,			A	ugust	
L	1	2	3	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 3	5 3	6 3	7 38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
L	ı																		Ε	E	Н	Н																		Е	Е	н	Н	Н	Н	Н	Н	Н	Н	Н	Н
Г	11	Т	Т	Т	Г													П	Е	E	н	н									П		П	Т	Т	Т	Т	П		Е	Е	н	н	н	Н	н	н	н	н	н	н
Г	III .	Т	Т	Т															Е	Е	н	н									П				Т					Е	Е	н	н	н	н	н	н	н	н	н	н
Г	v	Т	Т	Т	Г													П	Е	E	н	н										Е	Р	PF	,	PF	R	R	R	R	Α	Α			П		Т		Т		
8	ymb	ols:		Lea	arning	g peri	bd		Ε	Exa	mina	tion			Р	Prac	tice			R	Re	searc	h		Α	Ass	essm	ent		Н	Holid	ay																			

V. Plan of Educational process

120 72 36

1,5 45 45

48

	II. Summary table of time budget (Weeks)										
YEAR	Learning period	Examinati on	Practice	Assessme nt	Research	Holiday	Total				
1	36	4				12	52				
Ш	33	4				12	52				
III	36	4					52				
I۷	27	3	5	4	2	2	43				

III. Pra	ectice	
Type of practice	YEAR	Weeks
Pre-diploma Practice	4	5

IV. Graduates assessment											
Subjects	Form of graduates assessment (exam, graduation project)	YEAR									
	The defense of Bachelor Thesis	4									

Ŵ		Dis		n for te	rms			N	umber	of hou	ırs	
P			(Seine	J		its			Aud			
The code for the EPP (EDUCATIONAL-PROFESSIONAL PROGRAM)	Name of the discipline	Exams	Tests	Individual task	Module test	ECTS Credits	General	Total	Lectures	Practical Supplies	Laboratory	Self-study
1	1. Compulsor	v edu	cation	al co	nnone	nts	8	9	10	11	12	13
	1.1. Ge											
30 1	Ukrainian Landuage for Professional Purposes		2		2	2	60	36	18	18		24
30 2	History of Science and Technic		1		1	2	60	36	18	18		24
30 3	Basics of a Healthy Lifestyle		2		1,2	3	90	72	18	54		18
30 4	Foreign Landuage		2, 4		1,3	6	180	144		144		36
30 5	Economy and Organization of Production		7	7	7	4	120	72	36	36		48
30 6	Labor Safety and Civil Defence		7		7	4	120	72	36	28	8	48
30 7	Introduction to Philosophy		3		3	2	60	36	18	18		24
30 8	Labor Law		5		5	2	60	36	18	18		24
30 9	Foreign Language for Professional Purposes	8	6		5,7	6	180	126		126		54
30 10	Higher Mathematics I. Analytical Geometry. Differential and Integral Calculus. II. Integral Calculus, Differential Equations and Theory of Series. III. Multiple Integrals. Theory of Complex Variable. Theory of Probability	1,2	3	1,2,3	1,2,3	15	450	252	108	144		198
30 11	General Physics I. Mechanics and Molecular Physics. II. Electrostatics. Electromagnetism	1,2		1	1,2	11	330	180	108	36	36	150
30 12	Chemistry	3			3	4,5	135	54	18		36	81
30 13	Informatics and Computer Science I. Hardware and Software (ECM). II. Programming Fundamentals	2	1	1,2	1,2	6	180	90	27		63	90
30 14	Geology I. Geology. II. Engineering Geology and Hydrogeology	1	2	1,2	1,2	12	360	180	81	63	36	180
30 15	Descriptive Geometry. Engineering Graphics I. Descriptive Geometry. Engineering Graphics. II. Computer Graphics		1,2	1, 2	1,2	9,5	285	162	36	54	72	123
30 16	Applied Mechanics. I. Theoretical Mechanics. II. Strength of Materials	4	3	3	3,4	6	180	90	54	36		90
30 17	Coursework in Applied Mechanics		4			1	30					30
30 18	Introduction to Profession		3	3	3	4,5	135	72	36	36		63
30 19	Geomechanics I. Physics of Rock. II. Rock Mechanics. Soil Mechanics	3,4		4	3,4	8	240	108	45	36	27	132
30 20	Coursework in Geomechanics		3			1	30	0				30
30 21	Geotronics and Mine Surveying	4,5		4,5	4,5	7,5	225	108	54	18	36	117
30 22	Materials Science and Fundamentals of Construction I. Materials Science. II. Fundamentals of Construction	3	4	4	3,4	6	180	90	54	36		90
30 23	Fundamentals of Electrical Engineering		4		4	3	90	54	36	9	9	36
	Total number of part 1.1	14	21	17	34	126	3780	2070	819	928	323	1710
	1.2. Voc	ationa	al trair	ning c	ycle							
ПО 1	Technology, Mechanization and Organization of Geotechnical Construction		4	4	4	5,5	165	90	45	45		75
ПО 2	Construction Materials and Constructions of Underground Structures	5,6			5,6	7,5	225	108	54	54		117

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Course project in Construction Materials and Constructions of Underground Structures

Construction Mechanics

ПО 5	Geo-engineering and tunneling I. Construction Technology of Vertical Workings. II. Construction Technology of Horizontal and Incline Workings	6,7		7	6,7	8	240	108	54	54		132
ПО 6	Course project in Geo-engineering and tunneling		6			1,5	45					45
ПО 7	Substructures and Foundations	7			7	4,5	135	54	18	18	18	81
по 8	Coursework in Substructures and Foundations		7			1	30					30
ПО 9	Geoengineering of Metropolis	8			8	7	210	90	45	45		120
ПО 10	Course project in Geoengineering of Metropolis		8			1,5	45					45
ПО 11	Pre-diploma Practice		8			6	180					180
ПО 12	Diploma Projects					6	180					180
	Total number of part 1.2	6	7	3	8	54	1620	522	252	252	18	1098
	TOTAL for the NORMATIVE educational components	20	28	20	42	180	5400	2592	1071	1180	341	2808
	2. Optional	educa	tiona	com	ponen	ts						
	2.1. General training cycle (Op	tiona	l subj	etcs f	rom U	nivers	ity cat	alogu	e)			
3B 1	Educational Component 1 of GU-catalogue		3		3	2	60	36	18	18		24
3B 2	Educational Component 2 of GU-catalogue		4		4	2	60	36	18	18		24
	Total number of part 2.1		2		2	4	120	72	36	36	0	48
	2.2. Vocational training cycle	(Optic	nal s	ubjeto	s fron	ı Facu	lty cat	alogu	e)			
ПВ 1	Educational Component 1 of D-catalogue		5	5	5	4	120	72	36	36		48
ПВ 2	Educational Component 2 of D-catalogue		5	5	5	4	120	72	36	36		48
ПВ 3	Educational Component 3 of D-catalogue		5	5	5	4	120	72	18	54		48
ПВ 4	Educational Component 4 of D-catalogue		5	5	5	4	120	72	36	36		48
ПВ 5	Educational Component 5 of D-catalogue		6	6	6	4	120	72	27	9	36	48
ПВ 6	Educational Component 6 of D-catalogue		6	6	6	4	120	72	36	36		48
ПВ 7	Educational Component 7 of D-catalogue		6	6	6	4	120	72	27	27	18	48
ПВ 8	Educational Component 8 of D-catalogue		6	6	6	4	120	72	36	36		48
ПВ 9	Educational Component 9 of D-catalogue		6	6	6	4	120	72	36	36		48
ПВ 10	Educational Component 10 of D-catalogue		7	7	7	4	120	72	27	9	36	48
ПВ 11	Educational Component 11 of D-catalogue		7	7	7	4	120	72	36	36		48
ПВ 12	Educational Component 12 of D-catalogue		7	7	7	4	120	72	27	27	18	48
ПВ 13	Educational Component 13 of D-catalogue		8	8	8	4	120	72	36	36		48
ПВ 14	Educational Component 14 of D-catalogue		8	8	8	4	120	72	36	36		48
	Total number of part 2.2		14	14	14	56	1680	1008	450	450	108	672
	Total for the SELECTIVE educational components		16	14	16	60	1800	1080	486	486	108	720
	TOTAL	20	44	34	58	240	7200	3672	1557	1666	449	3528

Approved by University Academic Council, Meeting protoco	I № _3_ from March 15, 2021
Head of the DepartmentAnatoliy KRUC	нкоу
Dean of the Faculty (Director of the Institute)	_ Serhii DENYSIUK