

MODULAR EDUCATIONAL PROGRAM for recruitment to 2019-2020 academic year
Educational program 6B07204 - "Petroleum Engineering"

Group of educational programs 6B071 - Mining and extraction of minerals"

Form of study: full-time

Duration of study: 4 years

Academic degree: Bachelor of Engineering and Technology

Year of study	Discipline code	Name of disciplines	semester	Cycle	Credits	Total hours	classroom volume of lek/lab/pr	SRS	(including SRSF) in hours	Form of control	Competencies
Language Training module											
Required component											
1	LNG 1051	Beginner (A1)	1	G	6	180	0/0/3	135	E	GC 1,3,5,6,7,8	
	LNG 1052	Elementary English (A1)									
	LNG 1053	General English 1 (A2)									
	LNG 1054	General English 2 (A2)									
	LNG 1055	Academic English (B1)									
1	LNG 1056	Business English (B2)	2	G	6	180	0/0/3	135	E	GC 1,3,5,6,7,8	
	LNG 1052	Elementary English (A1)									
	LNG 1053	General English 1 (A2)									
	LNG 1054	General English 2 (A2)									
	LNG 1055	Academic English (B1)									
2	LNG 1056	Business English (B2)	3	G	6	180	0/0/3	135	E	GC 1,3,5,6,7,8	
	LNG 1057	Professional English (B2+)									
	LNG 1053	General English 1 (A2)									
	LNG 1054	General English 2 (A2)									
2	LNG 1055	Academic English (B1)	4	G	6	180	0/0/3	135	E	GC 1,3,5,6,7,8	
	LNG 1056	Business English (B2)									
	2111	Elective									
	LNG 1057	Professional English (B2+)									
1	LNG 101	Kazakh (Russian) language	1	G	4	120	0/0/2	75	E	GC 1,3,5,6,7,8	
	LNG 106	Business Kazakh (Russian) B2									
1	LNG101	Kazakh (Russian) language	2	G	4	120	0/0/2	135	E	GC 1,3,5,6,7,8	
	LNG106	Business Kazakh (Russian) B2									
Module of social disciplines											
Required component											
1	AAP122	Physical Culture I	1	G	2	60	0/0/2	30	E		
1	AAP118	Physical Culture II	2	G	2	60	0/0/2	30	E		
2	AAP122	Physical Culture III	3	G	2	60	0/0/2	30	E		
2	AAP132	Physical Culture IV	4	G	2	60	0/0/2	30	E		
1	HUM113	Modern History of Kazakhstan (state exam)	2	G	6	180	1/0/2	135	E	GC 4,8	
2	HUM124	Philosophy	3	G	6	180	2/0/1	135	E	GC 4,8	
1	SAF104	Industrial ecology and operational safety	1	B	6	180	1/0/2	135	E	GC 3,4,5,7	
Socio-political knowledge module											
Required component											
3	HUM126	Social-political knowledge	5	G	8	150	4/0/0	180	E	GC 2,3,8	
Module of physical and mathematical training, computer science and chemistry											
University component											
1	CHE558	Chemistry	2	B	6	180	2/1/0	135	E	GPC 3	
2	CSE174	Information and communication technologies	4	G	6	180	2/1/0	135	E	GPC 1,2	
Component of choice											
1	PHY110	Introduction to Physics	1	B	6	180	1/1/1	135	E	GPC 3	
	PHY111	Physics I									
1	MAT100	Algebra and mat. analysis	1	B	6	180	1/0/2	135	E	GPC 1,2	
	MAT101	Mathematics I									
1	PHY111	Physics I	2	B	6	180	1/1/1	135	E	GPC 3	
	PHY112	Physics II									
1	MAT101	Mathematics I	2	B	6	180	1/0/2	135	E	GPC 1,2	
	MAT102	Mathematics II									
2	MAT102	Mathematics II	3	B	6	180	1/0/2	135	E	GPC 1,2	
	MAT103	Mathematics III									
2	MAT103	Математика III	4	B	6	180	1/0/2	135	E	GPC 1,2	
	MAT105	Ordinary differential equations, MatLab									
Module of basic general technical training											
University component											
1	GEO116	General and structural geology	2	B	6	180	2/1/0	135	E	GPC 3, PC 2,3,4	
2	GEN104	Strength of materials	3	B	6	180	2/1/0	135	E	GPC 2,3,4	

2	CHE539	Chemistry of oil and gas	3	B	6	180	2/1/0	135	E	GPC 3
2	ELC103	Electrotechnics and microelectronics	3	B	6	180	2/1/0	135	E	GPC 3
2	PET133	Thermodynamics and heat engineering	4	B	6	180	1/0/2	135	E	GPC 3, PC 1
2	PET112	Fluid mechanics	4	B	6	180	1/1/1	135	E	GPC 3, PC 2,3
2	GEO134	Geology of oil and gas	4	B	6	180	2/1/0	135	E	GPC 3,4 PC 2,3,4,5,7
3	PET412	Oil and gas well drilling	5	B	5	150	2/1/0	105	E	GPC 4, PC 2,3,4
3	PET415	Reservoir fluid properties	5	B	5	150	2/1/0	105	E	GPC 3, PC 2,3
3	PET416	Reservoir engineering I: Primary recovery	5	B	5	150	1/0/2	105	E	PC 1,2,4,5,8
3	PET411	Reservoir rock properties	5	B	5	150	2/1/0	105	E	GPC 3, PC 2,3
3	PET418	Petroleum Engineering seminar	6	B	5	150	2/1/0	105	E	PC 1,2,4,5,8
3	PET422	Reservoir engineering II: Secondary and tertiary recovery	6	B	5	150	1/0/2	105	E	PC 1,2,4,5,8
3	PET424	Well log analysis	6	B	5	150	2/1/0	105	E	PC 1,2,3
Professional activity module										
University component										
1	PET103	Introduction to Major	1	S	6	180	1/1/1	135	E	GPC 1,2, PC 1
3	PET426	Well completion	6	S	5	150	2/0/1	105	E	GPC 3,4 PC 2,3,4,5,7
3	PET425	Petroleum Production Engineering	6	S	5	150	1/1/1	105	E	GPC 3,4 PC 2,3,4,5,7
4	PET436	Economic evaluation of oil and gas projects	7	S	5	150	1/0/2	105	E	GPC 1,3,4 PC 1,2,5,7
4	PET435	Oil and gas facilities design and operation	7	S	5	150	1/0/2	105	E	GPC 4, PC 2,3,4
4	PET441	Multidisciplinary petroleum project	8	S	5	150	2/1/0	105	E	GPC 3,4 PC 2,5,7,8
Component of choice										
3	PET417	Petroleum regulations and practices	5	S	5	150	2/0/1	105	E	GPC 2,3 PC 2,3,4,5
	PET414	Drilling solutions					2/0/1			GPC 2, PC 2,3,4,5
	PET419	Corrosion protection of oil and gas equipment					2/0/1			GPC 2,4, PC 2
	PET420	Natural gas engineering					2/0/1			PC 1,2,4,5
	PET427	Design and operation of oil and gas pipelines					1/0/2			GPC 4, PC 2,3,4
3	PET421	Reservoir geomechanics	6	S	5	150	2/0/1	105	E	GPC 2,3, PC 3,4,5,7
	PET423	Geostatistics					2/0/1			GPC 2,3, PC 3,4,5,7,8
	PET428	Design and operation of pump and compressor stations					1/0/2			GPC 4, PC 2,3,4,8
4	PET437	Well stimulation	7	S	5	150	2/0/1	105	E	GPC 2, PC 1,2,3,4
	PET433	Flow assurance					1/0/2			GPC 2,3 PC 3,5,6
	PET431	Reservoir engineering III: reservoir simulation					2/0/1			PC 1,2,4,5,8
4	PET432	Directional drilling	7	S	5	150	2/0/1	105	E	GPC 4, PC 2,3,4
	PET434	Design and operation of oil and gas storages					1/0/2			GPC 4, PC 2,3,4
	PET439	Artificial lift systems					1/1/1			GPC 3,4, PC 2,4
4	PET442	Well testing	7	S	5	150	2/1/0	105	E	GPC 1,2,3 PC 3,4,5,6
	PET440	Well workover					2/0/1			GPC 3, PC 3,4
	PET430	Computer - aided design					2/0/1			GPC 4, PC 2,3,4
4	PET438	Development of offshore fields	8	S	5	150	1/0/2	105	E	GPC 3,4 PC 1,2,5
	PET429	Multiphase flow systems					1/0/2			GPC 2,3, PC 5,6
Practice-oriented module										
Required component										
1	AAP101	Educational practice	2		2					GPC 1-4, PC 1-8
2	AAP141	Production practice I	4		4					GPC 1-4, PC 1-8
3	AAP166	Production practice II	6		8					GPC 1-4, PC 1-8
Module of final certification										
Required component										
	ECA003	Preparation and writing of a thesis (project)*	8	FC	6					GPC 1-4, PC 1-8
	ECA103	Defense of the thesis (project)*	8	FC	6					GPC 1-4, PC 1-8
Module of additional types of training										
Component of choice										
1	AAP107	Sports club sectional	5-7		0					
2-3	AAP500	Military affairs	3-6		0					
Number of credits for the entire period of study										
Cycles of disciplines										
Credits										
mandatory										
elective										
Total										
Cycle of general education disciplines										
Cycle of basic disciplines										
Cycle of profile disciplines										
Total for theoretical training:										
Final certification										
total:										

The decision of the Academic Council of Kazntu named after K.Satpayev. Protocol № 3 "25" 06 2021 r.

Decision of the Academic Council of the Institute _____, Protocol № 5 "24" 12 2021 r.

Vice-Rector for Academic Affairs

B.A.Zhautikov

Director of the Institute

A.H. Syzdykov

Head of the Department "Petroleum engineering"

G.Zh.Yeligbayeva

Representative of the Specialty Council from employers

N.A. Nysangaliev