

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN
SATPAYEV UNIVERSITY



MAJOR CURRICULUM for 2018-2019 academic year admission
5B070800- "Petroleum Engineering"

Full-time study

Study duration : 4 years

Academic degree: Bachelor of engineering and technology

Year of study	Code	Name of discipline	Cycle	Credits	lec/lab/pr	pre-requisites
1st semester						
1	LNG 105	English	G	3	0/0/3	Diagnostic test
	LNG 1051	Beginner (A1)				
	LNG 1052	Elementary English (A1)				
	LNG 1053	General English 1 (A2)				
	LNG 1054	General English 2 (A2)				
	LNG 1055	Academic English (B1)				
	LNG 1056	Business English (B2)				
	LNG 101	Kazakh (Russian) language	G	2	0/0/2	Diagnostic test
	LNG 106	Business Kazakh (Russian) B2				
	SAF104	Industrial ecology and operational safety	B	3	1/0/2	no
PHY111	Physics I	B	3	1/1/1	no	
MAT101	Mathematics I	B	3	1/0/2	no	
PET175	Basic of petroleum engineering	S	3	1/1/1	no	
Total:				17		
2nd semester						
1	LNG 105	English	G	3	0/0/3	Diagnostic test
	LNG 1052	Elementary English (A1)				
	LNG 1053	General English 1 (A2)				
	LNG 1054	General English 2 (A2)				
	LNG 1055	Academic English (B1)				
	LNG 1056	Business English (B2)				
	LNG 1057	Professional English (B2+)				
	LNG 101	Kazakh (Russian) language	G	2	0/0/2	Diagnostic test
	LNG 106	Business Kazakh (Russian) B2				
	HUM113	Contemporary history of Kazakhstan	G	2	1/0/1	no
PHY112	Physics II	B	3	1/1/1	PHY111	
MAT102	Mathematics II	B	3	1/0/2	MAT101	
CHE558	Chemistry	B	3	2/1/0	no	
GEO116	General and structural geology	B	3	2/1/0	no	
Total:				19		
3rd semester						
2	LNG 105	English	G	3	0/0/3	Diagnostic test
	LNG 1053	General English 1 (A2)				
	LNG 1054	General English 2 (A2)				
	LNG 1055	Academic English (B1)				
	LNG 1056	Business English (B2)				
	LNG 1057	Professional English (B2+)				
	2106	Electives (B2+)				
	HUM124	Philosophy	G	3	2/0/1	no
	GEN104	Strength of materials	B	3	2/1/0	PHY112
	ELC103	Electrotechnics and microelectronics	B	3	2/1/0	PHY112
MAT103	Mathematics III	B	3	1/0/2	MAT102	
CHE539	Chemistry of oil and gas	B	3	2/1/0	CHE558	
Total:				18		
4th semester						
2	LNG 105	English	G	3	0/0/3	Diagnostic test
	LNG 1054	General English 2 (A2)				
	LNG 1055	Academic English (B1)				
	LNG 1056	Business English (B2)				
	LNG 1057	Professional English (B2+)				
	2108	Элективы (B2+)				
	CSE174	Information and Communication Technologies	G	3	2/0/1	no
	MAT105	Differential equations. MathLab	B	3	1/0/2	MAT102, MAT103
	PET112	Fluid Mechanics	B	3	1/1/1	Flz 1204
	PET133	Thermodynamics and heat engineering	B	3	1/0/2	PHY112
GEO134	Geology of oil and gas	B	3	2/1/0	GEO126	
Total:				18		
5th semester						
3	OA 3215	Basics of automation	B	3	2/1/0	EM 2214
	PET101	Well - drilling in oil and gas industry	B	3	2/1/0	SM2211
	PET129	Reservoir Fluid properties	B	3	2/1/0	PET112
	PET124	Reservoir engineering I: Primary recovery	B	3	1/0/2	no
	PET176	Properties of rocks	B	3	2/1/0	no
	3302	Electives	S	3		
Total:				18		
6th semester						
3	MNG102	Financial analysis and valuation of projects	G	3	2/0/1	no
	PET125	Reservoir engineering II: Secondary and tertiary recovery	B	3	1/0/2	PET124
	PET106	Geophysical studies of reservoir parameters	B	3	2/1/0	GPH108
	PET134	Petroleum Production Engineering	S	3	1/1/1	OND 1301
	PET160	Well finishing	S	3	2/0/1	PET101
	3305	Electives	S	3		
3306	Electives	S	3			
Total:				21		
7th semester						
4	PET130	Petroleum Engineering seminar	B	3	2/1/0	no
	PET113	Multidisciplinary petroleum project	S	3	2/1/0	no
	PET169	Oil and gas facilities design and operation	S	3	1/0/2	no
	4309	Electives	S	3		
	4310	Electives	S	3		
4311	Electives	S	3			
Total:				18		
8th semester						
4	ECA 003	Preparation and writing of a thesis (project)	FA	6		
	ECA 103	Defense of the thesis (project)	FA	6		
Total:				12		

Additional academic programmes (AAP)				
Year of study	Code	Name of discipline	Credits	Semester
1	AAP106, 118	Physical training I, II	0	1-2
1	AAP101	Study practice	2	2
2	AAP109	Field Practice I	4	4
3	AAP103	Field Practice II	4	6
4		Complex test (EASP)		7
4	HUM113	Contemporary history of Kazakhstan	1	1-2
1	LNG101	Kazakh (Russian) language (Latin alphabet)	2	1-2
1		Military training	0	3-6

Total number of credits			
Cycle of disciplines	Credits		
	compulsory	elective	total
Cycle of general disciplines (G)	21	6	27
Cycle of basic disciplines (B)	69	0	69
Cycle of special disciplines (S)	15	18	33
Total of theoretical study:			105
Professional internship (AAP)	10	-	10
Extra education	12	-	12
Final attestation (FA)	3	-	3
Overall:			130

Decision of Academic council of KAZNRTU named after K.I.Satbayev. Minutes № 3, 25 06, 2021

Decision of Board of Studies of Institute. Minutes № 5, 24 12, 2020.

Vice-Rector for Academic Affairs

B.A. Zhautikov

Director of the Institute

A.H. Syzdykov

Head of the "Petroleum Engineering" department

G. Yeligbayeva

Representative of Specialty council

N.A. Nysangaliev

MINISTRY OF EDUCATION AND SCIENCE OF THE REPUBLIC OF KAZAKHSTAN
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MAJOR ELECTIVE DISCIPLINES for 2018-2019 academic year admission
SB070800 - "Petroleum Engineering"

Full-time study Study duration : 4 years Academic degree: bachelor of engineering and technology

		3th semester						
2	2106	LNG109	IELTS Preparation	G	3	0/0/3	LNG 1056	
		LNG110	Intercultural Communication					
		LNG117	Technical Writing					
		LNG118	Public speaking					
		LNG119	Productivity skills					
		LNG120	GRE preparation					
		LNG121	Academic Writing					
		Total:			3			
		4th semester						
2108	2108	LNG109	IELTS Preparation	G	3	0/0/3	LNG 1056	
		LNG110	Intercultural Communication					
		LNG117	Technical Writing					
		LNG118	Public speaking					
		LNG119	Productivity skills					
		LNG120	GRE preparation					
		LNG121	Academic Writing					
		Total:			3			
		5th semester						
3	3302	PET117	Petroleum regulations and practices	S	3	2/0/1	no	
		PET102	Drilling solutions			2/0/1	PET112	
		PET159	Corrosion protection of oil abd gas equipment			2/0/1	no	
		PET123	Natural gas engineering			2/0/1	PET133	
		PET170	Design and operation of oil and gfs pipelines			1/0/2	no	
		Total:			3			
		6th semester						
3305	3305	PET104	Reservoir geomechanics	S	3	2/0/1	PET101	
		PET105	Geostatistica			2/0/1	no	
		PED412	Oilfield equipment			2/0/1	ONGD2301	
3306	3306	PET171	Multiphase flow systems	S	3	1/0/2	PET124	
		PET172	Design and operation of pump and compressor stations			1/0/2	no	
		Total:			6			
		7th semester						
4	4309	PET212	Well stimulation	S	3	2/0/1	PET124	
		PET173	Flow assurance			1/0/2	PET124	
		PET126	Revervoir engineering III: reservoir simulation			2/0/1	PET125	
	4310	4310	PET1141	Directional drilling	S	3	2/0/1	PET101
			PET174	Design and operation of oil and gas storages			1/0/2	PET 172
			PET132	Artificial lift systems			1/1/1	PET125
	4311	4311	PET1071	Well testing	S	3	2/1/0	PET133
			PET118	Development of offshore fields			1/0/2	PET 134
			PET109	Well workover			2/0/1	PET101
			PET131	Computer - aided design			2/0/1	AUT109
			Total:			9		

Credits numbers of elective disciplines over the entire period of study	
Cycle of disciplines	credits
Cycle of general disciplines (G)	6
Cycle of basic disciplines (B)	0
Cycle of special disciplines (S)	18
Total:	24

By the decision of the Academic Council of the Institute Minutes № 5, dated 26/12 2020

Head of the department "Petroleum Engineering"

G. Yeligbayeva

Representative of Specialty council

N.A. Nysangaliev