



**SATBAYEV
UNIVERSITY**



APPROVE

Chairman of the Management Board
Rector of K.NRTU named after K.Satpayev
M.M. Begentaev

MODULAR EDUCATIONAL PROGRAM for recruitment to 2021-2022 academic year

Educational program 6B07204 - "Petroleum Engineering"

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

Form of study: distance

Duration of study: 3 years

Academic degree: Bachelor of Engineering and Technology

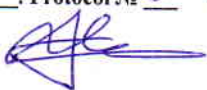
Year of study	Discipline code	Name of disciplines	semester	Cycle	Credits	Total hours	classroom volume of lek/lab/pr	SRS (including SRSP) in hours	Form of control	Competencies
Module of social disciplines										
Required component										
1	IDO293	Modern History of Kazakhstan (state exam)	1	G	5	150	1/0/2	105	E	GC 4,8
2	IDO717	Philosophy	4	G	5	150	1/0/2	105	E	GC 4,8
2	IDD170	Ecology and sustainable development	3	B	5	150	1/0/2	105	E	GC 3,4,5,7
1	IDD186	Fundamentals of Entrepreneurship, leadership and anti-corruption culture	1	G	3	90	1/0/1	60	E	GC 5,7,8,9
Socio-political knowledge module										
Required component										
1	IDD002	Sociology and political science	2	G	8	240	4/0/0	180	E	GC 2,3,8
Module of physical and mathematical training, computer science and chemistry										
University component										
1	IDD162	Mathematics	1	B	5	150	1/0/2	105	E	GPC 1,2
1	IDD161	Physics	1	B	5	150	1/1/1	105	E	GPC 3
1	IDD165	General chemistry	1	B	5	150	1/1/1	105	E	GPC 3
2	IDD268	Electromagnetism.Optics.	3	B	5	150	2/0/1	105	E	GPC 3
Module of basic general technical training										
University component										
1	IDO630	Engineering and computer graphics	2	B	5	150	1/0/2	105	E	GPC 1,2,4
1	IDD167	Strength of materials	1	B	5	150	2/0/1	105	E	GPC 2,3,4
1	IDD196	Chemistry of oil and gas	2	B	5	150	2/0/1	105	E	GPC 3
1	IDD192	Solving the problems of oil and gas engineering	1	B	5	150	2/0/1	105	E	GPC 3, PC 1,2
2	IDD 199	Reservoir rock properties	3	B	5	150	2/0/1	105	E	GPC 3, PC 2,3
1	IDD197	Thermodynamics and heat engineering	2	B	5	150	2/0/1	105	E	GPC 3, PC 1
1	IDD198	Fluid mechanics	2	B	5	150	2/0/1	105	E	GPC 3, PC 2,3
2	IDD308	Geology of oil and gas	3	B	5	150	2/0/1	105	E	GPC 3,4 PC 2,3,4,5,7
2	IDD195	Oil and gas well drilling	4	B	5	150	2/1/0	105	E	GPC 3, PC 2,3,4
2	IDD156	General and structural geology	3	B	5	150	2/0/1	105	E	GPC 3, PC 2,3
2	IDD200	Revervoir engineering I: Primary recovery	3	B	5	150	2/0/1	105	E	PC 1,2,4,5,8
1	IDD193	Petroleum Engineering seminar	2	B	5	150	1/0/2	105	E	PC 1,2,4,5,8
2	IDD201	Revervoir engineering II: Secondary and tertiary recovery	4	B	5	150	2/0/1	105	E	PC 1,2,4,5,8
2	IDD204	Well log analysis	3	B	5	150	2/0/1	105	E	PC 1,2,3
2	IDD205	Fundamentals of Data Analytics and Programming for Petroleum Engineers	4	B	5	150	1/0/2	105	E	GPC 2,3,4 PC 1,2,3
Professional activity module										
University component										
2	IDD195	Oil and gas well drilling	4	G	5	150	2/0/1	105	E	GPC 4, PC 2,3,4
3	IDD210	Well completion	5	G	5	150	2/0/1	105	E	GPC 3,4 PC 2,3,4,5,7
2	IDD194	Petroleum Production Engineering	4	G	5	150	2/0/1	105	E	GPC 3,4 PC 2,3,4,5,7
3	IDD202	Economic evaluation of oil and gas projects	5	G	5	150	1/0/2	105	E	GPC 1,3,4 PC 1,2,5,7
3	IDD207	Oil and gas facilities design and operation	5	G	5	150	2/0/1	105	E	GPC 4, PC 2,3,4
3	IDD211	Multidisciplinary petroleum project	5	G	5	150	2/0/1	105	E	GPC 3,4 PC 2,5,7,8
Component of choice										
3	IDD212	Petroleum regulations and practices	5	G	5	150	2/0/1	105	E	GPC 2,3 PC 2,3,4,5
	IDD213	Drilling solutions					2/0/1			GPC 2, PC 2,3,4,5
	IDD214	Natural gas engineering					2/0/1			PC 1,2,4,5
	IDD208	Design and operation of oil and gas pipelines					2/0/1			GPC 4, PC 2,3,4
3	IDD223	Development of offshore fields	5	G	5	150	2/0/1	105	E	GPC 3,4 PC 1,2,5
	IDD224	Corrosion protection of oil and gas equipment					2/0/1			GPC 2,4, PC 2
	IDD225	Reservoir geomechanics					2/0/1			GPC 2,3, PC 3,4,5,7
	IDD226	Geostatistics					2/0/1			GPC 2,3, PC 3,4,5,7,8
	IDD209	Design and operation of pump and compressor stations					2/0/1			GPC 4, PC 2,3,4,8
	IDD220	Multiphase flow systems					2/0/1			GPC 2,3, PC 5,6
3	IDD217	Directional drilling	5	G	5	150	2/0/1	105	E	GPC 4, PC 2,3,4
	IDD309	Design and operation of oil and gas storages					2/0/1			GPC 4, PC 2,3,4
	IDD218	Artificial lift systems					2/0/1			GPC 3,4, PC 2,4
3	IDD215	Well stimulation	6	G	5	150	2/0/1	105	E	GPC 2, PC 1,2,3,4
	IDD216	Flow assurance					2/0/1			GPC 2,3 PC 1,2,3,5,6
	IDD269	Revervoir engineering III: reservoir simulation					2/0/1			PC 1,2,4,5,8

3	IDD221	Well testing	6	G	5	150	2/0/1	105	E	GPC 1,2,3 PC 3,4,5,6
	IDD222	Well workover					2/0/1			GPC 3, PC 3,4
	IDD219	Computer - aided design					2/0/1			GPC 4, PC 2,3,4
Practice-oriented module										
Required component										
1	AAP109	Production practice I	2		2					GPC 1-4, PC 1-8
2	IDO805	Production practice II	4		4					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
Number of credits for the entire period of study										
Cycles of disciplines			Credits							
			mandatory	elective	Total					
Cycle of general education disciplines			21		21					
Cycle of basic disciplines			106		106					
Cycle of profile disciplines			30	25	55					
Total for theoretical training:			157	25	182					
Final certification			12	0	12					
total:			169	25	194					

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

Decision of the Academic Council of the Institute _____, Protocol № 5 "24" 12 2020 г.

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