### **Petroleum Engineering**

(Program Code: 081502)

#### **1. Program Objectives**

The educational aim of Petroleum Engineering specialty is to cultivate qualified personnel with advanced technology and engineering knowledge. To develop all-round morality, intellectuality and physical fitness, they can adapt to the needs of modern petroleum industrial development. They don't gain just the basic training on petroleum engineering, but also can be engaged in petroleum engineering design, operation and construction, production and management, scientific development and applied research etc. when they graduate from the university.

#### 2. Program Requirements

Graduates should acquire the following knowledge and capabilities.

1) Graduates will have solid foundation on math, physics, chemistry, mechanics and geology etc. They are able to use the basic Chinese to read Chinese books and magazines of their own specialty and have some skills such as listening, speaking, reading, writing and translation etc.

2) Graduates will grasp the basic theory and professional knowledge of engineering science required in their own specialty. They will possess preliminary capability to use basic applied theory and knowledge to go on oil and gas well drilling and recovering engineering design and oil and gas well development project design, to analyze and solve practical problems on petroleum engineering, and to make technological improvement, scientific development and applied research.

3) Graduates will have fairly strong experiment test, calculation and expression abilities and master document retrieval and other method to acquire scientific and technological information.

4) Graduates will have a better self-study and work adaptation capability, computer operation and application ability and innovative consciousness.

5) Graduates will have insight and ability to use systematic engineering ideas and modern operational knowledge to go on production and organizational management.

# **3. Graduation Requirements and Program Credits**

Cate	gory	Course Credits	Credit Hours	Remarks
Compulsory courses	Theory studies	131	2104	Including 96 CHs of experiment and 8 (40) CHs of Computer lab
	Experiment	2.0	48	
	Practice	25.0	25 weeks	
Selective	courses	15.0	240	
Graduation requirements	Scheme, and pass 2. Those who meet	HSK-3 in order to the graduation requ	graduate. airements will be a	gether with 10 credits required in the Supplementary Program warded a Bachelor of Engineering. Chinese is also required.

## 4. Curriculum

# 1) Compulsory Courses

				A	Allocation of	Semesters/Credits												
Course Code	Course Name	Credits	Credit Hours	e	Experiment	Computer lab	Practice		1 <sup>st</sup> year			2 <sup>nd</sup> year			3 <sup>rd</sup> year			/ear
								1	2	<b>S</b> 1	3	4	S2	5	6	<b>S</b> 3	7	8
2090199	Primary Oral Chinese (2-1)	4.0	64	64				4.0										
2090299	Primary Chinese reading (2-1)	4.0	64	64				4.0										
2092099	Moral Education and Law	1.0	16	16				1.0										
0711299	Computer Program Design	3.0	48	48		(16)		3.0										
2090199	Primary Oral Chinese (2-2)	4.0	64	64					4.0									
2090299	Primary Chinese reading (2-2)	4.0	64	64					4.0									
0711399	Computer Technology	1.0	24	24		(24)			1.0									
2090599	Intermediate Chinese (2-1)	4.0	64	64							4.0							

2090499	Survey of China (2-1)	3.0	48	48					3.	)					
2090499	Survey of China (2-2)	3.0	48	48						3.0					
2090599	Intermediate Chinese (2-2)	4.0	64	64						4.0					
2090699	Advanced Chinese (2-1)	4.0	64	64								4.0			
2090699	Advanced Chinese (2-2)	4.0	64	64									4.0		
0434199	Engineering Drawing	4.0	64	64			4.0							 	
0910199	Advanced Math (2-1)	6.0	96	96			6.0							 	
0910199	Advanced Math (2-2)	5.0	80	80				5.0						 	
0930199	University Physics (2-1)	4.0	64	64				4.0						 	
0940199	Physics Experiments (2-1)	1.0	24		24			1.0						 	
0960199	General Chemistry	4.0	64	54	10			4.0				-	-	 	
0930199	University Physics (2-2)	3.5	56	56					3.:	5				 	
0940199	Physics Experiments (2-2)	1.0	24		24				1.0	)		-			
0910399	Linear Algebra	3.0	48	48					3.	)		-			
0231499	Applied physical chemistry	3.0	48	40	8				3.	)		-			
0110699	Fundamentals of Geology	3.5	56	40	16					3.5		-			
0222099	Fluid Mechanics	4.5	72	68	4					4.5		-			
0640199	Engineering Mechanics	4.0	64	60	4					4.0		-			
0210999	Petrophysics	4.0	64	50	14					4.0		-			
0191299	Geology Practice	2.0	2 weeks			2 weeks					2.0	-			
0111499	Geology of Oilfield Exploitation	3.0	48	46	2							3.0			
0540299	Electric Electronics (1)	3.5	56	46	10							3.5			
0122999	Well Logging and Comprehensive Interpretation	3.0	48	48								3.0			
0210899	Fluid Flow in Porous Medium	3.0	48	48								3.0			
0211299	Rock Mechanics	2.5	40	40								2.5			
0230199	Oilfield Chemistry	3.5	56	40	16							3.5			
0210299	Drilling Engineering	4.5	72	66	6								4.5		
0210399	Production Engineering	4.5	72	66	6								4.5		

0210499	Reservoir Engineering	4.5	72	72					4.5			
0299399	Oilfield Practice	5.0	5 weeks			5 weeks				5.0		
0290299	Petroleum Engineering Design	5.0	5 weeks			5 weeks					5.0	
0230399	Theory of Enhanced Recovery	2.5	40	40							2.5	
0212199	Numerical Reservoir Simulation	2.5	40	32	8						2.5	
0212699	Well Stimulation	2.5	40	40							2.5	
0299999	Thesis Work	13.0	13weeks			13weeks						13.0

### **2)** Selective Courses

	Course Name	Credits		Allocation of credit hours				Course Type										
Course Code			Credit Hours	t enn	ment	b b	tice	1 <sup>st</sup> year		1 <sup>st</sup> year			1 <sup>st</sup> year			1 <sup>st</sup> year		
coue				Lecture	Experiment	Computer lab	Practice	1	2	<b>S</b> 1	3	4	S2	5	6	<b>S</b> 3	7	8
0810599	Technological Economics	3	48	48											3.0			
0840199	Management Introduction	2.0	32	32											2.0			
0201499	HSE in Petroleum Engineering	2.5	40	40											2.5			
0211399	Theory and Application of Water-jet flow	2.5	40	40											2.5			
0230499	Protection of Petroleum Formation	2.5	40	40													2.5	
0212899	Theory and Technology of Directional Drilling	2.5	40	40													2.5	
0210599	Gas Reservoir Engineering	2.5	40	40													2.5	
0219099	Artificial Lift Technology	2.5	40	40													2.5	
0210699	Gas Production Engineering	2.5	40	40														2.5
0211699	New Drilling Technology	2.5	40	40														2.5
0211599	Principles of Modern Well Test Interpretation	2.5	40	34		6												2.5

Notes: Students should obtain at least 15 credits for selective courses, including more than 10 credits from major courses.