

**COURSE OF STUDIES FOR B.E. PETROLEUM & NATURAL GAS  
(FROM 13-BATCH & ONWARDS)**

**First Semester**

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-101	Fundamentals of Petroleum Engg.	3	0	3	100	0
2	PG-111	Applied Chemistry	3	0	3	100	0
3	MTH-102	Applied Calculus	3	0	3	100	0
4	SS-111	Islamic Studies/Ethics	2	0	2	50	0
5	PS-106	Pakistan Studies	2	0	2	50	0
6	ENG-101	Functional English	3	0	3	100	0
Total			16	0	16	500	0

**Second Semester**

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-121	Applied Geology	3	1	4	100	50
2	PG-131	Engineering Drawing & Graphics	2	1	3	50	50
3	PG-141	Applied Physics	3	1	4	100	50
4	ENG-111	Communication Skills	2	0	2	50	0
5	MTH-111	Linear Algebra & Analytical Geometry	3	0	3	100	0
6	ME-191	Workshop Practice	0	2	2	0	100
Total			13	5	18	400	250

**Third Semester**

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-201	Stratigraphy & Structural Geology	2	0	2	50	0
2	CS-831	Computer Programming & Software Application	2	1	3	50	50
3	EL-215	Introduction to Electrical Engg.	2	1	3	50	50
4	MTH-223	Differential Equations & Complex Variables	3	0	3	100	0
5	CE-260	Fluid Mechanics	2	1	3	50	50
6	ENG-215	Technical Writing & Presentation Skills	2	0	2	50	0
Total			13	3	16	350	150

**Fourth Semester**

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-211	Drilling Engineering-I	3	1	4	100	50
2	PG-221	Petroleum Geology & Geophysical Exploration	3	1	4	100	50
3	PG-231	Applied Thermodynamics	2	0	2	50	0
4	CE-280	Mechanics of Materials	2	1	3	50	50
5	MTH-224	Applied Statistics	3	0	3	100	0
Total			13	3	16	400	150

### Fifth Semester

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-301	Petrophysics	2	1	3	50	50
2	PG-311	Natural Gas Engineering	3	1	4	100	50
3	PG-321	Organizational Behaviour	3	0	3	100	0
4	PG-331	Properties of Reservoir Fluids	3	1	4	100	50
5	PG-341	Drilling Engineering-II	3	1	4	100	50
		Total	14	4	18	450	200

### Sixth Semester

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-351	Well Logging	2	1	3	50	50
2	PG-361	Reservoir Engineering	3	1	4	100	50
3	PG-371	Petroleum Refinery Engineering	3	1	4	100	50
4	PG-381	Environment & Safety Management	3	0	3	100	0
5	MTH-321	Applied Numerical Methods	2	1	3	50	50
		Total	13	4	17	400	200

### Seventh Semester

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-401	Well Testing	3	1	4	100	50
2	PG-411	Petroleum Production Engineering-I	3	1	4	100	50
3	PG-421	Reservoir Simulation	3	1	4	100	50
4	PG-431	Instrumentation & Process Control	3	1	4	100	50
5	PG-441	Project Planning & Management	2	0	2	50	0
		Total	14	4	18	450	200

### Eighth Semester

S#	Course Code	Name of subject	Credit Hour		Total credit hour	Maximum marks	
			Th	Pr		Th	Pr
1	PG-451	Principles of Enhanced Oil Recovery	3	1	4	100	50
2	PG-461	Petroleum Production Engineering-II	3	1	4	100	50
3	PG-471	Gas Reservoir Engineering	3	1	4	100	50
4	PG-481	Petroleum Economics	3	0	3	100	0
5	PG-491	Project	0	2	2	0	200
		Total	12	5	17	400	350