

Undergraduate Courses – BSc Petroleum Engineering

Year One Semester One

Course No.	Course Name	T	P	C
PE 141	Basic French I	1	1	1
PE 151	Applied Electricity	2	2	3
PE 153	Linear Algebra and Trigonometry	2	2	3
PE 155	Technical Drawing	1	3	2
PE 157	Communication Skills I	2	1	2
PE 159	Introduction to Computing	1	2	2
PE 161	Physical and Structural Geology	2	1	2
PE 167	Basic Mechanics	2	2	3
Totals		13	14	18
Credit Hours		18		

Year One Semester Two

Course No.	Course Name	T	P	C
PE 142	Basic French II	1	1	1
PE 150	Calculus	2	1	2
PE 152	Strength of Materials	2	2	3
PE 154	Physical and Analytical Chemistry	2	1	2
PE 156	Engineering Drawing	2	2	3
PE 158	Communication Skills II	2	1	2
PE 162	Applied Electronics	2	1	2

PE 164	Introduction to Oil and Gas Industry	2	1	2
PE 166	Petroleum Geology	2	1	2
Totals		17	11	19
Cumulative Credit Hours		37		

Year Two Semester One

Course No.	Course Name	T	P	C
PE 251	General Psychology	1	1	1
PE 255	Mathematical Methods	2	1	2
PE 257	Organic Chemistry	2	1	2
PE 261	Principles of Surveying	2	4	3
PE 263	Chemical Thermodynamics	2	2	3
PE 265	Drilling Operations and Equipment	2	1	2
PE 267	Oil and Gas Exploration	2	1	2
PE 269	Properties of Reservoir Rocks and Fluids	2	2	3
Totals		15	13	18
Cumulative Credit Hours		55		

Year Two Semester Two

Course No.	Course Name	T	P	C
PE 250	Mathematical Analysis	2	1	2
PE 252	Engineering Practice	0	4	1
PE 256	Critical Thinking and Integrated Thought	2	1	2
PE 258	Numerical Methods	2	2	3
PE 264	Fluid Mechanics	2	2	3

PE 272	Reservoir Engineering I	2	2	3
PE 274	Principles of Natural Gas Engineering	2	1	2
PE 276	Drilling Engineering I	2	2	3
Totals		14	14	19
Cumulative Credit Hours		74		

Year Three Semester One

Course No.	Course Name	T	P	C
PE 351	Computer Programming	1	2	2
PE 361	Probability and Statistics	2	1	2
PE 363	Well Logging	2	2	3
PE 365	Drilling Engineering II	2	2	3
PE 367	Production Operations and Equipment	2	1	2
PE 371	Petroleum Engineering Laboratory Practices	1	4	2
PE 373	Reservoir Engineering II	2	2	3
Totals		12	14	17
Cumulative Credit Hours		91		

Year Three Semester Two

Course No.	Course Name	T	P	C
PE 354	Business Entrepreneurship	2	0	2
PE 356*	Field Trip and Technical Report Writing	1	1	1
PE 360	Gathering and Transportation of Oil and Gas	2	2	3
PE 362	Environment, Health and Safety in Oil and Gas Ind.	2	2	3
PE 364	Well Test Analysis	2	2	3
PE 370	Computer Applications in Petroleum Eng.	1	4	2
PE 372	Enhanced Oil Recovery Techniques	2	2	3
PE 374	Petroleum Production Engineering	2	2	3
Totals		14	15	20
Cumulative Credit Hours		111		

**Field Trips may be organised in either semester but the results shall be credited only at the second semester.*

Year Four Semester One

Course No.	Course Name	T	P	C
PE 451	Research Methods and Ethics in Science	2	0	2
PE 455	Principles of Artificial Intelligence	1	4	2
PE 459	Operations Research	2	2	3
PE 461	Principles of Economics	2	0	2
PE 467	Instrumentation and Control	2	2	3
PE 469	Oil and Gas Project Evaluation	2	2	3
PE 471	Principles of Refining and Petrochemical Eng.	2	2	3
Totals		13	12	18
Cumulative Credit Hours		129		

Year Four Semester Two

Course No.	Course Name	T	P	C
PE 450	Project Work	0	12	4
PE 452	Colloquium/Seminar	1	1	1
PE 458	Organisational Leadership and Management	2	0	2
PE 460	Corporate Social Responsibility	2	0	2
PE 464	Alternative Energy Sources	2	1	2
PE 466	Law of Contract and Torts	2	0	2
PE 468	Petroleum Upstream Laws and Regulations	2	1	2
Totals		11	15	15
Cumulative Credit Hours		144		

Undergraduate Courses – BSc Natural Gas Engineering

Year One Semester One

Course No.	Course Name	T	P	C
NG 141	Basic French I	1	1	1
NG 151	Applied Electricity	2	2	3
NG 153	Linear Algebra and Trigonometry	2	2	3
NG 155	Technical Drawing	1	3	2
NG 157	Communication Skills I	2	1	2
NG 159	Introduction to Computing	1	2	2
NG 161	Physical and Structural Geology	2	1	2
NG 167	Basic Mechanics	2	2	3
Totals		13	14	18
Credit Hours		18		

Year One Semester Two

Course No.	Course Name	T	P	C
NG 142	Basic French II	1	1	1
NG 150	Calculus	2	1	2
NG 152	Strength of Materials	2	2	3
NG 154	Physical and Analytical Chemistry	2	1	2
NG 156	Engineering Drawing	2	2	3
NG 158	Communication Skills II	2	1	2
NG 162	Applied Electronics	2	1	2

NG 164	Introduction to Oil and Gas Industry	2	1	2
NG 166	Petroleum Geology	2	1	2
Totals		17	11	19
Cumulative Credit Hours		37		

Year Two Semester One

Course No.	Course Name	T	P	C
NG 251	General Psychology	1	1	1
NG 255	Mathematical Methods	2	1	2
NG 257	Organic Chemistry	2	1	2
NG 261	Principles of Surveying	2	4	3
NG 263	Chemical Thermodynamics	2	2	3
NG 265	Drilling Operations and Equipment	2	1	2
NG 267	Oil and Gas Exploration	2	1	2
NG 269	Properties of Reservoir Rocks and Fluids	2	2	3
Totals		15	13	18
Cumulative Credit Hours		55		

Year Two Semester Two

Course No.	Course Name	T	P	C
NG 250	Mathematical Analysis	2	1	2
NG 252	Engineering Practice	0	4	1
NG 256*	Critical Thinking and Integrated Thought	2	0	2
NG 258	Numerical Methods	2	2	3
NG 264	Fluid Mechanics	2	2	3
NG 266	Drilling Engineering I	2	2	3
NG 272	Gas Engineering Laboratory Practices	1	4	2

NG 274	Gas Reservoir Engineering I	2	2	3
Totals		13	16	19
Cumulative Credit Hours		73		

* Field Trips may be organised in either semester but the results shall be credited only at the second semester.

Year Three Semester One

Course No.	Course Name	T	P	C
NG 351	Computer Programming	1	2	2
NG 361	Probability and Statistics	2	1	2
NG 363	Well Logging	2	2	3
NG 365	Drilling Engineering II	2	2	3
NG 367	Production Operations and Equipment	2	1	2
NG 371	Natural Gas Processing	2	1	2
NG 373	Gas Reservoir Engineering II	2	2	3
NG 375	Petroleum Refining Technology	2	1	2
Totals		15	12	19
Cumulative Credit Hours		92		

Year Three Semester Two

Course No.	Course Name	T	P	C
NG 352	Public Relations	2	0	2
NG 356*	Field Trip and Technical Report Writing	1	1	1
NG 360	Gathering and Transportation of Oil and Gas	2	2	3
NG 362	Environment, Health and Safety in Oil and Gas Ind.	2	2	3
NG 364	Well Test Analysis	2	1	2
NG 370	Computer Applications in Natural Gas Eng.	1	4	2
NG 372	Natural Gas Synthesis	2	1	2

NG 374	Gas Production Engineering	2	2	3
Totals		14	13	18
Cumulative Credit Hours		110		

* Field Trips may be organised in either semester but the results shall be credited only at the second semester.

Year Four Semester One

Course No.	Course Name	T	P	C
NG 451	Research Methods and Ethics in Science	2	0	2
NG 455	Applied Artificial Intelligence	1	4	2
NG 459	Operations Research	2	2	3
NG 461	Principles of Economics	2	0	2
NG 467	Instrumentation and Control	2	2	3
NG 469	Oil and Gas Project Evaluation	2	2	3
NG 471	Natural Gas Utilisation and Marketing	2	2	3
Totals		13	12	18
Cumulative Credit Hours		128		

Year Four Semester Two

Course No.	Course Name	T	P	C
NG 450	Project Work	0	12	4
NG 452	Colloquium/Seminar	1	1	1
NG 454	Business Entrepreneurship	2	0	2
NG 458	Principles of Management	2	0	2
NG 460	Corporate Social Responsibility	2	0	2
NG 464	Alternative Energy Sources	2	1	2
NG 466	Law of Contract and Torts	2	0	2

NG 468	Petroleum Upstream Laws and Regulations	2	1	2
Totals		13	15	17
Cumulative Credit Hours		145		