

Typical Plan for BSc Program – Preparatory Year

Petroleum and Natural Gas Engineering

Level 1			
Code & #	Course	H(X-Y-L)	Requisites
MATH 140	Introductory mathematics	2(2-1-0)	---
Health 14x	Health & fitness	2(2-1-0)	---
ENG 140	English language -1-	8(20-0-0)	---
CI 140	Learning, thinking & research skills	3(3-1-0)	---
Total		15	

Level 2			
Code & #	Course	H(X-Y-L)	Requisites
IT 140	Computer skills	3(3-1-0)	---
SCS 140	Communication skills	2(2-1-0)	---
MATH 150	Calculus	3(3-1-0)	MATH 140
ENG 15x	English language -2 -	8(20-0-0)	---
Total		16	

Level 3			
Code & #	Course	H(X-Y-L)	Requisites
CHEM 101	General Chemistry	4(3-0-2)	---
PHYS 103	General Physics -1-	4(3-0-2)	---
MATH 106	Integral Calculus	3(3-2-0)	MATH 150 (Pre-)
MATH 107	Algebra and Analytical Geometry	3(3-2-0)	MATH 150 (Pre-)
ENGL 107	Technical Writing	3(3-0-0)	---
Total		17	

Level 4			
Code & #	Course	H(X-Y-L)	Requisites
IC 101	Introduction to Islamic Culture	2(2-0-0)	---
ARAB 101	Language Skills	2(2-0-0)	---
PHYS 104	General Physics -2-	4(3-0-2)	---
GE 104	Basics of Engineering Drawing	3(1-0-4)	---
ENGL 108	Communication Skills for Engineers	3(3-0-0)	---
MATH 203	Calculus for Engineering Students	3(3-2-0)	MATH 106 (Pre-) MATH 107 (Pre-)
Total		17	

Level 5			
Code & #	Course	H(X-Y-L)	Requisites
IC 102	Islam and Society	2(2-0-0)	---
GE 105	Introduction to Engineering Design	2(1-1-2)	GE 104 (Pre-)
GE 201	Statics	3(3-1-0)	MATH 106 (Pre-) MATH 107 (Pre-)
GE 209	Computer Programming	3(2-0-2)	---
PGE 251	Introduction to Petroleum & Natural Gas Engineering	2(2-1-0)	---
PGE 361	Reservoir Rock Properties and Fluid Flow	2(2-1-0)	PGE 251 (Co-)
PGE 362	Reservoir Fluid Properties	2(2-1-0)	PGE 251 (Co-)
Total		16	

Level 6			
Code & #	Course	H(X-Y-L)	Requisites
ARAB 103	Expository Writing	2(2-0-0)	---
MATH 204	Differential Equations	3(3-2-0)	MATH 203 (Pre-)
CHE 312	Momentum Transport Operations for Petroleum and Natural Gas Engineering Students	3(3-1-0)	---
PGE 365	Reservoir Engineering Laboratory	1(0-0-3)	PGE 361 (Pre-) PGE 362 (Co-)
PGE 391	Principles of Petroleum Geology	3(3-1-0)	PGE 251 (Pre-)
IC 103	The Islamic Economic System	2(2-0-0)	---
ME 340	Mechanical Engineering for Petroleum Students	3(3-1-0)	GE 201 (Pre-)
Total		17	

Level 7			
Code & #	Course	H(X-Y-L)	Requisites
IC 104	Fundamentals of the Islamic Political System	2(2-0-0)	---
GE 404	Engineering Management	2(2-1-0)	---
PGE 490	Petroleum & Natural Gas Exploration -1-	3(3-1-0)	PGE 391 (Pre-)
PGE 460	Petroleum Reservoir Engineering	3(3-1-0)	PGE 362 (Pre-) PGE 365 (Pre-)
CHE 304	Thermodynamics for Petroleum and Natural Gas Engineering Students	2(2-1-0)	---
PGE 471	Drilling Engineering -1-	2(2-1-0)	PGE 490 (Co-)
STAT 324	Engineering Probability and Statistics	3(2-2-0)	---
Total		17	

Level 8			
Code & #	Course	H(X-Y-L)	Requisites
GE 302	Industry & Environmental	2(2-0-0)	PHYS 104 (Pre-) CHEM 101 (Pre-) MATH 107 (Pre-)
MATH 254	Numerical Methods	3(3-2-0)	MATH 107 (Pre-)
PGE 472	Drilling Engineering -2-	2(2-1-0)	PGE 471 (Pre-) PGE 494 (Co-)
PGE 481	Production of Naturally Flowing Wells	3(3-1-0)	PGE 471 (Pre-)
PGE 366	Natural Gas Reservoir Engineering	2(2-1-0)	PGE 362 (Pre-) PGE 365 (Pre-)
PGE 480	Petroleum Production Engineering Laboratory	1(0-0-3)	PGE 481 (Co-)
PGE 494	Petroleum & Natural Gas Exploration -2-	2(2-1-0)	PGE 490 (Pre-)
PGE 457	Computer Applications in Petroleum and Natural Gas Engineering	2(1-2-0)	PGE 460 (Pre-) PGE 366 (Co-)
Total		17	

Level 9			
Code & #	Course	H(X-Y-L)	Requisites
PGE 491	Petroleum and Natural Gas Economics	2(2-1-0)	PGE 496 (Co-)
PGE 455	Transportation & Storage of Petroleum and Natural Gas	2(2-1-0)	PGE 481 (Pre-)
PGE 477	Drilling Engineering Laboratory	1(0-0-3)	PGE 472 (Pre-)
PGE 492	Well Logging	3(3-1-0)	PGE 472 (Pre-)
PGE 484	Natural Gas Production Engineering	3(3-1-0)	PGE 366 (Pre-)
PGE 482	Artificial Lift Methods and Surface Operations	2(2-1-0)	PGE 481 (Pre-)
PGE 452	Seminar	1(1-0-0)	PGE 496 (Co-)
PGE 496	Graduation Project -1	2(2-0-0)	Comp. 131 credits
Total		16	

Level 10			
Code & #	Course	H(X-Y-L)	Requisites
PGE 465	Improved Oil Recovery	2(2-1-0)	PGE 460 (Pre-)
PGE 489	Well Stimulation and Sand Production Management	2(2-1-0)	PGE 482 (Pre-)
PGE 478	Directional & Horizontal Drilling and Well Control	3(3-1-0)	PGE 472 (Pre-)
PGE 467	Reservoir Simulation	3(3-1-0)	PGE 460 (Pre-) MATH 204 (Pre-)
PGE 493	Well Test Analysis	3(3-1-0)	PGE 460 (Pre-)
PGE 497	Graduation Project -2	2(2-0-0)	PGE 496 (Pre-)
PGE 999	Summer Training	0	Complete 96 credits
Total		15	