

# **Abu Dhabi Polytechnic**

## **Petroleum Engineering Technology**

### Curriculum and Study Plan

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

**Study Plan: Applied Bachelors in Petroleum Engineering Technology with Minor in Oil  
& Gas Process Engineering:**

1 <sup>st</sup> Year (Freshman)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
<b>Semester 1</b>	MATH100	Pre-calculus	4		
	CHEM111	Chemistry I	3		
	CHEM111P	Chemistry I Lab	1		CHEM111
	ICT110	Intro. To Progr. & Problem Solving	3		
	ENGL111	English Comm. Skills	3		
	PHYS111	Physics I	3		
	PHYS111P	Physics I Lab	1		PHYS111
	<b>Total Credit Hours</b>			<b>14</b>	
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
<b>Semester 2</b>	MATH111	Calculus I	3	MATH100	
	CHEM112	Chemistry II	3	CHEM111	
	CHEM112P	Chemistry II Lab	1		CHEM112
	PET110	Intro. to Petroleum Engineering	3		
	ENGL112	Technical English Skills	3	ENGL111	
	PHYS112	Physics II	3	PHYS111	
	PHYS112P	Physics II Lab	1		PHYS112
	<b>Total Credit Hours</b>			<b>17</b>	
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
<b>Summer</b>	MATH112	Calculus II	3	MATH111	
	PET120	Petroleum Geology	3	PET110	
	PET120P	Petroleum Geology Lab	1		PET120
	ENG113	Eng. Drawing	2		
	ENG126	Thermodynamics	3	PHYS111, CHEM112, MATH111	
	<b>Total Credit Hours</b>			<b>12</b>	

2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	ENG120P	Mechanical Workshop	1		
	MATH213	Differential Equations	3	MATH112	
	ENG114	Indust. Safety & Pro Ethics	2		
	PET209	Reservoir Rock Properties	2	PET120	
	PET209P	Reservoir Rock Properties Lab	1		PET209
	ENGL113	English for Oil & Gas	3	ENGL112	
	ENG224	Statics & Strength of Materials	3	PHYS112, MATH111	
	ENG227	Fluid Flow & Heat Transfer	3	ENG126, MATH111	
<b>Total Credit Hours</b>			<b>18</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	MATH211	Linear Algebra	3		
	PET225	Drilling Technology 1	3	PET209	
	PET225P	Drilling Technology 1 Lab	1		PET225
	PET216	Reservoir Fluid Properties	2	ENG126, PET110	
	PET216P	Reservoir Fluid Properties Lab	1		PET216
	PET217	Reservoir Eng. I	3	PET209,	PET216
	HUMXXX	Humanities Elective	3		
OGPXXX	Technical Elective	2			
<b>Total Credit Hours</b>			<b>18</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	PET271	Pumps & Valves	1	ENG227	
	PET272	Heat Exchangers & Steam Traps	1	ENG227	
	PET273	Air Compressors	1	ENG227	
	PET274	Experimental Fluid Mechanics	1	ENG227	
	PET275	Oil & Gas Testing	1	CHEM112	
	PET276	DC Machines	1	PHYS112	
	PET277	AC Machines	1	PHYS112	
	PET278	Instrumentation & Control	1	PHYS112	
	PET279	Process Fundamentals Simulation	1	ENG227	
HUMXXX	Humanities Elective	3			
<b>Total Credit Hours</b>			<b>12</b>		

3 <sup>rd</sup> Year (Junior)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	PET330	Health & Safety at Work	2	ENG114	
	OGP225	Chemical Reactors & Mixing	3	CHEM112	
	OGP225P	Chemical Reactors & Mixing Lab	1		OGP225
	PET335	Drilling Technology II	2	PET225	
	PET314	Well Logging	4	PET225, PET209	
	PET314P	Well Logging Lab	1		PET314
	PET321	Subsurface Production Engineering	4	PET217	
<b>Total Credit Hours</b>			<b>17</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	MATH212	Probability & Statistics	3	MATH111	
	PET345	Well Completion & Workover	3	PET225	
	OGP215	Equilibrium Thermodynamics	2	ENG126	
	PET317	Reservoir Engineering II	3	PET217	
	PET394	Graduation Project I	2	Completion of 90 credits	
	PETXXX	Technical Elective	3		
OGP220	Mass Transfer	3	ENG227		
<b>Total Credit Hours</b>			<b>19</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	PET371	Rig Safety	1	PET335	
	PET372	Drilling	1	PET335	
	PET373	Well Control	1	PET335	
	PET374	Stuck Pipe Prevention	1	PET335	
	PET375	Cementing	1	PET335	
	PET376	Well Head/Christmas Tree	1	PET335	
	PET377	Workover	1	PET335	
	PET378	Formation Evaluation	1	PET321	
	PET379	Matrix Acidization	1	PET321	
	PET495	Internship	3		
<b>Total Credit Hours</b>			<b>12</b>		

4 <sup>th</sup> Year (Senior)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
Semester 1	OGP464	Process Dynamics & Controls	3	MATH213	
	PET411	Petroleum Economics	2		
	PET417	Reservoir Simulation	4	PET317	
	PET430	Well Testing	3	PET217, MATH213	
	PET440	Production System Design & Analysis	3	PET321	
	PETXXX	Technical Elective	3		
	<b>Total Credit Hours</b>			<b>18</b>	
Semester 2	PET494	Graduation Project II	3		
	HUM402	Creativity, Innovation, & Entrepreneurship	3		
	OGPXXX	Technical Elective	3		
	PET425	Water Treatment & Injection	2		
	PET425P	Water Treatment & Injection Lab	1		PET425P
	OGP345	Petroleum Refining & Processing	2	OGP220	
	OGP345 P	Petroleum Refining & Processing Lab	1		OGP345
	OGP316	Gas Processing & Treatment	3	OGP220	
<b>Total Credit Hours</b>			<b>18</b>		

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Curriculum: Applied Bachelors in Petroleum Engineering Technology:

Degree Requirements	Total Credit Hours: 152 Credit Hours
ADPoly General Requirements	48
Humanities and Social Science Requirements	12
Program Major Requirements (compulsory)	80
Program Minor Requirements	N/A
Program Electives	6
General Electives	6

ADPoly General Requirements				48 Credit Hours
Course Code	Course Title	Prerequisite(s)	Co-requisite	Credit Hours
*MATH100	Pre-calculus			4
MATH111	Calculus I	MATH100		3
CHEM111	Chemistry I			3
CHEM111P	Chemistry I Lab		CHEM111	1
ICT110	Introduction to Programing & Problem			3
PHYS111	Physics I			3
PHYS111P	Physics I Lab		PHYS111	1
MATH112	Calculus II	MATH111		3
CHEM112	Chemistry II	CHEM111		3
CHEM112P	Chemistry II Lab		CHEM112	1
PHYS112	Physics II	PHYS111		3
PHYS112P	Physics II Lab		PHYS112	1
ENG114	Ind. Safety & Prof. Ethics			2
ENG120P	Mechanical Workshop			1
ENG113	Eng. Drawing			2
ENG126	Thermodynamics	PHYS111,		3
MATH213	Differential Equations	MATH112		3
ENG224	Statics & Strength of Materials	PHYS111,		3
ENG227	Fluid Flow & Heat Transfer	MATH111,		3
MATH211	Linear Algebra			3
MATH212	Probability & Statistics	MATH111		3

*\*Pre-Calculus (MATH-100) is not included in total credit hours calculation required for graduation*

Humanities and Social Science Requirements			12 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
ENGL111	English Comm. Skills		3
ENGL112	Technical English Skills	ENGL111	3
ENGL113	English for Oil & Gas	ENGL112	3
HUM402	Creativity. Innovation. & Entrepreneurship		3

Program Major Requirements (compulsory)				80 Credit Hours
Course Code	Course Title	Prerequisite(s)	Co-requisite	Credit Hours
PET110	Introduction to Petroleum Engineering			3
PET120	Petroleum Geology	PET110		3
PET120P	Petroleum Geology Lab		PET120	1
PET209	Reservoir Rock Properties	PET120		2
PET209P	Reservoir Rock Properties Lab		PET209	1
PET216	Reservoir Fluid Properties	PET110, ENG126		2
PET216P	Reservoir Fluid Properties Lab		PET216	1
PET217	Reservoir Engineering I	PET209,	PET216	3
PET225	Drilling Technology I	PET209		3
PET225P	Drilling Technology I Lab		PET225	1
PET271	Pumps & Valves	ENG227		1
PET272	Heat Exchangers & Steam Traps	ENG227		1
PET273	Air Compressors	ENG227		1
PET274	Experimental Fluid Mechanics	ENG227		1
PET275	Oil & Gas Testing	CHEM112		1
PET276	DC Machines	PHYS112		1
PET277	AC Machines	PHYS112		1
PET278	Instrumentation & Control	PHYS112		1
PET279	Process Fundamentals Simulation	ENG227		1
PET330	Health & Safety at Work	ENG114		2
PET335	Drilling Technology II	PET225		2
PET314	Well Logging	PET225, PET209		4
PET314P	Well Logging Lab		PET314	1
PET321	Subsurface Production Engineering	PET217		4
PET345	Well Completion & Workover	PET225		3
PET317	Reservoir Engineering II	PET217		3

Program Major Requirements (compulsory)			80 Credit Hours	
PET394	Graduation Project	Completion of 90 credits		2
PET371	Rig Safety	PET335		1
PET372	Drilling	PET335		1
PET373	Well Control	PET335		1
PET374	Stuck Pipe Prevention	PET335		1
PET375	Cementing	PET335		1
PET376	Well Head/Christmas Tree	PET335		1
PET377	Workover	PET335		1
PET378	Formation Evaluation	PET321		1
PET379	Matrix Acidization	PET321		1
PET411	Petroleum Economics			2
PET417	Reservoir Simulation	PET317		4
PET430	Well Testing	PET217, MATH213		3
PET440	Production System Design & Analysis	PET321		3
PET425	Water Treatment & Injection			2
PET425P	Water Treatment & Injection Lab		PET425	1
PET494	Graduation Project			3
PET495	Internship			3

Program Electives			11 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Co-requisite	Credit Hours
PET401	Numerical Methods	MATH213		3
PET421	Enhanced Oil Recovery	PET321		3
PET431	Applied Environment	ENG114		2
PET451	Special Topics in Petroleum			3

General Electives			6 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Credit Hours	
HUM110	Life Long Learning Skills		3	
HUM111	Islamic Culture		3	
HUM112	Emirates Society & Culture		3	
HUM211	Arabic Communication Skills		3	
HUM212	Applied Research & Development Skills		3	



## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Study Plan: Applied Bachelors in Petroleum Engineering Technology:

1 <sup>st</sup> Year (Freshman)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
<b>Semester 1</b>	MATH100	Precalculus	4		
	CHEM111	Chemistry I	3		
	CHEM111P	Chemistry I Lab	1		CHEM111
	ICT110	Intro. To Progr. & Probl. Solving	3		
	ENGL111	English Comm. Skills	3		
	PHYS111	Physics I	3		
	PHYS111P	Physics I Lab	1		PHYS111
	<b>Total Credit Hours</b>			<b>14</b>	
<b>Semester 2</b>	MATH111	Calculus I	3	MATH100	
	CHEM112	Chemistry II	3	CHEM111	
	CHEM112P	Chemistry II Lab	1		CHEM112
	PET110	Intro. to Petroleum Engineering	3		
	ENGL112	Technical English Skills	3	ENGL111	
	PHYS112	Physics II	3	PHYS111	
	PHYS112P	Physics II Lab	1		PHYS112
	<b>Total Credit Hours</b>			<b>17</b>	
<b>Summer</b>	E MATH112	Calculus II	3	MATH111	
	PET120	Petroleum Geology	3	PET110	
	PET120P	Petroleum Geology Lab	1		PET120
	ENG113	Eng. Drawing	2		
	ENG126	Thermodynamics	3	PHYS111, CHEM112, MATH111	
	<b>Total Credit Hours</b>			<b>12</b>	

2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	ENG120P	Mechanical Workshop	1		
	MATH213	Differential Equations	3	MATH112	
	ENG114	Indust. Safety & Pro Ethics	2		
	PET209	Reservoir Rock Properties	2	PET120	
	PET209P	Reservoir Rock Properties Lab	1		PET209
	ENGL113	English for Oil & Gas	3	ENGL112	
	ENG224	Statics & Strength of Materials	3	PHYS112, MATH111	
	ENG227	Fluid Flow & Heat Transfer	3	ENG126, MATH111	
<b>Total Credit Hours</b>			<b>18</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	MATH211	Linear Algebra	3		
	PET225	Drilling Technology 1	3	PET209	
	PET225P	Drilling Technology 1 Lab	1		PET225P
	PET216	Reservoir Fluid Properties	2	ENG126, PET110	
	PET216P	Reservoir Fluid Properties Lab	1		PET216
	PET217	Reservoir Eng. I	3	PET209	PET216
	HUMXXX	Humanities Elective	3		
<b>Total Credit Hours</b>			<b>16</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
	PET271	Pumps & Valves	1	ENG227	
	PET272	Heat Exchangers & Steam Traps	1	ENG227	
	PET273	Air Compressors	1	ENG227	
	PET274	Experimental Fluid Mechanics	1	ENG227	
	PET275	Oil & Gas Testing	1	CHEM112	
	PET276	DC Machines	1	PHYS112	
	PET277	AC Machines	1	PHYS112	
	PET278	Instrumentation & Control	1	PHYS112	
	PET279	Process Fundamentals Simulation	1	ENG227	
HUMXXX	Humanities Elective	3			
<b>Total Credit Hours</b>			<b>12</b>		

3 <sup>rd</sup> Year (Junior)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Co-requisite
Semester 1	PET330	Health & Safety at Work	2	ENG114	
	PET335	Drilling Technology II	2	PET225	
	PET314	Well Logging	4	PET225, PET209	
	PET314P	Well Logging Lab	1		PET314
	PET317	Reservoir Engineering II	3	PET217	
	PET321	Subsurface Production Engineering	4	PET217	
	<b>Total Credit Hours</b>			<b>16</b>	
Semester 2	MATH212	Probability & Statistics	3	MATH112	
	PET345	Well Completion & Workover	3	PET225	
	PET394	Graduation Project I	2	Completion of 90 credits	
	PETXXX	Technical Elective	3		
	PET425	Water Treatment & Injection	2		
	PET425P	Water Treatment & Injection Lab	1		
	HUM402	Creativity, Innovation, & Entrepreneurship	3		
	<b>Total Credit Hours</b>			<b>17</b>	
Summer	PET371	Rig Safety	1	PET335	
	PET372	Drilling	1	PET335	
	PET373	Well Control	1	PET335	
	PET374	Stuck Pipe Prevention	1	PET335	
	PET375	Cementing	1	PET335	
	PET376	Well Head/Christmas Tree	1	PET335	
	PET377	Workover	1	PET335	
	PET378	Formation Evaluation	1	PET321	
	PET379	Matrix Acidization	1	PET321	
	PET495	Internship	3		
	<b>Total Credit Hours</b>			<b>12</b>	

4 <sup>th</sup> Year (Senior)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
Semester 1	PETXXX	Technical Elective	3		
	PET494	Graduation Project II	3		
	PET411	Petroleum Economics	2		
	PET417	Reservoir Simulation	4	PET317	
	PET430	Well Testing	3	PET217, MATH213	
	PET440	Production System Design & Analysis	3	PET321	
	<b>Total Credit Hours</b>			<b>18</b>	

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Curriculum: Higher Diploma in Petroleum Engineering Technology

Degree Requirements	Total Credit Hours: 125 Credit Hours
ADPoly General Requirements	48
Humanities and Social Science Requirements	9
Program Major Requirements (compulsory)	59
Program Minor Requirements	N/A
Program Electives	3
General Electives	6

ADPoly General Requirements		48 Credit Hours		
Course Code	Course Title	Prerequisite(s)	Co-requisite	Credit Hours
*MATH100	Precalculus			4
MATH111	Calculus I	MATH100		3
CHEM111	Chemistry I			3
CHEM111P	Chemistry I Lab		CHEM111	1
ICT110	Introduction to Programing & Problem Solving			3
PHYS111	Physics I			3
PHYS111P	Physics I Lab		PHYS111	1
MATH112	Calculus II	MATH111		3
CHEM112	Chemistry II	CHEM111		3
CHEM112P	Chemistry II Lab		CHEM112	1
PHYS112	Physics II	PHYS111		3
PHYS112P	Physics II Lab		PHYS112	1
ENG114	Ind. Safety & Prof. Ethics			2
ENG120P	Mechanical Workshop			1
ENG113	Eng. Drawing			2
ENG126	Thermodynamics	PHYS111, MATH111, CHEM112		3
MATH213	Differential Equations	MATH112		3
ENG224	Statics & Strength of Materials	PHYS111, MATH112		3
ENG227	Fluid Flow & Heat Transfer	MATH111, ENG126		3
MATH211	Linear Algebra			3
MATH212	Probability & Statistics	MATH111		3

*\*Not included in credit hours calculation*

Humanities and Social Science Requirements			9 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
ENGL111	English Comm. Skills		3
ENGL112	Technical English Skills	ENGL111	3
ENGL113	English for Oil & Gas	ENGL112	3

Program Major Requirements (compulsory)				59 Credit Hours
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
PET110	Introduction to Petroleum Engineering			3
PET120	Petroleum Geology	PET110		3
PET120P	Petroleum Geology Lab		PET120	1
PET209	Reservoir Rock Properties	PET120		2
PET209P	Reservoir Rock Properties Lab		PET209	1
PET216	Reservoir Fluid Properties	PET110, ENG126		2
PET216P	Reservoir Fluid Properties Lab		PET216	1
PET217	Reservoir Engineering I	PET209,	PET216	3
PET225	Drilling Technology I	PET209		3
PET225P	Drilling Technology I Lab		PET225	1
PET271	Pumps & Valves	ENG227		1
PET272	Heat Exchangers & Steam Traps	ENG227		1
PET273	Air Compressors	ENG227		1
PET274	Experimental Fluid Mechanics	ENG227		1
PET275	Oil & Gas Testing	ENG227		1
PET276	DC Machines	PHYS112		1
PET277	AC Machines	PHYS112		1
PET278	Instrumentation & Control	PHYS112		1
PET279	Process Fundamentals Simulation	ENG227		1
PET330	Health & Safety at Work	ENG114		2
PET335	Drilling Technology II	PET225		2
PET314	Well Logging	PET225, PET209		4
PET314P	Well Logging Lab		PET314	1
PET321	Subsurface Production Engineering	PET217		4
PET345	Well Completion & Workover	PET225		3
PET394	Graduation Project			2
PET371	Rig Safety	PET335		1
PET372	Drilling	PET335		1

Program Major Requirements (compulsory)				59 Credit Hours
PET373	Well Control	PET335		1
PET374	Stuck Pipe Prevention	PET335		1
PET375	Cementing	PET335		1
PET376	Well Head/Christmas Tree	PET335		1
PET377	Workover	PET335		1
PET378	Formation Evaluation	PET321		1
PET379	Matrix Acidization	PET321		1
PET430	Well Testing	PET217, MATH213		3

Program Electives				3 Credit Hours
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
PET401	Numerical Methods	MATH213		3
PET421	Enhanced Oil Recovery	PET321		3
PET431	Applied Environment	ENG114		2
PET451	Special Topics in Petroleum Engineering			3

General Electives				6 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours	
HUM110	Life Long Learning Skills		3	
HUM111	Islamic Culture		3	
HUM112	Emirates Society & Culture		3	
HUM211	Arabic Communication Skills		3	
HUM212	Applied Research & Development Skills		3	

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Study Plan: Higher Diploma in Petroleum Engineering Technology

1 <sup>st</sup> Year (Freshman)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
<b>Semester 1</b>	MATH100	Precalculus	4		
	CHEM111	Chemistry I	3		
	CHEM111P	Chemistry I Lab	1		CHEM111
	ICT110	Intro. To Progr. & Probl. Solving	3		
	ENGL111	English Comm. Skills	3		
	PHYS111	Physics I	3		
	PHYS111P	Physics I Lab	1		PHYS111
<b>Total Credit Hours</b>			<b>14</b>		
<b>Semester 2</b>	MATH111	Calculus I	3	MATH100	
	CHEM112	Chemistry II	3	CHEM111	
	CHEM112P	Chemistry II Lab	1		CHEM112
	PET110	Intro. to Petroleum Engineering	3		
	ENGL112	Technical English Skills	3	ENGL111	
	PHYS112	Physics II	3	PHYS111	
	PHYS112P	Physics II Lab	1		PHYS112
<b>Total Credit Hours</b>			<b>17</b>		
<b>Summer</b>	E MATH112	Calculus II	3	MATH111	
	PET120	Petroleum Geology	3	PET110	
	PET120P	Petroleum Geology Lab	1		PET120
	ENG113	Eng. Drawing	2		
	ENG126	Thermodynamics	3	PHYS111, CHEM112, MATH111	
<b>Total Credit Hours</b>			<b>12</b>		



2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	ENG120P	Mechanical Workshop	1		
	MATH213	Differential Equations	3	MATH112	
	ENG114	Indust. Safety & Pro Ethics	2		
	PET209	Reservoir Rock Properties	2	PET120	
	PET209P	Reservoir Rock Properties Lab	1		PET209
	ENGL113	English for Oil & Gas	3	ENGL112	
	ENG224	Statics & Strength of Materials	3	PHYS112, MATH111	
	ENG227	Fluid Flow & Heat Transfer	3	ENG126, MATH111	
<b>Total Credit Hours</b>			<b>18</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH211	Linear Algebra	3		
	PET225	Drilling Technology 1	3	PET120	
	PET225P	Drilling Technology 1 Lab	1		PET225P
	PET216	Reservoir Fluid Properties	2	ENG126, PET110	
	PET216P	Reservoir Fluid Properties Lab	1		PET216
	PET217	Reservoir Eng. I	3	PET209	PET216
	HUMXXX	Humanities Elective	3		
<b>Total Credit Hours</b>			<b>16</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET271	Pumps & Valves	1	ENG227	
	PET272	Heat Exchangers & Steam Traps	1	ENG227	
	PET273	Air Compressors	1	ENG227	
	PET274	Experimental Fluid Mechanics	1	ENG227	
	PET275	Oil & Gas Testing	1	CHEM112	
	PET276	DC Machines	1	PHYS112	
	PET277	AC Machines	1	PHYS112	
	PET278	Instrumentation & Control	1	PHYS112	
	PET279	Process Fundamentals Simulation	1	ENG227	
HUMXXX	Humanities Elective	3			
<b>Total Credit Hours</b>			<b>12</b>		

3 <sup>rd</sup> Year (Junior)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET330	Health & Safety at Work	2	ENG114	
	PET335	Drilling Technology II	2	PET225	
	PET314	Well Logging	4	PET225, PET209	
	PET314P	Well Logging Lab	1		PET314
	PET321	Subsurface Production Engineering	4	PET217	
<b>Total Credit Hours</b>			<b>13</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH212	Probability & Statistics	3	MATH112	
	PET345	Well Completion & Workover	3	PET225	
	PET394	Graduation Project	2		
	PETXXX	Technical Elective	3		
	PET430	Well Testing	3	PET217, MATH213	
<b>Total Credit Hours</b>			<b>14</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET371	Rig Safety	1	PET335	
	PET372	Drilling	1	PET335	
	PET373	Well Control	1	PET335	
	PET374	Stuck Pipe Prevention	1	PET335	
	PET375	Cementing	1	PET335	
	PET376	Well Head/Christmas Tree	1	PET335	
	PET377	Workover	1	PET335	
	PET378	Formation Evaluation	1	PET321	
	PET379	Matrix Acidization	1	PET321	
<b>Total Credit Hours</b>			<b>9</b>		

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

**Curriculum: Applied Bachelors Oil & Gas Process Engineering Technology:**

Degree Requirements	Total Credit Hours: 152 Credit Hours
ADPoly General Requirements	45
Humanities and Social Science Requirements	12
Program Major Requirements (compulsory)	80
Program Minor Requirements	N/A
Program Electives	9
General Electives	6

ADPoly General Requirements			45 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
*MATH100	Precalculus			4
MATH111	Calculus I	MATH100		3
CHEM111	Chemistry I			3
CHEM111P	Chemistry I Lab		CHEM111	1
ICT110	Introduction to Programing & Problem Solving			3
PHYS111	Physics I			3
PHYS111P	Physics I Lab		PHYS111	1
MATH112	Calculus II	MATH111		3
CHEM112	Chemistry II	CHEM111		3
CHEM112P	Chemistry II Lab		CHEM112	1
PHYS112	Physics II	PHYS111		3
PHYS112P	Physics II Lab		PHYS112	1
ENG114	Ind. Safety & Prof. Ethics			2
ENG120P	Mechanical Workshop			1
ENG113	Eng. Drawing			2
ENG126	Thermodynamics	PHYS111, MATH111, CHEM112		3
MATH213	Differential Equations	MATH112		3
ENG224	Statics & Strength of Materials	PHYS111, MATH112		3
MATH211	Linear Algebra			3
MATH212	Probability & Statistics	MATH111		3

*\*Not included in credit hours calculation*

Humanities and Social Science Requirements			12 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
ENGL111	English Comm. Skills		3
ENGL112	Technical English Skills	ENGL111	3
ENGL113	English for Oil & Gas	ENGL112	3
HUM402	Creativity. Innovation. & Entrepreneurship		3

Program Major Requirements (compulsory)				80 Credit Hours
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
PET110	Introduction to Petroleum Engineering			3
OGP120	Organic Chemistry (Lecture + Lab)	CHEM112		3
OGP215	Equilibrium Thermodynamics	ENG126		2
OGP218	Fluid Mechanics	PHYS111		3
OGP223	Physical Chemistry (Lecture + Lab)	CHEM112		3
OGP222	Elementary Principle in Process Engineering	CHEM112		2
OGP228	Heat Transfer	OGP218, ENG126		3
OGP220	Mass Transfer	OGP218		3
PET271	Pumps & Valves	OGP228		1
PET272	Heat Exchangers & Steam Traps	OGP228		1
PET273	Air Compressors	OGP228		1
PET274	Experimental Fluid Mechanics	OGP228		1
PET275	Oil & Gas Testing	OGP228		1
PET276	DC Machines	PHYS112		1
PET277	AC Machines	PHYS112		1
PET278	Instrumentation & Control	PHYS112		1
PET279	Process Fundamentals Simulation	OGP228		1
PET330	Health & Safety at Work	ENG114		2
PET401	Numerical Methods	MATH213		3
OGP314	Analytical Chemistry	CHEM112		3
OGP313	Surface Production Operations	PET110		2
OGP316	Gas Processing & Treatment	OGP220		3
OGP225	Chemical Reactors & Mixing	CHEM112		3
OGP225P	Chemical Reactors & Mixing Lab		OGP225	1
PET425	Water Treatment & Injection			2
PET425P	Water Treatment & Injection Lab		PET425	1
OGP345	Petroleum Refining & Processing	OGP220		2

Program Major Requirements (compulsory)				80 Credit Hours
OGP345P	Petroleum Refining & Processing Lab		OGP345	1
OGP394	Graduation Project I			2
OGP371	Process Engineering Drawing	ENG113		1
OGP372	Oil Handling System & Facilities	PET110		1
OGP373	Gas Handling System & Facilities	OGP316		1
OGP374	Separation Process	OGP220		1
OGP375	Oil & Gas Distillation	OGP220		1
OGP376	Reactors Engineering	OGP225		1
OGP377	Pipeline Pigging & Inspection	OGP313		1
OGP378	Tank Farm Operations	OGP313		1
OGP379	Control Room Operations	OGP313		1
OGP464	Process Dynamics & Controls	MATH213		3
OGP465	Plant & Equipment Design	OGP345		4
PET411	Petroleum Economics			2
PET494	Graduation Project			3
PET495	Internship			3

Program Electives		9 Credit Hours		
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
PET421	Enhanced Oil Recovery	PET321		3
PET431	Applied Environment	ENG114		2
PET451	Special Topics in Petroleum Engineering			3
OGP340	Petroleum Storage & Loading	OGP316		2
OGP371	Process Equipment Drawing	ENG113		1
OGP415	Chemical Reactor Design (Lecture + Lab)	OGP225		4
OGP417	Process Modeling & Simulation (Lecture + Lab)	MATH213		3
OGP430	Petrochemicals	OGP225		3

General Electives		6 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Credit Hours
HUM110	Life Long Learning Skills		3
HUM111	Islamic Culture		3
HUM112	Emirates Society & Culture		3
HUM211	Arabic Communication Skills		3
HUM212	Applied Research & Development Skills		3

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Study Plan: Applied Bachelors Oil & Gas Process Engineering Technology

1 <sup>st</sup> Year (Freshman)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
<b>Semester 1</b>	MATH100	Pre-Calculus	4		
	CHEM111	Chemistry I	3		
	CHEM111P	Chemistry I Lab	1		CHEM111
	ICT110	Intro. To Progr. & Probl. Solving	3		
	ENGL111	English Comm.Skills	3		
	PHYS111	Physics I	3		
	PHYS111P	Physics I Lab	1		PHYS111
<b>Total Credit Hours</b>			<b>14</b>		
<b>Semester 2</b>	MATH112	Calculus I	3	MATH100	
	CHEM112	Chemistry II	3	CHEM111	
	CHEM112P	Chemistry II Lab	1		CHEM112
	PET110	Intro. to Petroleum Engineering	3		
	ENGL112	Technical English Skills	3	ENGL111	
	PHYS112	Physics II	3	PHYS111	
	PHYS112P	Physics II Lab	1		PHYS112
<b>Total Credit Hours</b>			<b>17</b>		
<b>Summer</b>	MATH112	Calculus II	3		
	OGP120	Organic Chemistry (Lec. + Lab)	3	CHEM112	
	ENG113	Eng. Drawing	2		
	ENG126	Thermodynamics	3	PHYS111, CHEM112, MATH111	
<b>Total Credit Hours</b>			<b>11</b>		

2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH213	Differential Equations	3	MATH112	
	ENG120P	Mech. Workshop	1		
	OGP218	Fluid Mechanics	3	PHYS111	
	ENGL113	English for Oil & Gas	3	ENGL112	
	ENG224	Statics & Strength of Materials	3	PHYS112, MATH111	
	OGP215	Equilibrium Thermodynamics	2	ENG126	
	ENG114	Industrial Safety & Pro Ethics	2		
<b>Total Credit Hours</b>			<b>17</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH211	Linear Algebra	3		
	OGP223	Physical Chemistry (Lecture + Lab)	3	CHEM112	
	OGP222	Elementary Principle of Proc. Eng	2	CHEM112	CHEM112
	OGP228	Heat Transfer	3	OGP218, ENG126	
	OGP220	Mass Transfer	3	OGP218	
	HUMXXX	Humanities Elective	3		
<b>Total Credit Hours</b>			<b>17</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET271	Pumps & Valves	1	OGP228	
	PET272	Heat Exchangers & Steam Traps	1	OGP228	
	PET273	Air Compressors	1	OGP228	
	PET274	Experimental Fluid Mechanics	1	OGP228	
	PET275	Oil & Gas Testing	1	CHEM112	
	PET276	DC Machines	1	PHYS112	
	PET277	AC Machines	1	PHYS112	
	PET278	Instrumentation & Control	1	PHYS112	
	PET279	Process Fundamentals Simulation	1	OGP228	
HUMXXX	Humanities Elective	3			
<b>Total Credit Hours</b>			<b>12</b>		

3 <sup>rd</sup> Year (Junior)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET330	Health & Safety at Work	2	ENG114	
	OGP225	Chemical Reactors & Mixing	3	CHEM112	
	OGP225P	Chemical Reactors & Mixing Lab	1		OGP225
	PET401	Numerical Methods	3	MATH213	
	OGP314	Analytical Chemistry	3	CHEM112	
	OGP313	Surface Production Operations	2	PET110	
	OGP316	Gas Processing & Treatment	3	OGP220	
<b>Total Credit Hours</b>			<b>17</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH212	Probability & Statistics	3	MATH112	
	PET425	Water Treatment & Injection	2		
	PET425P	Water Treatment & Injection Lab	1		
	OGP345	Petroleum Refining & Processing	2	OGP220	
	OGP345P	Petroleum Refining & Processing Lab	1		OGP345P
	OGP394	Graduation Project I	2		
	PETXXX	Technical Elective	3		
	OGPXXX	Technical Elective	3		
<b>Total Credit Hours</b>			<b>17</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	OGP371	Process Engineering Drawing	1	ENG113	
	OGP372	Oil Handling System & Facilities	1	PET110	
	OGP373	Gas Handling System & Facilities	1	OGP316	
	OGP374	Separation Process	1	OGP220	
	OGP375	Oil & Gas Distillation	1	OGP220	
	OGP376	Reactors Engineering	1	OGP225	
	OGP377	Pipeline Pigging & Inspection	1	OGP313	
	OGP378	Tank Farm Operations	1	OGP313	
	OGP379	Control Room Operations	1	OGP313	
	PET495	Internship	3		
<b>Total Credit Hours</b>			<b>12</b>		



4 <sup>th</sup> Year (Senior)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
Semester 1	OGP464	Process Dynamics & Controls	3	MATH213	
	PET411	Petroleum Economics	2		
	HUM402	Creativity, Innovation, & Entrepreneurship	3		
	OGP494	Graduation Project II	3		
	OGP465	Plant & Equipment Design	4	OGP345	
	OGPXXX	Technical Elective	3		
	<b>Total Credit Hours</b>			<b>18</b>	

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Curriculum: Higher Diploma in Oil & Gas Process Engineering Technology:

Degree Requirements	Total Credit Hours: 123
ADPoly General Requirements	45
Humanities and Social Science Requirements	9
Program Major Requirements (compulsory)	57
Program Minor Requirements	N/A
Program Electives	6
General Electives	6

ADPoly General Requirements			45 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
*MATH100	Precalculus			4
MATH111	Calculus I	MATH100		3
CHEM111	Chemistry I			3
CHEM111P	Chemistry I Lab		CHEM111	1
ICT110	Introduction to Programing & Problem Solving			3
PHYS111	Physics I			3
PHYS111P	Physics I Lab		PHYS111	1
MATH112	Calculus II	MATH111		3
CHEM112	Chemistry II	CHEM111		3
CHEM112P	Chemistry II Lab		CHEM112	1
PHYS112	Physics II	PHYS111		3
PHYS112P	Physics II Lab		PHYS112	1
ENG114	Ind. Safety & Prof. Ethics			2
ENG120P	Mechanical Workshop			1
ENG113	Eng. Drawing			2
ENG126	Thermodynamics	PHYS111, MATH111, CHEM112		3
MATH213	Differential Equations	MATH112		3

ADPoly General Requirements			45 Credit Hours	
ENG224	Statics & Strength of Materials	PHYS111, MATH112		3
MATH211	Linear Algebra			3
MATH212	Probability & Statistics	MATH111		3

Humanities and Social Science Requirements			9 Credit Hours	
Course Code	Course Title	Prerequisite(s)		Credit Hours
ENGL111	English Comm. Skills			3
ENGL112	Technical English Skills	ENGL111		3
ENGL113	English for Oil & Gas	ENGL112		3

Program Major Requirements (compulsory)			57 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
PET110	Introduction to Petroleum Engineering			3
OGP120	Organic Chemistry (Lecture + Lab)	CHEM112		3
OGP215	Equilibrium Thermodynamics	ENG126		2
OGP218	Fluid Mechanics	PHYS111		3
OGP223	Physical Chemistry (Lecture + Lab)	CHEM112		3
OGP222	Elementary Principle in Process Engineering	CHEM112		2
OGP228	Heat Transfer	OGP218, ENG126		3
OGP220	Mass Transfer	OGP218		3
PET271	Pumps & Valves	OGP228		1
PET272	Heat Exchangers & Steam Traps	OGP228		1
PET273	Air Compressors	OGP228		1
PET275	Oil & Gas Testing	OGP228		1
PET330	Health & Safety at Work	ENG114		2
PET401	Numerical Methods	MATH213		3
OGP314	Analytical Chemistry	CHEM112		3
OGP313	Surface Production Operations	PET110		2
OGP316	Gas Processing & Treatment	OGP220		3
OGP225	Chemical Reactors & Mixing	CHEM112		3
OGP225P	Chemical Reactors & Mixing Lab		OGP225	1
OGP345	Petroleum Refining & Processing	OGP220		2
OGP345P	Petroleum Refining & Processing Lab		OGP345	1
OGP394	Graduation Project I			2
OGP371	Process Engineering Drawing	ENG113		1
OGP372	Oil Handling System & Facilities	PET110		1
OGP373	Gas Handling System & Facilities	OGP316		1

Program Major Requirements (compulsory)		57 Credit Hours		
OGP374	Separation Process	OGP220		1
OGP375	Oil & Gas Distillation	OGP220		1
OGP376	Reactors Engineering	OGP225		1
OGP377	Pipeline Pigging & Inspection	OGP313		1
OGP378	Tank Farm Operations	OGP313		1
OGP379	Control Room Operations	OGP313		1

Program Electives		9 Credit Hours		
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
PET421	Enhanced Oil Recovery	PET321		3
PET431	Applied Environment	ENG114		2
PET451	Special Topics in Petroleum Engineering			3
OGP340	Petroleum Storage & Loading	OGP316		2
OGP371	Process Equipment Drawing	ENG113		1
OGP415	Chemical Reactor Design (Lecture + Lab)	OGP225		4
OGP417	Process Modeling & Simulation (Lecture + Lab)	MATH213		3
OGP430	Petrochemicals	OGP225		3

General Electives		6 Credit Hours		
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
HUM110	Life Long Learning Skills			3
HUM111	Islamic Culture			3
HUM112	Emirates Society & Culture			3
HUM211	Arabic Communication Skills			3
HUM212	Applied Research & Development Skills			3

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

**Study Plan: Higher Diploma in Oil & Gas Process Engineering Technology:**

1 <sup>st</sup> Year (Freshman)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
<b>Semester 1</b>	MATH100	Pre-Calculus	4		
	CHEM111	Chemistry I	3		
	CHEM111P	Chemistry I Lab	1		CHEM111
	ICT110	Intro. To Progr. & Probl. Solving	3		
	ENGL111	English Comm.Skills	3		
	PHYS111	Physics I	3		
	PHYS111P	Physics I Lab	1		PHYS111
<b>Total Credit Hours</b>			<b>18</b>		
<b>Semester 2</b>	MATH112	Calculus I	3	MATH100	
	CHEM112	Chemistry II	3	CHEM111	
	CHEM112P	Chemistry II Lab	1		CHEM112
	PET110	Intro. to Petroleum Engineering	3		
	ENGL112	Technical English Skills	3	ENGL111	
	PHYS112	Physics II	3	PHYS111	
	PHYS112P	Physics II Lab	1		PHYS112
<b>Total Credit Hours</b>			<b>17</b>		
<b>Summer</b>	MATH112	Calculus II	3		
	OGP120	Organic Chemistry (Lec. + Lab)	3	CHEM112	
	ENG113	Eng. Drawing	2		
	ENG126	Thermodynamics	3	PHYS111, CHEM112, MATH111	
<b>Total Credit Hours</b>			<b>11</b>		

2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH213	Differential Equations	3	MATH112	
	ENG120P	Mech. Workshop	1		
	OGP218	Fluid Mechanics	3	PHYS111	
	ENGL113	English for Oil & Gas	3	ENGL112	
	ENG224	Statics & Strength of Materials	3	PHYS112, MATH111	
	OGP215	Equilibrium Thermodynamics	2	ENG126	
	ENG114	Industrial Safety & Pro Ethics	2		
<b>Total Credit Hours</b>			<b>17</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH211	Linear Algebra	3		
	OGP223	Physical Chemistry (Lecture + Lab)	3	CHEM112	
	OGP222	Elementary Principles of Proc. Eng	2	CHEM112	CHEM112
	OGP228	Heat Transfer	3	OGP218, ENG126	
	OGP220	Mass Transfer	3	OGP218	
	HUMXXX	Humanities Elective	3		
<b>Total Credit Hours</b>			<b>17</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET271	Pumps & Valves	1	OGP228	
	PET272	Heat Exchangers & Steam Traps	1	OGP228	
	PET273	Air Compressors	1	OGP228	
	PET275	Oil & Gas Testing	1	OGP228	
HUMXXX	Humanities Elective	3			
<b>Total Credit Hours</b>			<b>7</b>		

3 <sup>rd</sup> Year (Junior)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET330	Health & Safety at Work	2	ENG114	
	OGP225	Chemical Reactors & Mixing	3	CHEM112	
	OGP225P	Chemical Reactors & Mixing Lab	1		OGP225
	PET401	Numerical Methods	3	MATH213	
	OGP314	Analytical Chemistry	3	CHEM112	
	OGP313	Surface Production Operations	3	PET110	
	OGP316	Gas Processing & Treatment	3	OGP220	
<b>Total Credit Hours</b>			<b>17</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH212	Probability & Statistics	3	MATH112	
	OGP345	Petroleum Refining & Processing	2	OGP220	
	OGP345P	Petroleum Refining & Processing Lab	1		OGP345P
	PET394	Graduation Project I	2		
	PETXXX	Technical Elective	3		
	OGPXXX	Technical Elective	3		
<b>Total Credit Hours</b>			<b>14</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	OGP371	Process Engineering Drawing	1	ENG113	
	OGP372	Oil Handling System & Facilities	1	PET110	
	OGP373	Gas Handling System & Facilities	1	OGP316	
	OGP374	Separation Process	1	OGP220	
	OGP375	Oil & Gas Distillation	1	OGP220	
	OGP376	Reactors Engineering	1	OGP225	
	OGP377	Pipeline Pigging & Inspection	1	OGP313	
	OGP378	Tank Farm Operations	1	OGP313	
	OGP379	Control Room Operations	1	OGP313	
<b>Total Credit Hours</b>			<b>9</b>		

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

### Curriculum: Diploma in Oil & Gas Process Technology:

Degree Requirements	Total Credit Hours: 86 Credit Hours
ADPoly General Requirements	37
Humanities and Social Science Requirements	15
Program Major Requirements (compulsory)	34
Program Minor Requirements	N/A
Program Electives	N/A
General Electives	N/A

ADPoly General Requirements			37 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours
MATH100	Precalculus			4
CHEM111	Chemistry I			3
CHEM111P	Chemistry I Lab		CHEM111	1
ICT110	Introduction to Programing & Problem Solving			3
PHYS111	Physics I			3
PHYS111P	Physics I Lab		PHYS111	1
CHEM112	Chemistry II	CHEM111		3
CHEM112P	Chemistry II Lab		CHEM112	1
PHYS112	Physics II	PHYS111		3
PHYS112P	Physics II Lab		PHYS112	1
ENG114	Ind. Safety & Prof. Ethics			2
ENG120P	Mechanical Workshop			1
ENG113	Eng. Drawing			2
ENG126	Thermodynamics	PHYS111, CHEM112		3
ENG133	Applied Electrical Technology	PHYS112		3
ENG124	Applied Instrumentation & Controls	PHYS112		3

Humanities and Social Science Requirements		15 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Credit Hours
ENGL111	English Comm. Skills		3
ENGL112	Technical English Skills	ENGL111	3



Humanities and Social Science Requirements			15 Credit Hours	
ENGL113	English for Oil & Gas	ENGL112		3
HUM111	Islamic Culture			3
HUM112	Emirates Society & Culture			3

Program Major Requirements (compulsory)					34 Credit Hours	
Course Code	Course Title	Prerequisite(s)	Corequisite	Credit Hours		
PET110	Introduction to Petroleum Engineering			3		
PET111	Introduction to Gas Production	PET110		3		
OGP211	Fundamentals of Pipelines Engineering	PET111		3		
OGP218	Fluid Mechanics	PHYS111		3		
OGP213	Intro. to Surface Production Operations	PET110	PET111	2		
OGP222	Elementary Principle in Process Engineering	CHEM112		2		
OGP228	Heat Transfer	OGP218, ENG126		3		
PET271	Pumps & Valves	OGP228		1		
PET272	Heat Exchangers & Steam Traps	OGP228		1		
PET273	Air Compressors	OGP228		1		
PET275	Oil & Gas Testing	OGP228		1		
PET330	Health & Safety at Work	ENG114		2		
OGP216	Intro. to Gas Processing & Treatment	OGP228		3		
OGP224	Pipelines Installation & Operation Management	OGP211		3		
OGP295	Internship			3		

## Higher Diploma and Applied Bachelor in Petroleum Engineering Technology Degree Requirements

**Study Plan: Diploma in Oil & Gas Process Technology:**

1 <sup>st</sup> Year (Freshman)					
<b>Semester 1</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Prerequisite(s)</b>	<b>Corequisite</b>
	MATH100	Pre-Calculus	4		
	CHEM111	Chemistry I	3		
	CHEM111P	Chemistry I Lab	1		CHEM111
	ICT110	Intro. To Progr. & Probl. Solving	3		
	ENGL111	English Comm.Skills	3		
	PHYS111	Physics I	3		
	PHYS111P	Physics I Lab	1		PHYS111
<b>Total Credit Hours</b>			<b>18</b>		
<b>Semester 2</b>	<b>Course Code</b>	<b>Course Title</b>	<b>Credit Hours</b>	<b>Prerequisite(s)</b>	<b>Corequisite</b>
	HUM111	Islamic Culture	3		
	CHEM112	Chemistry II	3	CHEM111	
	CHEM112P	Chemistry II Lab	1		CHEM112
	PET110	Intro. to Petroleum Engineering	3		
	ENGL112	Technical English Skills	3	ENGL111	
	PHYS112	Physics II	3	PHYS111	
	PHYS112P	Physics II Lab	1		PHYS112
<b>Total Credit Hours</b>			<b>17</b>		
<b>Summer</b>	<b>Credit Hours</b>	<b>Prerequisite(s)</b>	<b>Credit Hours</b>	<b>Prerequisite(s)</b>	<b>Corequisite</b>
	ENG120P	Mech. Workshop	1		
	ENG114	Industrial Safety & Pro Ethics	2		
	ENG113	Eng. Drawing	2		
	PET111	Introduction to Gas Production	3	PET110	
	ENGL113	English for Oil & Gas	3	ENGL112	
<b>Total Credit Hours</b>			<b>11</b>		

2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	HUM112	Emirates Society & Culture	3		
	OGP211	Fundamentals of Pipeline Engg	3	PET111	
	OGP218	Fluid Mechanics	3	PHYS111	
	OGP213	Intro. to Surface Production Operations	2	PET110	PET111
	ENG113	Applied Electrical Technology	3	PHYS112	
	ENG126	Thermodynamics	3	PHYS112, CHEM112	
<b>Total Credit Hours</b>			<b>17</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET330	Health & Safety at Work	2		
	OGP216	Intro. to Gas Processing & Treatment	3	OGP228	
	OGP222	Elementary Principles of Proc. Eng	2	CHEM112	CHEM112
	OGP228	Heat Transfer	3	OGP218, ENG126	
	OGP224	Pipelines Instal & Operation Manag.	3	OGP211	
	ENG124	Applied Instrumentation & Control	3	PHYS112	
OGP295	Internship	3			
<b>Total Credit Hours</b>			<b>19</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	PET271	Pumps & Valves	1	OGP228	
	PET272	Heat Exchangers & Steam Traps	1	OGP228	
	PET273	Air Compressors	1	OGP228	
PET275	Oil & Gas Testing	1	OGP228		
<b>Total Credit Hours</b>			<b>4</b>		

## Diploma, Higher Diploma and Bachelor of Science Degrees in Meteorology Program Requirements

### Curriculum

B.Sc. Degree Requirements	Total Credit Hours: 154
ADPoly General Requirements	57
Humanities and Social Science Requirements	6
Program Major Requirements (compulsory)	79
Program Minor Requirements	-
Program Electives	9
General Electives	3

Higher Diploma Degree Requirements	Total Credit Hours: 120 Credit Hours
ADPoly General Requirements	57
Humanities and Social Science Requirements	6
Program Major Requirements (compulsory)	51
Program Minor Requirements	-
Program Electives	6
General Electives	-

Degree Requirements	Total Credit Hours: 00 Credit Hours
ADPoly General Requirements	46
Humanities and Social Science Requirements	6
Program Major Requirements (compulsory)	31
Program Minor Requirements	-
Program Electives	-
General Electives	-

Program General Requirements				57 Credit Hours
Course Code	Course Title	Prerequisite(s)	Co-requisite	Credit Hours
CHEM111	Chemistry I			3
CHEM111P	Chemistry I Lab			1
ENG114	Safety and Ethics			2
ENGL111	English Commun Skills			3
ICT110	Intro to Programming & Problem Solving			3

Program General Requirements				57 Credit Hours
MATH100	Precalculus			4
MATH111	Calculus I	MATH100		3
ENGL112	Technical English	ENGL111		3
PHYS111	Physics I	MATH100		3
PHYS111P	Physics I Lab		PHYS111	1
CHEM112	Chemistry II	CHEM111		3
CHEM112P	Chemistry II Lab		CHEM112	1
MATH112	Calculus II			3
PHYS112	Physics II		PHYS111	3
PHYS112P	Physics II Lab		PHYS112	1
ENGL117	English for Met	ENGL112		3
MATH214	Calculus III	MATH112		3
MATH212	Probability & Statistics	MATH111		3
MATH211	Linear Algebra	MATH111		3
HUM-402	Creativity, Innovation and Entrepreneurship			3
MATH213	Differential Equations	MATH111		3

Humanities and Social Science Requirements			06 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
HUM-111	Islamic Culture		3
HUM112	Emirates Society & Culture		3
HUM-211	Arabic Communication Skills		3

Program Major Requirements (compulsory)				79 Credit Hours
Course Code	Course Title	Prerequisite(s)	Co-requisite	Credit Hours
MET-111	Intro to Meteorology	MATH111		3
MET-221	Met Instrum & Observ Workshop	MET-111		1
MET-222	Atm Thermodynamics	MET-111 MATH112		3
MET-223	Atm Dynamics I	MET-222		3
MET-224	Aviation Met	MET-111		3
MET-225	Physical Met	MET-222		4
MET-226	Intern Met Code Workshop	MET-221		1
MET-227	Climatology	MET-111, MATH212		3
MET-232	Meteorology & Computing Workshop	ICT110		1
MET-228	Synoptic Met I	MET-223		3
MET-229	Intro to Weather Charts Analysis Workshop		MET-228	1
MET-323	Synoptic Met II	MET-228		3
MET-321	Atm Dynamics II	MET-223		3
MET-322	Weather Charts Analysis Workshop		MET-323	1
MET-324	NWP & Numerical Analysis	MET-321		3
MET-325	Satellite Meteorology	PHYS112		3
MET-326	Marine Meteorology	MET-111		3
MET-327	Radar Meteorology	PHYS112		3
MET-421	Air Pollution	MET-111		3
MET-422	Atmospheric Waves	MET-321		3
MET-423	Tropical Met	MET-321		3
MET-425	Planetary BL Met	MET-321		3
MET-426	Climate Data Management Workshop	MET-227		1
MET-427	Global Climate Changes	MET-227		3
MET-424	Graduation Project 1	Student must pass a total of 90 CR		2
MET-428	Graduation Project 2	MET-424		1
<b>OCT Modules</b>				

Program Major Requirements (compulsory)				79 Credit Hours
MET-328	Mod 1: C++	MET-324		1
MET-329	Mod 2: WRF Model	MET-324		1
MET-330	Mod 3: Weather Broadcast	MET-322		2
MET-331	Mod 4: Weather Charts Analysis	MET-322		1
MET-332	Mod 5: Weather Forecasting Techniques	MET-322		1
MET-333	Mod 6: Numerical Comp Using MATLAB	MET-324		1
MET-334	Mod 7: Satellite & Radar Analyses	MET-325, MET-327		1
MET-335	Mod 8: Synop Met pract, Tephigram	MET-323		1
<b>OJT Modules</b>				
MET-429	Met Instruments and Observations			1
MET-430	International Met Code			1
MET-431	Weather Charts Analysis & Forecasting			1
MET-432	NW Analysis			1
MET-433	Satellite & Radar Analyses II			1
MET-434	Weather Forecasting Techniques II			1

Program Electives			9 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
	Elective A		6
	Elective B		3

General Electives			3 Credit Hours
Course Code	Course Title	Prerequisite(s)	Credit Hours
	Elective		3

## Diploma, Higher Diploma and Bachelor of Science Degrees in Meteorology Program Requirements

**Study Plan: B.Sc.**

1 <sup>st</sup> Year (Freshman)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
<b>Semester 1</b>	MATH100	Precalculus	4		
	CHEM111	Chemistry I	3		
	ENGL111	English Communication Skills	3		
	ENG111	Industrial Safety & Pro Ethics	2		
	ICT110	Intro to Program & Problem Solving	3		
	CHEM111P	Chemistry I Lab	1		
	<b>Total Credit Hours</b>			<b>16</b>	
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
<b>Semester 2</b>	MATH111	Calculus I	3	MATH100	
	CHEM112	Chemistry II	3	CHEM111	
	PHYS111	Physics I	3	MATH100	
	ENGL112	Technical English	3	ENGL111	
	CHEM112P	Chemistry II Lab	1		
	HUMXXX	Humanities 1	3		
	PHYS111P	Physics I Lab	1		
	<b>Total Credit Hours</b>			<b>17</b>	
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
<b>Summer</b>	MATH112	Calculus II	3	MATH111	
	PHYS112	Physics II	3	PHYS111	
	MET-111	Intro to Meteorology	3	MATH111	
	PHYS112P	Physics II Lab	1		
<b>Total Credit Hours</b>			<b>10</b>		



2 <sup>nd</sup> Year (Sophomore)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	ENGL117	English for Met	3	ENGL112	
	MET-221	Met Instrum & Observ Workshop	1	MET-111	
	MET-222	Atm Thermodynamics	3	MET-111 MATH112	
	MATH214	Calculus III	3	MATH112	
	MATH212	Probability & Statistics	3	MATH111	
	HUMXXX	Humanities 2	3		
<b>Total Credit Hours</b>			<b>16</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MET-223	Atm Dynamics I	3	MET-222	
	MET-224	Aviation Met	3	MET-111	
	MET-225	Physical Met	4	MET-222	
	MET-226	Intern Met Code Workshop	1	MET-111	
	MET-227	Climatology	3	MET-111 MATH212	
	MET-232	Meteorology & Computing Workshop	1		
<b>Total Credit Hours</b>			<b>15</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH211	Linear Algebra	3	MATH111	
	MET-XXX	Elective A	3		
	MET-228	Synoptic Met I	3	MET-223	
	MET-229	Intro to Weather Charts Analysis Workshop	1		
<b>Total Credit Hours</b>			<b>10</b>		

3 <sup>rd</sup> Year (Junior)					
Semester 1	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MATH213	Differential Equations	3	MATH111	
	MET-323	Synoptic Met II	3	MET-228	
	MET-321	Atm Dynamics II	3	MET-223	
	MET-322	Weather Charts Analysis Workshop	1		
	MET-XXX	Elective A	3		
	ICT-141	Modeling & Simulation Workshop	2	ICT-110	
<b>Total Credit Hours</b>			<b>15</b>		
Semester 2	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MET-324	NWP & Numerical Analysis	3	MET-321 MATH213	
	MET-325	Satellite Meteorology	3	PHYS112	
	MET-326	Marine Meteorology	3	MET-111	
	MET-327	Radar Meteorology	3	PHYS112	
	HUM-402	Creativity, Innovation and Entrepreneurship	3		
<b>Total Credit Hours</b>			<b>15</b>		
Summer	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
	MET-328	Mod 1: C++	1		
	MET-329	Mod 2: WRF Model	1		
	MET-330	Mod 3: Weather Broadcast	2		
	MET-331	Mod 4: Weather Charts Analysis	1		
	MET-332	Mod 5: Weather Forecasting Techniques	1		
	MET-333	Mod 6: Numerical Comp Using MATLAB	1		
	MET-334	Mod 7: Satellite & Radar Analyses	1		
	MET-335	Mod 8: Synop Met pract, Tephigram	1		
<b>Total Credit Hours</b>			<b>9</b>		

4 <sup>th</sup> Year (Senior)					
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
Semester 1	MET-XXX	Elective B	3		
	MET-421	Air Pollution	3	MET-111	
	MET-422	Atmospheric Waves	3	MET-321	
	MET-423	Tropical Met	3	MET-321	
	MET-424	Project (1)	2		
	XXX-XXX	Elective	3		
	<b>Total Credit Hours</b>			<b>17</b>	
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
Semester 2	MET-429	Met Instruments and Observations	1		
	MET-430	International Met Code	1		
	MET-431	Weather Charts Analysis & Forecasting	1		
	MET-432	NW Analysis	1		
	MET-433	Satellite & Radar Analyses II	1		
	MET-434	Weather Forecasting Techniques II	1		
	<b>Total Credit Hours</b>			<b>6</b>	
	Course Code	Course Title	Credit Hours	Prerequisite(s)	Corequisite
Summer	MET-425	Planetary BL Met	3		
	MET-426	Climate Data Management Workshop	3		
	MET-427	Global Climate Changes	3		
	MET-428	Project (2)	1		
<b>Total Credit Hours</b>			<b>10</b>		