

BSc in Petroleum Engineering – Curriculum Chart

Term 1

Courses	Credits	Code	Prerequisites	Type
General Chemistry	۳			B
General Mathematics 1	۳			B
General Physics 1	۳			B
Introduction to Petroleum Engineering	۲			C
General English	۳			G
General Persian	۳			G
Introduction to Students Lifestyle	-			-
Total Credits				

Term 2

Courses	Credits	Code	Prerequisites	Type
General Mathematics 2	۳		Mathematics 1	B
Computer Programming	۳		Mathematics 1	B
General and Construction Geology	۲		-	C
Statistics and Probability	۳		Mathematics 1	B
Statics and Strength of Materials	۲		General Physics 1	E
General Chemistry Lab	۱		General Physics 1	B
General Physics 1 Lab	۱		General Chemistry 1	B
Physical Education 1	۱		-	G
<i>a general course</i>	۲		-	G
Total Credits	۱۸			

Term 3

Courses	Credits	Code	Prerequisites	Type
Differential Equations	۳		General Mathematics 2	B
Rock Mechanics	۲		Physics 1	C
Petroleum Geology	۳		General and Construction Geology	C
Thermodynamics and Phase Behavior	۳		Physics 1	C
Numerical Analysis	۲		Computer Programming	B
Reservoir Rock Properties	۳		-	C
Petrology	۲		General and Construction Geology	C
<i>a general course</i>	۲		-	G
Total Credits	۲۰			

Term 4

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Fluid Mechanics	۳		General Mathematics 2	C
Drilling Engineering 1	۳		(Fluid Mechanics)	C
Well Logging	۳		Reservoir Rocks Properties - (Reservoir Fluid Properties)	C
Reservoir Fluid Properties	۳		Thermodynamics and Phase Behavior	C
Reservoir Fluid and Rock Properties Lab	۱		Reservoir Rocks Properties - (Reservoir Fluid Properties)	C
Foundations of Environmental Engineering and HSE	۲		General Chemistry	E
Rock Mechanics Lab	۱		Rock Mechanics	E
<i>a general course</i>	۲		-	G
Physical Education 2	۱		Physical Education 1	G
Total Credits	۱۹			

Term 5

Courses	Credits	Code	Prerequisites / (Corequisites)	Type
Application of Mathematics in Petroleum Engineering	۳		Differential Equations - (Petroleum and Gas Reservoir Engineering 1)	C
Petroleum Chemistry	۲		General Chemistry	E
Drilling Engineering 2	۲		Drilling Engineering 1	R
Transport Phenomena	۳		Fluid Mechanics	C
Drilling Lab 1	۱		Drilling Engineering 1	C
Biphasic Fluid Mechanics	۳		Fluid Mechanics - (Drilling Engineering 1)	C
Petroleum and Gas Reservoir Engineering 1	۳		Reservoir Rocks Properties - Reservoir Fluid Properties	C
<i>a general course</i>	۲		-	G
Total Credits	۱۹			

Term 6

Courses	Credits	Code	Prerequisites	Type
English for Students of Petroleum Engineering	۲		English for Students of Petroleum Engineering	E
Petroleum Organic Geochemistry	۲		Petroleum Geology	R
Research Methodology	۲		60 credits	C
Surveying Operations	۲		General and Construction Geology	E
Well Test and Results Analysis	۳		Petroleum and Gas Reservoir Engineering 1	C
Petroleum and Gas Reservoir Exploitation Engineering	۳		Biphasic Fluid Mechanics	C
Petroleum and Gas Reservoir Engineering 2	۳		Petroleum and Gas Reservoir Engineering 1	R
<i>a general course</i>	۲		-	G
Total Credits	۱۹			

Term 7

Courses	Credits	Code	Prerequisites	Type
Ground Level Facilities Engineering Design	۲		Petroleum and Gas Reservoir Exploitation Engineering	R
Well Stimulation	۲		Petroleum and Gas Reservoir Exploitation Engineering	E
Drilling Fluids	۲		Drilling Engineering 1	E
Foundations of Petroleum and Gas Reservoir Simulation and Modelling	۳		Petroleum and Gas Reservoir Engineering 1 - Numerical Analysis	R
Specialized Software Workshop	۲		Petroleum and Gas Reservoir Engineering 1	R
Geophysics	۲		-	R
Foundations of Fractured Reservoir Engineering	۲		Petroleum and Gas Reservoir Engineering 1	R
<i>a general course</i>	۲		-	G
Total Credits	۱۷			

Term 8

Courses	Credits	Code	Prerequisites	Type
Economic Assessment of Petroleum Projects	۲		Petroleum and Gas Reservoir Exploitation Engineering	R
Methods of Reservoir Exploitation Increase	۳		Petroleum and Gas Reservoir Engineering 1	R
BSc Project	۳		-	C
Internship	۱		Research Methodology	C
Selected Topics	۲		-	E
<i>a general course</i>	۲		-	G
Total Credits	۱۳			

Total Credits of General Courses: 22

Total Credits of Basic Courses: 25

Total Credits of Required Courses: 23

Total Credits of Elective Courses: 17

Total Credits of Core Courses: 55

Total Credits: 142

Course Types: G=General

B=Basic

R=Required

C=Core

E=Elective