



جامعة نِزْوَى  
University of Nizwa

# **Diploma in Chemical and Petrochemical Engineering**

**Department of Chemical and Petrochemical Engineering  
College of Engineering & Architecture**

**Jan, 2022**

UNIVERSITY OF NIZWA										
DIPLOMA IN CHEMICAL ENGINEERING										
C – Credit Hours, L – Credit Lecture, P –Practical Contact Hours										
First semester					Second Semester					
CODE	COURSE	C	L	P	CODE	COURSE	C	L	P	
<b>Fall Semester</b>					<b>Spring Semester</b>					
ARAB100	Arabic Language I	3	3	0	PHYS101/L	General Physics I	4	3	2	
ENGL150	English Language I	3	3	0	ENGL152	English Language II	3	3	0	
MATH 116	Pre-Calculus	4	3	2	COMP101/L	Computer Skills	3	2	2	
ENGN103	Engineering Drawing	2	1	2	ARAB101	Arabic Language II	3	3	0	
CHEM107/L	Fundamental Chemistry	4	3	2	MATH 211	Calculus I	4	3	2	
		<b>16</b>	<b>13</b>	<b>6</b>			<b>17</b>	<b>14</b>	<b>6</b>	
<b>Fall Semester</b>					<b>Spring Semester</b>					
CODE	COURSE	C	L	P	CODE	COURSE	C	L	P	
ENGN101	Introduction to Engineering	2	2	0	CHPE204	Fundamental of Chemical Engineering II	3	3	0	
CHPE202	Fundamental of Chemical Engineering I	3	3	0	CHEM265	Organic Chemistry I	4	3	2	
CHPE207	Fluid Mechanics	3	3	0	CHPE301	Principle of Heat Transfer	3	3	0	
CHPE208	Chemical Engineering Thermodynamics	3	3	0	CHPE305	Mass Transfer	3	3	0	
CHEM257	Physical Chemistry for Engineering	3	2	2	CHPE307	Fluid Laboratory	1	0	2	
HIST 150	Islamic Civilization	3	3	0	MNGT100/L	Entrepreneurship Creativity and Innovation	3	2	2	
		<b>17</b>	<b>16</b>	<b>2</b>			<b>17</b>	<b>14</b>	<b>6</b>	
<b>Fall Semester</b>					<b>Spring Semester</b>					
CODE	COURSE	C	L	P	CODE	COURSE	C	L	P	
CHPE303	Kinetics and Reactor Design	3	3	0	CHPE407	Unit Operation Laboratory	1	0	2	
CHPE306	Chemical Process Industries	3	3	0	CHPE408	Petroleum Refining and Petrochemicals	3	3	0	
CHPE309	Heat Laboratory	1	0	2	CHPE410	Polymer Science and Technology	3	3	0	
CHPE401	Unit Operations	3	3	0	CHPE415	Chemical Process Simulation	3	2	2	
CHPE405	Reaction Engineering Lab	1	0	2						
		<b>11</b>	<b>9</b>	<b>4</b>			<b>10</b>	<b>8</b>	<b>4</b>	
<b>Total No of Credits</b>							<b>88</b>			

## Curriculum for Diploma in Chemical and Petrochemical Engineering

<b>Minimum number of credits for graduation in this Diploma plan = 88</b>				
No.	Course code	Course	Credit	Pre-requisite
<b>University requirements = 21 Credits</b>				
1	ARAB100	Arabic Language-I	3(3+0)	None
2	ARAB101	Arabic Language-II	3(3+0)	ARAB100
3	COMP101/L	Computer Skill	3(2+1)	Comp-A, Comp-B (Digital Literacy)
4	ENGL150	English Language-I	3(3+0)	None
5	ENGL152	English Language-II	3(3+0)	ENGL150
6	MNGT100/L	Entrepreneurship Creativity and Innovation	3(2+1)	45 credits
7	HIST150	Islamic Civilization	3(3+0)	None
<b>College requirements = 12 Credits</b>				
1	ENGN101	Introduction to Engineering	2(2+0)	MATH116
2	ENGN103	Engineering Drawing	2(1+1)	None
3	MATH116	Pre-Calculus	4(3+1)	None
4	MATH211	Calculus-I	4(3+1)	MATH116
<b>Department Requirement: Core Course= 55 Credits</b>				
1	CHEM107/ L	Fundamental of Chemistry	4 (3+1)	--
2	CHEM257/ L	Physical Chemistry for Engineering	3 (2+1)	CHEM107/L
3	PHYS101/L	General Physics-I	4 (3+1)	MATH116
4	CHPE202	Fundamental of Chemical Engineering I	3 (3+0)	CHEM107/L, MATH211
5	CHPE204	Fundamental of Chemical Engineering II	3 (3+0)	ENGN101 CHPE202
6	CHPE207	Fluid Mechanics	3 (3+0)	MATH211, PHYS101/L
7	CHPE208	Chemical Engineering Thermodynamics	3 (3+0)	CHEM257/L, MATH211
8	CHEM265	Organic Chemistry I	4 (3+1)	CHEM107/L
9	CHPE301	Principle of Heat transfer	3 (3+0)	CHPE208

10	CHPE305	Mass Transfer	3 (3+0)	CHPE202, CHPE207
11	CHPE306	Chemical Process Industries	3 (3+0)	CHPE204, CHEM265
12	CHPE307	Fluid Mechanics Laboratory	1(0+1)	CHPE207
13	CHPE309	Heat Transfer Laboratory	1(0+1)	CHPE301
14	CHPE303	Kinetics and Reactor Design	3 (3+0)	CHPE204, CHPE208
15	CHPE401	Unit Operations	3 (3+0)	CHPE301, CHPE305
16	CHPE405	Reaction Engineering Lab	1(0+1)	CHPE303
17	CHPE407	Unit Operation Laboratory	1(0+1)	CHPE401
18	CHPE408	Petroleum Refining and Petrochemicals	3 (3+0)	CHEM265, CHPE401, CHPE303
19	CHPE410	Polymer Science and Technology	3 (3+0)	CHEM303
20	CHPE415	Chemical Process Simulation	3 (2+1)	CHPE306, CHPE401