

4.5 SUGGESTED STUDY PLAN FOR PETROCHEMICALS ENGINEERING DEPARTMENT

Tables 4.49 to 4.56 show the suggested study plans during the four academic years of specialized study starting from Second Year up to the Fifth Year (or Academic Semesters 3 to 10) for the Petrochemicals Engineering specialization.

Table 4.57 illustrates the course flow chart model for the suggested study plan of Petrochemicals Engineering department program.

Table 4.49
Suggested Study Plan of Petrochemicals Engineering Program
Second Year/ Semester 3

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EB103	Engineering Mathematics (3)	3	EB102	2	2	1	40	10			50	100	3
EP217	Materials Science	3	EB121	2	1	2	40			10	50	100	3
EM 251	Fluid Mechanics	3	EB112	2	2	1	40			10	50	100	3
EP 210	Organic Chemistry (1)	3	EB131	2	0	3	40			10	50	100	3
EP 214	Inorganic Chemistry	3	EB131	2	1	2	40			10	50	100	3
HU113	Tech. Report Writing and Presentation Skill	2	None.	1	0	2	40	10			50	100	2
UGE 03	English Language (3)	2	UGE 02	1	0	2	40	10			50	100	2
Total Credit hours		19	Total Contact Hours	12	6	13							
				31									



Table 4.50

Suggested Study Plan of Petrochemicals Engineering Program
Second Year/ Semester 4

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EB 204	Engineering Mathematics (4)	3	EB103	2	2	1	40	10			50	100	3
EE 208	Fundamentals of Electric Engineering	3	BE122& BE102	2	2	1	40			10	50	100	3
EP 213	Organic Chemistry (2)	3	EP 210	2	0	3	40			10	50	100	3
EP 314	Instrumentation Analysis	3	EB131	2	0	3	40			10	50	100	3
EP 315	Physical Chemistry	3	EB131	2	0	3	40			10	50	100	3
UC01	Communication Skills	2	None	2	0	0	50				50	100	2
Total Credit hours		17	Total Contact Hours	12	3	11							
				26									



Table 4.51
Suggested Study Plan of Petrochemicals Engineering Program
Third Year/ Semester 5

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EB 207	Numerical Analysis Using MATLAB	4	EB 102	3	1	2	40			10	50	100	3
EB 208	Applied Probability and Statistics	3	EB204	3	1	0	50				50	100	3
EP 200	Chemical Engineering Thermodynamics (1)	3	EB122	2	2	0	50				50	100	3
EP 327	Chemical Process Principles	4	EB131& EB103	3	3	0	50				50	100	3
EP 201	Introduction to Petrochemical Industries	3	EP210	3	0	0	50				50	100	3
Total Credit hours		19	Total Contact Hours	16	7	2	24						





Table 4.52

Suggested Study Plan of Petrochemicals Engineering Program
Third Year/ Semester 6

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
UGA 03	Arabic Language Skills	2	None	2	0	0	40				60	100	2
EP 389	Introduction to Environmental Engineering	3	EP210	3	0	0	50			0	50	100	2
EP 220	Chemical Engineering Thermodynamics (2)	4	EP200	3	2	1	40			10	50	100	3
EP 231	Heat Transfer in Chemical Process	4	EP 327	3	2	1	40			10	50	100	3
EP 340	Safety for Petrochemical Industries	2	---	2	0	0	50				50	100	2
EP elective	<u>Elective (1):</u> Table 3.66	3	-	2	0	2	40			10	50	100	3
Total Credit hours		18	Total Contact Hours	15	4	4							
				23									



Table 4.53
Suggested Study Plan of Petrochemicals Engineering Program

Fourth Year/ Semester 7

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EP 313	Mass Transfer	3	EP231	2	2	0	50				50	100	3
EP 324	Gas Treatment and Liquefaction	4	EP213& EP214& EP327	4	1	0	50				50	100	3
EP 333	Chemical Reaction & Industrial Catalysis	4	EP315 & EB103	3	2	1	40			10	50	100	3
EP 335	Polymer Science & Engineering (1)	3	EP213& EP217	2	1	1	40			10	50	30	3
EP elective	<u>Elective (2):</u> Table 3.66	3	-	3	0	0	40			10	50	100	3
Total Credit hours		17	Total Contact Hours	14	6	2							
				22									





Table 4.54

Suggested Study Plan of Petrochemicals Engineering Program
Fourth Year/ Semester 8

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EP 317	Unit Operation	4	EP313	3	2	1	40			10	50	100	3
EP 320	Automatic Process Control	3	EB204	2	2	0	50				50	100	3
EP 336	Polymer Science & Engineering (2)	3	EP335	2	1	1	40			10	50	30	3
EP 318	Corrosion Engineering	3	EP131	2	1	2	40			10	50	100	3
EP 329	Industrial Fibers Technology	3	EP 335	3	0	0	50				50	100	3
HU	Elective (1)	2	----	2	0	0	50				50	100	2
Total Credit hours		18	Total Contact Hours	14	6	4							
				24									





Table 4.55

Suggested Study Plan of Petrochemicals Engineering Program
Fifth Year/ Semester 9

Course Code	Course Name	Cr	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EP 362	Petroleum Refining & Evaluation of Its Products	4	EP213	3	2	1	40			10	50	100	3
EP 361	Fertilizers Industries	3	EP 201	2	2	0	50				50	100	3
EP 368	Chemical Plant Design (1)	4	EP 327	3	2	0	50				50	100	3
EP 385	Optimization of Chemical Process	3	EP333& EP231& EB207	2	2	0	50				50	100	3
EP490-1	Graduation Project (1)	4	Department Approval	3	0	3	20	30	30	--	--	100	--
Total Credit hours		18	Total Contact Hours	13	8	4							
				25									



Table 4.56

Suggested Study Plan of Petrochemicals Engineering Program
Fifth Year/ Semester 10

Course Code	Course Name	Cr.	Pre-requisites	Number of Hours per Week			Distribution of Grade (in percent)						Time of the Final Written Exam in Hours
				Lecture	Tutorial	Lab	Class Work	Project & IT application	Oral	Lab (or Workshop)	Final Written Exam	Total	
EP <i>elective</i>	<u>Elective (3):</u> Table 3.66	3	-	3	0	0	40			10	50	100	3
EP 369	Chemical Plant Design (2)	3	EP368	2	2	0	50				50	100	3
EP 339	Production of Plastics	3	EP336	3	0	0	50				50	100	3
EP 390	Industrial Equipment & Material Handling	3	PE317	2	2	0	50				50	100	3
EP490-2	Graduation Project (2)	4	EP490-1	3	0	3	20	30	30	--	--	100	--
HU	Elective (2)	2	-----	2	0	0	50				50	100	2
Total Credit hours		18	Total Contact Hours	15	2	3							
				20									

TOTAL CREDIT ACHIEVED for
PETROCHEMICALS ENGINEERING SPECIALIZATION = 179





**Pharos University in Alexandria - Faculty of Engineering
Study Plans for Petrochemicals Engineering Department
(2014)**





Table (4.57) Course Flow Chart Model
For the Study Plan of
Petrochemicals Engineering Department Program

