Iˢᵗ Semester

Paper	Course Code	Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	CHE111	Chemical Process Industries-I	2	0	2
II	MTH112	Engineering Mathematics-I	2	0	2
III	NEN113	Functional English	2	0	2
IV	HUM114	Islamic Studies/Ethics*	2	0	2
V	PHY115	Applied Physics	3	0	3
VI	CHEM116	Applied Chemistry	3	0	3
VII	GEC117	Engineering Drawing Lab	0	3	1
VIII	PHY118	Applied Physics Lab	0	3	1
IX	CHEM119	Applied Chemistry Lab	0	3	1
X	HQ110	Quranic Translation	1	0	0
		Total:	15	9	17

2ⁿᵈ Semester

Paper	Course Code	Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	CHE121	Chemical Process Industries-II	2	0	2
II	CHE122	Chemical Engineering Principles-I	3	0	3
III	MTH123	Engineering Mathematics-II	3	0	3
IV	GEC124	General Engineering	2	0	2
V	CHEM125	Physical Chemistry	3	0	3
VI	CHEM126	Physical Chemistry Lab	0	3	1
VII	CHE127	Chemical Process Industries Lab	0	3	1
VIII	CSC128	Computer Aided Engineering Drawing Lab	0	3	1
IX	GEC129	General Engineering Lab	0	3	1
X	HQ120	Quranic Translation	1	0	1
		Total:	14	12	18

*Only for Non-Muslim students in place of Islamic Studies.

3rd Semester

Paper	Course Code	Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	CHE231	Chemical Engineering Principles-II	3	0	3
II	CHE232	Heat Transfer	3	0	3
III	CHE233	Fluid and Particle Mechanics-I	3	0	3
IV	HUM234	Pakistan Studies	2	0	2
V	MTH235	Engineering Mathematics-III	3	0	3
VI	CHE236	Heat Transfer Lab	0	3	1
VII	CHE237	Fluid and Particle Mechanics-I Lab	0	3	1
VIII	CSC238	Computing and Computer Programming Lab	0	3	1
IX	HQ230	Quranic Translation	1	0	0
		Total:	14	9	17

4th Semester

Paper	Course Code	Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	CHE241	Particulate Technology	3	0	3
II	CHE242	Chemical Engineering Thermodynamics-I	3	0	3
III	NEN243	Technical Writing and Communication Skills	2	0	2
IV	CHE244	Fluid and Particle Mechanics-II	3	0	3
V	CHE245	Particulate Technology Lab	0	3	1
VI	CHE246	Fluid and Particle Mechanics-II Lab	0	3	1
VII	CHE247	Computer Applications in Chemical Engineering Lab	0	3	1
VIII	HQ240	Quranic Translation	1	0	1
		Total:	12	9	15

5th Semester

Paper	Course Code		Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	Elective –I	CHE351 A	Environmental Engineering	2	0	2
		CHE351 B	Natural Gas Engineering – I			
		CHE351 C	Nuclear Engineering			
II	CHE352		Chemical Engineering Thermodynamics-II	2	0	2
III	CHE353		Mass Transfer	3	0	3
IV	CHE354		Separation Processes-I	3	0	3
V	GEC355		Engineering Materials	2	0	2
VI	CHE356		Chemical Reaction Engineering	3	0	3
VII	CHE357		Separation Processes-I Lab	0	3	1
VIII	CHE358		Chemical Engineering Thermodynamics Lab	0	3	1
IX	CHE359		Chemical Reaction Engineering Lab	0	3	1
X	HQ350		Quranic Translation	1	0	0
			Total:	15	9	18

6th Semester

Paper	Course Code		Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	MGT361		Industrial Mangement and Process Economics	3	0	3
II	CHE362		Separation Processes-II	3	0	3
III	CHE363		Fuels and Combustion	3	0	3
IV	CHE364		Unit Processes	2	0	2
V	Elective – II	CHE365 A	Polymer Engineering	2	0	2
		CHE365 B	Natural Gas Engineering – II			
		CHE365 C	Renewable Energy Engineering			
VI	CHE366		Separation Processes-II Lab	0	3	1
VII	CHE367		Fuels and Combustion Lab	0	3	1
VIII	CHE368		Unit Processes Lab	0	3	1
IX	HQ360		Quranic Translation	1	0	1
			TOTAL:	14	9	17

CHE	400		CREDIT HOURS: 0

	INTERNSHIP			

7th Semester

Paper	Course Code		Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	MGT471		Production and Operations Management	2	0	2
II	CHE472		Chemical Plant Design	3	0	3
III	CHE473		Instrumentation and Process Control	3	0	3
IV	CHE474		Design Project Part I	0	3	3*
V	Elective-III	CHE475A	Petrochemical Engineering	2	0	2
		CHE475B	Petroleum Refinery Engineering –I			
		CHE475C	Industrial Energy Systems			
VI	HUM476		Industrial Psychology, Sociology and Tolerance	2	0	2
VII	CHE477		Instrumentation and Process Control Lab	0	3	1
VIII	CHE478		Process Design and Simulation Lab	0	3	1
IX	HQ470		Quranic Translation	1	0	0
			Total:	13	9	17

8th Semester

Paper	Course Code		Course Title	Lecture Hours	Lab. Hours	Credit Hours
I	MGT481		Entrepreneurship	2	0	2
II	CHE482		Process Analysis and Optimization	3	0	3
III	CHE483		Design Project Part II	0	3	3*
IV	Elective – IV	CHE484A	Biochemical Engineering	2	0	2
		CHE484B	Petroleum Refinery Engineering – II			
		CHE484C	Food Engineering			
V	CHE485		Transport Phenomena	3	0	3
VI	CHE486		Chemical Plant Safety and Maintenance	2	0	2
VII	CHE487		Transport Phenomena Lab	0	3	1
VIII	HQ480		Quranic Translation	1	0	1
			Total:	13	6	17

GRAND   TOTAL   CREDIT

HOURS =   136

*As per PEC/HEC Guidelines

Table 3.2: Description of Engineering & Non-Engineering courses

Domain	Knowledge Area	PEC/HEC Recommended	Institute's Program Breakup		
		Credits	Credits	Total CHRs	%age
Non-Engineering	Humanities	13	14	41	30.1%
	Management Sciences	4	7		
	Natural Sciences	19	12		
	Mathematics	11	8		
Engineering	Computing	8	4	95	69.9%
	Engineering Foundation	28	30		
	Major Based Core (breadth)	31	37		
	Major Based Core (depth)	9	10		
	Inter-Disciplinary Engineering (Electives)	14	08		
	Design Project	6	6		
	Industrial Training	4-6 weeks industrial training (non credit)	4-6 weeks Internship (non credit)		
Total CHRs				136	