

Course Structure: B.Tech. (Petrochemical Engineering)
Valid for students admitted from year 2023 onwards

Semester 3:

S.No.	Course Catag	Course No.	Course title	Contact Periods			Credits	Marks			Total
				L	T	P		Course-Work	Mid-Sem	End-Sem	
1	BS	AMS2412	Higher Mathematics	2	1	0	3	15	25	60	100
2	ESA	MEA2942	Machine Drawing and Computer Graphics	0	0	3	1.5	60		40	100
3	PC	PKC2112	Basic Principles of Chemical Engineering	3	1	0	4	15	25	60	100
4	PC	PKC2132	Chemistry of Hydrocarbons	4	0	0	4	15	25	60	100
5	PC	PKC2152	Fluid Mechanics	3	1	0	4	15	25	60	100
6	PC	PKC2172	Separation Processes in Hydrocarbon Indus	3	1	0	4	15	25	60	100
7	PC	PKC2192	Fluid-Particle Operations	3	1	0	4	15	25	60	100
8	PC	PKC2912	Computer Applications Lab	0	0	3	1.5	60		40	100

TOTAL CREDITS: 26

Semester 4:

S.No.	Course Catag	Course No.	Course title	Contact Periods			Credits	Marks			Total
				L	T	P		Course-Work	Mid-Sem	End-Sem	
1	BS	AMS2422	Applied Numerical Methods	2	1	0	3	15	25	60	100
2	ESA	CHA2922	Unit Operations Lab – I	0	0	3	1.5	60		40	100
3	PC	PKC2222	Chemical Engineering Thermodynamics	3	1	0	4	15	25	60	100
4	PC	PKC2242	Reaction Kinetics and Reactor Design	3	1	0	4	15	25	60	100
5	PC	PKC2262	Mass Transfer Operations	3	1	0	4	15	25	60	100
6	PC	PKC2282	Introduction to Petroleum Engineering	4	0	0	4	15	25	60	100
7	PC	PKC2902	Petroleum Testing Lab	0	0	3	1.5	60		40	100
8	HM	PKH2202	Health, Safety and Environment Management	3	1	0	4	15	25	60	100

TOTAL CREDITS: 26

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Semester 5:

S.No.	Course Catag	Course No.	Course title	Contact Periods			Credits	Marks			Total
				L	T	P		Course-Work	Mid-Sem	End-Sem	
1	ESA	ACA3112	Engineering Materials	3	0	0	3	15	25	60	100
2	HM	MEH3452	Engineering Economy & Management	2	1	0	3	15	25	60	100
3	PC	PKC3112	Petroleum Refining Processes	4	0	0	4	15	25	60	100
4	PC	PKC3132	Heat Transfer Operations	3	1	0	4	15	25	60	100
5	PC	PKC3152	Process Engineering and Equipment Design	3	1	0	4	15	25	60	100
6	PC	PKC3172	Heterogeneous Reaction Engineering	2	1	0	3	15	25	60	100
7	PC	PKC3932	Reaction Engineering Lab	0	0	3	1.5	60		40	100
8	PC	PKC3952	Process Equipment Design	0	0	3	1.5	60		40	100
9	PSI	PKP3812	Seminar	0	1	2	2	60		40	100

TOTAL CREDITS: 26

Semester 6:

S.No.	Course Catag	Course No.	Course title	Contact Periods			Credits	Marks			Total
				L	T	P		Course-Work	Mid-Sem	End-Sem	
1	ESA	CHA3932	Unit Operations Lab – II	0	0	3	1.5	60		40	100
2	PC	PKC3202	Refinery Engineering Calculations	2	1	0	3	15	25	60	100
3	PC	PKC3222	Petrochemical Technology – I	3	0	0	3	15	25	60	100
4	PC	PKC3242	Polymer Science and Technology	3	1	0	4	15	25	60	100
5	PC	PKC3262	Natural Gas Processing	3	0	0	3	15	25	60	100
6	PC	PKC3902	Process Simulation Lab	0	0	3	1.5	60		40	100
7	PSI	PKP3922	Project Phase I	0	3	0	3	60		40	100
8	DE		Departmental Elective-1				3	15	25	60	100

TOTAL CREDITS: 22

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Semester 7:

S.No.	Course Catag	Course No.	Course title	Contact Periods			Credits	Marks			Total
				L	T	P		Course-Work	Mid-Sem	End-Sem	
1	PC	PKC4112	Process Dynamics and Control	3	1	0	4	15	25	60	100
2	PC	PKC4132	Plant Design and Economics	2	1	0	3	15	25	60	100
3	PC	PKC4152	Petrochemical Technology – II	4	0	0	4	15	25	60	100
4	PC	PKC4912	Instrumentation and Process Control Lab	0	0	3	1.5	60		40	100
5	PC	PKC4952	Polymer Lab	0	0	3	1.5	60		40	100
6	PSI	PKP4932	Project Phase II	0	3	0	3	60		40	100
7	DE		Departmental Elective-2				3	15	25	60	100
8	DE		Departmental Elective-3				3	15	25	60	100
9	OE		Open Elective-1				3	15	25	60	100

TOTAL CREDITS: 26

Semester 8:

S.No.	Course Catag	Course No.	Course title	Contact Periods			Credits	Marks			Total
				L	T	P		Course-Work	Mid-Sem	End-Sem	
1	PSI	PKP4802	Industrial Training/Internship				2			100	100
2	DE		Departmental Elective-4				3	15	25	60	100
3	DE		Departmental Elective-5				3	15	25	60	100
4	OE		Open Elective-2				3	15	25	60	100

TOTAL CREDITS: 11

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List of Departmental Elective (DE) Courses:

S.No.	Crs. No.	Course title	S.No.	Crs. No.	Course title
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SUMMARY:

Category Code	Category Name	II-IV Year Credits	First Year Credits	Total Credits
DC	Departmental Core	85.5	0	85.5
DE	Departmental Elective	15	0	15
BS	Basic Sciences	6	19	25
ESA	Engg. Science and Arts	7.5	19	26.5
OE	Open Elective	6	0	6
HM	Humanities	7	5	12
PSI	Project, Seminar, Internship	10	0	10
TOTAL		137	43	180