

**7. STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN  
CHEMICAL ENGINEERING (SPECIALISATION IN POLYMER ENGINEERING)**

**FIRST SEMESTER**

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
1.1*	Communication Skills - I	3	-	2	25	25	100	3	50	2	200
1.2*	Applied Mathematics - I	5	-	-	50	-	100	3	-	-	150
1.3*	Applied Physics – I	4	-	2	25	25	100	3	50	3	200
1.4*	Applied Chemistry – I	3	-	2	25	25	100	3	50	3	200
1.5*	Basics of Information Technology	-	-	4	-	50	-	-	100	3	150
1.6*	Engineering Drawing - I	-	-	6	-	50	100	3	25 (Viva)	2	175
1.7*	General Workshop Practice - I	-	-	6	-	50	-	-	+100	3	150
	# Student Centred Activities	-	-	3	-	25	-	-	-	-	25
	Total	15	-	25	125	250	500	-	375	-	1250

\* Common with other diploma programmes

+ Includes 25 marks for Viva-voce

# Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

**SECOND SEMESTER – CHEMICAL ENGINEERING (SPECIALISATION IN POLYMER ENGINEERING)**

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week			Theory	Practical	Written Paper		Practical		
		L	T	P	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
2.1*	Communication Skills – II	3	-	2	25	25	100	3	50	2	200
2.2*	Applied Mathematics - II	5	-	-	50	-	100	3	-	-	150
2.3*	Applied Physics – II	4	-	2	25	25	100	3	50	3	200
2.4*	Applied Chemistry – II	3	-	2	25	25	100	3	50	3	200
2.5**	Applied Mechanics	3	-	2	25	25	100	3	50	3	200
2.6*	Engineering Drawing - II	-	-	6	-	50	100	3	25 (Viva)	2	175
2.7*	General Workshop Practice - II	-	-	6	-	50	-	-	+100	3	150
# Student Centred Activities		-	-	2	-	25	-	-	-	-	25
Total		18	-	22	150	225	600	-	325	-	1300

\* Common with other diploma programmes

\*\* Common with diploma programmes in Chemical Engineering, Mechanical Engineering and Civil Engineering

+ Includes 25 marks for Viva-voce

# Student Centred Activities will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities

**THIRD SEMESTER – CHEMICAL ENGINEERING (SPECIALISATION IN POLYMER ENGINEERING)**

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Theory	Practical	Written Paper		Practical					
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
3.1*	Engineering Fundamentals	4	-	2	25	25	100	3	50	3	200
3.2****	Strength of Materials	4	-	2	25	25	100	3	50	3	200
3.3**	Fluid Flow	4	-	3	25	25	100	3	50	3	200
3.4*	Polymer Science	3	-	-	25	-	100	3	-	-	125
3.5**	Chemical Process Calculations	4	-	-	25	-	100	3	-	-	125
3.6**	Mechanical Operations	3	-	3	25	25	100	3	50	3	200
3.7+	Computer Aided Drafting	-	-	3	-	50	-	-	50	3	100
# Student Centered Activities		-	-	5	-	25	-	-	-	-	25
<b>Total</b>		<b>22</b>	<b>-</b>	<b>18</b>	<b>150</b>	<b>175</b>	<b>600</b>	<b>-</b>	<b>250</b>	<b>-</b>	<b>1175</b>

\* Common with diploma programmes in Chemical Engineering (Spl. in Paint Technology) and Rubber Technology

\*\* Common with diploma programmes in (i) Chemical Engineering, (ii) Chemical Engineering (Spl. in Paint Technology) and (iii) Chemical Engineering (Pulp and Paper)

\*\*\* Common with diploma programmes in Mechanical Engineering and Rubber Technology

+ Common with diploma programmes in Mechanical Engineering (CAD/CAM Design and Robotics), Automobile Engineering, Chemical Engineering (Spl. in Paint Technology) and Rubber Technology

# SCA will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc..

**FOURTH SEMESTER– CHEMICAL ENGINEERING (SPECIALISATION IN POLYMER ENGINEERING)**

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
		Hrs/week			Internal Assessment		External Assessment (Examination)				
		L	T	P	Theory	Practical	Written Paper		Practical		
		Max. Marks	Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	Max. Marks	Hrs	
4.1	Polymer Processing Techniques - I	4	-	6	25	25	100	3	50	3	200
4.2	Polymeric Materials and Properties	4	-	-	25	-	100	3	-	-	125
4.3*	Heat Transfer	4	-	3	25	25	100	3	50	3	200
4.4*	Mass Transfer	4	-	3	25	25	100	3	50	3	200
4.5***	Chemical Engineering Thermodynamics	4	-	-	25	-	100	3	-	-	125
4.6**	Computer Aided Mould Design	-	-	3	-	50	-	-	100	3	150
# Student Centered Activities		-	-	5	-	25	-	-	-	-	25
<b>Total</b>		<b>20</b>	<b>-</b>	<b>20</b>	<b>125</b>	<b>150</b>	<b>500</b>	<b>-</b>	<b>250</b>	<b>-</b>	<b>1025</b>

\* Common with diploma programme in Chemical Engineering (Spl. in Paint Technology)

\*\* Common with diploma programme in Rubber Technology

\*\*\* Common with diploma programmes in (i) Chemical Engineering, (ii) Chemical Engineering (Spl. in Paint Technology) and (iii) Chemical Engineering (Pulp and Paper)

# SCA will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

**Industrial Training**

After examination of 4<sup>th</sup> Semester, the students will go for training in a relevant industry/field organisation for a minimum period of one month. He/She will be evaluated by his/her training officer in the industry/ organization for 100 marks (to be assigned in 5<sup>th</sup> semester)

**FIFTH SEMESTER – CHEMICAL ENGINEERING (SPECIALISATION IN POLYMER ENGINEERING)**

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
		Hrs/week			Internal Assessment		External Assessment (Examination)				
		L	T	P	Theory	Practical	Written Paper		Practical		
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
	Industrial Training	-	-	-	-	50	-	-	50	3	100
5.1	Polymer Processing Techniques - II	4	-	6	25	25	100	3	50	3	200
5.2	Design of Dies and Moulds - I	4	-	4	25	25	100	3	50	3	200
5.3**	Chemical Reaction Engineering	4	-	-	25	-	100	3	-	-	125
5.4	Polymer Compounding and Formulation	4	-	4	25	25	100	3	50	3	200
5.5*	Employability Skills - I	-	-	2	-	25	-	-	50	3	75
5.6*	Environmental Education	3	-	-	25	-	100	3	-	-	125
	# Student Centered Activities	-	-	5	-	25	-	-	-	-	25
	<b>Total</b>	<b>19</b>	<b>-</b>	<b>21</b>	<b>125</b>	<b>175</b>	<b>500</b>	<b>-</b>	<b>250</b>	<b>-</b>	<b>1050</b>

\* Common with other diploma programmes

\*\* Common with diploma programmes in (i) Chemical Engineering, (ii) Chemical Engineering (Spl. in Paint Technology) and (iii) Chemical Engineering (Pulp and Paper)

# SCA will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc.

**SIXTH SEMESTER – CHEMICAL ENGINEERING (SPECIALISATION IN POLYMER ENGINEERING)**

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
		Hrs/week			Internal Assessment		External Assessment (Examination)				
		L	T	P	Theory	Practical	Written Paper		Practical		
		Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs				
6.1	Polymer Testing, Characterisation and Quality Control	3	-	3	25	25	100	3	50	3	200
6.2	Design of Dies and Moulds - II	3	-	4	25	25	100	3	50	3	200
6.3	Plastic Product Design	4	-	-	25	-	100	3	-	-	125
6.4**	Process Instrumentation and Control	4	-	3	25	25	100	3	50	3	200
6.5*	Employability Skills - II	-	-	2	-	25	-	-	50	3	75
6.6*	Entrepreneurship Development and Management	3	-	-	25	-	100	3	-	-	125
6.7	Project Work	-	-	6	-	50	-	-	100	3	150
# Student Centered Activities		-	-	5	-	25	-	-	-	-	25
<b>Total</b>		<b>17</b>	<b>-</b>	<b>23</b>	<b>125</b>	<b>175</b>	<b>500</b>	<b>-</b>	<b>300</b>	<b>-</b>	<b>1100</b>

\* Common with other diploma programmes

\*\* Common with diploma programmes in (i) Chemical Engineering, (ii) Chemical Engineering (Spl. in Paint Technology) and (iii) Chemical Engineering (Pulp and Paper)

# SCA will comprise of co-curricular activities like extension lectures, library studies, games, hobby clubs e.g. photography, painting, singing, seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities, Civil Defence/Disaster Management activities etc..