

**7. STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN  
CHEMICAL 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)

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 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 etc.

### THIRD SEMESTER (CHEMICAL 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	
3.1 **	Fluid Flow	4	-	3	25	25	100	3	50	3	200
3.2 **	Mechanical Operations	3	-	3	25	25	100	3	50	3	200
3.3 **	Chemical Process Calculations	4	-	-	25	-	100	3	-	-	125
3.4	Introduction to Engineering Materials	4	-	-	25	-	100	3	-	-	125
3.5	Heat Transfer-I	4	-	3	25	25	100	3	50	3	200
3.6 *	Basics of Electrical and Electronics Engineering	3	-	2	25	25	100	3	50	3	200
#	Student Centred Activities	-	-	7	-	25	-	-	-	-	25
<b>Total</b>		<b>22</b>	<b>-</b>	<b>18</b>	<b>150</b>	<b>125</b>	<b>600</b>	<b>-</b>	<b>200</b>	<b>-</b>	<b>1075</b>

\* Common with diploma programmes in Mechanical Engineering

\*\* Common with Diploma Programme in Chemical Engineering (Pulp and Paper), Chemical Engineering (Sp. in Paint Technology), Chemical Engineering (Sp. in Polymer Engineering)

# 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.

#### FOURTH SEMESTER (CHEMICAL 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	
4.1	Mass Transfer-I	4	-	3	25	25	100	3	50	3	200
4.2 **	Chemical Engineering Thermodynamics	4	-	-	25	-	100	3	-	-	125
4.3	Heat Transfer-II	4	-	3	25	25	100	3	50	3	200
4.4 ***	Chemical Technology	4	-	3	25	25	100	3	50	3	200
4.5	Polymer Technology	4	-	-	25	-	100	3	-	-	125
4.6	Energy Technology	4	-	-	25	-	100	3	-	-	125
#	Student Centred Activities including Personality Development Camp	-	-	7	-	25	-	-	-	-	25
<b>Total</b>		<b>24</b>	<b>-</b>	<b>16</b>	<b>150</b>	<b>100</b>	<b>600</b>	<b>-</b>	<b>150</b>	<b>-</b>	<b>1000</b>

\*\* Common with Diploma Programme in Chemical Engineering (Sp. in Paint Technology), Chemical Engineering (Sp. in Polymer Engineering)

\*\*\* Common with Diploma Programme in Chemical Engineering (Pulp and Paper)

# 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.

**Industrial Training** - After examination of 4<sup>th</sup> Semester, the students shall go for training in a relevant industry/field organization for a minimum period of one month and shall prepare a diary. It shall be evaluated during 5<sup>th</sup> semester by his/her teacher for 50 marks. The students shall also prepare a report at the end of training and shall present it in a seminar, which will be evaluated for another 50 marks. This evaluation will be done by HOD and lecturer incharge – training in the presence of one representative from training organization.

### FIFTH SEMESTER (CHEMICAL 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	
	Industrial Training	-	-	-	-	50	-	-	50	-	100
5.1 *	Employability Skills I	-	-	2	-	25	-	-	50	-	75
5.2 *	Environmental Education	3	-	-	25	-	100	3	-	-	125
5.3 **	Chemical Reaction Engineering	4	-	-	25	-	100	3	-	-	200
5.4	Mass Transfer-II	4	-	3	25	25	100	3	50	3	125
5.5	Petroleum and Petrochemical Technology	4	-	3	25	25	100	3	50	3	200
5.6 ***	Computer Applications in Chemical Industry	-	-	3	-	50	-	-	100	3	150
5.7	Plant Safety	3	-	-	25	-	100	3	-	-	125
5.8	Minor Project Work	-	-	6	-	50	-	-	50	-	100
#	Student Centred Activities	-	-	5	-	25	-	-	-	-	25
<b>Total</b>		<b>18</b>	<b>-</b>	<b>22</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>-</b>	<b>350</b>	<b>-</b>	<b>1225</b>

\* Common with other Diploma Programmes

\*\* Common with Diploma Programme in Chemical Engineering (Pulp and Paper), Chemical Engineering (Sp. in Paint Technology), Chemical Engineering (Sp. in Polymer Engineering)

\*\*\* Common with Diploma Programme in Chemical Engineering (Pulp and Paper)

# 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.

## SIXTH SEMESTER (CHEMICAL ENGINEERING)

Sr. No	Subject	STUDY SCHEME			EVALUATION SCHEME						Total Marks
					Internal Assessment		External Assessment (Examination)				
		Hrs/week L    T    P			Theory	Practical	Written Paper		Practical		
					Max. Marks	Max. Marks	Max. Marks	Hrs	Max. Marks	Hrs	
6.1 *	Employability Skills-II	-	-	2	-	25	-	-	50	3	75
6.2 *	Entrepreneurship Development and Management	3	-	-	25	-	100	3	-	-	125
6.3 +	Process Plant Utilities	4	-	-	25	-	100	3	-	-	125
6.4 **	Process Instrumentation and Control	4	-	3	25	25	100	3	50	3	200
6.5 ***	Pollution Control in Chemical Process Industry	4	-	3	25	25	100	3	50	3	200
6.6	Paint Technology	4	-	-	25	-	100	3	-	-	125
6.7	Major Project Work	-	-	8	-	50	-	-	100	3	150
#	Student Centred Activities	-	-	5	-	25	-	-	-	-	25
<b>Total</b>		<b>19</b>	<b>-</b>	<b>21</b>	<b>125</b>	<b>150</b>	<b>500</b>	<b>-</b>	<b>250</b>	<b>-</b>	<b>1025</b>

\* Common with other Diploma Programmes

\*\* Common with Diploma Programmes in Chemical Engineering (Pulp and Paper), Chemical Engineering (Spl. in Paint Technology)

\*\*\* Common with Diploma Programme in Chemical Engineering (Pulp and Paper)

+ Common with Diploma Programmes in Chemical Engineering (Pulp and Paper), Chemical Engineering (Spl. in Paint Technology)

# 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.