

7. **STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN MECHANICAL ENGINEERING (CAD/CAM DESIGN AND ROBOTICS)**

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 (MECHANICAL ENGINEERING (CAD/CAM DESIGN AND ROBOTICS))

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 (MECHANICAL ENGINEERING (CAD/CAM DESIGN AND ROBOTICS))

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**	Strength of Materials	4	-	2	25	25	100	3	
3.2**	Thermodynamics	4	-	2	25	25	100	3	50	3	200
3.3**	Basics of Electrical and Electronics Engineering	3	-	2	25	25	100	3	50	3	200
3.4**	Workshop Technology – I	3	-	-	50	-	100	3	-	-	150
3.5**	Machine Drawing	-	-	6	-	50	100	3	25 (Viva)	2	175
3.6**	Workshop Practice – I	-	-	9	-	100	-	-	100	3	200
Student Centred Activities#		-	-	5	-	25	-	-	-	-	25
Total		14	-	26	125	250	500	-	275	-	1150

** Common with diploma programmes in Mechanical Engineering/Production 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 (MECHANICAL ENGINEERING (CAD/CAM DESIGN AND ROBOTICS))

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 **	Materials and Metallurgy	3	-	2	25	25	100	3	50	3	200
4.2 ***	Hydraulics and Pneumatic Systems	4	-	2	25	25	100	3	50	3	200
4.3 +	Computer Aided Drafting	-	-	3	-	50	-	-	50	3	100
4.4 **	Machine Design and Drawing	2	-	6	25	25	100	3	25 (Viva)	3	175
4.5 **	Workshop Technology – II	3	-	-	25	-	100	3	-	-	125
4.6 **	Workshop Practice – II	-	-	9	-	100	-	-	100	3	200
Student Centred Activities #		-	-	6	-	25	-	-	-	-	25
Total		12	-	28	100	250	400	-	275	-	1025

** Common with diploma programme in Mechanical Engineering/Production Engineering

*** Common with diploma programme in Production Engineering

+ Common with diploma programme in Automobile 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.

Industrial Training - After examination of 4th 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 5th 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 (MECHANICAL ENGINEERING (CAD/CAM DESIGN AND ROBOTICS))

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	3	100
5.1 **	Theory of Machines	4	-	-	25	-	100	3	-	-	125
5.2	CAD/CAM	4	-	4	25	25	100	3	50	3	200
5.3 *	Employability Skills - I	-	-	2	-	25	-	-	50	3	75
5.4 *	Environmental Education	3	-	-	25	-	100	3	-	-	125
5.5 **	CNC Machines and Automation	3	-	2	25	25	100	3	50	3	200
5.6 **	Workshop Technology – III	3	-	-	25	-	100	3	-	-	125
5.7 **	Workshop Practice – III	-	-	9	-	100	-	-	100	3	200
Student Centred Activities#		-	-	6	-	25	-	-	-	-	25
Total		17	-	23	125	250	500	-	300	-	1175

* Common with other diploma programmes

** Common with diploma programme in Mechanical Engineering/Production 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.

SIXTH SEMESTER (MECHANICAL ENGINEERING (CAD/CAM DESIGN AND ROBOTICS))

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	
6.1 ***	Robotics	3	-	3	25	25	100	3	50	3	200
6.2 **	Inspection & Quality Control	4	-	2	25	25	100	3	50	3	200
6.3 **	Industrial Engineering	4	-	-	25	-	100	3	-	-	125
6.4 *	Entrepreneurship Development and Management	3	-	-	25	-	100	3	-	-	125
6.5 *	Employability Skills – II	-	-	2	-	25	-	-	50	3	75
6.6	Project Work	-	-	12	-	100	-	-	100	3	200
Student Centred Activities #		-	-	7	-	25	-	-	-	-	25
Total		14	-	26	100	200	400	-	250	-	950

* Common with other diploma programmes

** Common with diploma programme in Mechanical Engineering/ Production Engineering

*** Common with diploma programme in Mechatronics

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.