

**I YEAR B.Tech. (4YDC)
Common To All Branches**

Semester - A

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				
				L	T	P	Th	Pr	Theory		Practical		Total
									Th.	CW	SW	Pr.	
1	BSC	MA 10001	Mathematics - I	3	1	0	4	0	70	30	0	0	100
2	BSC	PH10017	Physics	3	-	-	3	-	70	30	-	-	100
3	ESC	EE10015	Fundamentals of Electrical Engineering	2	1	-	3	0	70	30	0	0	100
4	ESC	CE10013	Fundamentals of Civil Engineering & Applied Mechanics	2	1	-	3	0	70	30	0	0	100
5	ESC	ME10049	Engineering Graphics	2	-	-	2	-	70	30	-	-	100
6	BSC (LC)	PH10151	Applied Physics Lab	-	-	2	-	1	-	-	20	30	50
7	ESC (LC)	EE10152	Electrical Engineering Lab	-	-	2	-	1	-	-	20	30	50
8	ESC (LC)	ME10153	Engineering Graphics Lab	-	-	4	-	2	-	-	40	60	100
9	HSMC	HU10191	Extra /Co-curricular Activity	-	-	2	-	1	-	-	50	0	50
10	MC		Induction program & Universal Human Values	2-3 weeks in the beginning of I Year & 1 hour per week during semester									
TOTAL				12	3	10	15	5	350	150	130	120	750

I year**Semester - B**

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				
				L	T	P	Th	Pr	Theory		Practical		Total
									Th.	CW	SW	Pr.	
1	BSC	MA 10501	Mathematics – II	3	1	-	4	-	70	30	0	0	100
2	BSC	CH10516	Chemistry	3	-	-	3	-	70	30	-	-	100
3	HSMC	HU10551	Technical English	2	-	-	2	-	70	30	0	0	100
4	ESC	CO10507	Programming for Problem Solving	2	1	-	3	-	70	30	0	0	100
5	ESC	EC10508	Basic Electronics Engineering	2	-	-	2	-	70	30	0	0	100
6	BSC (LC)	CH10656	Chemistry Lab	-	-	2	-	1	-	-	20	30	50
7	HSMC (LC)	HU10653	Language Lab	-	-	2	-	1	-	-	20	30	50
8	ESC (LC)	CO10654	Computer Programming Lab	-	-	2	-	1	-	-	20	30	50
9	ESC (LC)	IP10655	Manufacturing Practices	-	-	4	-	2	-	-	40	60	100
10	HSMC	HU10691	Extra /Co-curricular Activity	-	-	2	-	1	-	-	50	-	50
11	MC		Induction program & Universal Human Values	2-3 weeks in the beginning of I Year & 1 hour per week during semester									
TOTAL				12	2	12	14	6	350	150	150	150	800

Engineering Certificate shall be awarded after acquiring additional 10 credits out of which 6 credits as 2 Months industrial training within five years

II B.TECH.(4YDC) MECHANICAL ENGINEERING

Semester: III

S. No.	Subject Category	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				Total
				L	T	P			Th.	CW	SW	Pr.	
1	PCC	ME26011	Fluid Mechanics	3	-	2	3	1	70	30	40	60	200
2	PCC	ME26002	Strength of Materials	3	-	2	3	1	70	30	40	60	200
3	BSC	MA26004	Mathematics -III	3	1	-	4	-	70	30	-	-	100
4	PCC	ME26008	Material Science	3	-	2	3	1	70	30	40	60	200
5	PCC	ME26005	Engineering Thermodynamics	3	-	2	3	1	70	30	40	60	200
6	HSMC	HU26481	Values, Humanity and Professional Ethics	-	2	-	2	-	-	100	-	-	100
7	MC	HUM2001	Constitution of India*	2	-	-	-	-	-	50	-	-	50
Total				17	3	8	18	4	350	300	160	240	1050

Semester: IV

S. No.	Subject Category	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				Total
				L	T	P			Th.	CW	SW	Pr.	
1	BSC	MA26556	Mathematics-IV	3	1	-	4	-	70	30	-	-	100
2	PCC	ME26551	Machine Design - I	3	-	2	3	1	70	30	40	60	200
3	PCC	ME26562	Kinematics of Machine	3	-	2	3	1	70	30	40	60	200
4	ESC	ME26xx	Measurement & Control Systems	3	-	2	3	1	70	30	40	60	200
5	PCC	IP26553	Manufacturing Processes - I	3	-	2	3	1	70	30	40	60	200
6	HSMC	HU26507	Economics for Engineers	3	-	-	3	-	70	30	-	-	100
7	PCC	ME26881	Machine Drawing & Computer Graphics	-	-	2	-	1	-	-	40	60	100
8	MC	HUM2xx	Essence of Indian Knowledge Tradition	2						50			50
Total				20	1	10	19	5	420	180	200	300	1150

Internship of minimum 02 weeks between semester IV & semester V. To be evaluated in Sem V.

* Non Credit Mandatory Subject.

III B.E.(4YDC) MECHANICAL ENGINEERING

SEMESTER - V

S.No.	Subject Category	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
				L	T	P			Th.	CW	SW	Pr.	Total
1	PCC	ME36011	Dynamics of Machines	3	1	2	4	1	70	30	40	60	200
2	PCC	ME36003	Measurement & Automatic Control	3	-	2	3	1	70	30	40	60	200
3	PCC	ME36006	Heat & Mass Transfer	3	-	2	3	1	70	30	40	60	200
4	PCC	ME36007	Steam and Gas Power System	3	-	-	3	-	70	30	-	-	100
5	PCC	IP36062	Manufacturing Processes-II	3	-	2	3	1	70	30	40	60	200
Total				15	1	8	16	4	350	150	160	240	900

SEMESTER - VI

S.No.	Subject Category	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
				L	T	P			Th.	CW	SW	Pr.	Total
1	PCC	ME36501	Refrigeration and Air conditioning	3	-	2	3	1	70	30	40	60	200
2	PCC	ME36503	Machine Design – II	3	-	4	3	2	70	30	40	60	200
3	PCC	ME36506	Fluid Machinery	3	-	2	3	1	70	30	40	60	200
4	PEC	ME36509	Internal Combustion Engines	3	-	2	3	1	70	30	40	60	200
5	HSMC	IP36504	Industrial Engineering and Production Management	3	-	-	3	-	70	30	-	-	100
6	PROJ	ME36581	Industrial Training/ Minor Project	-	-	4	-	2	-	-	100	-	100
7	MC	HUM2xx	Essence of Indian Knowledge Tradition	2	-	-	-	-		50			50
Total				17	0	14	15	7	350	200	260	240	1050

Internship of 4-6 weeks between semester VI & semester VII.

IV B.Tech.(4YDC) MECHANICAL ENGINEERING

SEMESTER - VII

S.No.	Subject Category	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
				L	T	P			Th.	CW	SW	Pr.	Total
1	PEC	ME46018	Automobile Engineering	3	-	2	3	1	70	30	40	60	200
2	PEC	ME46051	Vibration and Noise Control	3	-	2	3	1	70	30	40	60	200
3	PEC	ME46020	Computer Aided Design	3	-	2	3	1	70	30	40	60	200
4	PEC		Elective-I	3	-	-	3	-	70	30	-	-	100
5	PEC		Elective-II	3	-	-	3	-	70	30	-	-	100
	PROJ	ME46481	Industrial Training	-	-	-	-	2	-	-	100	-	100
7	PROJ	ME46498	Major Project Phase-I (AB group)	-	-	6	-	3	-	-	40	60	100
8	PROJ	ME46998	Major Project Phase-II (BA Group)	-	-	8	-	4	-	-	60	90	150
Total		For AB Group		15	0	12	15	8	350	150	260	240	1000
		For BA Group		15	0	14	15	9	350	150	280	270	1050

SEMESTER - VIII

S.No.	Subject Category	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
				L	T	P			Th.	CW	SW	Pr.	Total
1	PEC		Elective III	3	-	-	3	-	70	30	-	-	100
2	PEC		Elective IV	3	-	-	3	-	70	30	-	-	100
3	PROJ	ME46882	Industrial Training/Internship	-	-	-	-	4	-	-	100	-	100
4	PROJ	ME46998	Major Project Phase- II (AB Group)	-	-	8	-	4	-	-	60	90	150
5	PROJ	ME46498	Major Project Phase-I (BA group)	-	-	6	-	3	-	-	40	60	100
Total		For AB Group		6	0	8	6	8	140	60	160	90	450
		For BA Group		6	0	6	6	7	140	60	140	60	400

IV B.Tech.(4YDC) MECHANICAL ENGINEERING

List of Electives

Elective-I			SEMESTER - VII
S.No.	Subject Category	Subject Code	Subject
1		ME46xx	Industrial Tribology and Maintenance
2		ME46xx	Design of Air Conditioning Equipment
3		ME46218	Mechatronics and Automation
		ME46219	Advanced Machine Design

Elective-II			SEMESTER - VII
S.No.	Subject Category	Subject Code	Subject
1		IP46316	Operational Research
2		ME46xx	Bio - Mechanics
3		ME46315	Hydraulic, Pneumatic & Fluidic Control
4		ME46327	Data Science and Machine Learning
5		ME46xx	Manufacturing Automation & CAM
6		ME46xx	Power Plant and Energy Management

IV B.Tech.(4YDC) MECHANICAL ENGINEERING**List of Electives**

Elective-III			SEMESTER - VIII
S.No.	Subject Category	Subject Code	Subject
1		ME46667	Composite Materials
2		ME46668	Renewable Energy Sources
3		IP46669	Industrial Inspection & Quality Control
4		ME46xx	Finite Element Methods
5		ME46xx	Robotics
6		ME46xx	Rotor Dynamics
7		ME46xx	Artificial Intelligence

Elective-IV			SEMESTER - VIII
S.No.	Subject Category	Subject Code	Subject
1		ME46xx	Gas Dynamics & Fluid Flow
2		ME46705	Engineering Optimization
3		ME46704	Design of Thermal Systems
4		ME46xx	Computational Fluid Dynamics
5		ME46xx	Viscous Fluid Flow
6		ME46706	3D Printing and Design