

Branch Code: ME25
Dual Degree (B.Tech. & M.Tech.) in Mechanical Engineering
2023-Batch

Semester 1

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	MA1101	Functions of several variables	3	1	0	0	6	10	S
2	PH1010	Physics 1	3	1	0	0	6	10	S
3	CS1100	Introduction to programming	3	0	0	3	6	12	E
4	ME1100	Thermodynamics	3	1	0	0	6	10	P
5	PH1030	Physics lab	0	0	0	3	1	4	S
6	CY1002	Chemistry lab	0	0	0	3	0	3	S
7	ID1200	Ecology and Environment	2	0	0	0	0	0	
8	GN1101	Life Skills I	0	0	0	0	2	0	
		NCC (NC1010)/NSO (NS1020)/NSO(NS1030)	0	0	0	0	2	0	
		Credits for semester 1						49	

Winter

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	WS1301	Workshop I	0	0	0	3	0	3	E

Semester 2

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	MA1102	Series and matrices	3	1	0	0	6	10	S
2	PH1020	Physics 2	3	1	0	0	6	10	S
3	CY1001	Chemistry	3	1	0	0	6	10	S
4	AM1100	Engineering Mechanics	3	1	0	0	6	10	E
5	ME1480	Engineering drawing	1	0	0	3	3	7	E
6	HS	Humanities elective 1	3	0	0	0	6	9	H
7	GN1102	Life Skills II	0	0	0	0	1	0	
8		NCC (NC1010)/NSO (NS1020)/NSO(NS1030)	0	0	0	0	3	0	
		Credits for semester 2						56	

Summer

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	WS1302	Workshop I	0	0	0	3	0	3	E

Semester 3

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	MA2020	Differential equations	3	0	0	0	6	9	S
2	EE1100	Basic electrical engineering	3	1	0	0	6	10	E
3	AM2200	Strength of materials	3	1	0	0	6	10	P
4	AM2530	Foundations of fluid mechanics	3	1	0	0	6	10	P
5	ME2201	Kinematics and dynamics of machinery	3	1	0	0	6	10	P
6	AM2540	Applied mechanics/ Fluid mechanics lab	0	0	0	3	0	3	P
		Credits for semester 3						52	

Semester 4

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	MA	Mathematics elective	3	0	0	0	6	9	S
2	ME2100	Applied thermal engineering	3	1	0	0	6	10	P
3	ME2200	Materials and design	3	1	0	0	6	10	P
4	ME2300	Manufacturing processes	3	1	0	0	6	10	P
5	ME2400	Measurements and instrumentation	3	0	0	2	6	11	P
6	ME3481	Mechanical engineering lab 1	0	0	0	3	0	3	P
		Credits for semester 4						53	

Semester 5

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	ME3101	Heat transfer	3	1	0	0	6	10	P
2	ME3103	Energy conversion systems	3	1	0	0	6	10	P
3	ME3201	Design of machine elements	3	1	0	0	6	10	P
4	ME3301	Manufacturing technology	3	1	0	0	6	10	P
5		Free elective 1	3	0	0	0	6	9	
6	ME3482	Mechanical engineering lab 2	0	0	0	3	0	3	P
7	ME3281	Machine drawing practice	1	0	0	3	3	7	P
		Credits for semester 5						59	

Semester 6

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	ME	Professional elective 1	3	0	0	0	6	9	P
2		Free elective 2	3	0	0	0	6	9	
3		Free elective 3	3	0	0	0	6	9	
4	BT1010	Life sciences	3	0	0	0	6	9	S
5	ME3302	Automation in manufacturing	3	1	0	0	6	10	P
6	HS	Humanities elective 2	3	0	0	0	6	9	H
7	ME3484	Mechanical engineering lab 3	0	0	0	3	0	3	P
		Credits for semester 6						58	
		Honors elective 1	3	0	0	0	6	9	
		Credits for semester 6 for honors						67	

Summer

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
	ME3500	Summer Internship	0	0	0	0	20	0	

Branch Code: ME23
Dual Degree (B.Tech. & M.Tech.) in Mechanical Engineering
(Curriculum for the first six semester is common – refer Page No.31 & 32)

STREAM: Intelligent Manufacturing
2023-Batch

Semester 7

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	ME7240	Modeling and Simulation in Manufacturing	3	0	0	0	6	9	P
2	ME7040	Computer Aided Design in Manufacturing	3	0	0	0	6	9	P
3	ME7010	Microprocessors in Automation	3	0	0	0	6	9	P
4	ME7050	Computer Numerical Control and Adaptive Control	3	0	0	0	6	9	P
5		Free Elective 4	3	0	0	0	6	9	
6	HS	Humanities Elective-3	3	0	0	0	6	9	H
7	HS3050	Professional Ethics	0	0	0	0	2	0	H
		Credits for semester 7						54	
	ME	Honours elective 2	3	0	0	0	6	9	
		Credits for semester 7 for Honours						63	

Semester 8

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1		Free Elective 5	3	0	0	0	6	9	
2		Free Elective 6	3	0	0	0	6	9	
3	ME7430	Oil Hydraulic and Pneumatic Systems	3	0	0	0	6	9	P
4	ME7120	Sensors for Intelligent Manufacturing and Condition Monitoring	3	0	0	0	6	9	P
5	ME7060	Manufacturing and Precision Engineering Lab	0	0	0	4	0	4	P
6	ME	Professional Elective 2	3	0	0	0	6	9	P
		Credits for semester 7						49	
		Honours elective 3	3	0	0	0	6	9	
		Credits for semester 8 for Honours						58	

Summer

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	ME6591	Project phase 1	0	0	0	0	42	21	
		Credits for summer						21	

Semester 9

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	ME6592	Project phase 2	0	0	0	0	24	24	
2	ME	Professional Elective 3	3	0	0	0	6	9	P
3	ME	Professional Elective 4	3	0	0	0	6	9	P
4		Free elective 7	3	0	0	0	6	9	
5		Free elective 8	3	0	0	0	6	9	
		Credits for semester 9						60	

Semester 10

S.No	Course No	Course Name	L	T	E	P	O	C	Cat
1	ME6593	Project phase 3	0	0	0	0	40	40	
		Credits for semester 10						40	

Semester	I	II	III	IV	V	VI	VII	VIII	summer	IX	X	Total
Credits	49	56+6	52	53	59	58	54	49	21	60	40	557

Category	Engineering (E)	Professional (P) Core+Elective+Project	Humanities (H)	Sciences (S)	Un-allotted credits	Total
Credits	45	208+36+85	27	84	72	557

DD Curriculum Intelligent Manufacturing

Category	ME
Basic Science (S)	84
Basic Eng. (E)	45
Profession (P)	244
Humanities (H)	27
Unallocated and project credits	72 + 85
Total	557

DD. - Category wise credit Requirements

Category	ME	
	Electives	Total
Basic Science (S)	10	84
Basic Eng. (E)	0	45
Profession (P)	36	244
Humanities (H)	27	27
Unallocated and project credits	72 + 85	72 + 85
Total	135 + 85	472 + 85
Percentage		

BTech (honours) + M.Tech: (Total credit requirement: $557 + 27 = 584$)

- **Eligibility:** minimum CGPA of 8.5 at the end of 5th sem without U or W grade in any course. They need to maintain these conditions until graduation.
- **Extra credit requirement:** Additional 27 credits to be taken in VI-VIII from Mechanical department (or equivalent);