

Curriculum Structure for UG Mechanical Engineering (applicable for batch entered into 2023-24)

F.Y. B.Tech. Mechanical AY 2023-24 onwards															
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
1	1	Basic Science Course	BSC	7MA101	Engineering Mathematics-I	3	1	0	4	4	30	20	50		
2	1	Basic Science Course	BSC	7CH101	Engineering Chemistry	3	0	0	3	3	30	20	50		
3	1	Engineering Science Course	ESC	7ME107	Engineering Graphics	2	0	0	2	2	30	20	50		
4	1	Engineering Science Course	ESC	7EE106	Electrical & Electronics Engineering	3	0	0	3	3	30	20	50		
5	1	Engineering Science Course	ESC	7CS106	Computer Programming	1		2	3	2	30	30	40		
6	1	Basic Science Course	BSC	7CH155	Engineering Chemistry Lab		0	2	2	1	30	30	40		
7	1	Engineering Science Course	ESC	7ME157	Engineering Graphics Lab		0	2	2	1	30	30	40		
8	1	Engineering Science Course	ESC	7EE156	Electrical & Electronics Engineering Lab		0	2	2	1	30	30	40		
9	1	Professional Core Course	PCC	7ME101	Elements of Mechanical Engineering	3	0	0	3	3	30	20	50		
10	1	Professional Core Course	PCC	7ME151	Elements of Mechanical Engineering Lab		0	2	2	1	30	30	40		
11	1	Vocational Skill Enhancement Course	VSEC	7VS152	Engineering Skills-II		0	2	2	1	30	30	40		
Total						15	1	12	28	22					
S.Y. B.Tech. Mechanical AY 2024-25 onwards															
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
12	2	Basic Science Course	BSC	7MA102	Engineering Mathematics- II	3	1	0	4	4	30	20	50		
13	2	Basic Science Course	BSC	7PH101	Engineering Physics	3	0	0	3	3	30	20	50		
14	2	Engineering Science Course	ESC	7AM101	Engineering Mechanics	3	0	0	3	3	30	20	50		
15	2	Engineering Science Course	ESC	7CV106	Basic Civil Engineering	2	0	0	2	2	30	20	50		
16	2	Ability Enhancement Course	AEC	7HS101	Communication & Generic Skills	1		2	3	2	30	30	40		
17	2	Basic Science Course	BSC	7PH151	Engineering Physics Lab	0	0	2	2	1	30	30	40		
18	2	Engineering Science Course	ESC	7AM155	Engineering Mechanics Lab	0	0	2	2	1	30	30	40		
19	2	Engineering Science Course	ESC	7CV156	Basic Civil Engineering Lab	0	0	2	2	1	30	30	40		
20	2	Professional Core Course	PCC	7ME102	Manufacturing System	3	0	0	3	3	30	20	50		
21	2	Professional Core Course	PCC	7ME152	Manufacturing System Lab	0	0	2	2	1	30	30	40		
22	2	Vocational Skill Enhancement Course	VSEC	7VS151	Engineering Skills - I	0	0	2	2	1	30	30	40		
Total						15	1	12	28	22					
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
23	3	Basic Science Course	BSC	7MA202	Mathematics for Mechanical Engg.	3			3	3	30	20	50		
24	3	Entrepreneurship/Economics/	EEM	7EE201	Understanding Incubation and Entrepreneurship	3			3	3	30	20	50		
25	3	Value Education Course	VEC	7VE201	Value Education	2			2	2	30	20	50		
26	3	Professional Core Course	PCC	7ME201	Thermodynamics	3			3	3	30	20	50		
27	3	Professional Core Course	PCC	7ME202	Materials Science and Metallurgy	3			3	3	30	20	50		
28	3	Professional Core Course	PCC	7ME203	Strength of Materials	3			3	3	30	20	50		
29	3	Professional Core Course	PCC	7ME204	Manufacturing Processes-I	3			3	3	30	20	50		
30	3	Professional Core Course	PCC	7ME251	Thermodynamics Lab			2	2	1	30	30	40		
31	3	Professional Core Course	PCC	7ME252	Materials Science and Metallurgy Lab			2	2	1	30	30	40		
32	3	Vocational Skill Enhancement Course	VSEC	7VSME251	Workshop Practice			2	2	1	30	30	40		
Total						20	0	6	26	23					
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
33	4	Engineering Science Course	ESC	7ESME201	Numerical Methods	2	1		3	3	30	20	50		
34	4	Ability Enhancement Course	AEC	7AE201	Employability Skills	2			2	2	30	20	50		
35	4	Indian Knowledge System	IKS	Refer List	IKS Elective	2			2	2	30	20	50		
36	4	Professional Core Course	PCC	7ME221	Fluid Mechanics and Fluid Machines	3			3	3	30	20	50		

37	4	Professional Core Course	PCC	7ME222	Kinematics and Theory of Machines	3			3	3	30	20	50		
38	4	Professional Core Course	PCC	7ME223	Manufacturing Processes-II	3			3	3	30	20	50		
39	4	Professional Core Course	PCC	7ME271	Fluid Mechanics and Fluid Machines Lab			2	2	1	30	30	40		
40	4	Professional Core Course	PCC	7ME272	Kinematics and Theory of Machines Lab			2	2	1	30	30	40		
41	4	Multy Disp. Minor	MDM	Refer List	MDM	3			3	3	30	20	50		
42	4	Vocational Skill Enhancement Course	VSEC	7VSME271	Computer Aided Design and Drafting Lab			2	2	1	30	30	40		
43	4	Community Engagement Project / Field	CEP/FP	7CE271	Field Studys			2	2	1	30	30	40		
Total						18	1	6	25	23					
T.Y. B.Tech. Mechanical AY 2025-26 onwards															
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
44	5	Multy Disp. Minor	MDM	Refer List	MDM	3			3	3	30	20	50		
45	5	Open Elective	OE	Refer list	Open Elective - 1	3			3	3	30	20	50		
46	5	Value Education Course	VEC	7VE301	Environmental Science	2			2	2	30	20	50		
47	5	Professional Core Course	PCC	7ME301	Heat Transfer	3			3	3	30	20	50		
48	5	Professional Core Course	PCC	7ME302	Applied Thermodynamics	3			3	3	30	20	50		
49	5	Professional Core Course	PCC	7ME303	Engineering Metrology	2			2	2	30	20	50		
50	5	Professional Core Course	PCC	7ME304	Design of Machine Elements	2	1		3	3	30	20	50		
51	5	Professional Core Course	PCC	7ME351	Heat Transfer Lab			2	2	1	30	30	40		
52	5	Professional Core Course	PCC	7ME352	Applied Thermodynamics Lab			2	2	1	30	30	40		
53	5	Professional Core Course	PCC	7ME353	Engineering Metrology and Manufacturing Technology Lab			2	2	1	30	30	40		
Total						18	1	6	25	22					
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
54	6	Professional Elective Course	PEC	Refer List	Program Elective - 1	3			3	3	30	20	50		
55	6	Multy Disp. Minor	MDM	Refer list	MDM					4	30	20	50		
56	6	Open Elective	OE	Refer List	Open Elective - 2	3			3	3	30	20	50		
57	6	Entrepreneurship/Economics/	EEM	7EE301	Finance for Engineering	2			2	2	30	20	50		
58	6	Professional Core Course	PCC	7ME321	Machine Design	3			3	3	30	20	50		
59	6	Professional Core Course	PCC	7ME322	Mechatronics and Automation	3			3	3	30	20	50		
60	6	Professional Core Course	PCC	7ME323	Computational Methods for Structures and Fluids	2			2	2	30	20	50		
61	6	Professional Core Course	PCC	7ME371	Mechatronics and Automation Lab			2	2	1	30	30	40		
62	6	Professional Core Course	PCC	7ME372	Computational Methods for Structures and Fluids Lab			2	2	1	30	30	40		
63	6	Vocational Skill Enhancement Course	VSEC	7VSME371	Mini Project			2	2	1	30	30	40		
Total						16	0	6	22	23					
Final.Y. B.Tech. Mechanical AY 2026-27 onwards Sem A															
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
64	A	Professional Elective Course	PEC	Refer List	Program Elective - 2	3			3	3	30	20	50		
65	A	Professional Elective Course	PEC	Refer List	Program Elective - 3	3			3	3	30	20	50		
66	A	Research Methodology	RM	7RM401	Reserch Methodology	2			2	2	30	20	50		
67	A	INTERNSHIP	INTERNSHIP	7ME445	Internship				0	8	30	30	40		
Total						8	0	0	8	16					
Sem B															
Sr. No.	Sem	NEP Category	NEP Category	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	POE
68	B	Professional Elective Course	PEC	Refer List	Program Elective - 4	3			3	3	30	20	50		
69	B	Professional Elective Course	PEC	Refer List	Program Elective - 5	3			3	3	30	20	50		
70	B	Multy Disp. Minor	MDM	Refer List	MDM					4	30	20	50		
71	B	Professional Core Course	PCC	7ME421	Dynamics of Machines	2			2	2	30	20	50		

72	B	Professional Core Course	PCC	7ME422	Refrigeration and Air Conditioning	2			2	2	30	20	50		
73	B	Professional Core Course	PCC	7ME471	Dynamics of Machines Lab			2	2	1	30	20	50		
74	B	Professional Core Course	PCC	7ME472	Refrigeration and Air Conditioning Lab			2	2	1	30	20	50		
75	B	Co-curricular Course Activity	CCA	7CC471	Techno-Socio Activities			2	2	1	30	20	50		
76	B	Vocational Skill Enhancement Course	VSEC	7VSME471	Skill Based Learning			2	2	1	30	20	50		
77	B	Research Project	PROJECT	7ME491	Project			10	10	5	30	30	40		
		Total				10	0	18	28	23					
										174					