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DEPARTMENT OF MECHANICAL ENGINEERING

MAPPING OF COURSES WITH PROGRAM OUTCOMES (Y19 Regulations)

S.No	Course Code	Course Name	Category	L	T	P	S	Cr	PO												PSO	
									1	2	3	4	5	6	7	8	9	10	11	12	1	2
1	19UC1101	Basic English	HSS	0	0	4	0	2	2				2					2				
2	19UC1202	English Proficiency	HSS	0	0	4	0	2	2			2	2			2	2	2				
3	19UC2103	Professional Communication Skills	HSS	0	0	4	0	2	2				2			2	2	2				
4	19UC2204	Aptitude Builder-I	HSS	0	0	4	0	2	2				2	2	2			2				
5	19UC3105	Aptitude Builder-II	HSS	0	0	4	0	2	2				2			2		2				
6	19UC3206	Campus to Corporate	HSS	0	0	4	0	2	2				2									
7	19UC0007	Indian Heritage and Culture	HSS	0	0	2	0	0	1													
8	19UC0008	Indian Constitution	HSS	0	0	2	0	1												1		
9	19UC0009	Ecology & Environment	HSS	2	0	0	0	0						1						1		
10	19UC0010	Universal Human Values & Professional Ethics	HSS	1	0	2	0	2								2						
11	19UC0011	Entrepreneurship	HSS	2	0	0	0	0											2	2		
12	19SC1104	Mathematics for Computation	BS	3	1	0	4	5	2													
13	19PH1010	Science Elective-1 (Mechanics)	BS	3	1	0	0	4	2	2												
14	19PH2007	Science Elective-2 (Materials for Mechanical Engineering Applications)	BS	2	0	2	0	3	1			1							1			
15	19MT2102	Mathematics for Engineers	BS	2	0	2	0	3	2													
16	19BT1001	Biology for Engineers	BS	2	0	0	0	2						1	1							
17	19ME1103	Design Tools Workshop –I	ES	0	0	4	0	2			1	2	2									
18	19SC1209	Design Tools Workshop –II	ES	0	0	4	0	2			1	2	2									
19	19SC1202	Data Structures	ES	3	0	2	0	4	2		2											
20	19ME1201	Mechanics of Solids-I	ES	3	0	2	0	4		2	2										2	2
21	19ME2108	Mechanics of Solids -II	ES	3	0	2	0	4	1	2	1										2	1
22	19ME1002	Engineering Graphics for Mechanical Engineers	ES	0	0	4	0	2		1	1	1	1								1	
23	19ME1003	Workshop Practices for Mechanical Engineers	ES	1	0	4	0	3		1		2										
24	19SC1101	Problem Solving and Computer Programming	ES	3	0	2	0	4	2	2		2										
25	19ME1204	Computational Thinking and Data Sciences	ES	2	0	2	0	3	2	2												
26	19ME2205	Numerical Computation for Mechanical Engineers	ES	2	0	2	0	3	2													
27	19EE2105	Circuits and Electronics	ES	3	0	2	0	4	2				2									
28	19ME2110	Machine Drawing	ES	0	0	4	0	2	1		1		1								1	1
29	19SC1106	Technical Skills-1 (Coding)	ES	0	0	0	6	1.5	2	2												
30	19ME2106	Metrology and Measurements	Prof. Core	2	0	2	0	3		2			2									
31	19ME2107	Thermal-Fluids Engineering-I	Prof. Core	3	0	2	0	4	2												1	2

32	19ME2127	Engineering in the Physical World	Prof. Core	1	0	2	4	7		2												
33	19ME2109	Kinematics and Dynamics of Machines	Prof. Core	3	0	2	0	4		2	2		2									
34	19ME2211	Manufacturing Techniques	Prof. Core	3	0	2	0	4	1	2	2										2	2
35	19ME2212	Thermal-Fluids Engineering-II	Prof. Core	3	0	2	0	4	2												1	2
36	19ME2213	Vibrations and Controls	Prof. Core	3	0	0	0	4	1	2											2	
37	19ME3114	Machine Design	Prof. Core	3	2	0	0	5		2	1	2	2								2	2
38	19ME3115	Design for Manufacturing	Prof. Core	3	0	2	0	4	2	1	2	1	1								1	2
39	19ME3116	Robotics and Artificial Intelligence	Prof. Core	3	0	0	0	3	2		2											
40	19ME3218	Engineering Management	Prof. Core	3	0	0	0	3							2				1			2
41	19ME3219	Heat Transfer	Prof. Core	3	0	2	0	4	2												2	2
42	19ME3117	Product Design and Development	Flexi. Core	0	0	8	0	4	2		2											
43	19ME3220	Machine Learning	Flexi. Core	3	0	2	0	4		1	2											
44	19ME3221	Internet of Things	Flexi. Core	2	0	2	0	3	2		2											
45	19ME3222	Computer Aided Design	Flexi. Core	2	0	2	0	3	2				2									
46	19ME3223	Geometric Dimensioning and Tolerancing	Flexi. Core	2	0	2	0	3	1		1											
47	19ME3224	Automotive Transmission	Flexi. Core	2	0	2	0	3			1	1										
48	19ME3225	Autotronics	Flexi. Core	2	0	2	0	3	1	2	2	2										
49	19ME3226	Automation System Design	Flexi. Core	2	0	2	0	3	1	2		2										
50	19TS701	Skilling for Engineers-1 (Manufacturing Technologies)	Tech.Skill	0	0	0	6	1.5				2										
51	19TS702	Skilling for Engineers-2 (Control Systems for Machines)	Tech. Skill	0	0	0	6	1.5			2		2									
52	19TS703	Skilling for Engineers-3 (Problem Solving techniques in Thermal)	Tech.Skill	0	0	0	6	1.5	1	2												
53	19TS704	Skilling for Engineers-4 (Problem Solving techniques in Design)	Tech.Skill	0	0	0	6	1.5			2	2	2								2	
54	19TS705	Technical Proficiency & Training-1 (Automobile Design and Building)	Tech.Skill	0	0	0	4	1	2				2									
55	19TS706	Technical Proficiency& Training -2 (Robot Design)	Tech.Skill	0	0	0	4	1	2				2									
56	19ME4051	Design of Transmission Elements	Prof. Electives (Engineering Design)	2	0	2	0	3			2		2									
57	19ME4052	Theory of Elasticity and Plasticity		3	0	0	0	3	2	2												
58	19ME4053	Advanced Vibrations and Noise Control		2	0	2	0	3	2	2												
59	19ME4054	Creep, Fatigue and Fracture Mechanics		3	0	0	0	3		2		2										
60	19ME4055	Advanced Strength of Materials		2	0	2	0	3	2	2												
61	19ME4056	Mechanics of Composite Materials		2	0	2	0	3	2													
62	19ME4061	Modern Manufacturing Processes	Prof. Electives	2	0	2	0	3		1												
63	19ME4062	Advanced Materials		3	0	0	0	3		1												

64	19ME4063	Additive Manufacturing	Electives (Strategic Manufacturing)	2	0	2	0	3		1												
65	19ME4064	Tool Engineering and Design		2	0	2	0	3		1												
66	19ME4065	Flexible Manufacturing Systems		2	0	2	0	3		1												
67	19ME4066	Reverse Engineering and Rapid Prototyping		3	0	0	0	3	1		1											
68	19ME4071	Automobile Engineering	Prof. Electives (Automobile Engineering)	2	0	2	0	3	1	1												
69	19ME4072	Automobile Engine Design		2	0	2	0	3	1		2	1										
70	19ME4073	Autotronics& Safety		2	0	2	0	3			1											
71	19ME4074	Alternative Energy Sources for Automobiles		2	0	2	0	3	2		2		2									
72	19ME4075	Automotive Electrical and Electronics System		2	0	2	0	3	1	1	1											
73	19ME4076	Automobile Engine System and Performance		2	0	2	0	3	2	2		1										
74	19ME4081	Automotive Sesnsor and Applications	Prof. Electives (Autotronics)	2	0	2	0	3	1		2	2										
75	19ME4082	Electronic Engine Management System		2	0	2	0	3	1		2	2										
76	19ME4083	Instrumentation in Automotive Industries		2	0	2	0	3	1		2	2										
77	19ME4084	Autotronics and Vehicle Intelligence		2	0	2	0	3	2	2	2											
78	19ME4085	Automotive Systems		2	0	2	0	3	1		2											
79	19ME4086	Programmable Logic Controller		2	0	2	0	3	1		2											
80	19ME4091	Artificial Intelligence for Robotics	Prof. Electives (Robotics and Mechatronics)	2	0	2	0	3	1		2	2										
81	19ME4092	Industrial Automation and Control		2	0	2	0	3	1		2	2										
82	19ME4093	Industrial Hydraulic and Pneumatic Systems		2	0	2	0	3	1	2	2	2										
83	19ME4094	Industrial Robotics and Material Handling Systems		2	0	2	0	3	1		2	2										
84	19ME4095	Micro Controllers and PLC		2	0	2	0	3	1		2											
85	19ME4096	Mechatronics System Design		2	0	2	0	3	1		2	2										
86	19ME4101	Programming Skills	Prof. Electives (Soft computing and Data Analytics)	2	0	2	0	3	1				2									
87	19ME4102	Data Analytics		2	0	2	0	3	1				2									
88	19ME4103	Python		2	0	2	0	3	1				2									
89	19ME4104	Machine Learning		2	0	2	0	3	1				2									
90	19ME4105	Artificial Intelligence		2	0	2	0	3	1	1	2		2									
91	19ME4106	Fuzzy Logic and Neural Networks		2	0	2	0	3	1	1			1									
92	19ME4201	Design for Quality and Reliability	Prof. Electives (Product Design)	3	0	0	0	3	1		1											
93	19ME4202	Designing Intelligence Systems		3	0	0	0	3	1		1											
94	19ME4203	Sustainable Design		3	0	0	0	3	1		1											
95	19ME4204	Systems Thinking for Design		3	0	0	0	3	1		1											
96	19ME4205	Design with Advanced Engineering Materials		3	0	0	0	3	1		1											
97	19ME4206	Design for Manufacture and Assembly		3	0	0	0	3	1		1											
98	19ME40B4	Robotics	Open Electives	3	0	0	0	3			2		2									
99	19ME40B5	Mechatronics		3	0	0	0	3		2												
100	19ME40B6	Operations Research		3	0	0	0	3					2									

101	19IE2246	Industrial Training	Project	0	0	0	0	2		2			2				2				2	2
102	19IE3247	Term Paper		0	0	4	0	2		3		3									2	2
103	19IE4048/	Project (Part I)		0	0	0	24	6		3			3				3				2	2
104	19IE4049/	Project (Part II)		0	0	0	24	6		3			3				3				2	2
105	19IE4050	Practice School		0	0	0	24	6		3			3				3				2	2
106	19IE4051	Internship		0	0	0	24	6		3			3				3				2	2