K L E F
DEPARTMENT OF MECHANICAL ENGINEERING
Green fields, Vaddeswaram, Guntur

MAPPING OF COURSES WITH PROGRAM OUTCOMES (2018 Regulations)

S.No	Course Code	Course Name	Category	L	T	P	S	Cr	Pre-Req.	PO												PSO	
										1	2	3	4	5	6	7	8	9	10	11	12	1	2
1	18UC1101	Basic English	HSS	0	0	4	0	2	Nil	2				2					2				
2	18UC1202	English Proficiency	HSS	0	0	4	0	2	Nil	2			2	2			2	2	2				
3	18UC2103	Professional Communication Skills	HSS	0	0	4	0	2	Nil	2				2			2	2	2				
4	18UC2204	Aptitude Builder -1	HSS	0	0	4	0	2	Nil	2				2	2	2			2				
5	18UC3105	Aptitude Builder -2	HSS	0	0	4	0	2	Nil	2				2			2		2				
6	18UC0007	Indian Heritage and Culture	HSS	0	0	2	0	0	Nil						1								
7	18UC0008	Indian Constitution	HSS	0	0	2	0	1	Nil												1		
8	18UC0009	Ecology & Environment	HSS	2	0	0	0	0	Nil						1						1		
9	18UC0010	Universal Human Values & Professional Ethics	HSS	1	0	2	0	2	Nil								2						
10	18SC1104	Foundations of Computational Mathematics	BS	0	0	2	0	1	Nil	2													
11	18PH1010	Physics Elective (Mechanics)	BS	3	0	2	0	4	Nil	2	2		2										
12	18SC1103	Single Variable Calculus and Matrix Algebra	BS	3	0	0	0	3	Nil	2													
13	18SC1105	Logic and Reasoning	BS	0	0	2	0	1	Nil	1													
14	18MT1201	Multivariate Calculus	BS	3	0	0	0	3	Nil	2													

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										1	2	3	4	5	6	7	8	9	10	11	12	1	2
15	18CY1002	Solid State Chemistry	BS	3	0	2	0	4	Nil	2		1	2			1							
16	18MT2102	Theory of Differential Equations in Engineering and Mechanics	BS	2	0	2	0	3	Nil	2										2			
17	18BT1001	Biology for Engineers	BS	2	0	0	0	2	Nil						1	1							
18	18ME1201	Mechanics and Materials-I	ES	3	0	2	0	4	18PH1010		2	2										2	2
19	18ME1002	Engineering Graphics for Mechanical Engineers	ES	0	0	4	0	2	Nil	1											1		
20	18ME1003	Workshop Practices for Mechanical Engineers	ES	1	0	4	0	3	Nil		1		2										
21	18SC1101	Problem Solving and Computer Programming	ES	3	0	2	0	4	Nil	2	2		2										
22	18ME1204	Introduction to Computational Thinking and Data Sciences	ES	2	0	2	0	3	Nil	2	2												
23	18ME2205	Numerical Computation for Mechanical Engineers	ES	2	0	2	0	3	Nil	2													
24	18PH2007	Restricted Open Elective Course - 1 (Materials for Mechanical Engineering Applications)	ES	2	0	2	0	3	Nil	1			1							1			
25	18EE2105	Circuits and Electronics	ES	3	0	2	0	4	Nil	2				2									
26	18SC1106	Technical Skill - 1 (Coding)	ES	0	0	0	6	2	Nil	2	2												
27	18SC1207	Technical Skill - 2 (Coding)	ES	0	0	0	6	2	Nil	2	2												
28	18ME2106	Measurements and Instrumentation	Prof. Core	2	0	2	0	3	Nil	2													
29	18ME2107	Thermal-Fluids Engineering-I	Prof. Core	3	0	2	0	4	Nil	2												1	2
30	18ME2108	Mechanics and Materials-II	Prof. Core	3	0	2	0	4	18ME1201		2	2										2	1

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										1	2	3	4	5	6	7	8	9	10	11	12	1	2
31	18ME2109	Kinematics and Dynamics of Machines	Prof. Core	3	0	2	0	4	18PH1010		2	2	2										
32	18ME2110	Machine Drawing	Prof. Core	0	0	4	0	2	18ME1002	1		1		1								1	1
33	18ME2211	Design and Manufacturing-I	Prof. Core	3	0	2	0	4	18ME1201	1	2	2										2	2
34	18ME2212	Thermal-Fluids Engineering-II	Prof. Core	3	0	2	0	4	18ME2107	2												1	2
35	18ME2213	Vibrations and Controls	Prof. Core	3	0	2	0	4	18ME2109	1	2											2	
36	18ME3114	Machine Design	Prof. Core	3	2	0	0	5	18ME2108		2	1	2	2								2	2
37	18ME3115	Design and Manufacturing-II	Prof. Core	3	0	2	0	4	18ME2211	2	2	2		2								2	2
38	18ME3116	Robotics and Controls	Prof. Core	3	0	0	0	3	Nil	2		2											
39	18ME3117	Product Design and Development	Prof. Core	0	0	6	0	3	Nil	2		2											
40	18ME3218	Engineering Management	Prof. Core	3	0	0	0	3	Nil							2				1			2
41	18ME3219	Heat Transfer	Prof. Core	3	0	2	0	4	18ME2107	2												2	2
42	18TS701	Skilling for Engineers-1 (Manufacturing Technologies)	Tech. Skill	0	0	0	6	2	Nil				2										
43	18TS702	Skilling for Engineers-2 (Artificial Intelligence)	Tech. Skill	0	0	0	6	2	Nil	2	2			2									
44	18TS703	Skilling for Engineers-3 (Problem Solving techniques in Thermal)	Tech. Skill	0	0	0	6	2	18ME2107		2												
45	18TS704	Skilling for Engineers-4 (Problem Solving techniques in Design)	Tech. Skill	0	0	0	6	2	18ME1201			2	2	2								2	
46	18TS705	Technical Proficiency & Training-1 (Data Analytics)	Tech. Skill	0	0	0	4	1	Nil			2											
47	18TS706	Technical Proficiency & Training -2 (Machine Learning)	Tech. Skill	0	0	0	4	1	Nil		1	2											
48	18GN1107	Cocurricular Activity -1	C&CA	0	0	0	2	1	Nil	2								2	2	2			
49	18GN1208	Cocurricular Activity -2	C&CA	0	0	0	2	1	Nil	2								2	2	2			
50	18GN2109	Cocurricular Activity -3	C&CA	0	0	0	2	1	Nil	2								2	2	2			
51	18GN2210	Cocurricular Activity -4	C&CA	0	0	0	2	1	Nil	2								2	2	2			
52	18GN3111	Cocurricular Activity -5	C&CA	0	0	0	2	0	Nil	2								2	2	2			
53	18GN3212	Cocurricular Activity -6	C&CA	0	0	0	2	0	Nil	2								2	2	2			
54	18ME4051	Design of Transmission Elements		2	0	2	0	3	18ME2214			3		2									
55	18ME4052	Theory of Elasticity and Plasticity		3	0	0	0	3	18ME2108	2	2												

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										1	2	3	4	5	6	7	8	9	10	11	12	1	2
56	18ME4053	Advanced Vibrations and Noise Control	Prof. Electives (Design)	2	0	2	0	3	18ME2109	2	2												
57	18ME4054	Computer Aided Design		2	0	2	0	3	Nil	2				2									
58	18ME4055	Creep, Fatigue and Fracture Mechanics		3	0	0	0	3	18ME2108		2		2										
59	18ME4056	Advanced Strength of Materials		2	0	2	0	3	18ME2108	2	2		2										
60	18ME4057	Mechanics of Composite Materials		2	0	2	0	3	18ME2108	2													
61	18ME4061	Modern Manufacturing Processes	Prof. Electives (Strategic Manufacturing)	2	0	2	0	3	18ME1003		1			2									
62	18ME4062	Advanced Materials		3	0	0	0	3	Nil		1												
63	18ME4063	Additive Manufacturing		2	0	2	0	3	Nil		1												
64	18ME4064	Tool Engineering and Design		2	0	2	0	3	18ME2211	1					1	1	1			2			
65	18ME4065	Flexible Manufacturing Systems		2	0	2	0	3	18ME3115		1		2										
66	18ME4066	Geometric Dimensioning and Tolerancing		2	0	2	0	3	Nil	2		2											
67	18ME4067	Reverse Engineering and Rapid Prototyping		3	0	0	0	3	Nil	1		1											
68	18ME4071	Automobile Engineering	Prof. Electives (Automobile Engineering)	2	0	2	0	3	Nil			2											
69	18ME4072	Automobile Engine Design		2	0	2	0	3	18ME2214	2	2	2	3										
70	18ME4073	Automotive Transmission		2	0	2	0	3	Nil					2									
71	18ME4074	Autotronics & Safety		2	0	2	0	3	Nil	1	1		2										
72	18ME4075	Alternative Energy Sources for Automobiles		2	0	2	0	3	Nil	2	1			2									
73	18ME4076	Automotive Electrical and Electronics System		2	0	2	0	3	Nil	1	1	1											
74	18ME4077	Automobile Engine System and Performance		2	0	2	0	3	Nil	2	2		1										
75	18ME4081	Automotive Sesnsor and Applications	Prof. Electives (Autotronics)	2	0	2	0	3	Nil	1		2	2										
76	18ME4082	Autotronics		2	0	2	0	3	Nil	1	2	2	2										
77	18ME4083	Electronic Engine Management System		2	0	2	0	3	Nil	1		2	2										
78	18ME4084	Instrumentation in Automotive Industries		2	0	2	0	3	Nil	1		2	2										
79	18ME4085	Autotronics and Vehicle Intelligence		2	0	2	0	3	Nil	2	2	2											
80	18ME4086	Automotive Systems		2	0	2	0	3	Nil	2		2											
81	18ME4087	Programmable Logic Controller		2	0	2	0	3	Nil	2		2											

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										1	2	3	4	5	6	7	8	9	10	11	12	1	2
82	18ME4091	Artificial Intelligence for Robotics	Prof. Electives (Robotics and Mechatronics)	2	0	2	0	3	Nil	1		2	2										
83	18ME4092	Automation System Design		2	0	2	0	3	Nil	1	2		2										
84	18ME4093	Industrial Automation and Control		2	0	2	0	3	Nil	1		2	2										
85	18ME4094	Industrial Hydraulic and Pneumatic Systems		2	0	2	0	3	Nil	1	2	2	2										
86	18ME4095	Industrial Robotics and Material Handling Systems		2	0	2	0	3	Nil	1		2	2										
87	18ME4096	Micro Controllers and PLC		2	0	2	0	3	Nil	2		2											
88	18ME4097	Mechatronics System Design		2	0	2	0	3	Nil	1		2	2										
89	18ME4101	Programming Skills	Prof. Electives (Soft computing and Data Analytics)	2	0	2	0	3	Nil	2				2									
90	18ME4102	Data Analytics		2	0	2	0	3	Nil	2				2									
91	18ME4103	Python		2	0	2	0	3	Nil	2				2									
92	18ME4104	Machine Learning		2	0	2	0	3	18ME4102	2				2									
93	18ME4105	Artificial Intelligence		2	0	2	0	3	18ME4102	2	2			2									
94	18ME4106	Fuzzy Logic and Neural Networks		2	0	2	0	3	Nil	1	1			1									
95	18ME4107	Robotics		2	0	2	0	3	Nil	1		1											
96	18ME40B4	Mechatronics	Open Electives	3	0	0	0	3	NIL		2	2											
97	18ME40B5	Robotics		3	0	0	0	3	NIL			2		2									
98	18ME40B6	Operations Research		3	0	0	0	3	NIL					2									
99	18IE2246	Industrial Training	Project	0	0	0	0	2	NIL		2			2				2					
100	18IE3247	Term Paper		0	0	4	0	2	NIL		2		2					2					
101	18IE4048	Project (Part I)		0	0	0	24	6	NIL		3		3					2					
102	18IE4049	Project (Part II)		0	0	0	24	6	NIL		3			3				2					
103	18IE4050	Practice School		0	0	0	24	6	NIL		3			3				2					
104	18IE4051	Internship		0	0	0	24	6	NIL		3			3				2					
No. of Courses mapped to each PO										71	42	35	28	28	5	5	5	14	11	10	3	11	10